



2016

# agency and resilience

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# **Building Community Capacity through Collaborative Participation: Case Studies of Neighbourhood Planning in Singapore and Seoul**

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## **Abstract**

In recent years, the governments of Singapore and Seoul have been active in their efforts to institute some form of community involvement at the local level, placing more emphasis on a community-based, participatory process in creating liveable neighbourhoods. Both cities are at a critical crossroads of societal transformation where there is a gradual shift towards a more inclusive and mutual partnership between the state and civic society, which contrasts sharply with the authoritarian posture seen during the early phase of urban development. The changing approaches to a more participatory urban development have the potential to contribute to different aspects of a cohesive community, such as social capital, social networks, attachment to a place, and a sense of ownership.

To expand and sustain the potential that these changing approaches imply, this paper argues that community should be approached as a process that needs to be collectively built by all stakeholders, rather than an end goal. Building communities with strong social capital takes time, and the impact on social sustainability can only be measured over a long period. However, due to political agendas that aim to demonstrate the effectiveness of such community initiatives, rapid progress and bureaucracy often override and frustrate the organic growth of participatory processes, placing more emphasis on the end result or artifact engendered through the physical setting to create desired social outcomes.

Two recent participatory initiatives in Singapore and Seoul will be taken as case studies to illustrate these points, providing a comparative angle, particularly in the context of neighbourhood planning. A new scheme in Singapore called Hello Neighbour! that started in 2014 as a collaboration between the Housing and Development Board and the National University of Singapore will be compared with the Neighborhood Community Project in Seoul, launched by the current mayor Park Won-soon in 2012. Both cases involve intermediary organisations (such as the Community Neighbourhood Platform in Singapore,

and the Seoul Neighborhood Community Committee and the Seoul Community Support Center in Seoul) that aim to mediate between the community and the government, facilitating the collaboration process amongst the various stakeholders in the neighbourhood. Firsthand experience of the author as principal investigator of the Hello Neighbour! project will form the basis of the analysis, while the mechanisms of Seoul's initiatives studied through secondary sources and interviews will be compared. The aim of this comparative analysis is to understand the different approaches and impacts of community-based participation and design, deriving from the different socio-political conditions and drivers.

It is expected that the outcomes of this study will reveal key gaps and challenges in local neighbourhood planning and offer insights into potential avenues for strengthening community's capacity to initiate change and resolve shared problems through collective effort, which is essential to support the long term social sustainability and resilience of a city.

Keywords: collaborative participation, community building, neighbourhood planning, resilience, social sustainability

## **Present, Past and Future: Collaborative Actions for a Resilient**

### **Pokfulam Village**

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#### **Abstract**

This paper reflects on recent collaborative actions undertaken by a community-based NGO team working with a volunteer resident task force organization. These actions aim to increase the resilience of the residents' historic traditional community, Pokfulam Village, in the face of numerous challenges, such as the threat of redevelopment, demographic, economic and socio-cultural changes, the lack of a sewage system and seasonal flooding. Although resiliency has become a transdisciplinary catchphrase in recent years, in this paper we look to contribute a case study which can help to define community resilience not just as the ability to withstand, adapt to or bounce back from adverse situations, but also as the ability to anticipate change and to develop proactive solutions through collaborative actions across sectors and with diverse groups of stakeholders. Taking an ethnographic approach, the paper relates the village's local and international context, the challenges the village faces and describes the approach taken by the NGO team, which is founded on the principles of Asset Based Community Development (ABCD). The paper then outlines and empirically grounds three key interrelated strategies (tourism and outreach, heritage conservation and community engagement activities) which emerged from the empirical research and analysis. The paper concludes with a reflection about how specific collaborative actions and practices within these strategies can be understood as helping to increase the resiliency of the village.

Keywords: Pokfulam Village, community, collaborative actions, Asset Based Community Development

# Collective Action in Villages-in-the-city Redevelopment: a Case Study from China

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## Abstract

Local collective action is generally considered as a key component in the pursuit of good governance and hence better developmental outcomes. In China, where urban planning is considered as top-down and public participation not fully institutionalized, collective action has allowed people to empower themselves to fight for their rights during urban development. Using the redevelopment of a village-in-the-city in Guangzhou city as a case study, this paper investigates the community-based collective action. Specifically, it explores the driving force behind the collective actions, the negotiation process and the outcome. In China, the idea of 'collective' is a socialist legacy; and the persistence of collective institution in the countryside has unexpectedly consolidate the negotiation powers of farmers in land confrontations. Despite this, the merely existence of collective institutions is not sufficient for collective action to occur and achieve targets. How collective power is built and how such a power has enabled people to negotiate their rights is rested on a number of spatially bounded relationships and local conditions. Through a case study, I argue that collection power are stemmed from a place identity, which is consolidated by residents' clan relationship plus a robust community-based economy. Such an identity has pulled people together to fight for their rights during redevelopment. At another level, local government's 'adaptive' way of management has allowed flexibility in the process of planning and negotiation. Specifically, there is the redevelopment framework of 'one village one policy' in Guangzhou. This framework has not only addressed local needs during the redevelopment process, but also allowed a certain level of local participation. Despite this, the framework also bounds the dynamic of power which affects redevelopment outcomes. Through the case study of Guangzhou, I also argue that collective organization is not necessarily benevolent. Power stemmed from collective identity are exclusive. In other words, social groups which do not share the common identity are excluded in collective action and hence become the loser of the redevelopment project.

Keywords: collective action, urban redevelopment, villages-in-the-city, urban China

## **Difference that Makes the City: Social Sustainability in Contemporary Cities**

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### **Abstract**

One of the salient features of cities is the diverse forms of cultural interaction they enable, at least potentially. Although urban diversity is normatively lauded, in practice contemporary cities are fast becoming sites of socio-spatial polarization, to a large extent due to the securitization of cultural difference. Which idea(s) of conviviality, civic exchange, and citizenship inform the design practices for socially sustainable cities? How does cultural difference figure in envisioning socially sustainable urban futures? Which aspects of collective identities are culturalized in everyday urban encounters and to what ends? This paper makes a critical analysis of desirable and undesirable forms of diversity in urban environments with special focus on ethnicity and religion. Key in my analysis is the deployment of naturalized conceptions of cultural difference in public debates about achieving social cohesion and inclusion in contemporary cities. To this end, I focus on the accommodation of Muslim minorities in Western cities to investigate the relationship between what Paul Gilroy calls ‘raciological discourses’ about Muslim communities and impermeable territorialities such discourses generate in both Muslim and non-Muslim imagination.

Keywords: social sustainability, conviviality, race, religion, Muslims.

## **Societal Effects of Gentrification and Transport Resources on Community Sense: a Case Study in Hong Kong**

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### **Abstract**

Transit development is being placed as a priority in many world cities' transportation master plan to improve connectivity and urban mobility. With new rail lines and bus routes, residents can enjoy higher accessibility and more activity opportunities. Upon the arrival of better access to public transport, gentrification and displacement may potentially develop in affected neighborhoods by residents of higher social economic status (SES). We hypothesize that in these affected neighborhoods there exist a different pattern of social class and community sense due to the gentrification process lead by transit-oriented-development (TOD). In this research, we collected approximately 600 questionnaire samples via phone interview from Hong Kong's 18 districts in 2016. Respondents expressed their residential mobility and their perceived neighborhood characteristics. We use a linear regression model to estimate factors affecting the residents' community sense. The result shows that residents from gentrified neighborhoods and of lower SES are associated with higher community sense. Other affecting factors include gender, age, and transport resources. This study would add a new dimension to existing theoretical discussion and empirical examination on urban development in transit cities.

Keywords: community sense, gentrification, displacement, transport resource, TOD.

# Geographies of Community Resilience: Articulating Multiple Displacement in Recovery Planning after Typhoon Morakot

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## Abstract

Based on a long-term study of the making of Rinari, a reconstruction village (Dec 2006 to Feb 2016) in Southern Taiwan, this presentation starts by questioning the notion of “permanent housing” in recovery planning. It intends to understand how the indigenous communities articulating multiple displacement in recovery in post-disaster recovery, which is especially important in the context of post-Typhoon Morakot recovery because many of the indigenous tribes were asked to relocate and become neighbors to one another at new reconstruction villages given limited lands and reconstruction funding. Taken a process approach, it asks the following questions: How does geography matter in understanding community resilience? Paying attention to how the three tribes - Makazayazaya, Kucapungane, and Tavalan – learn to counter displacement and a variety issues resulting from cohabitation, it rethinks some normative terms adopted in post-disaster planning, such as identity, displacement, and territory. It recognizes that living with others is not a new issue but a historical and geographical process, in which the indigenous communities adapt to changes in their migration/relocation/extension, which is integral to the indigenous way of territorialization and reterritorialization. It concludes that a community is more resilient than others if it is better connected with other places in the region and therefore a more extensive geography of negotiation for the community to adapt to changes. The increased communication between Rinari and its neighboring villages for growing quinoa and coffee is one example to the point. In the course of negotiating for opportunities and locating resources, the relocated communities may sustain diversified connections with other places, including their previous settlement or “settlement by extension,” that is, geographies of community resilience. The research would like to argue that geographies of community resilience is a key for the indigenous communities to navigate sense of displacement and cultural differences exposed by inadequate recovery planning.

Keywords: geographies of community resilience, indigenous communities, Taiwan

## The Social Calculus of “Floodplainizing” and Planning Taipei’s

### Shezi Island

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#### Abstract

Devastated by the torrential effect of typhoon Gloria of 1963, Taipei’s Shezi Island was demarcated as an urban area prone to flooding and inappropriate for development or building activities. The Flood Prevention Plan of the Taipei Region of 1970 further designated Shezi as a ‘floodplain zone’ and regulated that all building construction would be restricted till new urban plan passed the environmental and flood-prevention evaluations and rezoned its land use content. The island was later transformed into a peninsula excluded outside the embankment wall, which was erected to protect the city from 200-year flood probability, and its latent association with metropolitan Taipei has been segregated spatially and socially for the next 46 years. The lag of planning implementation defers Shezi’s process of urbanization, yet the construction moratorium sarcastically suggests the incapability of the governments over the years to solve the perplexing problems of flooding on this fragile sandbar. Shezi’s cultural landscape, in the meanwhile, continues to be shaped by the daily practices of approximately 11,000 inhabitants of various settlements on the island that have been accumulating layers of cultural disposition and meanings, from farming to unregulated factories, from self-built dwellings to a wide range of temples, from tea-drinking to firecracking Earth God festival.

The community network of each Shezi settlement demonstrates an informal yet tightknit socio-spatial relationship that is conducive to the strengthening of social resilience, which is an understated yet critical determinant of its newly proposed ‘resilient urban planning.’ In the name of ecology and flood prevention, the top-down master plan of ‘Ecological Shezi’ is expected to drastically revise the previously proclaimed but never implemented plan and eradicate the existing spatial fabrics under the mechanism of zonal expropriation. Though an artificial ‘ecological river’ is envisioned to offset the onslaught of the natural disaster and enrich the landscape aesthetics, the upsurge of building floor areas and the triple-sized population of the proposal reveal the developmentalist agenda of the municipal government. The social resilience of Shezi Island has channeled its inhabitants to persist and adapt through

the time of suspension, but the combined intentions of alleged ecological planning and a neoliberalist state will rupture the settlements' social and cultural sustainability by the apparatus of replacement and displacement. The government claims to have been endorsed by the local through the institutional device of 'iVoting' system, while the processes of participatory planning are reduced to the democratic token of voting. This article will survey various aspects of social impact on Shezi under the discourses and approaches of ecological planning and contends that social resilience is vital for the transformation of a place through the concept of resilient urban planning.

## Designing Inclusive Playground

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### Abstract

#### 1. Context and Purpose

This study concerns an inclusive playground constructed in Seoul Children's Grand Park in 2016. Although playgrounds were originally constructed in Korea in the 1960s, creating playing areas for children with disabilities was not seriously considered.

Before 2016, two barrier-free playgrounds were constructed in Seoul. However, both playgrounds have been criticized as unsuitable for children with disabilities because they cannot use the three-dimensional play facilities without adult support. We will discuss the concept of barrier-free playgrounds, which is based on providing a special space for only children with disabilities.

The project for creating inclusive playgrounds is managed by Inclusive Playground Network (IPN), organized by Network of Accessible Environment for ALL, Urban Action Network, Community Design Lab of Kyounggi University, and Wul Landscape Architecture Office, and supported by Daewoong Pharmaceutical Co., Ltd and The Beautiful Foundation. IPN studied the concept of inclusive playgrounds and related cases through literature research and visited some inclusive playgrounds in Germany. IPN also interviewed mothers of children with disabilities to gather opinions on facilities that could be introduced in inclusive playgrounds.

This study suggests the concept, established by IPN and introduces the participatory design process, the design.

#### 2. The concept of the Inclusive Playground

Before revealing differences between inclusive and barrier-free playgrounds, the concepts of “inclusion” and “barrier-free” should be reviewed. Barrier-free is based on creating a space for people with disabilities; inclusion is based on fostering equal participation between people with and without disabilities.

Therefore, barrier-free playgrounds are aimed at removing barriers to the play of children with disabilities, while inclusive playgrounds are aimed at allowing children with and without disabilities to play together. The latter therefore attempts to change discriminative social conditions.

### 3. The participatory design process

IPN do not consider the purpose of the participatory process to be collecting diverse opinions from stakeholders but assisting participants to form their own opinions, mediate these opinions, and finally realize them. Also, IPN are attempting to create a good circulation relationship between the design process and participatory program.

In the concept phase, IPN interviewed parents of children with disabilities about their children's needs and problems faced in common playgrounds. In this step, IPN observed how children with disabilities play in playgrounds. During the design, IPN and the parents reviewed the design twice. After construction, children with disabilities and their parents used the playground and suggested supplementary aspects.

### 4. Design

The space is divided into four areas: 1) a high-play area, 2) a low-play area, 3) a sand-play area, and 4) a moving-play area. The first two focus on physical movement. The high-play area has a great combination of play equipment, which children who use wheelchairs can climb. This combination comprises slides, a climbing wall, etc. The low-play area, which has a small combination, is for preschoolers and children with physical movement difficulties. The sand-play area has diverse equipment for sand play. The moving-play area has swings and a revolving stage, both designed with consideration for children with disabilities. For example, the revolving stage is designed for children who use wheelchairs.

### 5. Review

The inclusive playground, while being the first of its kind in Korea, has some limits. First, not every child can use it, because the range of disabilities is too diverse. In particular, blind children were not considered when designing the playground.

Second, misuse of devices for ensuring the safety of children with disabilities can pose a danger to children without disabilities. For example, aside from the great combination of play equipment, a ramp for wheelchairs was installed next to the steps; however, children used this as another slide.

Finally, contradictions between laws on playground safety and laws for people with disabilities have posed problems too. For example, according to playground safety law, the

height of handrails should be 70cm; however, according to the law for people with disabilities, it should be 60cm for the safety of people using wheelchairs.

Keywords: Playground, Inclusive Design, Children with disabilities.

## The Combined Chinese Temple in Singapore: Resilience of Folk Practices amidst Rapid Land Transformation

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### Abstract

Politically independent in 1965 and like most developing countries, the Singapore government embarked on the modernization of an island-city-state advised by a UN masterplan. This masterplan proposed an east-west developmental corridor to the island's southern coasts, and new housing estates encircling its only secondary forest that also served as a catchment area for potable water. The decongestion of dwellers in the densely-crowded city centre into this "Ring Plan" became a priority. The establishment of the Land Acquisition Act in the same year as its Independence provided an instrument for extensive relocation exercises in which residents of all ethnic races who erstwhile lived in villages and other settlement forms were reallocated new flats in public housing estates and other dwellings.

Such tumultuous uprooting of long-established villages and their communities have relocated the people, but not considered the future of other extant social and cultural forms that existed in these places. The government did not resettle village communal structures and, importantly, the religious buildings to be near their prior adherents in their new homes. The Chinese, forming the largest group of those resettled, worshipped in clan temples or community shrines that practise a syncretic mix of Taoism, Confucianism, Buddhism, ancestor worship, medical and martial arts practices. Over decades, these temples had created their own groups of faithful followers. The pantheons would usually comprise deities brought over by the overseas Chinese diaspora from Southern China, while some of them also inducted local personages into their pantheons of multiple deities. Such religious buildings are unlike their counterparts in the city, who are often given opportunities to develop into major sites of worship, in part sanctioned by the state to showcase inter-religious harmony.

When these temples were evicted alongside the communities they served, many had to find makeshift locations for their deities and ancestral tablets. The dilemma of the temples' future was partly resolved when a group of caretakers of several small temples with different

pantheons of deities from each other, jointly negotiated and leased government land to build their temples together as one built structure within a shared compound, but with clearly demarcated spaces. Such an institution was then dubbed a “Combined Temple.” In time, the Urban Redevelopment Authority permitted this new temple typology and even encouraged temples facing this same conundrum to consider combining with other temples. Between 1974 and 2012, 65 Combined Temples were established (or re-established) as amalgams from hundreds that once scattered across the habitable regions of Singapore.

The challenges of the individual temples now lodged amongst others but within one land parcel are numerous, including the need to maintain the respective congregations which may now consist of nearby residents in its new location, as well as the hosting of rituals and activities that may extend to the outdoor areas of the “shared” temple compounds. This paper discusses the Combined Temple as a new hybrid entity whose resilience had emerged despite Singapore’s land policies and efforts to simplify the religious landscapes.

Keywords: combined Chinese temple, syncretic religion in Singapore, land transformation pressures, village temples

## “Space Share, Taipei” as a Resilient Platform and Method for Urban Regeneration

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### **Abstract**

Public space has long been wished to play an important role of urban life by following urban law. In variety of forms of public spaces, like squares, parks, plazas, waterfront promenade, streets, etc., most of them provide an venue for people gathering, recreation, economic activities, personally exercise and political expression. Besides, many open space created under the FAR bonus policy just around commercial or residential buildings. After examining these public spaces, it would be found that “urban common” seems to be loosen more and more there. Instead of serving for different theme community, high greenery average of public space makes people feel something wrong in their daily life and want to rebuild the common spaces by button up process.

Since 2009, place-making groups in Taipei started to get the common spaces back by reversing the policy from city government. They designed and planed vacant lots or parking space into variety of forms of common spaces like community garden, rainwater collection park, herb garden, reading corner, parklet and so on. The concept “Space Share” emerged from these experiences. In social aspect, “urban commoning” born and grow up in these new common spaces. It makes interest communities find a place and run their programs unrestrained. In spatial aspect, they are more attractive for both theme groups and local communities by various types which are different from formal ones.

Against this context, the platform of Space Share was established by urban regeneration department of Taipei City. It plays a new role for matching space demander and provider. Demander like theme communities and individual social actors can register their physical space demand and soft activity plan on website. Platform stuffs invite providers from the elder owners who pay little concern to their properties. Some are encouraged by advertisements on TV in MRT station. This agency set up a new mechanism out of general market economic.

Through participant observation, in-depth interviews, literature review and other research methods, this study tried to deeply understand what public interest groups will get back the right to enter the city by the platform “Space Share, Taipei”, and what types of property spaces join the new mechanism instead of traditional exchange system. And the article will also dialogue with global cases in countries around the world in both literature theory and practice experiences of urban regeneration.

Study found that urban regeneration requires a distinct resilient matchmaking platform which is different from pure lease system. Through this mechanism can solve the problem that public interest groups usually can't afford the rent of space in the city. Besides, the space provider can feel honored and get emotional feedback because their unused space can inject social welfare and become a base of urban regeneration. This is not a giant platform and the successful matchmaking cases are not large spaces. But it's a good chance to create the most diverse common spaces. “Space Spare, Taipei” platform not only improves the utilization of idle real estate, but also creates more social network links in the city.

Keywords: sharing city, urban commoning, urban regeneration, common space.

## **Baseball as a Participatory Approach: a Case Study of Indigenous and Fantasy Association in Luye, Taiwan**

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### **Abstract**

The purpose of this paper will describe three causes of failure governance of baseball which leading vicious cycle affecting indigenous in history context and explain connection between baseball and participatory strategies of Fantasy Association to ponder over how to reverse a decline, meanwhile, establish a local sustainable system in Luye, a village in Taitung County, east coast of Taiwan. Since the 1920s, baseball has become one of the popular sports in Taiwan during the Japanese-Occupied period, the aboriginal players have been regarded as a symbol to unity different ethnicities, NOKA(能高) and KANO(嘉農) are well-known to this. Later on, KMT government also followed the same route. Furthermore, KMT government formulated sports policies for advancing Taiwanese baseball's capabilities, such as grouping a class for training talented athletes, rewarding the outstanding physical education school, promoting special admission for elite athletes, and illegalize the activity of headhunting. Although the indigenous players have been dedicated to the legend of Taiwanese baseball over 90 years; government is still recognized baseball as a tool to create a multicultural society, and the indigenous are born to be athletes. However, these policies had twisted spirit of sports and incorporated its political purpose into state apparatus when maple leaf baseball team(紅葉) defeated Japanese all-star team at 1968. The imbalance sports policies have become extremely utilitarianism and elitism, causing an uneven growth between west and east side of Taiwan, it can also reflect on the regional policy of resource allocation. Compare with the east side of Taiwan, when Taiwan's west corridor became a centre of developing, the government has funded almost 90% of the national budget into this area, the uneven development accelerates migration from east to west for a better job, life, and future, having a severe impact on local. Luye is only a small town with 9,000 populations, facing the challenges of the transformation of the social and industrial structure. The Fantasy association's purpose is to solve the uneven development's economic externality, such as local agriculture declined, grandparenting and disadvantaged family, and economic recession, in Luye. Their approach is to integrate baseball with environmental friendly agriculture to break the vicious cycle in the countryside and demonstrate the baseball is not only winning the game. Thus, Fantasy Association established a local baseball team and recruit children,

7-15 years old, who belong to disadvantage family at 2013. Additionally, the association has built up a tutor system to help children for improving their grade, enhancing the moral education to reform baseball training philosophy since 2013. Now, the association is dedicated into build up a local agriculture network, using the baseball team to promote local agriculture products. Therefore, this paper will use qualitative research, including the participant observation, interview method, as research methodology to understand agents' agency network, and how the baseball becomes a participatory approach to community empowerment. Finally, theorizing this case study and designing a new participatory way to the future planning method.

Keywords: Taiwanese baseball, indigenous, participatory planning, sustainable development, agriculture.

## The Intimate Economies of Burmese Street Vending

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### Abstract

After President Thein Sein initiated national reform in 2011, the world has rediscovered Burma/Myanmar and devoted significant expertise and capital to develop the country. In this process, globalized discourses of development, both urban and rural, have swept through the country proffering universalized solutions with little knowledge of local practices and conceptions of wellbeing. Macro-level policies based on development in the Anglophone and Japanese worlds have been dispensed as best practices with little time to adjust for local differences. Indeed the Yangon 2040 Master Plan, as drawn and written by the Japan International Cooperation Agency (JICA), has already become the unquestioned blueprint for the future of the city.

This paper questions the supposed efficacy of rationalist urban planning in delivering economic development by examining how everyday Yangon residents actually live. In particular, I focus on street vending as an intimate economy (Wilson 2004) that not only provides much needed income but also builds a network of relationships, which sustains neighborhoods and the city as a whole. The daily practices of selling and buying, the informal but broadly recognized agreements between vendors, and the empathetic accommodation between those who walk through and sell on the streets will show that this largely unregulated economy is a source of Yangon's vitality and conviviality.

The celebration of street markets is not new, particularly in the context of Southeast Asia. The case of Yangon is worthy of our attention because the city is at the beginning of its transition into a so-called developed or modern city. Its everyday socio-economic practices can serve as a basis for writing urban policies to promote development; they should not be swept aside as irrational or counter to progress.

Keywords: intimate economy, street vending, informality

## **Actions for Cultural Sustainability through Craft Tourism in Kanazawa**

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### **Abstract**

Kanazawa is a culturally unique city in Japan that is rich in so much art, cuisine, and natural beauty. The traditions of handicrafts and gastronomy culture trace back to the 16th century and these cultures and activities have been handed down to this date. Especially, Kanazawa has been known as a mecca of traditional crafts and the relevant culture for centuries. In June 2009, Kanazawa was registered as a UNESCO Creative City of Crafts and Folk Art. Kanazawa city has a strong financial and infrastructural commitment to enhance the interest and awareness of traditional crafts. In recent years, Kanazawa has developed boasting an attractive harmony between its traditional past and contemporary present.

On March 14, 2015, the Hokuriku Shinkansen (a high-speed railway line) from Tokyo to Kanazawa started operating and the further economic development of Kanazawa is expected. The number of annual visitors to Kanazawa reached 10 million, increasing by about 2 million in the past year. The number of foreign visitors is also significantly increasing. However, because of the limitation of the popular tourist area, the tourists tend to stay for only a few days. So it is required to increase the repeat rate for tourist visits with offering hospitality with local deep culture.

Under this situation, Kanazawa city has promoted “Kanazawa craft tourism” since 2009. The visitors can observe the entire process in its traditional form and they can create their own traditional arts and crafts souvenirs. The government is providing support for tourists to touch the local culture walking around in a town. On the other hand, the activity called “Kanazawa creative tourism” has been promoted by a grassroots organization since 2010 for the sake of the linkage between tourists and artist and development of artists of the next generation. The organization is making guided tours to visit many dotted creative spots such as artist’s studios and modern or traditional architectures. This activity can provide the occasion to learn various cultural values historically fostered in Kanazawa.

Main objective of this research is to reveal the role of government and grassroots in craft

tourism through surveys of their activities and interviews.

Firstly, we will conduct interview surveys to city servants and the people who work at grassroots organizations related to craft tourism to understand their purpose and current situation.

Secondly, we will put the tourist resources concerned with arts and crafts on the map and analyze them. Especially, we will focus on the differences of activities, their locations, and tour plans.

Thirdly, we will conduct questionnaire surveys to the owner of tourist facilities and the artists who accept tourists. We will analyze the changes pertaining to the increase of tourists and the value of craft tourism for themselves.

This research will appear the valuation of the craft tourism for the economic, social and environmental dimensions of sustainable development, and will show the possibility of town development with civic collaboration corresponding to the rapid social change.

Keywords: craft tourism, social change, cultural sustainability, collaboration.

## **Resident-driven community-building and recovery after the Great East Japan Earthquake: The Case of Namiita Village**

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### **Abstract**

The tsunami that was caused by the magnitude 9 Great East Japan Earthquake (GEJE) of March 11, 2011, devastated the sanriku (jagged fiord-like) northeast coast Japan. The village of Namiita, 21 families located on the Ogatsu peninsula, which has been incorporated into Ishinomaki City, suffered severe damage from the tsunami.

After the GEJE while staying in evacuation centers 30 kilometers away, some Namiita residents who feel a strong attachment to their village started coming back to Namiita everyday. This daily trip takes 40 minutes by car each way. They were thinking “we had a beautiful beach here before the GEJE,” they started picking up the tsunami debris by themselves. Some volunteers from outside the area also joined in this activity to help the residents. After the cleanup was finished, they started to want a space to heal the residents’ hearts. One year after the GEJE, they started trying to build a community center in Namiita, which has been completed, and is now used as a community meeting space and also has facilities for visitors to stay. Housing rebuilding in Namiita is currently underway, but before the residents could rebuild their houses, they started their activities through the Namiita community center.

This paper describes the processes of the residents of Namiita after the disaster and toward recovery of their coastal village. Through participatory action research and interviews with local residents, it considers the role of the community center, and the related activities towards to creation of the center, as a catalyst for community recovery. This paper also explores the factors that motivated the local residents to take an active role in the recovery of their own small village.

Keywords: China community center, public space, participatory action.

# **Resilience, Sense of Belonging, Social Capital and Values of Development: Life and Death of Four Communities in Hong Kong**

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## **Abstract**

### Context

There is a lack of community development and planning in Hong Kong. Redevelopment and urban expansion often lead to place-breaking and displacement of communities. These issues were not contested until in recent decades. This paper attempts to understand why some communities are more resilient than others and examine how resilience is related to people's sense of belonging, social capital and values of development.

### Central theme

A matrix of internal and external socio-spatial vulnerabilities and resources is used to gauge the level of social resilience in four communities in Hong Kong, namely Kwun Tong, Northeast New Territories New Development Area, Wanchai and New Choi Yuan Village. The former two can be seen respectively as urban and rural sites currently affected by large scale (re)development projects or proposals whereas the latter two are urban and rural sites that have successfully 'resisted' vulnerable conditions that could have eradicated their existence. It is argued that communities with strong and timely internal and external resources are more resilient in combating vulnerable situations. Communities facing adverse internal and external vulnerable conditions without external resource support and have weak internal leadership or cohesion are the least resilient. It is argued that the level of resilience is also reflected in community members' sense of belonging, the level of social capital and their values of development.

### Methodology

Desk top research works are done on the four case studies, followed by a questionnaire

survey to gauge the community's sense of belonging, social capital and values of development.

### Major findings

It is found that members in resilient communities have a stronger sense of belonging and higher social capital or community networks. They tend to live in the community for a longer period of time, have better family and community relationships and in general live happier and value more about families and nature and less on economic growth.

Keywords: resilience, sense of belonging, social capital, values of development, communities

# Emerging New Approach of Neighborhood Regeneration in Korean Urban Communities: the Case of Nangok Residential Neighborhood

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## Abstract

Seoul's housing distribution rate remains at 100 percent, though the low birthrate and aging population cause population decline. Accordingly, in 2012, the Seoul city government changed the housing renewal policy for deteriorated residential areas into the policy with a bottom-up approach, which local actors actively participate in development planning, but top-down approach still is dominant in Korea. This paper introduces the case of Nangok, deteriorated residential neighborhood with low-rise settlement, and proposes the new approach for community-led regeneration.

To minimize problems that have found in the previous regeneration projects, including lack of autonomy and low engagement, they run an idea contest, "Community with Hope." Hoping to have high level community participation and understand the idea of urban regeneration and the problems of the community, the government has initiated "Urban Regeneration Forum for Community Activists" to train and help preparing the project proposal. Certain conditions, such as the decline in population, need to be met, and the proposal must include specific ideas, such as educating the community, based on the characteristics of the neighborhood to receive fund.

In Nangok, buildings with over 20 years old are 84.2 percent. Population and companies have decreased for last 5 years. Besides, a number of housings are formed on the top of the terrain and built with embankment – safety considerations need to be reviewed. In fact, Nangok had been designated for urban renewal zone in 2011, but rejected due to a majority of people voted against it. These geographical conditions have resulted low land prices; consequently, single-parent families, elderly people living alone, and people with disabilities become concentrated in this area. It should be noted that people in this area were passive to community groups organizations that worked and supported the

neighborhood for a long time. Therefore, such area where have distinctive physical landscape, socially vulnerable people and community groups must need the new top-down approach for community-led regeneration.

First, a community group interested in “urban regeneration” has newly made, while existing community organizations, community activists, and government institutions build an intermediate organization consortium to support and increase the participation. Second, they initiate meeting with residents, hold working session, and provide presentations to increase levels of understanding in urban regeneration. They also plan to have reporters for the neighborhood, not only to encourage participation, but also to increase the interaction with residents and ultimately to create the networks among them. Moreover, they strongly suggest building public space where professionals, government institutions, and residents gather and discuss the physical regeneration. As mentioned, during the preparation process, there are lack of community interest in participation and low capacity to implement. However, with endless meetings, trust has built, the understanding of urban regeneration has increased, and residents become active. This paper, therefore, suggest that public intervention and support can build and develop community capacity. In fact, many of deteriorated residential neighborhoods in Korea need a practical model for urban regeneration—the approach Nangok implemented must become a new model for community-led regeneration.

Keywords: public intervention, community participation, neighborhood regeneration, urban regeneration.

# Sustainable Community Design as a Mean for Human Flourishing

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## Abstract

This research examines a case-study of a Native American community in Northern California going through a process of community design with the aim to become more sustainable. Through this case-study I identify aspects that support human flourishing as defined through social science literature. These aspects are then analyzed to extract their beneficial properties and to establish criteria for evaluating community design processes. Such criteria are an essential part of sustainable design and offer a way to accentuate the social benefits of sustainable design that overarch the common sustainability measures such as energy and material use.

In the evaluation I use a case study of sustainable building design on Native American land. The design process, in which I participated as part of a research and design team, occurred between 2008 (early community workshops) and 2014 (houses inhabited). In the process, UC Berkeley faculty and students worked with Pinoleville Pomo Nation citizens (PPN) to design and build homes for tribal low income families that are sustainable and culturally sensitive. The process included community workshops, design charrettes, discussions and feedback sessions, and construction workshops. The process resulted in two homes built from straw-bales, wood, and earth plaster with geothermal heating and cooling system, photovoltaics, and greywater system.

This paper offers details into the process and validate the benefits through the science of positive psychology that aims to “understand and build the factors that allow individual, communities and societies to flourish” (Seligman and Csikszentmihalyi 2000).

Looking at community design and construction process through the positive psychology lens, allows to identify and evaluate the aspects that contributed to human flourishing. Through this process I hypothesize that the flourishing power of sustainable design is embedded not only in the community design process but also in the characters of the materials and

technologies used.

As this year's theme suggests, agency in design and planning can lead to resilience. In psychology agency has an important role in improving mental and emotional health and lack of agency is often a cause for decreased mental health. Moreover, art and creativity are a common mean to enhance people's agency and improve their resilience. In my analysis I rely on Seligman's PERMA model of happiness (Seligman 2012) as the elements of human flourishing, I identify elements that were nourished through the community design process and establish guidelines and criteria for design process as a mean for human flourishing.

Different materials have different character and may be easier or harder to work with. Some materials like wood, require special skills, other, like concrete require special machinery. By evaluating the characteristics of the materials as experienced by the community I suggest that materials that do not require major professional expertise (Kaufman and Duckworth 2015) have particularly high potential in establishing a sustainable community that flourishes.

Keywords: sustainability, community design, psychology.

# A Review of Pontian District Adapting from Rapid Development Imposed by Neighbouring City

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## Abstract

In the ninth years of its existence, Iskandar Malaysia has grown into a region now recognized as a global brand. Since Iskandar Malaysia was establish as the Iskandar Development Region in 2006, the region has grown by leaps and bound, even surpassing its key economic target. Iskandar Malaysia contributes significantly to the economy of the state of Johor and the southern part of Malaysia. At the state level, it contributes nearly three quarter of the state gross domestic product and about 47 percent of the employment of Johor. The concept of resilience is rapidly gaining ground in the process of societal development, parallel to the idea of sustainable development. The issues of community resilience arise from the need to develop understanding on how people would respond to internal and external disturbances. Most journal articles that deal with resilience related studies focus on how each cities can withstand or resist from any potential threat to society, economy and environment. Little of them discussed in depth the impact of rapid development of a city to the neighbouring district. District of Pontian which is located west of Iskandar Malaysia has received an economic gain including development of infrastructure that come with development of Iskandar Malaysia. This study reviewed the community resiliency in Pontian district from the rapid development of Iskandar Malaysia particularly in the change of land use. The data collected from Pontian Land Office is used to analyse the land transaction pattern, conversion of land used and the economic gain resulted from the positive valuation of the land. The application for land conversion alone has increased from 307 applications for the year 2006 to 2010 to 731 application for the year 2011 to 2015. An increase of 238% for the interval period of five years. Whereas the data obtained from Pontian Municipal Council shows that there was a drastic increased in the numbers of application of the planning permission after the announcement of the development of Iskandar Malaysia. For the year of 2001 to 2005 there is only 51 applications for Planning Permission were submitted, 144 applications between the year of 2006 to 2010, an increase of 282% and 319 application for the year 2011 to 2015, an

increase of 625% for the interval period of five years. The statistics suggest that the rapid and massive development of Iskandar Malaysia could give an impact not only to Iskandar region, but also to the neighbouring district, Pontian. The study will further analyse on how Pontian District adapt to the drastic change in infrastructure and land use development, the ability of a community to adjust to change and to cope with the disturbance created which will affect the economic and social environment, and proposed a set of specific indicators to assess the resilience at neighbouring communities. To increase their capacities for resilience, Pontian district authorities need to adopt urban planning and land use strategies to maintain their abilities to better respond to economic, social and physical stress the district of Pontian will face.

Keywords: community resilience; Iskandar Malaysia; district development

# Urban Resilience in China's Post-disaster Reconstruction

## Planning Organization

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### Abstract

Post-disaster reconstruction planning is a highly contested and institutionalized arena, featuring the creation and adoption of novel mechanisms to facilitate the coordination of different stakeholders and the efficiency of reconstruction progress. This notion renders significant the studies of planning organization. In this regard, this paper attempts to provide such an analysis on the post-disaster reconstruction planning organization in China, applying urban resilience the theoretical construct. Focusing on the case study of Yingxiu Town, it first delineates the working relationships between different levels of governments, between local government and the partner support taskforce, and between local government and local residents, through highlighting several important forms of planning regimes, including the two major models of reconstruction, the Resident Reconstruction Committee, and the One Funnel Model. This paper has developed three major arguments from the case study around the urban resilience evaluation. Firstly, social connectivity is the vital key in the structure of planning organization, which is conducive to the exchange of information and consensus-building for the common goal. Secondly, flexibility catering to local circumstances and innovation are evident in planning organization. Thirdly, local capital is tremendously enhanced in the process of planning organization along with the technical assistances from the outside, which better prepares the community to cope with similar disturbances in the future.

Keywords: Reconstruction Planning, Urban Resilience, Planning Organization, China

## **Indiscernable Biopolitics of Neoliberalism and Prefigurative Politics: the Umbrella Movement and Beyond**

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### **Abstract**

Based on frontline participatory observation in the Umbrella Movement and its collective back to the communities drive after the reclaim public space phase, we analyze why the collective debates, resolutions, spatial-temporal designs, cultural politics and habitual practices of the Umbrella Movement and its aftermath, like the Community Citizen Charter Movement, have taken the form of a prefigurative culture of community resistance, community building and participatory democracy to articulate the resistance to what we call the indiscernable biopolitics of neoliberalization of our time-space and subjectivities.

Coined by Carl Boggs, elaborated by Wini Breines, prefigurative politics creates and sustains through practices of a movement, relationships and political forms that prefigure and embody the desired society to come. It rejects centrism and vanguardism of political parties and has participatory democracy at its core.

We find this operating in the Umbrella Movement, its antecedents and its follow up mobilizations. Hong Kong people, instead of waiting for universal suffrage to happen and indulge in the pre-1997 form of postmodern, discursive identity politics of deferral against essentialisms, take up a tactic of prefigurative actualization of the virtual – the actualization of potential subjectivities and agencies in the real.

Hong Kong's prefigurative politics is virtual and anticipatory, but its virtuality is real, and its goals are actualizable in the real. It is not inaccessible and bound by the previous postmodernist/poststructuralist assumption of hermeneutic limits. It is not merely linguistic and conceptual. It is a real truth process and procedure, a traversal event that is actualizable. The real is to be confronted, recognized, actualized, produced through a truth process. Thus unlike the postmodern assumption, here, both the virtual and the actual fall on the side of the

real.

Why does Hong Kong culture demonstrate such a kind of prefigurative politics? We surmise, only such a future anterior logic can overcome the enormous frustration in face of a difficult, distant and utopian ideal and keep a community hopeful and driven in pursuit in the long run, whether it be facing off Goliath China and achieving “real” democracy, or achieving alternative communities beyond the extreme biopolitics of neoliberalism.

Keywords: prefigurative politics, biopolitics of neoliberalism, Umbrella Movement, Hong Kong.

## Prosperous and Beautiful Villages: Architectural Production of Place in Rural China

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### **Abstract**

With China's recent economic and urban surge, there is now renewed attention to the improvement of infrastructure and alleviation of poverty in rural communities. Numerous new initiatives, such as the "prosperous and beautiful new village" (*xingfu meili xincun*) movement in Sichuan Province, emphasize an integrated approach of village upgrades and economic development, introducing new planning and architectural design practices into a once organically evolved vernacular setting. With limited options for village development, these efforts have largely focused on agro- and eco-tourism projects targeted at middle-class urban residents with newly plentiful leisure time and disposable income. This has resulted in aesthetically-driven projects, such as façade improvements and public spaces, aimed at attracting both tourists and investors. Many of these programs specify "place-specificity" (*yindi zhiyi*), leading to the widespread re-interpretation of indigenous cultural practices, motifs, and agricultural products to produce new, consumer-friendly vernaculars. Yet these projects often end up producing homogenized place-lessness, as the simulacra of invented vernaculars displace villages' existing socio-spatial diversity.

This paper investigates the reinvention of vernacular and the production of place in the villages of Sichuan Province, Anhui Province, and the Yangtze River Delta. The projects in these villages include repainting exterior walls to recall traditional building materials, upgrading street furniture, installing new market plazas, and constructing a hilltop hotel in the style of an ancient fort. New events and practices are organized in these spaces to attract visitors, including annual festivals, family-run restaurants (*nong jia le*), and educational

programs. These varying practices point to an emerging redefinition of the village in contemporary China: from a site of collective welfare, in which the lives and livelihoods of residents shape the development of village space, to a cultural object produced for the consumption of urban elites, in the aesthetic form of the village shapes residents' lives and livelihoods.

Keywords: place-branding; tourism; village architecture; vernacular

# The Transformation of Community in the Situation of the Declining Population in Japan

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## **Abstract**

I am exploring cases of community with an influx of newcomers and capital to demonstrate the actual conditions and issues in communities in Japan. A suitable location to research the influx of newcomers is the city of Kawaguchi, in Saitama prefecture, and a suitable area for researching an influx of capital is the city of Kanazawa, in Ishikawa prefecture. In Kawaguchi, certain areas of the city have many newcomers, and a shopping street has become multicultural, which is still rare in Japan. I work with the community members, and I have found that they try to find a way to communicate with the foreigners. In Kanazawa, the community is trying to preserve the authenticity of the area in the face of the influx of money from the outside in the wake of the bullet train. In this paper, I use the interviews and observations of the communities in the research areas. I also work with these communities to discuss these issues. These cases illustrate the actual changes, which would break the stereotype that Japanese communities are shrinking and are homogeneous.

Keywords: community, multicultural, capital influx

# **The Minority's Right to Housing under the New Regime of Cultural Governance: Accounting for the Future of Treasure Hill Settlement**

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## **Abstract**

The new regime of cultural governance has taken root in Taiwan following the turn to localization and democratization, the rising of consumer society and civil society since 1980s. Under different periods of the regime, the co-operating between the outsider-experts and voluntary groups-and Treasure Hill settlements have experienced staging processes about resistance, preservation, continuation, decline and so on. We attempted at exploring why so outsiders with a variety of resources and assistance have failed to prevent the minority community from withering. This study adopts qualitative research method, such as participant observation, interview, archival or documentary analysis to fit the concern. Firstly, this study reviews the different actors and their actions over the years, and their impacts as a result. Secondly, it will discuss about the structural forces that shape the vulnerability of the minority as to their right to housing and the action of the new regime of cultural governance. Finally, the study found that outsiders have contributed to a communication and coordination platform between the city government and the residents, whose existence serves as an important medium in between. Despite a range of constraints, we argue that it is still possible for outsiders to find alternative ways to address the long-term ignored issue of right to housing.

Keywords: new regime of cultural governance, agency, right to housing, Treasure Hill

## **“Aesthetic Regime”: Developing Urban Sculpture Venues as Part of Urban Entrepreneurialism in Shanghai**

**Zheng, Jane**

### **Abstract**

The dramatic increase of “public art” projects (“urban sculpture” is the equivalent term in China) has contributed to the emergence of an attractive urban sculpture scene in Shanghai. This article argues that urban sculpture venues were produced by the overall cultural strategy of the city as part of its urban entrepreneurial policies and practices. The new concept “aesthetic regime” is introduced to describe the role of the state in developing venues of urban sculptures and the ideological dimension of artworks. Ideological didactics were transformed into aesthetic education instilling world-class criteria and examples of artworks. This research conducted case studies and focused on three representatives of urban sculpture projects, namely, the Duolun Road Sculpture Project (2002), the Shanghai International Sculpture Center (Red Town) (2006), and the Jing’an Sculpture Park (2009). Such analyses revealed the developing trend of “public art” projects toward a new instrument for urban entrepreneurialism within the ideological context of Shanghai.

Keywords: public art, urban sculpture, urban development in Shanghai, cultural strategy

## **Puerto Real Biodiversity Conservation Park: A Study on the Effects of Losing the Mangrove Forest**

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### **ABSTRACT**

The year 2013 proved to be one of the most challenging years for the country because of the sheer number of fatalities the Philippines had sustained from earthquakes, cyclones and floods. Yolanda flattened the Visayas area, and leaving more than 6,000 people dead. Most of the victims died in storm surges, and blamed the caused to the deteriorating biodiversity of the country.

In 2004, a day after Typhoon Winnie rammed down Real, Quezon and its neighboring town Infanta and Nakar, the whole area was completely isolated. Both towns like Tacloban which was hit by Yolanda were directly faced the Pacific Ocean so-called 'typhoon belt' of the country, it has never encountered the same intensity of rain, floodwaters, debris before. The amount of destruction to public and private property and the hundreds of lives lost and livelihoods uprooted by this disaster was consider also caused by the deteriorating ecosystem and unprotected mangrove of the country due to urbanization.

This dilemma pursues the government's lawmakers to push Republic Act 8550 otherwise known as "Conversion of Mangroves. And by then the municipality of Real made a move by creating also an ordinance to protect the town from another disaster. The objective of this study is to provide the town of Real and researcher knowledge on the effects of losing mangrove biodiversity and provide solutions in preserving the ecosystem of the country. This study also resulted into creation of park that will be managed mainly for biodiversity conservation and as eco-tourism destination.

**Keywords:** Typhoon Winnie, Mangrove, ecosystem, biodiversity,

### **1. INTRODUCTION**

Biodiversity is the variety of life on earth. It encompasses variation of the terrestrial, aquatic and marine ecosystems. It forms the vast series of ecosystem services that significantly contribute to human well-being.

More than 7,100 islands fall within the borders of the Philippines hotspot, identified as one of the world's biologically biodiversity richest country. Many endemic species are confined to forest fragments that cover only 7% of the original extent of the hotspots. There are about 8,000 species of flowering plants and about 4,500 species of non-flowering plants including algae, fungi, hepatics, mosses, and about ferns found scattered in diverse habitats from marine fresh waters such as mangroves forest to various types of terrestrial habitats, an estimate 30-40% are endemic to the country found nowhere else in the world.\*

Those endangered species and organisms that are usually found in mangrove forest maintain oxygen in the air, enrich the soil, purify the water, protect against flood and storm damage and regulate climate. Mangrove is the Philippines best shield against climate change. But the original 500,000 hectares of mangroves has whittled down to 100,000 hectares or less, due to coastal development, land conversion, and reclamation.

The town of Real, Infanta and Nakar, Quezon located along northeastern side of Sierra Madre and facing the Pacific Ocean are among the mangrove haven which was affected by this development and urbanization. These areas are concluded as one of the hotspots in the Philippines

\*<http://prezi.com/u1eu7hcfahf0/biodiversity-in-the-philippines/>

that has been hit by Typhoon Winnie in 2004 and buried hundred lives because of the mangrove deforestation.

## 2. OBJECTIVES AND METHODOLOGY

The following are the Objectives and Methodology of this paper:

2.1 Data gathering and research of the environmental importance of mangrove, focusing on its quality importance to control the coastline against erosion caused by wind, waves, and currents, reducing the impact of storms and hurricanes.

2.2 On site sampling and photo documentation to present the economic importance of the mangrove to the community and reasons why people live in proximity to mangrove area.

2.3 Interview the town officials that have knowledge in the mangrove history of Real- Infanta, Quezon to find out the causes of mangrove deterioration. Asking set of questions, and listening to their view point, and facts that are important for the development of a solution on how to conserve the mangrove forest.

2.4 Analyze the findings, comparing the study areas in relation to destruction and risk caused by the deterioration of the mangrove forest to places with protected mangrove.

2.5 Selection of site for the biodiversity park development necessary for the community, profession and education. It is when the information is gathered in the collection of data would reveal the needs of the study that would result in developed and improved landscape architectural planning for Mangrove Biodiversity Conservation Park.

## 3. DATA GATHERING

### 3.1 Major Mangrove Habitat Uses and Changes in the Philippines

The Philippines has about 7,100 islands surrounding the mainland of Luzon in the north, Visayas in the middle and Mindanao in the south. The country has about 18, 000 km of shorelines and vast areas of mangroves totaling about 500,000 hectares in the early 1900s (Brown and Fisher, 1920). But overexploitation, conversion of areas to various uses, and the simultaneous logging of watersheds in the uplands, the country's remaining mangrove area was only about 117,700 hectares in 1995 (DENR Statistics (1998).\*

"Mangroves in general are one of nature's best ways for combatting global warming," said Filixberto Pollisco, policy and research specialist of ASEAN Centre for Biodiversity (ACB), one of the speakers at a discussion on the relationship between biodiversity and climate change.

The conference was held days after the release of the Fifth Assessment Report by the United Nations Intergovernmental Panel on Climate Change. The report affirmed that human activities cause global warming and warned of higher sea level rise and increased frequency of extreme weather events as "likely" consequences of climate change.

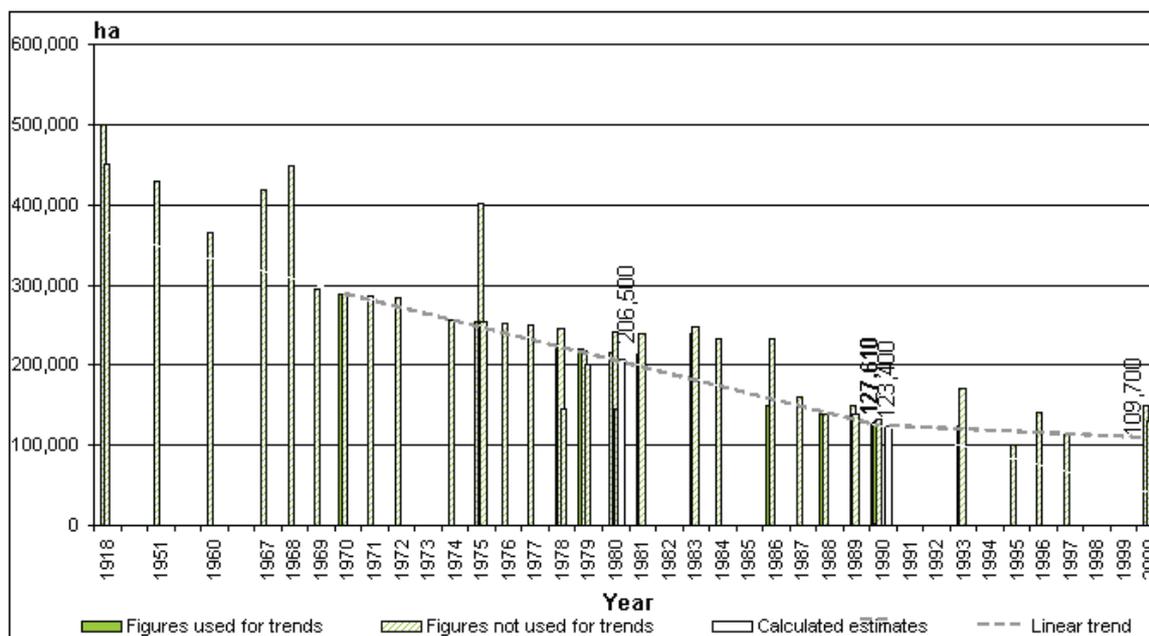


Fig. 1 – Siargao Island Mangrove Forest

\* <http://www.fao.org/docrep/007/j1533e/j1533e55.htm>

Mangroves occur on tidal flats bordering coastal areas and along the mouths of rivers where water is brackish. These forests used to be the source of tan bark for the tannin extract industry, but now the wood is more commonly used for fuel and charcoal-making. The main tree species found in Real-Infanta, Quezon mangrove area are *Rhizophora apiculata*, *Rhizophora mucronata*, *Ceriops tagal*, *Ceriops roxburghiana*, *Bruguiera gymnorrhiza*, *Bruguiera parviflora*, *Bruguiera cylindrica* and *Bruguiera sexangula*. Further upstream, where the water is not so brackish, nipa palm (*Nypa fruticans*) may form extensive and dense stands that are major sources of roofing materials in coastal areas.\*

Below are estimate for year 2000 that has been calculated applying FRA 2000 (FAO, 2001) annual mangrove forest cover change rate for 1990-2000 (-1.4 percent) to the most recent, reliable figure.



Graph 1-National Area Mangrove Estimates, FAO 2001

### 3.2 Ecological Importance of Mangrove Habitat:

The mangrove tree is a halophyte, a plant that thrives in salty conditions. It has the ability to grow where no other tree can, thereby making significant contributions that benefit the environment. Their coverage of coastal shorelines and wetlands provides many diverse species of birds, mammals, crustacea, and fish a unique, irreplaceable habitat. Mangroves preserve water quality and reduce pollution by filtering suspended material and assimilating dissolved nutrients.

The tree is the foundation in a complex marine food chain and the detrital food cycle. The detrital food cycle was discovered by two biologists from the University of Miami, Eric Heald & William Odum, in 1969. As mangrove leaves drop into tidal waters they are colonized within a few hours by marine bacteria that convert difficult to digest carbon compounds into nitrogen rich detritus material. The resulting pieces covered with microorganisms become food for the smallest animals such as worms, snails, shrimp, mollusks, mussels, barnacles, clams, oysters, and the larger commercially important striped mullet. These detritus eaters are food for carnivores including crabs and fish, subsequently birds and game fish follow the food chain, culminating with man.

\*FAO, UNEP. 1981. *Tropical Forest Resources Assessment Project, Forest Resources of Tropical Asia*. FAO, UNEP, 475 pp.

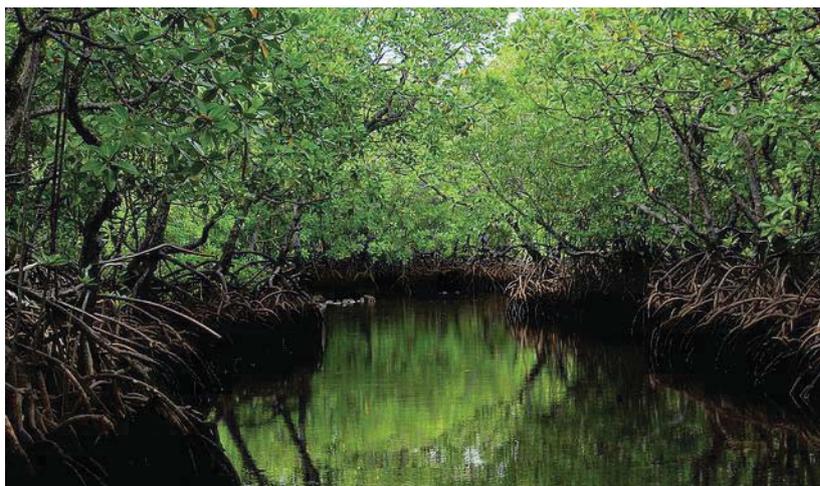


Fig. 2. Rasa Island Wildlife Mangrove Sanctuary.

Many of these species, whose continued existence depends on thriving mangroves, are endangered or threatened. It has been estimated that 75% of the game fish and 90% of the commercial species in south Florida rely on the mangrove system. The value of red mangrove prop root habitat for a variety of fishes and invertebrates has been quantitatively documented. Data\* suggest that the prop

root environment may be equally or more important to juveniles than are sea grass beds, on a comparable area basis. Discovery of the importance of mangroves in the marine food chain dramatically changed the respective governmental regulation of coastal land use and development.

Despite increasing awareness regarding value and importance, the destruction of mangrove forest continues to take place in many parts of the world under a variety of economic as-well-as political motives. In some areas, mangroves are protected by law but a lack of enforcement coupled with the economic incentive to reclaim land can result in deliberate destruction. Escalating pressure on mangrove populations and increasing quantities of pollutants reaching coastal and intracoastal waters has brought new interest in the importance of mangroves to a healthy marine ecology. The beneficial effects mangroves have on the marine ecology include:

- Basis of a complex marine food chain.
- Creation of critical habitat for fisheries and coastal bird populations.
- Establishment of restrictive impounds that offer protection for maturing offspring.
- Filtering and assimilating pollutants from upland run-off.
- Stabilization of sediments and protection of shorelines from erosion.
- Water and atmospheric quality improvements.
- Contribute to the health of coral reefs.

## 4. RESULTS

### 4.1 SITE ANALYSIS:

### 4.2 Macro Analysis

Quezon Province, Philippines:

The province was named after Manuel L. Quezon, the second President of the Philippines, and its capital is Lucena City. Quezon City . The sixth largest province in

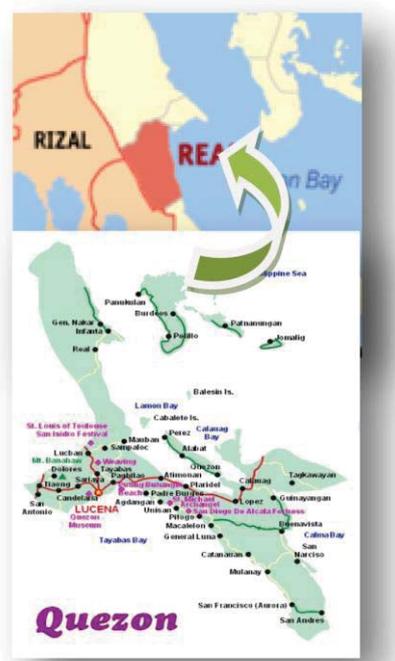


Fig. 3. Quezon Map. Google

\* <http://mangrove.org/video/mangroves.html>

the Philippines, is located in the CALABARZON Region . It has boundaries extending as far as the province of Aurora in the North and Camarines Norte in the South. It is bounded on the north by the province of Aurora, on the west by the provinces of Rizal and Laguna, on the southwest by the province of Batangas, and on the southeast by Camarines Norte and Camarines Sur. Tiaong, its first town via the Manila South Road is about 89 kilometers from Metro Manila, while Lucena City, the capital of the province, is about 137 kilometers by road and 133 kilometers by railroad. The total land area of Quezon is 870,660 hectares or 8,706.60 square kilometers representing the largest in the region (53.63%) and the sixth largest in the Philippines accounting for 2.96% land area share. Quezon Province has the longest coastline of all the provinces in the Philippines extending 310 kilometers from Gen. Nakar, Quezon to Cauyan, Quezon. It has forty (40) municipalities and one (1) highly urbanized city, Lucena, which is also its capital. Quezon has a total of 1,242 barangays that is administratively divided into four (4) congressional districts. It has a population density of 2.16 person per hectare or 216 persons per square kilometer thereof.\*

### 4.3 Micro Analysis

#### 1. DEMOGRAPHY DATA

As shown in the table below, the municipality of Real will continue to increase its population in the succeeding years. The 2000 population of 30,684 was increased to 33,073 in 2007 with an overall population annual growth rate of 1.04% in seven (7) years and will continue to rise up to 39,893 on 2017 as projected. Some barangay yielded a negative result in their annual population growth rate. The 2004 calamity in the locality is one of the reasons of such decline in the locality's population that triggers domestic migration to neighboring barangay and/or municipalities. The lives that such calamity claimed were also considered as one of the factors of populace decline. Hence, most of the barangays that has negative annual population growth rate has in it major river(s) or located in the mountainous area of the municipality where the calamity strike hard.\*\*

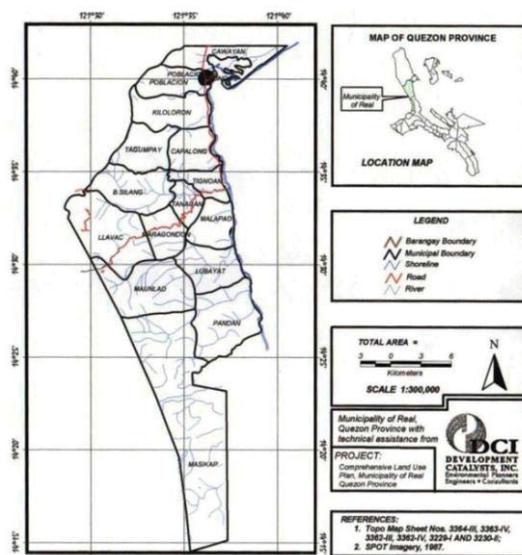


Fig. 3. Real Demography Data by DCI Devt.

#### 2. POPULATION DISTRIBUTION

The total population of the municipality of Real, Quezon is 33, 073 as of 2007 as per the 2007 survey of National Statistics Office. There are 12, 070 residing in urban barangays, namely: Brgy. Pob 1, Brgy. Pob 61 and Brgy. Ungos, while 21,003 people lives in rural barangays which includes the barangay of Bagong Silang, Capalong, Kiloloron, Llavac, Lubayat, Malapad, Maragondon, Masi kap , Maunlad, Pandan, Tagumpay, Tanauan and Tignoan. Similarly there are 24,460 people lives in coastal barangays while 8, 613 lives in upland barangays. Eleven of this barangay are located within the Pacific Ocean coastline.

\* Macro & Micro Analysis taken from the Municipality of Real, Quezon/Engineering Office.

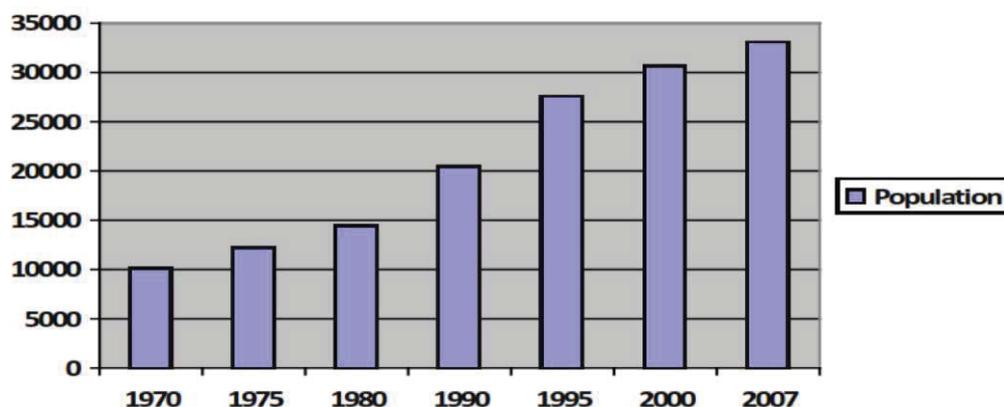
TABLE 1

POPULATION, POPULATION ANNUAL GROWTH RATE & POPULATION PROJECTION BY BARANGAY

Name of Barangay	NSO Population Survey		Annual Growth Rate* (%)	Projection* 2017
	2000	2007		
Bagong Silang	376	894	13.17	3,081
Capalong	1,713	1,949	1.86	2,344
Cawayan	1,571	2,074	4.05	3,084
Kiloloron	2,128	1,902	-1.59	1,620
Llavac	2,646	2,616	-0.16	2,574
Lubayat	977	1,077	1.40	1,238
Malapad	939	1,030	1.33	1,176
Maragondon	1,520	1,974	3.80	2,867
Masikap	298	598	10.46	1,617
Maunlad	351	449	3.58	638
Pandan	1,165	971	-2.57	749
Pob. 1	5,321	5,505	0.49	5,779
Pob. 61	2,530	2,516	-0.08	2,496
Tagumpay	538	221	-11.94	62
Tanauan	1,522	1,861	2.91	2,480
Tignoan	3,568	3,387	-0.74	3,144
Ungos	3,521	4,049	2.02	4,944
<b>Total</b>	<b>30,684</b>	<b>33,073</b>		<b>39,893</b>

Source: 2000 and 2007 NSO Census  
\*See annex for population projection formula and computation

Population growth Real of Quezon.



### 3. HOUSEHOLD \*

Based on NSO Census of 2007, there are 7,029 households in the municipality of Real, Quezon. 2,700 of these household are either owned or being amortized and 555 of which are being rented. There are 3,458 that are being erected in someone's property with the consent of the owner that are rent-free while there are 126 households that deliberately established their houses without the consent of the owner enjoying the occupation of someone's property without rent. There are 190 households that are not reported or don't have any data as per tenure status of their lot in this municipality. Sixty five percent (65%)

Table 2  
Household Population by Age Group and Sex

AGE GROUP	MALE	FEMALE	BOTH SEXES
Under 1	465	417	882
1 - 4	1,691	1,567	3,258
5 - 9	2,078	2,100	4,178
10 - 14	2,255	2,137	4,392
15 - 19	1,941	1,663	3,604
20 - 24	1,366	1,262	2,628
25 - 29	1,199	1,193	2,392
30 - 34	1,149	1,063	2,212
35 - 39	1,153	1,020	2,173
40 - 44	1,017	891	1,908
45 - 49	829	633	1,512
50 - 54	644	558	1,202
55 - 59	460	467	927
60 - 64	274	300	574
65 - 69	263	273	536
70 - 74	148	184	332
75 - 79	73	106	179
80 and over	57	103	160
<b>0 - 17</b>	<b>7,758</b>	<b>7,321</b>	<b>15,079</b>
<b>18 and over</b>	<b>9,304</b>	<b>8,666</b>	<b>17,970</b>

Source: NSO Census 2007

\*Population & Household Census by NSO.

of this households are located along the shorelines and river bodies.

#### 4.4 Disaster Caused by Typhoon Winnie due to Mangrove deterioration:

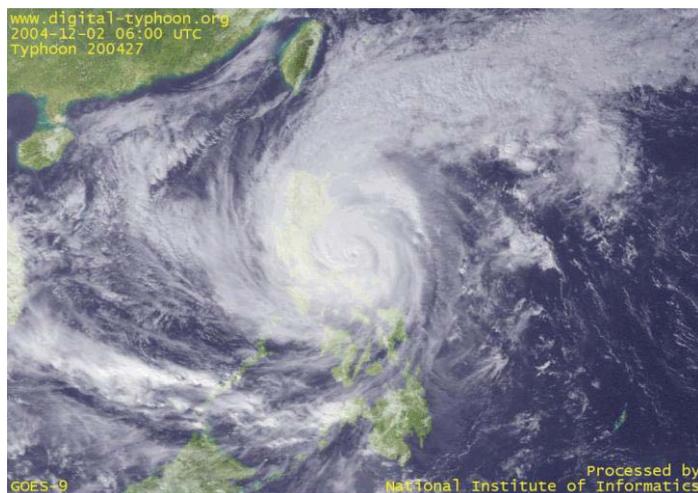


Fig. 4. Digital Typhoon Data from Institute of Informatics.

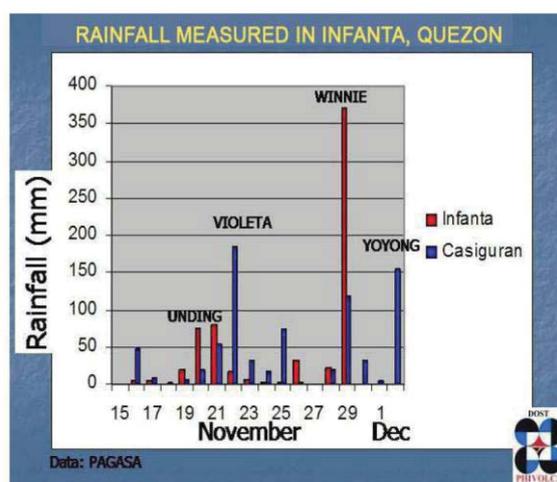
The formal announcement by the UN International Panel on Climate Change (IPCC) in 2007 that scientifically validated the role of man on global warming and its impact on climate change was an “inconvenient truth” that many people especially in developing countries, including the Philippines, have been experiencing for years before the IPCC panel’s dramatic announcement. The reality of global climate change’s effect to local communities such as storm surges, rising flood waters, droughts and flashfloods and the human and

physical catastrophe it brings to a community is a very vivid and harrowing experience to the people.

Real Quezon was blessed by abundant natural species and organisms that are found in diverse habitats from its marine and fresh waters, to its various types of terrestrial habitats including its mangrove forest to the lowland primary forests, to the vegetation in its mountains, but due society’s activities particularly to the over collection of natural resources, the town’s biodiversity was deteriorated. This deterioration causes natural calamities, remarkably the tragedy happened in 2004 because of the unexpected great flash flood, water surge and landslide due to typhoon Unding, Violeta, Winnie and Yoyong that killed 114 people, buried houses, buildings, and roads, and left tremendous disaster to the town.

From 16 November to 03 December 2004, the people of Real along with the neighboring towns of Infanta and General Nakar, that comprise what is called the REINA district (Real, Infanta and General Nakar) in the province of Quezon, suffered what local climate specialist called as a ‘freak of nature’. During that fateful period, Puerto Real and its neighbors suffered the onslaught of 4 typhoons surges (locally named Unding, Violeta, Winnie and Yoyong) that unleashed torrential rains, waves and floodwaters throughout the 18-day period. But the most devastating day that perpetually etched in the minds of the people of Real and the rest of the towns of Infanta and General Nakar was 29 November 2004.\*

Typhoon Winnie (international codename Nanmadol), the 3rd weather disturbance to hit the area, poured down almost 342mm of rainfall in a single day<sup>3</sup> and more than 20 million cubic meters of mud from mountains and 3 meter high floodwaters into the REINA area. The amount of rainfall received by Real and its environments on that single day was more than what historically would fall in Real over the last 50 years.



Graph 2. Rainfall During 2004 Typhoon

\*The Philippine Weather Bureau estimated that a total of 342 mm of rainfall that fell at the REINA area on 29 November 2008. The intensity of this rainfall was equivalent to 15 day rainfall that normally falls in the area for the entire month of November in previous year.

#### 4.5 Casualties and Damages:

A total of 176 casualties (12 were recovered dead bodies, 53 missing persons and at least 11 reported injured) were recorded. Roughly 12,007 households/families were left isolated without any food, water, electricity, communication, and medicine, during the first few weeks of the disaster. Sixteen (11) out of its 17 barangays were severely damaged.

Out of the 5,087 houses that were reported as damaged by the typhoons, 2,047 were totally washed out while 3,040 units were partially damaged. An estimated Php. 103.3 million or US\$ 2.29 million (at US\$1=PhP45) worth of crops, livestock, fisheries/aquaculture products and around Php 300 million or US\$6.67 million of public infrastructures and utilities/facilities were heavily damage if not wiped out. Damages to private properties/businesses and the environment were estimated to have reached billions of pesos.



Fig.5. Mangrove area washed by flashflood.

The root of that landslides and flashfloods were deforestation and the depletion of mangroves forest that control the sea flooding. Portion of those mangroves were in the area of Brgy. Cawayan, where study area is located. That site is composed of mangrove for marine and terrestrial species, these mangrove is important for the ecosystem because it serves as an important buffer between sea and land, act as filtering system, protect costal land, but when the typhoon arrived no mangrove would be able to protect the communities.

#### 4.6 Major Caused of Mangrove deterioration:

#### 4.7 Livelihood Program:

In 1960's due to its economic potential, the government of Real adopted a policy aimed at increasing fish production by converting large areas of mangroves into fishponds for the culture of milkfish and prawns. This policy classified and released mangrove timberland for fishpond development and opened loan to finance fishpond development. This opportunity encourage more fishermen and investors to convert the mangroves to fisheries, by then the mangrove in Real Quezon changed its habitat that causes environmental and social impacts which are shoreline erosion, decline in forest structure and diversity of plant species, decline in fishery, and rising incidence of "fish kill" and "red tide".

It is clear that the government's objective to increase fish production out of mangrove conversion to fishponds was not realized. Instead, it created adverse impacts, such as the loss of significant habitats and biodiversity, loss of fishery value resulting from the decline of the protective and ecological functions of mangroves as an ecosystem.

This dilemma pursue the government's lawmakers enacted Republic Act 8550 otherwise known as Philippine Fisheries Code of 1988 whose section 94 stated that "Conversion of Mangroves. It



Fig. 6 -<http://www.wwfpacific.org.fj/?201500/mangroves-protect->

shall be unlawful for any person to convert mangroves into fishponds or for any other purposes." And by then the municipality of Real Quezon also made a move by creating an ordinance that will protect their mangrove through Art.5

Sec 11 2.5 from Zoning Ordinance of Real Quezon 2002-2022, it stated that rehabilitation, restoration and protection of mangrove areas shall be actively pursued.

But these laws are not enough to bring back the richness of its biodiversity and to totally stop the community's activities that harms the habitat as well the species in the mangrove of Real Quezon. This needs implementation by offering education to the people the importance of the biodiversity through a park and the actual application of conservation through a landscape architectural solution.

#### 4.8 Illegal Logging:

Another major realization that the people of Real and the rest of the towns in the REINA area was that they have to seriously and determinedly address the rampant illegal logging and destruction of the mangrove forest in the shorelines that surrounds the whole REINA area. Rampant illegal logging and mangrove destruction for agricultural cultivation of upland areas have been constant problems within the area. In fact, the towns other forest products coming from the forest of Aurora and Isabela.

Despite a total log ban policy already imposed in the areas, rampant poaching remains. The deadly effects of the denudation and destruction of the Sierra Madre mountain ranges and mangrove forest was clearly shown with the devastating effects of the tons of felled timbers, uprooted trees and millions of tons of eroded upland soil that cascaded as



Fig.7. Illegally cut Mangrove along Barangay, Cawayan.

mudslides into the towns of Real, Infanta and General Nakar. To address this man-made threat, the towns of Real, Infanta, and Nakar in 2006 have formed an inter-LGU forest management council that would serve as coordination and cooperating body that will counter-act rampant illegal logging and protect the remaining forestlands in their upland areas and mangrove forest with strict enforcement of forestry laws and monitoring of illegal activities in their respective areas.

With strong coordination with environment department, local police and military authorities, the council has netted increased confiscations of illegally-cut logs and lumber over the last three years. As of September 2008, local police authorities have confiscated from January 2004 a total of 20,072 board feet (bd ft) of illegal logs and a total of seven (7) loggers arrested. On the other hand, local environment enforcers reported the confiscation of some 19,104 bd. ft of illegal cut logs and timber from June 2007-September 2008. The volume of cut logs confiscated in the last 15 months clearly shows that even after the devastating effect of the November 2004 event there is still a need for strong enforcement of logging laws in the upland areas of Infanta and the REINA area, which unfortunately, is under the jurisdiction of other LGUs.\*

#### 4.9 GOVERNMENT REHABILITATION PROGRAM:

##### 4.10 Executive Order No. 263



Fig. 8. Tree Planting Program in Real-Infanta, Quezon, May 2007.

This executive order launched the country's present national strategy for the rehabilitation of open and degraded open lands, the Community-Based Forest Management (CBFM) Program. This program consolidated previous people-centered forestry programs such as the Integrated Social Forestry Program under LOI 1260 (1982) and Community Forestry Program under DAO 89-123 (1989). Under this program, the task of restoring/ rehabilitating open and degraded forest and mangrove lands

becomes the responsibility of the upland community through its people's organization (PO). The government extends technical and material assistance to these POs to ensure the sustainability of the CBFM project in their hands. The private sector provides the market for the products that will be derived from the production areas of the CBFM projects.\*

The DENR is required to work with local government units (LGUs), people's organizations (POs), non-governmental organizations (NGOs), religious groups, business and industry, and other concerned organizations. The principal participants in the CBFM program are the local communities represented by their people's organizations (POs). To encourage POs to participate in the CBFM program, they are entitled to:

- Usufructuary rights over the improvements introduced in the area;
- Possessory and custodial rights over the CBFM area;
- Over-all management of the CBFM project; and
- Technical and material assistance from the government.

Real-Infanta, Quezon is one of the benefits of this program which started in 2007 - three years after the 2004 typhoon devastation.

#### 4.11 SITE DESCRIPTION

#### 4.12 PHYSICAL DATA

##### a) Location and Land Area

Real is located geographically at 14.7 degrees longitude and 121.5 degrees latitude. It lies 133 kilometers east of Manila and can be reached via the Infanta – Famy Road in two and a half-hours. It is 125 kilometers away from Lucena City, the provincial capital. It can be reached by a three hour motor launch ride from [Polillo Island, or a three hours motor boat ride from Mauban, and a fifteen minute jeepney ride from its mother town of Infanta. Real has a total land area of 56,380 hectares. It is composed of seventeen (17) barangays, eleven (11) coastal and six (6) upland.

##### b) Political Subdivisions

The Municipality of Real is composed of seventeen (17)



Figure 3  
 Land Area per Barangay

Fig.9 Real, Quezon Map per Brgy.

\*DENR,CBFM. <http://forestry.denr.gov.ph/primer.htm>

barangays, of which fourteen (14) are rural while three (3) are urban.

### 4.13 TOPOGRAPHY

The municipality of Real, Quezon is characterized mostly by mountainous terrain and sloping areas where flat surfaces of land rarely exceeds 10 has. in one area. It is the gateway to REINA cluster of municipalities blessed with abundant sunshine from the eternal horizons of the Pacific Ocean. Lowlands are being used for agriculture, mainly coconuts, and settlement areas. While highlands are still protected as forest reserves but there are sections that are being utilized as settlement areas and highland agricultural areas. One of the major advantages of this municipality is its proximity to Pacific Ocean. It provides the populace to take advantage of its broad fishing area and its estuarine environment. With its long line of beaches, tourism is also promising aspect this municipality is developing. It also has eighteen (18) rivers and 4 creeks that serve as the main source of fresh water in the locality. Most of these rivers have in it at least two (2) majestic falls that attract many local and foreign tourists.\*

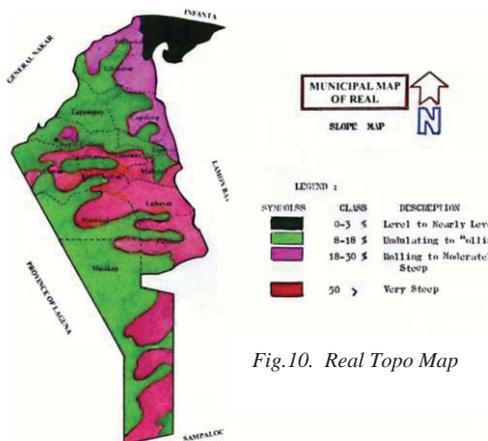


Fig.10. Real Topo Map

### 4.14 SOIL DESCRIPTION

- SOIL TYPES

Based on the report of the Bureau of Soils for the province of Quezon, the municipality of Real has four (4) types namely; Antipolo Sandy Clay, Alaminos Clay, Hydrosol, and Mountain Soil (undifferentiated).

Table 3.  
Soil Type Distribution

CODE NO.	SOIL TYPE	AREA (HAS.)	CHARACTERISTICS
912	Antipolo Sandy Clay	27,080	a. Light reddish brown to almost red finely granulated clay. Depth 2-30 cm. b. Reddish brown, friable clay with fine spherical concretions. Depth 50-90 cm. c. Reddish brown to light brown coarse granulated with numerous iron concretions.
166	Alaminos Clay	5,900	a. Pale reddish brown, reddish brown to brick red loam. Depth 20-25 cm. b. Same as surface soil, clay loam. Depth 40-100 cm.
1	Hydrosol	900	a. Found along the coast
45	Mountain Soil	22,500	
<b>TOTAL</b>		<b>56,380</b>	

Source : Municipal Agriculture Office

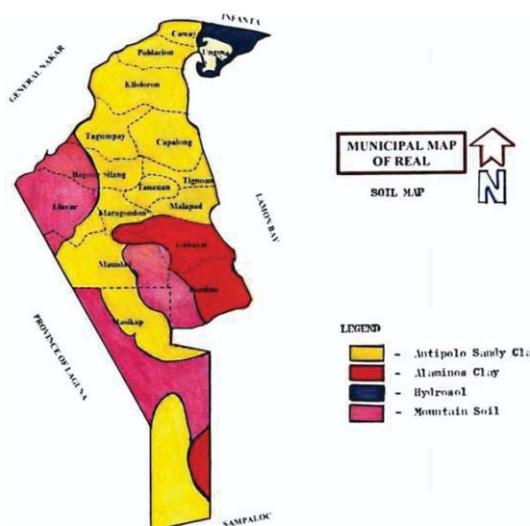


Fig.11. Real, Quezon Soil Map

\* Physical Data, Topo Map & Soil Type Map from Real Engineering Office.

#### 4.15 On-Site Photo Sampling and Documentation.

Note: the following data are from a related thesis that studied the mangrove of real-infanta mangrove.

##### LIVELIHOOD FROM MANGROVE

This data will present the economical importance of the mangrove to the community of Real Quezon which shows the need of its consideration for this study.

PHOTOS	USES OF THE REAL MANGROVE FOREST	DESCRIPTION
	<p><b>Fishing</b> <i>(mamimiwas)</i></p>	<p>The industry of fishing is the main livelihood that mangrove forest brings for the community. Mangroves are important nursery areas for fishing industry.</p> <p>Conversion of mangrove into fishponds remains the major cause in the loss of mangrove.</p>
	<p><b>Shrimp Catching</b> <i>(maninima)</i></p>	<p>Mangrove areas were abundant with natural shrimp. Shrimp farming is common in community's livelihood where farms generally can produce two to three crops per year. Typically, a farmer will create an impoundments ranging in size from a couple hectares to over a hundred hectares along tidal rivers or estuaries. The pools will be stocked with either wild shrimp larvae (captured from surrounding waters) or shrimp larvae from hatcheries elsewhere. Juvenile shrimp feed on naturally occurring plankton and microorganisms (the growth of which may be encouraged with organic or chemical fertilizers) and are kept in growout ponds until they reach marketable size.</p>

\*[http://www.worldfishcenter.org/resource\\_center/WF\\_2465.pdf](http://www.worldfishcenter.org/resource_center/WF_2465.pdf)



**Net Fishing**

*(mamanti or maglalambat)*

It is done by drive-in net. It is a dustpan-shaped net, resembling a trawl net with long wings. The front part of the net is laid along the seabed. The fishermen either wait until a school swims into the net, or they drive fish into it by creating some sort of commotion. Then the net is closed by lifting the front end so the fish cannot escape.



**Fuel wood gathering**

*(mangangahoy)*

Fuel wood from mangrove is gathered in order to obtain charcoal that is used for industrial needs especially for the heating of tuba and production of lambanog.



**Lambanog making**

*(nag-aalak)*

The lambanog from Real Area came from the juice of “sasa” or called “tuba“ which found in its mangrove forest. “Tuba” contain small amount of alcohol such that a 30 gallons of it can produce 5 gallons of more or less 30% alcohol of wine or lambanog. The fist few liters of “Tuba” which came from “sasa” tastes sweet and can be cooked to produce a honey. “Tuba” can also be fermented such that it became a vinegar. But the main product of tuba is wine or lambanog.



**Nipa shingles making**

*(magpapawid)*

Stitching up nipa shingles to a slate of bamboo is a source of income for the women of the community. Leaves are from the nipa trees that grow abundantly in the mangrove forest of Real.

\*[http://www.worldfishcenter.org/resource\\_center/WF\\_2465.pdf](http://www.worldfishcenter.org/resource_center/WF_2465.pdf)

EXISTING FLORA DIVERSITY OF REAL QUEZON'S MANGROVE FOREST

PHOTOS	SCIENTIFIC NAME	COMMON NAME
	<p><i>Acrosticum aureum</i> L. Blume</p>	<p>Lagolo</p>
	<p><i>Aegiceras corniculaum</i> (L.) Blaneo</p>	<p>Saging-saging</p>
	<p><i>Aegiceras floridum</i> Roem &amp; Schult</p>	<p>Tinduk-tindukan</p>
	<p><i>Avicennia marina</i> (Forsk.) Vierh</p>	<p>Bungala</p>
	<p><i>Avicennia marina</i> (Forsk.) vierh.  <i>Var. rumphiana</i> (Hallier) Bakh</p>	<p>Piapi</p>

\*\*Statistical Data Source: Tomlinson (1986) Philippine Mangrove Biodiversity

	<i>Avicenna officinalis</i> L.	Api-api
	<i>Bruguiera cylindrica</i> (L) Blume	Pototan lalake
	<i>Bruguiera gymnorhiza</i> (L) Lamk	Busain

## II. Secondary Data

### Statistical Data

Secondary data is consisting of statistical data that are used to summarize or describe the data collected. It is useful in presenting the condition of the subjects that are related to this study. \*

**Table 1. Flora The principal species of mangrove plants**

Family	Genus	Number of species	Plant form
<b>Major components</b>			
Avicenniaceae	<i>Avicennia</i>	8	Tree/Shrub
Combretaceae	<i>Laguncularia</i>	1	Tree/Shrub
	<i>Lumnitzera</i>	2	Tree/Shrub
Palmae	<i>Nypa</i>	1	Palm
Rhizophoraceae	<i>Bruguiera</i>	6	Tree
	<i>Ceriops</i>	2	Tree/Shrub
	<i>Kandelia</i>	1	Tree/Shrub
	<i>Rhizophora</i>	8	Tree
Sonneratiaceae	<i>Sonneratia</i>	5	Tree/Shrub
<b>Minor components</b>			
Bombacaceae	<i>Camptostemon</i>	2	Tree
Euphorbiaceae	<i>Excoecaria</i>	2	Tree/Shrub
Lythraceae	<i>Pemphis</i>	1	Tree/Shrub
Meliaceae	<i>Xylocarpus</i>	2	Tree
Myrsinaceae	<i>Aegiceras</i>	2	Tree/Shrub
Myrtaceae	<i>Osbornia</i>	1	Tree/Shrub
Pellicieraceae	<i>Pelliciera</i>	1	Tree
Plumbaginaceae	<i>Aegialitis</i>	2	Shrub
Pteridaceae	<i>Acrostichum</i>	3	Fern
Rubiaceae	<i>Scyphiphora</i>	1	Tree/Shrub
Sterculiaceae	<i>Heritiera</i>	3	Tree

Source: Tomlinson (1986) Philippine Mangrove Biodiversity

\*Statistical Data Source: Tomlinson (1986) Philippine Mangrove Biodiversity

Candidate grid cells/plots for biodiversity within the Real-Infanta Mangrove Forest

RANK	GRID CELL / PLOT NO.	BIOLOGICAL INDICATOR						SOCIAL INDICATOR						PAI
		Diversity Index (H')	Score (a)	Rarity Index	Score (b)	Wildlife Habitat	Score (c)	Population Pressure (Persons/hectare)	Score (d)	Population Dependency index	Score (e)	Protection Index	Score (f)	
1	496	2.04	0.77	439.61	0.90	BRA	1	10	0.50	58.43	0.74	Agree	1	4.9
2	390	1.97	0.74	489.04	1.00	BRA	1	5	0.27	70.13	0.89	Agree	1	4.9
3	357	2.66	1.00	255.32	0.52	BRA	1	5	0.27	70.13	0.89	Agree	1	4.7
4	472	2.28	0.86	259.25	0.53	BRA	1	5	0.27	70.13	0.89	Agree	1	4.5
5	442	2.28	0.86	223.79	0.46	BRA	1	5	0.27	70.13	0.89	Agree	1	4.5
6	327	2.51	0.94	175.89	0.36	BRA	1	5	0.27	70.13	0.89	Agree	1	4.5
7	331	2.11	0.79	250.21	0.51	BRA	1	7	0.39	55.38	0.70	Agree	1	4.4
8	324	2.06	0.78	199.14	0.41	BRA	1	5	0.27	70.13	0.89	Agree	1	4.3
9	294	2.13	0.80	156.27	0.32	BRA	1	5	0.27	70.13	0.89	Agree	1	4.3
10	291	1.61	0.60	249.66	0.51	BRA	1	5	0.27	70.13	0.89	Agree	1	4.3
11	270	1.08	0.41	439.34	0.90	None	0	19	1.00	74.97	0.95	Agree	1	4.3
12	292	2.24	0.84	112.75	0.23	BRA	1	5	0.27	70.13	0.89	Agree	1	4.2
13	325	2.17	0.81	121.65	0.25	BRA	1	5	0.27	70.13	0.89	Agree	1	4.2
14	330	2.08	0.78	165.16	0.34	BRA	1	7	0.39	55.38	0.70	Agree	1	4.2
15	361	2.15	0.81	47.47	0.10	BRA	1	10	0.50	58.43	0.74	Agree	1	4.1
16	470	2.06	0.78	80.89	0.17	BRA	1	5	0.27	70.13	0.89	Agree	1	4.1
17	360	2.14	0.80	47.20	0.10	BRA	1	5	0.27	70.13	0.89	Agree	1	4.1
18	260	1.66	0.62	130.19	0.27	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0
19	415	1.83	0.69	96.34	0.20	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0
20	414	2.14	0.80	40.50	0.08	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0
21	416	1.54	0.58	145.60	0.30	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0
22	389	2.04	0.77	48.07	0.10	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0
23	245	1.76	0.66	199.18	0.41	None	0	19	1.00	74.97	0.95	Agree	1	4.0
24	227	1.77	0.67	89.15	0.18	BRA	1	5	0.27	70.13	0.89	Agree	1	4.0

Table 4. Biodiversity Indicators. Real-Infanta Mangrove Forest. Source. DENR.

It showed that more than a third or 37.58% of the Real- Infanta Mangrove Forest has already been converted into fishponds for aquaculture.\*

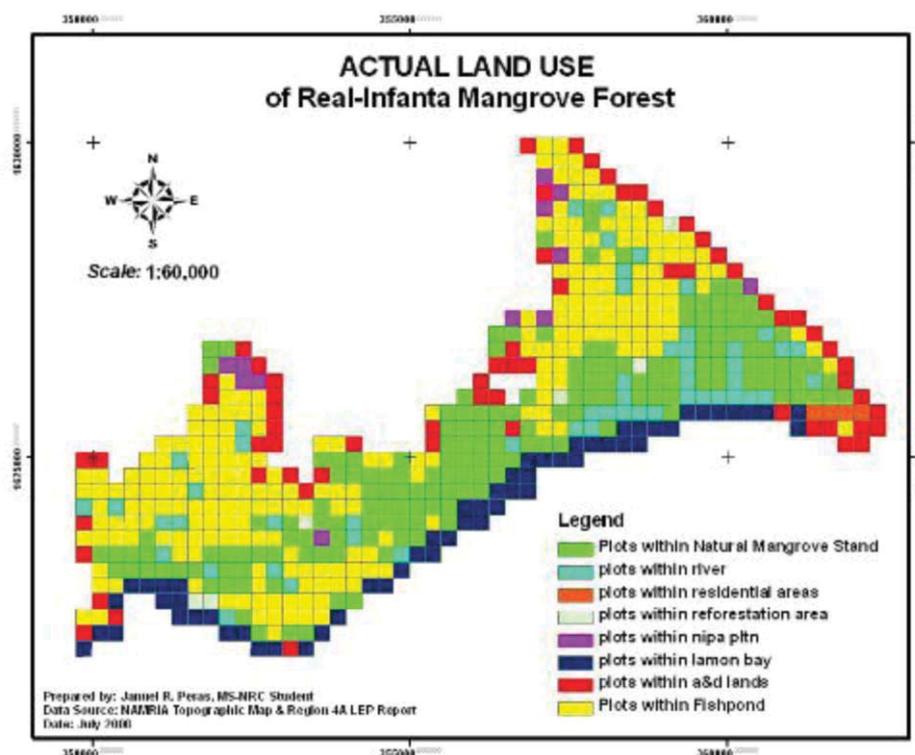


Fig. 12.. Present Land Use of Real-Infanta Mangrove Forest. Sources. NAMRIA

\* <http://www.namria.gov.ph/>

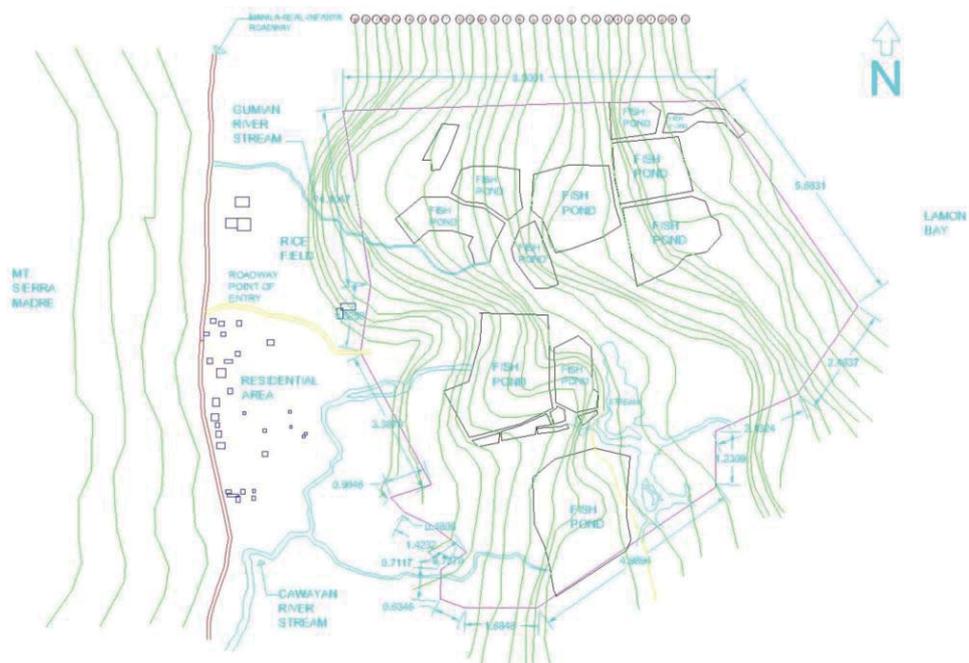




- **DIMENSIONS OF THE SITE**



- **TOPOGRAPHIC MAP**



\* <http://www.namria.gov.ph/>

## 5. CONCLUSION AND RECOMMENDATIONS

Mangrove forests are one of the most severely threatened and undervalued ecosystems on Earth. They provide a wide variety of ecosystem services currently valued globally at US\$1.6 billion. For many coastal communities in the Philippines, mangrove ecosystems provide livelihoods, essential sources of protein and coastal protection. Compelling evidence suggests that mangroves play an important role in climate stabilisation, possessing a carbon storage and sequestration potential considered to be greater than that of tropical forests.

Mangroves are being cleared at an alarming rate and there are numerous threats to these forests, including; land development, pollution, deforestation for fuel and climate change. The last IUCN assessment highlighted that more than one in six mangrove species are currently under threat of extinction.

After the November 2004 disaster, many people had speculated that it would take a long time or at least ten (10) years before the town of Real, Quezon could rise and recover from the havoc brought by the landslides and flashfloods. But after three (3) years, the town has managed to rehabilitate, repair and make functional all its municipal roads, bridges and other infrastructures that were damaged by the disaster. This was done through prudent fiscal management and maximization of the LGU's budgetary outlays plus continuous efforts by the citizenry to support the rehabilitation and recovery of the town.

Likewise, as a result of its CBFM programmed, the municipality was able to prevent any major damages to life and property when another typhoon, Super typhoon "Reming"4 struck the town anew and the rest of Southern Luzon in December 2006 and a mangrove rehabilitation program.

Real\_Infanta, Quezon started its mangrove rehabilitation work in 2007 through the Community-based Mangrove Rehabilitation Project (CMRP), with the aim of increasing coastal protection, food resources and diversifying livelihood options. This was achieved through empowering local communities to protect remaining mangrove forests and developing science-based methods for communities to rehabilitate lost forest sites. Over a four year period, close to 100,000 mangroves were planted, with the rehabilitation of 107.8 hectares of mangrove forest well underway.



*Fig. 13. Zhuhai Qi'ao Mangrove Wetland Park*

It is recommended that an integrated biodiversity conservation-development projects for Real Town Mangrove forest must be develop as a way of reducing the land use pressure on protected areas such as parks and preserves while assisting local populations. The objective is to provide people with sustainable, income generating opportunities and protection against incoming

calamities. This can be achieved by (1) Purchasing additional land or negotiating for the use of land for mangrove farming, and (2) setting up buffers around protected lands.

In planning a biodiversity parks, the goal to achieve this is to develop a new design approach that promotes conservation which will manage mainly for mangrove ecosystem protection and recreations that excluded exploitation and will provide a foundation for physical, recreational, economical, social, and educational system all of which must be environmentally and culturally compatible. The following design is recommended.



Fig. 14. Proposed Landscape Board for Puerto Real biodiversity Conservation Park.

Through considering the data presented in the previous chapters and the identification of needs, it provides recommendation which will help gaining the proper approaches in creating a well design conservation park for the mangrove forest of Real Quezon. It seeks to provide guidelines of ways and solutions from analyzing the data gathered in this study.

These recommendations are gathered and consider in expectation to answer and aid the deterioration, to restore and conserve the diversity of the mangrove forest of Real Quezon.

### Economic Stability

- Recommended to involve the modern methods in using mangrove as livelihood that will not harm its diversity such as Aquasiviculture and Prawn Farming Systems.
- Consider every livelihood from mangrove by providing areas for it.
- Propose income generating services such as boating and other activities that will provide employment and income for the local community.
- Develop a conservation park that is unique and will attract tourism to the town.

### Promoting Education

- Recommended to apply the Mangrove Forest Nature Trail with in the forest with species that are identified through interpretative information of description in every species seen.
- Provide areas for orientation and seminars about conserving the biodiversity of mangrove forest.
- Provide

areas per livelihood that will show the process of producing products from mangrove that will educate every visitor.

### Social Oriented

□ The site must offer special activities that will attract tourist such as kayaking along extreme river, fish feeding, canopy viewing deck, boardwalks and suspension bridges, floating bamboo raft, mangrove seedling for on-site planting. □ Set a place that will draw interest of any age range of visitors, proving activities that will suit in their own different interests.

### Landscape Architectural Design

□ Recommended to provide zoning of mangrove forest and create proper land-use of a park. □ The proper location and sun orientation every passive and active activities. □ The proper connection of every structure to each other □ Using sustainable materials that could be found and produce along the site. □ Consider the natural state of the site which is the primary form of conservation.

An important aspect of sustainable development is emphasizing community-based tourism. This approach to tourism focuses on community involvement in the planning and development process, and developing the types of tourism which generate benefits to local communities. It applies techniques to ensure that most of the benefits of tourism development accrue to local residents and not to outsiders. Maximizing benefits to local residents typically results in tourism being better accepted by them and their actively supporting conservation of local tourism resources.



Fig. 15. Proposed Master Plan for Puerto Real Mangrove Biodiversity Park

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Mr. Ron Crisostomo – Municipal Planning and Development Coordinator, Infanta, Quezon  
Ms. Armi Marquez - Municipal Public Information Office, Infanta, Quezon  
Ms. Pamela Grafilo – Programme Manager, Galing Pook Foundation

## **The Black-faced Spoonbill in Xinghua Bay, China: A Catalyst for Responsible Development**

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### **Abstract**

In 2016, SAVE International (SAVE) worked with a research team from the University of California, Berkeley, and Chinese scholars, to study the economic, environmental, and political factors around Xinghua Bay, which is part of the 2015-2030 Fuzhou New Area Plan. This plan seeks to attract 180,000 new residents and develop new roads and buildings by filling large swaths of the bay and destroying many of the villages, farms, historic sites, and wetlands, including rich tidal mudflats that support many species of migratory birds. Among these birds is the endangered Black-faced Spoonbill (*Platalea minor*), which has inspired SAVE's work in planning and advocacy since 1997. SAVE's successes have highlighted the importance of science in designing sustainable ecosystems and communities, especially in quickly urbanizing settings. The Black-faced Spoonbill's population is not yet self-sustaining and these birds need more places to live, but their coastal habitat throughout the East Asian-Australasian Flyway is facing threats from development that does not value wetlands or local cultures. SAVE's team proposed alternatives to the Fuzhou plan: protect wetlands under the Ramsar Convention, preserve historic sites, adapt agriculture and aquaculture to

sea-level rise, balance industry with the health of the bay, develop in less sensitive locations, foster tourism with a new regional scenic route, and empower citizens against a one-sided planning process. SAVE asks for advice from Pacific Rim designers who have changed the course of governmental development plans, and who have created plans with communities that sustain their livelihoods and manage their natural resources locally.

Keywords: alternative development, black-faced spoonbill, cultural preservation, sea-level rise, wetland preservation

## **Introduction**

The landscape around Xinghua Bay (Fujian Province, China) includes traditional villages, farms, fishponds, and rich tidal mudflats that support migratory birds in great numbers and diversity, including the endangered Black-faced Spoonbill. In recent years, these spoonbills have inhabited Xinghua Bay in numbers that would qualify the site for protection under the Ramsar Convention on Wetlands.

This landscape is vulnerable to dramatic change through state-sponsored plans for development, including the 2015-2030 Fuzhou New Area Plan and the 2012-2030 Blue Economy Industrial Park Plan. The plans would develop new roads, industries, and residences for 180,000 more people on the rural area north of Xinghua Bay, by filling large swaths of the bay and destroying wetlands, productive fisheries, and historic sites, such as canals and small family cemeteries. These plans also seem to ignore the imminent threat of sea-level rise, which would inundate much of the coast, including habitat for migratory birds and the new developments themselves.

The Black-faced Spoonbill has inspired the work of Spoonbill Action Voluntary Echo (SAVE) International in planning and advocacy since 1997. The habitat of this species along the eastern coast of Asia constantly faces threats from developments that disregard healthy wetlands and local cultures. This is true of Fuzhou, where the state-sponsored plans do not follow the principles of community design that SAVE upholds.

In the spring of 2016, SAVE worked with a research team from the University of California, Berkeley, and Chinese scholars, to study the economic, environmental, and political factors at Xinghua Bay and the broader Fuzhou area, and then propose alternatives to the government's plans. Although our research team focused on the lands immediately north of Xinghua Bay, we also looked at the larger ecosystem of the bay, existing assets of

Fujian Province (national scenic areas and reserves, sites for historical and cultural tourism, and transportation infrastructure), and China's role in the global community. Our team developed an alternative plan that would serve both the birds and the neighboring human community to ensure a resilient and sustainable ecosystem. The local residents have not seen this alternative plan yet, but they must get the chance to respond to it and adapt it to fit their own goals and abilities. The resulting work will serve as a catalyst for SAVE's future efforts in China.

This paper reviews the existing conditions at Xinghua Bay, examines the official government plans, proposes alternatives, and suggests a strategy to put the alternatives into action. We seek the advice of, and partnerships with, our fellow Pacific Rim community designers who have changed the course of governmental development plans (especially in China), and who have worked with communities to create more specific plans that sustain their livelihoods and manage their natural resources at a local level.

### **Spoonbills and SAVE**

The Black-faced Spoonbill (*Platalea minor*) is an endangered shorebird that lives along the eastern coast of Asia. These birds migrate each year along the East Asian-Australasian Flyway, between summertime breeding sites along the Korean peninsula, to various wintering locations farther south, including Taiwan, Hong Kong, and southern mainland China. They eat small fish and crustaceans in shallow water, such as tidal wetlands (often called "mudflats"), artificial fishponds, and rice fields. Habitat loss is a major factor in the spoonbills' decline, although disease, poor water quality, and other factors contribute. An international group of census-takers began counting the Black-faced Spoonbill population in the winter of 1989-90, and has done so every January since 1993. From a catastrophic low of around 300 birds in 1989-90, the population has risen tenfold, but the species is still endangered; the 2016 census, organized by the Hong Kong Birdwatching Society along with BirdLife International, counted 3,356 of the birds.<sup>1</sup> As the population continues to grow, they need more places to live. Government agencies or grassroots citizen groups in some countries are trying to preserve habitat, but local authorities do not always enforce the legal protections.

The mission of SAVE International is to prevent the extinction of the Black-faced Spoonbill by working with local, state, and national groups to protect critical habitat throughout the spoonbill's range by direct advocacy and by proposing alternative plans to support local sustainable economies at key sites. SAVE's efforts highlight the importance of science in sustainable planning and design, especially in quickly urbanizing settings. SAVE

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<sup>1</sup> International BFS Census press release, 2016

has had great success in protecting the spoonbill's habitat in Taiwan, but this is SAVE's first project in mainland China.

SAVE's process for land-use planning relies on the 'geometries' of existing successful habitat, depending on the season and location—distances, depths, and other spatial characteristics of the places where the birds roost (rest), feed, or nest. Many spoonbills spend the winter at Xinghua Bay, but others merely pass through and winter farther south. At typical wintering sites, spoonbills use two main habitats: fishponds and mudflats. The fishponds at Xinghua Bay offer the best roosting habitat, and both mudflats and fishponds offer suitable feeding habitats.<sup>2</sup> In general, they prefer roosting sites that are open bodies of shallow water, no deeper than 20 centimeters, approximately 1,500 meters across in any direction, and free of tall plants that could hide predators (see Figure 1). Relatively shy birds, spoonbills are scared by disturbances within 500 to 700 meters of their roosting sites. They can fly several kilometers from their roosting sites to feed—usually less than 3 kilometers, but sometimes up to 8 kilometers at Xinghua Bay.<sup>3</sup>

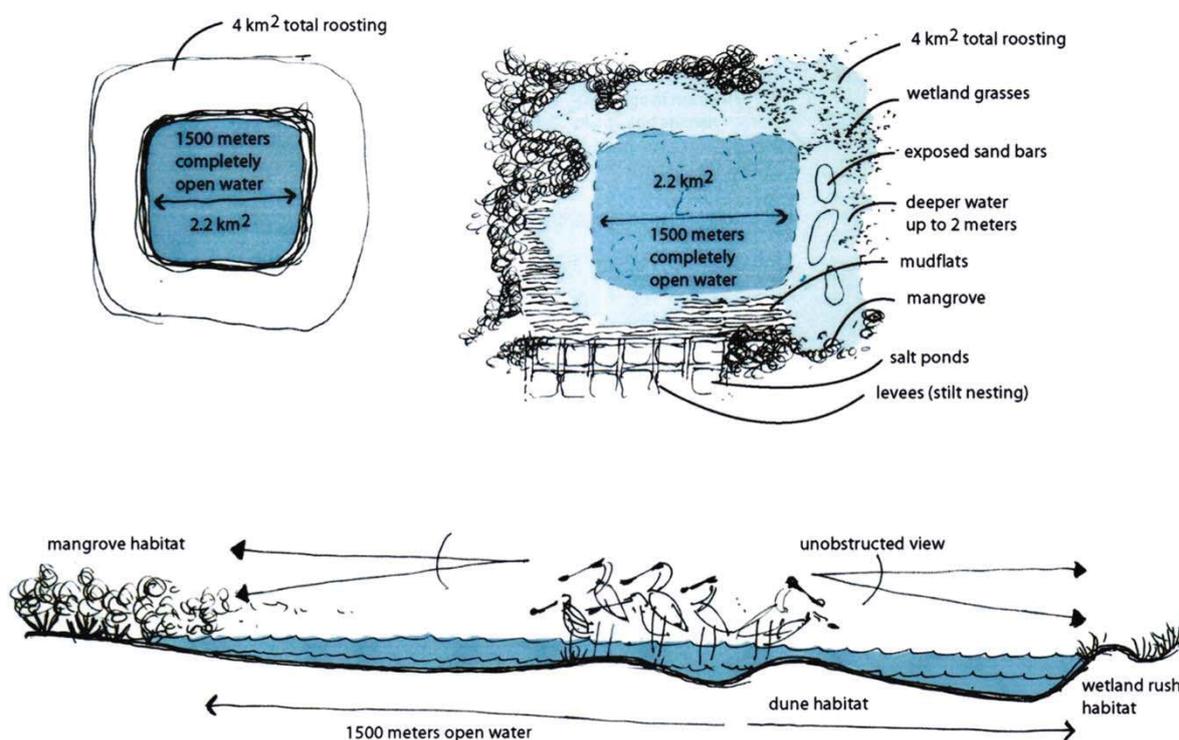


Figure 1. 'Geometries' of Ideal Roosting Site for the Black-faced Spoonbill, by Randolph T. Hester and Marcia McNally

<sup>2</sup> Jin et al., 2009

<sup>3</sup> Jin et al., 2010

## Existing Landscape of Xinghua Bay

The research team studied the existing landscapes and settlements around Xinghua Bay and specifically the northern portion (also called Donggang Harbor or Jiangyin Bay), where the Black-faced Spoonbills have been observed.

Xinghua Bay is an important node in the East Asian–Australasian Flyway, providing habitat for Black-faced Spoonbills and other species considered endangered or vulnerable. It has served as both a migratory stop and overwintering location for spoonbills for at least 10 years. During four years of study ending in 2009, 40 to 60 spoonbills overwintered at Jiangjing Huaqiao Farm, an aquaculture operation on the northern shore of Donggang Harbor, and 130 to 220 stopped at this farm while migrating.<sup>4</sup> Since then, the annual count of spoonbills at Xinghua Bay has varied dramatically: as many as 141 in 2013, but only 10 in 2015, and then 122 in 2016; the low number seems to reflect the intensive filling in their roosting habitat.<sup>5</sup> Nevertheless, the higher numbers represent more than 1% of their world population, so this habitat would qualify as a “Wetland of International Importance” according to the Ramsar Convention on Wetlands.

The Xinghua Bay Provincial Nature Reserve has been proposed to protect this habitat, but the core habitat the birds are using is threatened. Images visible on Google Earth show that fill has already begun in the large fishpond where spoonbills were roosting. Beyond this farm, many areas around the bay that the birds use for roosting or feeding, and people use for aquaculture, are projected to be lost.

The bay itself affects the climate and the character of the lands around it. The bay makes for warm winters and cool summers, but typhoons have become more frequent and more destructive in recent years. The flat terrain supports a vast network of aquaculture: mainly fishponds, as well as farming of mollusks and seaweed. The level of the bay rises or falls five meters in a typical tide, shaping the mudflat habitat around the edges and driving local aquaculture, which harnesses the tidal flows with channels, locks, and levees. Each spring, the seasonal rains bring a flush of freshwater to the bay, but also pollution from upland fields and from fishponds. The polluted state of the bay could undermine any efforts to protect the existing habitat and encourage birds to expand to new habitat nearby.

The wetlands around the bay protect the area from storm surges and provide a variety of environmental benefits, such as endangered-species habitat and water filtration, but they

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<sup>4</sup> Jin et al., 2009

<sup>5</sup> Yu, 2016

are not as extensive as in decades past. A 1960 survey showed more mudflats and shallow waters, as well as natural mangrove forests mainly west of Xinghua Bay. Numerous government-sponsored, large-scale developments have filled or otherwise altered the mudflats, and replaced the mangroves with fishponds. Even since 2008, our research team found that new roads and city growth in one area reduced fishponds by 33%, mudflats by 36%, and mangroves by nearly 100%.<sup>6</sup>

Ironically, the developments that have distorted the shoreline are now threatened by sea-level rise. The 2014 report by the Intergovernmental Panel on Climate Change (IPCC) projected an alarming increase of global mean sea level (GMSL)<sup>7</sup>, and newer studies suggest that the rise may be twice as much and twice as fast.<sup>8</sup> Our research team mapped a rise of 1 and 2 meters above today's average high-tide shoreline. Historical village centers are already on high ground, above the storm-surges of past typhoons, but new plans would put development within 2 meters of current high-tide level. Although people could adapt the aquaculture systems around Xinghua Bay to a rising sea relatively easily—they already rebuild them after typhoons or in response to changes in the consumer market—the new low-lying developments would not fare so well.

### **Recent Regional Plans**

Two planning documents outline the future development of this part of Fujian Province. The Ministry of Housing and Urban-Rural Development and the Ministry of Environmental Protection (national agencies) worked on both documents, but the power to enact these plans lies at the local level. Our research team reviewed the overall plans, and specifically their effect on the north side of Xinghua Bay. These plans aim for the area to compete directly with Taipei, which lies to the east across the Strait of Taiwan, and bring Taiwanese investment back to mainland China. The authors, however, seem to disregard the severe local environmental damage that would ensue, and they do not mention sea-level rise.

#### *2015-2030 Fuzhou New Area Plan*

The 2015-2030 Fuzhou New Area Plan (see Figure 2) intends “to further deepen and broaden the cross-strait exchanges and cooperation [between mainland China and Taiwan] ... [and] to promote the scientific development of Fuzhou.” The plan identifies land-use changes

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<sup>6</sup> The research team observed the recent changes in mudflats and fishponds by analyzing aerial photographs from 2008, 2010, and 2014. Using LANDSAT 4-band imagery, the team classified ponds and mudflat areas by performing a ‘4,3,2’ reordering of the imagery bands, depicting water, hard features, and living vegetation in contrasting colors, and then calculating the area of each type of habitat.

<sup>7</sup> IPCC, 2014

<sup>8</sup> DeConto and Pollard, 2016

that would bring industries, warehouses, harbors, highways, and associated residential and commercial areas. Existing drainage patterns would be reconfigured, and a new grid of development would be overlaid over the existing fish ponds and the mudflats. Along the northern and western edges, parts of the development would be built over existing villages. The Fuzhou government and the Fuzhou New Area Administrative Committee are the local entities that would put this plan into action.

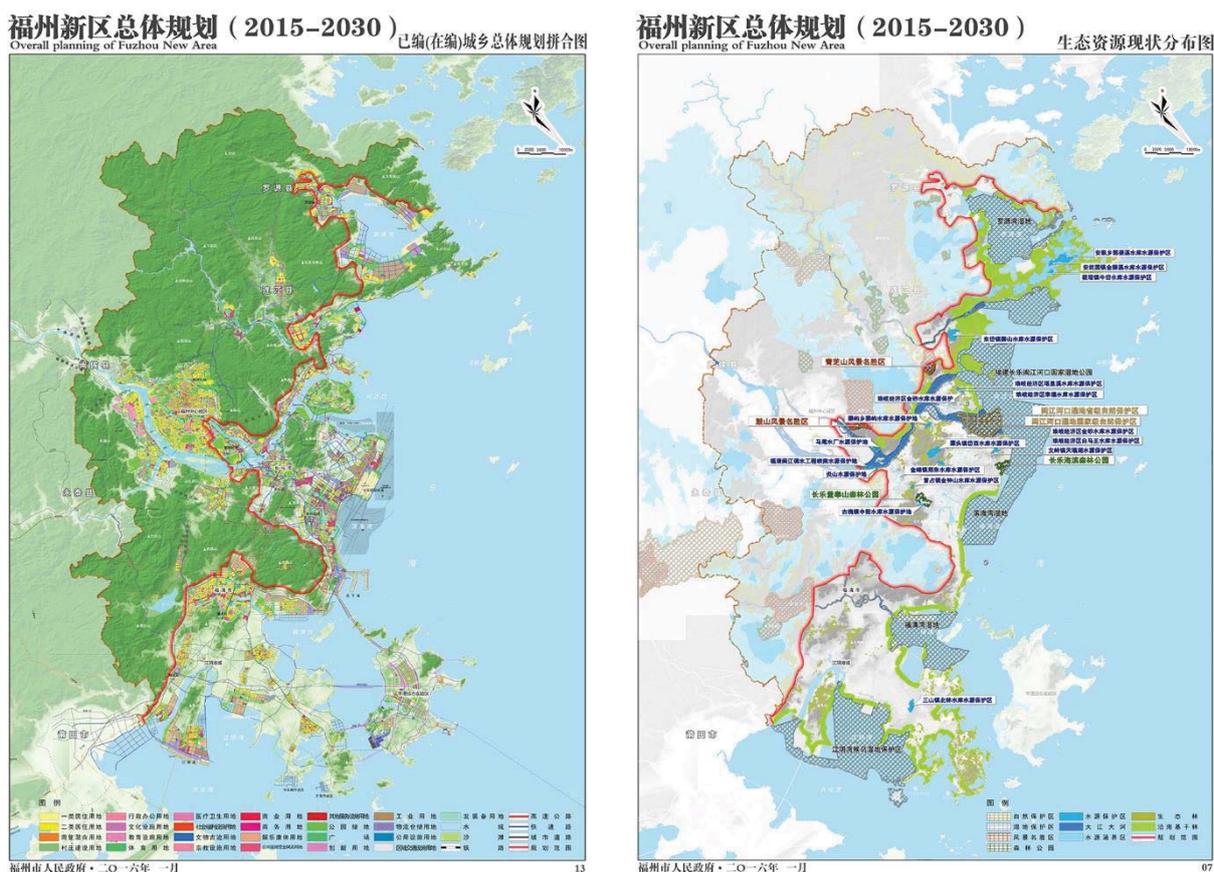


Figure 2. 2015-2030 Fuzhou New Area Plan

The Fuzhou New Area is larger than several well-known metropolitan areas around the Pacific Rim, such as San Francisco, Seattle, and Taipei. Over 12 square kilometers of mudflats along the harbor would be filled for high-density housing and commercial development alongside high-impact industrial plants. The plan seeks to attract 180,000 new residents to the area, drastically affecting the current residents. Although the new development would be oriented around mixed-use urban principles, incorporating canals and green edges, its inherent problems could devastate the larger region’s ecosystem.

The plan identifies “Ecological Resources” (including mudflats and other wetlands, mangroves and inland forests, and reservoirs) and proposes to protect them, but the authors

seem confused or uncoordinated about how to do so. The plan proposes new industry near the wetlands and new highways surrounding them—relations that are not consistent with basic concepts of conservation biology. Even the first phase would obstruct the hydrologic system that supports the fishponds and farms, as well as the sensitive wetland habitats.

### *2012-2030 Blue Economy Industrial Park Plan*

An earlier document, the 2012-2030 Blue Economy Industrial Park Plan (see Figure 3), offered a vision for the area in broader scope and greater detail. Without naming specific companies, it emphasizes attracting Taiwanese investors in various types of marine extraction, desalination, and aluminum refinement. The Fuqing government and the Blue Economic Industrial Park Administrative Committee are the local entities responsible for this plan. Although the full 2012 proposal was not adopted in the 2015 document, the organizing principles and intentions of the 2012 proposal guided it.

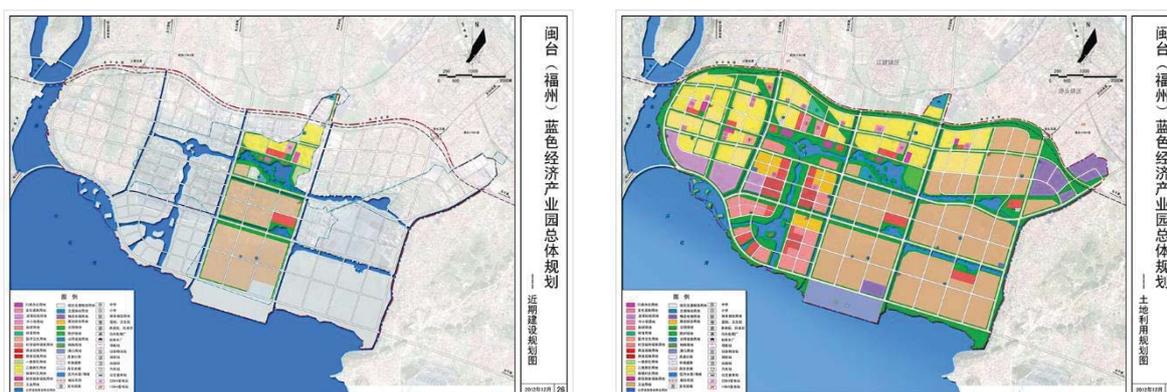


Figure 3. 2012-2030 Blue Economy Industrial Park Plan

## **Environmental Regulation in China**

China is at a crucial point in environmental policy. Since the liberalization of trade in 1979, industrial development and market reforms in China have caused significant local environmental destruction, including soil contamination and erosion, water and air pollution, and habitat loss, and contributed to global effects such as climate change and ozone depletion. Recent attempts to strengthen environmental laws are promising, but some critics fear that these will not be enforceable.<sup>9</sup>

Rapid industrialization of Fujian Province is the product of a national hierarchy that emphasizes economic development. China's administrative system has a pyramid structure,

<sup>9</sup> Ma & Ortolano, 2000

with its point in Beijing and interlinked levels below: state; provinces, autonomous municipalities, special administrative regions or autonomous regions; municipalities or counties; and towns or villages.<sup>10</sup> Since the 1980s, the central Chinese government has aimed to maximize the growth in Gross Domestic Product (GDP) at all territorial levels, and downplayed environmental or social concerns.<sup>11</sup>

In 2015, the Chinese People’s Political Consultative Conference (CPPCC) significantly strengthened China’s existing Environmental Protection Law (EPL), making it “the most progressive and stringent law in the history of environmental protection in China”.<sup>12</sup> It broadly regulates air and water pollution, and increases penalties for environmental offenses. It also offers incentives to develop environmental protection industries, protects whistleblowers, and asserts the rights of citizens to critique or challenge environmental impact reports (EIRs), while also increasing accountability for local governments and agencies to enforce environmental protections.

Many of these regulations could apply to the development in Xinghua Bay and the threat to Black-faced Spoonbill habitat. In particular, Article 29 of the 2015 EPL calls for establishing redline zones in ecologically sensitive areas, rare or endangered types of habitat, or habitat for endangered species. The Marine Environment Protection Law of 1999 also supports protections for coastal habitat. Enforcement of environmental law in China, however, is unreliable, and the penalties do not deter violators from emitting pollution or destroying habitat.

### **Analysis of the Plans and Proposed Alternatives**

Our research team found several ways to improve the ecological and economic resilience over the government's proposals. Xinghua Bay now has an opportunity to become a leader in ecological development and set a precedent for other coastal zones of Fujian Province. Our team proposed the following principles to inform our alternatives:

#### Guiding Principles for SAVE's Alternative Plan

1. HISTORY: Preserve historic village architecture
2. TOPOGRAPHY: Coordinate land use according to topographic character
3. WATER: Preserve hydrologic function by maintaining canals and buffer zones
4. SEA-LEVEL RISE: Build defensible development, not on high-risk land
5. HIGH-VALUE PROPERTIES: Maximize building along canals, around historic

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<sup>10</sup> Rémi, 2014

<sup>11</sup> Rémi, 2014

<sup>12</sup> Zhang & Cao, 2015

neighborhoods, and around the spoonbill reserve to increase high-value properties

6. ACCESS ROADS: Use the new highways to protect development and spoonbill habitat from sea-level rise
7. BUFFER: Use agriculture or canals as a buffer between industry and residences
8. ADJACENCIES: Keep local farms near historic buildings
9. ECONOMIC DIVERSITY: Support multiple economies in industry, ecotourism, and agriculture.

We were skeptical about the projected migration of 180,000 people to Fuzhou, given the failures of other large-scale developments in China. Other new towns have been based on false economic projections, such as the One City Nine Towns plan around Shanghai.<sup>13</sup> In the village of An Ting, for example, almost every house was sold, but far fewer than the projected 30,000 residents actually moved in. There were not even enough children to support the planned kindergarten. These new developments provide a commodity for investment by wealthy Chinese citizens, not homes.

Sea-level rise and other local effects of climate change were another glaring omission from the two planning documents. To prevent future disasters, natural buffers must be retained along the coasts, existing adaptable developments should be maintained, and any new coastal developments should be designed to adapt to the rising sea.

Having explored and researched the context for the plans at the local and regional scales, our research team produced alternative proposals to bridge economic goals with long-term prosperity and health, for both humans and wildlife. The alternatives address four main factors:

- Habitat preservation
- Ecotourism
- Agriculture and aquaculture preservation
- Phytoremediation

Our research team looked especially for mutually supportive interests that could unite their voices to promote the alternative proposals. Protecting the Black-faced Spoonbill, for example, involves many issues that the aquaculture industry would also raise in resisting rampant development.

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<sup>13</sup> Sze 2015

### *Habitat Preservation*

The 2015-2030 Fuzhou New Area Plan jeopardizes the fishpond and mudflat habitat areas most suitable for Black-faced Spoonbills and other birds. Even the area designated for “wetland protection” would not be an effective habitat for migrating or overwintering spoonbills, because it would be too small and too close to roads or industrial land-uses. Changing the development plan could correct this error, and a larger network of reservation sites would be necessary to support Black-faced Spoonbills in this region.

The existing habitat for spoonbills should immediately be protected as a “Wetland of International Importance” (Ramsar Site) under the standards of the Ramsar Convention. Since it joined the Ramsar Convention in 1992, China has designated 49 Ramsar Sites totaling more than 4.1 million hectares.<sup>14</sup> The presence of at least 1% of the population of a species is enough to qualify a site for listing, as is the case with the Black-faced Spoonbill at Xinghua Bay. The Ramsar Site at Chongming Dongtan Nature Reserve, near Shanghai, is an important migratory stop for spoonbills.

Spoonbills and other migratory birds need a network of habitat sites. Google Earth aerial imagery from spring 2016 indicates that parts of the 2015-2030 Fuzhou New Area Plan may already be under construction, so it is especially important to identify and protect other key sites quickly. Our research team identified three other sites nearby (see Figure 4) that are large enough to be a reserve for wintering spoonbills—at least 4 square kilometers in area, as SAVE’s geometries suggest—and then analyzed the feeding habitat, mudflats, and ponds within 8 km of each site (Table 1). None could completely replace the existing habitat, but “Region 2” stood out as a priority; a few spoonbills have already been observed there, it offers the most potential feeding habitat, and it is near the existing reserve, so spoonbills may find it easier to move there.

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<sup>14</sup> “China | Ramsar”

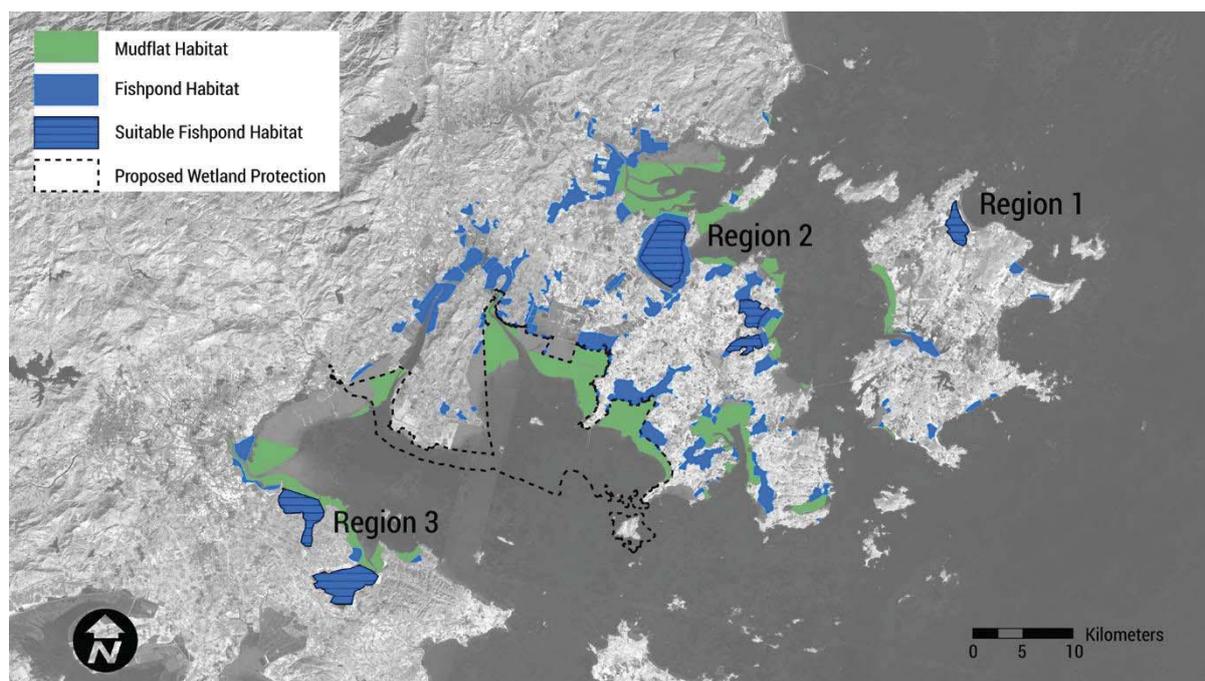


Figure 4. Potential habitat for Black-faced Spoonbills at Xinghua Bay

Table 1. Evaluation of nearby habitat for Black-faced Spoonbills at Xinghua Bay

Location	Spoonbills observed?	Feeding habitat (ha) within 3 km	Feeding habitat (ha) within 8 km
Existing Reserve	Yes	10,100	17,300
Region 1	No	500	1,000
Region 2	Yes	6,300	14,600
Region 3	No	4,100	5,500

*Ecotourism: Scenic Route and Wetland Plan*

Economic development and ecological restoration would not only be compatible around Xinghua Bay, but they would depend on each other for long-term success. An alternative approach to development must protect the assets of the past and address the changing shoreline condition, creating a landscape that succeeds both ecologically and economically. To this end, we propose an ecotourism-oriented Scenic Route, guided by a new Wetland Plan.

Our proposed Scenic Route would connect scenic areas and tourist sites with a rich shoreline. Culture, society, and ecology would be linked and recognized in a manner that stimulates the regional economy and shows the greatness of China to tourists and adventurers.

Planning now for a future landscape that respects the memory of the ancient culture of Fuzhou would be a huge opportunity for the region, but the 2015-2030 Fuzhou New Area Plan completely ignores this opportunity. Ecotourism has been a keystone in sustainable developments around the world and is an expanding market, which could influence regional and national government policies. The presence of a diverse range of birds at Xinghua Bay would depend on good water quality and a healthy ecosystem, and would increase the scenic value of the shoreline.

Our proposed Wetland Plan would encompass the historically extensive mudflats and the areas threatened by sea-level rise. It would protect today's ecologically valuable areas and reserve new areas needed for shoreline protection, according to the geometries of the Black-faced Spoonbill and other migratory birds. It would also reveal the natural beauty and rich resources of the province to local residents and visitors.

China's record of ecotourism is checkered, but the country appears to be learning from its mistakes. Although China has an extensive network of more than 2,000 formally protected Nature Reserves, inadequate funding or poor coordination among the responsible agencies sometimes undercuts actual protection. Many nature reserves try to support themselves by running their own tourism businesses, but they often exclude local people from the economic benefits (such as at the Wolong National Nature Reserve, home to giant pandas)<sup>15</sup> or they disrupt the wildlife habitat with inappropriate recreational uses (such as at the Ordos Relict Gull National Nature Reserve in Inner Mongolia).<sup>16</sup> Nevertheless, China has been seeking solutions to reconcile environmental protection with economic growth,<sup>17</sup> such as undertaking a trial National Park system in nine provinces, with advice from international institutes and experts.<sup>18</sup>

### *Agricultural and Aquacultural Preservation*

Preserving agricultural and aquacultural land would allow China to boost the economic livelihoods of many citizens, protect habitat for endangered species, and make its food system more resilient. Nationally, China has been transforming into an export-oriented economy, more dependent on foreign markets and susceptible to global recessions. Protecting agriculture, though, would let China set its own food prices and follow one of the United Nations Environmental Programme's goals of promoting sustainable agriculture.<sup>19</sup>

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<sup>15</sup> He et al., 2008

<sup>16</sup> Zhang et al., 2008

<sup>17</sup> Liu 2008 and Liu 2009

<sup>18</sup> Wong 2015

<sup>19</sup> "Agenda 21"/UNEP

Fujian province, in particular, has much to lose if it destroys its agricultural land. If the province replaces farms with industries, it will lose the diversity in crops and sophisticated agricultural methods that have been refined over centuries. Many of these practices are associated with ethnic minorities, involve prominent roles for women, and are inherently sustainable.<sup>20</sup>

Although destroying agricultural or aquacultural land would bring some short-term economic gains, protecting the land and promoting appropriate tourism could match those gains over decades or longer. This argument formed the core of SAVE's successful campaign to protect habitat for spoonbills and preserve traditional livelihoods by stopping the proposed Bin-nan Industrial Complex and promoting ecotourism at Chiku Lagoon, Taiwan, in the late 1990s; the Southwest Coast National Scenic Area and the Taijiang National Park have been formed since then, with the spoonbills as a key asset.

#### *Phytoremediation: Sustaining the Health of Xinghua Bay*

Developments since 1959 have nearly destroyed the mangrove forests and significantly reduced the tidal flats around Xinghua Bay, and the Fuzhou New Area Plan continues this unsustainable trend. By contrast, our proposals would preserve the diversity in habitat and aquaculture as a hallmark of Xinghua Bay, keeping the coastline “natural” (but deliberately managed) and protecting the tidal flats.

Improving Xinghua Bay through phytoremediation could be an important solution that works hand-in-hand with aquaculture. Phytoremediation uses plants to remove or neutralize contaminants in water or soil, such as excessive nutrients and heavy metals. Compared to conventional forms of remediation or traditional water-treatment facilities, phytoremediation usually requires less energy and maintenance and generates less waste.<sup>21</sup> Among many different approaches to phytoremediation, three seem best suited to Xinghua Bay: treatment wetlands, seaweed, and mangroves. Our research team devised a few patterns of phytoremediation using landscape forms—mangroves, seaweed farming, low and high marshland, oyster farming, and floating wetlands—and suggested general locations for each, but other designers would have to refine the forms and locations.

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<sup>20</sup> Dean and Zheng 2010

<sup>21</sup> Mannino et al., 2007

### *Three Alternative Proposals for Northern Xinghua Bay*

Consistent among all three of the following alternative proposals is the expansion of the protected habitat area for the Black-faced Spoonbill. The entire watershed east of Donggang Harbor should be designated as a reserve that incorporates both the necessary roosting areas and the traditional farming techniques upstream that maintain the health of the area. Considering the plans at the Xinghua Bay scale, we concluded that the current reserve area only seems expansive, but it does not protect essential fishpond habitat and includes only a small portion of the mudflat areas, which will continue to shrink as sea levels rise.

Another major theme in all the proposals is a more diverse economy with ecological and historic village tourism. If the core village areas and local agricultural areas are protected, this area could become a destination for people who want to see these landscape traditions. At Fuzhou, the combination of history and birdwatching would diversify both the tourism opportunities and the economic opportunities of the area.

#### Alternative A: Urbanized Canals + Inland Industry

This alternative (Figure 5) would direct new development to areas that would be easier to defend from sea-level rise, while protecting mudflats and agricultural traditions, and maintaining the overall hydrologic armature of the site. By aligning the new residential and commercial developments along the canals, the high-value canal-oriented development proposed in the 2015-2030 plan can still be developed, but with better water quality and more likely long-term success. But unlike the 2015-2030 plan, whose proposed main canal corridor would be oriented parallel to the bay and block the flushing of sediment and pollutants, our proposal would keep the canals perpendicular to the shore. Industrial areas would be inland, to ensure their resilience to sea-level rise and to be close to highways and railroads.



Figure 5. Alternative A

Alternative B: Vegetated Canals + Urban and Industrial Peninsulas

This alternative (Figure 6) would preserve the mudflats and agricultural traditions as a buffer along the canals, and would extend the new residential and commercial zones from these topographic peninsulas. While this option would leave some new developments more vulnerable to sea-level rise, the hydrologic systems would remain intact farther inland and would allow substantial green corridors to run through the development.

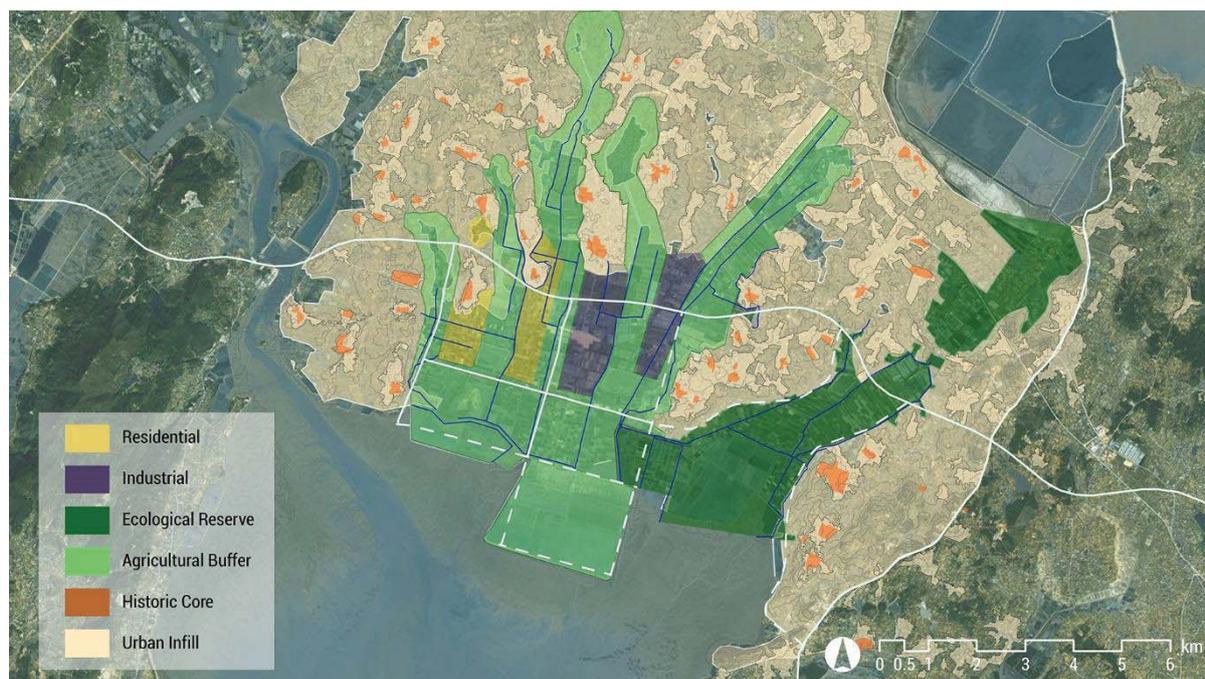


Figure 6. Alternative B

Alternative Proposal C: Urban Growth Boundary + Decentralized/Relocated Industry

This alternative (Figure 7) would establish an urban development boundary based on topography, elevation, and traditional land use, ensuring that new development would be exposed to only minimal risk from sea-level rise. The traditional agricultural areas would be protected and could be converted to new aquacultural practices as the sea rises. Habitat for shorebirds will shift “uphill” as sea level rises, so the protected area in this proposal would provide a long-term strategy for this inland movement. Industries would be located within the urban infill areas in a decentralized fashion, or could be located in other regions that are less environmentally sensitive.



Figure 7. Alternative C

### *Development Precedents*

Various successful developments in China and Taiwan have similar characteristics to what we propose, and we mention three here. Wuzhen, China, the “Venice of the East”, is a city whose historic canals attract tourists and thereby supplement the region's traditional economic base. The well-preserved architecture in Daxi Old Town, northwest Taiwan, is a major tourist destination that provides a rustic, rural experience but also a bustling, walkable shopping district. Mai Po Nature Reserve, a Ramsar Site located near Hong Kong, receives 40,000 human visitors and 55,000 birds to its marshes each year.

### **Strategies for Implementation**

#### *Stakeholder Analysis*

Our research team used a power-interest matrix (see Figure 8) to conduct a Stakeholder Analysis for the 2015-2030 Fuzhou New Area Plan. Drawing from papers, internet articles, and news reports, we considered the many actors (stakeholders) that would affect or be affected by the plan, including government agencies, private corporations, entrepreneurs, non-governmental organizations (NGOs), and locals. In the matrix, “power” (Y-axis) measures the ability to foster, block, or change the project. “Interest” or effect (X-axis), runs from negative on the left to positive on the right. When we believed that an actor would not

be affected directly but would be against it on principle, we considered this to be a negative interest. A stakeholder analysis is qualitative and subjective, and should be viewed as a hypothesis only.<sup>22</sup>

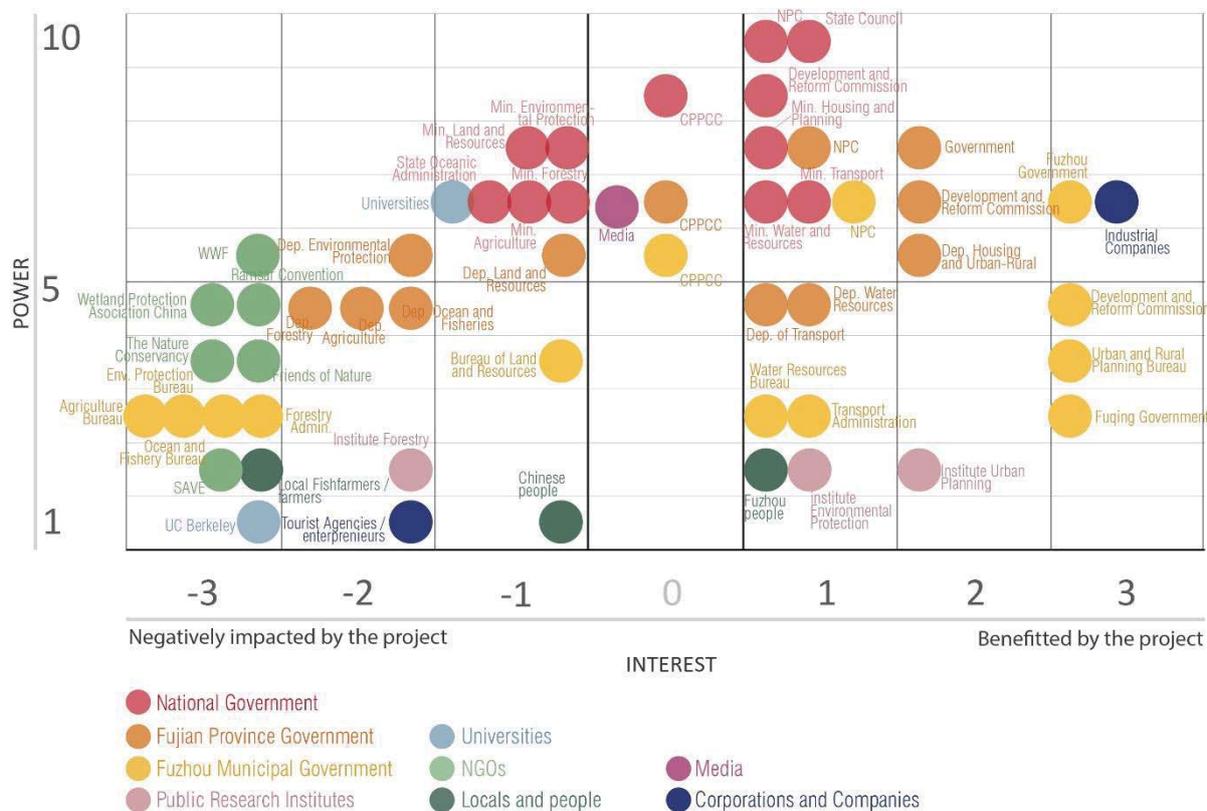


Figure 8. Power-interest matrix for the Fuzhou New Area Plan

Government agencies form a pyramidal pattern in the matrix: central government agencies are more powerful but more neutral, while local levels are less powerful but more polarized, because their political success depends on results. Agencies related to environmental issues have negative interest. Agencies related to growth and economic development have positive interest.

Academics could play an important role, especially through the Chinese People’s Political Consultative Conference (CPPCC). The CPPCC itself would be neutral, but it can arbitrate an environmental conflict. The protest against the Para-Xylene (PX) Plant in Xiamen City—the largest social protest in China since 1989, and a milestone for China’s environmental and democratic movement—showed that scientific research and public participation can be critical in revealing the impacts of industrial pollution and preventing

<sup>22</sup> “Stakeholder analysis”/Wikipedia

environmental damage.<sup>23</sup> More than one hundred members of the CPPCC are academics, including the presidents of prominent universities and a few prestigious academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering. Five are professors at universities in Fujian Province, in chemistry, ocean engineering, ocean and earth science, biology, and law.

Other groups have varying power or interest in the matrix. Local fish-farmers and dry-land farmers would be harmed by displacement or industrial pollution, but other people in Fuzhou might support the apparent economic growth. People from the rest of China, although less directly affected, might be opposed if they knew about its environmental problems. NGOs would oppose the project but have relatively low power, though large international NGOs—such as the Worldwide Fund for Nature (WWF) and the Ramsar Convention—have more power than national NGOs (such as Friends of Nature) or smaller organizations (such as SAVE). Private industrial companies with future production sites at Fuzhou would be important stakeholders: highly benefitted and with a high level of power. On the other hand, tourism agencies and local entrepreneurs would be deeply harmed but less powerful. A final stakeholder group is the media, not only mass media but also social media.

### *Mechanisms of Action*

We identified two main strategies from the stakeholder map to promote our alternative plans: empowering the stakeholders who have a negative interest, and raising awareness about the official plan's drawbacks for the environment and society (thereby moving some stakeholders from a positive interest to a negative interest).

SAVE is considering a two-pronged approach: a formal letter-writing campaign and a social media campaign of succinct and compelling graphics, easily circulated through microblogs and other social networks.

Official letters would go to provincial authorities and academic officials who can act politically, through the CPPCC or otherwise. Existing environmental laws and policy provide a basis for arguments opposing the official plan for Xinghua Bay, such as a critique of the existing Environmental Impact Assessment (EIA), given the provisions of the 2015 Environmental Protection Law. For example, the EIA fails to mention the Black-faced Spoonbills, which are a legally protected endangered species, and does not mention the potential to name this as a new Ramsar Site.

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<sup>23</sup> Gu & Tao, 2007

Appeals circulated on social media could make ecological as well as community-based arguments. One appeal might include a graphic of a spoonbill with an environmental slogan, while other appeals might focus on clean water, aquaculture, cultural heritage, or other issues.

Microblogging on Weibo or other platforms is a new and powerful channel of expression in China.<sup>24</sup> Users can discuss social inequality, corruption, disasters, poverty, and scandals—topics that the state media gloss over with positive coverage or silence. Although individual statements on Weibo may be small, they can add up to a formidable show of public opinion. As of spring 2016, 41 of the 52 stakeholders we identified had sites at Sina Weibo. Xinhua News Agency, the traditional national media, began to use microblogging in 2011. Some stakeholders have only a few dozen followers, while others have 3 million, on both sides of the issue and with similar power. Thus, public participation may change the course of events at Xinghua Bay and the larger Fuzhou area.

### **Requests from Fellow Community Designers**

SAVE seeks advice on what to do next. We have worked extensively in Taiwan, and intermittently in Japan and South Korea, but this is our first action in mainland China. We have begun to reach out to our contacts among local scientists and birdwatching societies, and we are meeting with some of them on this trip to Hong Kong and China, but navigating the political landscape of China will be a new challenge for our organization. We welcome the input of our fellow community designers, including residents of China, who have changed the course of governmental development plans. Do you agree with the strategies we propose in the section above? What else should we consider?

SAVE also asks you who are attending this conference to endorse the listing of a new Ramsar Site at Xinghua Bay, and join the campaign against the 2015-2030 Fuzhou New Area Plan. When we are ready to send letters to government officials, academics, and other people, we may ask you to compose and send letters of your own. We may also ask you to use your own networks, personal or online or otherwise, to spread the word and to get local people involved in critiquing and challenging the plans that the government is trying to impose.

### **Conclusion**

The 2015-2030 Fuzhou New Area Plan presents a severe threat to this region, including the jeopardized landscapes around Xinghua Bay and the endangered Black-faced Spoonbills who live there. State-sponsored projects have already destroyed many of the wetlands,

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<sup>24</sup> Zhou, 2011

including mudflats and mangroves. An alternative plan would create a more ecologically healthy and economically viable region, especially in the face of sea-level rise, which the official plan ignores. By combining the four main concepts of habitat preservation, ecotourism, agricultural and aquacultural preservation, and phytoremediation, and extending them over various scales, our alternative proposals offer a more holistic approach to planning the area. The key is to establish policies that focus on long-term sustainable economic growth, by protecting habitat for endangered species and preserving architectural and agricultural traditions. Together, these components will support a diverse economy and a resilient ecosystem. It will take a committed campaign of education, activism, and empowerment to give the people around Xinghua Bay a greater voice in planning the place that they call home.

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## **Transparent Government: A Pedestrian Park Network through Adaptive Reuse of Institutional Landscape Frontages**

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### **Abstract**

The Elliptical Road of Quezon City in Metro Manila is the institutional core of the city. The circular road is characterized by adjacent lots of institutional land use with offices such as the City Hall, the National Housing Authority, and the National Parks and Wildlife Center to name a few. As the radial thoroughfare is the heart of the city, it is observed that the lanes projecting from its quadrants also feature notable roadside institutional roadside lots. A typical government lot in this institutional core features this typical front-of-the-house landscape – fenced wide setbacks for buildings used as entry features, parking lots, and scattered pocket parks. This makes correspondence between offices difficult, discouraging pedestrians to walk relatively short distances and resort to other methods of transport such as private vehicles and public transport. The demand for usage of vehicular transportation increases, thus contributing to the undesired traffic situation in the city. The study explores the possibility of reusing these setbacks by making these spaces available to the public through a connected green corridor design that will encourage users to use an alternative pedestrian system. The goal of the study, therefore, is to propose a pedestrian friendly civic threshold landscape conceptual design that has the ability to facilitate movement of users by converting the frontage of the institutional lots through adaptive reuse of these spaces into a linear park.

Keywords: civic threshold, pedestrian corridors, urban linear parks, Quezon City

## Introduction

Contemporary urban design calls for responsive ecological approaches. This paper advances pedestrianization as an ecological approach in the landscape as an alternative to alleviate traffic hot spots in the urban environment.

In Metro Manila, vehicular traffic is an ecological landscape problem that worsens everyday. The Philippines ranked 6<sup>th</sup> in the list of countries with the worst traffic in the world this year on Serbia-based online research database Numbeo.com. Traffic is part of a vicious cycle that is driven by the demand of Filipinos who would rather travel comfortably from one point to another with the use of vehicles. As more vehicles occupy road networks, more greenhouse gasses are produced causing climatic conditions that, in turn, contribute to the urban heat island effect that increases the temperature of the surroundings. Annual mean temperatures (average of maximum and minimum temperatures) in all areas in the country are expected to rise by 0.9 °C to 1.1 °C in 2020 and by 1.8 °C to 2.2 °C in 2050. This becomes a cyclical occurrence that regularly affects the both climate and the user response towards the environment.

Quezon City, the largest city in Metro Manila, is no exception to this situation. This city, once envisioned as a Garden City characterized by parks, greenbelts, and open spaces by Frost and Arellano in 1949, continues to progress as observed through the ongoing development of its Central Business District – the Triangle Park. The growth of this Triangle Park is anchored by institutional development that is present inside the zone. These government developments, both national and local, enable the city to prosper through public service. On the other hand, this also factors in the traffic within the city, as the government clients would move from one institution to another through public and private vehicles. The study considers this undesirable as these institutions are clustered within walkable distances.

In addition to this localized traffic, the Triangle Park is located at the heart of the city bounded by major thoroughfares – the Elliptical Road on one of its corners and the Ehiphania Delos Santos Avenue (EDSA) along the side opposite of the Elliptical Road. The traffic emerging from various access points, the elliptical road serves as an everyday thoroughfare for commuters coming from different areas within or outside Quezon City. This passage is a convenient access to numerous adjacent institutions. Government offices like Social Security System (SSS), Land Transportation Office (LTO), Land Registration Authority (LRA), National Statistics Office (NSO), and Bangko Sentral ng Pilipinas (BSP) along East Avenue making the zone socially active in terms of the activities present in the site. It is where citizens

process their legal documents concerning government agencies. Hospitals such as National Kidney Transplant Institute (NKTII), Philippine Heart Center, and East Avenue Medical Center are also located in East Avenue. Establishments are positioned with close proximity to each other as it is the institutional core of the city.

One observation with these institutional roadside lots features this typical front-of-the-house landscape - fenced wide setbacks for buildings used as entry features, parking lots, and scattered pocket parks. The approach of the study is to look into the potential of these civic threshold spaces as venues for human interaction that can be considered for urban revitalization to address problems of correspondence between offices that discourages pedestrians to walk relatively short distances and resort to other methods of transport such as private vehicles and public transport. This leads to a demand for usage of vehicular transportation, thus contributing to the traffic situation in the city. This effect, of both localized vehicular traffic, within the Triangle and the vehicles-in-passing worsens the traffic situation.

The study focuses on a human ecology – based alternative linkage for the institutional threshold spaces at the Triangle Park of Quezon City. The problem statement is, “*How can the institutional threshold spaces inside the Triangle Park of Quezon City be designed to establish pedestrian landscape corridors?*” To confront the following, here are the sub-problems: (1) “What method of inventory shall be applied for these institutional areas?” (2) “How will these institutional landscape areas be analyzed?” (3) “What human ecological approach to the landscape shall be adapted to design the landscape corridors?”

The research intent is to propose a landscape corridor for the institutional areas inside the Quezon City Triangle Park. The following are the objectives of the study: (1) *to identify the institutional areas along the case study limits*, (2) *to survey existing conditions of the institutional threshold areas*, and (3) *to propose a human ecological landscape approach in landscape design*.

The problem will cover its limited scope with the overlap of the Triangle Development and QC Elliptical Road. The study will deal with institutional spaces only and the proposal is solely at a conceptual design level.

The assumptions of the study are as follows: (1) *the proposal is developed in a conception of no budgetary constraint*, (2) *there is correspondence between government agencies for management concern*, and (3) *part of the vehicular traffic happens due to users’ preference of traveling short distances within the institutional core*.

## Methodology

The study shall utilize the descriptive research method in gathering data by qualitative approach. Supporting the study are secondary data derived from the findings from published sources and documents relevant to the research.

Figure Ground Theory is first used to identify the institutional areas along the case study limits. The figure ground of the site does the following: reveal the extent and continuity of open space, examine the basic frameworks at hand in an urban context, understand the edge conditions between the positive and negative and understand how the proposed landscape intervention will interact with the existing urban fabric. (Lindwell, Holden, & Butler, 2013)

To survey existing conditions of the site, Systematic Observation is included with data gathering. Social situations are observed in relation to the occurring contexts implying that the site consist three elements: users, settings and activities engaged in the area of study. In evaluating existing conditions, SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis is used. It presents the data gathered into categories for consideration in design translation. (Pedhazur, 2013)

The ecological approach for the design adapts adaptive reuse as the responsive strategy for the site. The concepts will be drawn up as guidelines for the proposed intervention. By retaining, rethinking and reworking an existing building this history can continue in physical form, and be added to. The value of memory serves to create a sense of place. The character of a place is hard to create, and so to draw from the past, even the relatively recent past, can help form identity and belonging for a community. Four components are considered with adaptive reuse – planning controls, environmental sustainability, social sustainability, and efficiency. Planning systems control both physical form and use of spaces and building stock. Zoning typically controls use, through broad classifications. The simple act of reusing spaces making them more functional will increase the value and image of the institutional core. Through adaptive reuse, alterations would be cost and energy efficient. There is no need of an extensive demolition but rather a new layer will be affixed to the civic thresholds. Cohesive social bridges are emphasized through the integration of the linear parks design. Core community social values and participation are enhanced by careful consideration of adaptive-reuse strategies. Understanding the existing site condition and proposed design solutions with the principles of adaptive re-use will inevitably deliver the project construction considerably at a low cost. There will be an embedded narrative to be associated to the value of the existing built environment where the real end value of the proposal is expressed. “Adaptive Reuse gives new life to the site, rather than seeking it to freeze it at a particular moment in time; it explores the options that lie between the extremes of demolition or turning the site into a

museum. Adding a new layer without erasing earlier layers, an adaptive reuse project becomes part of the long history of the site. It is another stage, not a final outcome. (Clarke, 2013)”

## Results

### 1. Figure Ground Study



**Figure 1.** Distribution of Government (blue) and Health (violet) Institutions

The distribution map of government development based of the figure ground study of the Triangle Development reveals a concentration of institutional lands use at the east portion. This directs the researchers on where to gather first hand information through systematic observation.

### 2. Systematic Observation



**Figure2.** Sidewalk condition along East Ave.

**Figure3.** Traffic along East Ave to EDSA



**Figure 3.** Civic threshold of SSS

**Figure 4.** Microclimate condition

The notable images taken during systematic observation indicate the following – sidewalk condition, road traffic condition, and the pedestrian experience along the corridor. The sidewalk condition is congested with different obstructions from permanent fixtures such as lamp posts, uneven pavement, missing pedestrian ramps, and street vendors (see figure 1). The traffic condition along the roads continues to persist as vehicles are the primary method of travel for users (see figure 2). Lastly, the pedestrian experience indicates difficulty with the microclimate condition (see figure 4). These images shall guide the designers to address issues within the landscape through SWOT analysis.

During these observations, it was observed that there are three road typologies at the identified areas. The first type features a road network with institutional lots on both sides with a water body on one side. The second type features a road network similar to the first type except for the presence of a water body. Lastly, the third type features a road network with institutional area on only one side of the road.

### 3. SWOT analysis

Strengths	Weaknesses	Opportunities	Threats
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1)Accessibility: Proximity of institutional buildings	1) Fragmented walkways due to obstructions	1) Adaptive Reuse through utilization of wide setbacks	1) Pollution  2) Issues concerning traffic flow
2)Availability of mass transportation	2) Vehicular traffic congestion	2) Microclimate improvement	3) Visual perception of the establishments
3)Cohesive land use as an institutional core	3) Ill-kempt planting strips and islands	3) Pedestrianization  4) Safety and Security	4) Relatively warmer microclimate
4)Active social space	4) Thermal condition	5) Connectivity of establishments	

SWOT analysis follows through the observation of both second hand data through maps and first hand data through systematic observation. These points are important in understanding what areas should be addressed and taken into consideration. The results of the analysis suggest that the institutional areas require improvement of the pedestrian system.

#### 4. Adaptive Reuse

The following strategies to achieve adaptive reuse are listed for the proposed concept development;

1. Planning Controls: Planning systems control both physical form and use of spaces and institutional building. Zoning typically controls use, through broad classifications.
2. Environmental Sustainability: The simple act of reusing spaces making them more functional will increase the value and image of the institutional core. Through adaptive reuse, alterations would be cost and energy efficient. There is no need of an extensive demolition but rather a new layer will be affixed to the civic thresholds.
3. Social Sustainability: Cohesive social bridges are emphasized through the integration of the linear parks design. Core community social values and participation are enhanced by careful consideration of adaptive-reuse strategies.

4. Efficiency: Understanding the existing site condition and proposed design solutions with the principles of adaptive re-use will inevitably deliver the project construction considerably at a low cost. There will be an embedded narrative to be associated to the value of the existing built environment where the real end value of the proposal is expressed.

## Conclusions

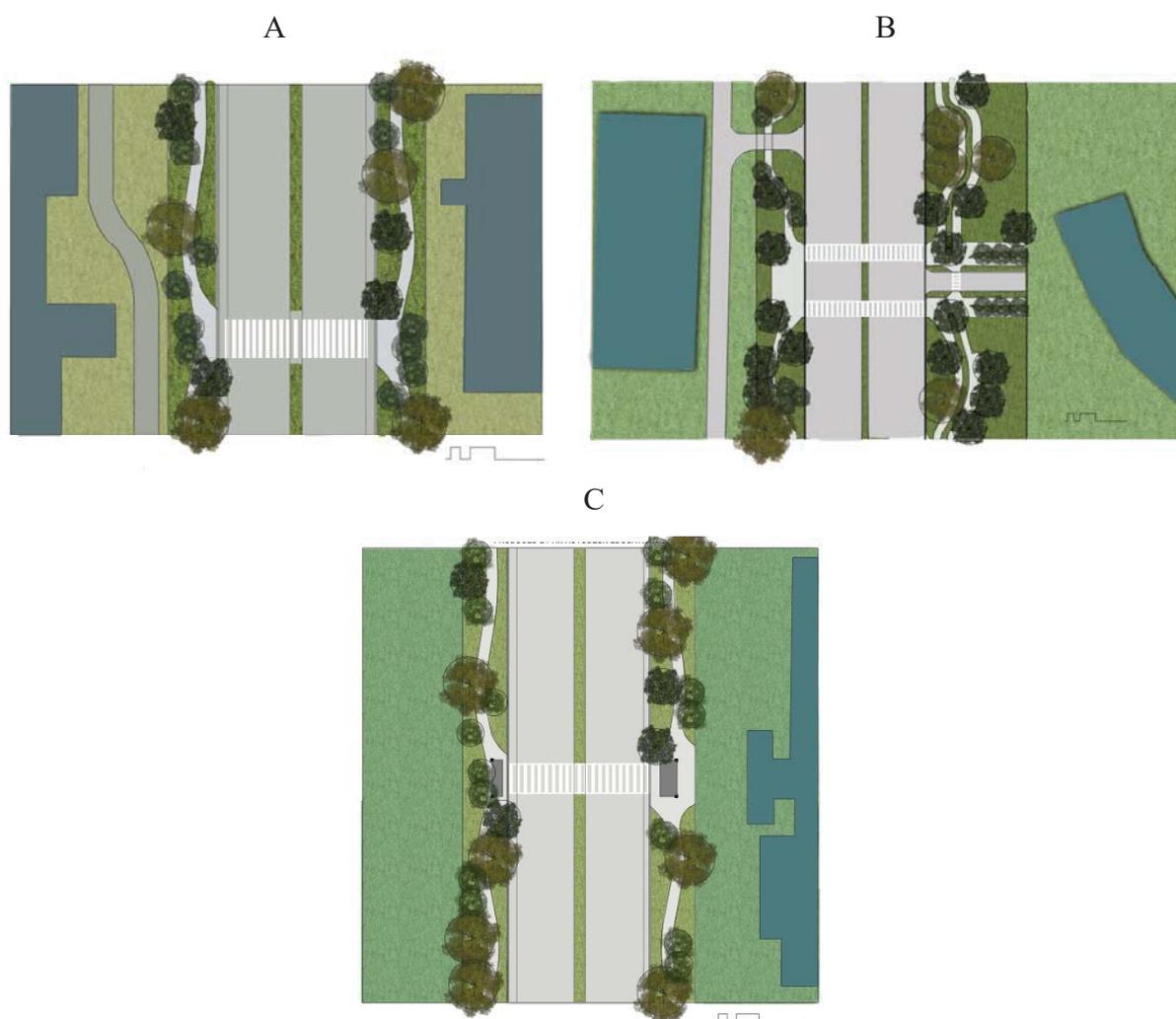
The goal of the study is met through the synthesis of the findings to develop a master site development plan that features a green corridor alternative to the existing civic thresholds (see figure 5). The application of strategies based on adaptive reuse leads to a more pedestrian friendly environment that links the institutional areas together.



**Figure 5.** Master Site Development Plan

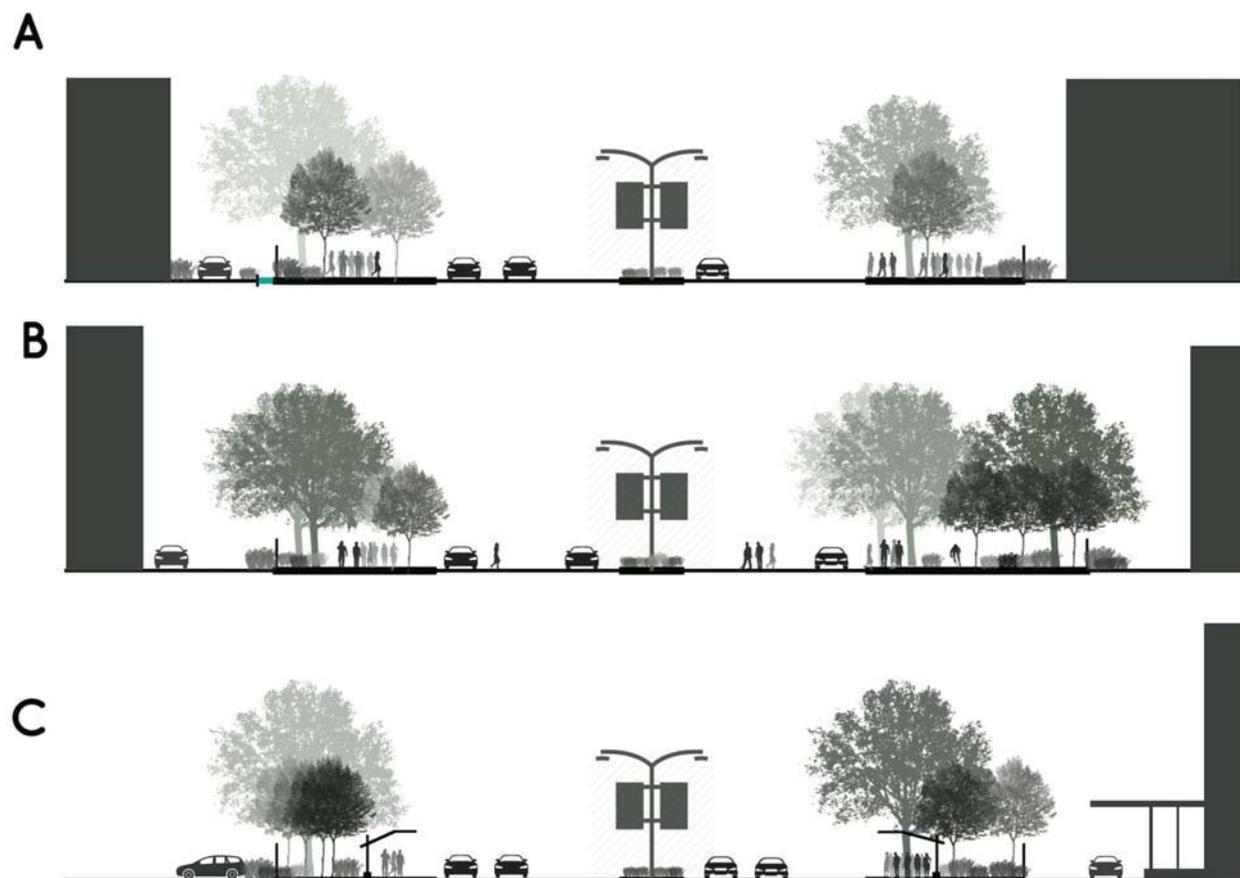
The master site development plan connects the two major thoroughfares, the Elliptical Road and EDSA with a pedestrian network. The three observed typologies (as indicated in

figure 5 as A, B and C) are developed to increase the pedestrian space by converting the government grounds (see figure 6).



**Figure 6.** Plans for linear park network

The pedestrianization of wide setbacks as seen in Figure 6 addresses the utilization of threshold spaces as venues for human interaction and serves as a better alternative mode of access to surrounding institution areas rather than methods of transport such as private vehicles and public transport. Designed linear park with streetscape elements are to be incorporated in reusing available spaces from institutional areas. With more trees and plantings, microclimate condition of the site will be improved which lets the pedestrians to walk more comfortably along the thoroughfare. Removal of street obstructions and clearing the walkways from unnecessary materials are proposed for the safety of the users. Through the pedestrian park network, the institutional core will augment its value in interconnecting institutional offices.



**Figure 7.** Section treatment for each observed typologies

As seen in Figure 7, the number of vehicular lanes was retained and additional spaces were from utilization of existing vacant front yard threshold areas of institutions. This is where adaptive reuse strategy is integrated. This conceptual landscape design is the alternative strategy towards a greener development. This design will positively impact both the environment and the users as the new layer of linear park promotes biodiversity and efficient means of travel. Healthier lifestyle of walking for the public common good considerably is satisfied through this design. As spaces in the urban environment become denser, the threshold level becomes more valueable. In the case of the Triangle Development of Quezon City, it is important that its pedestrian system must be improved. This study presents a site specific method of reusing existing institutional thresholds to adapt to a vision of user-friendly civic thresholds that will enhance urban linkage for pedestrian movement within the city center. Moreover, the study advances the idea of revitalization of institutional core is grounded on the needs of the users and the necessity for improving the

place. The pedestrian linear park design motivates green initiatives and gears toward a better transparent government.

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## UNESCO Chair in Human Rights and Community Architecture

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### **Abstract**

The Centre for Architecture and Human Rights is working on establishing a UNESCO Chair in human rights and community architecture. UNESCO Paris approved the proposal in May of 2016.

This chair would be the first of its kind, both for UNESCO and for architecture, in part because it is the first rights-based approach presented in an professional degree programme in architecture and in part because it should help to formalize within the curriculum an alternative approach to ‘traditional’ architecture.

In addition to describing the nature of the programme, the paper will present some possibilities for expansion and for the support of Pacrim members and their respective academic as well as professional institutions.

The primary objective of the paper is to stimulate discussion amongst attendees about how we can make best use of this new vehicle supporting community design.

Keywords: human rights education, architecture, UNESCO

### **1. Introduction**

There are a number of organizations around the world now which promote the teaching and practice of community design. Among them are:

- the Association for Community Design, (ACD)
- the Community Architects Network, (CAN)
- Architecture Sans Frontières International (ASF)
- Open Architecture Collaborative (OAC)
- Pacific Rim Community Design Network (Pacrim)
- Barefoot College

The Association of Collegiate Schools of Architecture has a listing<sup>1</sup> of more than 200 organizations in the US and Canada working on community design issues – an impressive list which does not include any organizations outside of the US and Canada. There are many more. This gives us some cause for some sense of vindication or satisfaction that the ideas we have been promoting over the last 10 to 50 years or so have some currency in the field.

Indeed they do have some currency. We know that by our actions in the field. At the same time, though, in my conversations with many of you working in this area of architecture and planning, there is a sense of isolation – not from communities, but rather from the mainstream of architecture and, in turn, from the mainstream of architectural education.

Much of the work done in community architecture in universities around the world is being done by individual faculty members – people with a deep commitment to a set of principles and ideas about an alternative approach to architecture. We know there is a great deal of interest amongst students for exposure to alternative approaches but I think there is a shared experience out there similar to my own. There is little opportunity in a traditional curriculum to present these alternatives. It is entirely dependent on the individual faculty members who bring this interest with them into their courses and studios. The resistance to adding alternatives to the curriculum is understandable. In the variety of curricula offered, the common response on the part of the university administration (or the accreditation bodies) is that there is only so much time in a 5 year program (or a 4+2 program or any other variation) to expose students to the enormous range of issues necessary to understand in order to become a graduate in architecture ready to enter internship. As a result, any attempt to mainstream these alternatives offered by some teaching faculty is met with stalwart opposition. “What do you want us to take out of the curriculum to accommodate these alternative forms of practice? History? Structures? Hardly.”

This often leads many of us who are presenting these alternatives to the edges of the traditional curriculum with the studio being the best – often the only – option for exposing students to community design.

At the edges of the traditional curriculum, the accreditation requirements and the profession itself, we are often living with an increasing sense of isolation within the university and the profession. Organizations such as Pacrim counter some of that isolation but there is an underlying question, I’m sure we all ask ourselves: “what will happen to these ideas when I go?” So much of what we do in the framework of the university is dependent on the

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<sup>1</sup> See <http://www.acsa-arch.org/resources/data-resources/community-design>

individual doing it. When that individual goes, will community architecture continue to be offered to students?

In some universities it has been institutionalized so that it does continue. For example, the Rural Studio<sup>2</sup> at Auburn University, started by Sam Mockbee, has continued for more than 15 years since his death. Other universities have not been quite so lucky.

I have been thinking about this since I started doing community architecture at KMUTT in Thailand in 1998. How can we integrate community design into the traditional curriculum in such a way that it is not dependent on individual faculty members but rather requires the architecture school to keep those faculty members, train their replacements and keep the programme going after the death or retirement of those individual faculty members committed to the cause?

I began to see an avenue for cementing community architecture into the programme through the support of UNESCO. After all, UNESCO has been talking about this at least since the workshop organized by UNESCO Bangkok in June of 1983 (UNESCO, 1983). With international support from UNESCO and perhaps the International Union of Architects (UIA), community architecture could be better integrated into the curriculum and into the practice of the profession.

I set out to investigate this further by presenting some ideas to UNESCO Bangkok in March of 2012. This paper outlines the rationale, the proposal itself and the state of its progress.

## 2. Background

### 2.1 The UNESCO Chair programme

The UNITWIN/UNESCO Chairs Programme started in 1992. It is intended to promote “international inter-university cooperation and networking to enhance institutional capacities through knowledge sharing and collaborative work.”<sup>3</sup> Aside from the promotional fluff, the UNESCO Chairs programme typically provides support (though not financial support) for different areas of research. There are currently 730<sup>4</sup> UNESCO Chairs at universities around the world. Of these, there are about 65 Chairs focused on different areas of human rights<sup>5</sup>. A few examples can illustrate the research interests the programme supports:

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<sup>2</sup> See <http://www.ruralstudio.org/about/purpose-history>

<sup>3</sup> See <http://en.unesco.org/unitwin-unesco-chairs-programme>

<sup>4</sup> <https://en.unesco.org/sites/default/files/list-unesco-chairs.pdf>

<sup>5</sup> <http://www.unesco.org/en/university-twinning-and-networking/access-by-domain/social-and-human-sciences/p/eace-and-human-rights/>

- UNESCO Chair in Human Rights and Democracy (Spain)-University of Las Palmas of Gran Canaria-established in 2010.
- UNESCO Chair in Peace and Conflict Studies (Thailand) - Prince of Songkla University - established in 2008.
- UNESCO Chair in Genocide Prevention (United States)-Rutgers, The State University of New Jersey-established in 2012.

Most of the Chairs in Human Rights are focused on democracy and conflict. There are two in architecture:

- UNESCO Chair for Fine Arts and Architecture (1998), Russian Academy of Arts, Moscow
- UNESCO Chair on Urban and Architectural Conservation (1998), Moscow Academy of Restoration, Moscow

There has never been a UNESCO Chair which combines human rights with architecture. This would be a first for UNESCO and for architecture.

## **2.2 The argument for establishing a Chair in Human Rights and Community Architecture**

While I discuss the relationship between architecture and human rights more directly elsewhere (Bristol, 2011), I see human rights as a set of founding ethical principles which can broaden (emancipate?) the narrow focus of the codes of ethics of the architectural profession. Using the Universal Declaration of Human Rights (UDHR) as a foundation for our professional codes can bring those codes closer to our underlying obligations to the public good. It is one way by which we can define the public good.

Too many people are overlooked in the development of our built environment. When they are rendered invisible the rights of the poor and vulnerable members of our society are abridged. Beginning in the 1970s with accessibility becoming a building code issue, the design professions began to recognize the rights of people whose mobility, sight or hearing were reduced. This was further reinforced by legislation such as the U.S. Fair Housing Act (1989) which tied accessibility standards to civil rights legislation. More recently these concepts have been expanded into ‘universal design’ and the International Code Council’s “Inclusive Design Guidelines: New York City” (2010)

The relationship between the design of the built environment and the cause of human rights extends much further, though. For example, in 2007<sup>6</sup> it was estimated that there were 163 million people who had been forcibly displaced. At 65% ‘development-induced displacement’ accounted for more forced evictions than all other causes combined. This fact alone suggests a different approach to development – a rights-based approach.

The purpose of establishing a UNESCO Chair in Human Rights and Community Architecture is to promote that change in approach on the part of those most responsible for the development of the built environment – architects, engineers, and planners.

I have identified so far five areas where the interests of the built environment intersect with those of human rights:

1. Cultural Rights – working with vulnerable communities in the protection of their cultural history. As the Pom Mahakan example has made clear, that cultural history is about more than sites and monuments identified by ICOMOS and the UNESCO World Heritage Sites. It is about vernacular culture as well. (Bristol, 2010a)
2. Right to access - Working with communities to overcome exclusion in access to buildings, to resources and to the city. This extends from disability legislation (noted above) to exclusionary zoning and the right to the city.
3. Forced evictions – working on advocacy and design alternatives for the victims of development-induced displacement.
4. Environmental rights – working on advocacy and design alternatives which protect traditional and legal land rights in the face of disaster and development as well as broad issues concerning environmental justice (see, for example, Bristol, 2010b)
5. Workers’ rights – Providing a safe haven away from the construction site for migrant construction workers and their families and improving their access to education (particularly work safety programs) and health care.

These five areas of interest overlap and would be integral to all aspects of the UNESCO Chair programme.

## 2.3 Objectives

Development objectives (long term)

- Reduce forced evictions through alternative planning in vulnerable communities
- Increase awareness of a rights-based approach to the design of the built environment through formal and informal education.

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<sup>6</sup> Christian Aid. *Human Tide: The Real Migration Crisis*, 2007, p.5

- By establishing a template for this RBA to design education, to replicate it in other regions with the help of UNESCO and the UIA
- Improving access to basic education as well as built environment education to children in vulnerable communities.
- Improving access to built environment education to migrant workers and long-term refugees.

#### Specific objectives (short term)

- Establish an undergraduate and graduate programme in community design at a regional architecture school with an international programme
- Establish student and faculty exchanges with universities offering courses/programmes in community development/design
- Publish research papers on the implications of human rights in the design and development of the built environment.
- Establish informal and formal programmes for children on a RBA to built environment education.
- Complete annual community projects demonstrating the relationship between human rights and the built environment in the process of design and development of the built environment and provide students with specific field training in working with communities in planning and design.

### 2.4 Support for the UNESCO Chair

Through the Centre for Architecture and Human Rights (CAHR) I have been promoting the proposal for a UNESCO Chair. There are now a number of organizations supporting the idea. Among them are the UIA, UNESCO Bangkok and the National Human Rights Commission of Thailand. UNESCO Paris granted their approval for the programme in April of 2016.

### 3. Description of the programme

The programme is focused primarily on establishing a rights-based approach to the design of the built environment. There are five related clusters into which programmes and projects are distributed:

- Formal Education – requiring a degree-granting institution
- Informal Education – training courses, continuing professional development for architects and engineers, built environment education for children.
- Research – this is derived from the formal education and supports it.

- Monitoring – Some of the research requires regular updating so that it can better inform the education, particularly those aspects of education that relate to vulnerable communities.
- Building – the primary focus is on schools for the children of migrant construction workers. This also relates to undergraduate studios and possible community projects which culminate in a building programme.

More specifically the programmes/projects under the umbrella of the UNESCO Chair are:

#### A. Formal Education

- A1a Undergraduate programme – in the context of a professional degree programme in architecture, the undergrad programme in ‘community design’ focuses the electives and studios on issues of poverty and human rights in vulnerable communities.
- A1b Undergraduate Work Integrated Learning – As part of their education, architecture students at SOAD are expected to spend 6 months training in an architect’s office. In this case the training would be with CAHR or other similar NGOs working on issues of development
- A1c Studies Abroad – in alternating years students in the undergrad programme will work on a studio project in another country hosted by one of the partner universities
- A2a Graduate programme in Community Design – a research degree for academics with an interest in research on the role of architecture as a tool in development and human rights
- A2b Graduate programme (part-time low residency) – similar to the graduate programme but directed towards practicing professionals.
- A3 Visiting Professorships – from partner universities. Faculty from these universities bring their expertise to research and to studios related to human rights, poverty and development
- A4 Scholarships – Initially 2 scholarships paying tuition for 4<sup>th</sup> and 5<sup>th</sup> year and then expanding for both the undergraduate and graduate programmes

#### B. Informal Education

- B1 Training programmes – short courses (7 to 10 day) directed towards capacity building for practicing professionals and community workers
- B2 Continuing Professional Development (CPD) – in jurisdictions where CPD is a requirement for continued registration as a professional, lecture programmes (1/4 day or ½ day) are available either online or at a specific venue.
- B3 Kids & the Built Environment (community outreach) – for children in vulnerable communities ages 6 to 12 an 8 week Saturday morning course in basic issues of the

built environment. This would be taught by students entering the 4<sup>th</sup> year of the programme.

- B4 Community Projects (Demonstration) – wherever applicable the results of research and studio work is implemented in identified community projects. (e.g. portable school project)
- B5 Distance Education for long-term refugees – similar to the training programmes, these would be available online and in camps.

#### C Research

- C1 Migrant construction workers – research on the movements and conditions for migrant construction workers in Thailand with a particular focus on children.
- C2 Graduate research – thesis projects in the graduate programme will be related to issues of development, human rights and vulnerable communities. The research should also support community projects (B4 above)
- C3 Symposia on Architecture & Human Rights – Alternating years and rotating between partner universities symposia will be held to advance knowledge on current issues of development and human rights. The first International Symposium was held at KMUTT in Bangkok in June 2006.
- C4 Codes/Regs and Rights – this research project involves the analysis of national building codes and land use regulations to better understand their implications for the support of human rights.
- C5 Construction contracts – developing standard forms of construction contracts which include human rights in their general conditions

#### D Monitoring

- D1 Codes/Regs & Rights – based on the research above (B4), monitoring changes in regulations and providing advice to municipal governments on improvements to codes and regulations to improve human rights standards.
- D2 Migrant Construction workers – currently the movement of migrant construction workers is not monitored. For the placement of CAHR mobile schools (also part of the education programme, A10) it is necessary to have this information. The mobile schools provide one avenue for the implementation of the ‘Kids & the Built Environment (B3) programme.

#### E Building

- E1 Mobile Schools (migrant construction workers) – schools placed in construction camps targeted at undocumented workers and their families.
- E2 Mobile Schools (other)– working with existing construction companies (beginning with L&H) where company provides building and CAHR provides administration/operation

- E3 Community Projects – these would be projects identified by communities and supported by student research. Assume a budget maximum of \$20K

Of these, the formal education programmes, and, in particular, the courses for the professional degree programme are of greater interest here because the approach taken attempts to introduce a rights-based approach into the traditional curriculum without interfering with the accreditation status of the architecture programme itself. As such, students entering this rights-based stream in architecture would be choosing from a shortlist of electives rather than the broader list traditional students would have. They would be taking a ‘major’ in rights-based architecture at that point.

The UNESCO Chair proposal used the SOAD curriculum as its model. In that 5 year professional degree curriculum there were a number of electives available along with 4<sup>th</sup> year studios. These electives are made available in the second semester of 3<sup>rd</sup> year in the SOAD curriculum. In addition to 6 electives, the proposal calls for:

- an university-wide foundation course in Ethics for 1<sup>st</sup> year students<sup>7</sup>;
- Lectures on human rights implications in established courses on urban planning, environmental technology, and professional practice;
- Placement with NGOs involved with planning/human rights for work-integrated learning (sometimes called a ‘co-op program’<sup>8</sup> where students work in an office for a summer or longer period);
- Thesis on topics of human rights and architecture

This can be adjusted for 4+2 programmes or other variations but it does require access to electives so that existing accreditation is not disturbed.

Examples of the elective courses are:

- Housing Design – the development of housing design and the motivations behind the changes over time. Some of these motivations can be described as rights-based (e.g., the language of modernist architects on worker housing)
- Housing and community – more policy focused than the housing design course.
- Architecture and Human Rights – the relationship between the design of the built environment and human rights.
- ESC rights and architecture – the relationship between economic, social and cultural rights and the practice of architecture

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<sup>7</sup> At KMUTT most incoming students are in engineering so it was appropriate to open this up to all design students, not just architecture students.

<sup>8</sup> See, for example, University of Waterloo - <https://uwaterloo.ca/architecture/co-op>

- Participatory methodologies for designers – working with communities and groups to gather data and develop programmes for planning and design.
- Legal issues for design professionals – human rights law, environmental law, construction law, contract law
- Sustainable development and equity – covering concepts of equity and environmental justice instead of technology and innovation (the traditional focus of existing courses on sustainable development).
- Urbanization and Development – development theory, globalization, the right to the city.

These courses would give students taking this option a grounding in the rights-based approach to architecture and better prepare them for working in the field of community design. In addition the professional degree curriculum would be tied to other elements of the overall programme of building, research, exchanges and so on.

#### 4. Current status

The project was originally intended to be hosted by a university in Bangkok in part because it is an ideal location in the region to begin implementing capacity-building for professionals, municipalities, NGOs and community workers. In addition to the urban growth in the region and the evident need for support to vulnerable communities facing displacement and forced eviction, there are a number of other issues which justify the need for this Chair in Human Rights and Community Architecture and its location in Bangkok:

- The support system of regional UN agencies in Bangkok
- The history of NGO support for community design through Community Architects Network and the Asian Coalition for Housing Rights
- Support for the regional National Human Rights Commissions in Southeast Asia<sup>9</sup>.

In 2012 King Mongkut's University of Technology Thonburi (KMUTT) in Thailand agreed to host the Chair. All of these negotiations were done while Dr. Sakarindr Bhumiratana was President of KMUTT and Dr. Weeraphan Shinawatra was Dean of the School of Architecture and Design (SOAD) at KMUTT. While Dr. Sakarindr is still President, Dr. Weeraphan's term as Dean ended at the end of 2015. He has since been replaced by Michael Paripol who was Dean between 2005 and 2010. Aj. Michael's term started at the end of 2015.

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<sup>9</sup> There are currently 5 in Southeast Asia: Indonesia, Malaysia, Myanmar, Philippines and Thailand

An agreement was distributed to UNESCO's partners in this programme – KMUTT and CAHR. The latter has signed the agreement and KMUTT has not. While I am still not sure what has given them pause, I went to Bangkok to try to answer that question. The resistance seemed to revolve around their lack of funds to proceed. However, I think the political changes in Thailand as well as the changes in the SOAD administration may account for their reluctance. This has required a search for an alternative host. There are a number of prerequisites for this host:

1. A professional degree program available to international students. We need this in order to implement student/faculty exchanges, international accreditation, and partnerships with other universities (part of the UNESCO Chair mandate [<http://en.unesco.org/unitwin-unesco-chairs-programme>] and part of the UNESCO proposal (see "C. Partnerships/Networking", pp11-13 in Bristol, 2015)
2. A curriculum for the professional degree program which allows for integration with supporting courses in human rights and architecture (see Annex 4 pp 28-30 in Bristol, 2015) without disrupting the accreditation of the architecture program.
3. Existing faculty (minimum 2) with some background in community design work, participation, and/or human rights. See also Community Architects Network (<http://www.achr.net/activities-de.php?id=2>) and others for expanded outline of faculty experience.
4. Financial capacity to implement:
  - a. Access to startup funds
  - b. Ability to source external funding in conjunction with CAHR.
5. University administration with commitment to the Unitwin mandate and the objectives of the UNESCO Chair in Human Rights and Community Architecture
6. Links to local NGOs/CBOs and local vulnerable communities.

This may mean relocating the Chair outside of Bangkok or outside of SE Asia. In addition to some of the university members of Pacrim I think there are a few possibilities outside of SE Asia, perhaps in North America or the UK. I am looking at those possibilities now.

## 5. Conclusions

We are faced worldwide with political forces which push development away from community-based architecture (much less rights-based). Some relatively recent incidents have led me to a much increased concern for the state of the profession and yet, at the same time, provided some encouragement about the future of the profession.

- Artists boycotting Frank Gehry's new Guggenheim under construction at Saadiyat Island in Abu Dhabi<sup>10</sup>. It was more than a little disconcerting that it was artists establishing this boycott of the Guggenheim because of labour practices on that construction site. Based on the Human Rights Watch report, 'Island of Happiness' (HRW, 2009), one would think that the representative institutions of architecture if not the architects themselves might have said something about the HRW report and the boycott. There was nothing but silence on this.
- Some years ago before she died, Zaha Hadid faced a great deal of criticism for her statements about the deaths of many migrant construction workers on sites around Qatar. She said: "I have nothing to do with the workers. I think that's an issue the government – if there's a problem – should pick up. Hopefully, these things will be resolved." (Riach, 2014). While it is an issue for the government, it is also an issue for the prime consultant on the site. Her reputation gives her leverage that other architects might not have. To turn her back on these workers is hardly a good example of ethical professional behaviour.
- "Patrik Schumacher calls for social housing and public space to be scrapped" – the managing director of Zaha Hadid's office called for "an attack on government regulations, which he claimed are stifling creativity and progress. He called for all land-use prescriptions and housing standards to be abolished, to make it easier for developers." (Frearson, 2016) Given Hadid's attitude towards migrant workers I can hardly be surprised that Schumacher expands on this imperious 'professional' attitude about who should live in cities and who should own them.
- Robert Ivy, the executive director of the AIA made a statement after the election of Donald Trump (Ivy, 2016) "The AIA and its 89,000 members are committed to working with President-elect Trump to address the issues our country faces, particularly strengthening the nation's aging infrastructure." He learned very quickly that he didn't speak for all of those 89,000 members, many of whom made a point of telling his so.

There are many people in the profession and I would say many more who are in architecture schools around the world working to become professionals who long for an alternative to practice than that shown by the wobbly ethical standards of the examples above.

It seems to me the AIA (and other similar institutions representing the profession) should be working with a broad set of principles. And, no, this is not just a Code of Ethics. If the President-elect or any other head of state shares those principles then it's possible to work

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<sup>10</sup> See, for example,  
<http://gulflabor.org/2011/for-immediate-release-100-international-artists-call-for-a-boycott-of-the-guggenheim-abu-dhabi/>

alongside them. If he or she doesn't share those principles then we may have to choose between maintaining the principles or sucking up to power. Most professional institutions align themselves with power.

Back in 1963 at the UIA congress in Havana, Che Guevara put it this way to the assembled architects: "And whoever says that a technician of whatever sort, be he an architect, doctor, engineer, scientist, etc., needs solely to work with his instruments, in his chosen specialty, while his countrymen are starving or wearing themselves out in the struggle, has de facto gone over to the other side. He is not apolitical: he has taken a political decision, but one opposed to the movements for liberation." (in Comerio & Protzen, 1982)

The architectural principles I find useful here are those arising out of the UDHR. We direct our skills and our time towards many things. All of us involved in community design are dedicated to working with citizens who are facing daily battles with developers and their architects and what the World Bank euphemistically calls 'development-induced displacement'. We believe in the right to housing (Art. 25, UDHR) and have joined the struggle.

It is my contention that this UNESCO Chair is a tool that would have some value in that struggle.

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# The evaluation of rural community development policies in Taiwan from the perspective of community planners – A case study in Tainan

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## **Abstract**

Rural regeneration has become an important subject in community development due to the increased concentration of the elderly and the increasing urban-rural gap in terms of population growth and economic development. Public policies are not only passive tools intended to reverse these trends but also are active agents in changing the dynamic of rural communities through different types of assistance and investments. The Integrated Community Development Plan (社區總體營造計畫) and Rural Rejuvenation Plan (農村再生計畫), announced in 1994 and 2010, respectively, determined the directions of community development in the rural areas in Taiwan in the past two decades. Although both policies have the same goals, consisting of a bottom-up approach, their directions in the area of community development have been different as the result of two distinct execution departments, the Council for Cultural Affairs and the Soil and Water Conservation Bureau. In this paper, we compare the implementation of both policies from the perspective of community planners in Tainan City to understand the similarities and differences between them, the institutional cultures of the departments executing them, and how the communities adopted the policy changes accordingly. Methodologies include in-depth interviews with community planners who assisted communities engaged in both policies as well as documenting reviews of government reports, websites, and databases. Evaluation was made based on four indicators, including a bottom-up approach, public participation, community-led development, and sustainable development. Through this paper, we hope to provide empirical evidence documenting the impact of government interventions in rural community development in Taiwan.

Keywords: Community Development, Rural Regeneration, Policy Evaluation, Comparative Study

## 1 Introduction

Rural regeneration is currently an important part of the development of community planning. At present, rural communities in Taiwan are facing some difficulties, including population migration, the aging problem, and a shortage of labor and economic resources, which creates a widening gap between the development of urban and rural areas. To revitalize rural communities and promote sustainable development in rural regions, the government of Taiwan has started to pay attention to rural regeneration in order to create some related policies and plans. For example, the Integrated Community Development Plan and Rural Rejuvenation Plan, announced in 1994 and 2010, respectively, determined the directions of community development in the rural areas in Taiwan in the past two decades. These two policies, the so-called ‘‘Community Cooperation Policy’’ (Shu-Cheng Tseng, 1999), were made by the government to guide the autonomous planning of communities. Although the two policies have the same goal as far as a bottom-up approach, public participation, and community-led, sustainable development, their directions as far as community development have been different as the result of two distinct execution departments, the Council for Cultural Affairs (CCA) and the Soil and Water Conservation Bureau (SWCB).

In this paper, we first briefly introduce the developmental processes of the two policies and then do a case study of a community that has completed both an Integrated Community Development Plan and a Rural Rejuvenation Plan in Tainan City through the use of a document analysis. In addition, methodologies include in-depth interviews with community planners who assisted the communities engaged in both policies to compare the implementation of the two policies from the perspective of community planners and to understand the similarities and differences between the two approaches. The aim of this paper is to provide empirical evidence documenting the impact of government interventions in rural community development in Taiwan.

## 2 Literature Review

### 2.1 Integrated Community Development Plan

In 1994, the CCA announced the "Integrated Community Development Plan," which was an attempt to develop a community in a multivariate way, such as through human, culture, land use, industry and landscape perspectives. The government is looking forward to improving the community's living environment and establishing different cultural characteristics. The four core projects in the integrated community development plan are "developing community culture," "enriching town facilities for performance," "building

exhibition halls for the community's cultural collection," and "repairing local traditional cultural buildings or spaces."

In addition to the CCA, other ministries have also put forward some community-scale development policies, such as the "Business District Modeling Program" from the Department of Commerce of the Ministry of Economic Affairs in 1996, the "Living Environment Improvement Program" from the Environmental Protection Administration in 1997, and the "Urban and Rural Renewal Planning Program" from the Council for Economic Planning and Development in 1998.

Different from previous community development programs, which only focused on hardware facilities and construction projects, the integrated community development plan focuses more on developing "people" through various means to enhance community cohesion and increase residents' common aspirations for participation. The purpose of the integrated community development plan is to "create people" and to promote the formation of a civil society (Chi-Nan Chen, 1995). Also, the government will create some policies for encouraging integrated community development, which include some operational principles, for example, a bottom-up approach, public participation, and community-led development, where this kind of policy implements the so-called "Community Cooperation Policy" (Shu-Cheng Tseng 1999). The integrated community development plan is a typical and primary community cooperation policy. The pattern of community development changes from a top down approach starting with the government to bottom-up community governance.

According to the Taiwan Community Alliance, there are certain steps and stages in implementing an integrated community development plan. First, planners and residents should understand their community very well, so they can create community awareness and build community-based consensus. Second, they should identify the needs and characteristics of the community. The third step is to unite the community through consensus, create a shared vision, construct a participatory mechanism, emphasize a "bottom-up" approach, and establish community participation through the participation of residents. This four-step approach is intended to cultivate mature and active participation among community citizens and create "community autonomy" so the integrated community development plan will continue to be promoted.

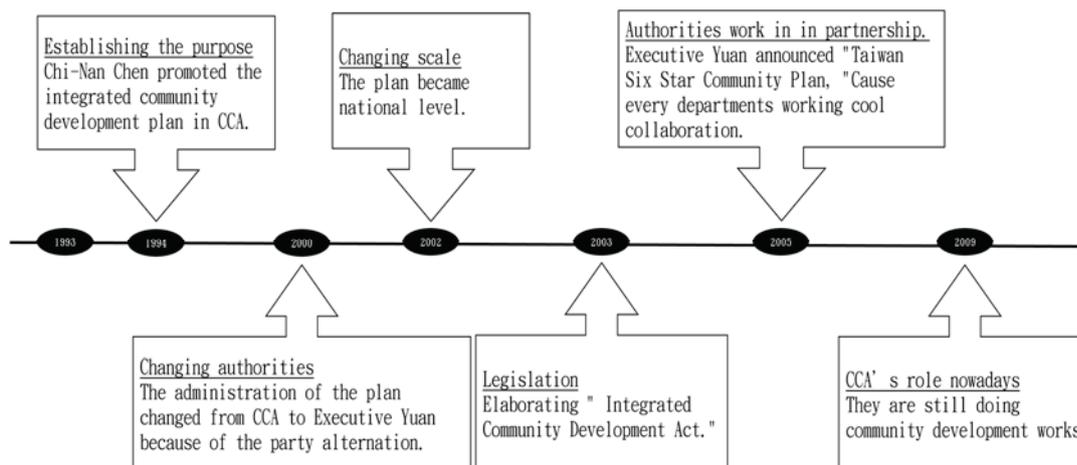


Fig.1. Integrated Community Development Plan Timeline

## 2.2 Rural Rejuvenation Plan

In the 1960s, much of the young labor population moved from rural areas to urban areas because of urbanization and the increasing trend toward industrial and commercial development. In contrast, the rural population declined and aged, which caused constructions, and some public facilities were damaged and led rural development to fall behind the development occurring in urban areas. Also, Taiwan had a lack of long-term, planned systematic policies to assist with rural development. Therefore, the government announced the "Rural Rejuvenation Plan" on August 4, 2010 and set up a rural regeneration fund of 200 billion NTD, aimed toward promoting its rural rejuvenation plan in an orderly manner.

According to the Rural Rejuvenation Act, the objectives of the policy are to promote the sustainable development of rural areas, and the goal is to create "vibrant, healthy and happy" rural areas. Through the integration of the rural rejuvenation plan and the rural regeneration program, the government hoped to enhance the quality of life of the rural population, create rural employment opportunities, and improve rural incomes and the overall rural environment.

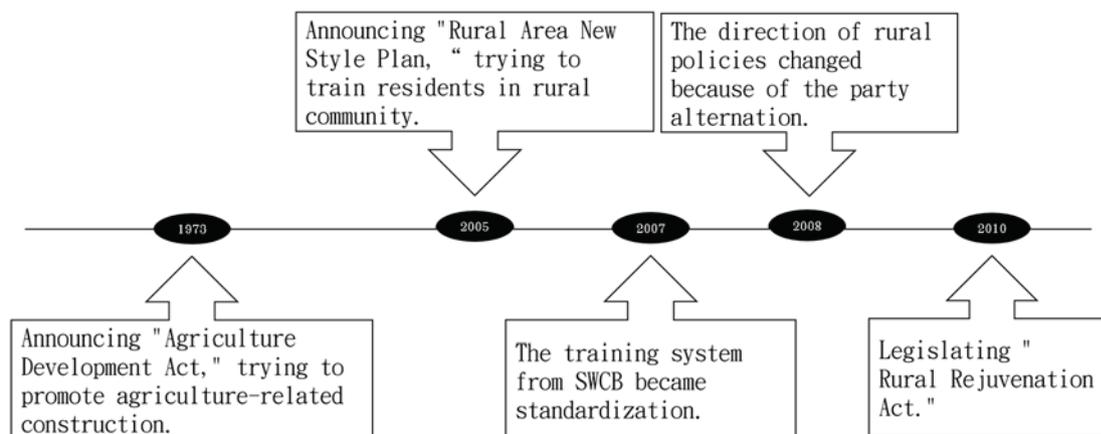


Fig.2. Rural Rejuvenation Plan Timeline

### 2.3 Related research

Past studies about integrated community development plans have usually focused on the impact of the plan in a specific community. Shu-Fang Wu (2009) used six dimensions, which came from the "Taiwan Six Star Community Plan" in 2005, to analyze and evaluate the impact of the plan in the empirical community. Ben-Chaung Wang (2005) used action research to study public participation in the integrated community development plan and used a community planner system as an example. Yu Hsing (2013) and Ming-Da Chen (2008) used the concept of a policy network, policy change and historical institutionalism to analyze and understand the integrated community development plan and the meaning and function of community in the policy.

For the rural rejuvenation plan, past studies have usually used empirical communities to explain the implementation of the plan. Ming-Yuan Kuo (2009) studied a rural rejuvenation plan implementation situation in the Taitung community, as an empirical area, and constructed the rural community development strategies in Taitung. Po-Ling Lin (2010) studied the institutional changes in rural development and governance in Taiwan, and emphasized the use of bottom-up community empowerment, which can shape a new level of rural competitiveness. In addition, Wen-Ling Chen (2011) and Chiu- Hua Lai (2012) also studied the legislative process and benefits of the rural rejuvenation plan.

### 2.4 Research question

Summing up the above, most related research has focused on analyzing the evaluation of a single policy, the policy content, the implementation of a case, and so on. Although this single-type policy research can result in more in-depth study, there is a lack of level-oriented policy comparison, which is of interest here because the two policies are the core policy of Taiwan's community cooperative policy strategy at this stage. Therefore, in this paper, a

narrative analysis and in-depth interviews are used to gather experiences from community planners to try to understand whether there is room for improvement in the community cooperation policy in Taiwan.

### 3 Research design and research methods

This paper takes the most representative community as the object of study, one which has done both an integrated community development plan and a rural rejuvenation plan. Research methods include a case study and in-depth interviews as well as the collection of some related texts, the guidelines for the two policies, and so on, which can help readers understand the developmental process of the research community.

This work not only provides interviewees' experiences and thoughts on the two policies but also provides some comparative analyses about the two policies through in-depth interviews with community planners.

#### 3.1 Case study

Through the case study and interviewee's relevant experiences, we learn that the most representative community among the rural communities in Tainan City, which has done both an integrated community development plan and a rural rejuvenation plan is the Tugou community; therefore, in this paper, we take it as the case study community.

##### 3.1.1 Introduction of case study community- Tugou community

The Tugou community is located in Houbi Township in Tainan City. The entire area is about 478 hectares. In recent years, the community has faced some difficulties such as the aging and declining population problems as well as some industrial and economic issues.



Fig.3. Map of the Tugou community

##### 3.1.2 The integrated community development plan period

The Tugou community has been doing community development since 1991. However, in

2001, the community fell into decay, and it was at the request of the Tugou community to do some projects making use of the integrated community development plan that the birth of the "Tugou Rural Culture Association" occurred. This association focused on searching for community culture and characteristics. Ultimately, they used "buffalo spirit" as the image of the community (Guang-Xu Wang, Jui-Hsuan Chung, 2014). At the beginning of the formation of the association, they tried to gather people together to clean their environment as the first step involving public participation. In addition, because of the plan, students at Tainan National University of the Arts also joined in this project to provide guidance for community development (Tainan Tugou Rural Culture Association, 2015).

### **3.1.3 The rural rejuvenation plan period**

According to the Tugou Community rural rejuvenation proposal (2016), the core community development goals include industrial development and industry-related construction and involve such things as improving the overall environment of the community, trenching the community land texture, and the use of zoning in the overall planning for such things as ecological corridors, living corridors, production corridors and art corridors. Also, public construction, waterfront design, community cultural building repair, industrial revitalization, and so on, are seasonal projects. This reveals that the planning in recent years has been biased towards hardware improvement and construction and has been aimed at the revitalization of community industries and the self-management of the community.

### **3.1.4 Current situation of Tugou community**

The original community development was very vigorous and mature, but since 2002, the association has become divided because of different perspectives and because the original organization was squeezed by outside factions, leading to community development stagnation.

However, because of the consensus in the community, which increased during the integrated community development, the community solved the problem successfully. This year, in 2016, the community proposed the rural regeneration plan and has still been working on community development.

## **3.2 In-depth interviews with community planners**

In this study, because of time limitations, we selected three community planners from the fields of government, industry and academia to interview who were also related to the case-study community.

## **3.3 Questions' design for the in-depth interviews**

Table 1 Interview questions

No.	Question	Dimension
1	When and why did you start to do integrated community development work? Are you currently involved in the rural rejuvenation plan?	Interviewee's information
2	What was the situation in the rural rejuvenation communities before they did a rural rejuvenation plan?	Experience
3	What do you think are the greatest differences between the integrated community development plan and the rural rejuvenation plan?	Comparison between two policies
4	What are the differences between the two policies with regard to educating residents?	Comparison between two policies
5	How does funding work in the two policies?	Comparison between two policies
6	What is the biggest problem for the rural rejuvenation plan now?	Experience
7	Which one is the most successful in regard to developing the community?	Experience

#### 4 Comparison of the two policies based on the four indicators

Through in-depth interviews with community planners and an analysis of the results, the comparison and the evaluation were made based on the four indicators referred to earlier: a bottom-up approach, public participation, community-led development, and sustainable development.

##### 4.1 Bottom-up approach

Traditional community planning is where the government (top) delivers the policy and creates plans and projects for communities (bottom). However, recently, community cooperation policies have become popular, so people are getting used to the bottom-up planning model.

*Before the rural rejuvenation plan, the community always did some regular and basic community development work or did nothing. I am the person who tried to encourage people to do something related to community development. (A)*

According to the residents' perspectives during the period of the integrated community development plan, if the community's residents have no consciousness and cannot form a consensus about how to develop the community, the community's mobility and enthusiasm will be low. However, with the change of times, during the rural rejuvenation plan, the

residents started to suggest many ideas about how to improve their community. The rural rejuvenation plan also helped people approach their community development project from the bottom up.

*If the community planners or leaders do things too quickly, others will not be able to catch up, and the development also has something to do with politics. (A)*

*The policies about communities are related to politics and the local government.(C)*

*If there are 1,000 residents in this community, it will be enough and great if about 50 residents are willing to do something for the community with you. If you want to do something, the more people know, the more possible it will be for this project to succeed, but it will be more efficient if you do things alone. (A)*

Through the interviews, we can see that community planners and leaders need to have a good relationship with the government and the residents in order to successfully enact a bottom up approach. For example, the leader of the group from "Tainan National University of the Arts" in the Tugou community has a great relationship with the government, professionals and residents, and that's why the integrated community development plan can succeed. However, in the case of the rural rejuvenation plan, community planners and leaders are more like consultants who try to help residents write the rural rejuvenation program.

*The situation in Pingtung is interesting; the community was very vital while doing the integrated community development plan and made lots of achievements during that time. But when it came to the rural rejuvenation plan, the mayor did not put effort into this plan, so only a few communities participated in the rural rejuvenation plan. However, in the last year, the mayor changed, so a new leadership group in the local government started to pay attention to rural development and formed an office that focused on the rural rejuvenation plan and rural communities in Pingtung. (B)*

From the perspective of the government, we can summarize that the attitude of the government toward promoting detailed plans will affect the result.

## **4.2 Public participation**

In regard to "participatory planning," the following quote compares the participatory planning method, the residents' training system and the attitude of the community toward the participatory planning of the two policies.

*The rural rejuvenation community can freely join the residents' training course offered by the government. It has both required and elective topics from which the community members can choose a course based on the features of their own community. For example, I am currently handling the residents' training courses in Kinmen, Tainan,*

*and Penghu, where I am a community teacher and counselor. I think the community development project should emphasize not only industry but also culture and ecology, among other things. (A)*

*The residents' training system in the integrated community development plan involves the government looking for and gathering residents who have an interest in community development. This system started in 2006, and after 2014, the system became stable. (B)*

*People can joined the classes which were offered by the government during the integrated community development plan.(C)*

We can see from the residents' training system that during the integrated community development plan, residents were not proactive; they only did what the government asked them to do. On the contrary, during the rural rejuvenation plan, residents have been more proactive, and they are willing to go to the community development training courses, so it is more likely they will achieve the developmental goals.

*At that time, during the integrated community development plan period, the community counselor usually tutored 3 to 5 communities, and he would spend lots of time with them. He tried to build a partnership between the counselor and the community. (B)*

*The community counselor tried to connect the community to neighboring communities by organizing a regional family network. (C)*

*However, now, in the rural rejuvenation plan, there is no regional family network because the counselor has less time to be with the community. This plan only emphasizes results and profits, not the process. (B)*

We can see from the company system that the counselor's group can spend enough time with communities so that they can have a healthy relationship and link with communities. If the counselor spends more time in the community, it is more likely this community development will succeed. In the case of the Tugou community, because the group from Tainan National University of the Arts gets along with the community well, the development has remained active.

*About the construction situation, the effectiveness and the quality were high during the integrated community development plan because residents did construction that was essential. (B)*

We can summarize from the community's attitude toward participatory planning that people did projects and exerted effort only during the integrated community development plan period. However, during the rural rejuvenation plan period, community development

projects becomes plan-oriented, and people cared more about the results, not the participatory process.

### 4.3 Community-led

In terms of "Community-led development," the following passage discusses two leading indicators for the community development policy, funding and planning project content.

*In the integrated community development plan, the community gives the separate planning project and funding application to CCA. In contrast, the rural rejuvenation plan has a timetable for the application. The community gives their overall plan to the SWCB, and when they accept the plan, the SWCB will give the funds to the community directly. (B)*

Through the interviews, we can see that there is no overall application system in the integrated community development plan, so the development in a community can become fragmented. However, in the current rural rejuvenation plan, the application system is integrated.

*Now, the rural rejuvenation plan focuses more on the vision of the community. For example, if the vision of the community is industry, then the public construction and other programs should relate to industry. (A)*

The planning content of the project will focus on projects related to developing community culture and characteristics. Even though the rural rejuvenation plan is multivariate, it is more likely that projects will conflict with other ministries' plans, and if planning projects involve too many departments, implementation will be difficult.

### 4.4 Sustainable development

In terms of "sustainable development," the following text compares two leading indicators in both policies, the length of community development and the application situation.

*It is very difficult to extend the period of community development because of politics and factions. For example, the community chairman can hold this position eight years at the most, so if the new chairman does not want to maintain the previous plan, then the community development will be interrupted. (A)*

*There are some communities that were very successful with development until they changed the chairman. We should tutor the community carefully, especially when the community chairman and the chief of the village are different, sometimes the counselor will end up as the sacrifice. (A)*

*I think in any re-election in associations, like in a presidential election, the chief of village election will weaken the policy. (B)*

*The community's association plays an important role in community development. (C)*

Usually, in the integrated community development plan period, the length of community development is equal to the length of re-election. In the Tugou community, they also faced this problem after the community chairman and the chief of village re-election. However, in the rural rejuvenation plan period, the length of community development goes by the rural rejuvenation plan rules, which is about 3 to 5 years.

*The rural rejuvenation plan is criticized because it only focuses on hardware or construction but not on software. However, I think the hardware is basic; we should have a good structure first so that we can do more projects, such as an industrial plan or tourism. (A)*

The current application situation for the integrated community development plan is managed by the CCA, which gives communities some funds and helps with developing the community's culture. The rural rejuvenation plan emphasizes the community's vision, and the vision about community industry is currently the focus.

## **5 Conclusion**

Prior to the text analysis and in-depth interviews, we could have assumed that the two policies have two different authorities and thus believed that the CCA will focus only on software, and the SWCB will focus only on hardware. Actually, after this study, we discovered that the two policies work on both software and hardware. The difference is that the community has to apply to other authorities' plans when they apply for the integrated community development plan. However, when the community applies for the rural rejuvenation plan, because it is an overall plan already, the community can use the application for this single scheme.

In addition, the integrated community development plan not only suits rural communities but also works for urban communities, but the rural rejuvenation plan is suitable only for rural communities. The distinction between the two policies is that they have the different objectives because of the standard, and the system will be different. However, they still have something in common; they support participatory planning.

All interviewees felt that the community association is the key point of community development. Any re-election will affect the policy implementation, the organization and the community.

The interviewees also gave some advice and opinions about the two policies. They feel

that the integrated community development plan has become very rigid and administrative. In addition, the attitude toward participatory planning changed after 2010, after the rural rejuvenation plan was enacted. Before 2010, the community had more passion for developing their community, but after 2010, the community focused only on funds and results.

Therefore, based on the result of this paper, community cooperation policies should not be too rigid and administrative. Otherwise, it won't be possible to implement the four indicators: a bottom-up approach, public participation, and community-led and sustainable development. When the government draws up the policy, it should be both community-based and people-based. The government can not only emphasize the results of the development but also must pay attention to the process so that the community can develop sustainably.

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## Following Informal Street Markets in Taiwan: The Mechanism of Cross-Market Mobile Selling of Vendors

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### **Abstract**

“Let’s check out what is available in the market today!”

My mother, or any women who are of my mother’s age, usually starts her trip to the traditional market with the saying. These words seem common in our daily life. However, it reveals a very important characteristic of Taiwan’s traditional market in these days. Before arriving a market and going around it, we know little about what kinds of products or services would be provided in these “traditional” markets.

Beyond our imagination, vendors are not necessarily staying still in the same market all the time. In fact, there are many vendors take the business strategy of cross-market mobile selling and run their business in the different market on a day-to-day basis. Therefore, it is curious why these vendors choose to keep moving among different markets rather than staying at the same location in a certain market? Is there no barrier for vendors to flow among different markets and how do they get over it?

Through participant observation, the researcher had reached a preliminary conclusion about the reason why it is so common for vendors to do cross-market mobile business and also the mechanism functioned behind it. The formation of these informal street markets and the whole system of cross-market mobile selling are strongly related to stalls. Meanwhile, mobility itself is not only about individual capability and personal decision making, it is the collective outcome of the complex interaction among different stakeholders and actors in the political economy of market.

Keywords: mobile vendor, cross-market, stalls, Taiwan

## Introduction

*“Let’s check out what is available in the market today!”*

My mother, or any women who are of my mother’s age, usually starts her trip to the traditional market with the saying. These words seem common in our daily life. However, it reveals a very important characteristic of Taiwan’s traditional market lately. Before arriving a market and going around it, we know little about what kinds of products or services are available in these markets today, which is somehow contradicting with modern management of traditional market.

As previous regulation enacted by the city government, vendors are only permitted in marketplaces where the government assigned. In fact, the actual operation of market business seldom abides strictly by the formal planning. Street vendors not only usually crowd outside of the marketplace designated by the government, forming an informal street market itself, but also do mobile selling among different markets frequently which is also against the rule.

However, the situation has changed very recently. *“Articles of the Establishment and Regulations of Concentration Area of Vendors in Taichung (台中市攤販集中區設置管理自治條例)”* passed in the mid of 2016, which permit vendors to run their business outside marketplaces where the government assigned if there is an application. Meanwhile, vendors are still required to stay in a fixed location within a certain “informal” market. However, there still are a great deal of street vendors run their business in different markets every day.

In other words, there are quite a few stalls are run by different vendors on the different day of the week, which corresponds to the need of consumers who always seek for fresh feeling. In comparison with modern retailing businesses which change their commodities according to “season”, the “traditional” markets supply quite different types of commodity with local customers “every day”. That is, no one knows who will sell what in where exactly before going around the whole market place. Hence, going to a market seems to be an unknown adventure in our daily life.

However, this outcome does not correspond to previous understandings from some case studies, which considered a market place to be an important “social space” and connected it with the sense of place and the neighborhood relationship (Zinhan, Fontenelle and Balazs ,1999; Watson, 2009; Mele, Ng and Chim, 2015). These studies emphasized that a market is not just a platform for people to obtain foods, goods or anything for people's livelihood and Sophie Watson (2009) even indicated that the market can play an important role in community care and ethic integration. Nevertheless, these characteristics are built up on the base of the constant composition of vendors in a market, which is not exactly the case of street markets in Taiwan.

In addition, it seems reasonable for vendors to stay at the same place so as to occupy a good location for business and gain trust from customers. Rather, long-term occupation and continuous appearance at one place are main ways for vendors to gain or even “create” a business location, namely, stall, on a street or in a marketplace, which are exemplified by some case studies of vendors (Lauermann, 2013; García-Rincón, 2007; Chiu, 2010). However, in the case of central Taiwan shows that vendors are highly fluid among different markets, far from staying at a certain and fixed place.

Therefore, it is curious why these vendors choose to keep moving among different markets rather than staying at the same location in certain market? Is there no threshold for vendors to flow among these markets and how do they get over it? Besides, under the condition of continuously moving, why the space of a market can be stable and even broaden? Is there any mechanism to support the mobile businesses and the fixation of a marketplace? How does it work?

### **Blending into a Market: Becoming a Vendor**

#### **I. Traditional Markets in Taiwan**

Even through modern retailing businesses and channels penetrating into every aspect of Taiwanese daily life, “*traditional retail market* (傳統零售市場)” still plays a role in the distribution of food and goods in both urban and rural areas. This term usually refers to markets that open every day morning from 6 to 13 (the opening period is very rough and flexible, depending on the particular vendor’s decision and also the season.). “*Sunset market*(黃昏市場)” is usually considered as one kind of *traditional retail market* but it usually opens from 15 to 19 (the opening time is also very flexible). However, it is not the main focus of this research.

According to the regulation of the government, there are several different kinds of *traditional retail market* in Taiwan. Public Markets are officially designated and constructed, some of which can be traced back to Japanese colonial times and are still under regulation of the local government. Starting from the 1960s, private markets were established by private sectors after the post-war, central government canceled the previous regulation that had prevented local people from setting up a market – a policy inherited from the Japanese colonial governance. Meanwhile, street vendors usually crowd outside these formal markets mentioned above, forming open-air markets itself on nearby streets and lanes. Some of them are officially registered as ‘*temporary concentration area of vendors*(攤販集中場)’ (Following I will use the term “Informal Street Market” or “Street Market”). These morning street markets are the main focus of the study.

While the size and geographic distribution of these informal street markets are highly

variable, they all provide almost all kinds of daily necessities, including food materials, cooked food, groceries, hardware, clothing and so on. No matter which market you go, they usually have somewhat similar characteristics, composition and atmosphere. Bustling with noise and excitement, *traditional retail markets* are crowded with lots of people every morning, especially on weekend. Plenty of vendors run their business at stalls which range along both sides of a road or alley, supplying a variety of goods with customers and use all their skills, experiences, and tricks to attract people passing by.

## II. Research Method

In order to blend into the vendors' community and know how exactly they run their business, I inquired an intern opportunity from some "vending corporations". These vending corporations are very organized in every aspects of business, such as products development, stock management, logistics and even human resources management. Joining a company is the most efficiency way to become a vendor, because it provides everything a newcomer may need, from commodities that you can sell, the know-how of selling to the place that you can set up your business.

After I interviewed with several operators of these corporations and explained my purpose of doing research on vending, one of them gave me an offer. Therefore, I got a chance to serve as an intern to assist vendors hired by the corporation from mid-July to early September, 2016. There are 7 vendors in the company and each of them dominates his/her markets so as to avoid competition in the same business. Most importantly, all of these vendors do the cross-market mobile selling so that I can grasp the core reason why these people keep moving among different markets and how they can make it. As a "quasi-vendor", the following depiction and analysis of cross-market mobile selling are mainly through participant observation.

During my internship, I went to the different market 5 to 6 days a week. On account of the opening hours of these morning street markets, I usually arrived at market at 7 to 8 (the stall is usually set up already), and leaving at 12 to 13 (after wrapping up the stall). Before saying hello to the vendor who I learned from on that day, I would go around the whole market to understand the geographical feature of the market (its form and its boundary and where the "core" place is in the market) and what kind of goods were available in the market.

During the business period, I observed the vendor how to do business and interact with neighboring vendors. When customers crowded around the stall, I would also help introduce the commodities, give change or pack up. In addition, I used the free time to chat with vendor who I followed on that day to know about the details of their business, such as how to get a stall in a market and the why they prefer mobile selling to selling at a fixed location.

## Research Findings: Motivation and Mechanism for Mobile Vending

Vending used to be seen as a typical “informal economy” and was connected to jobs or labor status which is “unskilled, easy-entry and low wage” (Hart, 1973; ILO, 1972). However, to start up a market business, namely to become a vendor, is not as easy as one’s imagination, especially to those who have little knowledge about market businesses and are also lack of essential relationship in markets.

To become a vendor, you have to be able to accomplish following goals: First, to determine which commodity is “marketable” in traditional markets accurately, and pricing it on an acceptable level to both customers and the seller. Second, to find a good location to sell your commodities and ensure it is big enough to demonstrate all of them. Thirdly, a wealth of knowledge about the commodity you sell and the trick or performing skills to attract and persuade customers to buy it. Finally, it is necessary to have sufficient working capital and to ensure that the number of inventories.

However, what have mentioned above is only the most basic condition of business operation, and it does not mean that one’s business can be sustained in the long term and even thrive. Depending on the type of commodities being sold and the individual decision of business strategy, some of the vendors determine the mobile ways to actively expand the "commodity circle" that a vendor can reach.



Figure 1. The diagram of cross-market mobile selling

*“If you don’t move, you will die.” (2016/7/18)*

Therefore, being mobile is a very common strategy for vendors to struggle for their living. In each informal street market, there are always a significant proportion of “itinerant” vendors, who do their business in the different market on a day-to-day basis. That is, these vendors keep moving among different markets and even spread beyond the boundary of country.

Although every street market seems very similar to each other, there are still some different characteristics originated from the socio-economic context of each market. In fact, it is very common to hear the “evaluation” of the different market from vendors during my internship. In general, a market can somewhat reflect the level of income or the socio-economic condition of the neighborhoods. Therefore, vendors have to adjust their strategy to different

market so that they can ensure a successful business. In other words, it is not necessarily possible for a vendor to run the business at the same place in a long run because of saturation of single market or lack of purchasing power.

Relating to the survival of business, vendors are very sensitive to the characteristics of the different market. Vendors who I learn from keep reminding me some points, such as "*choosing a suitable market and the corresponding grade of commodity*" or "*keep an eye on the worth-operating market*". That is to say, you can sell in some markets once a week while you had better reduce such frequency in some markets otherwise the sales performance will be bad. However, there is no standard for such business and it depends mostly on the socio-economic characteristics of the neighboring community and one's fortune, which is always hard to anticipate.

Being mobile enables vendors to react quickly to the market changes and flexibly adjust their selling strategy and even locations. However, how vendors can break the barriers to entry in various markets and achieve this highly-intense mobility? According to my observation during the internship, the following contents attempt to answer the question. First of all, three types of mobile vending were identified based on their different level of mobility. Next, I will go further to discuss the mechanism of mobility which is related to the formation, exchange and transaction of stalls and all the stakeholders and actors in the market.

### I. Types of Vending

According to my observation and the information obtaining from the gossips, there are quite a part of stalls in the market operated by different vendors on the different day of the week. Therefore, these morning street markets are able to keep somewhat "fresh" to the local customers and always to be an attracting place to visit. However, it is notable that not all vendors in a market keep "mobile" status or take such highly-intense mobile strategy to run their businesses.

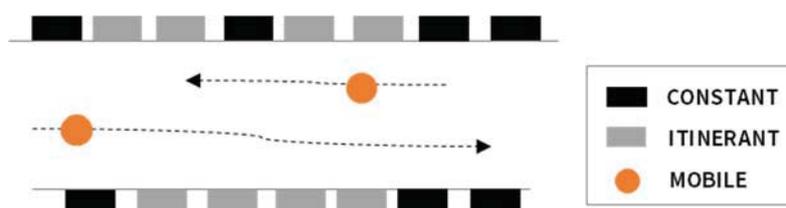


Figure 2. A market comprises of three types of stall actually

Based on their different level of mobility, three types of vending are distinguished as follows:

1. Constant vendors (see the black rectangles in Figure 1)

In general, constant vendors do not change their location in the market and always sale

the same type of commodity. All kinds of raw food are common in such fixed selling, such as meat, poultry, seafood, fruits and vegetables, as well as some vegetarian and cooked food. Usually, constant vendors operate their business for a relatively long time in the same market.

2. Itinerant vendors (see the gray rectangles in Figure 1)

Itinerant vendors are those vendors who keep mobile among different markets on a day-to-day basis. Therefore, the same stall in the market is operated by different vendor on the different day of the week. Even though there are still some exceptions, the same stall is usually operated by the same vendor on the same day of a week and this cycle becomes the base of relationship in such fluid community.

Itinerant vendors usually sell non-food commodities, such as groceries, hardware, clothing, shoes, hats and other commodities that in the category of daily necessities. However, it is notable that the scale of business varies considerably. It reflects on the size of the business space especially, some stalls are very large (generally known as “the big stalls”), while some are relatively small.

3. Mobile vendors (see the dots in Figure 1)

Mobile vendors do not have a fixed place to run their business, so they have to be constantly mobile during the operation period of the market. Therefore, they are jokingly called as “cockroach” by other vendors. However, most of them are fixed in the same market, selling fruits and vegetables cultivated in adjacent suburbs, self-made food, or goods stocked in small amount. No matter what they sell, the goods cannot be too heavy or too much for vendors to carry around so that mobile vendors can bring their commodity with their body (holding with arms or hanging on the body) or push a cart in the market back and forth.

In conclusion, we can distinguish three types of vendors from the different level of mobility. Even though mobility itself is a common strategy for vendors to run their business, there are still some vendors fixed at the same place. Also, when it comes to mobility, we can differentiate some vendors are mobile in the same market while others are mobile among different markets.

However, the rotation of stalls is on a week-by-week basis. Therefore, the same day of each week, the composition of a market is roughly the same group of people. Although the vendor is mobile, this mobility is still traceable to a degree. In order to establish credibility and attract customers back, the vendors usually stressed that "*I come here on the same day of the week,*" or "*I am here every two weeks.*"

## II. Formation of Stall and Operation of “Stall Estate”

For itinerant vendors, "mobile selling" is a necessary means to operate their businesses. However, how can a vendor ensure that there is always a “place” for him/her to set up the stall in these markets? In fact, vendors know beforehand which market they can go, otherwise the “cross-market” mobile selling system cannot be achieved. Without the existence of “fixed stalls” in each market, it is impossible for these itinerant vendors to mobile among different markets or even plan a long-term mobile strategy.

Therefore, under the highly-intense mobile status, it seems apparent that the formation of a “stall” is not through one’s long-term occupation and continuous appearance at one place, there is a complex but invisible mechanism behind the whole mobile system, which named “stall estate” in this research.

According to the investigation from my internship, every "stall" in these informal street markets is possessed by the corresponding holder or "broker". Therefore, without the consent from or informal contract with these holders or brokers, no one can set up one’s stall at any “stall”, otherwise it will cause serious disputes. Actually, these so-called "stalls" are located in public space on streets or lanes, but they are also located in front of the house of these holders. Therefore, the formation of “stall” is accompanied by the appropriation of public space, and the entire process is also the starting point of the operation and management of stall estate.

Meanwhile, the formation of stalls and the establishment of these informal street markets are strongly interrelated so that it is hard to specify the sequence, just like a chicken-and-egg cycle. However, one thing is for sure that the formation of stalls, and the operation and management of “stall estate” definitely affect the consolidation, expansion and operation of these street markets.

In any case, these “stalls” have corresponding rents. Therefore, vendors are required to pay rent to the "landlord" or the "broker" who owns the stall so as to use the certain stall in the market. According to the discussion in the previous section, some vendors can reach an agreement with the landlord for a long-term "monthly rent" to become a fixed vendor in the market. However, a large part of vendors is just "daily rent" from the landlord or broker.

Two types of stall can be identified by whom you rent from: private stalls and broker’s stalls. Vendors can rent private stalls directly from the landlord, while broker’s stalls are manipulated by a number of brokers, namely *group heads*(組頭). These *group heads* have little relation to mafia or gambling, even though each of them do control a lot of stalls in different markets. Actually, they are more like stall estate investor or just the “middleman” landlord.

These *group heads* will search for "good location" in a market or its surrounding area and then contact the landlord whose house is close to it. After reaching an agreement or signing an informal contract with the landlord, *group heads* obtains the right to lease the stall. Usually, they will sign for a long-term rent and pay the rental for one year at a time. However, why these landlords are willing to lease or hand over "their space" to these *group heads*?

Actually, it is more convenient for landlords to hand over the right of stall management to *group heads*. On one hand, landlords need not collect the rent from many different people or worry about related trifles. Also, the rental income is very stable no matter whether the stall is rented out each day of every week. On the other hand, these *group heads* can make a big profit from the substantial difference in the price attribute to the relatively low rental of long-term "monthly rent" and relatively high rental of "daily-rent".

A *group head* actually manipulates a lot of stalls in many markets for vendors who attach themselves to the particular *group head* to choose. To attach a *group head*, a vendor has to pay commission charge every month, and the *group head* will inform the vendor a stall which he/she can go on each day in return. According to the information provided by some anonymous vendors on the internet, the market price of the commission in 2010 is 10,000 NTD (or charging 300-500 NTD per stall) per month. Besides, because *group heads* make profit from the difference in the price, broker's stalls are much more expensive than private stalls. However, the best position in a market are all under control of *group heads*.

All in all, who are these *group heads*? How come these people can own so many stalls as well as so much investment funds? According to the initial interview (2016/7/16) with the operator of a vending corporation, the predecessor of the *group head* is actually a vendor. These experienced vendors not only accumulated a large amount of cash as they operated their business in markets for a long time, but also are well acquainted with many stakeholders in different markets.

As a result, these *group heads* own many "good stalls" scattered in different markets and even "develop" new stalls from surrounding area. Thus, it is worth noticing that the formation and expansion of the informal street market is strongly related to these *group heads* and their operation of stall estate.

### III. Exchange of Stalls among Vendors

Since there is no formal contract of such stall transaction and lease, there are diversified ways to obtain a stall other than through landlords or *group heads*.

*"Make friends with people is the biggest thing in the market."* (2016/7/28)

During my internship in markets, the vendor stressed this sentence over and over again. It

points out the strong relation between obtaining a stall in a market and interpersonal networks. That is, more people you make acquaintance, more possibility that you can get a stall, especially a stall which is in good location and at reasonable price.

In case there is any emergency incident (such as weddings and funerals) or going on a vacation or any other particular reason for taking days off, the vendor is very likely to contact with his/her acquaintance to take over the stall. Also, it is a very common situation that a vendor intends to coordinate another vendor who he/she knows to operate a stall alternatively with him/her at a week interval.

Besides, some vendors who has done their business for a long time and know very well about the accessibility to stalls of many different markets are capable of “owning” an amount of “good stalls” that is obviously too much for one vendor (after all, there are only seven days a week). As a result, the vendor would rather distribute stalls to those he/she are familiar with than drop these “good stalls”. Thus, the vendor become more and more like a *group head* and finally becomes a real one.

Actually, vendors enjoy the more flexible way to exchange and obtain private stalls relative to broker’s stalls, which are controlled by *group heads* intensively. In addition to the means mentioned above, with the development and popularity of communication software and social network, the information of stalls to rent becomes more and more transparent and immediate. That is, vendors can still grasp the latest information about stalls around the county and even the central area of Taiwan without *group heads*.

However, how come the mechanism of information exchange can work? First, there are unknown sponsors to set up stall-rented club pages on Facebook or LINE groups and inviting vendors among the same geographic area to join. To become a member of such club page, you have to request for a permission from the administration. There must be a referrer to guarantee the identity of the newcomer and submit one’s real name, the type of business and the contact to the administrator so that the newcomer may qualify for a membership.

Secondly, the vendor who intend to rent the stall out for one day or a longer period can post a message on the club page or chat group. The location, size, rental or any related information of the stall as well as the contact have to be included in the message. Finally, the one who want to rent the stall have to contact with the vendor. Once the agreement is reached, the tenant has to pay the rental through transfer immediately and reply the post with a formal term “*yǐ chu* (已出)”, which means that the stall is reserved on that day. It is strictly prohibited to reply the post before you contact with the renter.

Actually, administrators of these social and communication media lay down some rules and penal regulation for vendors to follow, and those who do not abide by the rules might

disqualify themselves from the membership of at worst. (There will be a collective punishment for the referee, too.) For example, they cannot overstate the size and rental on purpose, or cannot ask for commission if the stall they lease is private and so on.

In addition to vendors, more and more *group heads* also rent their stalls through these communication and social media. Therefore, while vendors are more accessible to the information about stalls to rent which was once confined by the personal relationship and *group heads*, these traditional holders of stalls also keep up, even take advantage of the trend.

How much has the new technology replaced the role of *group heads*? Or, more precisely, what impact do the community and communication software make on the cross-market mobile-selling system? More research is needed to explore the questions.

### **Conclusion**

This preliminary research demonstrated that the strategy of cross-market mobile selling is not only aimed at expanding business, but also a necessary means of survival for a number of vendors. Given the different socio-economic context of every different market, it seems impossible for some vendors who sell a certain type of commodity to stay at the same place. Therefore, it is understandable that the transfer, exchange and acquisition of stalls are so important to a vender.

However, it is worth noticing that the formation of stalls and the strategy of mobile-selling are strongly interrelated. That is, the need of mobile selling among different markets gives birth to the business of the broker, namely *group head*. Meanwhile, *group heads* are able to “create” new stalls by negotiating with landlords whose house are located inside or in the vicinity of a street market. Attribute to the formation of these stalls, the space and the boundary of the market become fixed and even broaden, and related stakeholders also gain a lot from the prosperity of stall renting business.

Nevertheless, vendors have diversified ways to obtain a stall in a market other than relying on *group heads*. The relationship between vendors and the coordinating strategy among one another still play an important role in obtaining stalls, but the development and popularity of community and communication media are making an impact on the existing stall estate and the stall renting market.

Obviously, vendors who take the strategy of cross-market mobile selling can more easily learn of information through these web platforms; they benefit a lot from this learning and gain more momentum to move even farther and more frequently and it has posed very positive effect on broadening the scope of one’s movement. However, it has to be kept in mind that the rise of the new technology does not alter the fact that the majority of stalls and the best location in markets are still under the control of *group heads*. However, it is very

worth to keep an eye on what will happen in the coming future.

In conclusion, both the formation of these informal street markets and the whole system of cross-market mobile selling revolve around the operation of stall estate. It is impossible for vendors to mobile in different markets without the existence of stall renting market and well-functioned mechanism. Therefore, the ability to move for a particular vendor among different markets, the formation of a market and the operation of stall estate as well as the stall renting market are all interrelated, and it is hard to clarify their sequence. That is, mobility itself is not only related to individual capability and personal decision making, it is also the collective outcome of the complex interaction among different stakeholders and actors in the market.

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## **Amphibious City: Sustainable Adaptations to Sea Level Rise in Seattle's Interbay Area**

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### **Abstract**

Sea-level rise poses major challenges to coastal land uses, and therefore to urban design processes. The project is intended to create an innovative, sustainable and workable urban design plan. In the Seattle Interbay Area, the water along Seattle's Puget Sound shoreline has risen by more than 6 inches during the past century (Climate Impacts Group,2013). Climate change is expected to accelerate rising sea levels during the next century. Mean projections indicate that Seattle will experience 7 inches of sea-level rise by 2050, and 24 inches by 2100 (GGLO Design, 2015). While chronic inundation is a concern, sea-level rise impacts will first be noticed episodically with more frequent tidal flooding events.

As a result, there is a need to inspire creative thinking on how to integrate existing and future built environments with predicted coastal processes. I intended to provide coastal communities design concepts and ideas that create shoreline communities that address coastal hazards and preserve and enhance coastal resources. The project seeks to find the balancing point between people and nature, which is when sea level rise, how to survive because of flooding in the next hundred years. The design solution is an embodiment of cultural representation and technology of stormwater management in order to achieve ecological and social resilience which is life, produce and ecology.

Keywords: Sea-level rise, Flooding, Urban design

## Introduction

Sea-level rise poses major challenges to coastal land uses, and therefore to urban design processes. This project is intended to create an innovative, sustainable and workable urban design plan.

Sea level rise is like storm surge in slow motion—an inexorable, decade-by- decade phenomenon that never creates a sense of immediate crisis. Impacts from sea level rise are forces that already contribute to coastal flooding, such as storm surge. When these forces are superimposed on higher sea levels, the result will be short-term, extremely high water levels that can inflict damage to areas that were not previously at risk.

In the Seattle Interbay Area, the water along Seattle’s Puget Sound shoreline has risen by more than 6 inches during the past century (Climate Impacts Group,2013). Climate change is expected to accelerate rising sea levels during the next century. Mean projections indicate that Seattle will experience 7 inches of sea-level rise by 2050, and 24 inches by 2100 (GGLO Design, 2015). While chronic inundation is a concern, sea-level rise impacts will first be noticed episodically with more frequent tidal flooding events.

Increasing rates of sea level rise caused by global warming are expected to lead to permanent inundation, episodic flooding, beach erosion and saline intrusion in lowlying coastal areas. How do we keep Interbay safe in the face of future extreme weather events and sea-level rise? How can we make cities less vulnerable to water extremes, urban heat and population growth? And what can we do to improve the water quality and quality of life in the region? What can we do to make “bay life” safer, healthier, more fun, and more accessible? These are the questions I address in Living with the Interbay, our comprehensive regional resiliency plan for Seattle’s Interbay. The goal of the plan is to make the communities around the Interbay more resilient in the face of future extreme weather events and sea level rise, but also strengthen what makes living near the bays great in the first place.

As a result, there is a need to inspire creative thinking on how to integrate existing and future built environments with predicted coastal processes. I intended to provide coastal communities design concepts and ideas that create shoreline communities that address coastal hazards and preserve and enhance coastal resources. The project seeks to find the balancing point between people and nature, which is when sea level rise, how to survive because of flooding in the next hundred years. The design solution is an embodiment of cultural representation and technology of stormwater management in order to achieve ecological and social resilience which is life, produce and ecology.

## Background

Interbay is a neighborhood in Seattle, Washington in the United States consisting of the valley between Queen Anne Hill on the east and Magnolia on the west, plus filled-in areas of Smith Cove and Salmon Bay. Interbay is an industrial/ retail/office area between the Magnolia and Queen Anne areas. Fifteenth Ave West is the main commercial street in this area. There are 70% industrial area such as light manufacturing complexes, a railroad yard, fenced off storage yards, marine industries, clustered retail stores, and the Interbay Golf Center are among the many varied uses located here.

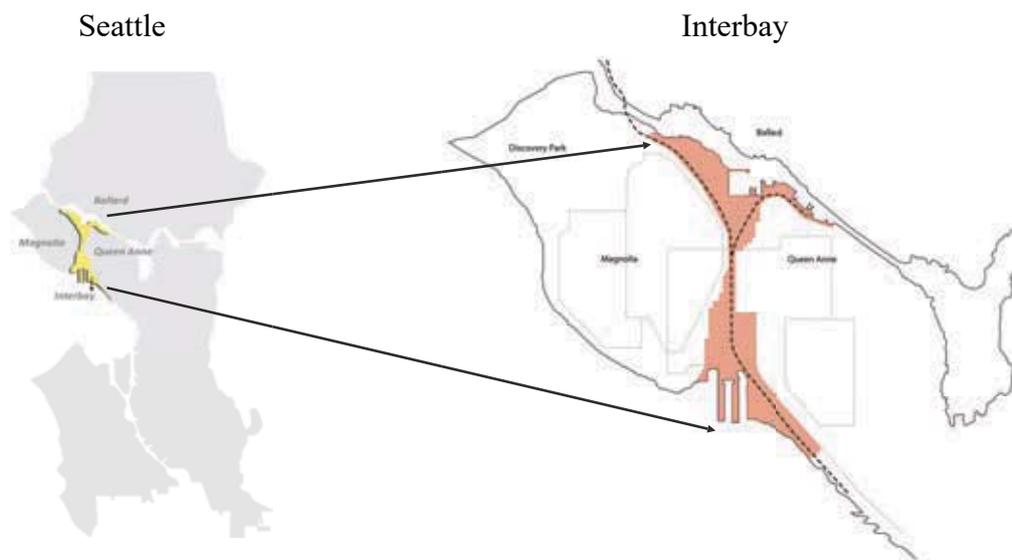


Figure1. Locations

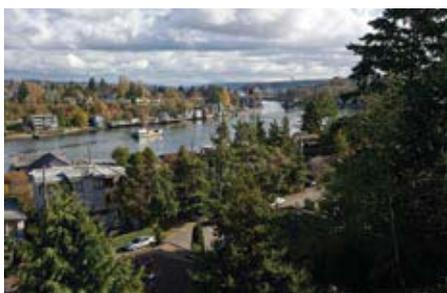


Figure2. North of Interbay



Figure3. Middle of Interbay

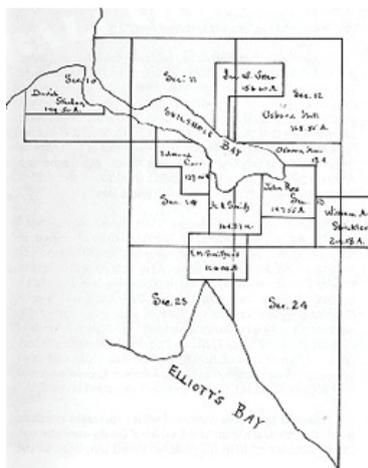


Figure4. South of Interbay

## History

The ship canal project began in 1911 and was officially completed in 1934. Prior to construction of the Lake Washington Ship Canal, otherwise known as the Salmon Bay Waterway, water used to exit Lake Washington via the Black River which flowed from the south end of Lake Washington into the Duwamish River (Robert C,1961).

As early as 1854, there was discussion of building a navigable connection between Lake Washington and Puget Sound for the purpose of transporting logs, milled lumber, and fishing vessels. Thirteen years later, the United States Navy endorsed a canal project, which included a plan for building a naval shipyard on Lake Washington. In 1891 the US Army Corps of Engineers started planning the project. Some preliminary work was begun in 1906, and work began in earnest five years later. The delays in canal planning and construction resulted in the U.S. Navy building the Puget Sound Naval Shipyard in Bremerton, Washington, which is located across the Sound from Seattle.



1853



1894



1900

Figure5. Ballard and Interbay/Photo Source: Seattle Public Library

Getting to Ballard can take time. 100 years ago, its fishing and lumber industries stayed connected to the world by rail and by sea. In 1892, the Great Northern Railway came to Seattle from the north, down the shore of Puget Sound, across Salmon Bay and Interbay, to Seattle.

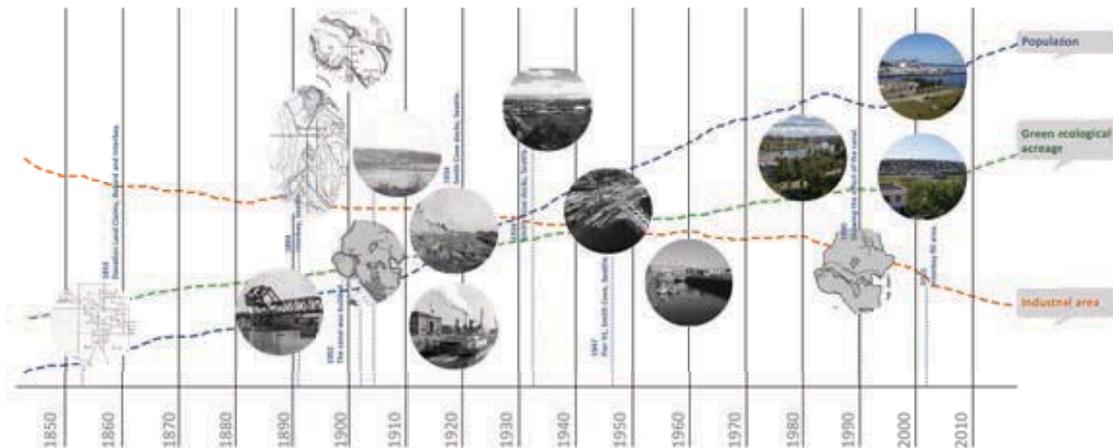


Figure6. History of Interbay Timeline

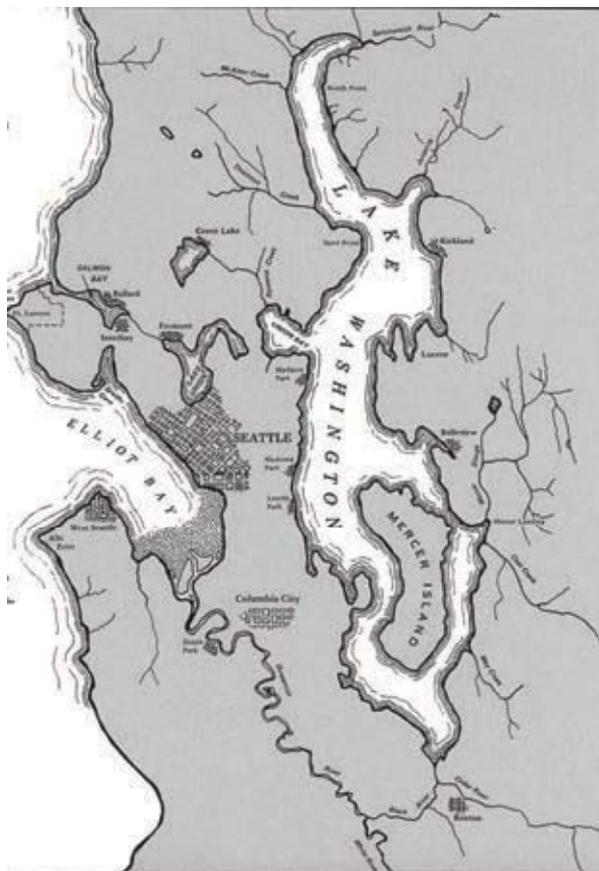


Figure7. 1902 Map of waterways in Seattle Interbay Tide Flats

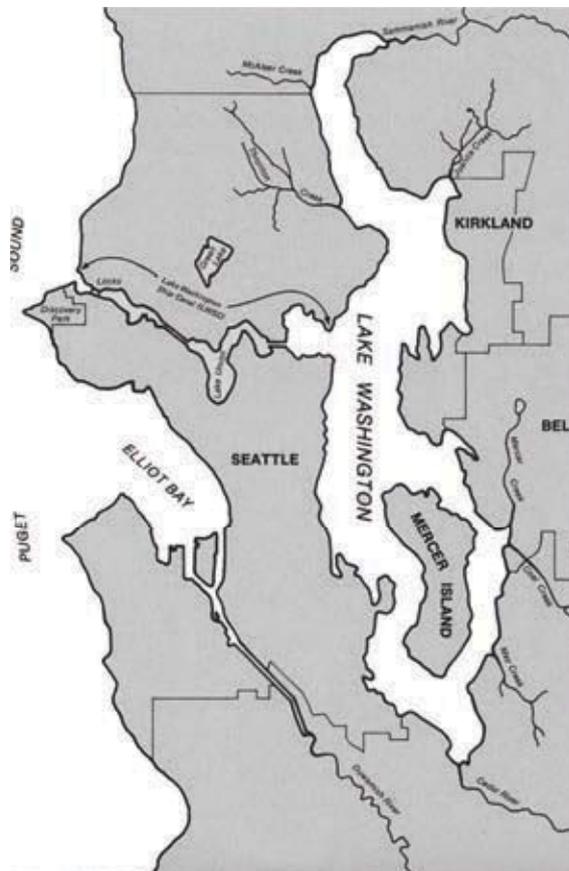


Figure8. Map of waterways today

The two image is intended to be contrasted to the different waterway changes in Interbay.  
 Photo Source: U.S. Government Printing Office Pamphlet 1999-791-887: "Lake Washington Ship Canal and Hiram M. Chittenden Locks", p. 3.

## Conceptual Framework

This study begins with an estimation of river level rise in the Interbay and its floodplain, taking into account the causes of urban storm surge within the City of Seattle, as a study sample site. Given current civil engineering solutions and ecological factors, this study provides an alternative operational framework to evaluate the sustainability of solutions to urban flooding at levels estimated for the next 100 years.

Based upon my analysis of the three selected work by theorist- practitioners, I was able to find a way to consider the landscape in different dimensions: architecture space, industrial area and coasts area. The site synthesis presented three major issues and opportunities for the Interbay site: walkability, disconnection to its people and context, and linkages to surrounding park systems to form a network of ecological infrastructure. These design priorities became the facilitators between theory and real world problems.

This study proposes a sustainable urbanism design model including building designs to confront urban flooding in Interbay while accommodating ecological and social activities in this historical city center. The structure of the research undertaken is shown in the diagram below (Figure 9).

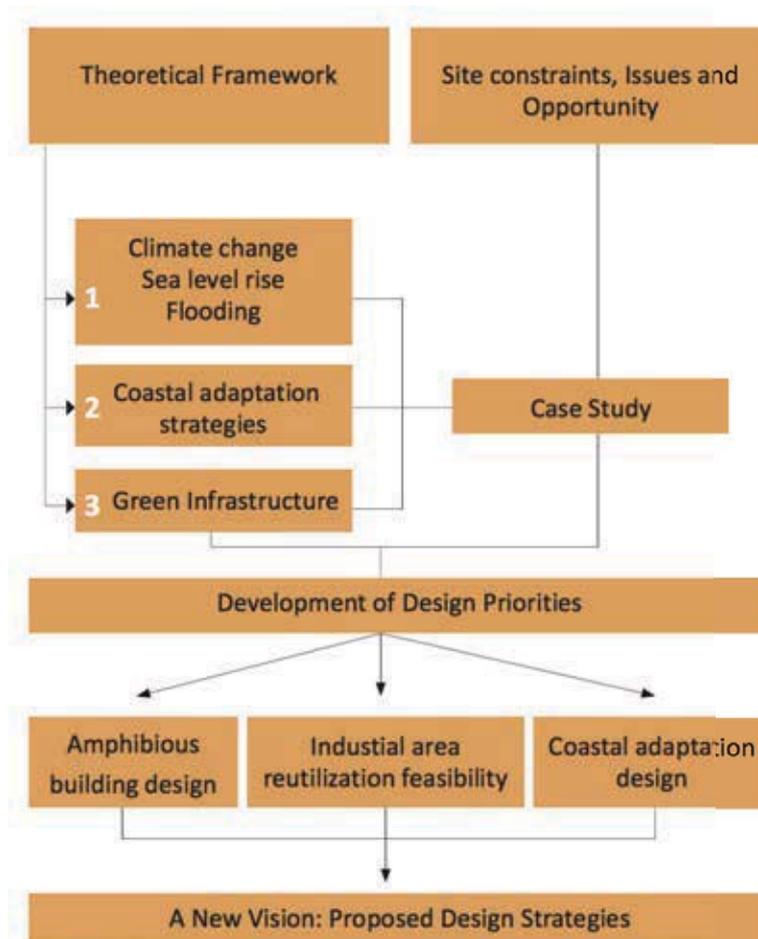


Figure9. Thesis Structure Diagram

## **Literature Review and Case Studies**

This chapter reviews the scientific literature and synthesizes global sea level rise projections and impacts, then narrows in scope to focus on Interbay in Seattle.

Characteristics of the Interbay coast make it unique in planning and adapting to sea level rise, including the coastal communities and salt marshes. Coastal management literature suggests methods that coastal communities might consider to adapt to coastal hazards using varying strategies such as accommodation, protection, and retreat (IPCC Working Group III, 1990). These scientific findings and adaptation strategies gleaned from this chapter will provide grounding as subsequent chapters move toward a site design that incorporates rising sea levels into the design process.

## **Global Sea Level Rise**

Over the past fifty years, the rate of global sea level rise has increased from 1.8mm per year to 3.1mm per year. Scientists predict that the rate of change will continue to accelerate over the next century (IPCC, Climate Change, 2007). Future sea level rise projections are defined through a scientific analysis of how humans' actions are manipulating the climate and, in turn, natural earth processes. This section examines the ways climate change affects global sea level rise through thermal expansion and melting ice sheets (Martin Vermeer, 2009).

Sea level rise is predicted to impact the built and natural environments of the coast in significant ways. Some impacts of a rising sea level are permanent inundation, more frequent temporary flooding, higher storm surges, erosion, and intrusion of salt water. When coupled with the prediction that climate change will bring more intense and frequent storms and thus high winds and storm surges, damage to coastal communities will only increase.

Inundation in natural areas will cause inland migration of intertidal and upland natural environments, such as marshes, tidal flats, and dunes (Craft et al., 2009). While these habitats are naturally equipped to deal with change and disturbance, without adequate space for these features to migrate these environments could be fractured or lost all together. Hard coastal defenses such as sea walls or levees prevent the habitat from migrating, leading to devastating loss of species and habitat as well as loss of vital ecosystem services such as storm surge buffering, nutrient cycling, and water quality provided by these habitats (Craft et al., 2009).

Climate Change Prediction	Impacts associated with change	Potential effects on society and built and natural environments
Sea level rise	<ul style="list-style-type: none"> <li>• Higher high tides cause temporary and permanent inundation</li> <li>• Increased shoreline erosion</li> <li>• Saltwater intrusion</li> </ul>	<ul style="list-style-type: none"> <li>• More frequent temporary flooding and permanent inundation of low lying land</li> <li>• Flooding of critical infrastructure</li> <li>• Loss of transportation accessibility during inundation events</li> <li>• Loss of economic industries, especially natural resource-based, such as agriculture, fisheries, forestry</li> <li>• Mobilization of contaminants at flooded sites</li> <li>• Increased shoreline erosion</li> <li>• Habitat and vegetation migration</li> <li>• Salinity damage to built structures and infrastructure, both above and below ground</li> <li>• Increased salinity of estuaries and aquifers contaminates drinking water sources</li> </ul>

Table1: Sea Level Rise Impacts (NOAA Tides, 2012)

This chapter reviews the scientific literature and synthesizes global sea level rise projections and impacts, then narrows in scope to focus on Interbay in Seattle. The study included a detailed analysis of the projected sea level rise. The following findings from the Seattle Government Climate Change Center are summarized as follows:

1. The mean sea level rise along the Interbay in Seattle coast is projected to rise from 7 to 24 inches by the year 2100.
2. A 24 inches sea level rise will put 320,000 people at risk of a 100 year flood event, given today's population. The current 100 year high tide peak would become a 10 year high tide peak, causing more frequent risks of inundation.
3. A wide range of critical infrastructure, such as roads, golf course, schools, wastewater treatment plants, and more will be at increased risk of inundation in a 100 year flood event.

## Coastal Adaptation Strategies

In light of these projections of sea level rise and its impacts, it is critical that coastal areas prepare to adapt to a “new normal” of higher sea levels, higher tides, and increased flooding.



Figure10. Diagram of coastal adaptation responses to sea level rise: retreat, accommodation and protection(adapted from IPCC Working Group III, 1990).

By recognizing the risks, uncertainties and vulnerabilities that a coastal community faces in the future, communities can plan their own response and develop their own direction for growth in the future. By combining a strategy of coastal management that combines hard and soft infrastructures, accommodation, and retreat, communities can alter their built and natural environments to attain a resilient future.

Design professions such as landscape architecture are poised to lead these discussions and develop creative solutions to these apocalyptic problems. New and innovative strategies in the planning and design fields will help to address these unprecedented changes to our modern society.

Despite the fact that specific climate change predictions are considered uncertain, it is nevertheless a fact that measures must be taken in the Seattle Interbay Area to guard against, or to take advantage and adapt to, flooding and high water levels.

## Coastal Vulnerability to Sea Level Rise

Several studies have examined the vulnerability of coastal areas to sea level rise (Gornitz, 1990). Vulnerability is defined as the degree to which a natural or social system is at risk to damages or losses due to natural phenomenon. Vulnerability can be discussed as a function of exposure (i.e. duration or intensity of change), sensitivity (i.e. extent to which a system will respond to change) and adaptive capacity (i.e. extent to which a system can moderate or take advantage of change). In this characterization, a vulnerable coastal area is susceptible to the effects, and incapable to adapting to, even modest increases in sea level.

Gornitz (1990) constructed a coastal hazards database to assess the vulnerability of the U.S. West Coast to the impacts of sea level rise. The database integrated seven variables known to influence the vulnerability of coastal areas to the impacts of sea level rise. These variables included elevation, coastal rock type, geomorphology, relative sea level rise, erosion and accretion, tidal ranges and wave heights (Gornitz, 1990).

Accelerated sea level rise, driven by global climate change, will continue to affect the Elliott coast through permanent inundation, episodic flooding, beach erosion and increased saline intrusion of low-lying areas. As a result, a wide range of impacts on socioeconomic and natural systems is anticipated, including increased damage of property and infrastructure, declines in coastal bird and wildlife populations and the contamination of groundwater supplies. The past and current affect of sea level rise on the Seattle coast are apparent. Base on these theories, proposed that the final waterfront design is likely to include a combination of perched beach, headland, salt marsh, boardwalk, walkway, and bikeway, as well as convenience parking, retail, and hotel/dining experiences.

### Green Infrastructure Defined

Green infrastructure is a term that is appearing more and more frequently in discussions of sustainability across the United States (Center for Watershed Protection, 2009). Green infrastructure has become a popular stormwater management tool as a growing number of practitioners are applying its techniques to site designs, and long-term monitoring results are contributing to research quantifying its benefits (Calkins, 2012).

The profile of green infrastructure for urban stormwater management has also been raised, as major metropolitan cities such as Philadelphia, Chicago, New York, Seattle, and Portland adopt comprehensive green infrastructure plans in order to meet water management goals in urban areas.

Green infrastructure shares many characteristics to other terms used in coastal adaptation, climate change, and hazard literature. Terms such as soft protection, soft infrastructure, soft coastal engineering, and living shoreline are commonly used in coastal literature (Grannis, 2011). While these names might differ from “green infrastructure” they all stem from the same philosophy - using natural materials and natural processes to perform ecological services. One definition of soft coastal protection highlights these similarities, defining it as, “projects that replenish or mimic natural buffers, such as beach nourishment, living shorelines, or wetlands restoration” (Grannis, 2011).

Table 2: Green infrastructure types (adapted from Center for Watershed Protection, 2009).

Green Infrastructure Type	Examples
Low Impact Development Techniques	<ul style="list-style-type: none"> <li>• Natural areas</li> <li>• Riparian buffers</li> <li>• Land conservation</li> <li>• Cluster Building</li> <li>• Reduced impervious area</li> <li>• Site assessment and design</li> </ul>
Low Impact Development Practices	<ul style="list-style-type: none"> <li>• Bioretention</li> <li>• Bioswales</li> <li>• Stormwater wetlands</li> <li>• Stormwater ponds</li> <li>• Constructed wetlands</li> <li>• Rainwater harvesting</li> <li>• Green roofs</li> <li>• Permeable pavement</li> <li>• Filtration practices (sand or vegetated filter strips)</li> <li>• Infiltration practices (infiltration basins &amp; trenches)</li> </ul>
Coastal Green Infrastructure Practices/ Restoration	<ul style="list-style-type: none"> <li>• Sand dunes</li> <li>• Salt marshes</li> <li>• Wetlands</li> <li>• Organism-based habitats (oyster reefs, oyster beds, mussel beds)</li> <li>• Submerged aquatic vegetation</li> </ul>

There are many types of green infrastructure, depending on the scale at which it is being used. The types range from small-scale site design features, commonly called Low Impact Development (LID) techniques, to landscape conservation agendas (Center for Watershed Protection, 2009). A compiled list of green infrastructure techniques and practices is found in Table 2.

### **Green Infrastructure as a Climate Change Adaptation Strategy**

Green infrastructure is increasingly mentioned in the climate change literature as a method for both mitigating greenhouse gas emissions and adapting to the realities of climate change. Studies are concluding that green infrastructure, by increasing green space and natural land cover, can help manage flooding, temper the urban heat island effect, provide cleaner air and water, and increase human health through increased recreational opportunities and interaction with nature (Gill, 2007).

In the policy statements of national associations of landscape architects, such as the American Society of Landscape Architects (ASLA) and The Landscape Institute in the United Kingdom, the organizations advocate for the use of green infrastructure as a climate change mitigation and adaptation technique (ASLA 2008; The Landscape Institute, 2008).

Therefore, green infrastructure is a possible solution that can help adapt our urban infrastructure to be more resilient to disturbances due to climate change.

The following section describes some of the unique challenges and possible benefits of applying green infrastructure to manage and adapt to sea level rise and flooding under uncertain future scenarios. The discussion focuses on using a green infrastructure approach to coastal adaptation to sea level rise that other strategies such as adaptability and resilience.

### **Adaptability and Resilience**

By working “with nature’s capacity to absorb and control impacts,” green infrastructure has the potential to provide systems that are adaptable and flexible to uncertain future conditions (Odefey et al., 2012, p.147). With the large levels of uncertainty regarding the exact rate and height of sea level rise, a flexible and adaptable approach is one method to design in the present but be prepared for future conditions.

Green infrastructure is a spatially flexible approach to design that can be used at multiple scales. This flexibility may prove especially beneficial considering the uncertain future conditions of sea level rise. A green infrastructure approach can be used at multiple scales from a large landscape scale to a site scale (Benedict & McMahon, 2006).

Resilience theory is one way that adaptability might be approached. Resilience is defined as, “the ability of a system to absorb disturbance and still retain its basic function and structure” (Walker & Salt, 2006, p.62). Resilience has been championed as a new paradigm of

design thinking that adopts lessons from nature and ecosystem services to mitigate impacts of flooding, extreme weather and climate change (Watson & Adams, 2010).

The design strategies will utilize green infrastructure including bio-swales, wetlands, permeable paving, green roofs, and rainwater harvesting. In addition to providing solutions to buffer and absorb flooding and coastal habitat, the proposed infrastructure will provide living machines or turbines to cleanse urban storm water and reduce urban heat as well as collect energy.

### Conclusion for Literature Review

1. Sea level rise - As sea levels rise and chronic flooding becomes the new normal. How to moving to more flexible, resilient solutions. The concept of designing with bay is the strategy of allowing defined areas to flood or contain water in order to prevent damage to other areas. Solutions to address rising sea levels should provide opportunities to improve our environment and our relationship with the city.
2. Coastal Adaptation Planning - Understanding how extreme urban flooding in the City of Seattle Interbay could be caused by sea rise, storm surge, and extreme precipitation, the limitations of current hard-only solutions - not to mention the ecological damage caused by the latter, should be apparent. Therefore, solutions should address improved resiliency and ecological benefits including enhanced biodiversity.
3. Green infrastructure - Reestablishment of habitat depends on restoration and management of wetlands and the development of infrastructure. Therefore, green space as new type of urban infrastructure in high-density urban settings could promote urban ecological health by providing potential space for urban habitats, recreational space, and living amenities in a sustainable manner.

In Seattle, today's emergency response to coastal flooding means people need to develop effective short-term strategies for protecting their properties from saltwater intrusion. With extensive resources on emergency response available elsewhere, this thesis largely focuses on longer-term preparedness measures.



Figure 11. Diagram of design with Interbay principles.

## Site Analysis

Interbay is located in the city of Seattle, WA, in the neighborhood of Ballard on the north, Magnolia on the west and Queen Anne Hill on the east, plus filled-in areas of Smith Cove and Salmon Bay.

It is a small and protected industrial harbor off of Puget Sound. Salmon Bay continues east to become part of the Lake Washington Ship Canal, established in 1917 by the Army Corp of Engineers. The ship canal was established as part of the Government Locks to enhance commercial and industrial uses of Salmon Bay and to connect it with the fresh water bodies of Lake Washington and Lake Union ( Warren,2005). Within the Interbay, a industrial historic core and had been established to preserve.

The Interbay industrial area effectively severs most of the possible green connections between the Queen Anne Boulevard system and the Magnolia open space network. However, land use patterns in Interbay are shifting. The Port of Seattle, with huge holdings in the area, is currently considering future development in the southern half of Interbay.



Figure12. Site studies area.

The Interbay is currently planning to replace the Magnolia Bridge, the gateway to the Magnolia boulevard system. These changes create the opportunity to provide trail and linear park connections linking Queen Anne and Magnolia as well as between Salmon Bay and the City's waterfront. The alignment and design of the Magnolia Bridge will be especially important in establishing a strong sense of continuity between the historic Olmsted Boulevard systems on Queen Anne and Magnolia.

The Seattle Interbay are three roadway connections from the Magnolia community, of over 20,000 residents, to the rest of Seattle (City of Seattle, Department of Planning and Development, 2012). As the southernmost of the three connections, the Magnolia Bridge is the most direct route for much of south and west Magnolia to downtown Seattle and the regional freeway system.



Figure13. The Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC).  
Photo Source: Seattle: City of Seattle, Department of Planning and Development,(2012).

## Ballard-Interbay Northend Manufacturing and Industrial Center (BINMIC)

Ballard's thriving urban industrial centre has been made successful largely due to its creation as one of two Seattle Manufacturing and Industrial Centers (MICs). The City designated Ballard as part of the BINMIC in 1994 through the adoption of its Comprehensive Plan, *Toward a Sustainable Seattle*. Comprising approximately 843 acres of waterfront and upland property northwest of downtown Seattle, the BINMIC was established to ensure that adequate accessible industrial land is available to promote a diversified employment base and sustain Seattle's contribution to regional high-wage job growth (PSRC, 2002)

BINMIC's centre spans from Elliot Bay to Salmon Bay, and includes some of the city's most productive working waterfront, wharfs, shipyards and rail yards. The BINMIC encompasses an area in Ballard which parallels the shore of Salmon Bay from the Locks to 3rd NW Ave and includes much of the industrial zoned land in Ballard.

To preserve jobs and industrial lands; and to provide recreational spaces that connect important public amenities and open spaces. The Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC) is a community based organization addressing commercial /industrial issues including:

1. Preserving Industrial Land
2. Locate bike trails away from BINMIC
3. Drainage Improvements



Figure14. The Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC) land use map .Photo Source: City of Seattle DPD.

## History of Salmon Bay

Interbay area is developed with residential, commercial, industrial, institutional, public uses, and streets/highways. Ballard celebrate its heritage by preserving elements of the fishing and maritime industry along the Ship Canal, integrated with other green industry, bio-business, and public open space.

In the early 1900's, Salmon Bay was an important fishing waterway as it was one of the inland salmon migration routes from Puget Sound. Salmon bay and ships symbolize Ballard's marine heritage and it was come together at the Ballard Locks. The Locks have never served the salmon well because not mimic the natural functions of an estuary such as mixing salt water and freshwater, protecting sea bound fish with shallow water, modulating water temperatures, and providing abundant food.

In the future, I think that keeping one of the most historically important pieces of the neighborhood, especially economically viable. Present industrial and fishing zones along salmon bay will be infilled with public greenspaces that also serve as green machine filtration units to create an eco-processing buffer zone to preserve the water quality of the canal.

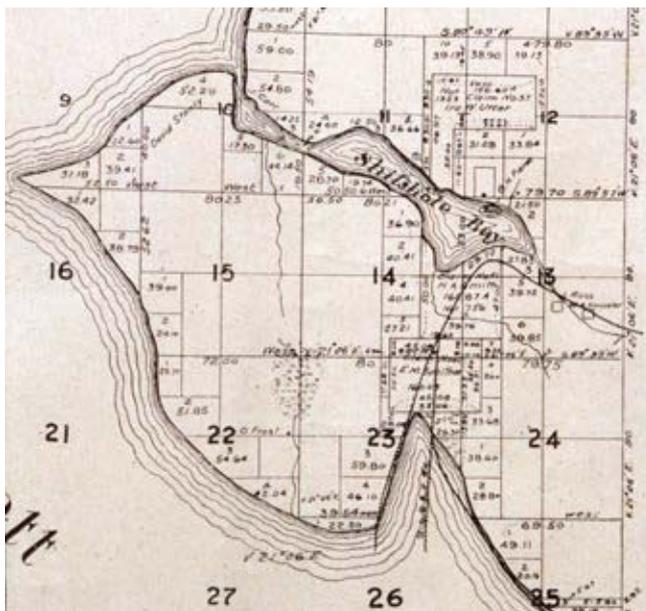


Figure15. Salmon Bay and Magnolia – as the federal surveyors first drew it in the late 1850s.

Photo Source: City of Seattle DPD.



Figure16. Salmon bay in 1887 and 1903.

## High Flood Risk

Section explored the problem of how flood protection could be designed for the sea level rise of Interbay of Seattle. The flood protection that keeps Seattle dry during extreme weather events will only serve this purpose for a small percentage of its lifetime. It is essential that it be designed as an improvement to the city's coastline, which can be enjoyed by citizens on a daily basis. To make this work, flood protection features must become part of the life of the city.

In the Seattle Interbay Area, the water along Seattle's Puget Sound shoreline has risen by more than 6 inches during the past century. Climate change is expected to accelerate rising sea levels during the next century. Mean projections indicate that Seattle will experience 7 inches of sea-level rise by 2050, and 24 inches by 2100 (GGLO Design, 2015). While chronic inundation is a concern, sea-level rise impacts will first be noticed episodically with more frequent tidal flooding events



Figure17. The simulation allows wetland area in south Interbay. Flood protection features must become part of the life of the city.

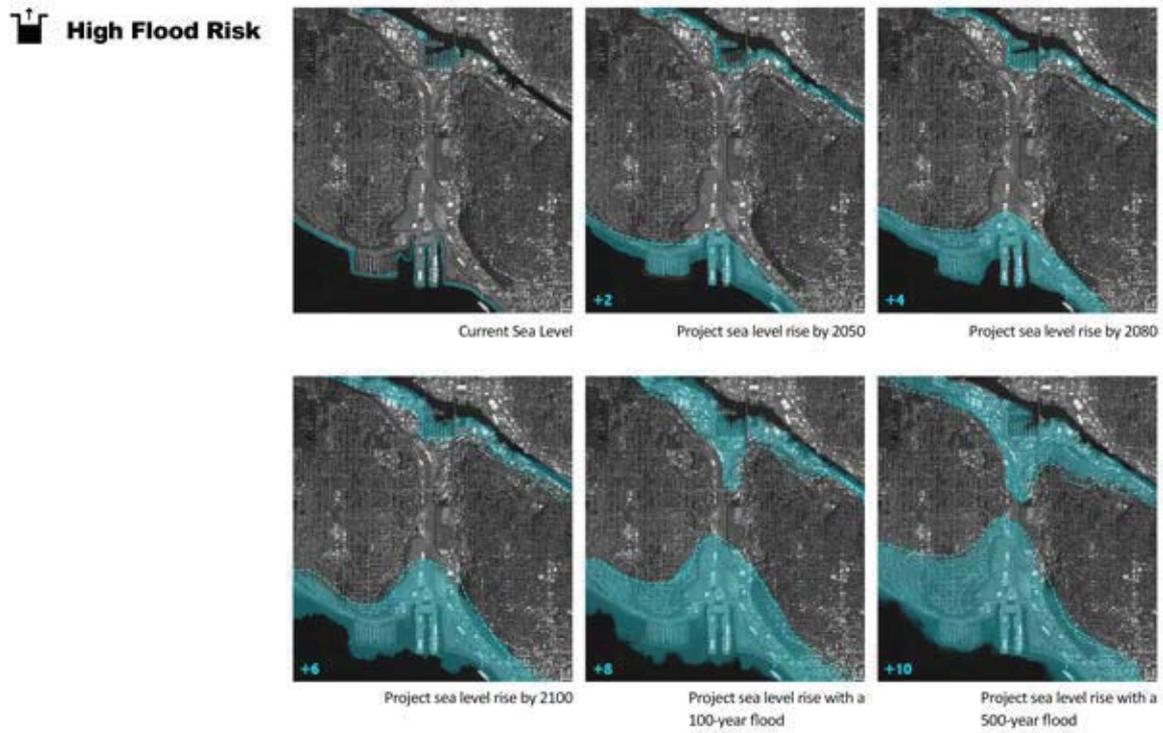


Figure18. High flood risk in Interbay

### System Analysis - Green Space

In my investigated, I found three types of open space around the Interbay: 1) passive; 2) active; and 3) scenic. Passive landscape is defined as a space that provides opportunities for less intensive recreation, i.e. strolling, seating, people- watching and dog-walking. Active landscape is for formal recreational and cultural events, i.e. active sports and events including soccer, basketball and music concerts. Scenic landscape is greenery or landscaping that provides very little recreational opportunities and is mostly used for ornamental decoration and often put in places that are highly inaccessible but easy to be viewed i.e. slopes, highway underpasses.

Furthermore, just only one corridor Magnolia and queen Anne. Many of these streets are separated by roads and buildings. Geographically, salmon bay offers a central location that has the potential to connect the parks and establish a more systematic network of green infrastructure. This new green infrastructure has the potential to provide ecological functions such as stormwater filtration, food production, biodiversity and energy saving.

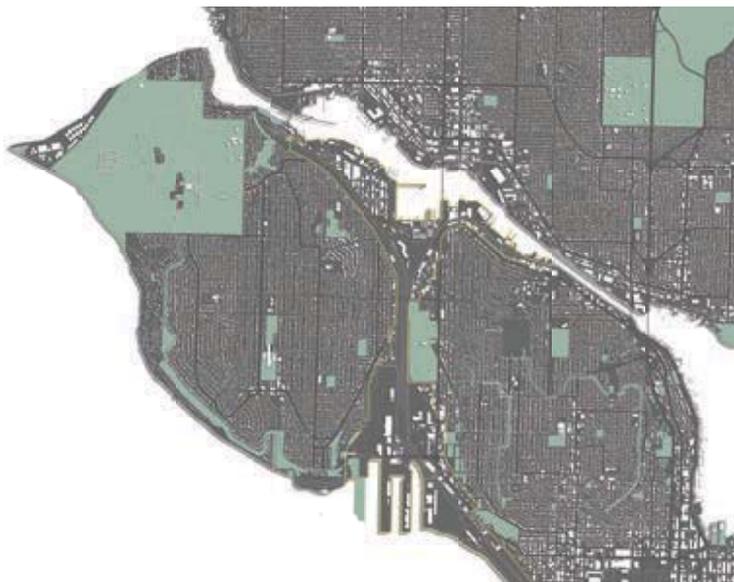


Figure19. Existing site of green space

Problem	Solution
Natural land cover is limited to small, fragmented patches dispersed throughout the area.	<ul style="list-style-type: none"> <li>• Incorporate green infrastructure.</li> <li>• Foster urban agriculture.</li> <li>• Increase and improve habitat within the urban network.</li> </ul>

Table 3: Green space problem and solutions.

### Transportation System

The circulation network for the Interbay includes a system of multi-modal pedestrian-friendly streets, sidewalks, transit routes and bike paths which will reconnect the City of Seattle's Interbay. The street network is one of the most important components.

Throughout the Interbay area, the circulation system will encourage people to access and enjoy new community parks, walkways, open space and restored Interbay. Connectivity – Connections between the Magnolia and Queen Anne neighborhoods by extending the existing street grid. New view corridors, and access points, allowing safe transport over the bluff and an active railroad in the future.

Local traffic – Magnolia is isolated from the rest of the city due to the presence of rail infrastructure in the Interbay area.

Pedestrian environment – Create a walkable environment, with design adjustments to accommodate a comfortable blend of opportunities for people moving on foot, and using bikes, transit, commercial and personal vehicles.

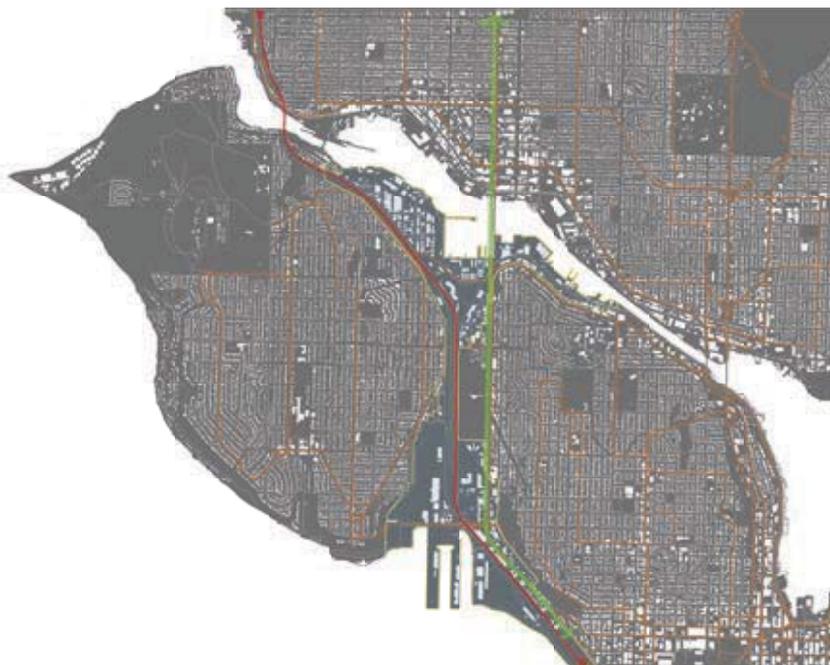


Figure20. Existing site of transportation

Problem	Solution
<p>Natural land cover is limited to small, fragmented patches dispersed throughout the area.</p>	<ul style="list-style-type: none"> <li>• Incorporate green infrastructure.</li> <li>• Develop multi-modal greenways (functioning for both people and habitat).</li> <li>• Create community gathering spaces.</li> <li>• Increase local access to open space.</li> <li>• Transform Interbay's identity</li> </ul>

Table 4: Transportation problem and solutions.

## Soils

### *Modified Land (Mc and Mf)*

The term “modified land” is used to describe surficial geologic conditions that have been “modified” by human activities such as, but not limited to: cutting (Mc), filling (Mf), grading, leveling, sluicing, and shoreline protection.

### *Alluvium (Ha)*

Alluvial soils were transported and deposited by water in streams, rivers, and creeks. They are typically comprised of silt and fine to medium sand, but the size of the particles in a particular deposit depends on the velocity of the water at the time of deposition.

### *Recessional Outwash (Vr)*

Recessional outwash was deposited by meltwater streams emanating from retreating glaciers during the last episode of glaciation.

### *Glacial Till (Vt)*

Glacial till typically consists of a heterogeneous mix of gravelly sand with scattered cobbles and boulders in a clay/silt matrix.

### *Advance Outwash (Ve)*

Glacial advance outwash soils were deposited by meltwater streams emanating from advancing glaciers. Advance outwash is similar in composition to recessional outwash, except it has been glacially over-ridden.

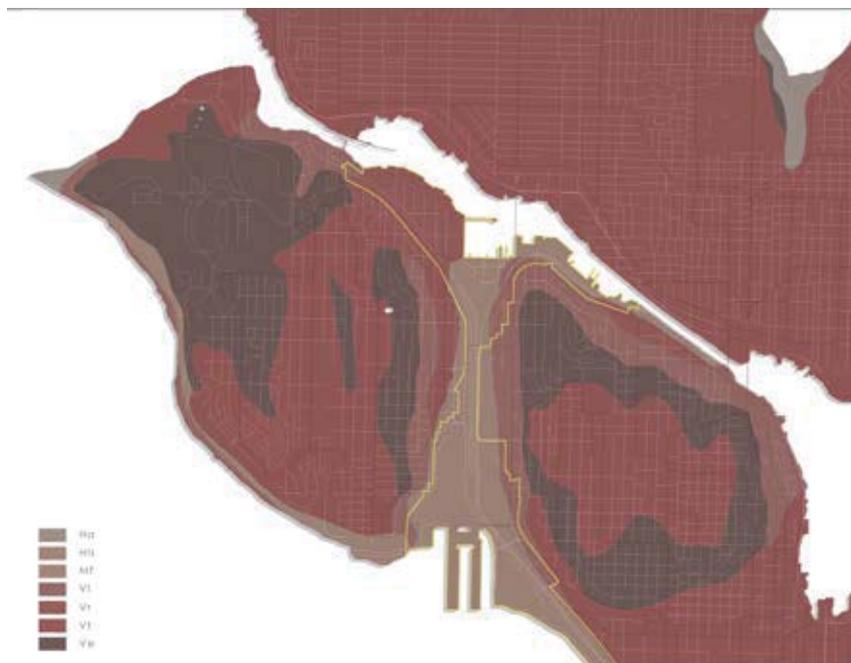


Figure21. Existing site of soils

## Land use

Industrial uses 70% industrial area, such as clothes, glasses. Interbay covers just over 407 acres – 100 acres in communication, utility, and transportation uses reflecting the port and rail activities, nearly 100 acres in warehouse facilities, and just over 60 acres in manufacturing activities. 32% of the area is in public or railroad ownership.



Figure22. Existing site of landuse

## Contours

1. Flat valley floor.
2. Topographic between corridor and adjacent neighborhoods.



Figure23. Existing site of contours

## Vision

When climate change and temperature rise, it is not only effect natural but also change human activities. Design proposals of this project are to re-transform the Interbay from a channelized and single-functional channel to multi- functional corridor of significant natural and cultural value, to reuse stormwater and improve ecological environment of the Interbay, to create green infrastructures which place an emphasis on balancing the restoration of habitat and watershed with the accessibility and recreation for people within the maze of pre-existing infrastructure, to create a synergy that elevates an urban riverfront landscape to a thriving and harmonious balance of complex systems, and to regenerate for developing to bring new life and investment to nearby urban settlements.

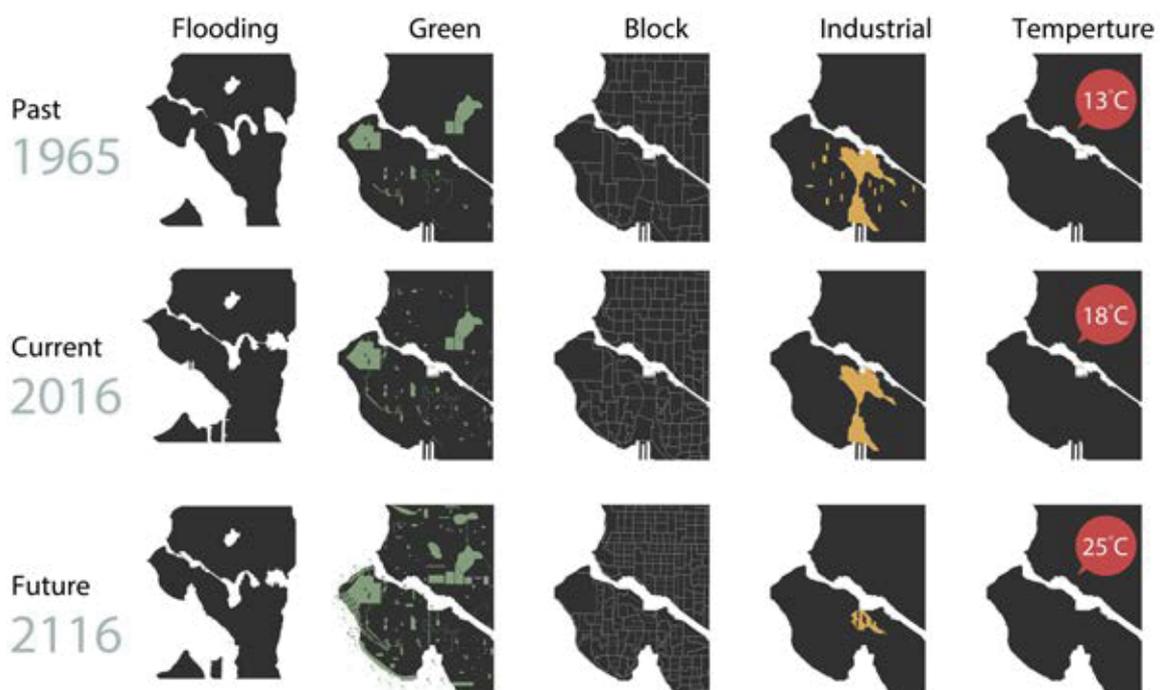


Figure24. Analysis of Interbay area.



## Design Concept

The design of the site specifically addresses the goal of applying green infrastructure at a site scale to help increase sustainability and resilience to coastal climate change impacts of sea level rise and flooding. This thesis applies the findings and discussions on sea level rise and green infrastructure in Interbay, including community, park and coastal. Congregate, Connect, Cleanse is a design response to the vision to form a cohesive landscape that creates values through social, ecological means along the Interbay area of Seattle.

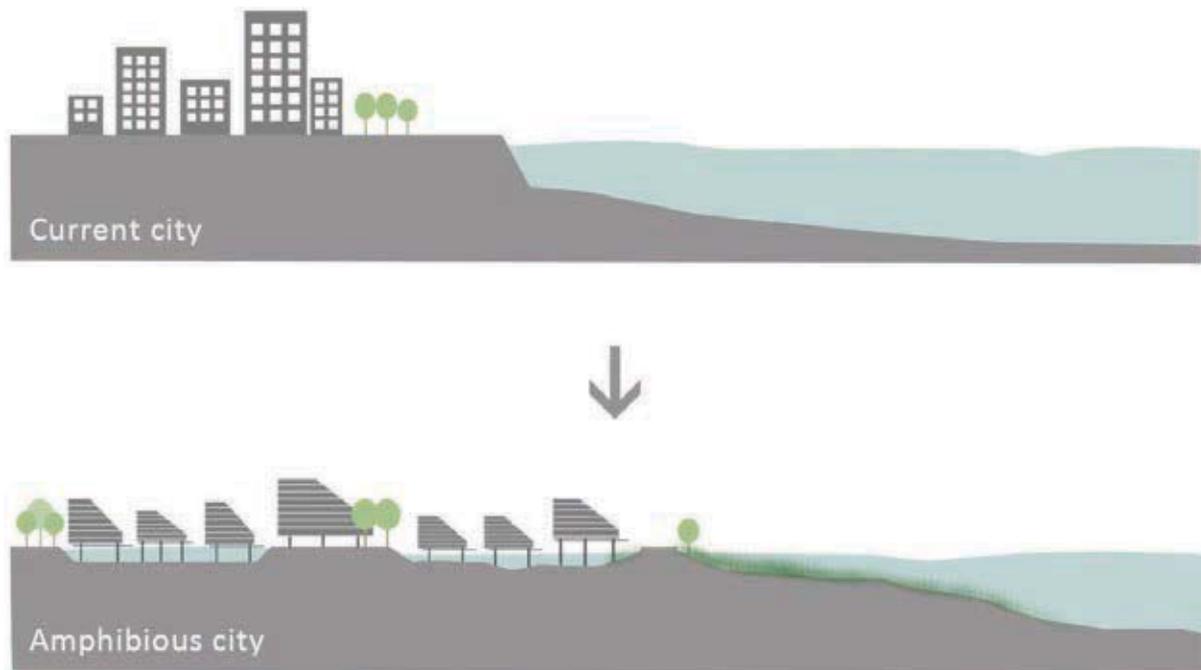


Figure25. Design concept diagram

As the bay is restored for natural habitats and a place of learning, it also creates an opportunity for an iconic architectural element that captures the imagination of this park system, as well as affords a spectacular view.

By increasing awareness and connection to nature, this Green River Corridor project can begin to heal the riverfront. The ecological services of this park system in the environs of the Estuary shall include: storm-water/sea-water treatment strategies in the form of salt marshes, constructed wetlands, and vernal ponds.

Groves of trees act as screens along the paths to break up spaces and provide natural habitat. Other ecological services would include food production, plant selection to maximize bio-diversity, and the creation of wildlife habitats.

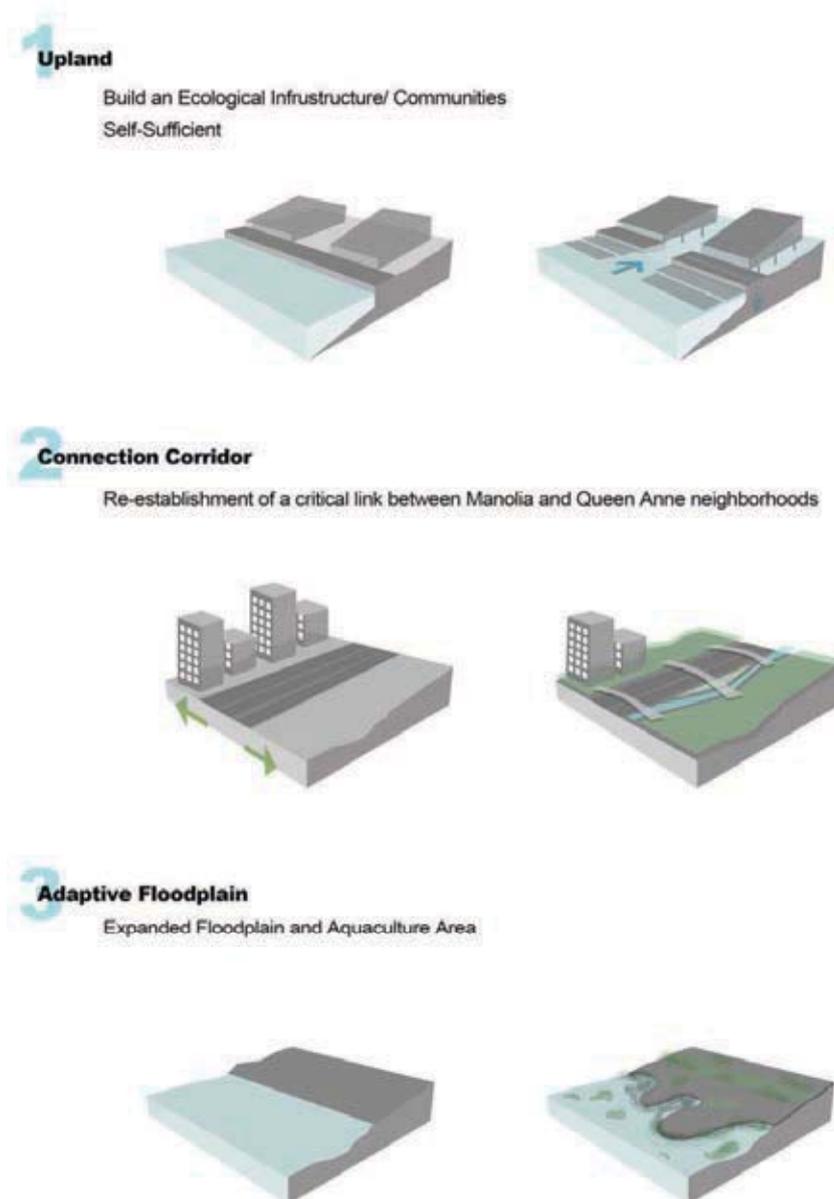


Figure26. Concept diagram-1

### **Congregate - Community: Upland**

- 20-50 years- Let It Raise • 50-100years- Let It Flood

Commercial Developments / Propose high density residential, commercial and mixed-use buildings along the bay as the solution for the expanding of Interbay and the increasing population. Community area provide two element. Firstly, to minimize the use of energy through passive design measures and, secondly, to maximize the use of sustainable and renewable energy sources.

### **Connect - Park: connection corridor**

A plan to redevelop the river as a critical ecological, industrial, and cultural resource for the city.

Let Us Go – Create Connection / Reconnecting the site to cities.

three main bridges are proposed on the bay and the railroad which connects Magnolia and Queen anne to form a complete trail system, making the bay more accessible to public. I do not broken the industrial area pattern. But, adding participative design to supply two concepts, which is food productive and fabrication produce.

### **Cleanse - Coastal: adaptation floodplain**

Let It Grow – Wetland Restoration, Urban Agriculture and Reforestation.

The proposed ecological framework will adapt to the site condition over time. Bringing back wetlands that clean and improve overall water quality while providing refuge for animal species. Promoting Urban Agriculture in the neighborhood will establish healthy and sustainable food access to populations in needed.



Figure27. Concept diagram-2

## Design Strategy - Program

This is not simply a park plan. Rather, it is a strategy for transforming the larger urban fabric, and the everyday lives of locals and visitors alike. It does so by tapping into larger systems—infrastructural and ecological—and by extending its physical reach across the Ballard, Magnolia and Queen Anne into outlying neighborhoods.

The strategy is flexible, and therefore sustainable: environmentally, urbanistically, and economically. Importantly, it is a 50- to 100-year plan, a series of parks and neighborhoods for the next generation of Seattle people. In this way, the various proposals contained herein will help guide these places' gradual transformation, making for new kinds of parks and public infrastructures, for new working ecologies and landscapes and city fabrics that will come to revitalize Seattle for decades to come.

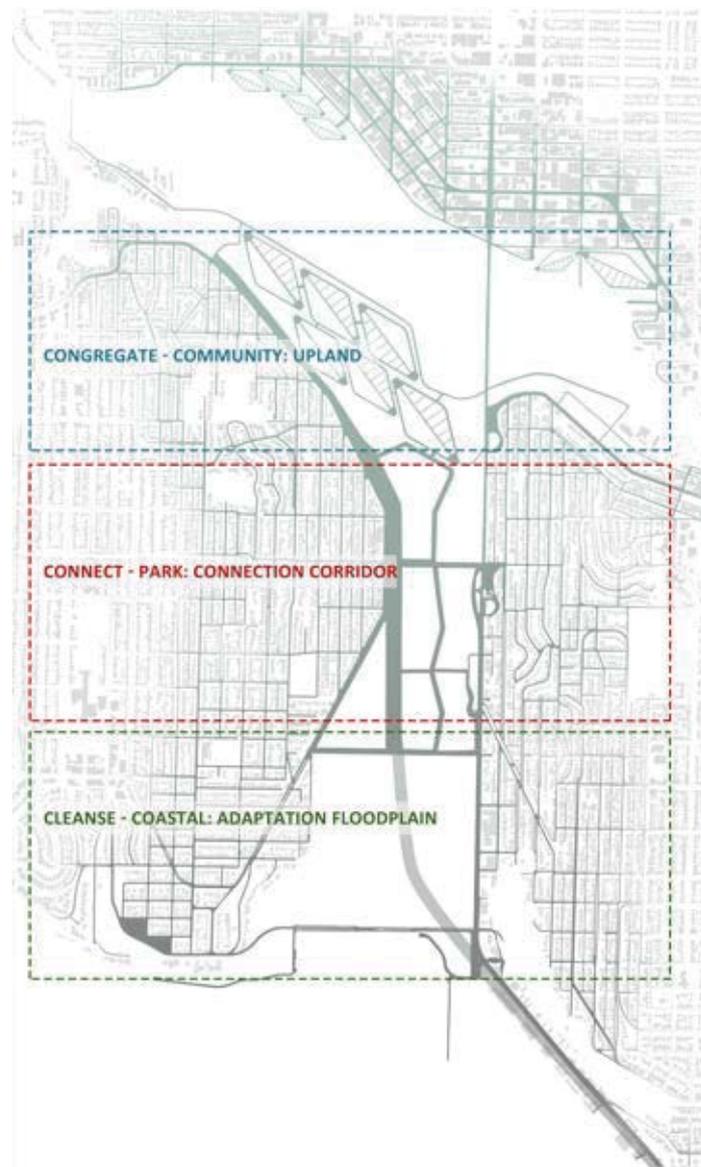


Figure28. Program diagram

## Mobility

Pedestrian and bikeway system will be created along the Salmon bay. In the flood period, riverwalk in the low water level will be covered by bay water.

The Interbay-park area can become one of the major green-blue parkways of Seattle , providing significant public spaces with recreational and educational opportunities for both residents and visitors. Programming includes baseball fields, tennis and basketball courts, playgrounds, a track, community gardens, farmer’s market, possibly even a museum, and small-scale housing development. Pathways can be developed for pedestrians, cyclists, in-line skaters, and runners.

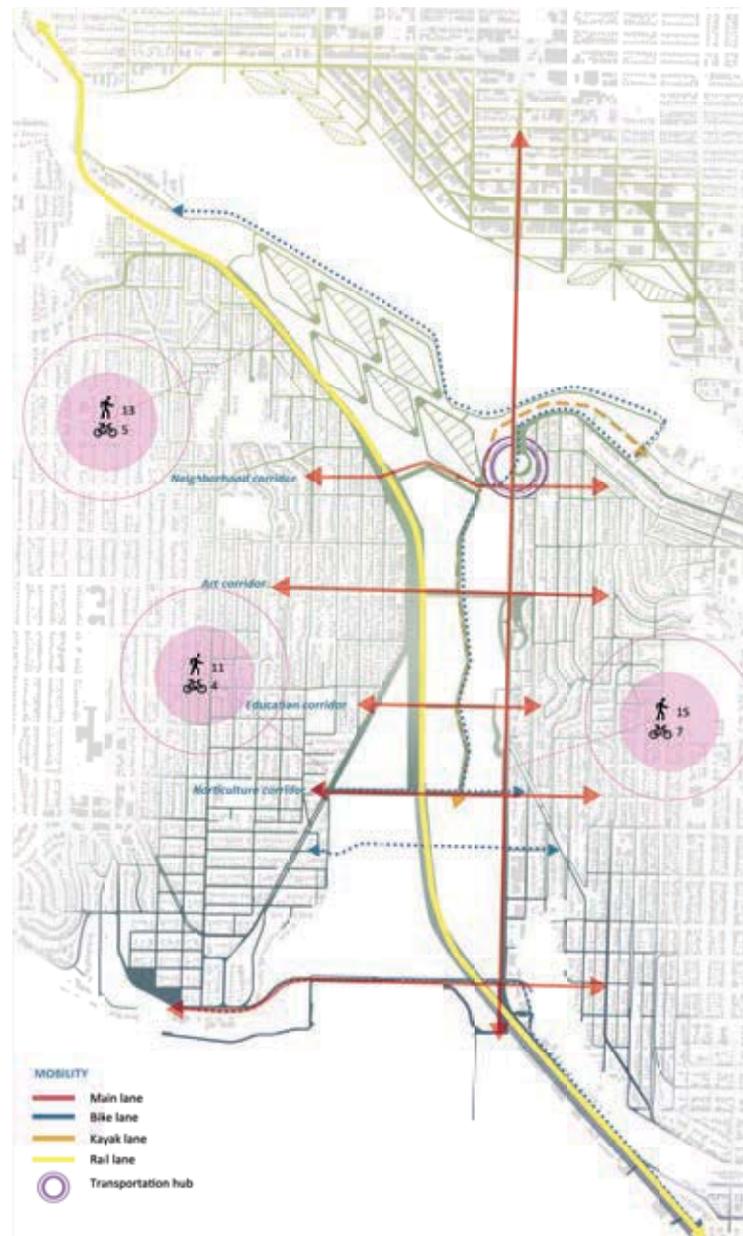


Figure29. Molility diagram

## **Water**

The backbone of the program is the creation of a new ecosystem, a stormwater cleansing system that connects the existing open space to Interbay and creates values. The proposed stormwater cleansing system intends to link Elliott with the regional open space program to form a ecological network.

The proposed stormwater cleansing system will serve three major purposes:

1. Reduce stormwater surge and improve the quality water quality
2. Reintroduce biodiversity and habitat communities
3. Provide opportunities to increase human interaction with ecology by creating different types of spaces that promote recreation activity (jogging path along the wetland), passive activity (seating facility and overlook decks),and interaction (water path).

The program features three types of spaces: neighborhood, public and education. The intent of these spaces is to facilitate outdoor learning experience in sustainability and ecology. The new ecosystem can not fully function in an urban setting like Salmon bay without systematic and efficient circulation system.

The new proposed non- motorist circulation network addresses different user groups: bikers, joggers and pedestrians. The active circulation system of bike and jogging trails is separated from pedestrian circulation to minimize potential conflicts between the two user groups.

Figure30. Water diagram

## **Habitat**

Engaging hybrid, systematic approaches to dealing with storm water runoff, river surge, and sea rise collectively in Interbay, this thesis set up a study and design model for urban flood prevention and urban refinement adaptive strategies without eliminating existing civil engineering solutions. Combining soft and hard solutions makes possible more environmental and sustainable solutions. Soft solutions can find their home on or adjacent to hard solutions to meet a collective goal of sustaining beauty for the city in the future and providing more amenities for people. Water is treated not as an enemy but as a welcome friend, transforming the character of the city.

Ecosystem is a system formed by interaction of living and non-living organisms. Ecosystem provides critical services and functions to our society include air purification, water cleansing, recreation, cultural implications, food and resources. By introducing a new ecosystem to the site area that connects Salmon bay with existing open space programs, it will strengthen the ecological network in the area and hence the overall ecosystem services and functions.

The wetlands of the South Interbay are a major urban biodiversity reservoir in the Seattle. Documented species include more than 260 species of birds, 22 mammals, more than 51 species of fishes and bees and 420 species of plants. Wetlands make up 340 acres of the South Interbay and include brackish and freshwater marshes. Because of small height differences there are plentiful transition areas between low (wet) and high (more dry) habitats as well as salt and freshwater habitats. These create a great potential for biodiversity.

Figure31. Habitat diagram

## Design Evolution

A strategy for transforming the larger urban fabric, and the everyday lives of locals and visitors alike. It does so by tapping into larger systems— infrastructural and ecological—and by extending its physical reach across the Ballard, Magnolia and Queen Anne into outlying neighborhoods. It is a strategy for transforming the larger urban fabric, and it is flexible, and therefore sustainable: environmentally, urbanistically, and economically.

The design evolution are sea level rise different phases, a 20- to 100-year plan, a series of communities, parks and coastal area for the next generation of Seattle people. In this way, the various proposals contained herein will help guide these places' gradual transformation, making for new kinds of parks and public infrastructures, for new working ecologies and landscapes and city fabrics that will come to revitalize Seattle for decades to come.



Figure32. Design evolution

The design of the site attempts to create a framework of green infrastructure that can accommodate and facilitate the adaptation of rising water levels and vegetation shifts predicted with sea level rise. The ecological function of the bioswales could improve the ability of the site to be resilient to small disturbances (i.e. a low level of sea level rise). The design is meant to be a conceptual intervention into the landscape that could help bring resiliency and function to the site.

The buildings on site could be designed to accommodate raising the structures and occasional flooding. And structures such as the kayak and canoe storage facility could be designed as open to the air and would accommodate occasional flooding. Simple structures such as the day use pavilion and kiosks could be designed to be elevated at a later date, as threats of rising waters become more apparent.

The process of coastal retreat would also be set in motion by this design. First, the vulnerable populations living in vulnerable housing would be relocated already into safe, accessible housing on higher ground, removing the risk of having residents on the site. Secondly, the system of bioswales begins to enable a trajectory of ecological restoration back to a more natural state. The swales would provide conduits for water to migrate, similar in function to natural salt marshes.

## Overall – Amphibious City

This scheme for the site seeks to create a landscape and building which add amenity to the neighborhood and create space which does not merely improve the water management of the area but the quality of life as well for those who live in the development, the bayview, and the city.

The project focuses on the design of strategic relationships between larger social, natural, civic and ecologies. Physical concepts for the three parts which is high density community, park and coast area. The site proposes a set of creative, inter related design initiatives that function at multiple scales.

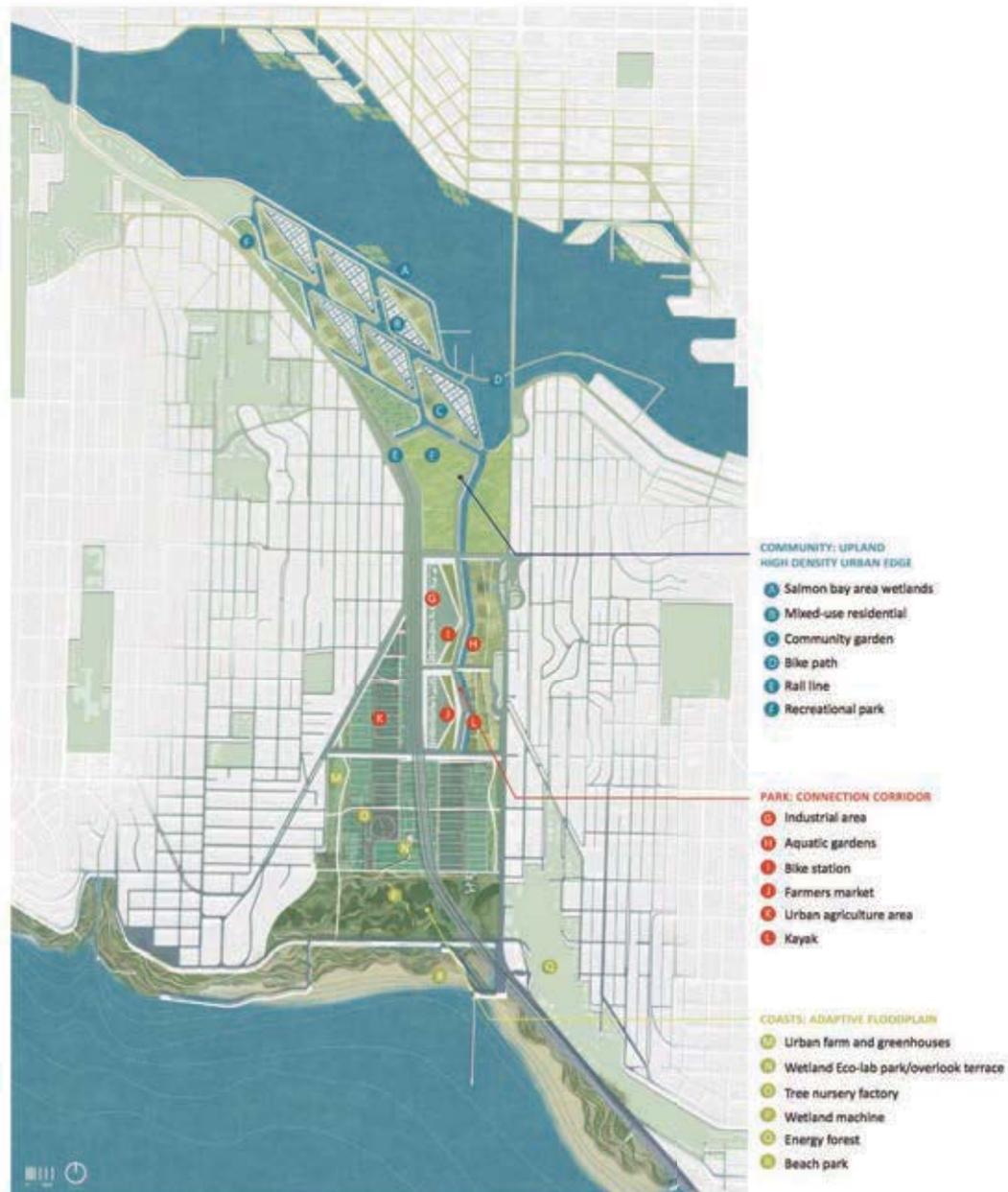


Figure33. Design overall plan

## Design Topography

The study of these design priorities at various scales created a scope which helped inform specific design strategies to address current site issues and opportunities. It also helped me understand the relationship between different parameters at different scales.

The design topography is base on the currently topo, the site specific demonstration sites create anchors at strategic locations along the Interbay that establish the foundation for a vision for the Seattle that will support the region's neighborhoods that are rich with cultural and ethnic diversity, artistic production, and multi-scaled industrial business served by freeway, rail, and barge.

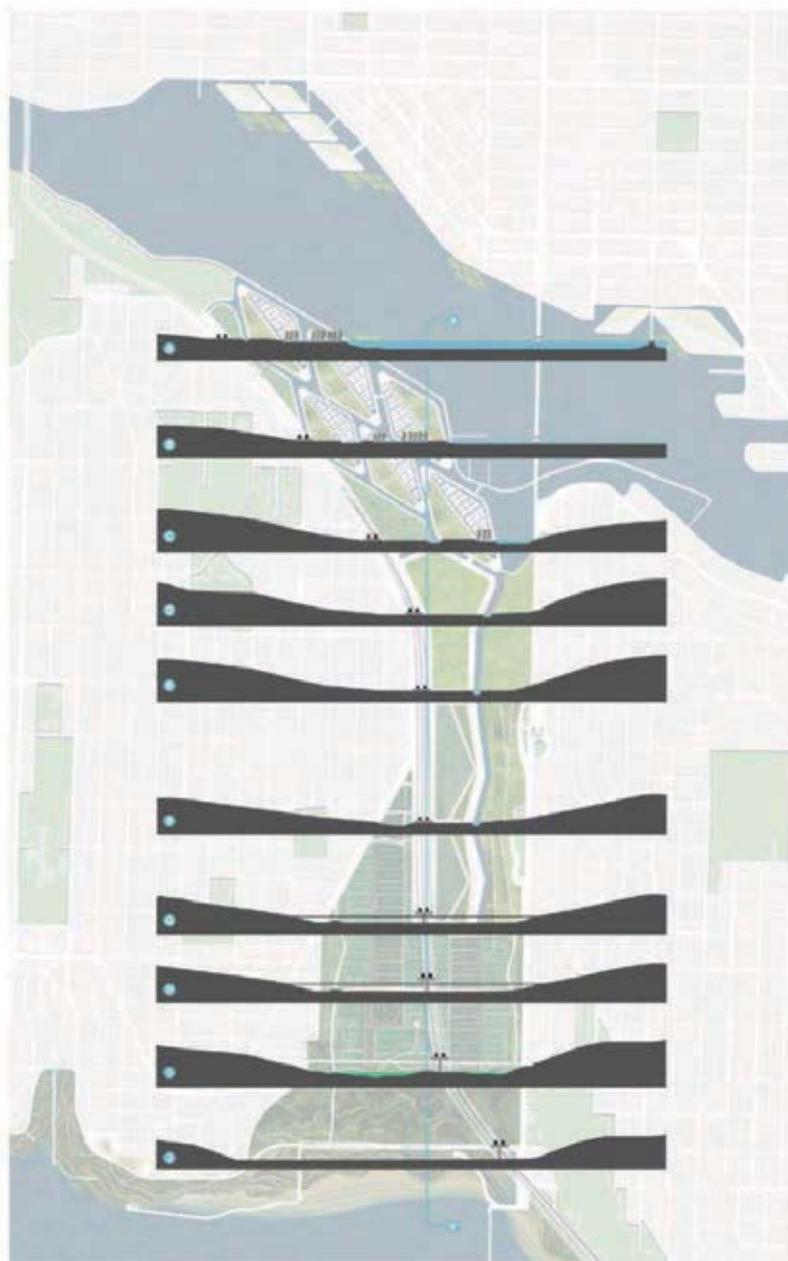


Figure34. Design topography

**Detail: Congregate - Community**

The site plan creates a gradient of spaces designed for bay ecology and people. Higher density housing is mixed with small-scale commercial and retail use at the middle portion of the site, bay-side canal and linear park create a lively neighborhood destination for culture, and arts programming.



Figure35. High density community view

## Design program

Community area is very much a working landscape, one that cleans the site—and the city - as it grows. It supports a full range of social and recreational activities, and ecological life: nesting sites, skating canals, fields for flying kites, vibrant meadow habitats.

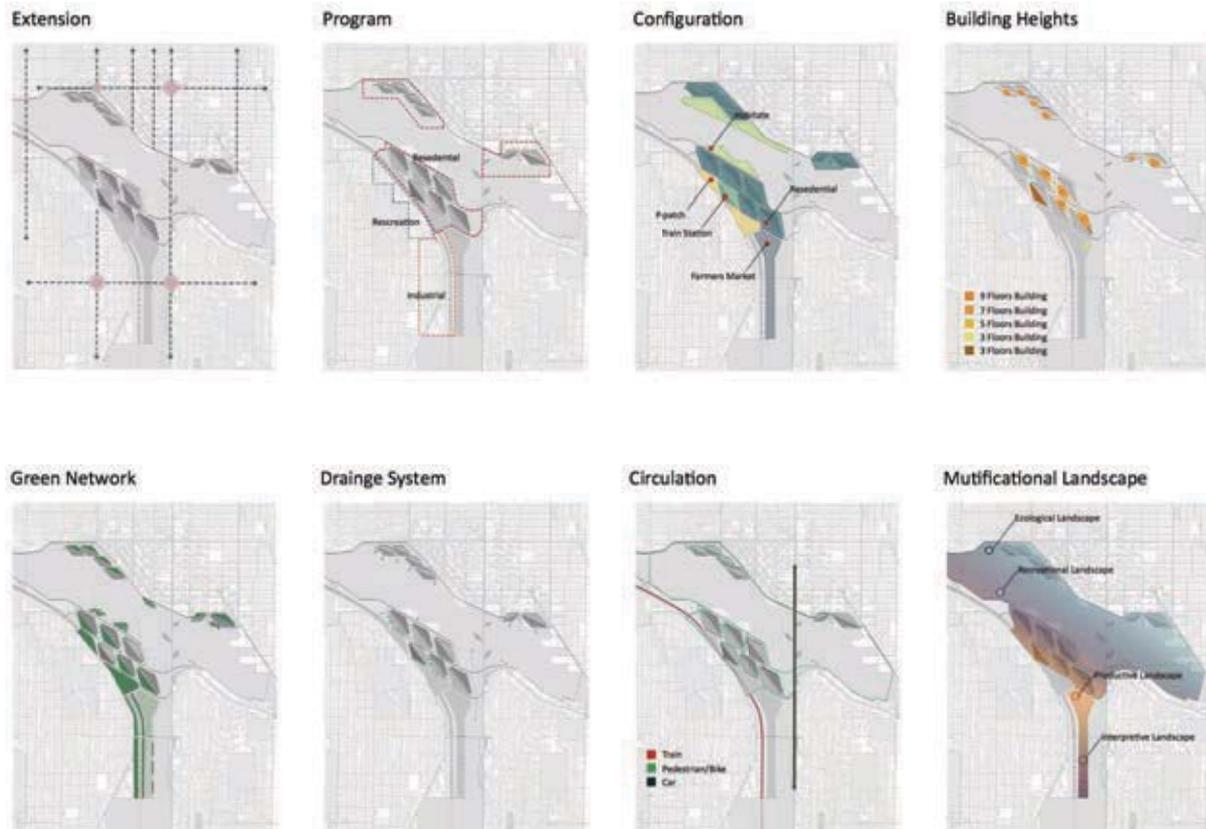


Figure36. Community area program

### Community overall strategy

The overall strategy for sustainability takes its starting point in the LEED Neighborhood Development rating system. This will ensure a thorough process and create an area residents can be proud of, while making it an exemplary neighborhood for future developments in flood prone areas around the world.

For optimal sustainability the site and buildings should be designed, firstly, to minimize the use of energy through passive design measures and, secondly, to maximize the use of sustainable and renewable energy sources.

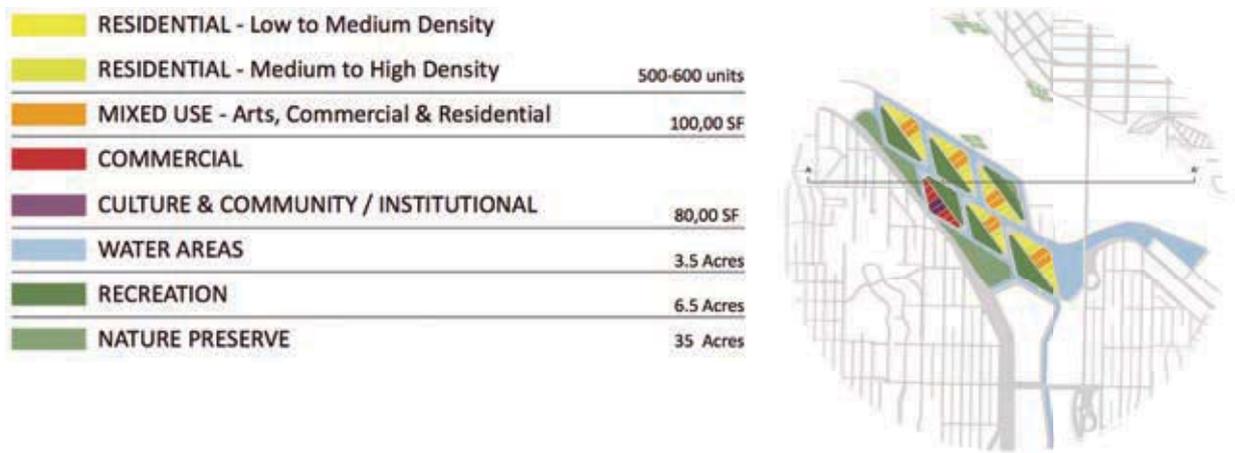


Figure37. Landuse of community area

Seattle sunshine time is very short, so take advantage of the sunshine slanting roof elements allow easy access to the interior. In front of each community the open public space provide agriculture and production.

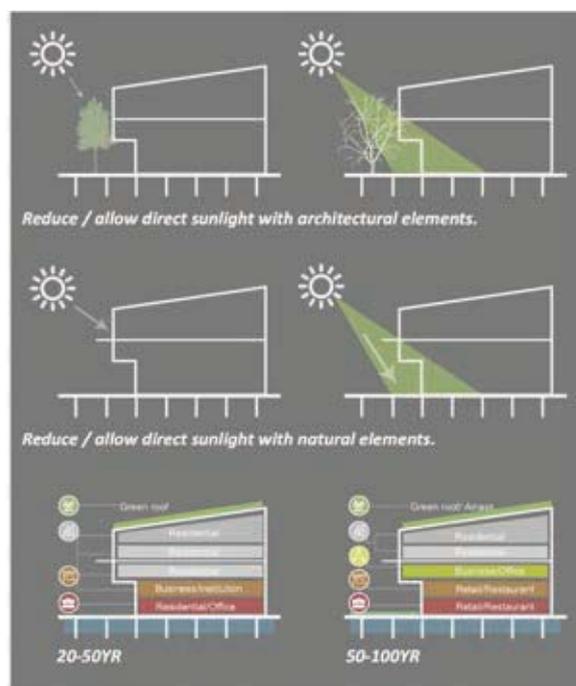


Figure38. Building concept diagram-1

The building is made out of timber and sits within a steel barge. The reason for timber construction is that wood is a light building material. A steel barge is used due to its low corrosive rate in salt water and is not harmful to the water on which it floats. To ensure necessary ballast and waterproofing, concrete slabs are inserted on top of Expanded Polyurethane Foam blocks inside the barge. The wooden structure on a concrete foundation within a steel barge gives the house a low center of gravity, which promotes stability.

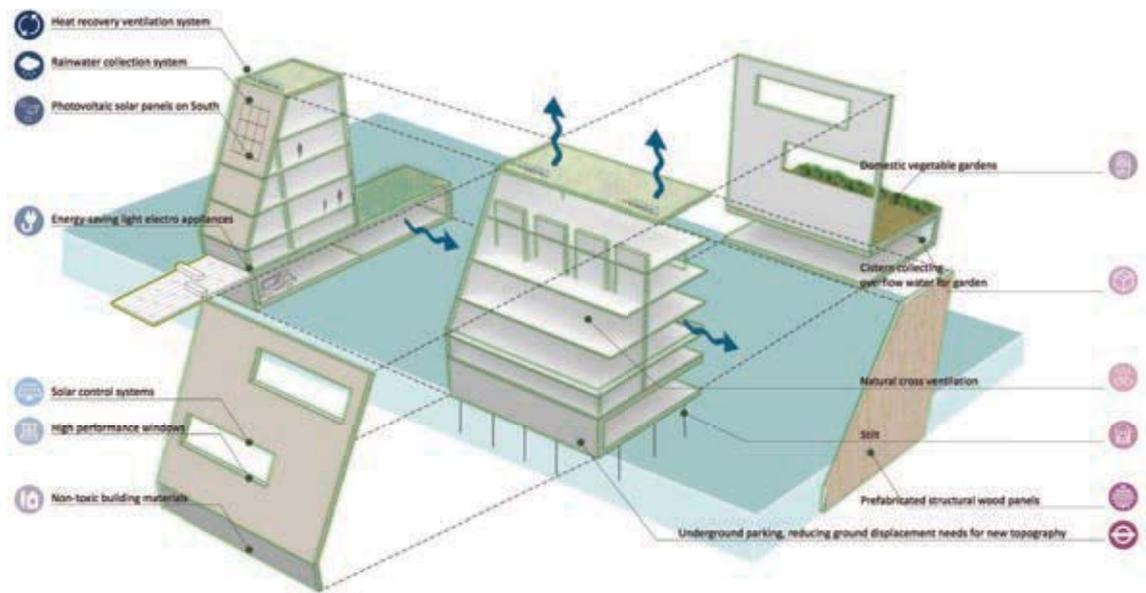


Figure39. Building concept diagram-2



Figure40. Amphibious city - Building view

### Welcome to the new lifestyle of the Resilient bay

Among the new residential communities, the flagship is a flooding neighborhood. I envision a truly 21st Century lifestyle adapted to the local climate. The neighborhood will be built with the most innovative on-site infrastructures for water, waste, and energy. Residents can work in the surrounding biotech, art, and education corridors or commute by bicycle or streetcar from Ballard to Interbay. Community gardens, tree nurseries, and biofuel farms will occupy remediated sites. Citizens will be engaged in the cycles of production, learning more about where their food, energy, and other landscape resources come from.



Figure41. Sustainable building

**Connect - Park: connection corridor**

Let Us Go – Create Connection / Reconnecting the site to cities.  
three main bridges are proposed on the bay and the railroad which connects Magnolia and Queen anne to form a complete trail system, making the bay more accessible to public. I do not broken the industrial area pattern. But, adding participative design to supply two concepts, which is food productive and fabrication produce.



Figure42. The park view

### Create Connection/ Industrial strategy

It is combines public open space with the emerging tendency of urban food production and the ecological balance. The main goals were to the industrial area, to promote the practice of agriculture and to provide recreation. Citizens will be engaged in the cycles of production, learning more about where their food, energy, and other landscape resources come from.

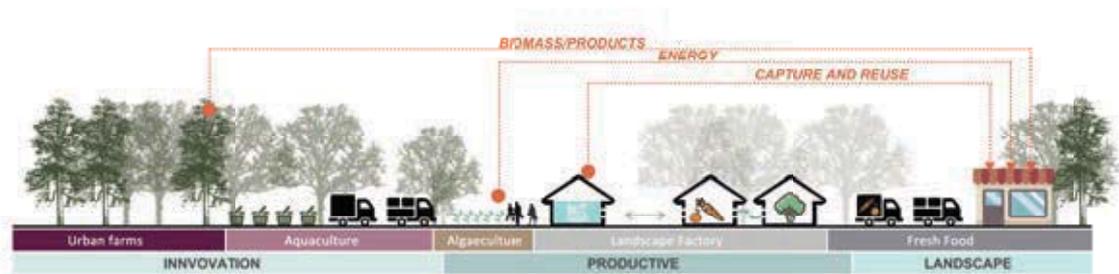


Figure43. Industrial area diagram-1

The design concept for Eco-productive Park combines public open space with the emerging tendency of urban food production and the ecological balance. The main goals were to restore the river habitat, to promote the practice of agriculture and to provide recreation. Many allotments for horticulture set the design of the space and offer color and texture in the wide central area of the park.

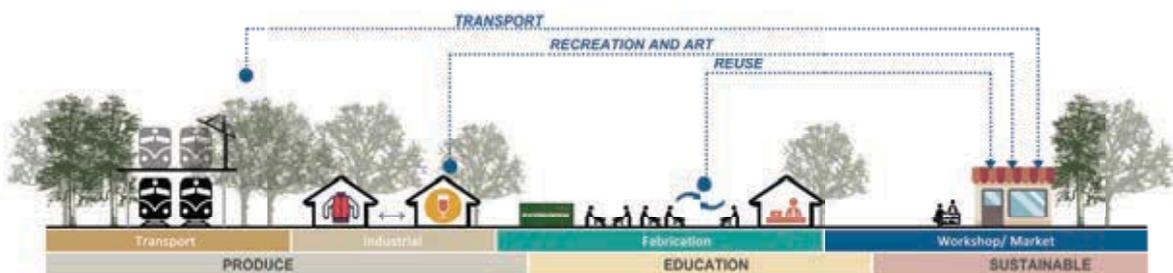


Figure44. Industrial area diagram-2

### Cleanse - Coastal: adaptation floodplain

Let It Grow – Wetland Restoration, Urban Agriculture and Reforestation.

The proposed ecological framework will adapt to the site condition over time. Bringing back wetlands that clean and improve overall water quality while providing refuge for animal species. Promoting Urban Agriculture in the neighborhood will establish healthy and sustainable food access to populations in needed.



Figure45. Coasts view

Each studied type presented a different way of understanding the relationship between ecology and human activity. Whereas some typologies focused more on providing seating opportunities that provoke an appreciation of nature and its services, other typologies stressed more on creating a scenic and aesthetics promenade.



Figure46. Different type of design models

### Stormwater and urban ecology wetland system

Restoration of habitats is proposed as part of this design. Islands for wet prairie and riparian habitat will be built from recycled demolition materials and organics from the soil factory. The River will once again be a safe haven for migrating birds and other wildlife.

A water-cleansing system structures the area. Rain washes particles of soil, grit, and other materials off streets, beach and roofs in nearby neighborhoods. This stormwater is intercepted by a sedimentation chamber and periodically emptied; clean extracts of the sediment can be used in shoreline and island building. Wetlands of nutrient-tolerant species receive the stormwater next, removing fine sediment and pollutants; here indigenous wet meadow species such as sedges, cordgrass, blue-joint and wildflowers would thrive.

Plants here are able to root in water and withstand flooding: arrowhead, bur- reed, aquatic sedges, bulrush, and other marsh plants. Water then flows into the riffle stream and bivalve bed. All along are native plants, naturalized soils, and insect life which provide organic matter to the stream, forming the base of the food chain.



Figure47. Stormwater and urban ecology wetland system



## **Conclusion**

With global predictions of climate change and sea level rise threatening the future of US coastal areas, planning and design solutions that protect and adapt our coastal communities from rising waters are rapidly becoming a necessity. Green infrastructure practices such as wetland restoration, bioswales, green roofs, and rainwater harvesting/reuse are some strategies that could be implemented in coastal regions that would provide benefits to stormwater management today and sea level rise management in the future.

This thesis has used the methods of literature review, precedent design study, inventory, analysis, and design application to answer the research questions provided in the Chapter 1 of this thesis. The thesis has shown that green infrastructure can be a viable adaptation strategy for coastal sea level rise adaptation planning. By working with, rather than against, natural systems, materials and processes, green infrastructure can assist in buffering capacity for increased storm surge and rising water levels.

This thesis identifies the potential for reutilization of the Interbay, and the importance of planning for resilience to future changes. The design application inventory provides an example of site-specific inventory of sea level rise impacts. And lastly, the design of the Interbay is one example of how green infrastructure practices can be applied to a coastal site and how the landscape can reveal subtle changes to topography and hydrology as water levels rise and vegetation shifts through time.

Further scientific research is needed to define the exact quantification of the capacity of green infrastructure to protect against rising water levels and increases salinity. In the mean time, green infrastructure can be a cost-effective way to make small, incremental changes to increase future resilience in coastal communities. By working with nature's services, green infrastructure might provide some level of protection, while also benefiting ecological and community health.

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## Transforming Vacant Land into Community Park in Ho Chi Minh City: Cross-cultural and Multidisciplinary Collaborative Design towards Social and Environmental Resilience

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### ABSTRACT

Started in 2014, the project aims to understand urban issues and explore participatory community design process in rapidly developing cities in Asia. *Phú Xuân*, a suburban district in Ho Chi Minh City, Vietnam, was chosen as a case study as it experiences one of the highest economic growth and rate of urbanization in the region, yet faces multi-faceted urban issues such as lack of amenities, pollution, need for proper waste management and housing improvement. Over the past two years, a multidisciplinary team from three universities – Singapore University of Technology and Design (SUTD), Ho Chi Minh City University of Technology (HCMUT), and Van Lang University (VLU) – was formed to work with *Phú Xuân* community. Not only crossing national boundaries, the students also come from diverse disciplines including architecture, structural engineering, mechanical engineering, system engineering, environmental engineering, and information technology.

Communication among the cross-cultural, multidisciplinary teams in different locations thus became a unique and challenging aspect of the project. On the other hand, the *Phú Xuân* community, being less exposed to democratic process and more focused on making ends meet, also made conventional community workshop less effective. Hence, the project called for new strategies of collaboration, both among the universities and between the students and the community. This project was thus set up as a Participatory Action Research (PAR) to prototype and test the followings: (1) The collaborative design process between different disciplines and across cultural boundaries (international level and inter-district level); (2) The extent and acceptance of participatory design approach in Vietnam context; (3) A design prototype in response to the social and environmental issues faced by the local community.

During the first phase of “Community”, the students had experimented with different approaches in engaging the community, from organizing workshop, conducting door-to-door survey and interview, using technology to collect various data such as soundscape of streets, time-lapse of public spaces, geo-tagging photographs by residents, and setting-up photo booths to reveal social network. The results were exhibited at a school in *Phú Xuân* in September 2014. Meanwhile, two

Facebook groups were set up to facilitate the dialogue among the three universities as well as to promote the project and garner participation from the residents.

Further analysis pointed towards the lack of communal spaces, children's play area and greenery, garbage disposal at vacant lands (which became a hygiene issue during frequent flooding), and security issues as drug addicts occupied those vacant lands. These issues, nevertheless, led to the opportunity to turn one of these vacant lands into a community park that is environmentally and socially resilient. In the second phase of "Co-creation", a roadside stall was then set up by the students in May 2015 to solicit ideas on the park design. Finally, a play structure based on traditional Southern Vietnamese "Monkey Bridge" was prototyped using local and recycled materials in a vacant land 50m away from the school. The site was also landscaped into a "Rain Garden" with indigenous plants to make it more resilient to flooding.

Much learnings and experience are gained from this project. Among these are the cross-cultural, multidisciplinary approach, leveraging on data-gathering technology and social media, coupled with localized initiatives in engaging the community. While participatory community design is still in its infancy in Vietnam, the project suggests a potential direction of future development with several layers of empowerment.

**Keywords:** Community Design, Participatory Action Research, Cross-cultural Multidisciplinary Collaboration, Resilient Design, Ho Chi Minh City

## INTRODUCTION

Participatory Action Research (PAR) is a collaborative approach combining research, education and action used to gather information to inform decisions made concerning social or environmental issues.<sup>1</sup> PAR has been a growing approach in dealing with larger urban issues where every stakeholder from people to planners are involved in studying and solving these issues together. This approach aims to oppose the unspoken perspective that researchers are superior to those studied and empower the people to do something for themselves. The researchers work closely with members of the target community, and tap on a variety of skillsets to engage with people and draw insight from the process. The subjects themselves are often enlisted to become co-researchers, contribute data and ideas, and have significant influence over the outcomes of the research process. In this process of engagement and problem solving between researchers and the communities, a deeper understanding of issues can be achieved, leading to a more effective outcome. This trend is gaining ground in developing countries where many local governments and non-governmental organizations (NGOs) are experimenting with alternative approaches in tackling pressing urban issues amid rapid urbanization. From the usual method of "design for community" to "design with community", this cultural shift poses a new area to research with PAR approach in developing countries in Southeast Asia, such as Vietnam.

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<sup>1</sup> Rachel Pain, Geoff Whitman, David Milledge & Lune Rivers Trust (2010), *Participatory Action Research Toolkit: An introduction to using PAR as an Approach to Learning, Research and Action*, Durham University.

The site of our research resided in Ho Chi Minh City (HCMC), the largest city and the center of economic activity of Vietnam.<sup>2</sup> Suburbanization outside the “inner core” was widespread in the recent decade, which brought about various challenges for both urban dwellers and planners.<sup>3</sup> In this research project, we were working with Phu Xuan Commune of Nha Be District, a suburban district in HCMC, building on the relationships established with the community by our Vietnamese partners – Ho Chi Minh University of Technology and Van Lang University. Phu Xuan is located in the east side of Nha Be, with a size of 101 hectares and a population of more than 16,000. Surrounding Phu Xuan are Sai Gon River, Long Tau River and other communes. In the past decade, Phu Xuan experienced one of the highest rates of urbanization among all communes in Nha Be District, developing rapidly in terms of infrastructure and economy. However, many redevelopment projects were reportedly on hold because of land clearance issues. Its strategic location and complexities in development made it a suitable case study.

This participatory action research was conducted in three phases over a period of two years, namely Community, Co-Creation, and Continuity, in order to investigate the urban issues as well as the collaborative design process with multiple partners. Such approach, tapping on expertise across different universities, different disciplines, different cultures as well as knowledge and experience of the community, had provided us multiple perspectives in understanding suburban development issues particularly in southern Vietnam. In the following sections, we will describe the participatory research methodology, planning and implementation process, outcomes and reflections of the research phases.

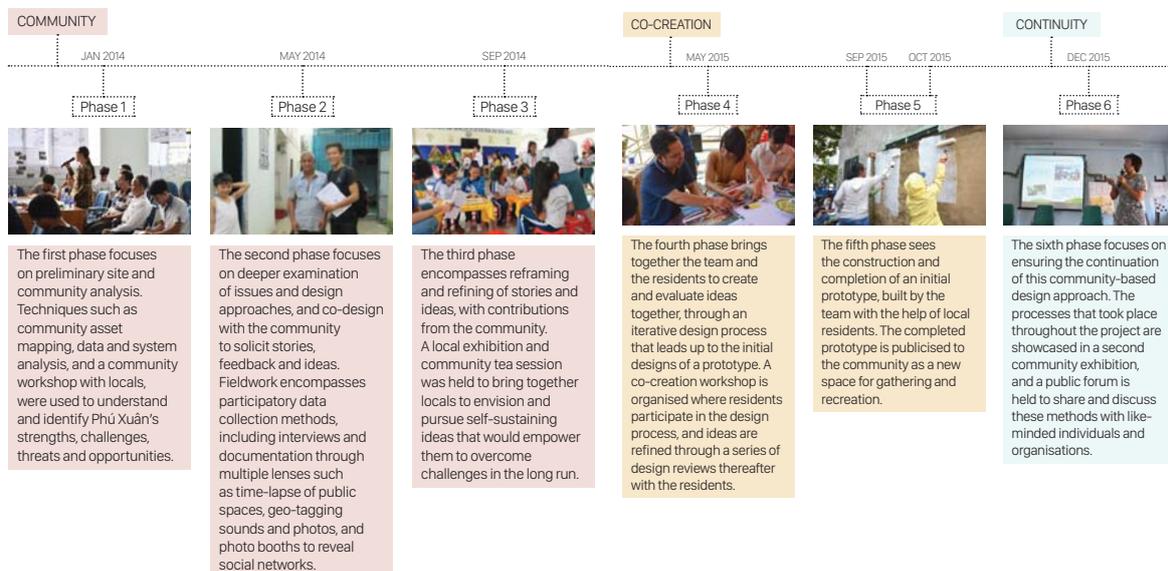


Figure 1. Project timeline.

<sup>2</sup> The city recorded a population of 7.5 million in 2011, and HCMC’s population is expected to grow to 13.9 million in 2025. Population data acquired from HCMC government website (accessed 18 Nov 2016): [http://www.pso.hochiminhcity.gov.vn/c/document\\_library/get\\_file?uuid=bb171c42-6326-4523-9336-01677b457b13&groupId=18](http://www.pso.hochiminhcity.gov.vn/c/document_library/get_file?uuid=bb171c42-6326-4523-9336-01677b457b13&groupId=18).

<sup>3</sup> See also Wendell Cox, “The evolving urban form: Ho Chi Minh City (Saigon):” <http://www.newgeography.com/content/002738-the-evolving-urban-form-ho-chi-minh-city-saigon> (accessed 18 Nov 2016)

## COMMUNITY

The first phase, Community, focuses on deep understanding of Phu Xuan community, through three sub-phases of participatory workshop, data collection and analysis, and community exhibition. A series of techniques, including community asset mapping, data and system analysis and community dialogues with the local residents, were used to understand and identify Phu Xuan's strengths, challenges, threats and opportunities.

### *Community Design Workshop*

A community design workshop was organized to provide a structured platform for students from different cultural backgrounds and disciplines, including architecture, civil engineering, system engineering, environmental engineering, information technology from three participating universities, to identify issues and opportunities together. The workshop consisted of a rigorous and iterative process of community analysis, mapping, interviews, design, development and presentations over 10 days, exposing participants to the various approaches of addressing community issues through a series of exercises and site studies. The aim was to understand the community and the underlying forces at work to scope the real issues faced by the people in Phu Xuan. Participants were given opportunities to develop potentially self-sustaining ideas to empower the community to eventually overcome their own challenges.

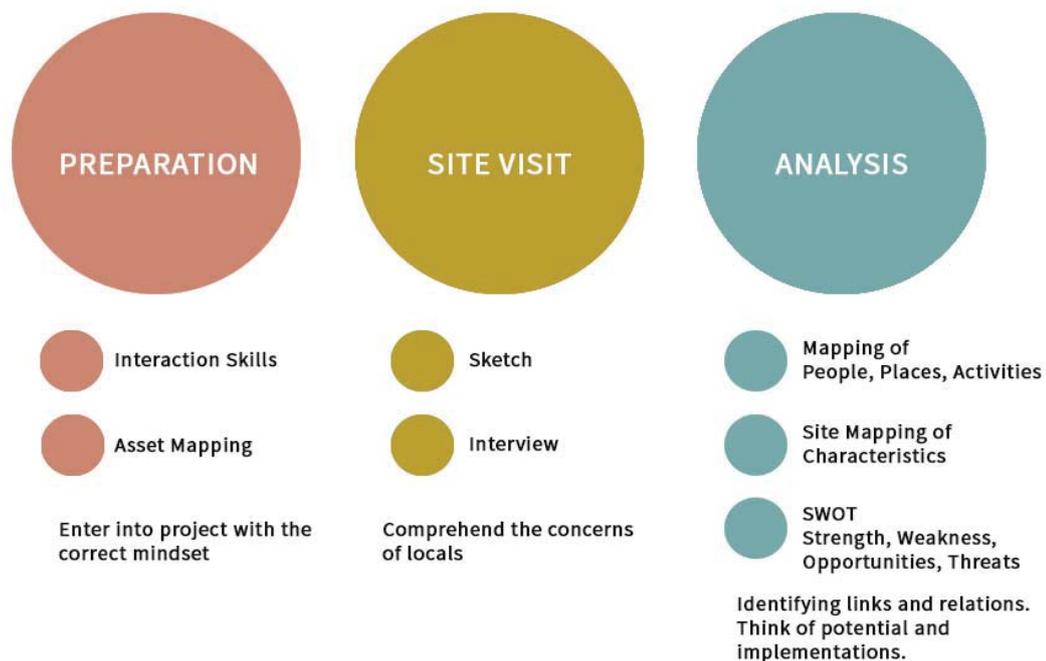


Figure 2. Different sets of techniques introduced in the Community Design Workshop.



Figure 3. (Top) Community design workshop in progress; (bottom) site visit and interview with residents at Phu Xuan.

A community dialogue was held in the commune headquarters in Phu Xuan, with the locals identifying places where they live, work, learn and play, and sharing their stories and views towards Phu Xuan. Participating student teams also presented their study of Phu Xuan and their proposals to the locals. Based on feedback, the teams refined their ideas and revisited issues identified earlier. It was interesting to note that while engineering students had initially seen this as an architectural exercise, after the community dialogue they began to see the multidisciplinary nature of the workshop and ways in which they could contribute and come up with refreshing ideas. These new ideas were then evaluated based on Willingness-To-Pay (WTP), value and capability of the community,<sup>4</sup> with reference to the site mapping and community asset mapping earlier. The team reflected that it was a useful skill to understand a world of factors and trade-offs, such as the fall-backs of tourism in Phu Xuan.

The workshop culminated in a review by a panel of local academics, NGO representatives, and local enterprises. Teams presented their research on the community and design proposals. The discussion ended off strongly emphasizing the need for raising environmental awareness, and collaborating with unions, agencies and local authorities to implement such ideas.



Figure 4. (Left) Community dialogue; (centre & right) proposal review.

<sup>4</sup> Willingness To Pay (WTP) is the maximum amount an individual is willing to sacrifice to procure a good. Value is the ordinal value of the benefits the particular measure might bring to the community.

Data Collection and Analysis

After the workshop, the team recollected and reflected on the process and discussions, and sought to focus the next fieldwork of phase 1 on re-examining the various sustainability issues: environmental, social, cultural and economic.

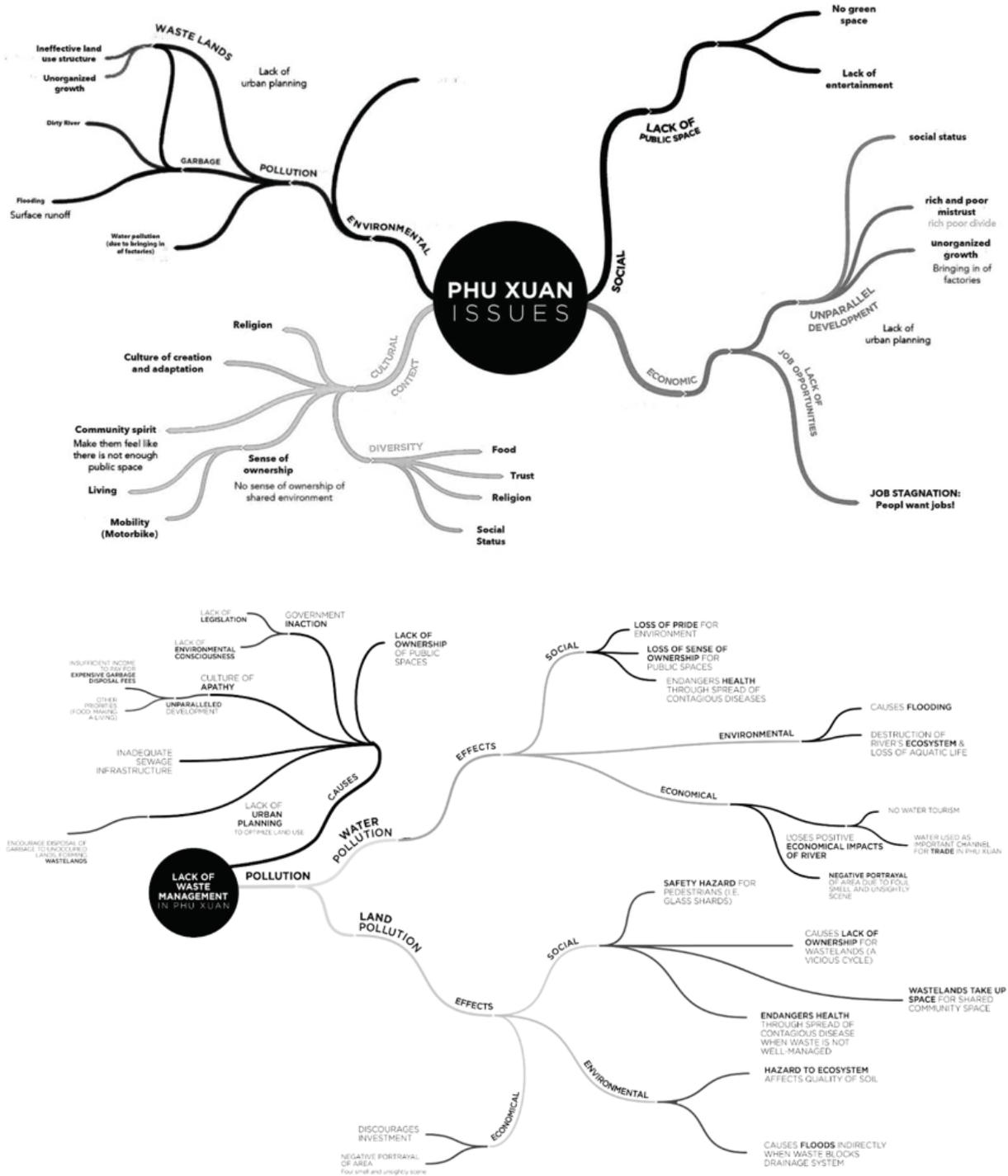


Figure 5. (Top) Potential issue for research and design; (bottom) design of data collection.

With a starting point of waste management issue, the team diverged and designed the data collection based on two main criteria: they should collectively capture as many aspects of the district and community as possible, and they should collectively exploit our different physical senses in collecting those information. This resulted in five data collection methods, including interview with important stakeholders, documentation of the community through multiple lens such as time-lapse of public spaces, geo-tagging sounds and photos, and setting up photo booths to reveal the community's social network.

	Methods	Process
<p><b>Surveys</b></p> 	<p><b>To find out insights various stakeholders had about the Phu Xuan community.</b></p> <p>Different surveys designed for each type of stakeholder: Community, Government, Academia, Activist and</p>	<p>A mix of experienced and new volunteers Residents were generally friendly and willing to be interviewed Each interview took an average of half an hour.</p>
<p><b>Video Recording</b></p> 	<p><b>To identify informal social spaces of Phu Xuan through recording its soundscape.</b></p> <p>Sound recorders were mounted in various secure locations to record the sounds of the place.</p>	<p>Sounds were collected around the whole of Phu Xuan, forming the soundscape of the entire commune Sounds were also recorded at the various wastelands Disparity in the volume showed where and which communities made use and adapted the wasteland space for their own use</p>
<p><b>Sound Recording</b></p> 	<p><b>To document activities and movements of the place through videos.</b></p> <p>Cameras would be mounted from a secure high point to observe what is happening on the ground.</p>	<p>Camera placed at more than 20 different locations for 1-2 hours Locations chosen based on how people used the areas Spent time talking to locals passing by and observed their lifestyles</p>
<p><b>Photobooth</b></p> 	<p><b>To create a map with photos that represent significant places in Phu Xuan, including places of interest, services, public spaces and voids.</b></p> <p>Photos to be geotagged using Global Positioning System (GPS) loggers.</p>	<p>Opened the photobooth at a cafe selling drinks Cafe owner became uncomfortable with our presence, leading to the switch of location to Lê Văn Hữu Secondary School More conducive to work there, but a lot less frequented by the general public Led to a close collaboration with the school for the next phase of the project</p>
<p><b>Geo-Tagging Photos</b></p> 	<p><b>To explore the social network of people in Phu Xuan through setting up photobooths at key locations.</b></p> <p>Photographs to be taken of residents who come together in a group for free. These residents would also be surveyed on their relationships with each other, as well as their neighbours, friends and family.</p>	<p>Equipped with digital cameras, generic GPS loggers and the free GPS-logging software, BaseCamp™ by Garmin Categories of the photos taken: 1. Religion and Culture, 2. Social Spaces and 3. Environment Split into 2 main teams: the first team taking photos by themselves and the second team asking the residents to take photos The second team received rather poor response and we eventually disbanded the second team, even after the attempt to combine the photo taking procedure and the participation of the survey as it was too time consuming and the residents were too</p>

Figure 6. Methods and processes of data collection.

### *Surveys*

The survey showed three types of demographics: residents who had mild opinions, residents who displayed a strong sense of appreciation, and residents who actively sought improvement. It also revealed three main areas that the responses were targeted at: social connections, recreation, and environment, which strengthened the initial findings from the workshops conducted earlier.

### *Sound Recordings*

Mapping the sounds and photographs gave us a micro view of the community. The soundscape showed that Phu Xuan was full of life in the day, but streets turn quiet once the sun sets, reflecting the suburban early-to-sleep and early-to-rise lifestyle. While empty wastelands were often silent, street corridors bustled with conversations and sounds of motorcycles, i.e. the residents' primary form of transport, revealing their preference to gather in corridors between houses. Conversations often had women's voices, which imply men were usually not around in the day. Sound recordings also often captured children's laughter and conversations in the background, which reflects the prevalence of children in Phu Xuan playing outside.

### *Video Recordings*

At most locations, people of Phu Xuan enjoyed gathering in groups and chatting with each other. They gathered over drinks at a roadside cafe, to play card games or even just to watch their children play. To them, there was no specific public space that they had to go to; it seemed as if they gathered wherever convenient. Due to the unique nature of Vietnamese businesses where shop owners would operate in front of their houses, with barely any partition separating their living space and shop, neighbours would gather at someone's house and cafe at the same time, blurring the boundary between public and private space. A strong neighbourly spirit could be sensed when small groups of neighbours gather, especially in the afternoons. However, there were hardly any community gatherings that bring the larger community of Phu Xuan together. Thus, other than the few immediate neighbours around their house, the typical Phu Xuan household had very few opportunities to interact with others outside of that circle. This posed a challenge in inspiring community action in Phu Xuan if the people were not used to gathering as a community in the first place.

### *Geotagging Photos*

Access to location-based information helped in understanding patterns of social gathering spaces, cultural landmarks and even the empty lands that have the potential to be meaningfully repurposed. Originally the exercise was planned to involve the locals in taking those photos or shadowing them. However, the idea was dropped as the team faced challenge in recruiting the locals.

### *Photobooth*

More than fifteen groups of residents took part in the photobooth activity. They were often friends, neighbours or families; each group received a group photo for keeping. Interesting stories sometimes arose from the photobooth session (for example in one case, the elder seven-year-old daughter was not biologically related to the mother, who had taken care of the girl like her own child). This activity had captured a strong sense of kinship in Phu Xuan Commune, where friends, family members and neighbours care for each other.



Figure 7. Various data collection methods: (top left) home visit and survey; (top right) sound recording; (middle left) video recording; (middle right) geotagging photos; and (bottom) photobooth sessions.

### *Community Exhibition*

Building on the analysis of the collected data, the team organised a community exhibition in the subsequent trip to share these results, with the aims to help the residents in seeing their neighbourhood from new perspectives, rediscovering their strengths and potential of the community, and bringing them together to envision and pursue self-sustaining ideas to overcome their challenges. The exhibition was held in the local Le Van Huu Middle School within the neighbourhood, and was designed in such a way that it became part of the community design process, using existing data to further gather and extrapolate stories and ideas from the visiting residents, as well as to build their confidence, capacity and network. As such, the exhibition was highly interactive and organically growing where visiting residents could leave their mark. To present the exhibition in a coherent and clear manner, the data and analysis were grouped into the three themes: Stories, Treasures, and Future.



**Figure 8. Objectives of the 3 exhibition themes: Stories, Treasures and Future, followed by a Community Tea**



An interactive display showcasing different sounds of Phú Xuân, under the theme 'Treasures'



Several students looking at a panel of geo-tagged photos on a map of Phú Xuân



Students interacting with flip cards showcasing different issues concerning Phú Xuân



Each flip card depicts an issue faced by the community, or a characteristic that might help to tackle these issues



A student poses for a photo with his written postcard, under the theme 'Future'



A group of students gathered at the Children's Corner

**Figure 9. Visitors expressing opinions and interacting with exhibits.**

The idea of motivating and empowering residents to make changes in the community was however not an easy concept to express clearly to the residents who were not exposed to such process. Brochures were given out, and a personal guide tour was conducted by Vietnamese students to relay the message in a more localised manner. Visiting residents generally commended the novel concept of the community exhibition. They enjoyed experiencing their community in new ways, through interacting with the sound map, quizzes, as well as visioning boards and drawings that had contributed to the growing exhibits.

At the end of the Community phase, the team concluded the findings within the framework of the community's strengths, weakness, opportunities and threats (SWOT). Intricate complex relationships among diverse aspects were then established. While there was a lack of public recreational and green spaces, there were many abandoned vacant lands which had become garbage dumping sites for the residents, due to lack of waste management. The condition worsened when these sites were close to the river and were vulnerable to the tidal flooding. Coupled with poor drainage system, the garbage on those vacant sites added to the land and water pollution. The economic gap was wide, there were also drug addicts who occupied these vacant lands at night and in early morning, which posed security issues. On the other hand, there was a strong sense of ownership in the community. The locals were hardworking and resourceful, while children were independent, well-educated, helpful and looking for things to do after school. The riverside scenery was beautiful. It was with such understanding that the team began to identify opportunities to work with the local residents in the next phase.

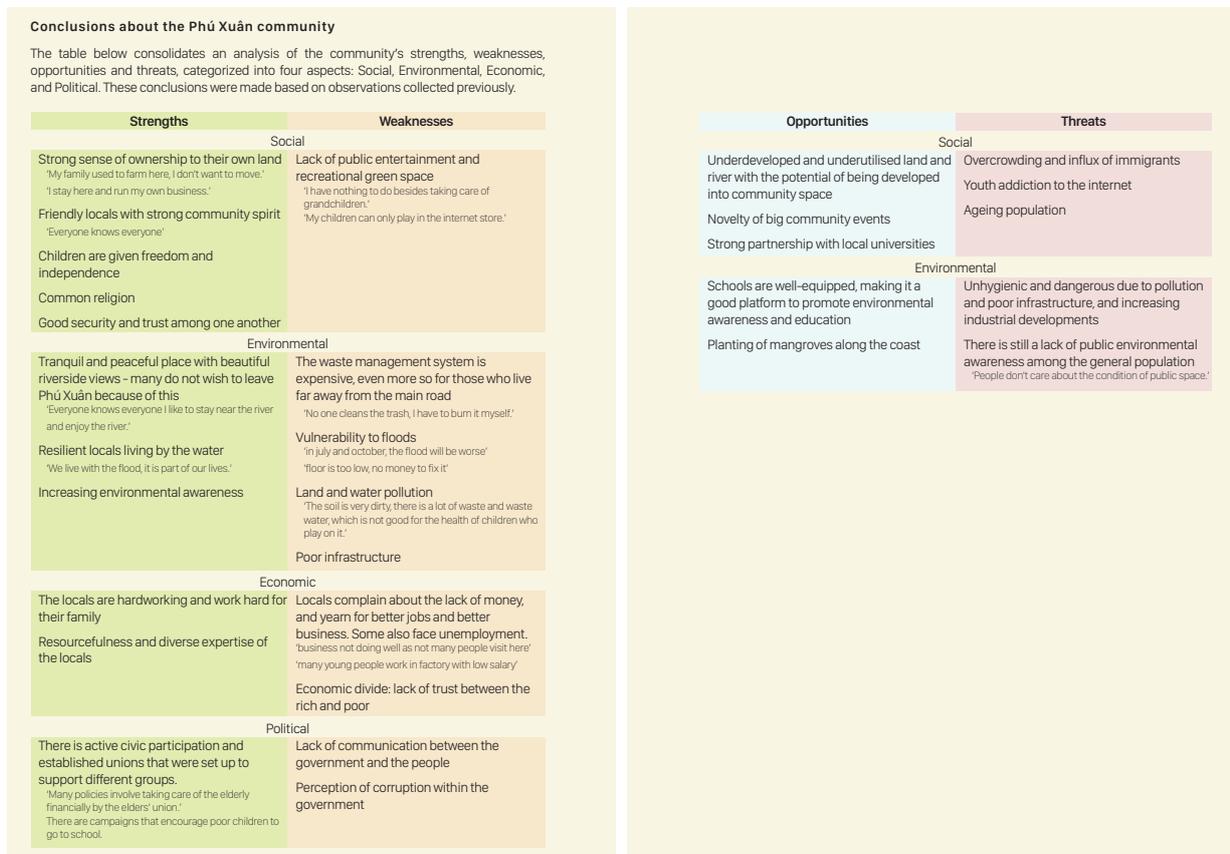


Figure 10. SWOT analysis of Phu Xuan community based on Phase 1 research.

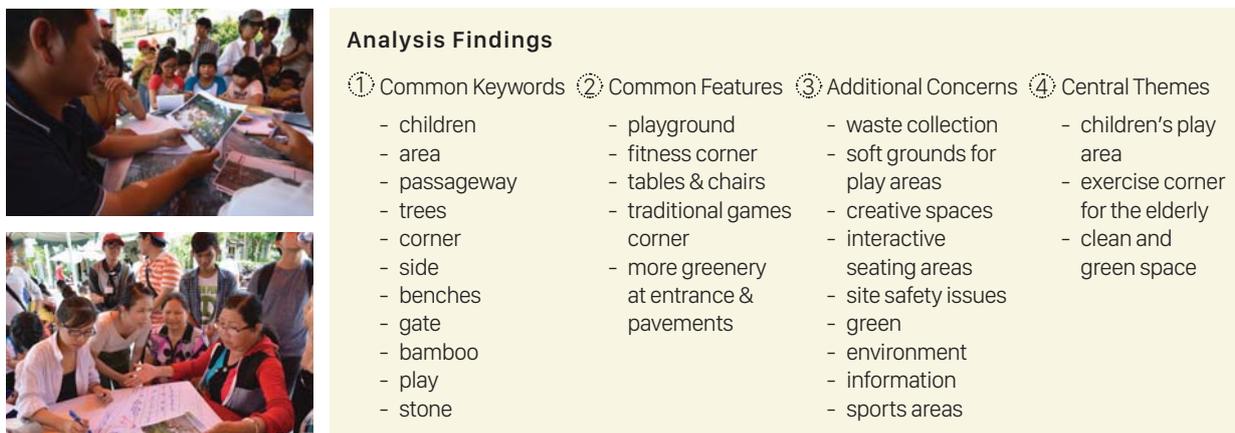
## CO-CREATION

The second phase, Co-creation, brought together the multi-institutional project team<sup>5</sup> and residents of Phu Xuan to collaboratively create and evaluate ideas, develop designs and build a prototype. This phase also focused on deeper examination of issues faced by the residents, and potential design approaches not only to overcome these issues but also leverage on the community resources.

### *Designing with residents*

After surveying various vacant lands in the neighbourhood, a site sandwiched between shophouses along the main road was selected and secured for a period of two years to create experimental design prototype with the local community. A three-day co-creation workshop was organised as a roadside stall outside the Le Van Huu Middle School. Residents were invited to brainstorm ideas, reflect on local issues, and envision possibilities for the site and the neighbourhood of Phu Xuan. As the roadside workshop took place outside the school, many parents and school children would pass by the place at noon and in the evening. Members of the team took the opportunity to engage people from both age groups in the workshop activities.

The residents' comments, feedback and ideas were collected in the form of sketches, comments, and interview transcripts. The compiled information was then entered into a computer program that ranked the frequency of keywords and phrases mentioned by the residents. Further analysis of the results informed the team of common areas of concern and needs for the residents, categorised into themes. Sketched maps were also evaluated for the placement of programs and features within the site.



**Figure 11. (Top left) Residents commented on images of public space; (bottom left) residents gave ideas on site planning, sketched out by students; (right) frequency analysis of the data gathered.**

<sup>5</sup> Apart from the three universities, this phase was also joined by students from Ho Chi Minh City University of Transport.

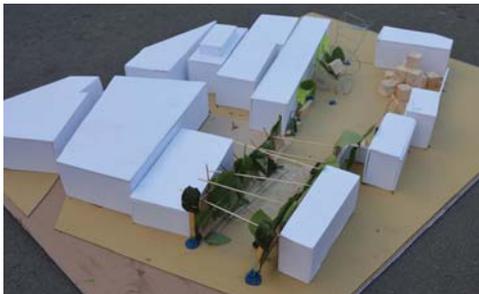
With these findings, the team split into three groups, each developed a specific design strategy in response to these themes, while referring to the residents' sketch maps and ideas. Physical models were produced, showcasing ideas such as elderly fitness corner, interactive spaces, open areas for street food vendors to make the place socially and economically sustainable. Residents who took part in the workshop earlier were invited back for a feedback session, where the team sought comments on the three design strategies developed.



Plasticine models as simple representations



An attractive entrance as a gateway



An open, landscaped site with wide trellises



A bridge play structure and feature pond

**Figure 12. Physical models built on site by the team to showcase different design strategies.**

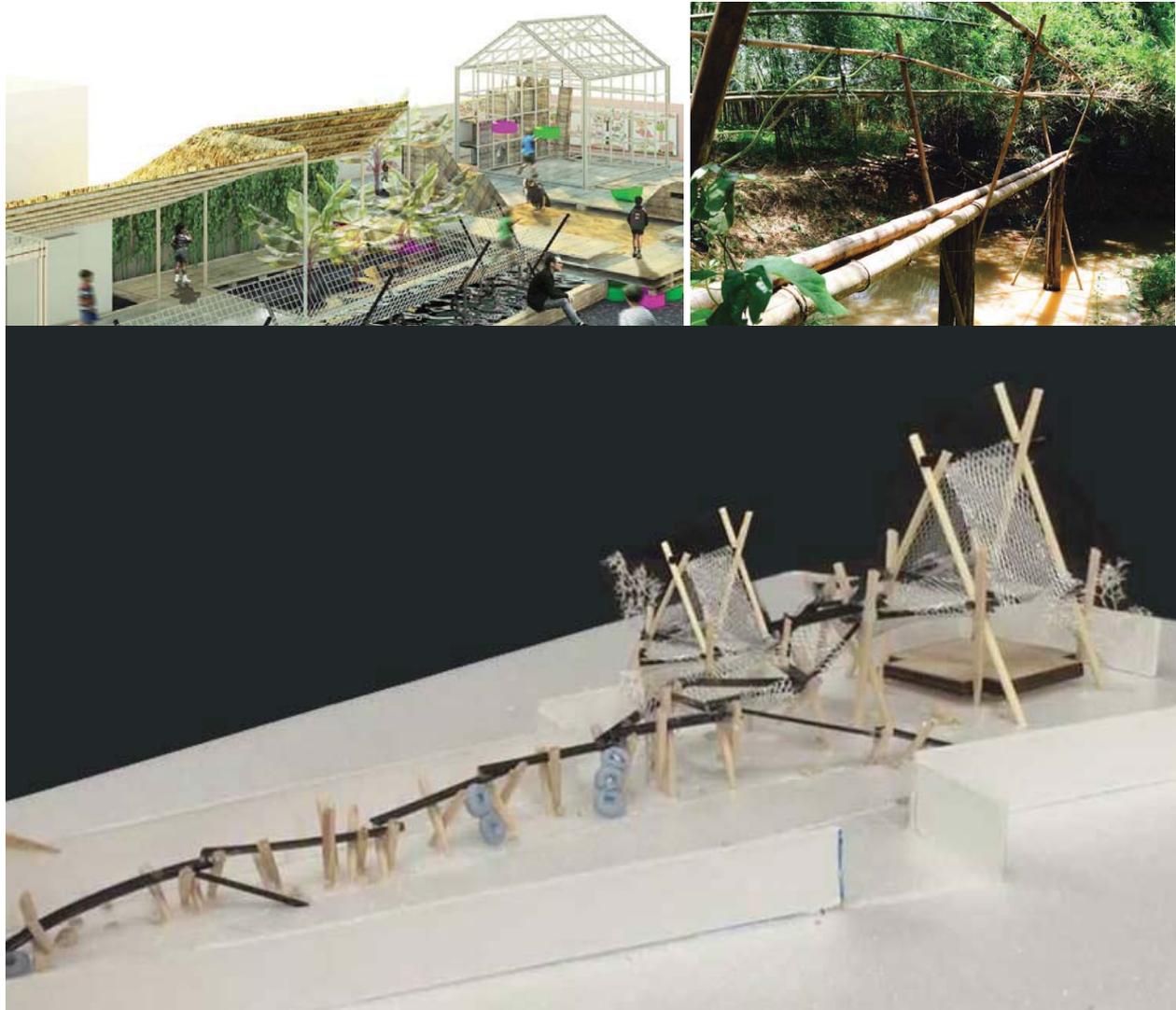
### *Prototyping with residents*

After the co-creation workshop, the international project team began to develop a more defined design proposal. Many rounds of reviews were held over video conferences and Facebook group discussions, with members of the team spread across different geographical locations in Vietnam, Singapore, China and the United States.

Some team members were researching on Southern Vietnamese architectural and landscape typologies, as a way to imbue a sense of familiarity and cultural relevance into the design. The traditional monkey bridge structure was eventually adopted as a design feature for the play structure. Vietnamese team members also searched around Phu Xuan for suitable building materials, including visiting a bamboo reserve.

The design developed was brought back to the community for a second feedback session. Several members also went on house visits to gather more comments, raising awareness of the project within the community.

The site was eventually designed based on a holistic strategy to respond to several local issues through its various parts: a rejuvenated public park with various features for people of all ages within the community to enjoy, providing a safe playing ground for children, a green space for respite, and a rain garden to make the terrain more resilient to frequent flooding.



**Figure 13. (Top left) Design iterations expressed through illustrations; (top right) traditional monkey bridge in Southern Vietnam constructed in bamboo; (bottom) physical model of final design adopted.**

Prior to the Singapore team joining the subsequent prototype phase, the Vietnam team began by clearing up the site and constructing supporting structures. The Singapore team joined the rest of the team for a period of two weeks, during which the entire team was regrouped to work simultaneously on the different parts of construction, as well as confirming the remaining aspects of the design, consulting local structure engineers, engaging the local residents, and sourcing for tools, equipment and more material.

Throughout the duration of construction, local residents came forward as individuals or in small groups, offering guidance and helped in parts of the work. Most residents would like to contribute to the project although they did not have money, many thus contributed materials (e.g. cardboard boxes, spare wood pellets, plastic bottles), tools (e.g. barrel, shovel, power source), or even skills and knowledge (e.g. gardening knowledge, carpentry skills). A resident next door donated several banana saplings, while others offered helping hands at construction work. Experienced adults demonstrated how to drill holes through narrow wooden poles, while children eagerly helped painting mural. Materials were also procured from nearby local retailers.

The construction took 2 phases: first on the monkey bridge play structure, then on the rain garden landscape. The completed community park welcomed its users after word was spread around by the team.



A resident offers some advice on putting the X-shaped posts into the ground



A resident comes forward to give a demonstration after seeing some initial difficulty faced by the team



Gardening activities were held for children to experience planting seeds in soil, get creative by decorating their planter bottles, and having their creations become a part of the site



A group of children get involved to help complete a mural painting on a wall that runs along the site

**Figure 14. (Top left) Local residents involved in construction of the monkey bridge play structure.**



Figure 15. (Top) Monkey bridge play structure; (middle) rain garden completed 1 month later; (bottom) Christmas celebration with children at community park.

## CONTINUITY

The final phase, Continuity, involved evaluating the project and its social impacts, as well as looking ahead towards a sustainable model achievable by the community.

### *Community exhibition and evaluation*

The transformed community park was left in the hands of the community for a period of four months after completion, before the Singapore team returned to see how it might have been used and had impact on the community. A community exhibition was held near the community park to celebrate the contributions of all residents and collaborators. It also gave the team an opportunity to gather feedback from the residents. Most residents commended on the project for the inspiration it had given to the community. However, they also remarked that the park catered less for adults, the structure of the prototype needed more strengthening, and more greenery was needed to beautify the place. Furthermore, it was largely due to the lack of adult's presence that resulted in vandalism on the site. On hindsight, the team could have considered alternative design to engage the adult residents in parallel. The team also did not expect the children to intentionally test the limits of the structure, leading to eventual damage in parts of the structure.

An interview with the head of resident committee of Phu Xuan neighbourhood also brought more insights. He acknowledged the inspiration and positive impacts that the pilot project had brought about to the residents, and wished for more projects like this to be undertaken in the community. He also shared that in an attempt to provide more essential public spaces for the community, the local authorities usually cope with various problems such as land acquisition, compliance to central spatial planning, difficulty in getting permission to develop the lands from higher-level authorities, and the lack of funds and other resources to implement projects. As a result, they preferred spending more resources on infrastructures that they have more control in the decision-making processes, and also those with more direct benefits in the short-term. In any case, he wished more people would step up to run initiatives that benefit the entire community.

Besides, the team also noticed that residents began using the structure in unexpected ways, such as hanging of laundry on the bamboo bridge. Such unexpected behaviour could point to a deeper need in the community. Despite being partially damaged, the fact that the monkey bridge was still being played by children indicated a strong demand of recreational space in the neighbourhood, and that the project had provided value to the community to some extent.

### *Closing workshop and public forum*

A final workshop was conducted to evaluate how the project could have progressed better. Several learning points were raised during the discussion. In terms of time frame, the team felt that the project could be stretched longer (e.g. 5 years) in order to achieve a better balance between understanding the community, empowering the residents, and actual implementation, yet with shorter cycles of quick prototypes and evaluation (e.g. every 6 months) to keep the momentum going. On-going publicity is also essential to keep the residents engaged, while the focus could also shift more towards maintenance of communal space and sense of ownership.

On the other hand, many changes had been made to the initial plans due to many uncertainties and unforeseen circumstances, the team realised that striking a balance between detailed planning and flexibility was utmost important. For example, the team faced much challenges in inviting the residents to the participatory workshops, thus the elaborated workshop plans were in the end replaced with outreach programmes and door-to-door interviews during the actual fieldwork.

During the final fieldwork, the project team was informed that they were no longer authorised to work on the existing site as the landowner had sold the land to another company. The original agreement between the landowner and the project team hence became void. This led to the learning that it is important to involve people who had a stake in the place itself. In this case, the landowner did not physically live in Phu Xuan, and therefore did not experience the benefits of the community project personally.

## CONCLUSION

The objective of this project is to find out: (1) The collaborative design process between different disciplines and across cultural boundaries; (2) The extent and acceptance of participatory design approach in Vietnam context; (3) A design prototype in response to the social and environmental issues faced by the local community.

In term of the collaborative design process, much has been learnt from the extraordinary two-year effort. In the Community phase, the Singapore team kickstarted participatory community design project by leading the various universities in Vietnam. It was with the support of the local faculty and students, especially those from HCM University of Technology, that the team could develop a better understanding of Phu Xuan by building on their existing relationships with the residents, and through new platforms such as workshops, exhibitions, interviews and data collection. In the Co-Creation phase, faculty and students from Van Lang University gradually began to take the lead in working with residents to identify the needs for playground and green space for recreational purposes. Thereafter, with the support of enthusiastic residents, the team successfully built a monkey bridge play structure and a rain garden on a piece of vacant land. It was learnt that in such multinational, multi-institutional project, the transition of leadership from ‘outsider team’ (Singapore team) to ‘insider team’ (Vietnam teams) is better when it was gradual, with opportunities in between the milestones to let the various partnering institutions took on their own initiatives in contributing to the project.

As for the social and environmental impact brought by the project, the team generally agreed that more could be done to make a long-term impact. Despite numerous efforts in publicity, some residents still had not heard of the initiative. A few enthusiastic residents were identified as potential community leaders because of the tremendous support they had provided; however, they did not seem able to actively sustain the project on their own. Indeed, the idea of attempting to change mindset across every level of community in a span of two years was ambitious. It was even more challenging when the political support from the local government remained unclear, coupled with a strong economic-driven development and weak human-driven development in the suburban districts, as seen in the case of Phu Xuan. However, the team believed that if the idea

of transforming existing vacant lands into temporary community parks could get more buy-in from different levels of stakeholders – from local residents, schools, businesses, land owners and developers, to NGOs and local government, and more such projects could take off in future, there would be, collectively, large social and environmental impacts brought to the suburban districts.

Nevertheless, one strong positive outcome of the project was how deeply the project had impacted the Vietnamese university students. From the beginning, the main responsibility of explaining the project to local residents had always laid on these students who had the ability to convey in Vietnamese. This drove them to understand and synthesize the entire participatory action research and community design methodology so well that they could explain the concepts to the ordinary layman. It was fruitful to witness local Vietnamese students adopting some of these methodologies and techniques, and even applied onto other community projects they began to initiate in around the region. While the approach is still relatively new in Vietnam context, and particularly challenging for local residents to appreciate, such collaborative experience between the partners of different nationalities and cultural origins and transfer of knowledge proved to be successful. The empowerment thus comes in many layers, and in this case it is to the local Vietnamese students, who will eventually become leaders of the community in future.

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## Exploring Ecological Democracy in Japan

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### Abstract

We established the Ecological Democracy Foundation in October 2016 to spread understanding of ecological democracy in Japan and practice it with people. For its establishment, we have conducted two activities – discovering ecological democracy in Japanese grassroots activities and getting supporters for the establishment. In this course of these activities, we found 4 key phrases to explain a principle, value, method and practice of ecological democracy. In this paper, we analysed reactions to each of key phrases and considered how people can understand and accept the concept of ecological democracy. Judging from the reactions to the key phrases, many Japanese people seemed to understand the logics of the principle and value of ecological democracy but were not ready to accept the idea. On the other hand, the key phrases for method and practice were welcomed.

Keywords: ecological democracy, Ecological Democracy Foundation, key phrase

### 1. Introduction

After the Great East Japan earthquake in 2011, a nuclear power plant in Fukushima melted down and exploded with a lot of radio-actives spread around the area. Today, thousands of people are still evacuating and an area of 337 km<sup>2</sup> surrounding the plant is still prohibited to enter. In addition, the power plant is not yet under control. In terms of the public opinion, a poll conducted in 2015 showed that more than double were against the restart of any nuclear power plant than those who were for. However, a nuclear power plant in Kyushu was restarted only within four years from the disaster by Japanese Government. This devastating situation is completely opposite to the ecological democracy.

“While I am overwhelmed by the despair around us ... ecological democracy takes roots, sprouts, and blooms here and there!” – wrote Randolph T. Hester in his book. So, we have decided to explore ecological democracy in Japan.

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<sup>1</sup> Hester (2006), p.419

In order to discover ecological democracy in Japan, we asked five civil organizations to look into their own activities and try to find ecological democracy with us. The process started with explaining to them what is ecological democracy, and we together looked at their activities and tried to give expression to the ecological democracy that was found in these activities. This challenge to discover ecological democracy in grassroots activities and give expression to it is now taking shape. The methodology that has been developed is that an observer describes grassroots activities in the form of monologue and puts them into the cycles of society and nature.

Going through this process, we found that the first step – to explain to civil organizations the concept of ecological democracy that needs to be discovered in their activities – was very difficult. Because they had their own goal and their activities were designed for that goal, it was almost impossible to make them convinced that their activities had another value from the ecological democracy viewpoint. We have learnt that they can accept this idea after finding ecological democracy in their activities together with us and seeing the expression of it.

While trying to discover Japanese ecological democracy, we began to prepare for the establishment of the Ecological Democracy Foundation from April 2016. The Foundation was established in October as an organization to put ecological democracy into practice in Japan. One of the important strategies for the establishment was to get its supporters. Today around 150 people have become supporters of the establishment of the Ecological Democracy Foundation, but it was not easy to make them understand what is ecological democracy since no one knew or even had ever heard of it. Getting their understanding had an important meaning.

Through these two activities – discovering ecological democracy in Japanese grassroots activities and getting supporters for the establishment, the Ecological Democracy Foundation was born to spread understanding of ecological democracy in Japan and practice it with people.

In the following chapter, the sequence of events which affect the establishment of the Foundation is explained focusing on the transition of its supporters and projects. The third chapter introduces the goal, vision and the structure of ten programs of the Foundation because these reflect the local adaptation of ecological democracy in Japan that has been developed through the feedback from 150 supporters and five civil organizations. The fourth chapter examines key phrases the Foundation uses to explain ecological democracy and people's reactions to them. This uncovers critical strategies for the acceptance of ecological

democracy in Japan. Finally, the fifth chapter argues the possibilities and significances of spreading ecological democracy in Japan and considers how it can be locally adapted in different countries such as China, Taiwan, Korea and the United States. The result of this paper is one of the strong tools for ecological democracy to overcome anti-ecological democracy policies.

## 2. Sequence of events towards the establishment of the Foundation

To confront short-term profiteering of global capital and a shallow democracy that causes tragic situations, the Ecological Democracy Foundation has established in Japan in October 2016. This Foundation is supported by 150 persons including researchers, administrative officers, and members of NPO and NGO who engaged in the realization of an inclusive and environment-oriented society (of which the authors are its core members). This chapter briefly explains how this foundation was established through the sequence of events.

Initially, the discussion concerning the establishment of the Foundation started with 4 persons who share the same aspiration toward ecological democracy. In the beginning when we started the argument, because we have been took part in some civic activities, such as ARCH<sup>2</sup> and SPOON<sup>3</sup>, we reconsidered them from the perspective of ecological democracy and devoted ourselves to deduce the critical issues for their further improvement. After that, we gradually moved to the discussion relating to the idea, articles of incorporation, and action plan of the Foundation resulting in the creation of the Business plan ver.0.

Then it entered the stage of inspection. In order to examine our Business plan, we started to go outside and meet researchers and specialists in a wide variety of field, such as urban planning, community design, architecture, welfare, law, and natural environment. They checked it from several aspects sometimes in a strict manner and sometimes kindly, and we improved the Business plan each time. Through these meetings, we got some Foundation's supporters and they reached 26 persons in the end.

Finally, it attained the stage of development. In this stage, we mainly focused on getting the Foundation's supporter from citizens spreading out the idea of ecological democracy. We held the orientation meeting several times, and tried to make the concept clear to meet the Japanese situation, attitude, and activity. At that time, we also launched some of the

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<sup>2</sup> "ARCH (*Advocacy and Research Centre for Homelessness*) is a small, research-based organisation whose primary purpose is to improve and strengthen the entire homelessness sector in and around Tokyo." (cited from the web site of ARCH; <http://archcd.wixsite.com/arch/about-us-en>)

<sup>3</sup> "Team SPOON was formed under the concept of raising urban residents' consciousness of being a part of the ecosystem by raising recognition of the Black-faced Spoonbills." (cited from the web site of SPOON; <http://spoonprd.wixsite.com/teamspoon>)

Foundation’s projects antecedent to its establishment. For example, “Ecological Democracy interactive monitoring project” began in August with 20 participants, “Study session on Ecological Democracy” was held in September with 50 persons, and “Ecological Democracy observation project” has been running since August discovering several good practices and creating strong ties between us. They really contributed to increase our supporters and made the idea of the Foundation rich. In fact, we obtained many key phrases of Japanese ecological democracy from the above projects, which explained in Chapter 5 in detail. At the end, just before the kick-off party on October, we completed our Business plan ver.8.4, got 129 supporters, and succeeded the establishment of the Foundation.



Figure 1. Timeline of the events towards the establishment of the Foundation

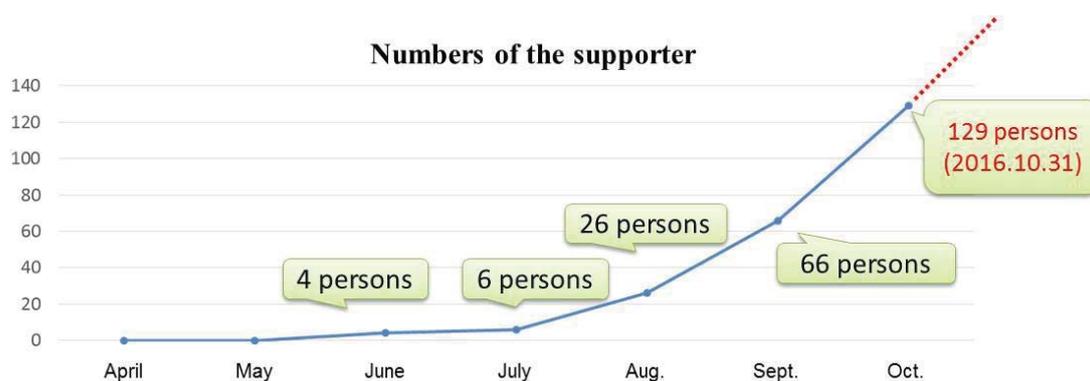


Figure 2. Numbers of the Foundation’s supporter

### 3. Establishment of the Ecological Democracy Foundation in Japan

To illustrate the general contents of the Foundation, this section is organized as follows: Subsection 3.1 states the aim and vision of this foundation, and Subsection 3.2 describes the contents and current status of its primary projects.

#### 3.1. Vision and goals of the Foundation

After some deep considerations and discussions, the Foundation has created its vision and four goals.

<Background>

Human beings are part of ecosystems, and human society was once operated as part of the nature within ecological cycles. With the significant development of scientific technology and economy, however, activities of human society have gone beyond natural cycles. The gap between “humans as biological creatures” and “humans living in contemporary society” is now widening as a consequence. Under such circumstances, nature and ecosystem conservation efforts, as well as tenacious attempts to achieve a diversified society where people live with the socially vulnerable, are flourishing and deepening. Activities of ecology and democracy are often carried out separately, but it is not sufficient to approach the current issues of our society in a highly specialised fashion. Ecological democracy connects these activities. It is a principle, value, method and practice which lead to a world where ecological and democratic ideologies meet each other, and where our pleasure of living with nature and joys of living together with other people are intertwined. Ecological democracy relocates our society and cities within ecosystems. Ecological democracy allows the nature and ecosystems to function as the seeds of people’s cooperation. Ecological democracy consciously connects movements of seeking people’s participation and contribution to the society and social diversity with local nature and ecosystems. Thus, there is a desperate necessity to propose and implement methods of connecting various fields and addressing issues of nature and society together as a whole, while pursuing the possibility of ecological democracy and appealing it to the society. This is why we established the Ecological Democracy Foundation.

#### <Vision>

To achieve the world where people respect each other and their cooperation as well as nature which has to be consoled and feared by ourselves, being proud of the fact that only human being has developed the faith (freedom, equality, and peace) and the fact that human being is a part of nature.

#### <Goals>

1. To create the new thought, value and world called ecological democracy that leads us to bear with one another being conscious of the connectedness of nature and society
2. To inform that only human beings are capable of integrating the nature and society
3. To correlate improving the nature with healing the society and vice versa consciously
4. To put ecological democracy into practice from daily life to international politics

#### *3.2. Contents of the primary projects*

Currently, the foundation divides the projects into 3 categories in order to approach our vision multidirectional.

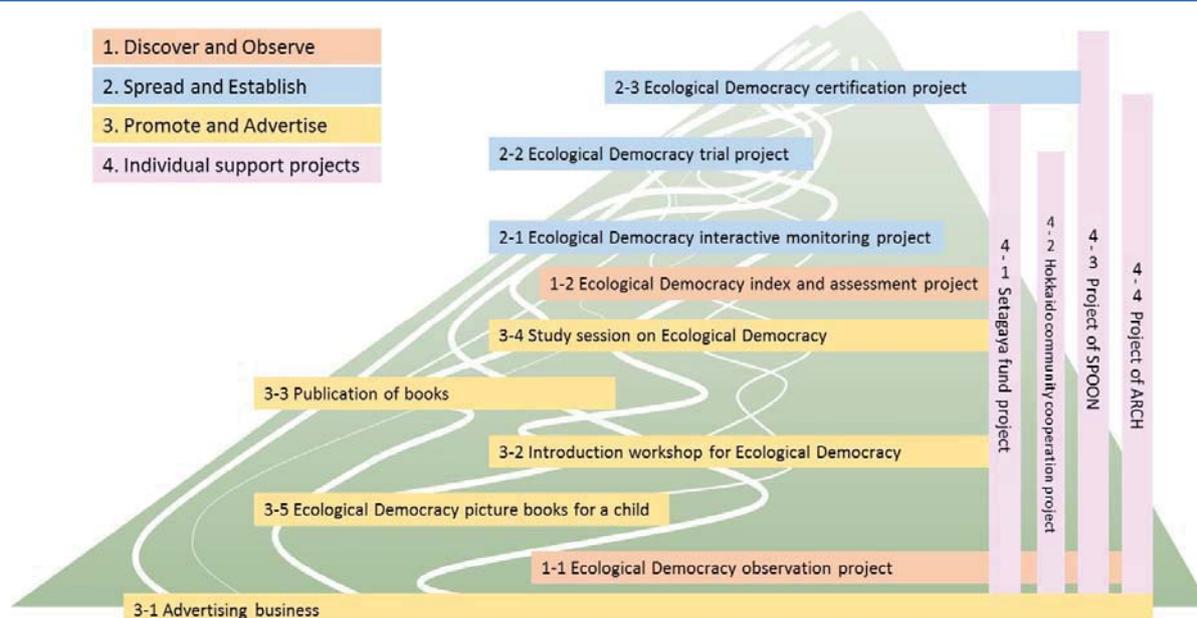


Figure 3. The relationship of the Foundation's primary projects

## 1. Discover and Observe

Ecological democracy takes root, sprouts, and blooms on all sides. However, in most cases, even its practitioners do not realize the values. So, we should discover and observe good practices of ecological democracy with citizens carefully, and respect them splendidly.

The following projects are the most fundamental works to merge the activities and to form the ecological democracy in Japan.

### 1-1 Ecological democracy observation project

This project intends to discover and collect the ecological democracy all over Japan, where the practitioners working up with a case study. Its ultimate goals are to make everyone understand the ecological democracy, and create a condition that citizen can discover it by themselves.

### 1-2 Ecological democracy index and assessment project

This project is planned to create the evaluating method to measure an expression level of ecological democracy, a ratio of the interrelationship between nature and society, and a degree of diversity and creativity of each activity. This index would be advanced as we accumulated many sampling and conclude the principles design of ecological democracy.

## 2. Spread and Establish

In order to spread and set up the ecological democracy widely, we are going to pursue people to become familiar with the ecological democracy, train the specialist who can handle ecological and social issues at the same time, and design the city model for ecological democracy.

### 2-1 Ecological democracy interactive monitoring project

In this project, participants read a particular chapter of “Design for Ecological Democracy (Randolph T. Hester, 2006, The MIT Press)” per week, and discussed it with other participants on the internet as a small group seminar. This seminar lasts for 5 months in total to complete every part of the book. Through the seminar, this project aims to make the participants well-understand the ecological democracy and interact with the others.

### 2-2 Ecological Democracy trial project

This trial project is a kind of consulting business for a local government, which will reduce extra costs and increase multiplier effects concerning environmental and social policies and projects. Above all, its purpose is to let the citizens feel how the ecological democracy is rich and enjoyable.

### 2-3 Ecological democracy certification project

Through field trips all over Japan, the foundation will find many activities which embodied the ecological democracy. In this project, we intend to certify them as a good practice of ecological democracy and create the platform where their practitioners can ensure, learn, support, and collaborate with each other.

## 3. Promote and Advertise

To share and practice the ideas, value, and method of ecological democracy in the whole society, we are going to carry out an introduction workshop, study session, and publishing.

### 3-1 Advertising business

Using web services and medium, this project is going to promote and advertise the ecological democracy and the foundation. In particular, contacts some CSR activities of a private company concerning environmental business as well as held a lecture and workshop in a school and municipal office.

### 3-2 Introduction workshop for Ecological democracy

A business card just shows your position in a business. Unlike this, the Ecological Democracy Card reflects your position and assurance both in ecology and society. This project is planned to spread out this new card through some workshops which confirm human beings are part of ecology and democracy.

### 3-3 Publication of books

The publication of the Japanese translated book “Design for Ecological Democracy (written by Randolph T. Hester, translated by Dohi Masato)” has been decided formally. This book will become the theoretical backbone of our Foundation to inform the route for creating a better world through a design for a daily life. In addition, this business is going to plan and publish the ecological democracy case studies, picture books, and so on.

### 3-4 Study sessions on Ecological democracy

In order to learn the diverse value of ecological democracy in relation to the Japanese version publication of “Design for Ecological Democracy”, this project delivers a study session in public, by inviting well-known researchers and practitioners in various fields.

#### 3-5 Ecological democracy pictures books for a child

“Is ecological democracy difficult?” No, it is not. This project intends to create a picture book for a child to make them understand and like the ecological democracy cheerfully.

### **4. Key Phrases in the context of Japanese Ecological Democracy**

We had some opportunities to meet many people in establishing the Foundation and explained the concept of ecological democracy. At the same time, we tried to find the ecological democracy around us in Japanese contexts as the ‘Ecological Democracy observation project’. In particular, ARCH and SPOON are one of the good practices of ecological democracy in Japan, and from the first stage, we referred to them frequently to create the Foundation’s schemes.

In this course of activities, we found several key phrases, which we believe, comprehend the situation of the native ecological democracy in Japan and would be an important idea to consider the Foundation’s future projects. In addition, we have already discussed these phrases as well as the concept of ecological democracy with our Foundation supporters and noted down how they react.

This section will review the 4 important key phrases and the reactions from the supporters one by one. Identifying both positive and negative opinions and the last part (Subsections 3.5) considers the characteristics of ecological democracy in Japan and how we should deal with them to manage the Foundation.

#### *4.1. Key Phrase 1; “Compassion flows from person to person as an ecology that only human has developed.”*

First of all, through a long-term observation of Japanese ecological democracy, the key phrase 1: “Compassion flows from person to person as ecology that only human has developed” has come to our mind. Through a long survival historical in nature, human has developed Sympathy and Compassion as the essential aspects of ecology. The origin of the flow of ecology arises inside the human being when faced social or environmental issues. This flow will become larger and larger as it gains more compassion from their family, friend, and colleagues. Finally, it pours into society - making democracy to ecological democracy.

Then we ask our Foundation’s supporters, whether it would be adequate for notifying the concept of ecological democracy in the very first orientation meeting of the Foundation. In our explanation, we referred to ARCH and SPOON to illustrate the key phrases with an example. However, with our disappointment, the reactions were negative for the most part. Many participants pointed out that even though the mechanism demonstrated by that the key phrase can be found in the activities of SPOON, it cannot be applied with the same mechanism in the ARCH’s activities. In particular, they seem to reject or feel difficult to find out ecological element named compassion from the homeless issue and do not support for the expression at all. After this orientation meeting, as a result of their negative reactions, we astonished and it took about 2 weeks to overcome it.

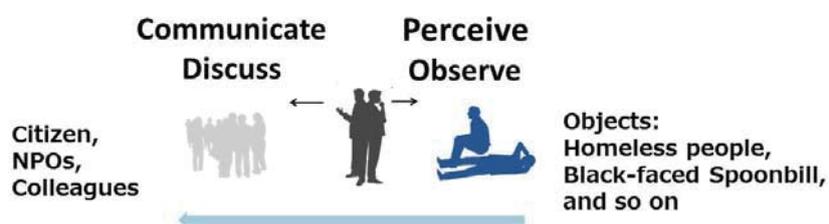


Figure 4. The mechanism of the flow of compassion

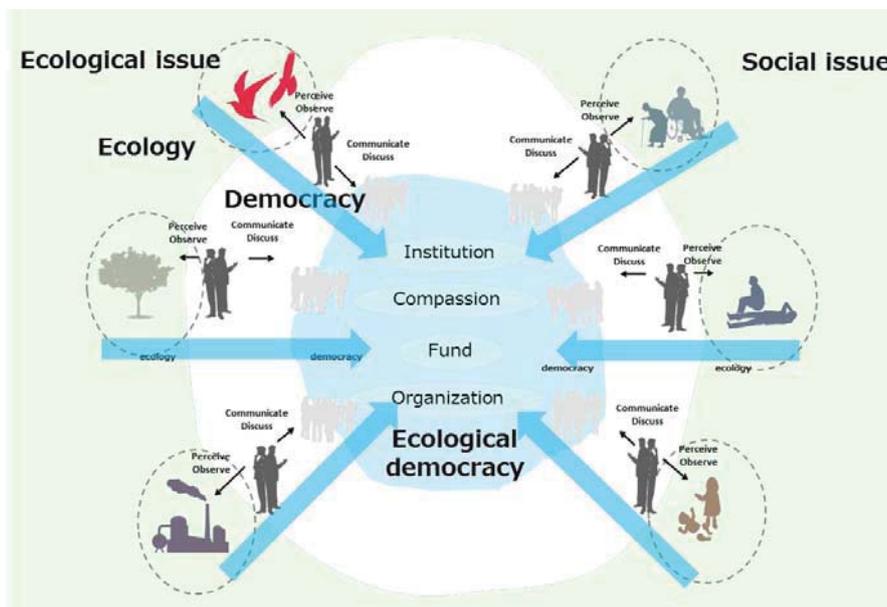


Figure 5. The image of the transition from democracy to ecological democracy

4.2. Key Phrase 2; “When we improve the society, the nature heals. When we improve the nature, the society heals.”

Secondly, we have come across the key phrase 2: “When we improve the society, the nature heals. When we improve the nature, the society heals.” (In Japanese, “improve” and “heal”

have the same pronunciation: *naosu*). We realized this mysterious interrelationship empirically and do not have any theoretical explanation.

After a while, we hold the next orientation meeting and observed the supporter's reactions. At this time, we were surprised, almost all of them agreed with it without an apparent reason. They mentioned that it was easy to imagine and understand what is to be conveyed by this phrase instinctively, representing the greatness of both ARCH and SPOON activities. These positive reactions reassured us and this phrase turned to be the most useful and frequently used to explain ecological democracy.

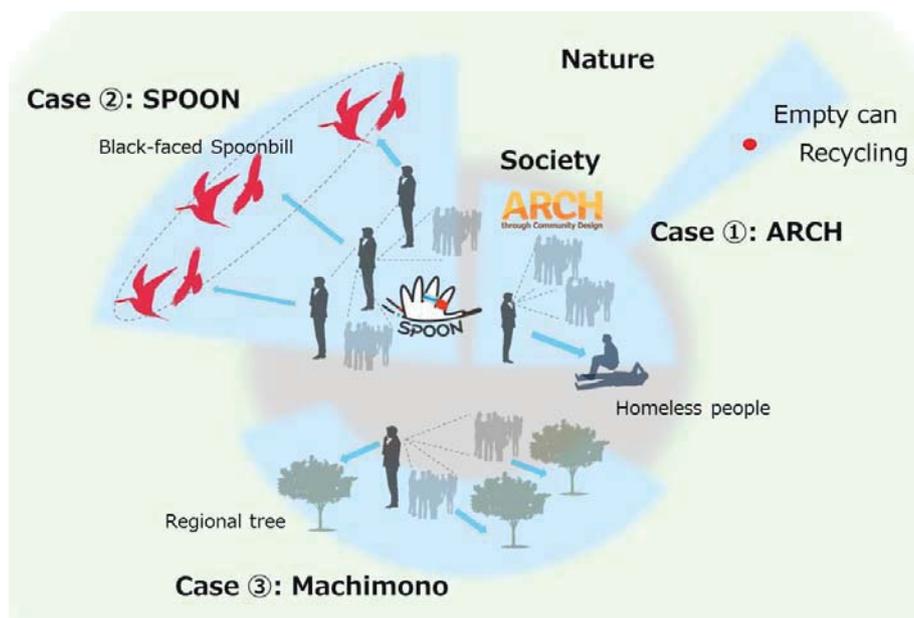


Figure 6. The interrelationship between society and nature through the activities

#### 4.3. Key Phrase 3; “Ecological democracy takes root, sprouts, and blooms here and there”

Thirdly, when we reviewed the epilogue of the book “Design for Ecological Democracy”, we found the key phrase number 3: “Ecological democracy takes root, sprouts, and blooms here and there”. Actually, it is a funny pronunciation in Japanese; “*Ecodemo* (ecological democracy), *kokodemo* (here), *asokodemo* (there)”. So, this phrase, especially, is easy to pronounce, repeat, and remained for Japanese, giving us the hope of developing our Foundation.

As we expected, most of the supporters seem to like this phrase. In particular, many practitioners were delighted when they realized that there are a lot of people who act vigorously with the same faith as them. It creates the atmosphere of hope and reinforces our optimism.

*4.4. Key Phrase 4: “Human beings equipped with democracy meet again ecology and obtain the 5 values of ecological democracy; liberty, equality, peace, compassion, and art”*

Lastly, just before the opening ceremony of the Foundation, we attained the key phrase 4: “Human beings equipped with democracy meet ecology again and obtain the 5 values of ecological democracy; liberty, equality, peace, compassion, and art”. Originally, human beings literally live in nature as part of ecosystems, and console and fear it. However, the arrival of modern society gradually enabled us to take off from it. We continued to develop the territory which prevents the rule of nature and created a modern society. At the same time, we have formed a government called democracy which gives us liberty, equality, and peace. Nowadays, confronting with global environmental issues, we started to realize the importance of nature. Equipped with democracy, the increasing number of people is a beginning for the return of nature which brings the value of compassion and art. So, in the end, there are 5 values in this term: liberty, equality, peace, compassion, and art.

Generally, the supporters’ reactions toward this phrase were divided into two categories. Some researchers were completely for the value of ecological democracy and the others had no interest in this phrase. Now we are discussing about the suitable expression which attracts Japanese with its followers to deepen the ecological democracy.

*4.5. Characteristics of ecological democracy in Japan*

Using several key phrases, we have discussed the idea, value and practice of ecological democracy with many Japanese researchers, practitioners, and citizens. As can be seen above, the reactions were diverse depending on the phrases. In the first and fourth phrase, we explained ecological democracy logically focusing on its mechanism and result. In fact, we tried to provide as many examples as possible and developed the theory based on the fact. However, our general impression is, Japanese have few interest in it. On the other hand, in the second and third phrase, we showed the future image of ecological democracy concerning its phenomena and future vision. At this time, we rarely mention their reason and provided several images instead. As a result, most of the supporters accepted the concept of the Ecological Democracy Foundation instinctively.

## **5. Discussion and Conclusion**

Since April 2016, we have spent seven months thinking practically about ecological democracy. Thinking practically means two things. The first is about in what way we could spread ecological democracy in Japan and make a city in which liberty, equality, peace, compassion, beauty and joy are blooming. The second is about by what kind of explanations Japanese people, especially those who support us, could understand

ecological democracy when they have never heard of it. An explanation of the idea that is easy for Japanese people to accept is vital for spreading ecological democracy in Japan.

In our effort to find a way of explaining the concept, it became clear for us that ecological democracy was a principle, value, method and practice at the same time. We consciously tried to explain ecological democracy from these four aspects and pursued a key phrase for each of them. Judging from the reactions to the key phrases, many Japanese people seemed to understand the logics of the principle and value of ecological democracy but were not ready to accept the idea. They showed scepticism to the new idea and reacted in a cautious manner. On the other hand, the method (key phrase 2) was welcomed. Many, if not most, commented that they were deeply convinced by the phrase despite the fact that it only described a phenomenon and did not explain logics behind. Also, the Japanese version of the third phrase “*Ecodemo, kokodemo, asokodemo*” received a warm welcome, perhaps thanks to its humour to some extent. People enjoyed it and saw hope in this encouraging idea that ecological democracy is already sprouting here and there. We need to respect and value these attitudes in order to realize ecological democracy in Japan. Brushing up the way of explanation will in turn contribute to the future implementation of our projects. In the projects we have already started (observation project and monitoring project), we are witnessing people learn the effectiveness of ecological democracy methods and start to understand its principle and value on the ground of their acceptance of the methods.

The journey of the Ecological Democracy Foundation has just started. We will keep working to spread ecological democracy in Japan and try to make a world where liberty, equality, peace, compassion, beauty and joy flourish. Can our ecological democracy rise up as a flock of small nightingales and change the world? We would appreciate your attention and support to our activities.

Also, we would like to learn ways of spreading ecological democracy in other parts of the world. Just like we have presented here our experience of the first seven months, we would like to exchange local wisdom and experiences with every one of you.

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## Rebuilding, Reconsidering and Rethinking through Resilient Bridgeport

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### Abstract

Communities face difficult choices as rising sea levels and increasing storm activity reshaping costal landscapes. The United States government held a design competition to generate real world answers. As described in the competition program, “Rebuild by Design is a new way to connect design, funding, and implementation strategies for a more resilient future, marshaling the talent of the world to answer a region’s greatest needs. Using an innovative process based on the design competition model, Rebuild by Design places local communities and civic leaders at the heart of a robust, interdisciplinary creative process to generate implementable solutions for a more resilient region.”

Lessons from Resilient Bridgeport, one of the funded solutions are described from the perspective one of many collaborators including Unabridged Architecture, Waggoner and Ball Architects, Arcadis, the Gulf Coast Community Design Studio, and the State of Connecticut involved in engaging the community through the competition, planning and pilot project concept selection. Unlike most design competitions, residents actively shape project proposals and implementation. Goals were set to build local capacity and assets. Similar to any real world large-scale development, options are constrained by rules, timelines, property ownership, budget, political interests and many other factors.

Challenges of conducting an engagement process that integrates constraints within community conversations and planning outcomes are discussed. Multiple strategies for individual input, group problem solving, documenting community input, and reflective processes are explored. The authors recommend ways that future competitions could enhance the efficacy of community participation through funding structures that allow incremental investments that build momentum and continuity of community engagement.

Key Words: Climate Change, Resilience, Participatory, Rebuilding by Design, Community Design, Bridgeport, Super Storm Sandy, Urban Planning,

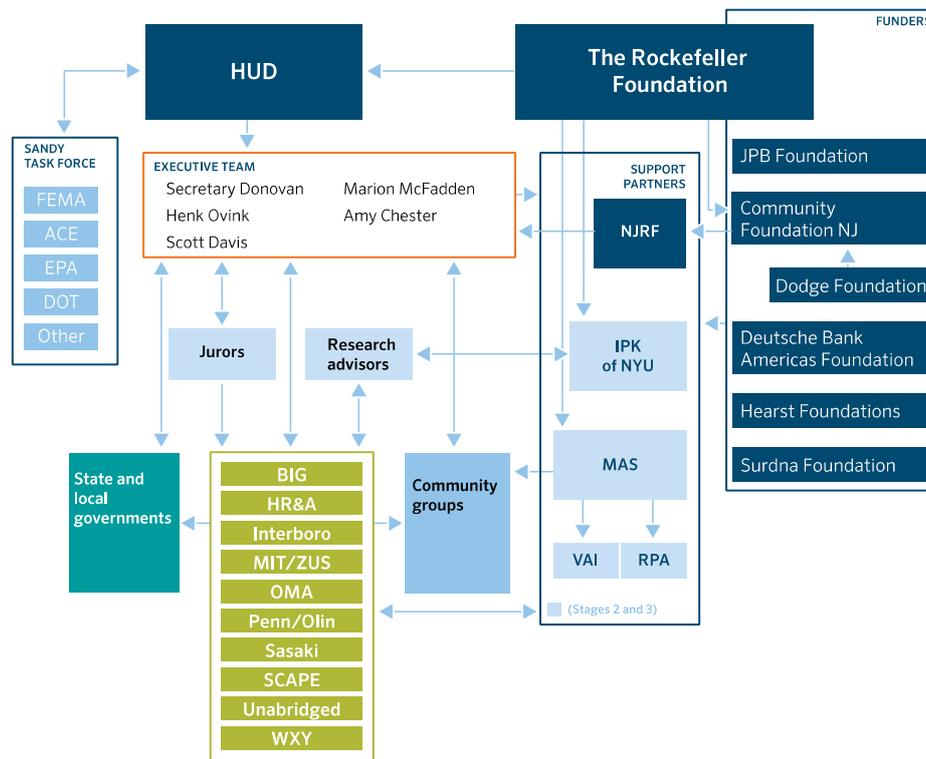
## **Introduction**

Rising seas and other impacts of climate change is increasing risk in many communities. Yet the prevailing methodology of responding to these threats in the United States remains primarily to provide property insurance using federally subsidized products. In the case of loss communities are often rebuilt substantially in their original form and in their original location with perhaps some modification to individual structures. Rebuild by Design is an initiative by the federal government and cooperating NGOs (non-governmental organizations) to explore alternative methodologies of preparing communities for increasing vulnerability. It employs two established yet differing and previously largely exclusive methodologies of securing and demonstrating innovative strategies for the design of more resilient settlements; these are the design competition and the participatory design process. This paper explores the benefits and challenges of combining these approaches and recommends strategies for future initiatives based on the ongoing experience of the Resilient Bridgeport project, included in Rebuild by Design.

## **Rebuild by Design Competition**

Rebuild by Design was launched in June 2013 as an initiative of the Hurricane Sandy Rebuilding Task Force and HUD (US Department of Housing and Urban Development) in collaboration with NGOs including the Institute for Public Knowledge at New York University, the Municipal Art Society of New York, the Regional Plan Association, and the Van Alen Institute. Philanthropic support was provided by a number of foundations led by the Rockefeller Foundation (Figure 1). The goal of the ongoing initiative Rebuild by Design is to assist regions plan for resiliency before disaster strikes. The organization connects communities and explores necessary policy and regulatory changes. In addition, it researches and shares best practices.

Figure 1. Rebuild by Design Organization Chart



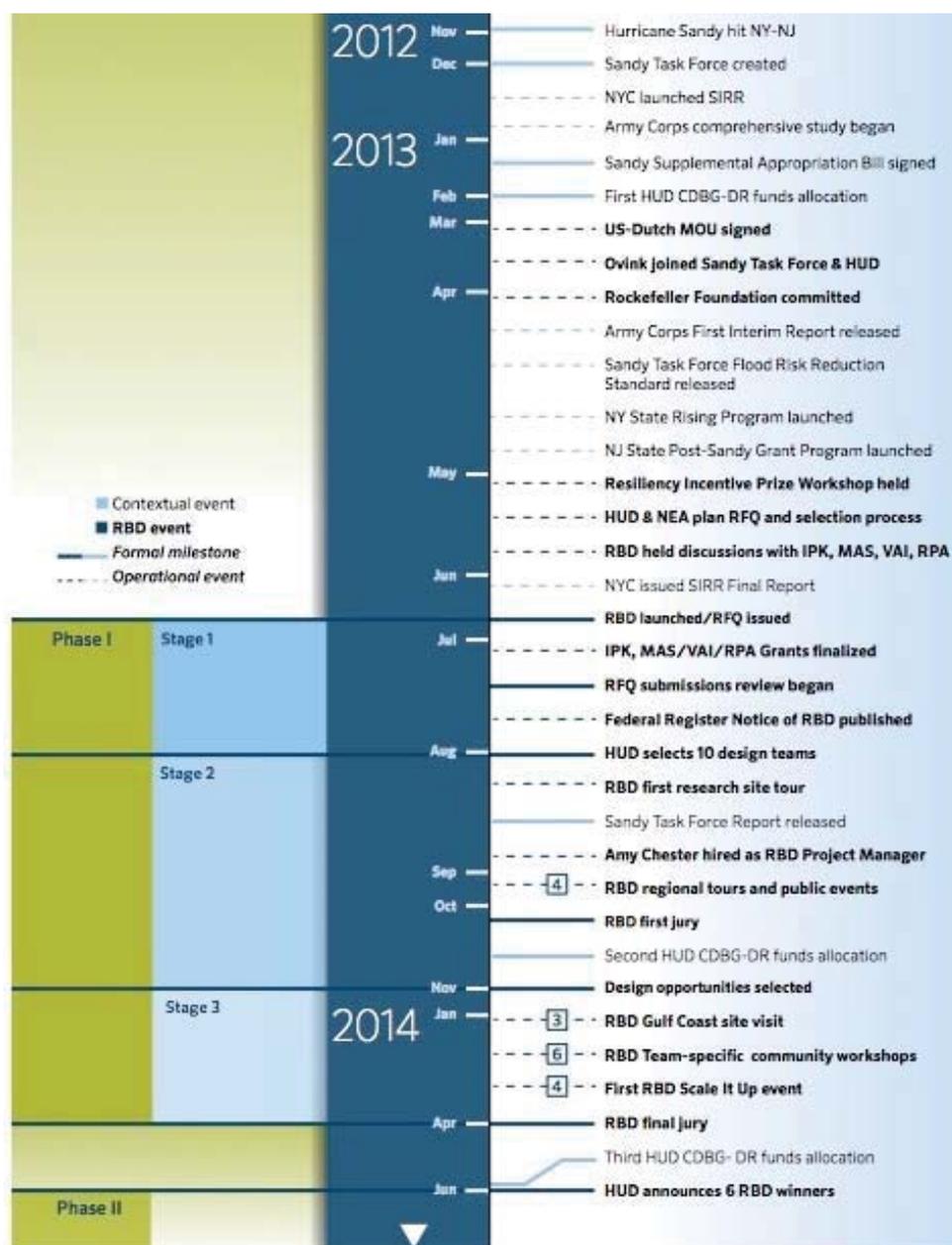
(The Rockefeller Foundation “Evaluation”)

Rebuild by Design began to inform rebuilding following Super Storm Sandy. It was envisioned as a methodology for securing innovative, implementable solutions to complex regional needs. “The Rebuild by Design competition was structured as a successive and connected set of stages, established to orient the design process around in-depth research, cross-sector, cross-professional collaboration, and iterative design development.” (Rebuild by Design, Website) The process is based on a collaborative yet competitive process with the goal of securing the best knowledge and talent. “Final proposals would be replicable, regional, and implementable.” (Rebuild by Design, Website) Activities included “research, design development, jurisdictional negotiations, media outreach and community engagement – a process that typically would take a minimum of two years.” ...“In sum, RBD’s vision was to i) innovate, ii) use design as the channel for innovation, iii) develop a competition that ensured talented designers would be enlisted with broad room to maneuver, and iv) alter the nature of competition with activities that required the design projects to be informed by science, desirable for recipient communities and tenable for implementation.” (The Rockefeller Foundation, “The Evaluation”) The Rockefeller Foundation, a major funder for Rebuild by Design, described the competition as demonstrating “innovative departures from traditional federal practice in the execution of the competition through its unique public-philanthropic

partnership.”

A jury of design, environment, disaster recovery and climate change experts, led by HUD Secretary Shaun Donovan, provided critical input at each of the analysis and design stages as well as selecting projects. Program partners provided technical assistance throughout the process. After evaluation of initial concepts proposed by 148 design teams from throughout the world, in August 2014, Rebuild by Design’s multi-stage regional design competition selected ten interdisciplinary teams as finalists for an eight month interactive design process. All stakeholder groups noted that the intensity of the compressed timeframe for the competition was taxing. (Figure 2) Despite the expedited timeframe and concern for long-term engagement, most community groups willingly participated in the project with an understanding of the possible positive outcome and benefits, particularly the opportunity to win substantial funding.

Figure 2. Post-Sandy and Rebuild by Design Timeline



(The Rockefeller Foundation)

The Research Stage was three months of collaborative, in-depth research (Figure 2). During this research stage, teams gained a better understanding of issues in areas such as housing, infrastructure, economy, public health, insurance, public service access, and ecology. The finalist teams synthesized their findings from tours of 41 neighborhoods, multi-day site visits, as well as meeting with residents, community organizations, business leaders, experts, and local government officials who shared experiences of Hurricane Sandy’s effects. Insights and perspective was gained for ongoing response and community priorities for long-term recovery. Rebuild by Design provided assistance to identify project problems and to match these with competition design solutions. “In playing the role of project developer, RBD also helped

coordinate local political outreach and required teams to engage local citizenry and community organizations. The level of resources and local government involvement differed markedly from other development endeavors.” (The Rockefeller Foundation, “The Evaluation”) With the help of the local government, teams uncovered complex intersections of the regions vulnerability and promising opportunities to improve resilience. At the end of this first stage, the teams unveiled and shared 41 concepts for design opportunities. One concept for each team was chosen to move forward to the next stage.

The Collaborative Design Stage took place over the next five months (Figure 2). The teams worked closely with community stakeholders to create final proposals to insure that projects were implementable and supported by the partner community. The Resilient Bridgeport engagement strategy was centered on individual and group meetings with stakeholders representing diverse segments of the community and in depth exploration of the needs of each segment as well as design workshops engaging regional and local stakeholders. Individual interviews took place with elected officials, primary property owners, environmental groups, community leaders and others. For example, meetings were held with new immigrants, students (Figure 3), public housing residents, homeowners, community developers and service providers. Sessions were designed to be fun and educational as well as to inform the competition entry. For example, a series of sessions with English language learners included deliberate introduction of vocabulary appropriate for each class’s level of proficiency and instruction on emergency preparedness as well as identification of community needs. The engagement process was also integrated with the contemporaneous development of the South End NRZ (Neighborhood Revitalization Zone) Plan. This reduced community planning fatigue and the potential hazards of planning toward competitive rather than community goals.

During this Collaborative Design Stage of the competition the team’s strategy was to collect, refine and illustrate concepts for reshaping Bridgeport in a way that was visually compelling, supportive of community goals and resilient. Funding from the collaborating funders allowed the team to build an outreach partnership with Bridgeport Neighborhood Trust, a local community development corporation, and provide refreshments and educational activities. The Van Alen Institute supported expanded outreach and development of a bike share program for youth. City staff members were active participants in activities. The process resulted in a proposal requested \$204,010,000 in funding and included comprehensive community development as well as strategies for mitigating both costal and upland flooding. Another outcome of the process was collaboration among previously estranged parties who recognized mutual interest in securing solutions and resources for Bridgeport.

Figure 3. Young Residents of Bridgeport join author and others on bike tour



The competition phase of the project culminated with the ten finalist teams presenting to the jury, following a public showcase of their visions at public exhibitions in New York and New Jersey. The team was supported by about 15 community participants that traveled to New York for the presentation. In June 2014, six winning projects were selected for recognition, these projects and one finalist, Resilient Bridgeport, were allocated a total of \$930 million in funding to begin implementation.

In 2015, funding in the amount of \$10,000,000 for Resilient Bridgeport was awarded to the State of Connecticut, which is responsible for implementation. Funds were designated for developing a plan to reduce flood risk and improve resilience for the South End and Black Rock Harbor areas of Bridgeport, and to “build a pilot project in the South End that serves as a catalyst for full implementation of broader flood protection and resilience strategies”...“Each grantee would have to incorporate its Rebuild by Design projects into a broader Disaster Recovery Plan, specifying its strategies for developing the proposals and plans for continuing to involve community stakeholders.” (Rebuild by Design, Website) Following the award the State selected technical services providers, which included some but not all of the original design team. Community engagement resumed in March of 2016; this was 21 months after the last community involvement.

This gap in activity resulted in a significant loss of momentum for many reasons. The first is there was no opportunity for participants to celebrate the award of funds. In addition, by the time activity resumed conditions and participants had changed and memories of the storm

event had faded. Many residents of public housing were relocated and the Mayor, who had been actively involved in development of the proposal, was defeated in a bitterly fought primary.

### **Competition Model for Discussion**

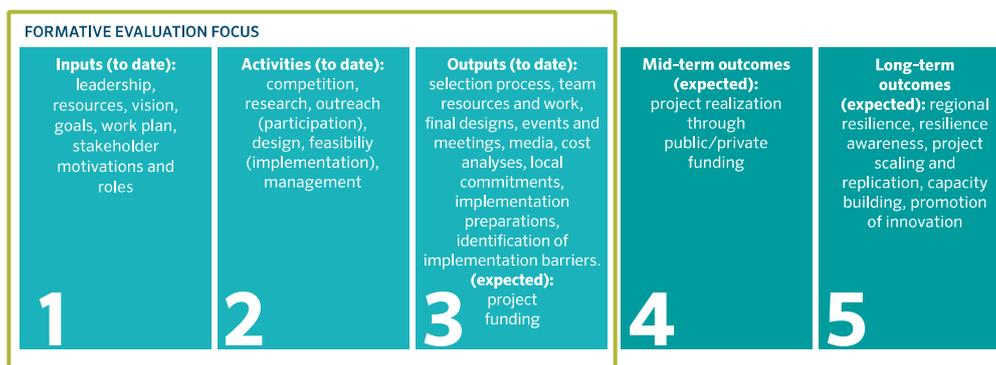
Design competitions have strengths and weaknesses, as do other methods of securing design services and project proposals such as conventional grant competitions. According to Royal Institute of British Architects (RIBA), design competitions “are a good thing when they are appropriate and well-run, and can generate the best design and give inspiration and valuable choice” to stakeholders. Design competitions often attract new, young, or unrecognized creative talent and new thinking; however, these ideas may not be grounded in local knowledge and preferences. In some cases, competitions may not get the best solutions as juries can judge on sole visuals rather than content or substance. (Nasar) “One study of forty Royal Institute of British Architects (RIBA) competitions found 37.5 percent were either abandoned or not built as planned. Out of sixty-eight competitions, approximately one in five failed. These figures point to costly failures for both sponsors and architects.” (Nasar, 26) RIBA suggests that “myths and realities about the use of competitions should be tackled openly to demonstrate that they are no more costly than other forms of procurement.” In addition, “although competition attracts publicity, publicity does not necessarily translate into a successful building.” (Nasar, 3)

Development and planning for competition entries are targeted to meet the criteria of the competition, which may or may not address the needs of the community or client. For example, competitions often lack interchange and interaction between the client and architect or end-users, which is crucial to the design process. The typical design competition’s lack of intense community involvement does not appropriately inform design proposals. In addition, the people who actually implement winning projects may not have the same vision or intention as the original competition entrants or grant writers. Due to this lack of continuity the end result may not reflect initial plans. Similarly, “priorities and obligations that state and local authorities face may compete with and impede the long-term attention needed for Rebuild by Design projects,” notes the Urban Institute.

Evaluations of the Rebuild by Design process identified specific benefits, opportunities for improvement and areas to be examined (Figure 4). The Urban Institute found that the Rebuild by Design Competition varied from typical competitions in several important ways. For example, it lacked of clear project prize. However, it did “demonstrate many of the best aspects

and improved upon traditional design competitions by introducing research, public engagement and practical implementation stages, often in collaboration across the teams – three key opportunities and one framework that are uncommon in traditional competitions”. (The Rockefeller Foundation, “The Evaluation”) However, “there are various aspects of the [Rebuild by Design] competition processes that can be improved to raise quality and ensure that competitions are appropriate and well-run.” (RIBA)

Figure 4. Evaluation Method by The Rockefeller Foundation and Urban Institute

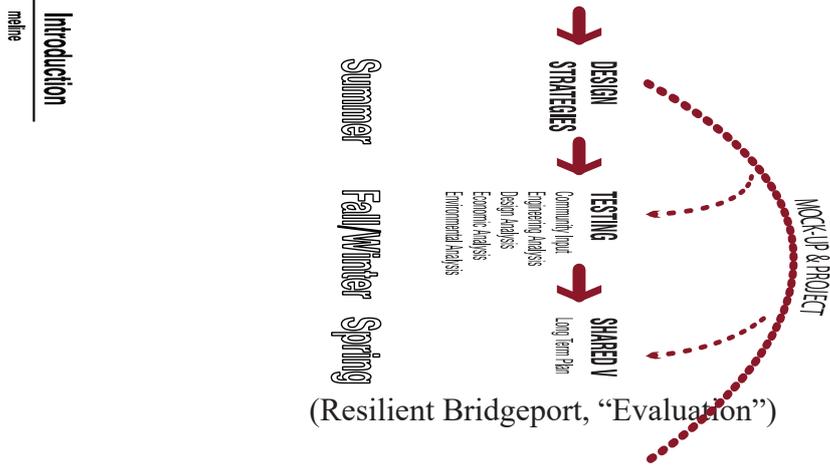


(The Rockefeller Foundation, “The Evaluation”)

Groups that support Rebuild by Design’s mission include local officials, community groups, and citizens that had self-interest in the projects development and success. “It has produced a tremendous volume of juried design analysis and plans whose values far exceed the resources that were made available. Evaluation found that Rebuild by Design brings hope and inspiration that communities and decision makers can collectively ‘build back better’ by responding in innovative and creative ways and working as a region to become more resilient.” (The Rockefeller Foundation, “Evaluation”)

The Rebuild by Design competition model could be adjusted based on findings. The Urban Institute suggests, “multiple variations on the theme of early open-endedness that could make the implementation transition easier are imaginable.” For example, timing of stages, preselecting sites, and team assignment. Management staff, clear plans and parameters can help reduce the project intensity while also providing opportunity to develop content. “Securing financial resources and anticipating or preventing local political challenges are both critical considerations for future replication of the model.” According to Henk Ovink, Principal of Rebuild by Design, “Through the experience of Rebuild by Design, we can never deliver this [resilience] ambition on our own. This new standard of innovative resilience is the only standard fit for the future - we owe it to our future generations to stick to the promise we made during this process” (Figure 5).

Figure 5. Resilient Bridgeport Design Process



## Bridgeport

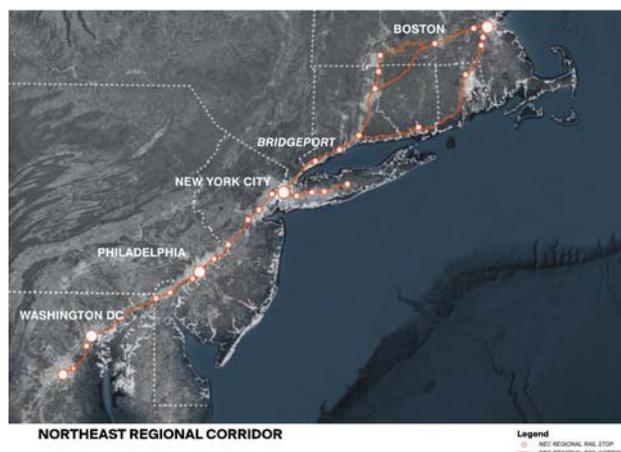
Located on the shore of the Long Island Sound (Figure 6), Bridgeport is the most populous city in the United States State of Connecticut, . It serves as the crossing point and transit hub within the Northeast Corridor between Boston and New York City (Figure 7). This post-industrial weak market city is challenged by poverty, high taxes, poorly performing schools and distrust among political and social groups. The Resilient Bridgeport target area is the greater South End Neighborhood, which was damaged by wind and flooding during Super Storm Sandy in 2012.

Bridgeport, Connecticut is located in Fairfield County one of the highest income counties in the United States with a 2015 median household income of \$82,283 in comparison to a median household income of \$41,050 in Bridgeport and \$27,203 for renters in Bridgeport according to data compiled by the Partnership for Strong Communities.

Figure 6. Geographic Location of Bridgeport, Connecticut, USA



Figure 7. Map of Northeast Corridor: I-95 and Rail

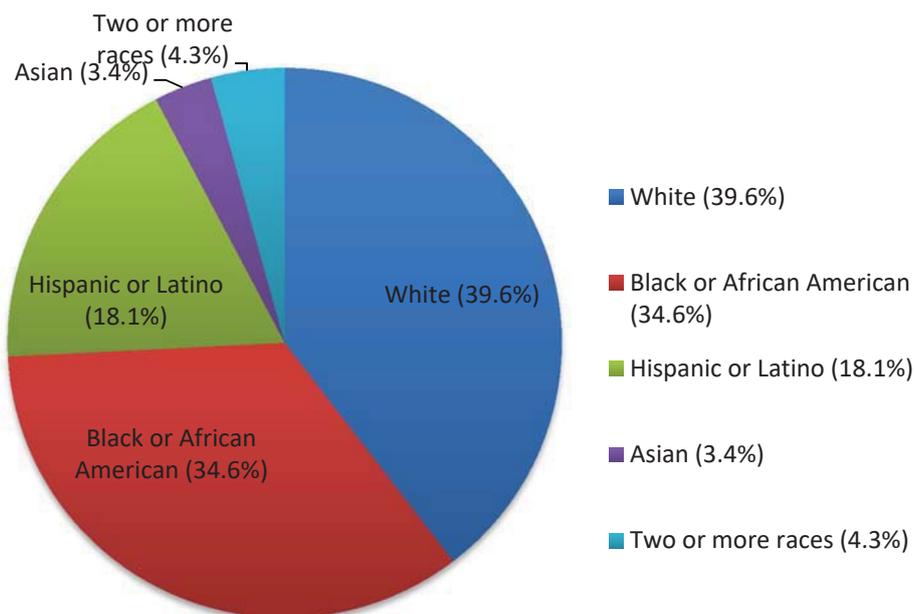


(Resilient Bridgeport, “Bridgeport Atlas”)

Once home to 500 factories, Bridgeport was a booming, wealthy manufacturing hub during much of the 19<sup>th</sup> and 20<sup>th</sup> centuries that played an important role in labor movements. It is known for its expansive park system and as the home of PT Barnum, circus founder and former mayor. Now largely abandoned by industry, Bridgeport struggles with problems of poverty and crime. “Families living in dilapidated housing are often exposed to lead-based paint, cockroaches, dust, dust mites, mold, and mildew and are more vulnerable to natural disasters.” (Unabridged et al)

As of 2010, the city’s population of 144,229 was 39.6% White, 34.6% Black or African American; 18.1% Hispanic or Latino, and 3.4% Asian, and 4.3% from two or more races (Figure 8). Over 70 languages are spoken in the city with a plethora of cuisines, religions, and cultures.

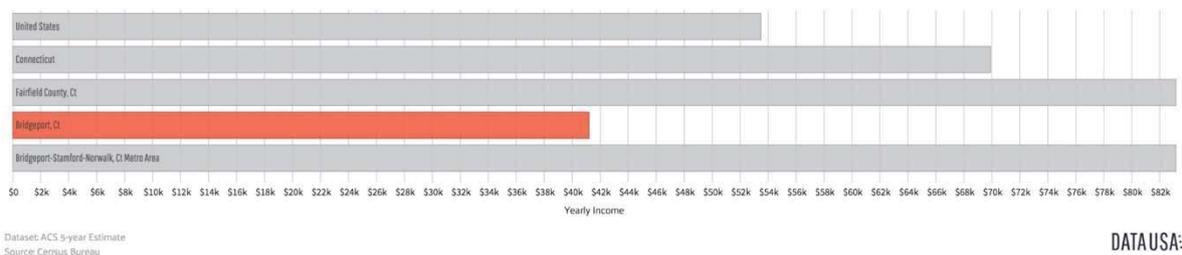
Figure 8. Bridgeport Population 2010



In Semuels' reporting for the Atlantic, she described Bridgeport: "Amid the middle-class homes, you'll see burned-out houses, empty factories, and abandoned buildings that line the main street. Nearby, in the wealthier part of the county, there are towns of mansions with leafy grounds, swimming pools, and big iron gates." Suburban development and housing attracted middle and upper class residents away from Bridgeport, leaving the city with low-income demographics. Although, loss of manufacturing jobs started much earlier, Semuels notes that "between 1990 and today, the number of manufacturing jobs in [Fairfield County] dropped by 60 percent."

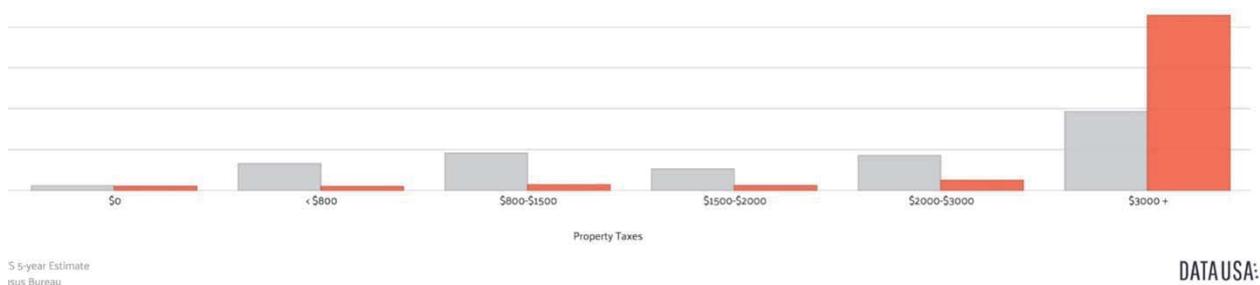
Resilience challenges in Bridgeport include rising sea level and coastal flooding, rainfall flooding from upland areas, social inequality, crime, violence, high unemployment, high-taxation, and pronounced poverty. Within the State of Connecticut, "Bridgeport is the poorest city and one of the ten poorest cities in the nation. The citywide poverty rate is almost 25%". (Unabridged et al) Taxes are high in Bridgeport, and the highest in Fairfield County (Figure 9, Figure 10). (Wikipedia) Semuels' article also notes the income and tax burdens of Bridgeport families making \$50,000 and \$75,000 a year. A family with \$50,000 household income has the "second-highest tax burden of any similarly-earning family in the largest city in each state, at 13.5", while a "Bridgeport family making \$75,000 a year faces the highest tax burden nationwide, at 15.8 percent". In July 2016, property taxes were raised by 29 percent. Hussey of The New York Times reports it as "the highest one-year property tax rate increase any community in the nation has imposed in recent years". This increase forced some homeowners to resort to putting their homes up for sale, however, there may not be buyers to takeover high tax rates. (Lockhart)

Figure 9. Bridgeport, CT, USA Median Household Income 2014



(Data USA)

Figure 10. Bridgeport, CT, USA vs. United States Property Taxes 2014



(Data USA)

The target area (Figure 11) “is a place with both spectacular resources and extreme challenges”. (Unabridged et al) The population of the South End is composed of over 8,000 people: students, public housing residents, and other vulnerable populations. It is one of the most geographically vulnerable parts of Bridgeport. “The low peninsula is exposed to storm surge and at increasing risk due to sea level.” Flooding in the lower elevation areas of the neighborhood is frequent. The impact of Super Storm Sandy is an example (Figure 12).

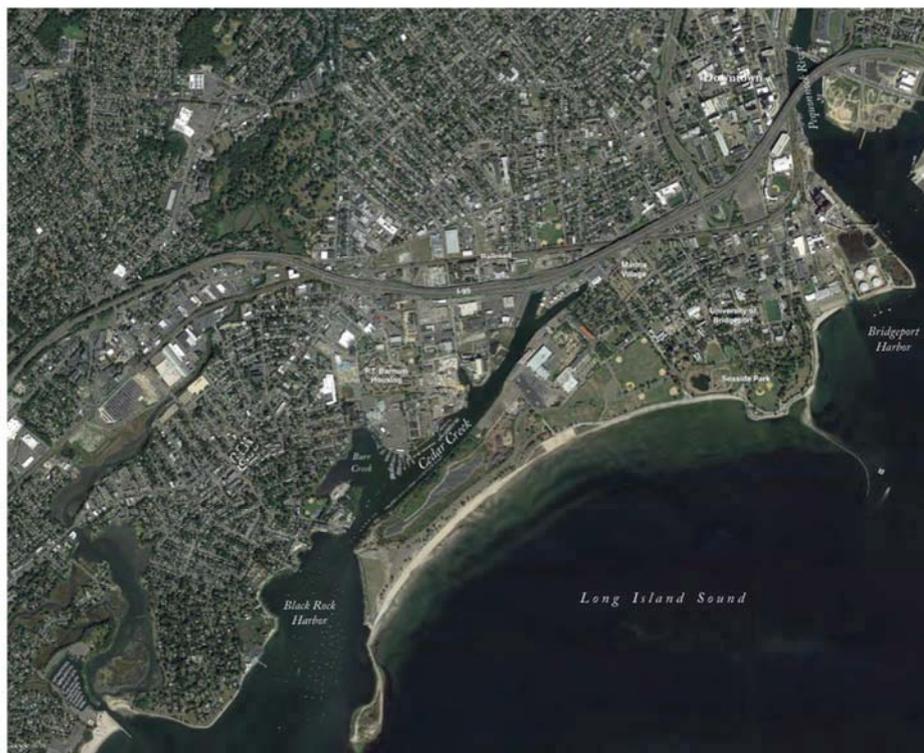
Figure 11. Bridgeport, CT, USA Aerial Image

**Aerial Image**

A view from above shows the complex interplay of land and water by Bridgeport's coast. Highway and rail lines are intertwined in the northern portion of the study area, while waterways reshaped by urbanization flow south from upland areas towards Long Island Sound. Seaside Park is a wide green buffer between the Sound and city.

Visible, too, are a wide variety of land uses, amenities, institutions, and building types throughout the study area. These include boating facilities and industries along Cedar Creek, athletic fields and open parkland throughout Seaside Park, University of Bridgeport's seaside campus, extensive energy production and transmission facilities, and housing ranging from wood-frame single-family houses and brick townhomes to modern multi-story apartment buildings.

Source: 1. Google Earth



(Resilient Bridgeport, “Bridgeport Atlas”)

Figure 12. Bridgeport Flood Levels



(Unabridged et al)

The neighborhood has many historic buildings, districts, and Seaside Park that have national significance as recognized by the US Department of Parks and Historic Preservation. Historic

homes include grand mansions, tiny cottages, and the Freeman Homes. Centrally located, the South End is a short walk to downtown Bridgeport, the Amtrak rail station, a YMCA, a beach, and universities. However, the South End also includes crumbling buildings, vacant lots, and public housing in the process of demolition. “The community also sends students to the State’s worst performing schools and is part of a locally defined target area for comprehensive neighborhood transformation that has a poverty rate over 50%, an unemployment rate over 35%, a vacancy rate in residential properties of over 50%, and a concentration of crime.” (Unabridged et al) A shared vision of neighborhood redevelopment that emerged from community discussions is to preserve the neighborhood assets, prepare for additional investment and to make infrastructure investments visible and beautiful.

## Engagement

In planning for any real world, large-scale development, the options are constrained by program rules, technical requirements, timelines, property ownership, budget and many other factors. Integrating these constraints within community conversations is impacted by the hazards of planning for uncommitted resources, planning fatigue, and lack of trust. Resilience planning includes the challenges of predicting future conditions and understanding meaningful measures of risk. Constraints specific to Resilient Bridgeport included a simultaneous waterfront planning process, relocation of the majority of Marina Village public housing residents, a change in the city regime, HUD requirements for replacing the Housing Authority Board of Directors, gaps in the community process due to administration requirements of public resources, and the award of funds in an amount insufficient to protect the target area to desired local standards. Outreach for Resilient Bridgeport was designed to follow the design process in tandem with the design team and provide maximum opportunity for individuals to be heard in environments that feel safe and welcoming.

Bridgeport community stakeholders include: residents of public housing, owner-occupants of property with decreasing value, a university, students, a power plant, a community development corporation and industrial operations. Outreach was based in established practices. Rebuild by Design identified five themes in recommendations for effective collaboration: timing collaboration, deep cooperation, accessible engagement, building capacity, and evaluation engagement. (Rebuild by Design, “Elements of Effective Engagement: Strategies”) Ultimately a project’s engagement success is gauged by the degree of collaboration defined by its process and the construction solutions that address “big-picture community issues such as poverty, public health, or inequality”. (Rebuild by Design, “Elements of Effective Engagement: Strategies”) “Communities judge government’s success

in part by how flexibility and inclusively it provided multiple points of engagement for stakeholders.” (OECD) According to Butterfield, senior management consultant advisor at Management Partners, “an important first step in the engagement process is to ensure that stakeholders have the same goal in mind. Public engagement after a catastrophe builds hope, trust, and confidence in government, relationships, new leaders, and opportunities to improve long-standing community challenges. To capture these benefits, public engagement must be both deliberate and strategic.” “An inclusive planning process is critical for waterfront and coastal communities because of the complex regulatory environment, the diversity of stakeholders, the demand for public access to the water, and the competing interests for use of waterfront resources.” (Smart Growth)

For Resilient Bridgeport, community engagement was initiated through a series of open houses, workshops, design workshops, walking tours (Figure 13) and participation in established community events. Each fostered a co-productive relationship between experts and the community. Meeting locations were easily accessible and located in communal environments, such as community centers and the university student center. (Figure 14) Resilient Bridgeport transformed a vacant storefront into a highly visible and accessible space for planning and engagement.

There was purposeful outreach to a diverse array of participants in order to harness their expertise and experiences. This included building an emailing list, flyers, posters, word of mouth and social media. Through continuing interchange, the development team gained valuable insight and input throughout the project cycle. Stakeholders became fluent in design options, technical information, regulatory requirements, budget, existing conditions, and predictions for sea level rise.

Figure 13. Walking Tour Route

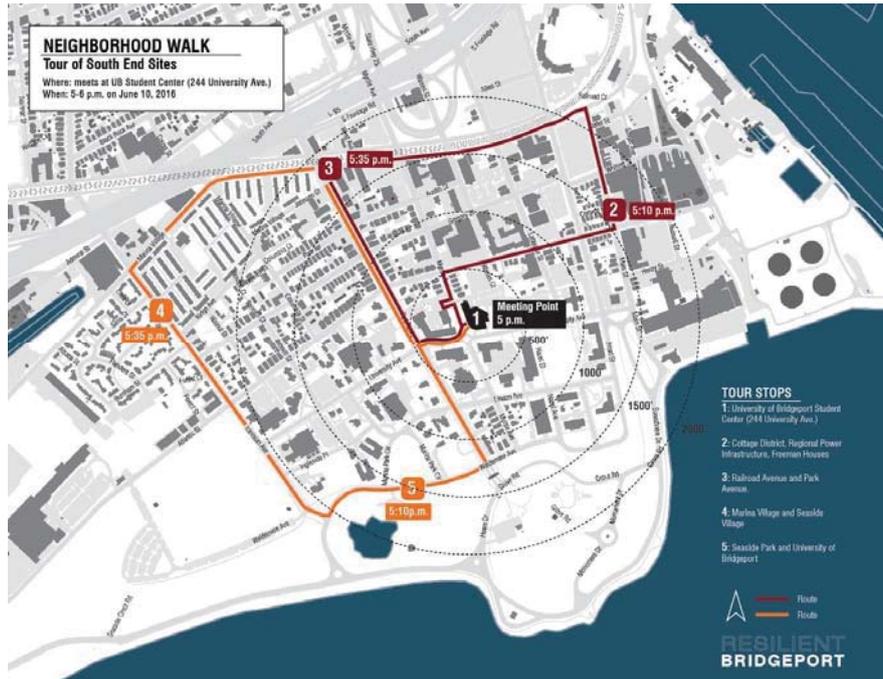


Figure 14. Meeting Poster: Announcement & Location

Multiple strategies for individual input as well as group problem solving were employed.

Each activity was analyzed and applied to a reflective design process, which included community leaders. (Figure 15) Stakeholder communication during workshops included neighborhood friendly strategies for communicating changing water levels, uncertainty, and the scale of infrastructure interventions. Workshop communication strategy included developing a shared vocabulary, use of helium balloons to demonstrate heights, and visual preference exercises. Each of these processes impact: 1) planning outcomes 2) efficacy of individual engagements and 3) the arc of project participation.

Figure 15. Community Engagement: Design Workshop



*Particularly successful strategies include the following:*

Neighborhood walking (and bike) tours: Tours were conducted in order to provide shared experiences and understanding of the neighborhoods. Attendees are able to openly share and express opinions, preferences, and experiences with tangible locations. Walking tours (Figure 16) allows for and supports further development dialogue and common vocabulary regarding the project sites. Residents and stakeholders now have shared tangible references and visuals, such as the flood marks and residue lines left behind from hurricanes, historic building identification, and specific street intersections.

Figure 16. Community Engagement: Walking Tour



Helium balloon height demonstration: The Resilient Bridgeport team used helium balloons (Figure 14) to demonstrate water level and height. This visual aid helped participants engage in the discussion through a mutual understanding and reference point that clearly illustrated projected flood and surge levels as well as necessary extents of infrastructure.

Figure 17. Community Workshop: Helium Balloon Height Demonstration



Models: Workshop attendees were presented with a scaled model of the neighborhood with exaggerated topography (Figure 15). Color pins were used to mark strategic site locations. Participants were asked to further contribute with additional color pins to mark their own home or business, and important landmarks. Yarn was then utilized to illustrate alternative strategies for barriers and water flow. This hands-on methodology helped residents get a feel for water flow and actively participate in brainstorming strategies.

Figure 18. Community Workshop: Scaled Models & Topography



Reporting Back: Each meeting was followed by a detailed report of community participation accompanied by photographs. This was key to participants feeling heard, making sure the entire design team received the full benefit of feedback and allows those who missed meetings to keep in touch with progress.

Figure 19: Examples of major Event Reports



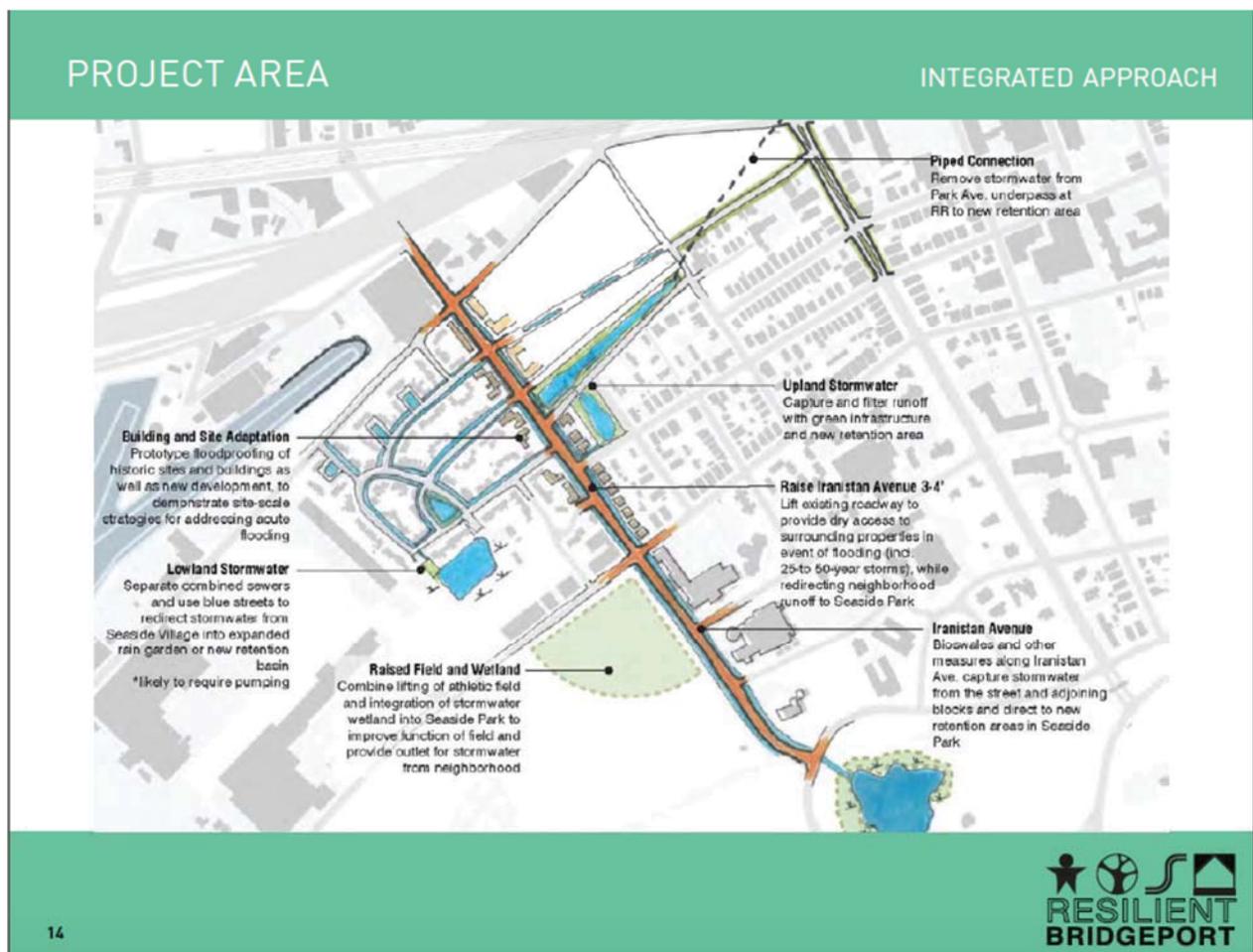
## Resilient Bridgeport Proposal

The goal of Resilient Bridgeport established with community participation is a “development plan that uses the land efficiently and wisely, upholds public rights of access, and protects the community’s interest in a precious natural resource.” Involving stakeholders from the outset of the development process can “help create a shared vision for the future”. (Smart Growth) To meet this goal Resilient Bridgeport is preparing a comprehensive and integrative plan for resilience that will serve as a prototype for the region’s coastal cities. It consists of a

resilience framework and implementation of a model project. The project focuses on how to protect Bridgeport against climate change, flooding caused by storm surge and rainfall, along with stimulating environmental restoration, economic development, and neighborhood revitalization.

The plan includes protecting the South End neighborhood, the University of Bridgeport, and historic resources, while better connecting these assets to downtown. The resilience framework applied is a set of integrated coastal, urban, and riparian design strategies and planning principles. This framework takes into account short-term and long-term trends, and provides an approach to infrastructure planning and risk management. The Resilient Bridgeport plan and design proposals are place-specific solutions: green streets in upland areas, wetland park buffers in coastal areas, safety services in times of storm, and a transition to thriving with water. Solutions include elevating streets, building a waterfront berm, and establishing rain gardens and other onsite water storage. (Figure 20)

Figure 20. Resilient Bridgeport: Integrated Approach



“Each proposal demonstrates three key principles of the resilience framework. First: integrated lines of resilience are critical to inhabiting the coast, with site and district level measures complementing engineered solutions and natural buffers. Second: the city’s coastal and riparian edges are productive places of exchange, and the restoration of these zones can be the basis for a revived regional ecology and economy. Third: Bridgeport’s identity is founded upon the relationship of its people and industries to its watercourses, estuaries, and beaches. Reclaiming this identity and redefining what it means to live at the water’s edge are critical to the city’s safety and long-term prospects.” (Unabridged et al)

## **Findings & Recommendations**

Resilient Bridgeport and Building by Design provide important models for advancing both resiliency and community engagement. Each project and community requires different strategies for successful engagement. However, as we work on Resilient Bridgeport we have learned the following:

- 1) Build on existing assets – The partnership built with the Bridgeport Neighborhood Trust with support from the Rebuild by Design partners, the South End NRZ, elected and individual community members are key to the process and building long-term capacity for addressing resiliency. Each interaction with other organizations working on their project embeds resiliency within the community.
- 2) Local, quick and regular – Stakeholders prefer short meetings close to home. This limits the scope of a given meeting and leads to some meetings being repeated at multiple locations to capture various segments of the community. Gaps between meetings can lead to a loss of momentum.
- 3) Hands on and interactive – Informal hands on interactive activities are preferred to classroom type presentations. This requires additional staffing and attention to gathering and consolidating feedback. Different people and groups respond to different techniques, so it is important to offer various options.
- 4) Record and Communicate – It is difficult to take in all of the community feedback in real time. This becomes more difficult as the robustness of discussion and opportunities for small group interaction increase. Designated photographers and note takers are critical. Opportunities for various forms of input including small group discussions, written surveys and large group meetings are important to collecting input from all participants.

Reports serve the needs of both the design team and participants. Including photographs is important for connecting participants.

The primary challenge of successful engagement in a planning process such as that for Resilient Bridgeport is the amount of time, almost five years, which will pass between the first community meetings and the completion of construction. The early and frequent victories necessary to maintain momentum in community development are absent from this process. It is difficult to ask people faced with immediate life challenges to take a look far into the future and disconnect planning for future conditions from current issues requiring more timely responses. Coordinating with other ongoing activities addresses this challenge in part. However, future initiatives would be much more rewarding if projects could be more deeply rooted in providing more immediate tangible opportunities.

As the proven process of using competitions in collaboration with community engagement is refined, a stream of incremental funding should be established to make periodic small investments in both the physical and social structures that contribute to resiliency. Rebuild by Design modeled this through funding partners who provide small amounts of funding for community activities. In Bridgeport, part of this funding allowed the creation of a bike share program that helped introduce young people to the community waterways and shorelines.

An *Early and Frequent Victories* funding stream would provide small grants for education projects, art installations, experimental homes, or growing plant materials for future rain gardens. This incremental approach would build community efficacy and engagement as well as provide matching funds for other investments in the community. Additionally, this structure would provide more immediate rewards to community participants, allow testing of design strategies, and reduce the potential hazard of waiting until the competition project is funded, designed or built to advance other important community objectives.

Figure 21. Community Partners and Engagement



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## A Study about Overview of ‘Children’s Restaurant’ in Kanto Area

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### Abstract

Recent years, ‘Children’s Restaurant’ has spread in Japan. This research finds out the characteristic of ‘Restaurant’ in Kanto area. It was the space for dining for children who cannot have three meals in a day. This survey analyzes ‘Restaurant’ in Kanto area from 3 main perspectives, meaning, opening schedule, opening hours, and participation fee. ‘Children’s restaurant’ is not organized regularly in Kanto Area. So it is a special place for people. And some restaurants charge participation fee to children. Therefore all ‘Children’s restaurant’ can not solve poverty of children directly. Rather some restaurants are open for adults as well as children. As a result ‘Children’s restaurant’ provides a place for adults and children to interact through ‘co-eating’ in the local community.

Keywords: Children’s restaurant, Poverty of children, Co-eating

### Introduction

“Figure 1” is a homepage of ‘Children’s restaurant’. It’s written like this in this homepage (Figure 1).

*“I’m alone tonight meal.”*

*“I often buy a packed meal when my mother is busy by her job.”*

*“Children’s Restaurant is that they can come when children is in such a situation. Even if the child is alone”*

*“Everyone that neighbor people is waiting you while cooking a hot meal of highly nourishing for you”*

*“This network has an aim to connect people that want to go or help this place.”*

“Figure 2” is a page for helper of ‘Children’s restaurant’. It’s written like this in this page (Figure 2)

*“We often have received a mail like “What can I help about your activity?” and “Can I send some food?”. If you can help these “Restaurants”, could you search for five*

marks in the “Restaurant”. The marks means that “Mark1: We need rice”, “Mark2: We need meat and fish”, “Mark3: We need donation”, “Mark4: We need vegetable” and “Mark5: We need Volunteer staff” ”.



Figure 1. Homepage of “Children’s Restaurant”



Figure 2. For helper of “Children’s Restaurant”

This network has an aim to interaction for promoter of the restaurants, too. So this information always has been updated by association of children's restaurant network<sup>1)</sup>.

This research finds out the characteristic of 'Children's Restaurant' in Kanto area. 'Children's restaurant' started in a vegetable store in Tokyo in 2012. It was the space for dining for children who cannot have three meals in a day. It has spread to Yokohama city, Osaka prefecture, Shiga prefecture, and Kyushu area in addition to Tokyo. The founder defines 'Children's Restaurant' as "any situation where a local housewife is able to gather three children within the community and provide meals for them." These restaurants are managed by volunteers from the local community. It is also supported by Foodbank which supplies ingredients to them. This survey analyzes 'Children's restaurant' in Kanto area from 3 main perspectives, meaning, opening schedule, opening hours, and participation fee.

## Results

There are eighteen 'Children's restaurant' in Kanto area (Table1). Fifteen of them are in Tokyo area. The others are Chiba prefecture, Saitama prefecture and Kanagawa.

Table1. Place

	Name	Place
1	Shita-Town Children's restaurant SAKURA	Taito area, Tokyo
2	Everyone's place * See you tomorrow	Koganei city, Tokyo
3	Mitakayama Children's restaurant	Mitaka city, Tokyo
4	Nerima Children's restaurant	Nerima area, Tokyo
5	Radish Children's restaurant	Nerima area, Tokyo
6	West-Tokyo WAIWAI Cooking	West-Tokyo city, Tokyo
7	Kaname-Town ASAYAKE Children's restaurant	Toyoshima area, Tokyo
8	Ikebukuro Children's restaurant	Toyoshima area, Tokyo
9	Shiina-Town Children's restaurant	Toyoshima area, Tokyo
10	Setagaya Children's restaurant MITTO	Setagaya area, Tokyo
11	Zonmyoji Children's restaurant	Setagaya area, Tokyo
12	WAIWAI Children's restaurant	Suginami area, Tokyo
13	Caprice Greengrocer DANDAN Children's restaurant	Ota area, Tokyo
14	Regional living plus one welcome home meal	Itabashi area, Tokyo
15	Children's village:calm station for Junior and senior high school students	Arakawa area, Tokyo
16	Ichikawa Children's restaurant	Ichikawa city, Chiba
17	Saitama Children's restaurant	Saitama city, Saitama

18	Komaoka top of the hill Children's restaurant	Yokohama city, Kanagawa
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### i) Opening schedule

Three restaurants are held once a week. Seven restaurants are held twice a month. There are eight restaurants which are open once a month. There is one restaurant which is open only during a long holiday (Table 2).

Table2. Date

	Name	Date	Once a week	Twice a month	Once a month	Other
1	Shita-Town Children's restaurant SAKURA	Fourth Thursday			○	
2	Everyone's place * See you tomorrow	Third Wednesday			○	
3	Mitakayama Children's restaurant	Second Saturday			○	
4	Nerima Children's restaurant	Twice a month on Monday		○		
5	Radish Children's restaurant	First and third Monday		○		
6	West-Tokyo WAIWAI Cooking	Third Saturday			○	
7	Kaname-Town ASAYAKE Children's restaurant	First and third Wednesday		○		
8	Ikebukuro Children's restaurant	First and third Thursday		○		
9	Shiina-Town Children's restaurant	Second and third Thursday		○		
10	Setagaya Children's restaurant MITTO	Second and third Thursday		○		
11	Zonmyoji Children's restaurant	Third or fourth Wednesday			○	

12	WAIWAI restaurant	Children's	Break of school				○
13	Caprice DANDAN restaurant	Greengrocer Children's	Every Thursday	○			
14	Regional living plus one welcome home meal		Every Friday and fourth Tuesday	○		○	
15	Children's village: calm station for Junior and senior high school students		Every Thursday	○			
16	Ichikawa Children's restaurant		First or fourth Friday			○	
17	Saitama Children's restaurant		Once a month			○	
18	Komaoka top of the hill Children's restaurant		First and third Thursday		○		

## ii) Opening hours

Twelve restaurants are open from 5 p.m. to 8 p.m.. In the other area, some are open during the lunchtime. Others are open throughout the day (Table3).

Table3. Opening hours

Name		Opening hours		Day time	Dinner time
1	Shita-Town Children's restaurant SAKURA	18 : 00—20 : 00 (19 : 30Final acceptance)	2hours		○
2	Everyone's place * See you tomorrow	18 : 30—20 : 30	2hours		○
3	Mitakayama Children's restaurant	17 : 00—20 : 00	3hours		○
4	Nerima Children's restaurant	18 : 00—20 : 00	2hours		○
5	Radish Children's restaurant	17 : 30—20 : 00 (If it has reservation, the time will change.)	2.5hours		○
6	West-Tokyo WAIWAI	11 : 00—14:00	3hours	○	

	Cooking				
7	Kaname-Town ASAYAKE Children's restaurant	17 : 30—19 : 00	1.5hours		○
8	Ikebukuro Children's restaurant	17 : 30—20 : 00	2.5hours		○
9	Shiina-Town Children's restaurant	18 : 00—19 : 30	1.5hours		○
10	Setagaya Children's restaurant MITTO	15 : 00—20 : 00	5hours	○	○
11	Zonmyoji Children's restaurant	17 : 00—19 : 00	2hours		○
12	WAIWAI Children's restaurant	Unknown			
13	Caprice Greengrocer DANDAN Children's restaurant	17 : 00—20 : 00	3hours		○
14	Regional living plus one welcome home meal	17 : 00—	Unkno wn		○
15	Children's village:calm station for Junior and senior high school students	17 : 00—20 : 45	3.75ho urs		○
16	Ichikawa Children's restaurant	Unknown			
17	Saitama Children's restaurant	Unknown			
18	Komaoka top of the hill Children's restaurant	7 : 30—19 : 30	12hour s	○	○

### iii) Participation fee

With regards to participation fee, there are six restaurants which offer free meal to children (Table 4). In the other twelve restaurants, the fee is ranging from 300 to 500 Yen. Participation fee for adults are ranging from 300 to 500 yen in all the restaurants.

Table4. Participation fee

	Name	Children	Adult
1	Shita-Town Children's restaurant SAKURA	¥100	¥300
2	Everyone's place * See you tomorrow	Free	¥300
3	Mitakayama Children's restaurant	Free	¥300
4	Nerima Children's restaurant	Free	¥300

5	Radish Children's restaurant	Free(until high school student)	¥300
6	West-Tokyo WAIWAI Cooking	Free	¥300
7	Kaname-Town ASAYAKE Children's restaurant	¥300	
8	Ikebukuro Children's restaurant	Unknown	
9	Shiina-Town Children's restaurant	Unknown	
10	Setagaya Children's restaurant MITTO	Free	¥300
11	Zonmyoji Children's restaurant	¥ 100-200	¥300
12	WAIWAI Children's restaurant	¥300	¥500
13	Caprice Greengrocer DANDAN Children's restaurant	¥100	¥500
14	Regional living plus one welcome home meal	Primary school ¥300 /Junior high school student ¥400 /Parents ¥600 (Free until junior high school student only fourth Tuesday)	
15	Children's village:calm station for Junior and senior high school students	¥100	¥200
16	Ichikawa Children's restaurant	¥100	¥300
17	Saitama Children's restaurant	¥100	¥500
18	Komaoka top of the hill Children's restaurant	¥200(until 18age)	¥300

## Conclusions

‘Children’s restaurant’ is not organized regularly in Kanto Area. So it turns out that ‘Children’s Restaurant’ is not a place for daily use but an extraordinary place. Additionally, it is not free in all the restaurants. Some restaurants charge participation fee to children. Therefore it would be an exaggeration to say that ‘Children’s restaurant’ can solve poverty of children directly. Some restaurants are open for adults as well as children. Therefore, it can be concluded that ‘Children’s restaurant’ provides more than just food in needs, also provides a place for adults and children to interact through ‘co-eating’ in the local community.

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# Revitalization with Regional Management Including Vegetation Planning in Ikuta, Awaji City

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## Abstract

The Ikuta District, which is on Awaji Island, is beautiful farmland. Like other areas of Awaji Island, however, aging and population decline are progressing. We aimed to activate this area by investigating the region and experiencing farming with its residents. As a result, we identified some issues that needed to be solved. We made some proposals and conducted some practical projects. We also made a booklet to introduce routine life in the farmland. This allowed the residents to reexamine various aspects of their lifestyles. In this booklet, we introduce beautiful terraced rice fields and walking paths. This introduction was intended to encourage people to develop stronger feelings of attachment to the areas covered. After all, the residents accepted these efforts with joy. We also made landscape plans for cafés that utilize local soba and fireflies. We were able to contribute to revitalizing this aging community through interaction among the residents and students.

Keywords: Awaji Island, Terrace rice field, Farming,  
Booklet,

## Introduction

Revitalization is a big issue on Awaji Island, where my office is at a branch of the University of Hyogo. The local communities are traditional farm villages that are within the boundaries of Awaji City, which is located in the north of the island. This village area where depopulation and aging are advancing is called the “interior” of the island, but it is also a near Kobe, which is a large city that can be reached by car in less than one hour.



Figure 1 The location of Awaji Island

First among the great attractions of Awaji Island is the abundance of food from the sea, the mountains, and the farms. In addition, people can enjoy many activities in every season, like swimming in the sea in summer and appreciating the scenery of the mountain villages. The main industries are farming, fishing and tourism, and there are few large companies, many residents work off of the island. Hopes for the future include the growth of industry and promotion of tourism on the whole island, as well as establishing the identity of the region.

Looking at every area of the island, Awaji City, which is on the northern part of Awaji Island, has many mountain villages on steep slopes and a good fishing industry. There are also many farming and fishing villages that have terraced rice paddies. In 2015, the population of Awaji City was 43,925. Sumoto City, which is in the center of the island surrounds by farmland, had 44,271 residents in 2015. Like elsewhere, its population also continues to decline. Minami Awaji City, with a population of 46,948, has many flat farming areas and some seashores with cliffs and mountain views.

The Ikuta district, which I will focus on in this paper, is in the southern part of Awaji City. The proportion of people who are over 65 in this city is much higher than the average for Japan. In just the Ikuta district, which is a typical farming area on Awaji Island, the proportion of people over 65 is almost 40%. Many people work as farmers on a daily basis.

## **Purpose**

First of all, it can be said for all Awaji Island, that facilities and projects that promote tourism, facilities and events for residents to enjoy themselves and things that appeal to the generation of children who left the island are desired. Various things are being tried in many places. In this report, I will introduce a project in the Ikuta district in which core members of the area have tried energetically to fulfill these three purposes.

In these villages, the local community has invested together in and runs a soba café that uses noodles produced in the area. Our university program was involved in renewal plans for the area surrounding this café, proposals for café products and publishing small booklets with information about the beautiful terrace field scenery, historic areas and daily life in farm villages.

## **Method**

We tried to experience farming with the local people at first (Figures 2-5). Then, we conducted some interviews and surveys of the historical and cultural monuments in the district. We also interviewed residents about the routine work of farming.

As a result, we proposed landscape plans for the renewal of the soba and firefly cafés. We made presentations about these plans as well as about how we evaluated the beautiful rice paddy terraces and the routine life of the farmers. Finally, we offered our plans and made a booklet that introduces the Ikuta



Figure 2-5 Having farming experiences with the local people

District and shows the valuable landscape and lifestyles of the terraces.

We tried to have the experiences for farming with the local people at first(Figure 2-5). And then we had some hearings and surveys for the historical and cultural monuments in the district as well as having interviews to the residents about the routine work for the farming.

As a result we proposed the landscape plan for the renewal of Soba café and Fireflies café. We had presentation about these plans as well as how we evaluate the beautiful terrace rice field or routine life of farmers. We finally offered the plans, and made a booklet to introduce this Ikuta District to show the valuable life of Terrace rice field.

## Result

A resident group called the Ikuta District Revitalization Association manages this café. Core members include former employees of Awaji City, which is helpful because they know well about acquiring grants. We focused on the soba noodle café and implemented some proposals and practical trials for the needs of the area. We tried to make a small booklet that would be useful not only to the residents but also to the tourists who visit this area.

By publishing the booklet, local people were able to learn about the wealth of farm village scenery and about everyday life in the area. New awareness was achieved. The

renewal plan and proposals for new products are continuing as revitalization measures.

In another community, we made a green space as a relaxation area for local people. We used plants, both exotic and native, and artworks to express scenic points and historic buildings of Awaji Island in this green space. We decided to use three symbolic colors as the theme colors for the three cities on the island.

For this booklet, as the University of Hyogo, we got funding for a cooperative project with the region from the Japanese Ministry of Education. Through this project, many community revitalization efforts are continuing. At first, the community people expected us to introduce the scenic points and history of the area.

However, we interviewed people about routine work in the community beforehand. The Ikuta district belonged to the “Awaji Kuni” administrative division in the Edo period two hundred years ago. The Hosokawa clan established a base here. You might imagine a marvelous Japanese castle with a tower and multilayer roof, but here they only had an ordinary house, which is now gone. They made a moat around a flat expanse of fields and built an earth wall for to protect it further. The only remnant we can see now is a well called the “Bicchū Well”(Figure 6).

There are also “chikara-ishi” (Figure 7). This name means a stone that requires strength to lift. In rural areas, people needed to be strong, so young people trained by lifting these big stones. They also used them for a form of recreation or sport.

We conducted interviews about lifestyles in the Ikuta district and learned the following things about life through a year in the region. In the early part of the year, people till farmland in February and March. From April, they clean waterways and draw water to prepare for farming. They finish planting new rice seedlings before the middle of June.



Figure 6 Bicchū Well



Figure 7 Chikara-ishi Power stones

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Des.
	Spring Cultivation		Rice Planting	Maintenance of water and weeds			Rice Cutting	Maintenance of rice field			

Figure 8 Annual schedule of a farmer in Ikuta District

Ears of rice start to appear around the beginning of August. In September, the rice begins to change color. In this period, the terraced rice paddies shine like gold. The farmers start harvesting around the beginning of September and finish by the end of the month (Figure 8).

At this time, when water is in the terraced rice paddies, the most beautiful scenery in the Ikuta district can be enjoyed (Figures9-12).

The reservoirs in Ikuta also create beautiful scenery (Figure 9). There are about 40,000 reservoirs in Hyogo Prefecture, which is the most of any prefecture in Japan. A surprising fact is that, 23,000 of these are on Awaji Island. The Ikuta District, which is one of the best places for rice production, also produces vegetables. The number of abandoned farms, however, is gradually increasing. Until now, farmers called rights for mountain water “tazu” and managed water very strictly. If a drought occurred, however, they would fairly share the mountain spring water, which they could distribute precisely using their own system called “ban-mizu”, which means “turn water.”



Figure 9 Beautiful terrace filed



Figure 10 Beautiful terrace filed  
(Photo by Syuji Tanimura)



Figure 11 Reservoir between terrace



Figure.12 Reservoir between terrace farms



Figure 13 *Nelumbo nucifera*



Figure 14 *Fagopyrum esculentum*



Figure 15 *Campanula punctata*



Figure 16 *Lycoris radiata*

There are also many native plants around the field

The best viewing spots in the Ikuta District are the terraced paddies where many beautiful plants can be seen (Figure 13-16).

When we showed those plants in the booklet (Figure 17), people in the Ikuta District had a new impression of their landscape. We also put a walking map at the end of the booklet (Figure 18).

Figure 17 A booklet introducing Ikuta District

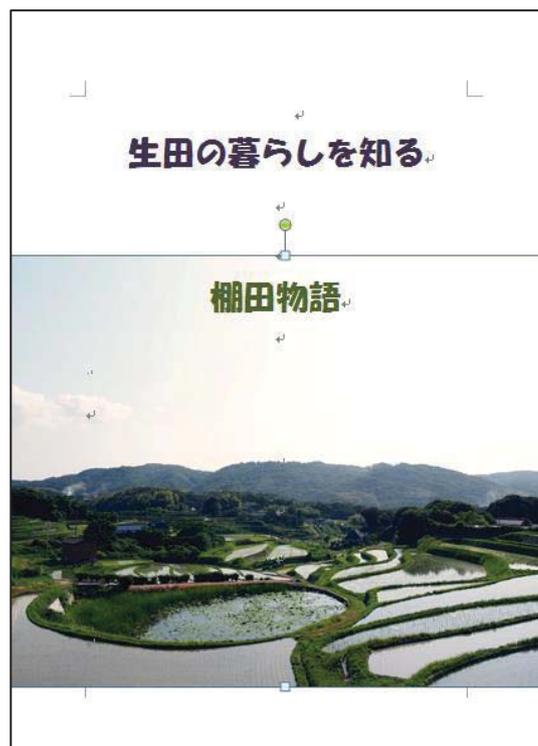




Figure 18 Walking map in the booklet



Figure. 19 Soba Coffee in Ikuta District



Figure 20 Goat whose milk can be served in the coffee



Figure 21-22 Proposal for renovation around the kindergarten swimming pool and garden

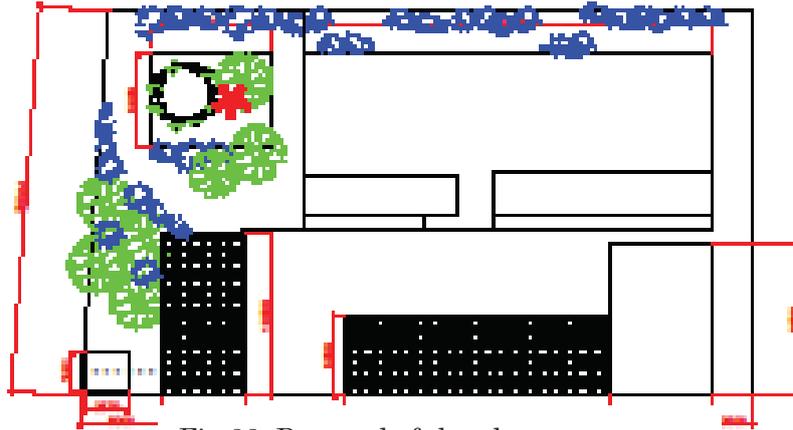


Fig.23. Proposal of the plan

over where people can watch movies (Figure 24-25), we propose a landscape plan for this place (Figures 26-27). (We also suggested adding a humorous rice omelet shaped like a firefly to the menu.)



Figure24-25 Fireflies Café

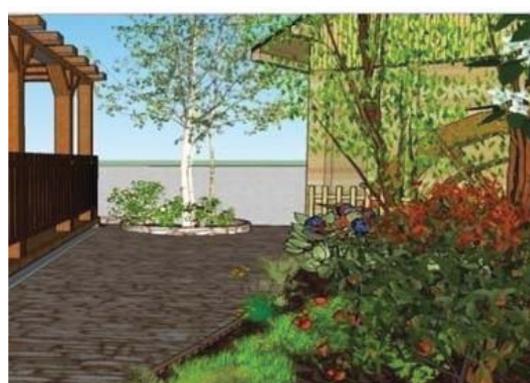


Figure26-27 Fireflies Café



Figure 28 Plan for the area around Fireflies



Figure 29 Fireflies around the Café

In these ways, working with students, we have proposed and implemented revitalization measures and real programs in the area villages. Of particular interest is that the local people accepted many of the proposals as fresh ideas and have approached them positively as realistic.

In addition, by undertaking these activities and becoming involved in the communities, the students learn a variety of skills, including workshop techniques, practical design, making proposals that contribute to community revitalization and communication skills for working with local people.

At first, the students visited the area, saw the historical places and beautiful scenery, and asked about some issues. Then, they experienced farming with residents. Many students had never experienced entering a wet paddy field. Some students were bitten by leaches, but they realized that this was a routine matter for farmers. Many of the residents were elderly, and they told us that they were very glad to farm and work in rice paddies with young people.

The students interviewed farmers at their houses, asking what they did in their leisure time and what issues they had at the moment. The residents told the students about the issues that the declining birth rate and aging caused the area by reducing the number of working people. The continuation of public services has become difficult. For example, public bus transportation has stopped and nursery and primary schools have closed. The students also learned, however, that the people really love the area and want to live there as long as possible.

From those field surveys, interviews and document investigations, students made presentations that showed daily life in the Ikuta district and that made proposals and plans for the soba and firefly cafés. Residents, support staff hired by the local government to promote

community revitalization and managers of the cafés listened to their ideas. They thought the student presentations were good for reflecting on farm lifestyles, which are usually taken for granted. They also appreciated the proposals for the two cafés.

### **Conclusion**

This project has been good training that prepares students to become members of society after graduation. For the local residents, who live in aging communities with declining populations, the ideas and activities of a younger generation provide a boost in vitality. Deepening cooperation between local communities and universities by continuously carrying out activities like this in the future is very important.

### **Afterword**

We also have some activities in other community in Awaji City. We would like to introduce these to you in detail at another time. I will provide just a brief overview here.

For example, in the Nagasawa district, we made a green space and flowerbeds in the community square. For this project, we prepared the plants, bringing native plants from our school and buying some exotic plants from an agricultural high school. We used roof tiles, which are made as a traditional industry on Awaji Island, to represent famous and symbolic buildings in this green open space. In these projects, we think together with the residents, but the first step is to start by farming with them. The work to make green space was also done in cooperation with the residents. In the Nagasawa district, people are announcing the progress of these projects that are based on plans we made. We are grateful and thankful that they are willingly to accept our proposals seriously and to implement them.

In another community, the ruins of an ironware factory from the ancient Yayoi era (3rd century CE) were found. Now, the national government has designated it as a historic site, and a project to establish a new park has begun. We are proposing how to use plants in making this historical park, how to plan the park itself, and how residents can work with this project. I would like to introduce these other plans and proposals that are being realized at another time.

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# Urban and Rural Co-construction Mode Based on Participatory Rural Planning: A Case Study of Wufeng Village in Changsha, City of Hunan Province

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## Abstract

This article takes the practice process of public space reconstruction and public life reconstruction in the planning of beautiful countryside in Changsha as an example, analyze the role of each participant and its participation mechanism. It also illustrates the achievements of rural micro-activation under plural participation (government, universities, NGO, social capital, villagers and so on.) and makes a further discussion about the practical methods of urban and rural co-operation model in China's top-down planning system.

Keywords: Urban and Rural Co-construction; Participation; Micro-activated; Changsha

## 1. Background.

### 1.1 Beautiful countryside Planning.

The 18th National Congress of the CPC put forward the new concept of “Beautiful China” for the first time, and stressed the need to respects nature, follow the rules of nature and protects nature in the construction of ecological civilization. It clearly proposes ecological civilization construction, political construction, cultural construction and social construction as the “five in one” socialist construction of the general layout. Since the reform and opening up, China's cities and towns have entered the high-speed development stage. By 2015 the level of urbanization has reached 56.1%, but there are still 6-7 million people living in rural areas. Therefore, in order to realize the goal of “Beautiful China” put forward by the 18th CPC National Congress, it is necessary to accelerate the pace of rural construction. However, at present, there are still problems such as indiscriminately imitate urban planning content and system [1], not able to be put into practice [2], people passively cooperated, lack of follow-up management [3]. How to make the countryside plan be implemented, how to improve the village appearance, and how to form a stable and healthy rural development has

become the most critical issues in rural planning.

In June 2010, Zhejiang Province formulated a policy named “Beautiful Rural Construction in Zhejiang Province Action Plan (2011-2015)”, the beautiful rural construction upgraded to provincial strategic. Since then, the beautiful rural construction began to promote nationwide. In 2016, Changsha City Urban Planning Bureau organized a beautiful rural planning competition, the author team found Wufeng village in Changsha City, and try to explore a different model in promoting rural construction in the top-down planning system.

## 1.2 “Sharing Home” Introduction.

Sharing Home was founded in December 2011, which is the only non-governmental organization aiming to promote sustainable way of life in central China. Since its inception, Sharing Home has been promoting and practicing sustainable lifestyles, and organizing activities which are benefit to public, in sectors of the economy, culture, education, community and rural areas. Since 2013, Sharing Home created “36 house co-building experiment”, “Warm-Heart-project Fuyaping community service work stations” and other community-building projects. Rural construction projects such as “Building Farm”, “Organic Rice”, “Knowing-Nature (natural education)”.



Figure 1. "Organic Rice"  
experiment



Figure 2. "Knowing-Nature"



Figure 3. 36 house co-building experiment

Photo source: Sharing Home

Photo source: Sharing Home

Photo source: Sharing Home

## 2. Wufeng Village beautiful countryside planning.

### 2.1 Project Background.

#### 2.1.1 Basic information

Wufeng Village is located in the west part of Changsha, the village covers an area of 7.2 square kilometers, 1934 acres of paddy fields, 7500 acres of forest, which takes up of 48% of the area. In 2016, there are 20 village groups, including 2667 people, their average income is 21000 Yuan. Wufeng Village is 17.5 km away from the urban area of Changsha, it obviously has geographical advantages. Wufeng Village is located in hilly areas, it`s western and northern parts are mainly forest land, while the central, eastern and southern areas are mainly

composed of flat land and water. The village has the Lotus River and Wufeng Mountain as natural characteristics landscape.

Like most of the suburban villages in China, Wufeng Village has no well-preserved village style and no perfect infrastructure and convenient living conditions compare to the city. Most of the existing buildings in the village are new buildings built after 2000, although there are a small number of earlier period buildings built with brick and wood, and they are not stable or comfortable for living. In addition to a small number of brick houses which lie on the edge of the new houses, the other mainly are in the abandoned state. Roads in village are mainly hardened cement road, 3-4 meters on average. Most of the young people work in Changsha City, leaving the elderly and children. The existing primary and secondary schools in Wufeng Village are abandoned due to the shortage of current students and the educational facilities are shared by the surrounding villages to form a complete school system. Now about 90% of the children go to school at town. In order to pursuing the quality of education, parent sent their children to urban schools. The existing schools in villages, will be close at festival and holidays, children cannot enter and play; meanwhile school activities venues and facilities are not well accommodated. The village cultural square built recently is the only public activities venue. The road and home courtyard are the main activities venues for children. There are 577 old people over 60 years in the village. The lack of space for the elderly is also a serious issue. The village has no centralized cultural activities center, nursing homes or other facilities. The new village cultural square is the only activities venues for elder people, and most of time they take their own courtyard and rural roads to do some activities. Through the planning, the use of public space, the construction of public life will be the value of activation of the village to improve the quality of life of the villagers and economic income, so that more and more young people will go back to the village, and gradually form a healthy village development trend, which is the purpose of this planning.

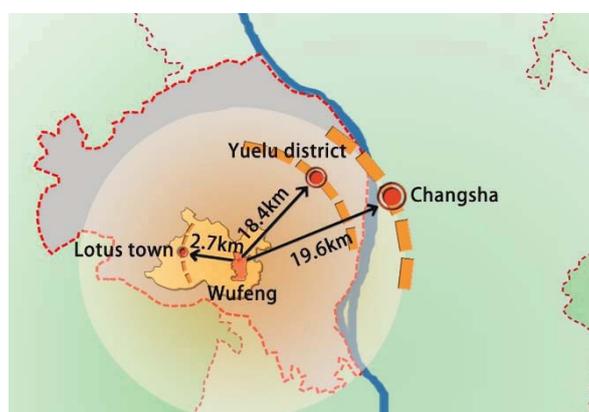


Figure 4. Location of Wufeng. (Drawn by author)

### 2.1.2 Status analysis

The previous Wufeng village master plan is similar to urban planning. But rural planning has no support from regulatory plan, urban design and urban subject planning like the urban planning. The guidance of the construction of the village is not significant (Table 1). Wufeng Village is one of the 39 demonstration villages selected by the "Beautiful Rural Planning Competition" in Changsha. We look forward to creating a model for sustainable urban and rural development of Wufeng Village.

Table 1. A summary of the implementation of the previous Wufeng Master Plan

planned project	Implementation situation
The recent land use planning	Basically in accordance with the plan to achieve. The protection of cultivated land and forest land is well, but Supporting facilities are not complete
Long-term land use planning	In 2050 · Wufeng Village will be merged with the Dongtang Village, establish Wufeng community. The Wufeng village committee confirmed it has not been implemented.
Industrial development planning	Implementation is not as expected. Due to changes in the village investment projects, it should be adjusted in our planning.
Traffic planning	Basically in accordance with the plan · The roads still has some problems in connectivity.
Infrastructure planning	Public service facilities are not implemented except activity room in village committee and it's parking lot.
Electric power and telecommunication planning	telecommunication planning has been implement well, but post office has not been build yet.
water supply and sewerage planning	Villagers still use groundwater, sewage straight into the farmland or reservoirs.
Renovation planning	Has implemented a transformation of the courtyard, household is satisfied with it.

Wufeng has the following advantages : 1) Excellent location, it is located in Changsha City 30 minutes traffic circle. 2) It has a certain tourism resources and characteristics landscape, the space is full of change, the courtyards are open. 3) Some village households have a strong sense of doing business. 4) The village committee will actively participate in build the countryside. 5) Beautiful Rural Planning Competition provide certain construction funds.

Problems of the village: 1) There is no reasonable garbage disposal point in the residential area. Domestic waste is dumped at the entrance of the residential area at will. The domestic sewage enters the nearby pond or farmland and the living environment is bad. 2) The path for children in the village is not safe. As the main road in Wufeng Village, the Lotus Road is a

traffic-laden street, which affects the safety of children. 3) Extreme lack of children's activity space. 4) The elderly do not have the space for daily public activities.

## 2.2 Specific work in Wufeng beautiful countryside planning.

In the spirit of "Urban and Rural Co-construction" concept, all the work is fixed on "Co-construction", this concept allows the villagers to participate and work with plural parties together with other group to build the village. The work carried out by the plural parties in the plan is as follows:

1) The university party undertook the whole research on Wufeng Village and made the planning and design with the participation of the village committee, and put forward the "Give Me Five" and "CC Interactive" planning concept, positioning Wufeng Village as the ecological tourism for Changsha City Vacation-based, the development of independent industries, increase the vitality of the village. The aim is to raise the income of the villagers, attract young people to go back to the village, and activate the village development.



Figure 5. Interviews and Surveys in Wufeng village. (Picture taken by author)

2) The university party and village committee together, did a survey and added up the idle housing and land. The university party and Sharing Home will be the designer. The university party assist the village committee negotiating with the villagers in terms of compensation. The village committee takes charge of the construction of basic facilities in the village. In order to stimulate the enthusiasm of the villagers, we take the "substitute subsidies with rewards" form: the villager firstly rebuild their house under the guidance of the university party and Sharing Home, then get award from the village committee. Villages can be added to the construction of the village, and funds will be provided by the village committee.

3) The university party should fully communicates with the village committee and villagers to carry out the design of various types of buildings (public buildings, farm houses), landscapes (village public spaces, farm yards). Public buildings and space is mainly the activity room of the village committee and village cultural square, it will provide a variety of public activities and public life. Farm houses and gardens should be designed one room by one room, to reserve the identifiability of the village, while controlling design elements to achieve a certain extent of unity. Pre-select the enthusiastic villager's house to design and

implement, by creating a model house to stimulate the enthusiasm of other villagers.

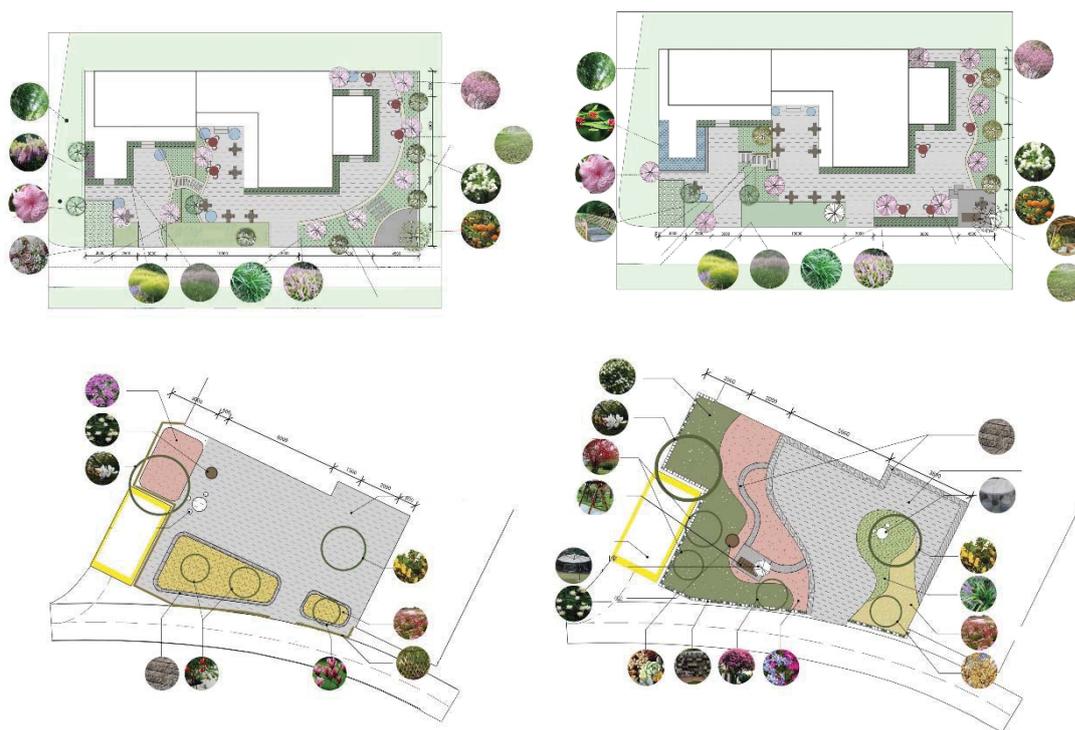


Figure 6. Four kind of garden we design for villagers. (Drawn by author)

4) With the help of the villagers, the university party should collect the old materials (cob bricks, hollow bricks, bamboo, wood, green tiles, etc.) which can be used in local construction. And collect the local characteristic plants. While saving the cost of village construction, a large number of "construction waste" turn waste into treasure, in the meantime, it retain the sense of the times of the houses and bring unvarnished artistic effect.

5) Sharing Home should conduct an investigation to understand the Wufeng clan, geo-relationship, contradictions and customs. In addition, Sharing Home should search stories concerning the traditional culture, we can also invite an old man to tell the old story and make a video out of it . Later, the story and the image will be applied to Wufeng Village's marketing.

6) Sharing Home select volunteers to enter the village and help villagers carry out construction and further development, contact with the outside world to exchange resource, and draw support from the outside world to solve problems if necessary. The presence of young people with ideals and feelings will enhance the vitality of the village.

7) The university party should take the public space in rural areas, farm houses and landscape which need further design as a practice base, and the college students should enter the countryside to take part in design work. It will address the needs of house designing and the

shortage of funds, while students can increase practical experience.

8) The village committee gives preferential policies to attract investment, exploiting "Wufeng Mountain", "Lotus River" and other high-quality natural landscape resources for development. The university party and Sharing Home should organize social activities in this area, to attract tourists from Changsha and other surrounding areas, enhance the vitality of the village, and increase the village income.

9) The village committee should organize villagers to develop the converted houses as homestay hotel. B & B mode of development to take the cooperative business mode, so that residents voluntarily unite to carry out cooperative business. There are two main elements: "cooperation" and "economic organization". Its main purpose is to solve the problem of the right to operate B & B, the formation of a manor economy, and to solve the lack of farmers operating capacity, phenomenon of low quality accommodation caused by the lack of taste.

10) The university party and Sharing Home will assist the Government to develop village regulations and management. Experts will train the villagers systematically. For example, they will develop the villagers' economic and environmental awareness. by giving lectures in the meeting. Cooperatives and villagers will explore the characteristics of local agricultural products.

11) Later, Sharing Home will be the agent between Wufeng and city community, forming the joint modes: the elderly in the city came up with their demand, and prepay to Sharing Home to make the screening. The villagers provide certain fields and houses, as well as individualized farm services. Through comparing service and conditional deletion, Sharing Home finds the best match (Fig.7). After the matching, urban residents can use the house and land for leisure or entertainment.



Figure 7. Match model. (Drawn by author)

The above is the specific work in Wufeng beautiful countryside planning. Rural construction is a long-term process, requiring the plural parties to accompany and participate in the process of long-term, in the process to stimulate the enthusiasm of the villagers change large-scale rural government building ideas in the past, and gradually activate the countryside.



Figure 8. Urban-rural interaction model. (Drawn by author)

## 2.3 Public space, Public life transformation case

### 2.3.1 Activity Room in Village Committee.

The activity room of village committee is located in the west side of the village committee office building, it is one of the most important public space in Wufeng. The activity room of the village committee for a layer of brick-wood structure, wall materials for the solid earth tiles, sloping roof wooden roof frame. The Activity room was built in 1950s, and reconstructed into a village activity room in 2010. The building covered an area of 136m<sup>2</sup>. Before the transformation, it was used as a storage room for the staff to park their electric bikes, there is no place to hang the honor plate and the temporary unused building materials and some other debris are stored inside. The required of rebuilding the activity room was proposed by the village committee and the university party, the village committee required functions to meet the requirements of the higher authorities of the village construction, and to enrich the village such as doing excises and dancing. The university wants to make the villagers' activity room have a really public space and becoming the space carrier of the villagers public life. For the village activity room, the following transformation measures will be taken:

- 1) Remove the addition part of the ceiling from the last renovation. Reveal the original

wooden frame and red brick gables. Repair the main wooden trusses and add spotlights and projectors at the truss. Hang projection screen on the wall in the east side. Add window between the earth-brick wall and the roof truss.

2) will be removed from the walls of the earth piles stacked to the wall facade as a dado, used for the old metal wrapped brick, metal hollow pattern, revealing the inside of the brick material.

3) Removed all the books from the library room, stored them under the shelves in the activity room by the north side of the wall. The original library was transformed into a storage room.

4) The floor is made of wooden tiles, placed soft isolation in the middle of the activity room, and place large pieces of glass on the east wall to create a dancing room. The gymnastic equipment provided by government were placed in the west side, the table and chair in mahjong room and chess room can be folded and take out easily if necessary.

The transformation of the activity room in the village makes it more useful as it can be used in many ways such as dancing, reading, playing chess, having meeting, giving performance, etc. The function concentrated in this public space will bring the villagers gathered together, and public life is thus created. Later Sharing Home and the villagers should work together to organize various activities in the village activity room to activate the use of public space, and improve the cohesion of the villagers.

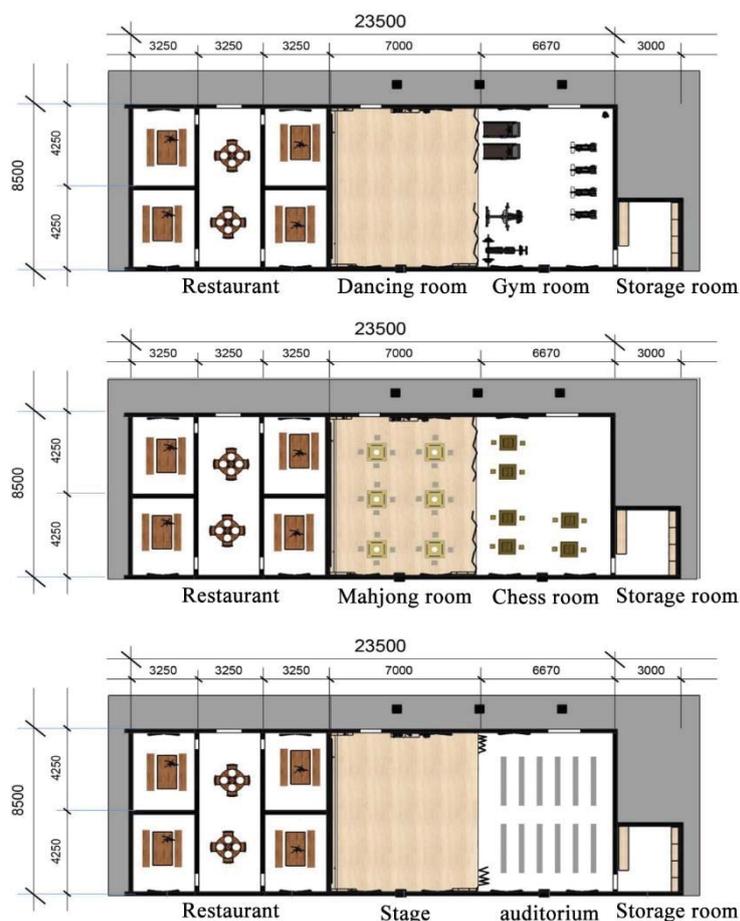


Figure 9. Activity room in different function. (Drawn by author)

### 2.3.2 Children's park

The small park is located at the entrance of the largest residential area in Wufeng Village, and is located next to the main road of Wufeng Mountain in the village. Before the transformation of the children's park, it was a wasteland, the site had a large height difference, by the roadside there is a resident's house, not put into use. Considering the increase of tourists in the future, children's park not only serve children in the village, but also for children from outside tourists. The park must be located in a first place where all visitors can see it, it should offer service as well as performance.

After the construction a part of height difference remains. The original trees were transplanted to the west side and the north side of the park, leaving plenty of open space for children to run and play games. Pebble playground, clock playground and pudding mountain were built in the park. There is a flower field by the entrance, used tires were recycled and used to build a tire wall. A little cabin in the park were transformed the service center. And the cabin itself becomes a part of the renewal.

The children's not only provided a place for children to play, and for the tourists an open space to rest, but also Sharing Home will organize many interesting outdoor activities her.



Figure 10. Children's park design. (Drawn by author)

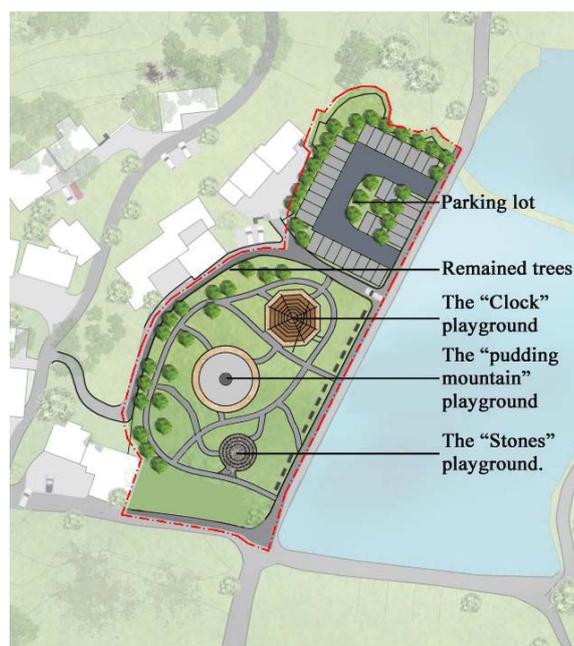


Figure 11. Children's park design. (Drawn by author)

### 3. Sharing Home`s construct plans.

#### 3.1 Village co-construct community

Most of the rural governance are concentrated in the village committee, and the villagers rarely participate in the management, while designing the management system, the villagers should be capable and be access to take part in the management. As shown above, there are many options for built-in financial and economic cooperatives according to Wufeng`s conditions, it is recommended to gradually set up the establishment of college students business base, the village economic cooperatives, built-in financial system, and collective company. In terms of social service and community construction, we must cultivate villagers' self-organization with the help of social organizations and volunteers to enhance their ability and willingness to participate in village affairs.

#### 3.2 Construction schedule

2016 - To complete the transformation of the village, garden renovation; development of "beautiful village" construction framework.

2017 – To organize learning, study of domestic and foreign rural governance (construction) demonstration; docking domestic community construction NGO, to carry out Lotus projects; to assist the operation of residential projects, and the establishment of "cooperatives" organizations.

2018 – To construct new rural area, classify garbage; and develop intensive economy; to form of collective companies to buy land, and rebuild old house.

2019 - To develop rural tourism; built service center for the elderly; to create college students

entrepreneurship and capacity-building base in april.

2020 - Plan and design 5,000 "old village"; to collect land of 600 acres;to creat the "Wufeng" brand and promote the building.

#### **4. Conclusion**

This paper introduces the Wufeng beautiful countryside planning and Sharing Home, summarizes the roles and position of the multi-party in this plan, and their participation in the form of solving problems in the top-down planning system. Urban and rural areas co-construct strategy were discussed. This strategy has only been practiced in the Wufeng Village, Changsha City, and further research is needed to validate it. Through this beautiful rural planning, cooperate with community development in Changsha, integrate the existing resources and power, realize the resource sharing between urban and rural areas, promote the development of urban and rural interaction, is the next step of the research.

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## The Informal Adaptation Project in Response to Riverbank

### Public Works: The Case of Kampung Cikini in Jakarta

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#### Abstract

Informal settlements, or urban kampungs, can be found in the riversides in Jakarta. Kampung residents live in a vulnerable environment without appropriate infrastructure and high risk of floods. Therefore, the government of the capital region of Jakarta DKI is carrying out the zero-slum policy and the river improvement project. From 2011, our project team has developed activities with the local community in Kampung Cikini that is located in the river side of Ciliwung, the main river of Jakarta. Its river improvement project is called Ciliwung Normalization and it was executed in the sector of Cikini in 2013. The normalization has drastically changed the relation between kampung and the river causing the eviction of houses situated at the river bank and producing a strip and dry open space the river bed. In addition, a wall built before the normalization to prevent floods separates kampung from new riverside open space and blocks the access to the river.

This paper reports the process regarding our adaptation project in response to the physical transformation of the river normalization works executed by the government:

The project revealed that community design can contribute to discover an optimum adaptation way of the informal community towards public works at the river bank. This can avoid the conflict between the government and the concerned community. Although the participative process is not a reality on public works improvements of the river bank, it is possible to turn the riverside space more resilient by the adaptation emerged from the community needs.

Keywords: urban river, informal settlement, community design, adaptation, resilient

## 1. Background and Aim

Informal settlements, or urban kampungs<sup>1</sup>, can be often found in the riversides in Jakarta. Kampung residents live in a vulnerable environment without appropriate infrastructure and high risk of floods. Since 2011, our project team Megacity Design Lab (MDL)<sup>2</sup> has developed activities with the local community of Cikini, one of riverside urban kampungs in Jakarta. MDL is joint architectural laboratory of Japanese and Indonesian Universities. Besides organizing international students workshop every summer, it has been involved in several projects from design proposal to construction and facility management. In 2012-13, MDL has carried out "Rumah Pintar" project. It was a project of small community space and now it is used as adolescents' association meeting space. A movable library for children takes place there once a week. Rumah Pintar means "smart house". It was also built as a house model to achieve better lighting and ventilation by inserting an environmental void called "E-Void"<sup>3</sup>. The MDL project in Cikini during 2014-2016 was the renovation of the existent communal toilet. While upgrading the toilet facilities, we proposed to add the rental room in its second floor in order to get rents to be expended for the maintenance of communal toilet. This paper describes the process of the upcoming project of MDL that consists on the intervention to the riverside open space. It is the project of informal adaptation with kampung community in response to the riverbank public works. Through the development of the project with local community, the interface between the formal and the informal has been revealed.

Chapter 2 presents a brief introduction of Kampung Cikini. Chapter 3 describes the interaction between the formal riverbank improvement works and the reactions of informal settlements. Chapter 4 reports the participative design process of the informal adaptation project of the riverbank public space. Finally, we discuss on the findings from the design process and how we can contribute to the improvement of riverbank space by working with the community in informal adaptation projects.

## 2. Target Area: Kampung Cikini

Kampung Cikini is located in Central Jakarta City, DKI Jakarta. It is situated besides the Ciliwung River. (fig.1) and its population density is more than 1000pp/ha. Portable water

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<sup>1</sup> Kampung literally means "village" and is not synonymous "slum". Most kampungs actually contain a mix of lower and lower middle class – even some middle class families.

<sup>2</sup> <http://afterfireproject.wixsite.com/megacity-design-lab>

<sup>3</sup> Okabe, A. (2016) E-VOIDs: a bottom-up micro-intervention for better lighting and ventilation in high density slums, Jakarta (Indonesia), Brief for GSDR, <https://sustainabledevelopment.un.org/>

supply and sewage infrastructure are not fully equipped. It is possible to confirm the existence of Kampung Cikini on map from 1897 in which Cikini wasn't yet urbanized. As the railway track was built during the colonial era and turned into a market called "Pasar.", it has been urbanized gradually. While a high-end residential area is located now at the north, a luxury hotel is located in the south. Low and wet lands along the river such as Cikini are frequently occupied by informal settlements in the very center of Monsoon Asian big cities.

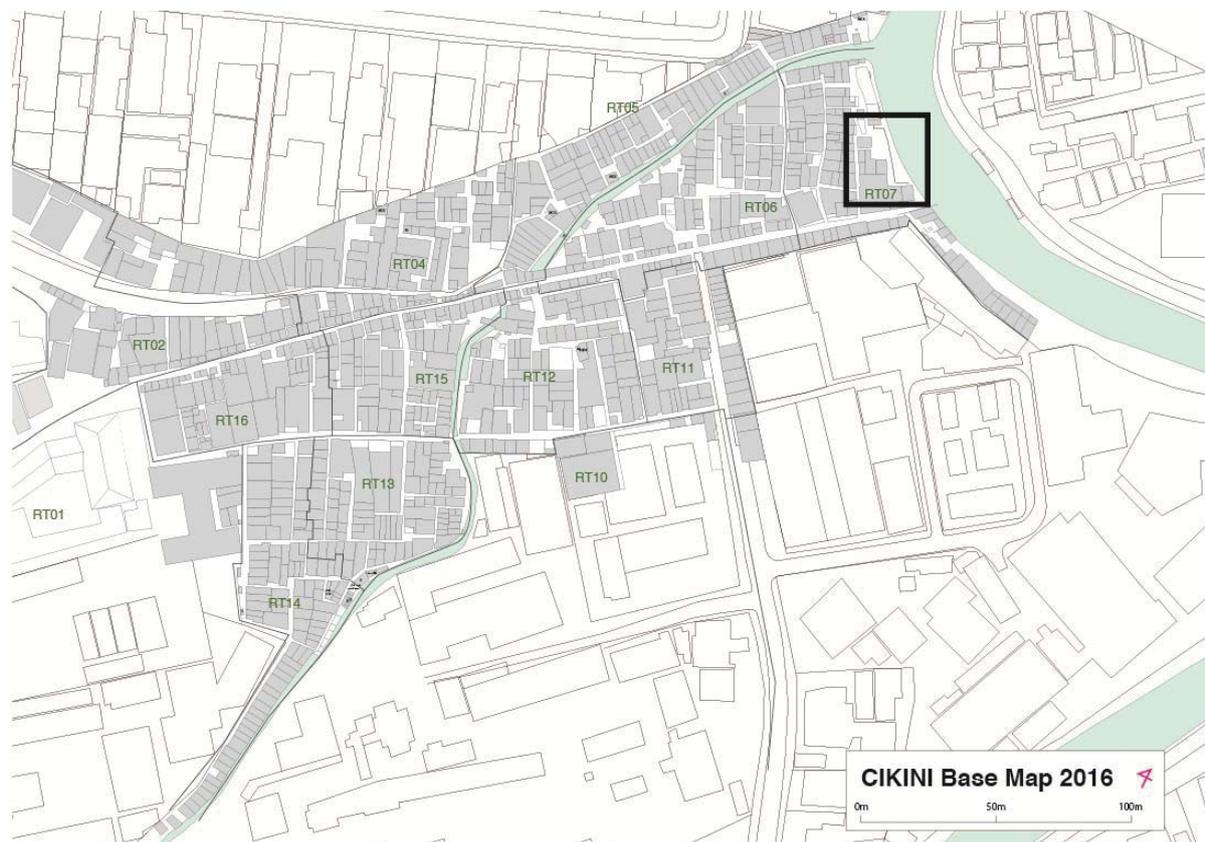


Figure 1. Cikini Map own source Megacity Design Lab 2016

### 3. The Formal Riverbank Improvement Works and the Reaction of Informal Settlements

Informal settlements have survived the persisting attempts of eviction by the local government. The land re-adjustment and the new road construction have been regarded as if natural disasters by the residents of informal settlements. Furthermore, they adapted to it and attempted to improve their lifestyles over time.

Since 2011, a flood control project called "Ciliwung River Normalization Project"<sup>4</sup> was implemented in two phases covering the total length of 119 km of Ciliwung River.

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<sup>4</sup> Normalization Project is done by Ministry of Public Works.

The phase 1 covers 8.5km from the Manggarai<sup>5</sup> water gate to downstream and the phase 2 covers a total of 19km from the same gate to upstream. The project is still ongoing. (fig.2)

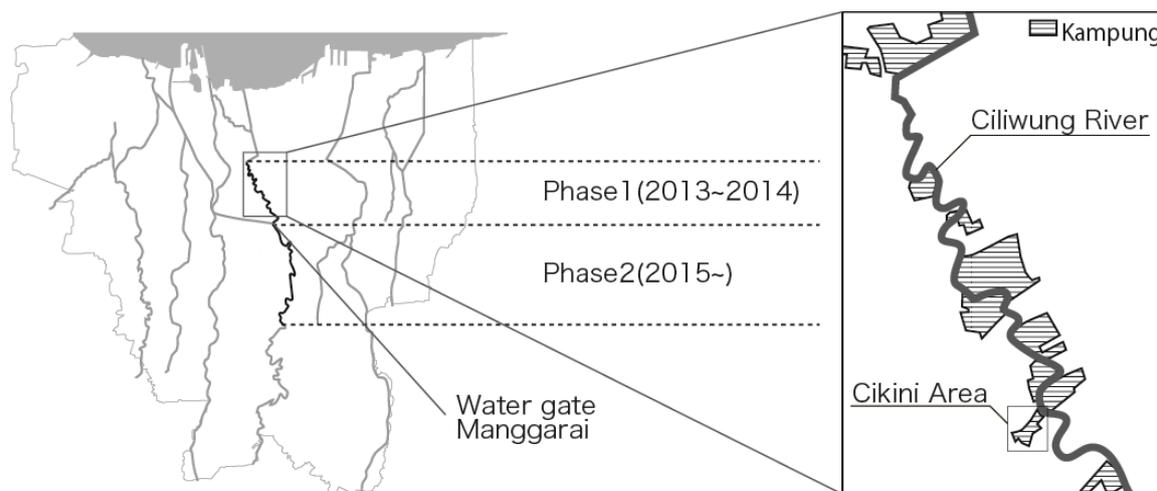


Figure 2. Ciliwung River and Kampung own source Megacity Design Lab 2016

Cikini is located in the phase 1 area.

- Phase 1

Mainly, the local government built a flood channel space to reinforce the embankment by implementing a dredging work to clean out the deposit soil and the garbage. However, the flood channel space limited all neighbors with an unprecedented accessibility to riverside. In response, neighbors build small shacks or place sofas in order to spend their leisure time on the flood channel.

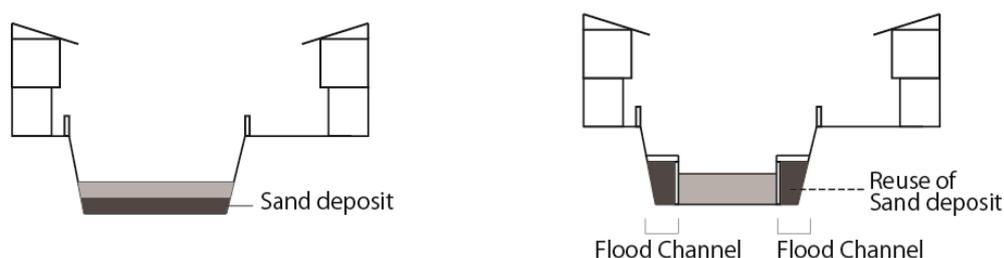
- Phase 2

Phase 2 aimed to enlarge the river-width around 20 meters to 50 meters. The government demolished all the informal settlements located inside of the eviction line. For example, houses from the kampung Bukit Duri<sup>6</sup> were destroyed and its inhabitants were forced to move into the alternative high rise public housing (Rumah Susun). On the other hand, inhabitants located outside of the eviction line collocated ladders in the strategic points where the new road intersect the existing road for accessibility issues. (Fig,3)

<sup>5</sup> Manggarai is an administrative village in Tebet district, South Jakarta.

<sup>6</sup> Bukit Duri is one of the area locates along with the Ciliwung river in Tebet district.

Phase1(2013~2014)



Phase2(2013~2015)

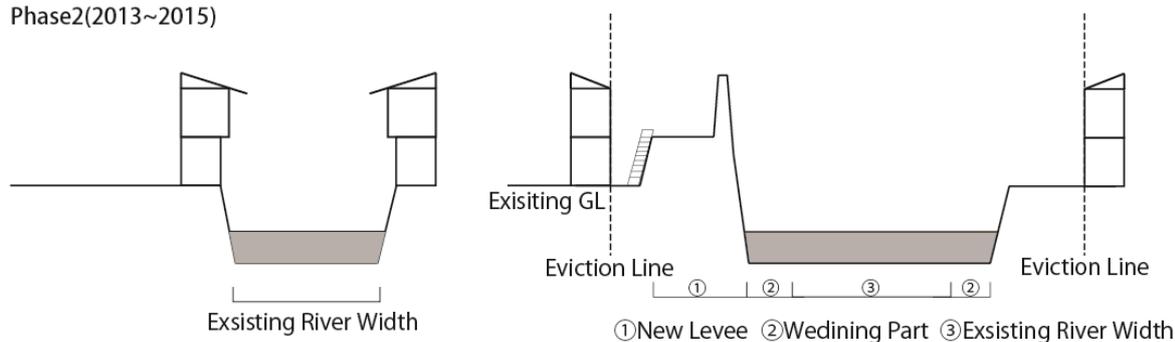


Figure 3. Character of Normalization

#### 4. Participative Design Process of the Riverbank Adaptation Project

##### 4.1 Project Background

Cikini riverside has been affected by Phase 1 Ciliwung Normalization works. The riverbank open space of the flood channel has newly appeared. On the other hand, there is a square faced to the Ciliwung River in kampung area. It means that the informal square and the formal riverbank open space lies side by side with the level difference of 3 meters. It is quite natural that the kampung people want to use both formal and informal spaces jointly. The spontaneous adaptations by kampung side were as follows.

- 1) Ladders to overcome the level gap and ease the access from the kampung square to riverside flood channel space
- 2) Small shacks in the flood channel space
- 3) Birds' feeding space
- 4) Children's playing space

In this way, the lifestyle of the local people has changed and came into spending their leisure time going to the riverside actively. However, people who can enjoy the riverside flood channel space were limited. The local leaders were looking for the possibility to open the new riverside space for the whole community.

Therefore, we started to make a proposal to improve riverside as a public space.

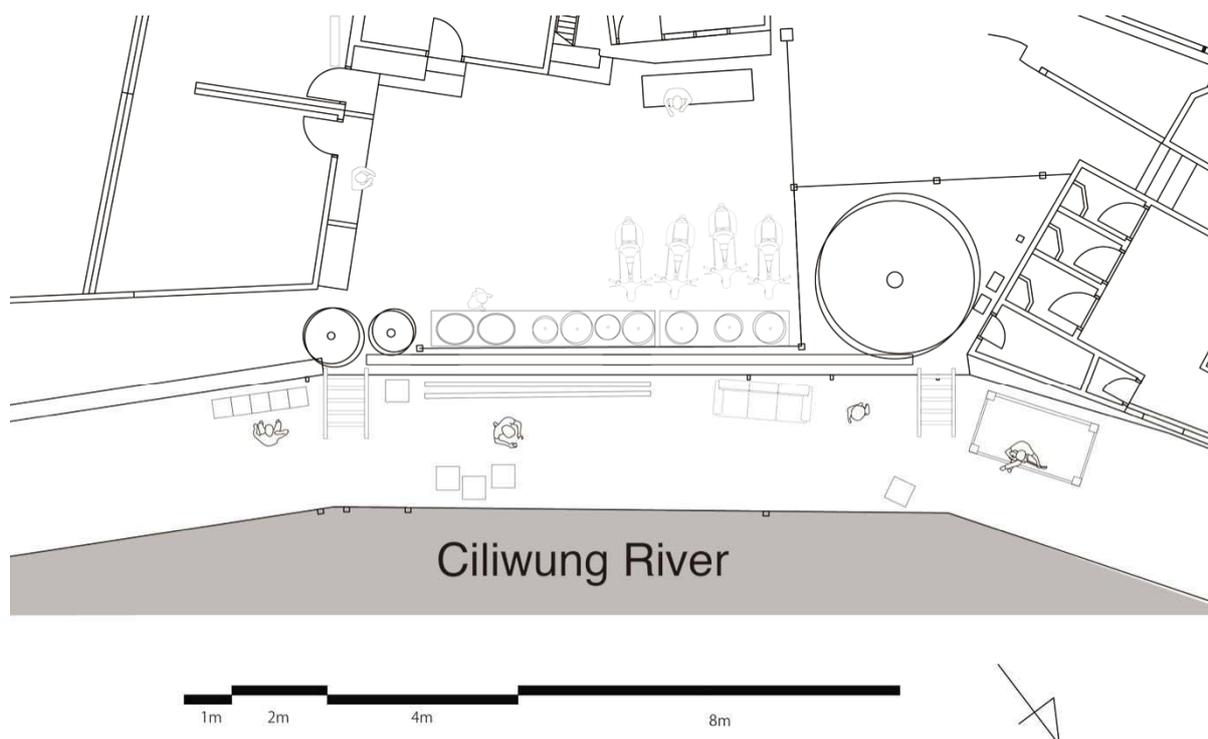


Figure 4. Usage of Flood channel

#### 4.2 Brainstorming with Local Leaders and Site Analysis

We discussed on how we should make an improvement plan from the interviews with the local people.

The proposed site had a square and a wall which were facing to the river that were built using funds distributed by the local government to kampung after a flooding event in 2007. A few decades ago, the local government evicted families and did a soil improvement work in the site in which local people was allowed to stay and resettled in the place. Therefore, the area affected by the eviction became a public square serving as an assembly space. For example, they usually use the space to hang out, to do the laundry and dry clothes during daytime and to park their motorbikes in the evening. Also the square is utilized as a space for special events and festivals. During the interviews with the local people, we found that the word “everyone” was employed to make reference of the few families and relatives who daily use the square. Regarding the flood channel space, the same situation was recognized as the space is only utilized by a certain group of people. In this way, housewives never go down to the flood channel space as they feel restricted by this group in combination with the existing physical obstacle.

#### 4.3 Design Proposal

We proposed the following three design guidelines on the basis of the findings of

brainstorming and site analysis;

1) Remove the wall made before the normalization.

The wall built before the water gate at Manggarai was not necessary because the risk of flooding is not higher in this area. Instead, the wall was causing a physical break off of the flood channel space and the square.

2) Build a new stair by partially cutting the retaining wall.

We propose new stairs in the square of informal kampung by cutting partially the retaining wall.

3) Regard the big stairs as a new open space in between the informal area and the formalized flood channel.

As it was mentioned in 1), we introduced a stair that has accessibility into the break off space by the current wall and turned it into a public space in which many kampung people could integrally use it from the square to the flood channel space.

(fig5,6)

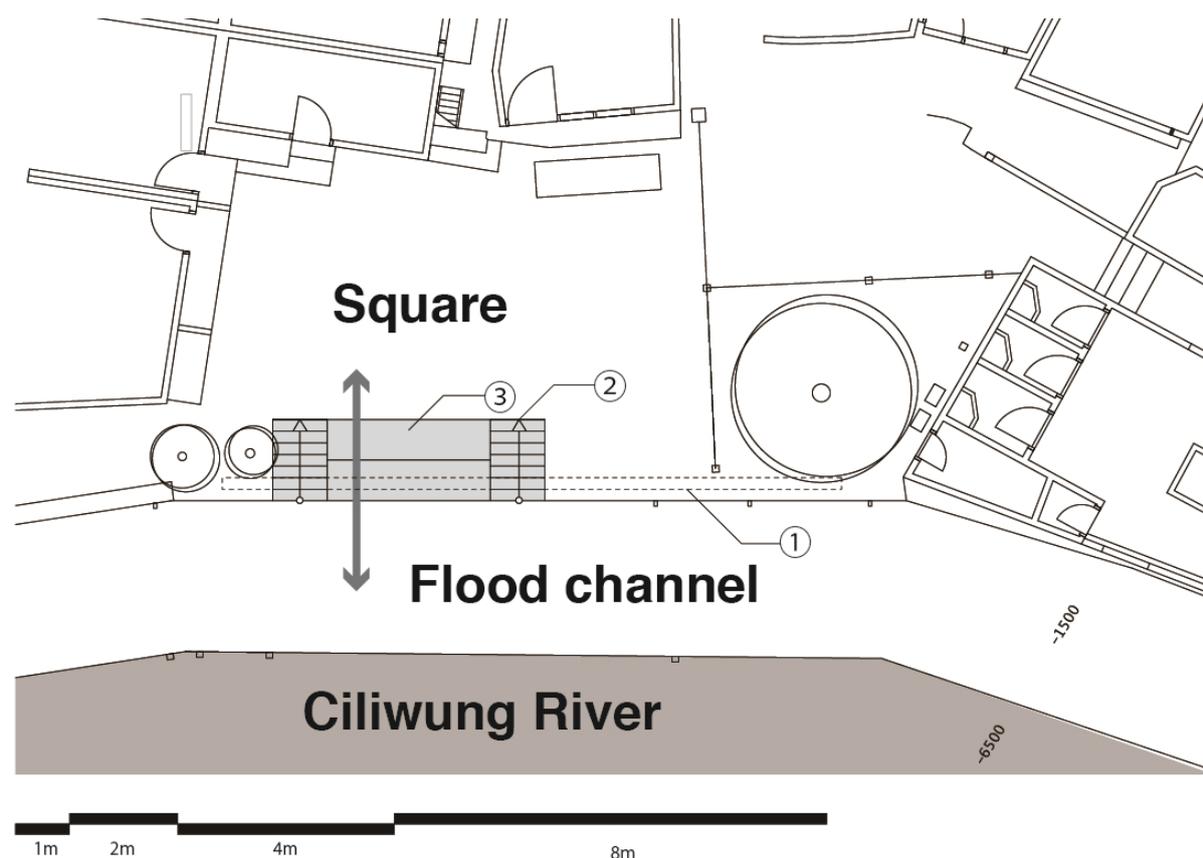


Figure 5. Proposed  
Plan

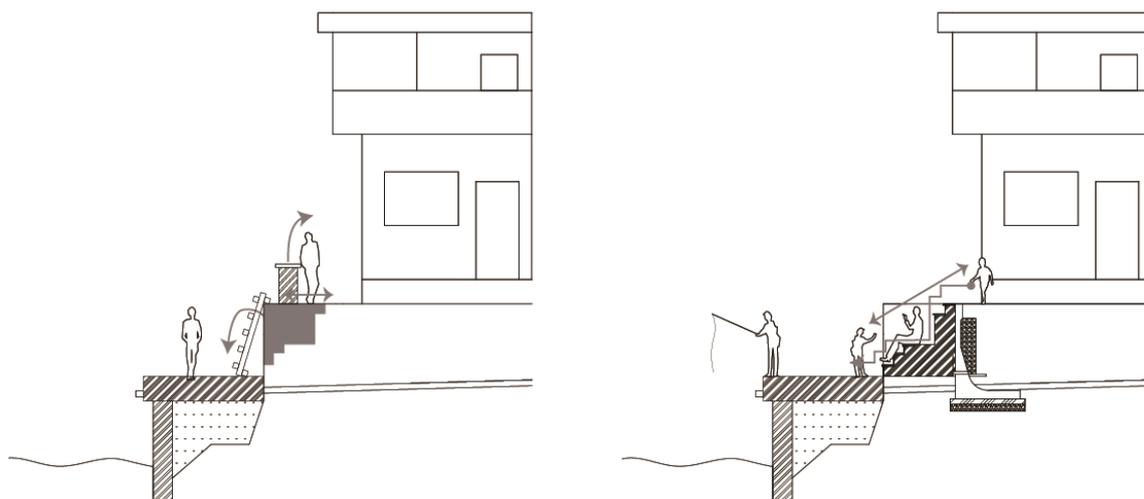


Figure 6. Concept Diagram

#### 4.4 Discussion Process with the Community

##### 4.4.1 Proposal Explanation

We set up an opportunity to make a local presentation and to exchange opinions based on these proposals. Almost all people live in the concerned community gathered at the square and attended the presentation. We gathered the community at the proposed site and explained about the proposal. Next, we made a design presentation after opening the information as long as we could and explaining: the process, why we were doing the proposal, the role of this project in the activity of MDL, the possibility to stop the project scheme because of budget and so on. We also included a design explanation with visual materials by comparing existing images and our proposal images in order provide a better understanding about visual changes of the proposed site. In addition, this method and a scale model were used to explain our ideas clearly and to demonstrate how much our idea had a reality perspective. (fig.7)



Figure 7. Local Presentation

#### **4.4.2 Discussion among the community**

After the proposal explanation, we asked to local people to discuss about their habitats providing them some printed proposals. As there is always a division between the ones who propose and the ones who receive the recommendations, this way may make people willing to express their ideas freely.

It was found that the merits of the proposal construction and how the space could be improved. Additionally, there was a tendency of debate on how much the proposal could change their life until now when they use it.

On the other hand, the wall demolition proposal raised anxiety among local community leaders about the responsibility in case a flood happens. We explained that the wall demolition would not increase flood risks, as the existence of the Manggarai water gate.

Furthermore, the community carpenter suggested that the government would not be so generous about the modification of the riverside retaining wall. His opinion had a decisive influence and the community turned skeptical. The proposed stairs belong to kampung informal land but the uncertainty whether the government will take removal actions persisted.

#### **4.5 Consensus Building**

In general, the local community positively accepted our proposal. Through discussion with the community, we could convince them that our proposal won't increase the flood risk. On the other hand, the government's reaction against the informal modification of riverside retaining wall by kampung community remained uncertain. We agreed with the local community to explain our proposal to DKI government and ask their permission.



Figure 8. Final Proposal Image

## 5. Conclusion

Through site analysis, we could reveal the constant actions of adapting by kampung side to the formalization attempt by the government. Actions taken by kampung have not necessarily been against the formal but have sought to smoothly harmonize with the formal.

However, the spontaneous adaptation can provoke the conflict between the government and the concerned informal community. This project revealed that community design can contribute to discover an optimum adaptation way of the informal community towards public works at the riverbank and avoid conflicts. Even the participative process is not a reality on public works improvements of the riverbank, it is possible to turn the riverside space more resilient by adaptation emerged from the community needs after the formal execution.

The attempts to improve informal settlements by formalizing from outside have rarely succeeded. Through this process, we learned that the professional such as community carpenter is highly respected. If we opt to endogenous way in order to improve informal settlements of kampung, the professionals who share the informal common sense and can help the process of community design are strongly required.

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## Urban Commoning and Social Resilience: Alternative Social Networks and Implications for Community Planning Practices

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### Abstract

In cities around the world, urban commoning has become a defining feature in a recent wave of grassroots actions in community building and creation of alternative social spaces and networks. Branded also as creative placemaking or tactical urbanism, efforts like these have catalyzed new forms of social spaces and networks and challenge the conventional norm of social organization and formalized methods of spatial planning. Defined here as the making of alternative social networks and relationships (mostly) outside the confines of state institutions and market economy, “urban commoning” activities have demonstrated potential for supporting community building, socializing, networking, and even alternative economies. They have also been important to communities facing distress or catastrophic events, as in the case of Hurricane Sandy in New York City where community gardens, cycling collectives, and surfing clubs played an important role in the rescue and recovery efforts after the super storm (Hou 2015).

In East Asia, acts of urban commoning are also on the rise, ranging from food sharing and community makerspaces, to co-working and co-living collectives and other forms of social startups. What are the common characteristics of these initiatives? What types of networks have been created? In what contexts did these initiatives emerge? How do the outcomes of these initiatives contribute to the practice of social resilience? Based on fieldwork including interviews and observations in Taipei, this paper discusses the common characteristics of a selection of representative cases in the city. Specifically, it discusses the composition and organization of these initiatives, how they operate, and the degree to which they are interconnected and supportive of each other as well as other social actors and organizations. Based on these findings, the paper further discusses the implications of urban commoning and alternative social networks on aspects of social resilience and community planning practices.

Keywords: urban commoning, social resilience, community building, Hong Kong, Taipei

## Urban Commoning in East Asia

Against the backdrop of increasing enclosures of the public realm through forces of privatization and neoliberalization, acts of urban commoning have emerged in cities around the world. Defined here as the making of alternative spaces and/or social relations mostly outside state institutions and market economy (see Lindbaugh 2007, Hardt and Negri 2009, Harvey 2012, Hess 2008), urban commoning supports community building, socializing, and alternative economies often in the seams of hegemonic urban orders. Specifically, recent cases of urban commoning have catalyzed new forms of social spaces and challenged the conventional norm of formalized community planning.

In West European cities, including Helsinki, Amsterdam, Berlin, Vienna, and Naples, for instance, a variety of social actors transformed the abundant vacant lands in the city into alternative venues for art, entertainment, commerce, and housing (Urban Catalyst 2007). In Dublin, against the rising rent cost, artists and residents develop mechanisms for space-sharing and create the so-called independence spaces by collectively paying rent through donations, membership, fundraising, providing food, etc. (Bresnihan and Byrne 2014). In North American cities, the growing movement in transforming vacant sites and parking spaces into Parklets and pop-up spaces represents a desire for alternative forms of placemaking.

In East Asian cities, including Seoul, Taipei, Hong Kong, and Tokyo, a variety of creative urban commons have also mushroomed in recent years. They range from self-organized activities at the community level, to institution-sponsored initiatives to activate urban sites. The emergence of urban commoning in East Asia is particularly significant as the activities are occurring in places where public space has virtually been non-existent historically, or have been highly controlled by the state. In other words, the initiatives are contributing to new social actions and assemblages with important implications for community planning.

In Seoul, cases such as Bin-Zib shared housing have emerged in the context of declining income and job opportunities for young people, coupled with high living costs in the city (Han and Imamasa 2014). With the election of Mayor Park Won-Soon, the Seoul Metropolitan Government has launched an aggressive Sharing City initiative in 2012 to address issues of transportation, parking, residential, and environmental issues through sharing policies. A variety of city-supported initiatives have emerged that promote sharing and support social startups. These include the Youth Zone (or Zero-Gravity Zone), a hub for

young people that hosts events and provides affordable space for social startups, as well as serving as an informal gathering space for young people.

In Tokyo, a variety of commoning initiatives has also emerged, ranging from Curry Caravan, a moving feast of curry rice to catalyze social interactions and activate public space, to more established initiatives, such as the 3331 Arts Chiyoda, a vacant public school transformed into a hub for artists and designers. Other examples include Unagi-no-nedoco, a co-working space that also functions as a hub for neighborhood residents in Shinogawa. Unlike typical co-working spaces that are becoming a common sight in Tokyo, Unagi-no-nedoco is actively engaged in neighborhood activities, including a children's event that involves having neighborhood shops participate in providing "ninja training" for the local kids.

In Hong Kong, the recent instances of urban commoning have risen against a backdrop of significant social and political shift since the handover from UK to China (Kao 2014). Specifically, some efforts have strong ties to the recent protest movements, including the Umbrella Movement in which citizens and students occupied streets in key locations in Hong Kong for as long as two and half months in 2014 to demand for universal suffrage. Fixing Hong Kong, for example, is a group formed by artisans who helped build the "Study Area" on streets of Admiralty during the occupation. After the occupation has ended, the group continued political advocacy through voluntary home repairs. Under the slogan of "fixing Hong Kong starts with fixing communities," the volunteers sought to engage residents in political conversation through free home repairs. The outreach has spiraled into other community initiatives including organized cleaning of stairways in old apartment buildings.

### **Cases of Urban Commoning in Taipei**

In Taipei, a variety of creative urban commons have grown in recent years. They range from social startups to government-supported community initiatives. These initiatives include community gardening and activation of urban residual spaces for social events. The following highlights a few cases that serve to represent different organizational arrangements.

Starting with independent initiatives, *Do You a Flavor* is a group of young people interested in helping marginalized social groups in Taipei. The idea for the group started during the Sunflower Movement in spring of 2014 in which they were involved with managing the supplies donated by the public. Instead of letting the perishable food go to waste, they distributed them to the homeless at the Longsan Park. Their experience with the homeless there inspired them to start the venture. Do You a Flavor's first project was to create a digital map (<http://agoama.tw>) showing locations of recyclers who combed the streets of Taipei for

cans, bottles, cardboard boxes, etc. Through the interactive map, they encourage visitors to the website to give recyclable items to the recyclers to help them make a living. The website also allows anyone to report locations of recyclers and the schedules of their collections. The mapping project brought significant attention to Do You a Flavor, and a fan base was soon established on Facebook.

Their next project, *Stone Soup*, brought more volunteers to donate food and cook for the homeless about once per month. The homeless individuals not only received food at given locations, they also had a chance to interact with the volunteers. To move beyond charity, the Do You a Flavor organizers have been developing a project to design new products for struggling street vendors. The redesigned products include small packets of dried fruits and organic tea that are produced by small-scale, organic farmers, and more recently bubble gum with packaging design by one of Taiwan's top graphic designers. The goal here was to attract more customers through design, which would in turn help both the vendors and small producers. As such, the products would support alternative economic networks against the dominance of large distributors.

Similarly to other major cities around the world, the number of co-working spaces is also on the rise in Taipei. *Hun Communes* is one of several new, café-style co-working spaces in the city. What made Hun Communes different from the others, however, was its status as the very first co-working space in the city. Tucked in a quiet residential alley, this trendy, café-like co-working space has been a site of frequent pilgrimage by aspiring entrepreneurs and start-ups. More than simply a co-working venue, Hun Communes has also been the site of ongoing social and business experiments. Rather than following a conventional business model, half of its staff are actually volunteers who have other paying jobs. The arrangement, with volunteers working there because they enjoy being part of the community, has significantly reduced the operating cost and allowed Hun Communes to break even in only nine months since it opened. With such arrangement, Hun Communes functions more as a collective than a typical, profit-seeking business venture.

Hun Communes' ongoing experiment extends beyond the co-working space itself. In 2014, Yu and his colleagues applied for a city grant to convert a nearby, government-owned vacant lot into a temporary community open space in a residential neighborhood. Named "Umbrella Park," the project was envisioned to provide "refuge, togetherness, and linkages" in the community. To build outdoor furniture for the park, they partnered with a nonprofit organization called *DreamCityBuilding* that trains homeless individuals to become carpenters. In the process of creating the space, Hun Communes invited locals to participate in an art installation featuring photographs of residents. Participants, including both

old-timers and student renters (the neighborhood is located next to a major university), began having conversation with each other—something that had never happened before in the community.

Aside from independent initiatives, many cases in Taipei have been supported by a city program called “Open Green Matching Fund Program” that provides funding support for community initiatives. One specific case is *the White Hut*, a community-based makerspace where residents can borrow tools and get help from volunteers with repairing their home appliances and small household furniture. Surrounded by multistory apartment buildings, the White Hut was once a vacant two-story shed sitting idly on a street corner. It now serves as one of the most active and unusual neighborhood spaces in the city. Each Saturday morning, the first-floor façade opens to allow residents and visitors (some from far away) to use its growing collection of tools to fix household appliances, furniture, and so on. A group of volunteers are on staff to offer assistance. Rather than offering free repairs, however, the volunteers prefer to teach the residents and visitors how to perform the repairs themselves. The main mission of the White Hut is therefore to reduce waste and encourage an alternative, environmentally responsible lifestyle.

First intended for tool sharing, the White Hut soon became a hub for a variety of community activities. Besides the repair hours on Saturdays, it holds workshops (such as soap making) and events during the week to serve a variety of residents and visitors. More recently, it began holding woodworking hours on Sundays with power tools made available to residents and visitors. With the success of its many programs, the volunteers at the White Hut began to branch out. For example, they partnered with a homeless advocacy organization to build storage cabinets for the homeless. More recently they began to help other communities or organizations set up similar kind of makerspace. One such project is *the Timber Hut*, located in a working-class neighborhood known for its strong artisan community. The staff of the White Hut have provided assistance as well as tools and equipment in multiple events joined by local residents and visitors, turning the space into an active neighborhood hub.

Besides the Open Green Program, another City-sponsored program called ‘Space Share Platform’ also facilitates sharing of underutilized private spaces for community, cultural activities, and short-term leases. One particular case is **9Floor Co-Living Apartment**, a network of co-living apartments, where one can rent living rooms and shared spaces for events or co-working. With an abundance of new co-working spaces in Taipei already, Shiy-Rung Pan, the cofounder of 9floor, set out to create something different—a co-living space for those looking for affordable and alternative living arrangement in Taipei, one of the most unaffordable housing markets in the world. Pan and his colleagues got the idea from

sharing their small rented apartment unit with friends, visiting international students, and activists who came to join protests in Taipei during the Sunflower Movement. At one point, more than twenty people were staying together at his place. To improve their deteriorating living condition, he and his roommates started to look for a larger apartment in the city. To subsidize the higher rent for the larger space, they decided to keep one of the rooms in sparkling condition and rent it out through Airbnb. With the living room empty during the day (as people are out for school or work), they also rent it out as a home-style, co-working space, or what he called “co-working at home.” The additional revenue was invested into improving the apartment and amenities shared by the tenants.

With the success of the experiment, 9floor has since expanded to a total of eight locations in just over a year, all in highly desirable residential locations in the city center. With the added income streams from Airbnb and co-working uses, the business model has enabled 9floor to keep the rent low for the majority of its tenants, allowing young people and students to live close to work and schools downtown. More than just an affordable place to stay, however, 9floor also promotes an alternative, communal lifestyle and seeks to bridge diverse communities in the city. One of its ongoing programs is hosting the *Southeast Asian Open Sundays*, a meal-sharing social event with migrant workers in the living room of one of its locations to promote intercultural understanding. This has been carried out in partnership with *One-Forty*, another Taipei-based social start-up that organizes educational and outreach programs for migrant workers mostly from Indonesia.

### **Common Characteristic of Urban Commoning in Taipei**

While distinct in their specific missions, the above cases of urban commoning do share many significant and interesting characteristics that shed light on the formation of alternative social networks, beyond the archetypal neighborhood or community unit, with important implications for the practice of social resilience and community planning. Here I highlight three specific observations:

First, the acts of urban commoning have occurred in a wide variety of locations and spaces in the city—both private and public, and in between. While some cases are site-specific, others can move from site to site as in the case of Do You a Flavor and One-Forty, adding to the fluid and indeterminate nature of the new urban commons. Perhaps more importantly, this growing variety of urban commoning initiatives have contributed to creation of alternative social networks that are not bound by notions of community or neighborhood. While community or neighborhood is still relevant, as in the cases of the White Hut and the Timber Hut, they become a node in a more extensive social network, mediated by interpersonal

connections as well as the prevalence of social media. This particular arrangement enables neighborhoods with limited means to have access to broader social and material resources.

Secondly, an important characteristic pertains to the new social networks and relationships that emerged from these commoning initiatives. Rather than traditional, community or place-based organizations, many of these initiatives are founded by self-organized network of individuals and volunteers who are drawn to the social or societal purpose of the activities and organizations rather than traditional social or community ties. As in the cases of Do You a Flavor, Hun Communes, 9Floor, and One-Forty, the work of many of these organizations has spawned additional networks and relationships by bridging different social and cultural groups through the sharing activities. Furthermore, many of these networks begin to intersect. For example, Do You a Flavor has utilized the temporary open space created by Hun Communes for its events. 9Floor has collaborated with One-Forty to host the Southeast Asian Open Sundays. Such collaboration provides each individual organization to have access to a broader range of resources for their work.

Third, distinct from the notion of commons as a rejection of both the state and the market, as is commonly found in discourse from Western Europe and North America, many of the initiatives in Taipei demonstrate a more hybrid and nuanced relationship with the market and state institutions. Specifically, many initiatives in Taipei have been supported by government grants such as the City's Open Green Matching Fund Program. The program provides financial support for community initiatives that transform both private and government-owned spaces into community gathering places. The program is carried out by a team of community planners who provides technical and organizational assistance, in addition to administering the grant. At the same time, other initiatives such as 9Floor exist as social enterprises that take advantage of some features of the market place, especially the emerging sharing economy.

### **Alternative Social Networks and Social Resilience**

As illustrated and discussed above, the recent acts of urban commoning are producing new social and spatial networks in Taipei with implications for the understanding and practice of social resilience. Specifically, such networks entail the formation of new subjectivities and organizations for social, economic, and political change in the contemporary society. The tentative results included more inclusive and fluid urban settings with more open spatial and social boundaries for diverse societal and cultural groups to interact. These new networks and assemblages also suggest new forms of agency through which urban spaces and communities can be co-produced, organized, and transformed. Through sharing of knowledge, skills, and

other forms of material and social resources, such networks have increased the individual and collective capacity of the organizations in pursuing their missions and objectives, and adapt to new opportunities and challenges. As such, each organization or community and the their networks become more resilient as a result.

With these unfolding possibilities, the kind of alternative social networks discussed in this paper present both challenges and opportunities for community planning practices. Specifically, they raise questions concerning what constitute “community” and “planning” in today’s society. Through the advent of social media and modality of sharing, new “communities” are being forged that transcend traditional bonds and boundaries. The mechanisms that facilitate the emergence and operation of the new commoning initiatives also suggest a new repertoire of planning instruments. Finally, the wide variety of individuals and social groups suggest the emergence of new planning actors and institutions beyond traditional governmental and professional entities and the primacy of traditional community networks and organizations. In the meantime, questions have also emerged regarding tensions and relationships between new and traditional actors and between new initiatives and existing social structures in the society. Examining these challenges and opportunities is critical for the continued evolution and advancement of community planning practices.

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## Leverage Affordance to Cultivate Subjectivity: the Case of a Peri-Urban Village in Taipei Metropolitan

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### Abstract

In the past few decades, participatory planning has established its well-accepted discourses on policy design. However, the recently global land-grabbing phenomena raise a challenging question: can participatory planning help to stop the development-induced displacement? To answer this question, we should pay attention to the complex linkages between human and environment. But a further question is: how should planners locate its meaning in the spectrum of participatory planning?

This article engages in the debate by revisiting the ecological psychology approach which constructed by James Gibson and his fundamental concept of “affordance.” This approach highlights the complicated relations between perceptions, meanings, actions, and affordances by shedding light on the subjective choice based on capabilities and intentions. To realize subjectivities, actors need an arm-length distance to social disciplines and require proper opportunities to deliver alternatives. The "homeland" represents a safe and familiar place to accumulate resources and organize networks to actualize possibilities and establish subjectivities. Depriving home/land would just take away the valuable opportunities. The empirical part derives from nine years' participation and the story still does not see its end. Three leading examples present to describe how the owners cultivate their farms by expanding skills, exploring affordances and reorganizing relational assets. The cultivating process led these residents to do their dwelling and claim their subjectivities. The discussion and conclusion sections remind the deficiency in participatory planning would damage its ability to face the land-grabbing question, and the concept of affordances may provide an analytic tool to fill the lacuna.

Keywords: affordance, subjectivity, participatory planning, ecological psychology

## **Problematic**

In the past few decades, participatory planning has established its unique contribution to the domain of policy planning. More and more researchers and practitioners engaged in promoting participatory planning as an ideal methodology to rectify policy design. Participatory planning has been widely discussed in social and spatial domains, particularly when it relates to the political reforming agenda. Stakeholders' opinions and residents' involvement together build up its cornerstone while how it works in real cases attracts the most attention. The "participatory tide" also pushes "radical planning" to the land of the agency which has been a critical concept to evaluate democratic progress in civil society. Additionally, empowerment as one of the goals also gives respects to the local wisdom that has become a charming word to represent the combination of social capitals, cultural habits, and place-sensitive knowledge from the grassroots.

However, the recent globally land-grabbing phenomena raise some more challenging questions to this paradigm, that is in what term of and to what degree could participatory planning help to stop the development-induced displacement? Or is it just out of the province of participatory planning? On the other hand, the complex linkages between people and their lands or homes contribute lots to the discourse of resistance and blend the displacement issues with the color of justice and human rights rather than social welfare or cost-efficiency. Can planners sincerely locate its meaning in the spectrum of participatory planning? Can social movement campaigners see the emotive hue inside the argument? Even more, on what approach we can lead it to the sacred territory of the ethic of planning and then use it to improve the methodology of participatory planning? Answers to these questions cannot and should not separate from the epistemology of human-environment relation. The critical question is where the starting point is?

## **Revisiting ecological psychology: affordances between animals and environment**

Many scholars see the relation between human and environment as an ecological linkage and emphasize the importance of understanding its co-evolving mechanism and process. The ecological approach has grown numerous sprouts on the academic map. Researchers from Actor-Network Theory (ANT), Social-Environment System (SES), and Science, Technology and Society (STS) approaches have proposed their analytic frameworks with the same concern about the role of materiality in social practice while the core differences are their analytic spheres and goals. All the contributions imply the importance of non-human factors, and how people recognize and interact with "things" works as soil to fertilize the arguments.

Affordance, a term coined by James J. Gibson in mid-1960s, refers to the coupling relation between environmental materials and living creatures (Gibson, 1966). In his later work, Gibson has given it a definition as "properties of things *taken with reference to an observer* but not properties of the *experiences of the observer*"(Gibson, 1979:137, emphases in original). According to Gibson (1966), the notion of an affordance centers on an interactive duality or complementarities. On one hand, it is the properties of things enable and constrain what can or cannot do. The physical characteristics set down its essential scope of possibilities. Just like water can nurture life, clean dirty, and ship goods but cannot cut a diamond, iron can be beaten into shape after heating, forged as a hammer or a blade, but cannot be cooked to eat. Things, including creatures, have its range of potential utilization. On the other hand, actors "read" the usefulness concerning their intentions and capabilities. While birds can use branches to build nests, apes swing it to travel in the forest. With different goals and physical features, actors deliver particular affordances of things to meet their intentions.

Since an affordance emerges from the constitution of subject and object, it is not the materiality that describes only the properties of things (cf. Fisher, 2004). An affordance is born from interactions between perception and interpretation and guides a substantial reality. On one side, the actor's intention with its previous encounters and following assumptions would form a particular strategy to use things to meet the expectation. To carry out that, players need to know their capabilities and what they run into, use their skills and knowledge to plan a policy, and then try to get what they want. The process makes prominent of the actors' judgments both to themselves and to surroundings. Divergent recognitions bring out remarkable strategies. Therefore, an affordance is not a whole and fixed quality which just sticks to the things, but regards to "an animal." The animal's physical features and intentions affect what kind of affordance would emerge.

On the other side, the things get properties from life-long contingency and dynamic circumstance. The actualization of an affordance was affected not only by the actor's intentions, skills, and recognitions but also how it works at biological, physical and chemical levels. The effect would not happen unless it fits in the natural laws, known or unknown, which play a critical role to the formulation of affordances. To better understanding, we should consider an affordance as a mutually constructed result, both the features of actors and things would influence what kind of affordance would show up(cf. Chemero, 2003 ; Stoffregen, 2003).Moreover, no affordance can separate from other existences; it was affected by what has occurred before and influence what will happen later, like the rain moistures the soil and then the earth can nourish the plants. Affordances have causality.

In sum, delivering an affordance comprises at least three interweaving threads. First, the body's features and sensory system guide subjective affordances (Fisher, 2004 ; Good, 2007; Heft, 1989; Stoffregen, 2000). The variation and transformation between different animals' bodies and perception abilities change what affordances occupy the obvious position (Vygotsky, 1976). The famous riddle of Sphinx not only describes a metaphor for the evolution of body functions but also implies how the creatures perceive the environment and use things differently at various life stages. For example, the adults' storage box can be the infants' sleeping bed,<sup>1</sup> and the older people may prefer gentle entertainments while the teenagers would love harsh sports. Different organism status enables specific sensory experience (Howes, 1991), which could lead to various body techniques (Mauss, 1935/1979) and embodied different life behaviors (Csordas, 1990). Thus, the actor's body is critical to recognize affordances and make visible differences for individual's endowments. Like what Claude Lévi-Strauss has inspired us: we are our tools (Suchman, 2013:146). The sense of body allows an individual creature to claim the unique discoveries of the world, which is an outstanding part of subjectivity.

Second, just like there is nothing new under the sun, most affordances do not appear at all fresh. Every application of an affordance creates more than just a behavior in a given temporal space, it forms a meaningful experience that can convey a light or strong lesson to others. According to the post-structuralism, the affordance bears significance which is signified by a particular thing in a given situation, and the constitution brings the things some disciplines. The disciplines of things, or the social rules and cultural representation of affordances, increasingly construct a particular system of meanings and influence how actors regulate their knowing of affordances and orientation of behaviors (Harré, 2002; Reed, 1985, 1993, 1996; Withagen et al., 2012). For example, a temple or a church often symbolized a sacred place in which the altars would be easier to be cognized as praying places rather than as gambling tables. Particular meanings thus dominate the followers' perceptions to the affordances and functions of things.

However, with cognitive liberation<sup>2</sup> to loosen the ordered triple relations between the

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<sup>1</sup> The idea comes from the Finland Government's policy to provide pregnant women a starter kit box with full of baby-caring stuff, such as clothes, sheets, and toys. The program started from 1938, and the experience shows that lots of parents would use the box as the baby's bed for the first several months and then to be the kid's multipack space. Further information can visit the website <https://www.finnishbabybox.com/>.

<sup>2</sup> Originally, "cognitive liberation" refers to change current political oppression by loosening social orders, and transform the attitude of destiny to the perspective of rights by collaborative actions (Mcadam, 1982 ; Piven and Cloward, 1979). Klandermans (1988) improved the argument by providing a detailed discussion on how the emancipation works, which includes obtaining support, increasing the contacts with potential agents, influencing people's involvement in policy making, and enhancing stakeholders' participatory wills. Klandermans also suggested some important steps achieve the goal, such as frame bridging, frame extension, and frame amplification. Bloomfield, Latham, and Vurdubakis (2010) took a similar concept on the usage of things. In their case study on a disable person's house redecoration, the assistant social workers emphasized the

affordances, rules of things, and symbolic meanings, actors can subvert the disciplines into a flexible explanation or melt its meanings with flowing interpretation. Like what Michael and Still (1992) argued, the “liquefaction” of the freezing knowledge can destabilize the hard power-knowledge relation and create resources for resistance. By doing that, an alternative affordance has a chance to emancipatory realization. Under some occasions, such as playing a game, simulating a scenario, or just be outsiders of the system, it would be easier to give away the social roles and the rules and have opportunities to actualize alternative affordances, although it may also have a risk to bring over negative impacts. (A burning piano may provide an awesome material to photography but would not be able to play again.) Additionally, in some other occasional situations, actors may bring out unconscious affordances before (Ingold, 1996; Lu and Cheng 2013), that is why people use their handbags as a shield to defend a sudden attack or take a big table as a shelter on an earthquake. Affordances have causality, but may also come from probability.

Third, some actualization of affordances needs others’ supports or helps. Case studies on disabled people have proven that with appropriately modified places or tools, or with a support worker’s help, they can do what they cannot do alone. Therefore, mediated translation or co-presence of made objects play critical roles to unleash potential affordances (Bloomfield, Latham, and Vurdubakis, 2010; Clapham, 2011). In facts, not only the disable people but also most of the creatures can actualize more affordances with medium’s assistances which could be some other animals or tools (Hutchby, 2001, 2003). For examples, only with beneficial microorganism’s work can farmers transform the organic waste into fertilizers, and with the assistance of a truck the crop harvest can be shipped to a remote storage barn. Not every intention can actualize directly, part of them come from complex procedures and need accumulations of affordances. From the viewpoint of ANT, the combination of human and non-human factors together builds the real agency while any single actor is only an actant (Latour, 1996). To convey desired affordances or effects, actors should appropriately bridge relational characters between different actants. Social practices never work isolatedly; collaborative connections between various creatures and things offer synergic efficacy for executing numerous tasks in daily life.

Nonetheless, some materials, expertise, or body skills would play a leveraging role in making use of things. A piece of wood can be a salad bowl but only after a carpenter carves it with proper tools (such as utility knives, chisels, saws, polishers, etc.) and step by step. Without the affordances of these tools, know-how knowledge, and body skills, even one can see its

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importance of situation awareness and being allowed to change the forms and functions of places and things. Therefore they can reshape affordances for the disable man, such as integrating computer devices into a wheelchair and rearranging the kitchen decoration to be compatible with the workplace. To do that, these social workers need to release their common sense of things by referring to the disable person’s body.

potential quality to be a bowl, it would not happen. Increasing complexity in life strengthens the necessity of systematic and collaborative accomplishment. Different actants together make up a series of temporary achievements in the process which incrementally lead to the desired goals. To build a commercial airplane needs thousands of components, the tool machines to manufacture these components, software systems to help piloting, and large-scale factories to do the assembling job. Each one of them has roles and functions in the process of aircraft construction, and only when the affordances of these components can work together by orders could the giant machine fly. Consequently, accumulations of affordances not only refer to pile up resources, means, and tools which are helpful in complying missions but also to manage the social-ecological networks that are necessary to accomplish the tasks. Bringing out further affordances requires cooperative engagement and coordination, and some critical affordances can play as a vision or a magnet to attract others' participation.

Even though, there are still some external factors would disturb the effect of affordances, such as the property right system, a large-scale environmental change, and socially ideological shift. The right of ownership assures the owners can regulate their resources by their wills as far as possible, but it also blocks others off the opportunities to use the resources even if they may use it more efficiently and creatively. It reveals that not all affordances can be actualized unquestionably, and this may partly explain the appearance of rental systems and the sharing economy for their temporary acquisition of affordances. The large-scale environmental change not only brings material vicissitudes but also leads to a cognitive modification. After earthquakes which were caused by the geological shifts, for example, the survivors would use the barely existing schools or auditorium as temporary shelters to live. The multiple usages of materials provide creatures the possibilities to be resilient in some unexpected calamities.

As to socially ideological shift, it refers to some changes in social representation or cultural interpretation that result in alternations on the logic of social or ecological interaction and the selection between affordances. For a long time, shark's fin has symbolized a precious food in East Asia to highlight the gourmets' taste and social status. However, environmental protectionists continually present the world the evidence of its cruelty and emphasize the vital role of sharks in the ocean ecosystem. The claim changes many people's preference of the ingredients. Such an ideological shift turns the priority of the affordances of shark's fin over from edible to swingable. (But to the shark, the latter is always the primary.) An ideological shift may work differently in compare to cognitive liberation, but both stress how physical and psychological awareness affects the perception of affordances.

To conclude, an affordance may work as a bridge to connect things, actors, meanings,

intentions, and environment, or like a mirror to reflect the possibilities of actions. Anything, accordingly, is potentially a resource which provides an opportunity to act in a given situation (Withagen et al., 2012). But nothing can be well-used until the player knows how to utilize it well and gathers enough "relational assets"(Storper, 1997). Ecological relation, however, is also affected by social factors, such as the property rights, the social rules, and the cultural meanings. These factors largely influence how actors perceive, obtain, and deploy resources and affordances in everyday life. Knowing this suggests that any creature grows from the soil of ecological affordances never lives alone, and its gesture reflects its life-long experience to establish an affordable subjectivity.

### **An empirical case: the Tucheng arsenal village at Peri-Urban Interface<sup>3</sup>**

The empirical case stems from a small rural village with an MRT station nearby which locates at the southwestern part of Taipei Metropolitan. It is an almost ten-year story and still does not see its end. My role in the case transformed from a foreign helper to a local co-organizer, an activities planner, and now an occasional yet familiar consultant. This transformation allows me to participate the community deeply, share strategic thoughts sincerely, and acquire context-aware observations but beyond just profits logic. The story deserves to write down but would not fit the limitation of this article, thus following provides only a brief.

Before 2007, this area identified itself as a military area for its mission of repairing and storing ammunition and equipment for the troops quartered in northern Taiwan. The area was around 97 hectares but not all under military use. Because of limited budgets, when the Department of Defense (DOD) built the camp here in 1953, they expropriated only the places they needed and suited for arsenals but delineated a larger area as a red-line zone for the safety reason. The leftover was still agricultural landscape only the farmers lived here were under the military administration, which meant that they could not repair, decorate, or expand their houses and facilities without permission. Furthermore, the outsiders, including the moving out family members (for marriage or job reasons), would not be allowed to visit here without previous registration and investigation. This situation consolidated the statistic relationship and limited the options of affordances. Until 2006, an explosion happened in one other munitions factory, which resulted in two deaths and ten injuries, broke the bars. Its' proximity to the city triggered public condemnation, and the DOD declared to relocate all the arsenals around the city. Finally, this small village released its military mission entirely in the

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<sup>3</sup> The author chooses the term of "peri-urban interface," rather than "rural-urban interface," to define the location of the empirical case because the word "peri" provides a dynamic image to describe the unstable process to urbanization (cf. Allen, 2006; McGregor, Simon, and Thompsom, 2006).

same year after fifty-three years long service.<sup>4</sup>

The liberated hamlet, however, did not welcome its promising freedom but just another re-encircled project. In the local government's political agenda, this area with its unique location under the mountain and separated from the commercial areas by the highway makes it a fantastic option to be the new site of the judicial zone that includes a court, an office building for the public prosecutors, and a prison. Since the relocation of the jail, which was established in 1972 and now locates at the town center, has been a vital issue in the local elections for the past twenty years, this resurrected area emerged as a huge motivation to encourage a political move. Soon after the liberation from the military control, the city government launched an urban expansion project which elaborated to transform this non-urban area into part of the town with the judicial, residential, and commercial zones as its majority. Due to financial consideration, the project adopted a "collaborative and benefits exchange" approach, the zone expropriation, that expropriates residents' tenure on farmlands and return them a smaller residential land while the lion's share dispatches to the judicial construction cluster and some commercial sales to pay the infrastructures' bill.

The proposal quickly infuriated the residents' oppositions even their reasons may diversify. Many villagers then organized themselves as an alliance and sought external supports, and several residents just left their life trajectories, even quit jobs, to devote themselves into the long journey of the resistance movement. There are two factors worth to be noted here. First, because of the unusual characters derived from its peri-urban interface location and military history, lots of local families have plentiful urban living and working experience which means the members possess different abilities in all walks of life that contribute plenty in the movement. Second, the easily accessible location (for an MRT station nearby) and incredible environmental qualities (paddy fields, wild ecosystem, and military facilities in the town) attract many NGOs and individuals with different concerns to involve in this campaign. Same target (to stop the farmland-grabbling policy) but diversified skills and experience of the members help to transform the irritation into real actions. Addition to those protests in front of government offices, the residents' anger soon became waves of activities, such as a public jogging around the camp, holiday farmers markets and music festivals in front of the storehouses, and community planning workshops with other citizens. The aims were to present the beauty of local ecosystem, stimulate possibilities for the area, and attract public support and involvement at the same time. Numerous imaginations encourage prosperous

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<sup>4</sup> In fact, because of the democratic election of the municipal mayor and representatives, the area had experienced a two-stage de-restriction in 1998 and 2000 to respond local complaints and protests. Following that, six registered leisure farms established under the tutorship of the farmers' association, but some others just rent their lands to be factories, warehouses, or parking spaces. The remaining restricted area hence reduced to half of the original size.

events, and its effects rippled to individual farms. The following portrays three instances that operate as leading examples.

The first one now is a field classroom managed by the owner family and provides ecological and farming courses for little children. Before 2006, it was a private citizen farm for rent, and most of the family members had their jobs in the town. The land expropriation policy stimulated the family to rethink the meaning of their farmlands. One of the members just gave up her job as an after-school class teacher and fully engaged in the campaign as the core organizer to stop the policy. At the meantime, the government's defiance to the ecological importance of this place also urged her to consider the possibility to be an organic farmer. With the financial and physical supports from her family and the neighbors, their farmland incrementally equipped with an ecological pond, a vegetable garden, a wooden stage under a giant tree, some other supporting facilities, and several greenhouses which then became the main interior spaces for classes or gatherings. The evolving point happened when her daughter graduated from the department of animal science and joined in the management of the farm. They soon design a series of courses based on environmental and farming topics for kids, plan marketing strategies on social media, and redecorate and expand the facilities to meet the demands of new activities. Now, the farm has another bigger pond for sailing and fishing, a traditional outdoor cooker for local meals, a safe space for overnight camping, and a collaborative garden for the class participants' farming. The farm makes a distinct character that presents its owners' preference and environmental ideology, and the material resources, financial incomes, and social networks accumulated in the process continually support the owners to fight against the government's land-grabbing policy.

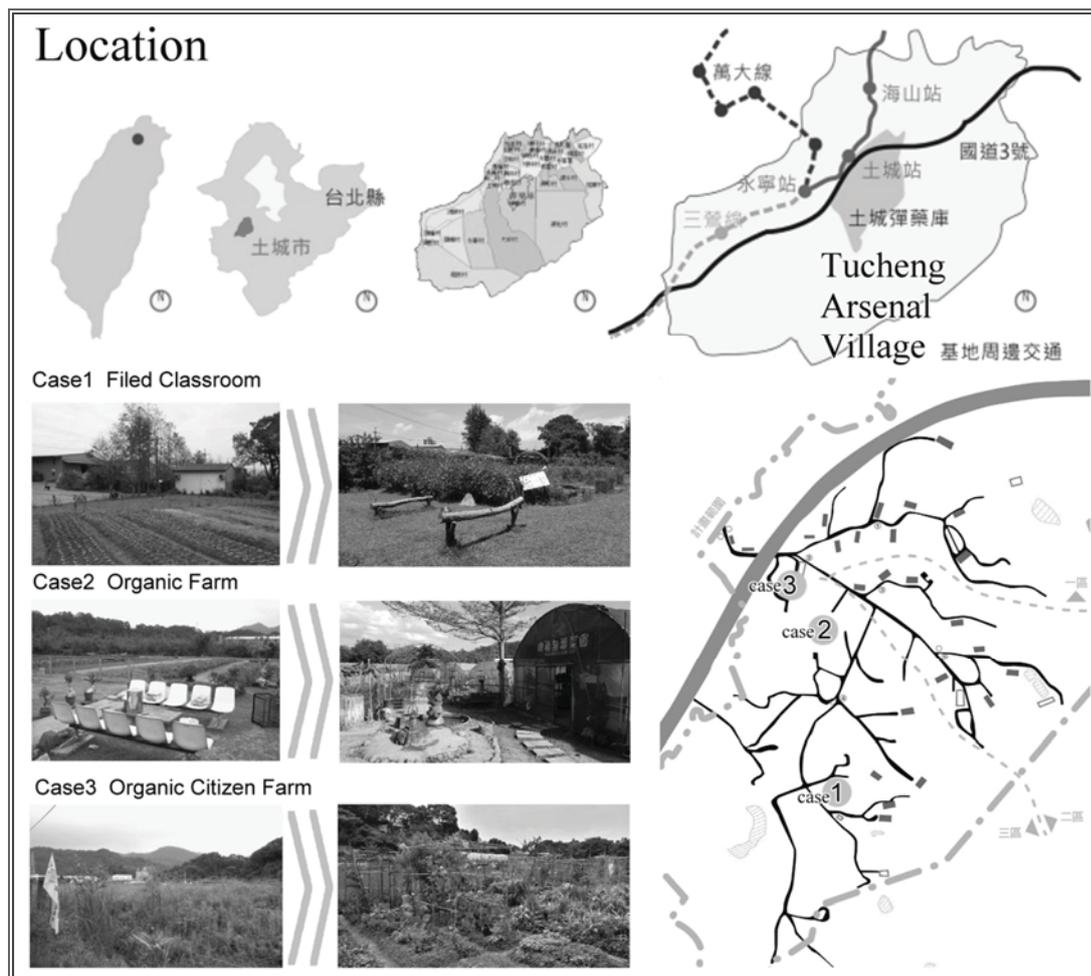


Figure 1. Location of Tucheng Arsenal Village and Cases

The second example was originally a vegetable garden but now becomes an organic farm. The owner inherited the farmland from his old father who opposes the organic idea at the beginning. This fresh middle-aged farmer just decided to retire from the manufacturing industry and came back to take care of his parents in the year before the urban expanding project. In the first few years, the threat of land expropriation made him dare not to make any further investment in facilities, and the farmer and his wife cultivated and managed the farmland in an arduous way. They reused a large water tower as a temporary shelter and did kitchen waste composting with only simple tools. Incrementally, his farming method earned the consumers' trust and finally expanded his business as community support agriculture (CSA), plus raising few chickens and ducks at the same time due to they are great helpers to deal with the kitchen waste. With collaborative favors, both from the community and the NGOs network, he started to invest in facilities, such as a welcome garden at the entrance, paved paths in the farm, a greenhouse for taking a rest and hosting guests, and two other ones for vegetables that could provide products even after torrential rain. The involvement of the second generation brought in the fresh air, too. His son and daughters offer more than just

workforces that help to arrange the working schedule flexibly yet also benefit to expand social networks and new tasks. More and more invitations come from different farmer markets and food education activities and motivate his son to try breads-making and bees-raising businesses which make his son's role distinct in the farm's business. Currently, the farm has installed a large wooden classroom to boost interactions, a brick-made oven to support the bread business and experience activities, and a bamboo raft on the nearby pond for visitors' entertainment. Such an adorable landscape not only makes it a gracious place for consumers' visits but also helps the farm keep its agricultural role in the revised version of government policy.

The third instance locates closely to the second one and is the closest farm to the MRT station. After 2000, the co-owners' family accepted the transformation tutorship to be a registered leisure farm and started its leisure agriculture business for part of the reason was one senior family member work at the farmers' association that promoted the policy. They redecorated the front yard for visitors' experience activities of rural life, built a small but lovely restaurant and a greenhouse to support the food services and DIY courses, and tried some vanilla sales because one junior member has the botany expertise. But not long before the urbanization proposal, a crisis of lacking enough human resources emerged, and they just kept at the lowest management and grew only green manure at the arable fields in the back of their house. Its' location, however, still offers a unique advantage. After the resistance movement began, some NGOs borrowed the front yard for activities, such as environmental education lectures, holiday farmers markets, and even as a temporary theater for drama. Besides, the community also proposed a Roselle planting and harvesting plan to rehabilitate the arable field, but the human resources problem remained. Nonetheless, the affordances arose from these activities inspired the big family to transform the arable land as an organic citizen farm for rent which means the renters should use no pesticides and chemical fertilizers on the farmland. These amateur farmers design their plantscapes, exchange experience, and share harvests to each other, but also seek advisements from the owner family. Currently, the allotment garden has been a hot spot in the town, and many citizens are still on the waiting list. The various organic practices on the farmland mirror the constitution of this liberated village and point out an alternative future worth to fight.

Although the difficulties of organizing networks and negotiating intentions between different participators remain, the community has the experience. The resolve to save the farmlands and build an ecological homeland make the villagers no longer see themselves as passive actors in the political agenda. They now can argue with the government about what the natural and social ecosystem here can or cannot afford and even discuss what they can create and save for the next generations. The journey of re-dwelling locally which started from

resisting the urbanization project encouraged them to develop a different viewpoint to unearth the hidden affordances and leverage it to actualize a new future. By continually remarking and reclaiming affordances in their farmlands, they are making their belonging (Bennett, 2012) and practicing their subjectivities on the territory.

## Discussion

In participatory planning, the communities and the involved planners usually aim at some public issues, and the goal is to solve a problem, seek a better vision, and negotiate a suitable way. Two classic bottom-up approaches, the spatial scenario based on narrating residents' daily life and the local wisdom about using community resources and social capitals, stand as contributive pillars to inspire context-sensitive methodologies.<sup>5</sup> The ideal linear process is that planners and participators together identify issues, work out context-fit and well-acceptable plans, and improve life quality after the implement. It is not hard to see that both approaches give more weights on public domains and shape planning concepts according to the circumstances at the time. Even the results may be alternative from the top-down policy it would still be a "collective choice."

The individuals, however, could be seen only when they are parts of a big picture or a member of public life. Besides, there always are "scale" problems. When the scale is too large to afford a perfect participation the representative system emerges, a compromise follows, only the sacrifices hidden behind the compensation mechanism. Development in terms of community refers to the collective evolution rather than the personal change because the selfishness is always the nightmare of democratic planning. The prosperity comes by trickle-down logic and therefore makes prominent of the common good and collective benefits. The members attached to this society can get benefits when their life fits in the new situation. But to those who could not match this new life, they may feel abandoned. To avoid this, or at least lower its negative effects, scholars may stress the importance of tolerance and respect; and to solve this, or at best increase more satisfaction, planners would promote conversation and communication.

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<sup>5</sup> The spatial scenario paradigm emphasizes the investigation of people's everyday activities in daily life to understand how they use spaces and for what purposes, and what they will need in the future. It usually refers to some issues needed to address, and the best strategy leading to solutions is discovering clues from participators' story-telling or filed observations even those are often under the planners' arrangement or schedules. In contrast, the local wisdom approach works more like an implementing discipline to find out and carry out the plan. Although the solution to the planning issues may have many versions, this paradigm advocates the favorite choice should be the one which can fit local contexts. Local wisdom means there are particular ways of combining elements and networks which can regulate community resources with local knowledge to solve problems or achieve goals and induce less negative impacts as far as possible. By collective actions, participators can give contributions and receive feedbacks that benefit the next round of local wisdom accumulation.

The conversation needs words and communication requires thoughts. People learn words from education but produce thoughts by action. By action, people perceive the world, explore the affordances, actualize the possibilities, and build up living style for self. It is the source for everyone to start a journey of “dwelling.” We participate the world not as a part of it but as a whole to it. People know their dependence on the world because they are independent of other existence. The linkages and networks they create and sustain guarantee their living, and the home, or the land, operates as a private basement which allows them actively to accumulate the relational assets but reflexively review its affordances.

So, my land is my stage, and my home is my laboratory (cf. Bardone, 2013 ; Bhatti et al., 2009). The "homeland" represents as a safe and familiar place which affords and accepts personal choices. By creating some things novel, or some new affordances, the dweller would no more be just a follower but an innovator. Every lesson derived from practical trials stimulates the inhabitant to reevaluate the potential of things and form a new strategy for further actions. To reconstruct the structure, actors would deploy and connect resources to reorganize network and present the uniqueness of life. “Agency,” according to the ecological psychology approach, can be interpreted as "actors can be free from the obligated relation between things, affordances, and meanings in particular situations, and have abilities to deal with the contingent encountering by selectively utilizing the affordances based on their will."

The particular role of affordance in everyday life is what misses in the spatial scenario approach and underestimates in the local wisdom paradigm. In the case of Tucheng arsenal village, stakeholders perceived and recognized the affordances with different intentions, proposed conflicting priorities of applications, and led to irreconcilable versions of development. The city government at town level conceived the liberated land as a whole and marked its undulant character to meet the demand of relocating the government buildings cluster. However, the proposal was refuted by residents for the ecosystem cannot afford the amplification of traffic flows and pollution. More important is that the urbanization project would block out the agricultural and other possibilities which provide chances for these villagers to rebuild lifestyles they prefer. To validate an alternative vision, these protestors learned new skills, reorganized networks, dug out the hidden affordances, and held activities to present the veiled value. The affordance in the case, as a channel to possibilities, is not just medium to the goal; itself is one of the goals (see Table 1).

Table 1. Comparing three approaches in community planning

	<b>Spatial Scenario</b>	<b>Local Wisdom</b>	<b>Subjective Affordance</b>
Motivation /	Governance /	Management /	Innovation /

solution	find patterns	organize networks	cultivate opportunities
Baseline	Meet contextual needs	Fit specific characters	Inspire multiple possibilities
Planning concept	Emerging from the story-telling	Emerging from the issue-solving	Emerging from the affordance-exploring
Way to see planning	What and How to <b>deal</b> with	What and How to <b>bring</b> with	What and How to <b>create</b> with
Participatory process	Discussion under Planner's Arrangement	Planning by Collaborative Doing	Converge Individual Experiments
Target	Make Improvement	Make Empowerment	Make Subjectivity

But an affordance never services as good or ill, it just invites behaviors (Withagen et al., 2012). It is the practices and the following effects in particular society bring in the positive or negative impression. The environmental resources and the open farmlands in the post-military era with its advantageous location also led to some "illegal" adoptions in the village, such as warehouses, factories, and parking spaces for its high revenues. These owners demonstrate their intentions with alien concerns on the financial income by giving out the rights of utilizing affordances of their land to the renters out of the village's context, and the consequence may worsen local conflicts because of the contradictory results caused by external effects. Besides, not all villagers stood against the urbanization policy. Some residents support the urbanization proposal for the returning residential lands could bring more value they intend. Even more, there were some unfamiliar visitors came here to steal the soil but leave just the waste for the inclusive quality of the farmlands pleases them more. Hence, how to negotiate a well-accepted solution remains a difficult problem, and the best answer may be not achieving by sacrificing but by re-networking.

The action networks play a critical role to utilize affordances. Villagers who against the land-grabbing project usually dedicate to mobilize human resources, learn new skills, and expand social networks to reconstruct their agency. Since the mindsets of policy planning likely lean to the compensation mechanism that based on cost-efficiency calculation, the methods adopted to accomplish the projects usually result in the destruction of some groups' action networks. Thus, a more progressive training of planning should redirect to the lessons of how to design a compatible solution which include affordances as more as possible and assists people to reorganize their relational assets to be a participatory subject (Nissen, 2014).

### Concluding remarks

Life is a historical narrative cumulated by material and social networks which correspond to

the expanding of physical and psychological practices. Mitch Rose (2012) has argued that every creature was born to the world with existing rules which were created or formulated by the actors before but may not fit these newcomers' preference. To establish their autonomy or orders in the world, actors have to mark and claim for their existence by leveraging what they can use. The experience of exploring and settling life in the world constitutes the process and fact of a dwelling. The process of a dwelling is also a life-long task of deploying, accumulating, and organizing affordances to form subjectivity.

Having the right to explore and claim affordances allow the subject to keep an arm-length distance to current social disciplines and find opportunities to construct an amiable reality. By networking the various affordances, the actors can fix their life in an advantageous way and establish an affordable subjectivity. Furthermore, people can build their agency and resilient ability to face the frustration and clean the stumbling blocks in their life encountering. The "cognitive liberation" process not only opens a possibility to unbundle a limited relation but also encourage people to do experiments in their life. In recognizing the alternative affordances, people re-form the context they live in, the discipline they live with, and the value they live for. Thus, what land-grabbing takes away is not just some "properties" which can be compensated by financial calculation. It does deprive the opportunities to innovating life and creating subjectivity.

The concept of affordances has widely employed in many domains, such as environment design for disable people, aesthetic training, product innovation, ICT R&D, to name but few. For community planning or participatory planning, however, it is a new territory worth to explore. The goal of this article is not using the concept of "affordance" to replace the popular democratic paradigms of participatory planning. On the contrary, the idea is to supplement and push the practice forward to think more about the subjectivity issue, and it has exceptional importance especially in the moment of globally land-grabbing tide.

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## Perceptions of Housing Estates in a Tropical Urban Forest

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### **Abstract**

Despite academic awareness of the environmentally significant impacts of deforestation and the ecologically important role of urban forests in the attainment of sustainable cities, the socio-cultural aspects of urban forests are not widely discussed in Singapore. The article explores various opinions of different stakeholder groups on the positive and negative issues of living near forested areas and on various aspects of deforestation management. It uses Tagore forest, an ecologically strategic location that will be developed as a housing district in the immediate future. Personal interviews were conducted with 40 respondents slotted into four groups: those living near forests; members of the general public not living near a forest; those in professions related to landscape architecture and/or urban ecology; those in architecture, building, planning, and/or real estate. Interestingly, the study found two clusters, and these clusters did not respect the original four divisions: the first appreciated the forest and/or living near the forest, and the second thought managed green parks were more aesthetically attractive and useful. Although generally speaking, the four original groups' responses were similar, the nature-related profession group highlighted the importance of pre-emptive biodiversity assessment. Overall, the article addresses the socio-cultural, economic and environmental concerns raised by various stakeholder groups as a baseline for reconciling discourses on deforestation management in a tropical city.

Keywords: Housing development, Urban forest, Different stakeholder groups, Singapore

## 1. Introduction

Over the past 200 years, land use in Singapore has dramatically transformed from primary rainforests into urbanized land (Wee & Corlett, 1986) (Ng, Corlett, Tan T. W, & Raffles Museum of Biodiversity, 2011). Massive development has resulted in widespread deforestation, leaving less than 5% of the original habitats intact (Yee, 2011). Over the years, these habitats have continued to dwindle and deteriorate in the face of burgeoning urban growth (Ng, Sodhi, & Brook, 2003). Land development in Singapore continues unabated and is even projected to accelerate, based on population policy announcements (NPTD<sup>1</sup>, 2013) and a newly released URA plan (*The Planning Act Master Plan Written Statement 2014*).

In the meantime, under the ‘Garden City’ initiative and its successor, ‘City in a Garden’<sup>2</sup>, nearly half of the land area of Singapore has been covered by manmade vegetation, including both highly managed greenery and spontaneously vegetated areas (P. Y. Tan, Wang, & Sia, 2013). Managed greenery, such as urban parks, neighbourhood open spaces, and streetscapes, are now regarded as representative Singaporean landscapes. The parkland aesthetic, often likened to an ‘English Garden,’ is now widely preferred by the public (Khew, Yokohari, & Tanaka, 2014; Yuen, Kong, & Briffett, 1999) and subtly promoted by the national greening policies. A recent MND survey shows a high level of public appreciation of and satisfaction with Singapore’s greenery<sup>3</sup> and parks (V. Tan, 2011).

However, the issue of the loss of secondary forests has been overlooked (Y. H. Hwang, Feng, & Tan, 2016), even though the forests still account for almost half of the total vegetation cover of the island (Yee, 2011). Most such forests are simply regarded as temporary and transitory land to be ultimately cleared for future development. Based on land use projections in the Urban Redevelopment Authority (URA) Master Plan 2014, much of the existing secondary forests will be converted into residential, commercial, institutional, or reserve sites over the next 10–15 years. These areas presently occupy more than twice the total area of all parks in Singapore, equivalent to half the public housing area (P. Y. Tan, Feng, & Hwang, 2016). The loss of the secondary forests to urban development on an island-wide scale will have far-reaching ecological ramifications, including biodiversity loss resulting from habitat removal (Laurance et al., 2012), and the loss of the long term sustainability of adjacent nature reserve areas (McDonnell & Kendal, 2015). It will also have a biophysical impact, including on urban hydrology, nutrient flows and microclimate (Lu, Wong, & Chou, 2005).

Development is perhaps inevitable, given the continuous population growth in land-scarce and developmentally driven Singapore. And extensive deforestation is likely to proceed, given Singapore’s development model and priorities (Olds & Yeung, 2004). Nevertheless, there is a growing social awareness of, and interest in, the loss of secondary

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<sup>1</sup> Population White Paper, 2013, Released by The National Population and Talent Division (NPTD)

<sup>2</sup> <https://www.nparks.gov.sg/about-us/city-in-a-garden>

<sup>3</sup> <http://www.channelnewsasia.com/news/singapore/satisfaction-with/2050828.html>

forests (P. Y. Tan et al., 2016). For example, people who live near forest patches and ecology-related groups are expressing a desire to protect forested areas. In their view, forests have value in terms of human health, educational resources, sense of place, psychological well-being, and aesthetic improvement of the urban landscape. Singaporeans in general have grown much more conscious of the value of wild and natural environments (O'Dempsey, 2014) and are increasingly questioning whether the “manicured” lawn is better than “untamed wilderness” (Kong & Yeoh, 1996). A recent study of perceptions of wild green roofs in Singapore found wild vegetation to be positively connected with ecosystems, even though individual aesthetic values were highly divergent (Hwang & Rosco, 2015).

Having said that, public debates have traditionally framed the conflict as a zero-sum game where a treed space can be either conserved for biodiversity and nature-loving residents, or completely developed to meet the demands of economic and population growth. Deforestation is not simply a case of development vs conservation, however, and it may be more productive to consider the complexity of the issue in the ongoing debates.

Here perception studies could play an important role. They could provide a synthetic understanding of the range of opinions on deforestation, possibly even suggesting the extent to which biophilic concepts could be put into practice. To probe this issue, this paper shows how different stakeholder groups perceive the socio-cultural consequences of a tropical forest development. It has two objectives; 1) to identify factors linked to positive perspectives and negative concerns of different stakeholder groups about a forest near a housing estate; and 2) to summarize various opinions of the planning and design considerations of housing development on secondary forests.

## **2. Methodology**

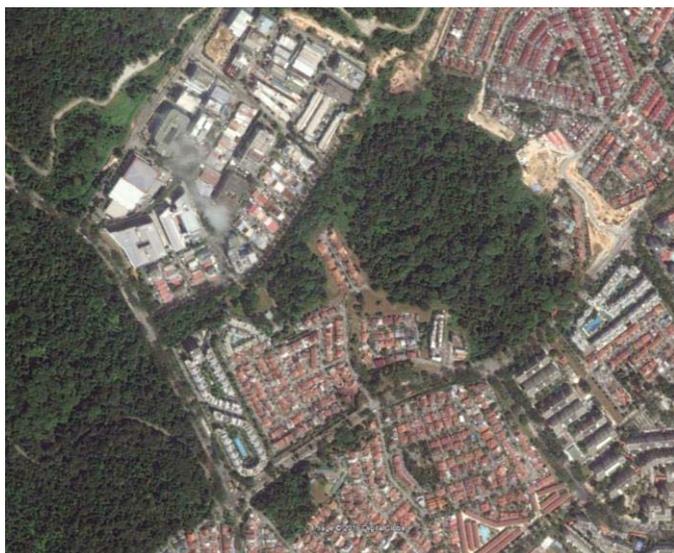
### **2.1. Surveyed site**

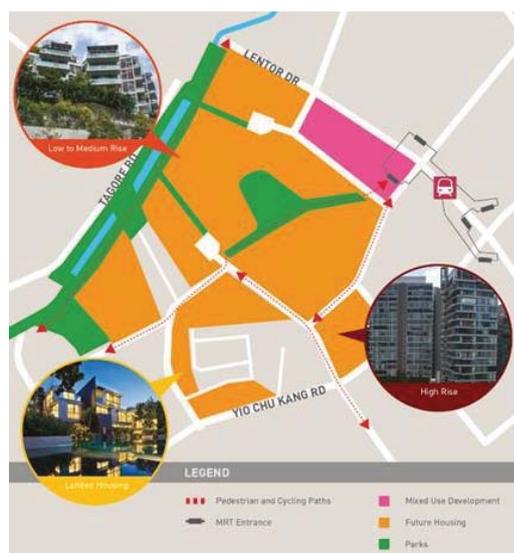
A 30-hectare patch of fallow land in Ang Mo Kio district has grown into a mature secondary forest since the former kampong and its accompanying landscape was phased out in the 1970s. The forest patch is surrounded by a business district and two residential towns which consist of private houses, low-rise condominiums, institutions and industrial areas, several new development plots, and sites reserved for future development. It is bounded by a 6-lane major road along the east side (West), a 4-lane neighbourhood road (East and South) and major highways SLE (North).

The Tagore forest contains two rare freshwater streams and has become an important stopover for wildlife moving to/from the central catchment Nature Reserve. According to a report by Nature Society Singapore (NSS) (2016), this fairly undisturbed area is rich in biodiversity. It is home to more than 32 plants, several critically endangered animals, including the Sunda pangolin, Sunda slow loris, and banded leaf monkey, and 71 forest bird species. The forest is also regularly used by community members. Along several informal footpaths and two

scenic freshwater streams running through both sides of the forest, recreationists can be seen trekking, strolling, and cycling towards Lower Seretar Reservoir. Sporadic informal “home gardeners,” residents who enjoy living near the greenery, and bird watchers can also be spotted along the estates bordering the forest, offering a sense of the old *kampong* life that once thrived in the area.

In the 2014 URA master plan, the site is zoned as an area reserved for future use and residential housing. It is expected to be developed into several private housing clusters serving residential functions and connected to the new Lentor MRT station (Thomson-East Coast Line). Massive construction is slated to begin in the third quarter of this year; two rare freshwater streams will likely be cleared, and main infrastructure, including concrete drains, sewers, and roads, will be gradually introduced over five years. According to a recent news story (Strait Times, June 2016), the URA and associate authorities (NParks) have decided to save two forested plots for at least five years to implement a wildlife management plan to preserve or relocate critical animals and plants. There will be a one-hectare neighbourhood park in the hilly area and an extensive park connector network on the Tagore stream, one of the two freshwater streams. Figure 1 shows the current condition and future development plan of the surveyed site.





[Figure1] Aerial photo (Left) and URA future development plan of the site (Right)

## 2.2. Survey questions and analysis

In October 2016, we carried out semi-structured interviews with 40 respondents who had volunteered for an interview. The pool of interviewees consisted of four target groups: 1) residents living near the forest; 2) members of the general public with no geographical connection to urban forests; 3) those in professions related to landscape architecture and/or urban ecology; 4) those working in architecture, building, planning, and/or real estate. The objective was to secure a minimum of 10 interviewees from each group. The groups were chosen because the categorization would enable easy identification of any disparity in views between them.

After being shown 10 images of Tagore forest, including a satellite image, the URA plan, and close-up photos, the interviewees were asked a set of common questions about their general opinions of the forest in terms of recreational, aesthetic, ecological, environmental values and were then asked to expand on some of their replies, depending on each group's interests and expertise, to obtain keywords on the issues. The interviews were recorded and transcribed and the transcripts were analysed qualitatively; the most frequently used words were extracted, and the predetermined research themes were organised into categories determined by the interviewees' responses. Table 1 shows examples of the questions.

Is the Tagore forest a valued part of your everyday life?

- Expected associated activities (usage), utilitarian aspects
- Changes in outdoor activities due to deforestation

What is your opinion of the proximity of the woodland (deforestation) adjacent to your home?

- Aesthetic evaluation of woodland in the housing environment and its contribution to

residential satisfaction
What are the positive values and meanings you attach to the Tagore woodland(deforestation)?
<ul style="list-style-type: none"><li>• Benefits of a restorative nature</li><li>• Contribution to individual and collective place identity</li><li>• Relaxation, contentment and stress relief</li><li>• Links with place attachment &amp; contribution to place identity</li></ul>
What concerns and meanings do you attach to the Tagore woodland (deforestation)?
<ul style="list-style-type: none"><li>• Potential for existential experiences</li><li>• Perceived safety from wildlife: monkeys, snakes, mosquitoes etc.</li></ul>
What do you think about the effects of the housing development on the forest as an ecologist / resident / member of the public / developer & planner / designer?

[Table 1] Examples of questions

### 3. Findings

#### 3.1. Residents and members of the general public (Group 1 and Group 2)

Responses from residents and the general public were very similar, so the findings can be discussed together. Half (10/20) were willing to explore and closely observe the forest (or adjacent forests) and had engaged in direct recreational activities, such as collecting durians, hiking the forest trails or jogging along the forest edge, as well as indirect activities, like watching forest birds or observing fish. However, the other half had never had an interaction with the forest (or adjacent forests). Interestingly, there were no clear differences between those who lived near a forest and those who did not.

Seventy-five percent (16/20) recognised the aesthetic value of the forest. Certain words appeared more frequently in the interviews; the interviewees found the forest beautiful because: 1) the scenery was green or pleasing to the eyes (13 times);<sup>4</sup> 2) it gave them a comfortable feeling, it was peaceful, and it was calming (8 times); 3) it provided thermal comfort (4 times); 4) they were able to observe or chance upon fauna (3 times).

Sixty percent (12/20) expressed a human-centric point of view, noting the values of the forest in terms of how humans may benefit from it without using keywords linked to the environment. The positive values they described were: 1) psychological values, such as calming, serenity, relaxation (9 times); 2) educational values, such as fauna observation, exploration (7 times); 3) physical values, such as cooling, shady (4 times). Another 40% (8/20) mentioned environmental values, such as absorbing CO<sub>2</sub>, cleaner air, and flood prevention (6

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<sup>4</sup> One person may mention something more than one time.

times).

While around half of the residents and the public (11/20) thought strongly that there were no concerns about living near the forest, 30% (6/20) were significantly concerned with unpleasant wildlife like snakes, mosquitoes, and wild boars, as well as illegal activities that might occur inside the forest. The rest (3/20) were unsure of the negative values. Many residents gave feedback on wild animals appearing near their residential housing. But just under half (4/10) acknowledged the reality that they themselves were intruding into the animal space; they said they respected the animals and tried to live in harmony with them. One resident (a 23-year-old female) described forests as “creepy” and “scary” spaces.<sup>5</sup>

When the scenario changed and interviewees were asked for their reactions to the forest being cleared to make way for developments, both the residents and the members of the general public felt there would be better connectivity and accessibility when the new MRT and other residential or mix-residential and commercial plans come into being. They expected more amenities, a growth in property values, and fewer pest issues. However, with the new development, they also said the forest and the associated ecosystem would be lost; for example, the animal habitats would be affected by the increased traffic.

When questioned about the positive values of secondary forests, many were quick to answer. This suggested that people in general are quite well informed about what a forest entails, its advantages and disadvantages alike. Although most had highly positive opinions about living near (or potentially living near) a forest, they understood the context of Singapore as a small island with increasing economic growth means deforestation is likely unavoidable; they thought they lacked the power to actively protest, but most did not want to. A few voiced their disagreement with and dislike of deforestation, citing environmental issues, such as flooding, upsetting the ecosystem or destroying animal habitats. Yet they expressed confidence that the government agencies and developers knew how to balance nature and development; they simply wanted a good reason for development, such as for the wider good, for example, public parks, not just to make money.

### 3.2. Nature related professions (Group 3)

People in landscape architecture and ecology related professions (Group 3) recognized the importance of human interactions or connections with nature. Most of Group 3 (9/10) felt it was important to be engaged with forests on a daily basis. At the same time, they saw forests as important for reasons other than human usage.

In terms of aesthetic beauty, most (8/10) agreed that forests are beautiful; they stressed that forests have a different aesthetic beauty than manmade parks. Two said people can only evaluate a forest if they have already experienced it themselves. Elements making the forest

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<sup>5</sup> The full comment was: “Actually I don’t go to the area, it’s actually quite creepy... You don’t know what will come up from it.”

beautiful were the stream, the habitat quality, its uniqueness (rarity), and fauna. There was a tendency in this group to think that aesthetic beauty goes together with environmental and ecological necessity.

When the questioning turned to value, the most common references were to environmental and ecological value (30 times). Anthropocentric aspects included recreational and human well-being values (12 times) and property values (2 times).

Six of ten interviewees in this group said they did not think there were any negative concerns attached to forests. Four of ten pointed to the possible dangers of exotic species or minor human-nature conflicts, such as issues with snakes or mosquitoes, but said these were manageable.

The question about successful deforestation management led to suggestions of a need to identify areas for preservation or conservation through a professional flora and fauna assessment, an Environmental Impact Assessment (EIA), to give solid justification for developing a certain area in a certain way. With such an assessment, the designers would be better informed on how to mitigate and minimise disruption to humans and non-humans. They also said education of the public was very important to change the prevailing mindset. The most frequently appearing words were: EIA (7); preservation of identical areas like *topo*, biodiversity, stream (4); integration of elements (5); education of the public (4); justification for development (4); and buffer (3). A few voiced the necessity of exploring the forest, and some suggested integrating the forest and the stream into the new development and increasing its accessibility to allow more people to enjoy it – not just adventurous nature lovers or biologists.

### 3.3. Development related professions (Group 4)

Some in the group recognized the importance of forests in everyday life but said they were constrained in their designs by the developers or clients' goals; others thought that the forest had little value to be preserved.

Around half of the group (6/10) said forests have recreational value in people's daily lives, especially for people living in the vicinity who may be engaging physically with the forest or just enjoying the scenery. They thought forests were good for mental health and spiritual well-being. The rest of the group thought that more managed urban parks have more recreational value, with a few saying forests have a different type of recreational value.

Seven of ten in Group 4 expressed the aesthetic value of forests as the following: forests are something natural and rare; the greenery can entice people; forests are beautiful in their provision of an ecosystem. The rest disagreed; to them, a forest was just something vastly different from urban greenery, unlike Bukit Timah or Macritchie, already "human touched and controlled" landscapes.

Most people (9/10) identified with human-centric values, including psychological,

educational, physical, and branding values (13 times) and environmental values of air quality (4 times) and ecological values (3times). Most of Group 4 (8/10) cited negative values of the forests, mainly human-animal conflicts (mosquitoes) and safety issues.

We observed that two property developers in group 4 could have branded living near forests as their project's selling point, but they said it was a minor priority. Accessibility to major transportation nodes and amenities was the first priority. Group 4 highlighted the inevitability of development demands and noted the economic and technical difficulties involved in conserving certain forest patches. This common concern was not surprising, given their similar educational backgrounds.

#### **4. Discussion and conclusion**

This study examined various perceptions of a secondary forest, looking specifically at aspects of the positive and negative opinions of living near “unmanaged” nature and considerations about developing nature in a compact, tropical city context. We found it was difficult to generalize whether people have positive or negative views of the forest (or living near the forest) based on their group allocation – residents, the public, or development professions. Rather, preferences tended to be dependent on individual personalities. In our study, half of those in the four groups thought forests were beautiful and valuable for various reasons, while the other half seldom saw any benefit. However, the proportion of nature lovers and urban lovers should be verified in further studies with a larger sample size.

There was an exceptional group consisting of those in nature related professions; members of this group realized the ecological benefits of forests, possibly because of their pre-knowledge. It would be worth looking for changes in preferences if people were given educational input.

The frequently used words were interesting. Urban lovers, namely those people with less connection to the forest, tended to use “green”, “greenery”, “park”, whereas “forest” was the most frequently used word for the nature lovers. The former group equated “controlled” green spaces and nature; group members also thought controlled green space had more direct value. They also had higher appreciation of anthropocentric and utilitarian aspects. Extracted from the finding, future studies might ask, “If no one uses the forest, does it still have value?” Meanwhile, the nature loving interviewees appreciated the existence of the forest because of its socio-ecological benefits for both humans and nature.

The respondents thought human development was inevitable, given the pressures of continued urbanization and population growth. However, the two professional groups raised some design issues related to sustainable housing development on the forested area. Serious consideration of these issues could open a discourse on deforestation management in Singapore.

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## Board Game of Life Design

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### Abstract

Since 2014, the game, “Game of Life Design,” which was developed in a workshop, has been used in a “Recovering from a Tsunami” class for the junior high school students of Ryori village in Ofunato city, Iwate prefecture. Ryori was struck by a huge tsunami that destroyed the village in 2011. Prior to that, in 1896 and 1933, the village was also devastated by huge tsunamis, and therefore, in Japan, it is considered as a zone to be “periodically prone to destruction” by tsunamis. The residents of Ryori village also believe that the next tsunami will occur within a few decades. Therefore, the authors set up a life design workshop in this village to provide youngsters with an opportunity to prepare for an expected tsunami that will occur within a few decades and face the problem of community rehabilitation and survival collaboratively.

Keywords: tsunami disaster, workshop, board game, life design, junior high school students

### Introduction

Since 2014, the authors as a research group have held revival workshops for third-year students of Ryori junior high school in Ofunato city, Iwate Prefecture, the only junior high school in Ryori village. The school experienced a tragic disaster due to the Tohoku earthquake and tsunami that occurred on March 11, 2011. As for Ryori village, it has been hit by tsunamis frequently. Even the 1896 Meiji Sanriku earthquake and the 1933 Showa Sanriku Earthquake were extremely destructive, with the heights of both tsunamis setting new national records in Japanese history. In Japan, it is considered as a zone to be “periodically prone to destruction” by tsunamis. The residents of Ryori village also believe that the next tsunami will occur within a few decades. Therefore, the authors set up the life design workshop in this village to provide youngsters with an opportunity to prepare for an expected tsunami that will occur within a few decades and face the problem of community rehabilitation and survival collaboratively.

The workshop was conducted in a class of 20 students for two days, with one session held in July and the other, in September. In July, the board game, “Game of Life Design,” was played to help students recognize the points involved in designing a life. They then collected

stories about their seniors' lives as homework during the summer vacation. The second workshop was held in September, when the students gathered and analyzed all of the stories to choose the "best practice that could be used in the real world for designing life." Ryori's main industry is mariculture farming, but there is not enough employment in it for people. Therefore, many of the younger generation born in the village go to other towns in search of jobs.

In the "Game of Life Design" board game, players choose their own paths at important crossroads of their lives; one example is staying in their hometown to find a job or leaving their hometown to continue their studies. This is similar to our normal daily lives, where there are many resources on offer other than money; whenever we use our resources to collaborate and face challenges together, we gain confidence and can overcome all sorts of problems. Furthermore, if we accumulate these resources in the long term, we eventually become capable of reacting to and reviving from any sudden disasters in the future. This was the core message that the authors conveyed to the students.

## **Background**

### (1) Outline of Ryori village

Ryori village in Ofunato, Iwate Prefecture, had a population of 2,906 and 870 households in 2010 before the earthquake disaster. Before being annexed, Ryori village had a population of 4,576 in 1955. After the earthquake, the population of Ryori declined. Three-and-a-half years after the earthquake disaster, the population stood at 2,627, and the number of households had been reduced to 840. The chief industry in Ryori is the local fishery, particularly the mariculture farming of wakame seaweed, Yesso scallops, and ascidians, which takes place in the bay.

A great deal of damage was done to the Ryori area repeatedly by the Meiji-Sanriku tsunami in 1896 and the Showa-Sanriku tsunami in 1933. In the Meiji-Sanriku tsunami, 1,347 people died or went missing. In the Showa-Sanriku tsunami, 94 people died or went missing. The residents of Minato, Iwasaki, Tahama, and Ishihama, who had been hit by the Showa-Sanriku tsunami, were relocated as a group to new residential sites developed by cutting away steep hills. The relocated residential sites, which are called Fukkouchi,<sup>1</sup> were not damaged by the last tsunami. Although a 7.9-meter high seawall was constructed in the Minato settlement, in the central part of the Ryori area, the 14.79-meter high tsunami created by the Great East Japan Earthquake struck the coastal area of Ryori in 2011, destroying 145 homes. Twenty-six people died or went missing. Housing land comprised 40% of the submerged area in Ryori.

### (2) About Ryori junior high school

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<sup>1</sup> Fukkouchi: A residential site that has been relocated after a disaster.

Ryori junior high school is the only junior high school in the village. The number of students has been decreasing year on year. About 50 years ago, there were 170 students, about thirty years ago, 60 to 70 students, and in 2014, there were only 25 students. Ryori junior high school was designated as a promotion school for “a human resource training support project for future generations supporting the revival of communities in Iwate” in 2013. Ryori junior high school set the goal of training students to be able to support the revival and development of their community. Ryori junior high school devised the training plan in 2014 to train students to develop the ability to think, judge, and express themselves based on the training scheme. Ryori junior high school decided to proceed with the plan with the cooperation of community-based recovery and reconstruction committees and support groups.

In this context, the authors, as a support group for recovery and reconstruction, approached the school to hold the workshop, titled “Recovering from a Tsunami,” and school officials agreed to hold the workshop once a year between 2014 and 2016.

### **Aim of the Life Design Workshop**

After the 1933 Showa-Sanriku Tsunami, residents moved to a higher altitude and were no longer hit by tsunami until the 2011 Great East Japan Earthquake. Among the 2000 residents, 26 people got killed, much less casualties when compared to the previous big disasters. And some other villages even managed to zero casualties. How did they do that?

Through research, we found that the residents had learnt their lessons from their predecessors; they had acquired the knowledge of how to deal with tsunamis and engage in revival work. This was gradually and unconsciously embedded into their normal daily lives as well as into their basic life stages. This long-term prevention experience and knowledge gained during the five to ten years of difficult revival work should not be forgotten.

Students who had first-hand experience of the disaster and the evacuation, the refuge and repair operations, and the entire revival process will probably live for another 70 years; these valuable experiences might thus be forgotten. Therefore, we set up the workshop in this village to provide youngsters with an opportunity to prepare and be ready for any future tsunamis by giving them knowledge about community rehabilitation and enabling them to collaboratively face problems.

### **Content of the Life Design Workshop**

The workshop was conducted in a class of 20 students. The participants of the workshop were divided into five groups of five. First each group discussed the issues and worked with a facilitator who was a university student. Then each group presented the outcome to all the members for information sharing and discussed the findings with all the members at the workshop. The workshop was held for one day in July and one day in September, and each day was divided into two periods (50 mins. per period).

The first part of the workshop was held in July. The board game, “Game of Life Design,” was played to help students recognize the points involved in planning a life course. They then collected stories about their seniors’ lives as homework during the summer vacation. The second part of workshop was held in September, when the students gathered and analyzed all the stories to choose the “best practice that could be used in the real world for designing life.”

(1) The first part of the workshop: “Game of Life Design”

1) The design of the board game

In July, we developed a life design game for this workshop to get participants quickly involved in a workshop in which it would be difficult for them to consider ways to face the problem like “how to prepare and be ready for any future tsunamis,” “how to contribute to revival of their home communities.” The game is a workshop method developed for designing “virtual life courses” using resources obtained in everyday life. Participants share their knowledge and experiences in designing a rich and happy life.

The game board was mainly inspired by the famous board game "Game of Life" created by Milton Bradley Company in 1963. There are 3 features that are different than the original game: (a) Instead of linear path of life, this game is designed in a circular way where tsunami can hit back anytime. (b) All trades and activities within this game are not exchanged by currency, but by communities, experiences, human resource, tangible or intangible assets. (c) This is a cooperation game, when events or disaster are approaching, can give out your own resources to work together.

The kit of the game comprises a game board (Figure 1), resource cards, and crossroad cards. Three patterns of the typical life courses are indicated in the game board in chronological cells, each showing a life event. Three “crossroad cells” and three “problem cells” are also indicated on the game board. The authors set up “community problems” to be solved with the collaboration of the local people, such as “planning an event in a festival,” “founding a new industry,” “recovering from a disaster,” and so on.

In the simulation game, as players go forward, certain squares correspond with “important crossroads in their lives” and “important events in their lives.” In the game, the first square for “important crossroads in their lives” is the square representing being eighteen years old. On that square, players decide between staying in their hometown to take employment or leaving to continue their studies at a university or a technical school. When players stop on the “important events” squares, such as “planning and carrying out a plan of a summer festival in Ryori,” “developing new business in Ryori,” or “responding to unexpected accidents such as a fire and the like,” they have to propose an original plan, taking advantage of their talent and social networks. Each group decides on the best idea from all the ideas members propose by a vote.

Lastly, all the members improve the ideas together by collectively using their talents and

social ties. Participants can consider their lives seriously and propose original ideas in cooperation with others on the square of “important events” while enjoying the exercise. Through the simulation game, participants found that not only people who stay in their hometown of Ryori but also people who leave for Tokyo or another city outside the prefecture can contribute to the revival of their community.

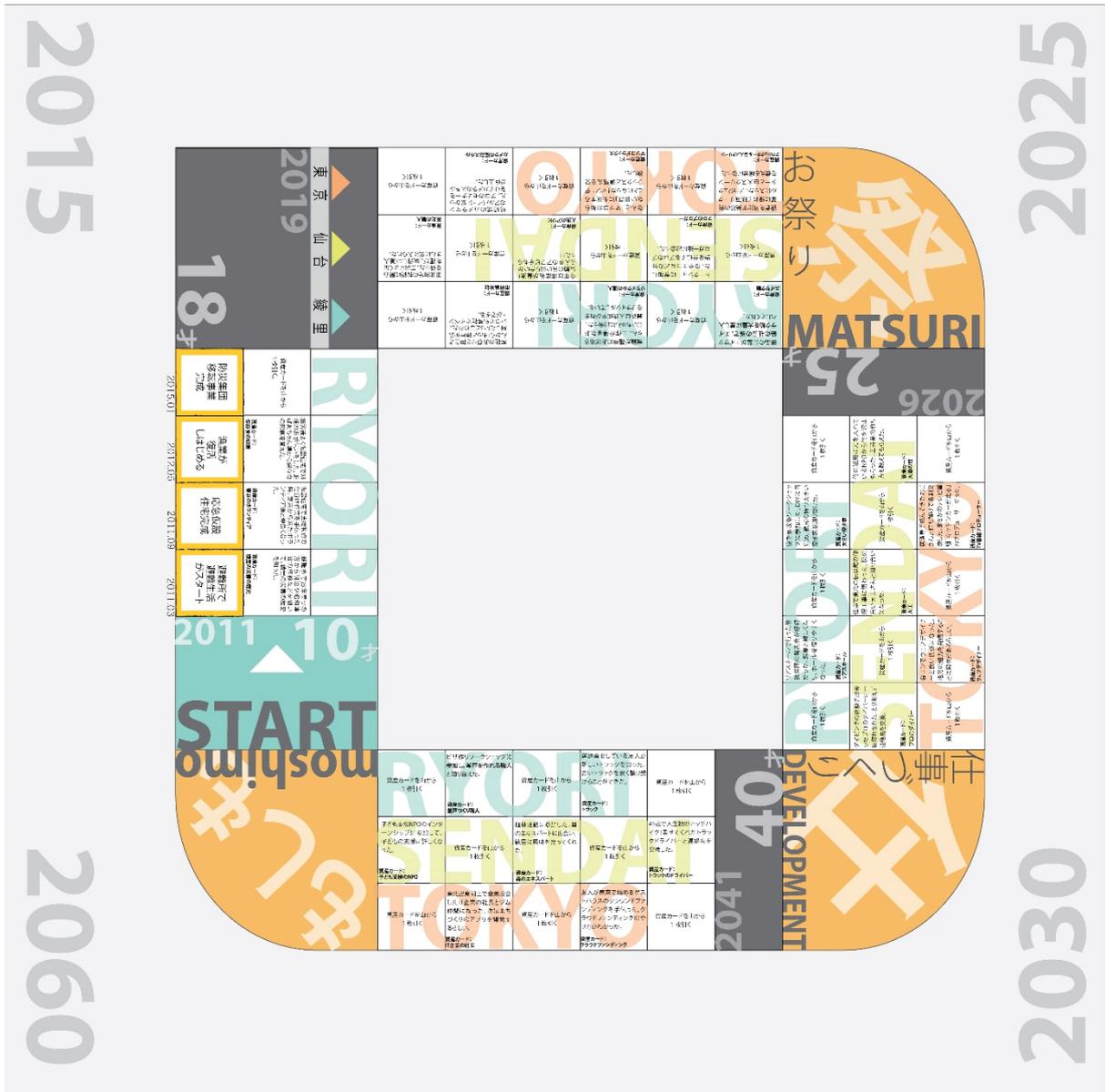


Figure 1. The game board of “Game of Life Design”

- 2) How to play the game (Figure 2)
  - a) Five participants, each with a piece, play the game rolling a dice.
  - b) Once a participant stops at a cell, an instruction on the life event and the resource from the event are indicated in the cell, and the participant gets a “resource card.” An

example of an instruction is “You get an NGO member as a friend by supporting the NGO project.”

- c) Every participant must stop at a “crossroad cell” (at 18, 25, and 49 years in a sample), and draw a “crossroad card.” A turning point and choices of life course are indicated in a “crossroad card.” An example of an instruction in such a card is “Your old mother needs to get nursing care. Do you wish to live with her? Or stay at your present home and ask for a private service to take up nursing care for her?” The participant chooses his life course by asking advice from other participants.
- d) Every participant must stop at the “community problem cell” (at 25, 35, and 60 years in a sample) and wait for other participants. All the participants propose solutions for the community problem by using “resource cards” that they find through the game. An example of a problem is “Your hometown was on fire and half of the village was burned down. What can you do to recover using your resources?” After discussing and examining the proposals put forth by all participants, “the best idea” is chosen and the proposer of that course of action gets a title in reward.
- e) All participants experience three “crossroads over a life course” and face three “community problems” in the course of the game. Participants who were born in same hometown simulate their various life courses and find a solution collaboratively using everyone's resources to help solve the community problem. They discover the importance of the “design of life,” “resources from life,” and “collaboration with friends” through the game.



Figure 2. Scene of players using the board game

## (2) The homework: “Collect stories about seniors’ lives”

In the time between the workshop in July and the one in September (during the summer vacation), participants had to do their homework, which involved interviewing seniors (including their parents) who were from Ryori with regard to: (a) what choices they had

wrestled with and what choice they had chosen, and why they had selected that choice at important crossroads in their lives, (b) on the occasion of the summer festival in Ryori<sup>2</sup> as their important event, what plan they had proposed and carried out and what they had taken advantage of, (c) what job they had got, where they had got that job, and why they had taken that job, (d) how they had responded to the Great East Japan Earthquake, and, at the time, what they had taken advantage of.

Each student had to interview two seniors. After all the students had submitted their homework, we were able to collect about 50 examples of the actual lives of their seniors.

We held the first part of the workshop using an enjoyable simulation game to get participants quickly involved in a workshop in which it was difficult for them to consider ways to contribute to the revival of their communities. On the other hand, they also needed to learn from actual experience, so we gave the students the homework of interviewing their seniors to collect data for the second part of the workshop.

### (3) The second part of the workshop: “Selection of the best practice”

The second part of the workshop was held in September. Members of each group read the results of their homework to each other, and discussed and decided what the best practice was from examples of the actual lives of their seniors. They learned how to use resources that they had received in their lives and how to contribute to their hometown community.

#### 1) Selection of best practice in each group (Figure 3)

Five members of each group divided the items of the contents that they had found from their seniors. Each member classified 10 contents into three groups, a “helpful example,” an “example that they can’t judge without some questions,” and an “unhelpful example” after reading all 10 submissions. In concrete terms, they made their choice according to four perspectives: (a) whether it was a typical example in Ryori (examples of making a choice at an important crossroads in their lives), (b) whether it was a helpful example (examples of planning a summer festival in Ryori as their important event), (c) whether it was a recommendable example (examples of the choice of jobs they had followed), (d) whether it was a helpful example (examples of responses to the Great East Japan Earthquake).

They checked up on “examples that they can’t judge without some questions,” with some questions directed to the people who had been interviewed on the matter. After checking, they ranked the 10 examples and selected the best practice. They also proposed the original idea of combining the first proposal with the second one in order to select the best practice.

#### 2) Selection of the best practice by all students (Figure 4)

Members of each group posted on the classroom wall the best practice for each item and the reason for making the selection. All of the participants read out the best practices of the

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<sup>2</sup> In Sanrikucho-ryori in Ofunato, Iwate, graduates of Ryori junior high school have to plan and conduct a summer festival in Ryori and also organize fundraising for the festival when they are twenty-five years old.

groups apart from their own group and voted for the best practice apart from their own one. University students, the professors acting as facilitators, and the junior high school teachers also voted for what they considered to be the best practice. In the second half of this section, people who voted for the practices that were the most popular argued why they had selected their choice, and what they learned from their seniors' lives.



Figure 3. Participants selecting the best practice



Figure 4. Participants voting to decide the best practice

## Results

### (1) The first part of the workshop

We held the first workshop using the enjoyable life design game to get participants quickly involved in the workshop. As a result, all of the participants were able to discuss their choices

of jobs and dwelling places at important crossroads in their lives with classmates and propose original ideas in cooperation on the squares of “important events.”

One group’s examples of choices of jobs and dwelling places at important crossroads in their lives are given in Table 1. There are various kinds of choices, for example, a fisherman in Ryori, a civil servant in Ryori, a professional tennis player in Tokyo, and an owner of a restaurant in Tohoku.

There were various reasons given for their choices. For example, (a) because they would satisfy the necessary conditions for self-realization, (b) Out of consideration of family members, such as their parents, (c) because of attachment to their hometown, (d) because of the employment situation and the conditions of their employment, and (e) because of their partner’s wishes.

Table 1. Examples of choices of jobs and dwelling places at important crossroads in the participants’ lives

age	18	25	40
dwelling place	Tokyo	Tohoku	Ryori
occupation	certified nutritionist	restaurant owner/chef	restaurant owner/chef
school a student wants to attend	vocational training school in Tokyo		
dwelling place	Ryori	Ryori	Ryori
occupation	fisherman	fisherman	fisherman
school a student wants to attend			
dwelling place	Tohoku	Ryori	Ryori
occupation	government worker	government worker	government worker
school a student wants to attend	preparatory school of examination for public service employment in Tohoku		
dwelling place	Tohoku	Tokyo	Ryori
occupation	professional tennis player	professional tennis player	professional tennis player
school a student wants to attend	university in Tohoku		
dwelling place	Tohoku	Tohoku	Tohoku
occupation	teacher	teacher	teacher
school a student wants to attend	university in Tohoku		

When players stopped on an “important events” square, such as “planning and carrying out a plan for a summer festival in Ryori” or “developing a new business in Ryori,” they proposed their ideas using the “Sanriku railway,” the “wisdom of grandmothers in Ryori,” and

“Eisaku candy and Wakame seaweed: special products of Ryori” as valuable resources in their lives. Members of one group proposed the idea that they would invite volunteers who came from Tokyo to Ryori after the earthquake disaster and promote what is good in Ryori. The volunteers were able to provide resources of life in Tokyo and also in Ryori. In addition, they proposed the idea that they would promote Ryori as their hometown with a website that they would create using the advantages of their talents and social ties that they would gain in Tokyo. When players stopped on the “important event” square, which was a “response to the next tsunami disaster,” members of one group proposed the idea that they would provide shelters for refugees using big vacant houses as a valuable resource of Ryori. In the life design game, members of each group proposed various ideas.

## (2) The second part of the workshop

Members of one group selected the example of leaving their hometown for Tokyo to realize their ambitions at important crossroads in their lives as the best practice, and the example of staying in Ryori to live with their families as the second option. They discussed their worries about the choice of their jobs and dwelling places, and one member proposed that he would return to his hometown after he realized his ambitions in Tokyo. Another member proposed that he would work ultimately in his hometown, taking advantage of his qualifications, know-how, and skills that he would build up in Tokyo. They had clear visions for the future.

In the context of the important festival in Ryori, members of one group selected the example of contributing to the festival operation by applying a bowline knot to building a stage for the Bon Festival dance and also suggested that a ritual dance by performers wearing a lion’s mask (called a “Gongen-sama”) would be helpful in operating the festival.

Members of one group selected the example of sending out a message that agriculture was attractive work in the local community in order to increase the number of farmers as the best practice regarding improving employment (the major industry in Ryori is the local fishery) There were many members who sympathized with the idea that they could promote a primary industry by sending out a message that the industry involved attractive work.

A member of one group selected the example of receiving material support from friends and colleagues as important moments in his life after the Great East Japan Earthquake, and he found that the bonds of affection and consideration for others was the best practice regarding responses to the Great East Japan Earthquake.

## Reflection

The workshop was defined by two conditions. The first was that the game was put to practice on a local society that had together faced a huge disaster, such as a “tsunami,” in recent years. This ensured that every student and teacher, and all the locals, were fully focused on the program. However, ordinary local society does not usually encounter such a

situation. Developing and extending this program to other localities in seeking to find a common problem will be a big issue for game planners.

The second condition was that the game was practiced on a small, isolated village with a population of only 2,000. There were not many variations in people's life courses, resources, or common events. Therefore, it was easy to develop the game kit. To design a game kit for a more complex locality is a separate issue that needs to be tackled.

## **Conclusions**

The purpose of this workshop was to provide youngsters with an opportunity to prepare and be ready for any future tsunamis by giving them the knowledge to engage in community rehabilitation and collaboratively face a problem.

This workshop was effective in helping students find that their choices at important crossroads in their lives are not about choosing between only two options, which were (a) to leave their hometown to realize their ambitions or (b) to give up on their hopes and stay in their hometown. Through this workshop, they were able to discover that both a person who leaves his hometown to realize his ambition and a person who stays at home can contribute to the revival of their home place by taking advantage of their talents and social ties.

According to the questionnaire after the program, it seems that many participants discovered some indications about how to build their lives. However, the real purpose of the program will only be evaluated when the next disaster happens. This may become clearer in 50 to 80 years' time.

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## Precarious Life and Subversive Potential: Nanjido Landfill (1978-1993) in Seoul

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### Abstract

The Nanjido landfill in Seoul was a habitation landfill where over 4,000 people with diverse backgrounds gathered to find economic opportunities and settled in or near the landfill site. This study examines the Nanjido landfill community's housing conditions and work (garbage collecting) patterns, through which to explore a potential self-help and self-organising living environment. It aims to address the borderline characteristics of the landfill community and its consequent precarious living environment as well as its disruptive and subversive potential.

First, landfill as the site of refuse, or the territory bordered from that of usefulness, is essentially not allowed to be blended with the alleged normal residence in the city. Inhabiting in the landfill itself is, thus, an invasion into the prohibited zone and subversive act against the existing norm of bordering between the valuable and the valueless. Meanwhile, the landfill residents' housing conditions is related to the dwellers' voluntary and *ad hoc* management of their own living environment, which manifests a potential self-help, self-organisation of community. Second, garbage collecting has dual aspects: it is recycling (returning to normal society) and an act of scavenging (disrupting the separated waste by the norm of a society). Garbage collecting is, in this sense, a practice of re-ordering (of recycling) through dis-ordering (of scavenging), harboring inherent conflict in it. Through these examination, this study attempts to demonstrate that the precarious living environment, derived from the borderline characteristics, will lead us to reconsider the sense of security and resilient living in the urban context.

Keywords: landfill, habitation, self-organisation, precariousness, disruption

### Introduction

The Nanjido landfill was a habitation landfill in which people with diverse backgrounds gathered and settled in or near the landfill site to find economic opportunities, creating a working community of garbage collectors. Initially, their residency began in the form of squatting in the city-owned land. But when the city built a collective housing complex for the settlers and gave them the right of residence, the town became posited on the legal-illegal borderline in various socio-economic respects, which placed the landfill community in the state of ambiguity. David Gantt Westendorff mentions that “the largest single urban land tenure category in many developing countries is that of extra-legal land developments. These include a wide range of land development practices, from squatting, unauthorized sub-divisions to the construction on registered land of houses that have not been officially sanctioned.”<sup>1</sup> The residence in the Nanjido landfill, in this sense, can be viewed as a form of extra-legal land development. Especially the landfill housing, although beginning as squatting, was mostly registered structure that was not been fully sanctioned.

Landfill, as the site of the wasted, or the territory bordered from that of usefulness, in principle of the modern society, must not be fused with the alleged normal city space. Inhabiting in the landfill is, thus, an invasion into the prohibited zone, crossing the border, and a subversive act against the existing norm of constant bordering between the valuable and the valueless. The transition from illegal occupancy to registered legal residence in the mid-1980s placed the landfill residents in a more ambiguous position of citizen-subject<sup>2</sup> as they were free from citizens’ duty of tax payment and from the rights to social welfare services.

This research examines the borderline characteristics of the Nanjido landfill and its community through the landfill residents’ housing conditions and working patterns. First, the housing conditions concern not only with the land tenure issue or residency in the legal-illegal border zone, but also with the individuals’ *self-help* management of their own living environment. Second, the work of garbage collecting, the primary economic means of living in the landfill, will suggest a symbolic meaning of self-employed activity. Garbage collecting aims to trade recyclable items and make profit, yet, the essence of this job is rooted in the act of scavenging. It is the practice of re-ordering (recycling) through dis-ordering (scavenging), harboring inherently conflicting duality. The workers, too, attempted to

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<sup>1</sup> David Gantt Westendorff, ‘Three Essays on Urban Governance and Habitat in Developing Countries,’ Dissertation, Cornell University, 2009, p. 56.

<sup>2</sup> Verena A. Conley states that even if humans aspire ultimately toward a borderless world especially in today’s globalised world, they are still defined by the state and borders. They are not simply migrating masses, but the subjects who should ask for the right to move, to reside and to inhabit. In this sense, she claims that an ‘eco-subject’ must also be a ‘citizen-subject,’ a term coined by Étienne Balibar (Verena Andermatt Conley, ‘The Ecological Relation,’ *Relational architectural Ecologies: Architecture, Nature and Subjectivity*, ed. Peg Rawes [London: Routledge, 2013], p. 283; Étienne Balibar, *Droit de Cité* [Paris: Edition de l’Aube, 1998]).

assimilate themselves to existing economic systems (through recycling) by resisting it (through scavenging). The work itself, as such, implies that the potential of order-making derives from the processes of disarranging.

Meanwhile, the borderline characteristics of their housing and work exposed the community members to permanent precariousness, both physically and psychologically. Precarious living environment in the landfill suggests not only the issue of body-security-space, but also the relational matter between body-security-capitalism. For Foucault, biopolitics was a “positive influence on life that endeavours to administer, optimise, and multiply it,”<sup>3</sup> achieved through a set of regulatory regimes (insurance, public health, welfare programmes etc.) that emphasised the wellbeing and benign control of the body, and of society as a whole.<sup>4</sup> The case of the Nanjido landfill residence demonstrates the ways in which certain socio-economic structure prevents certain socio-economic groups from full access to health and welfare services, causing insecurity in their space. The relation between body, security and capitalism provides an undercurrent of precarious environment as the landfill and its people’s living ground depended on the neoliberal logic of city development.<sup>5</sup> Thus, this study will inquire into the precarious aspects in their housing and work environment in which the security was not guaranteed.

Such generalised precariousness leads us to reconsider the meaning of absolute sense of safety and security in the urban context. It will suggest an alternative view on the vulnerable environment, regarding it as dominant human habitat of today compared to a limited few that are generally conceived as normal. This is not to determine the vulnerability as a norm, but to diagnose the current environmental situation from the perspective not confined to that of the northern hemisphere. By doing so, this will draw an emancipatory potential of the habitation landfill as border area, the subversive attributes of which may enable the creation of voluntary community and restoration of eco-subjectivity.

### Architectural Forms of Nanjido Residence

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<sup>3</sup> Michel Foucault, *The History of Sexuality 1: The Will to Knowledge*. trans. Robert Hurley (London: Penguin, 1998), p. 137.

<sup>4</sup> Derek Gregory, ‘Vanishing Points: Law, violence and exception in the global war prison,’ in Derek Gregory and Allan Pred (eds.) *Violent Geographies: fear, terror and political violence* (London: Routledge, 2007), p. 206.

<sup>5</sup> Joe Penny, while discussing biopolitics-security-space relation, points out that further work is needed to tease out the relationship between biopolitics, security and capitalism, and how this relationship works to produce spaces of insecurity. He continues to state that one could apply this framework to the neoliberal “annihilation of space...[and]...the annihilation of the people who live in it” (Don Mitchell, ‘The Annihilation of Space by Law,’ *Antipode* Vol. 29 (3) [1997], p.305) and the use of health and security discourses to free up prime real estate areas currently being used as shanty towns (Joe Penny, ‘Insecure Spaces, Precarious Geographies: Biopolitics, Security and the Production of Space In Jerusalem and Beyond,’ UCL Development Planning Unit [DPU Working Paper No. 141, 2010], p. 27).

In 1978, when Nanjido was appointed as Seoul's official main landfill, the ragpickers from other landfills rushed into this area and formed a new town of 'outsiders.' At the beginning, Nanjido residents mostly consisted of *jae-geon-dae* who had previously worked in other landfills.<sup>6</sup> During the early and mid-1980s, people other than *jae-geon-dae* gradually moved into Nanjido for economic reasons. According to a survey conducted on the in 1993 with 532 families (out of 820) that remained in Nanjido, 27.1% moved to Nanjido following the opening of this landfill and 26.5% moved in when they went out of business.<sup>7</sup> As garbage collecting in Nanjido turned out profitable enough to lead a life, initial members brought their relatives into the landfill especially after the mid-1980s. The Nanjido landfill community was, as such, mainly created by the people who could find almost no economic opportunities and social positions in the city. Political dissidents or protesters against the military dictatorship in the 1980s occasionally hid themselves in Nanjido. In sum, the Nanjido landfill community was created mainly for the socio-economic purposes by the people who were seeking financial opportunities, and it was possible in Nanjido as it was unsanitary landfill from which a variety of valuable resources could be reclaimed and traded.

### *Self-built structures*

In the Nanjido landfill, early settlers built houses by themselves with scrapped materials found in the garbage dump. As for the building methods, they set up wooden pillars and covered the rooftop with vinyl or other water-proof materials. Sometime, they tied the corners of the wooden pillars to trees nearby so that the structure could stand still relatively safely.<sup>8</sup>

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<sup>6</sup> Regarding the institutional organization of the vagrants and ragpickers under the title of the Reconstruction immediately after the 5.16 coup d'état in 1961, and its transformations throughout the 1960s and 1970s, Soo-jong Yoon, 'The Characteristics and Changes of Rag Pickers Community, *Democracy and Human Rights*, Vol. 2 (1) (2003), pp. 175-210.

<sup>7</sup> '43% of Nanjido Residents Do Not Want to Move Out,' *Hankyoreh* (19 June 1993).

<sup>8</sup> Interview with Jae-Soon Yoo (21 August 2014).



Figure 1. Early houses were set up by tying the corners of the structure to trees.

After 1984 most Nanjido landfill residents moved into new collective housing complex provided by the Seoul city, but some who did not want to become a part of the community built their huts in the landfill site and continued to live there.<sup>9</sup> Huts were built for work purposes as well—shelter or lounge, dining place and public toilets for garbage collectors working on site. Also, each garbage collector had one's own temporary tent structures where they placed bags of collected items, which they were carrying with them while moving around the landfill. There were about two hundred non-registered illegal temporary structures as of 1987. The illegal housing patrol occasionally destroyed these huts, but residents or workers rebuilt them again and again, and they remained until the late-1990s.



Figure 2. Garbage collectors' lounge or housing in the landfill (c. 1990s): exterior and Interior

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<sup>9</sup> Interview with Nun Magdalena (26 August 2014).



Figure 3. Tent style housing in the landfill with additional exterior structures

### *Collective housing complex (1984-1993 [2001])*

Generally, Nanjido people's residency refers to a complex of prefabricated Quonset-type of houses located in 482 Sangam-dong. As the Seoul city provided them with collective housing when self-built shabby houses were destroyed by the 1984 flood, their basic living conditions drastically changed. It is unusual for the municipal government to build a housing complex for garbage collectors, because it indicates that the government legally allows them to live in the city-owned land. It is not clear why the city decided to provide the illegal occupants with the right to residence. According to a Seoul city's public official, it was cardinal Stephan Sou-hwan Kim who proposed that the city provide the occupants with basic courses of living and his remark affected the city's decision.<sup>10</sup> The city's provision of the housing complex along with the residence registration was, as such, initiated by a philanthropic intention rather than as a part of the government's urban planning or development policies.

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<sup>10</sup> Interview with Yong-Soo Kim (16 May 2014).

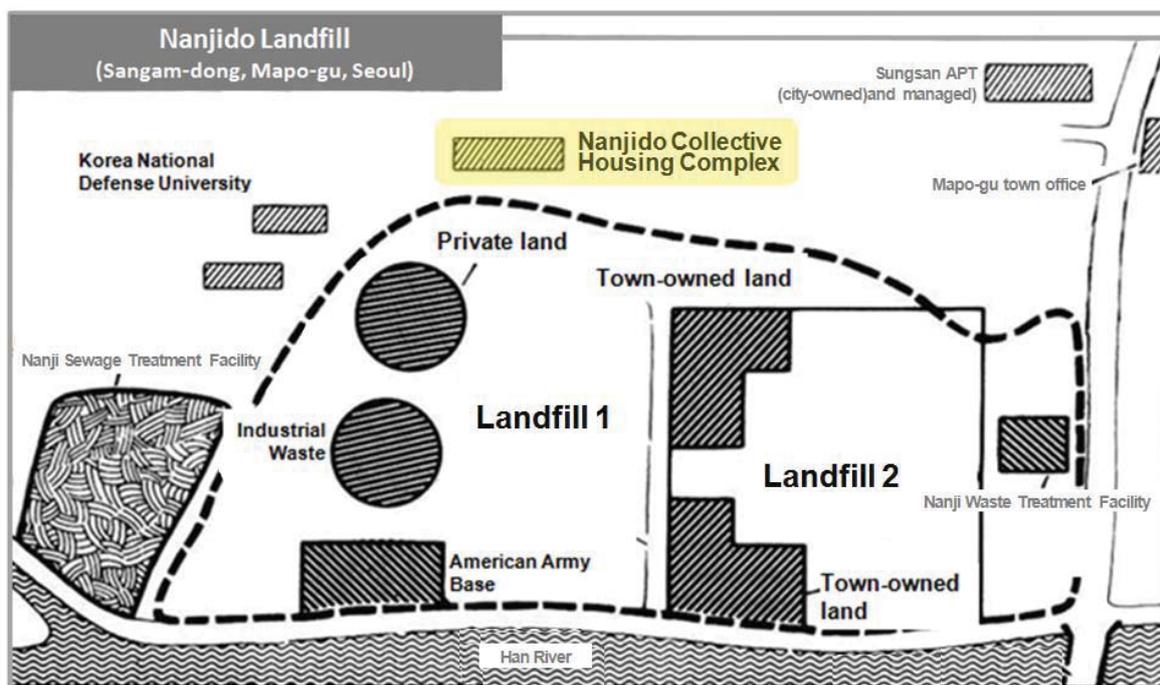


Figure 4. Nanjido collective housing complex located north of the landfill site

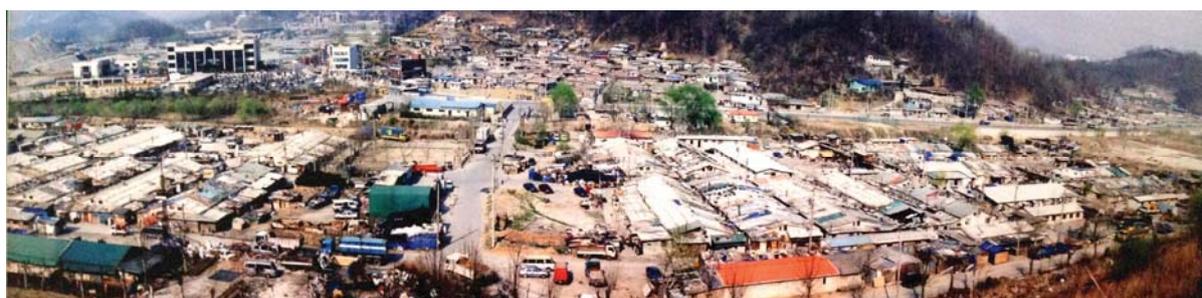


Figure 5. Nanjido collective housing complex (1984-199/2001)  
Approx. 4,000-4,500 people lived in 40 Quonsets, 24 families per building

In the collective housing complex, approximately 1,000 families were living under one address.<sup>1112</sup> Twenty four families lived in one Quonset, and average 4 m<sup>2</sup> was allotted per family of four to six members—the total population living in the complex reached

<sup>11</sup> Byung-cheon, Choi, 'Nanjido Report: Nanjido People's Lives for Survival' (*New Family*, Vol. 369, May 1987), pp. 34-42. Newspaper reports on the lives and the living conditions of Nanjido people from 1980 to early 1990s similarly described their lives as survival human story, seen from an outsider's point of view. See 'Digging Life from the Waste Dump,' *Dong-A Ilbo* (15 July 1980); 'Manage to Live through Waste,' *MK Business News* (19 September 1981); 'Nanjido: People Who Stake Their Lives on Waste,' *Dong-A Ilbo* (23 July 1984); 'We Are the Recreators, Even Though It Is the Life in Dust,' *Kyunghyang Shinmun* (9 January 1990); 'The Last Winter of Nanjido,' *Kyunghyang Shinmun* (13 December 1990).

<sup>12</sup> Public officials often call this complex 'Indian village.' According to the former Nanjido residents, however, this expression has never been heard of nor used within their community. It seems that the 'Indian Village' was a derogatory nickname for the Nanjido people and community, only used by non-Nanjido people.

approximately 4,000 to 4,500.<sup>13</sup> Each house unit was equipped with water pipe and sewage system but did not have a bathroom. So they shared public toilets, paying 1,000 won (1 USD) per month for maintenance and used cramped in-house kitchen area for shower and washing as well. They would often wash clothes outside the house, using shared water facilities between or around Quonset buildings. Yet, taking a shower remained unresolved throughout the 1980s. For garbage collectors who were working in the landfill where they were exposed to dust and putrefying toxic gases, shower facility was an absolute necessity. In 1989, as then Seoul city mayor Goh Kun initiated government's living environment renovation project for Nanjido, they had renovated public toilets and shared bathrooms (125 m<sup>2</sup>) where forty people could take a shower together.<sup>14</sup>

What is notable about the living in the collective housing of Nanjido is that they transformed the building exterior and interior of each unit as they needed. To complement the cramped interior, they would use exterior spaces as much as possible by extending the side of the building or adding extra structures such as staircases so that they could use the upper part of the building. It was much easier for the building on both edge of the complex to extend on one side—they attached additional structure on its side mostly for commercial purposes such as hair salon, clothing stores, bicycle sales and repair shops, briquette stores and so forth. On the other hand, extra structures between Quonset buildings made alleys even narrower. In addition, due to the confined interior spaces, people would often place household goods outdoor and wash clothes outside the house unit, which contributed to the crowded outdoor spaces. Therefore 40 Quonset buildings looked almost as if they were linked to each other as one entity. Meanwhile, interior of the house unit had less option for change other than dividing one space into separate rooms: generally one for parents and the other for children. According to the Seoul city official who was in charge of the Nanjido residents' relocation after the landfill's closing in 1993, some households which could afford—but remained in Nanjido for work or for legal battle against the city for compensation—had renovated the interior of the unit far more actively.<sup>15</sup> Such remodeling, especially the extension of the building was not firmly restricted by real estate rules or regulations in Nanjido. In principle, the sales of the unit of the collective housing were not permitted, but individual trade was not completely controlled.

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<sup>13</sup> Interview with Rev. Kyung Whan Chang (13 August 2014).

<sup>14</sup> *Dong-A Ilbo* (27 April 1989); *Kyunghyang Shinmun* (17 July 1989); *Hankyoreh* (28 April 1989).

<sup>15</sup> Interview with Yong-Soo Kim.



Figure 6. (Left) Extended sides of the building for extra purposes (c. 1990s), (Right) Interior of a house remodelled/divided into separate rooms (c. 1990s).

The emancipatory potential of self-building in the landfill derives from the fact that they combined ad hoc parts to set up a needed structure. It is a practice based on interpretations of transformative potentials of the material, exploring the indeterminacy of the material itself. The liberating force inherent in creation is rooted in this idea that anything could transform into something else. In this respect, the self-help approach to building is akin to the concept of bricolage—the term that anthropologist Claude Lévi-Strauss used to describe patterns of mythological thought which does not select means that would meet the pre-formulated goals, but use or reuse available sources to make things and solve problems.<sup>16</sup> While discussing schizophrenic desiring-production, Deleuze and Guattari invoked Lévi-Strauss and referred to bricolage as a schizoanalytic, transgressive mode of production. Inasmuch as it works with what is at hand instead of starting from planning or designing, Schizoanalysis can be viewed in the similar vein of bricolage in Lévi-Strauss's sense.<sup>17</sup> The potential of bricolage-esque or schizoanalytic approach to production lies in the transformative indeterminate openness. Given that the politics can be possible only when the final purpose is not determined and open discussion is allowed, the material alteration in self-building transversally extends the discourse of the indeterminate attitude toward environment to social and political dimensions.<sup>18</sup> For the Nanjido landfill residents, making one's own living environment was not an option, but the only way through which they could survive. Thus we must discuss making of one's own environment in inevitable situations of extreme destitution with care and caution not to romanticise any conditions of deficiency.

According to David Gantt Westendorff, “self-built or self-help housing is the product of a range of activities leading to the design, construction, maintenance, and management of the

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<sup>16</sup> Claude Lévi-Strauss, *The Savage Mind* (Chicago: University of Chicago Press, 1966/1962).

<sup>17</sup> Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. Robert Hurley, Mark Seem and Helen R. Lane (London: Continuum, 2004/1972), pp. 7-8.

<sup>18</sup> *Ibid.*, p. 23, pp. 33-36.

physical structure and immediate surroundings of permanent shelter for human beings. Self-help housing also includes renovations, alterations, or adaptations of existing buildings, including tenements, industrial spaces, or other structures that have not been occupied for lengthy periods and whose new residents or others working with them undertake the improvements.” He continues to state “regardless of the nature of the structure, self-help housing would normally, if not at the moment of first habitation, entail eventual provisioning of clean water, sanitation, and energy within the shelter or within convenient reach of the structure.” The conditions for self-built housing is not unlike those of ‘adequate housing’ as pursued as a human right established and elaborated over time by the United Nations in the Covenant on Economic, Social and Cultural Rights (ESCR). It is because in any structure including self-built or self-help one must be protected from being exposed to any environmental pathogens or other health-endangering conditions.<sup>19</sup> The United Nations Special Rapporteur included the right to adequate housing as a part of the right to an adequate standard of living as follows: “the right of every woman, man, youth and child to gain and sustain a secure home and community in which to live in peace and dignity.” It also asserts that all the rights are interrelated to one another, and thus, the right to adequate housing can be fully realized only when it is applied along with the rights to other infrastructures including food, urban infrastructure (water, sewage disposal, electricity, home waste collection, transportation), health (community clinics, preventive medicine, dental and psychological assistance) and culture/welfare (kindergartens and primary schools, daycare centres, public libraries, artistic activities, sports and recreational facilities) as well as security (security of person and home, and protection against inhuman and degrading treatment).<sup>20</sup> Nanjido residents actively engaged with their housing conditions from self construction of their own housing structure to alterations of the collective housing complex. Infrastructures required for adequate housing were installed one by one, if not complete since their first settlement. Compared to the water supply, however, sewage disposal system was poorer and severely polluted the stream on the north of the landfill. Water pipelines were set up throughout the region, but the water pressure was not always good. Above all, the cramped housing structure did not allow appropriate shower facility that was absolutely required for the landfill workers exposed to severe stench and pollutants. Electricity was poorly equipped before it was installed along with the collective housing complex. One of the major causes of fire in the residential area in the early years—unlike in the landfill where the methane gas would catch fire—was the misuse of candles in the houses when the electricity was not

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<sup>19</sup> Westendorff, pp. 37-38.

<sup>20</sup> Ibid., p. 38, p. 55; Miloon Kothari, Statement of the Mr. Miloon Kothari Special Rapporteur on adequate housing as a component of the right to an adequate standard of living to the Commission on Human Rights, Fifty-ninth session, Agenda Item 10 (4 April 2003). Achille Mbembe, in a discussion on the full subjectivity, mentions ‘rights to health, education and a functional economy’ as basic conditions for full civil, political and socio-economic rights (Penny; Achille Mbembe, “Necropolitics,” *Public Culture* Vol. 15(1) [2003], p. 13).

available sufficiently.<sup>21</sup> After the electricity was provided to all housing complex, ill-management of the old lines would cause a short circuit and fire. Being the registered residents after moving into the collective housing in 1984, the landfill people were, in principle, eligible for healthcare and welfare services including education. However, they had difficulty in full access to such services either because of economic reasons or because of the lack of service facilities within the area. Social prejudice about the landfill people was also an obstacle to deserving services. The lack of health and welfare services in the landfill community often entailed security-related incidents, too.

### *In/Security: precarious living environment*

Frequent accidents in the landfill work site, lack of or insufficient healthcare and welfare services are causes of constant insecurity, endangering the lives of the Nanjido landfill people.

First of all, many accidents occurred during working processes in the landfill; some garbage collectors were hit by trucks, bulldozers, or gigantic stones rolling from the landfill mound; some were buried with the piles of waste; and, in many cases, people died from consuming toxic foods or drinks obtained in the landfill. Because they were always exposed to dust, dirt and unsanitary materials, a number of residents had respiratory, dermatological diseases and food poisoning as well as stomach and liver problems caused by high consumption of alcohol.<sup>22</sup> Fire<sup>23</sup> was another problem in Nanjido. As the landfill grew larger, massive methane gas caused more fires. Once a fire broke out in the landfill, it could hardly be put off by general fire fighting equipments and techniques, and so the bulldozer drivers would risk their lives and go into the blazing flame to cut the whole block of flaming landfill mass.<sup>24</sup> Fire in the residential area was often caused by candles during the early years, whereas later it broke out by short circuit. Also, Nanjido, as a flood prone area, continued to be flooded during the summer monsoon season.<sup>25</sup>

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<sup>21</sup> Interview with Rev. Kyung Whan Chang.

<sup>22</sup> 'A Truck Hit a Tent in Nanjido, Killed Junkmen Couple,' *Dong-A Ilbo* (17 January 1990). Regarding the landfill workers' exposure to toxic chemicals, see 'Nanjido Poisonous Gas Overflowing,' *Kyunghyang Shinmun* (9 October 1996); '12 Nanjido Illegal Recyclers Arrested: Refrigerator Disassembling, Freon Gas Emission,' *Kyunghyang Shinmun* (26 September 1991).

<sup>23</sup> As for fire in the Nanjido landfill and residential area, see 'Fire in Nanjido Cabin Compound: 19 Houses Burnt,' *Kyunghyang Shinmun* (28 April 1992); 'Nanjido Residents Moving Urgent: Unidentified Fire,' *Dong-A Ilbo* (31 March 1993); 'Fire in Nanjido,' *Hankyoreh* (14 February 1996).

<sup>24</sup> Interview with Yong-Soo Kim.

<sup>25</sup> On one of the biggest floods in the Nanjido landfill area, see 'Nanjido Cabin Compound in Danger of Collapse,' *Hankyoreh* (15 September 1990).



Figure 7. (Left) Fire in the landfill (c. 1990s), (Right) Fire in the residence (1993)

What significantly differentiated Nanjido from other regions are the welfare services. Without government support, they entirely relied on religious organizations; for example, daycare centre necessary for mothers working in the landfill were built and run by Catholic and Christian groups' voluntary services.<sup>26</sup> There were no government-registered institutions including schools and hospitals in Nanjido. There was neither a clinic nor a pharmacy. Thus, the residents' health was in the hands of volunteer doctors who served individually or in connection to religious organisations. Catholic and Christian church-related doctors generally visited Nanjido weekly, bi-weekly or monthly basis.<sup>27</sup> In the case of serious illness or fatal injury by accidents, they went to the nearest Catholic hospitals located outside Nanjido.<sup>28</sup> Residents who did not have resident registration and health insurance could not receive affordable healthcare services in hospitals. Even though registered residents are eligible for healthcare services, many people did not have proper insurance and rarely visited hospitals mainly for economic reasons. It was not until 1993, when the Nanjido stabilization plan was implemented that the town government provided Nanjido residents with free medical check-up services.<sup>29</sup> For education, Nanjido students went to schools in the northern part of Sangam-dong or Susaek area located in the north of Nanjido. Geographically, the small river stream called *nanjicheon* was the borderline that separated Nanjido from neighbours, but school was the field in which Nanjido children and teenagers experienced invisible border between them and others.<sup>30</sup> Some students did not enjoy going to school where they are often detested by students from other neighbours. The lack of after school programmes for

<sup>26</sup> Interview with Nun Magdalena.

<sup>27</sup> 'Nanjido Sunday Charity,' *Kyunghyang Shinmun* (30 January 1987).

<sup>28</sup> Interview with Rev. Kyung Hwang Chang and Nun Magdalena.

<sup>29</sup> 'Free Medical Checkup for Nanjido Residents,' *Dong-A Ilbo* (28 June 1993).

<sup>30</sup> "The small stream, which we called 'poop river', and the bridge was the line. Here and there were hell and heaven. The children of this part could not play with the ones from that part. For the parents of that region, we were a group of ragpickers and so they could not allow their children to get along with the ragpickers' children" (Interview with Nun Magdalena).

elementary or junior/high school students were supplemented by voluntary services by religious organizations or like-minded individuals.<sup>31</sup>



Figure 8. Volunteer medical service, taking care of 100 people every week in a temporary clinic inside a church (1987)

In order for self-help housing to be an adequate housing, it requires conditions such as *affordability, livability, security* and *sustainability*.<sup>32</sup> In the Nanjido landfill, since the early houses were self-built structures on a squatted land with found materials and the collective housing complex was provided by the city, it can be said that the residents were given the affordability of the housing. The inhabitants also continued to rebuild and alter to make better livable and more secure conditions. However, without socio-economic power and less capabilities to sustain these conditions (including adequate sources of income), affordability, livability and security cannot help being challenged. As long as the housing was temporarily allowed without a guaranteed sustainability, livability and security were likely to become unstable. That was why collective housing complex residents were desperately attempted to maintain the right of residence that might guarantee them a right to an affordable housing of their own after the landfill's closing.

## **Nanjido Landfill as Work Field**

### *Economic life and work environment*

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<sup>31</sup> Regarding after school activities (painting), see Ju-hye LeeYou, 'Painting World in Nanjido,' Saemteo Vol. 32 (1) (January 2001), p. 59. For daycare centre run by religious organisation, see Hyun Kang, 'Waiting for Love,' *New Family* 386 (December 1988), pp. 102; 'Plant Love on the Children of Waste Ground,' *Hankyoreh* (12 November 1991).

<sup>32</sup> Westendorff, p. 56-61.

For Nanjido dwellers, the major source of income was the work in the landfill—garbage collecting. As the amount of consumption drastically increased throughout the 1980s, the job of garbage collecting had become more profitable than ever. The exceptional circumstance where the workers could avoid income tax payment also contributed to increased earnings. Rev. Chang stated “in the 1980s Nanjido was the land of opportunity for diligent people and the paradise for the lazy because they could earn money in concurrence with the extent of their work.”<sup>33</sup> That is, the Nanjido landfill was full of potential profit for those who endeavoured to grasp economic opportunities, while anyone could survive day to day life just by doing a certain amount of work. Monthly incomes of the Nanjido garbage collectors varied depending on each individual’s position and skills. In better cases, they earned 500,000-700,000 KRW (500-700 USD) per month, which corresponded to the salary of mid-lower class in the early and mid-1980s. For that reason, the number of the Nanjido garbage collectors increased from 550 in 1980 to 2,000 in 1984.<sup>34</sup> Although the accurate income could not be counted or recorded mainly because most people did not pay income tax, according to the former landfill residents, during the mid to late 1980s, many garbage collectors, mostly the front-earners who had a right to garbage trucks, built up wealth to a certain degree. One church in Nanjido collected more than 1,000,000 KRW (approx. 1,000 USD) weekly.<sup>35</sup>

Although garbage collectors worked independently and gained individual incomes in Nanjido, there were strict work systems and methods among themselves. There were two types of garbage collectors; one was the ‘front-earner’(앞벌이) and the other was the ‘rear-earner’(뒷벌이), and they had strict hierarchy and work rules. Front-earners had a right to one or more waste trucks coming from 17 different towns (total 40 front-earners had rights to about 700 waste trucks). They sometimes trade the right to the truck for 2,000,000-3,000,000 KRW (2,000-3,000 USD). As front-earners picked up recyclables as soon as the truck unloaded the waste dump, they started working early in the morning when the trucks came in at dawn, whereas rear-earners began morning work at around 7 am and normally finished around 1 pm. Only after front-earners picked up recyclable items could rear-earners gain access to the rest of the waste—city-operated bulldozers that level off the ground often helped rear-earners to work more easily by driving back and forth to gather scattered pieces at one point. When the bulldozer pushed the garbage to the end of the ridge dropping it down the slope, rear-earners rushed to the piled dumps and picked up recyclable items under the landfill cliff. Likewise, there existed significant difference in income and work environment between the two groups; front-earners had more opportunities to ascend the economic class ladder, whereas rear-earners remained as low-income class for longer period.

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<sup>33</sup> Interview with Rev. Kyung Whan Chang.

<sup>34</sup> Ibid.

<sup>35</sup> Ibid.



Figure 9. (Left) Front earners collecting recyclable items when the truck unloads the garbage, (Right) Rear earners picking recyclables while a bulldozer pushes remained garbage to one side

### ***Recycling and scavenging***

There are four basic methods of garbage disposal: dumping (sanitary or unsanitary landfill), burning (incinerating), turning it into something that can be useful (recycling), and minimizing the volume of material goods—future garbage.<sup>36</sup> What was practiced in the Nanjido landfill was turning waste into something useful, or recycling.



Figure 10. Ping-pong table with a bar nailed in the middle and paddle made of palm-sized board

Their recycling activities were made for different purposes: one for their own living and the other for making a profit. Above all, as aforementioned, the landfill residents built their houses and other extra structures—either private or public—by using found materials such as wood, metal, tarpaulin, vinyl, fabric and so forth. They reused all kinds of necessities at home from electronic appliances to small household goods to clothes. They repaired or upcycled

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<sup>36</sup> William Rathje, Cullen Murphy, *Rubbish! The Archaeology of Garbage* (New York: Harper Collins Publishers, 1992), p. 33.

defected things, or reclaimed the objects by reinterpreting the original purpose of the goods. Foods were recycled mainly for the workers' own consumption but there were also cases that they re-sold the raw food in the market.<sup>37</sup> During the mid and late 1980s, especially after the 1986 Asian Games and 1988 Seoul Olympic games, general consumption rapidly grew and the amount food refuse increased accordingly. Foods are somewhat different from manufactured products in the mode of recycling. Sometimes they picked up and consumed unconsumed food, but in most cases they collected raw ingredients that had been refused intact. In either case, food recycling is basically a form of gleaning and consuming over-production (or the one that unfits the standard for commodity value) rather than reclaiming the refuse whose value has been expired or lost. Food recycling is, in this respect, closely related to the high consumerist society in the late twentieth century and it harbours subversive signal that opposed the post-industrial capitalist economy represented by over-production and over-consumption. In Nanjido people's methods of consumption—gleaning, collecting and reusing of found items—we can find a case precedent for alternative consumption movements such as freeganism.<sup>38</sup>

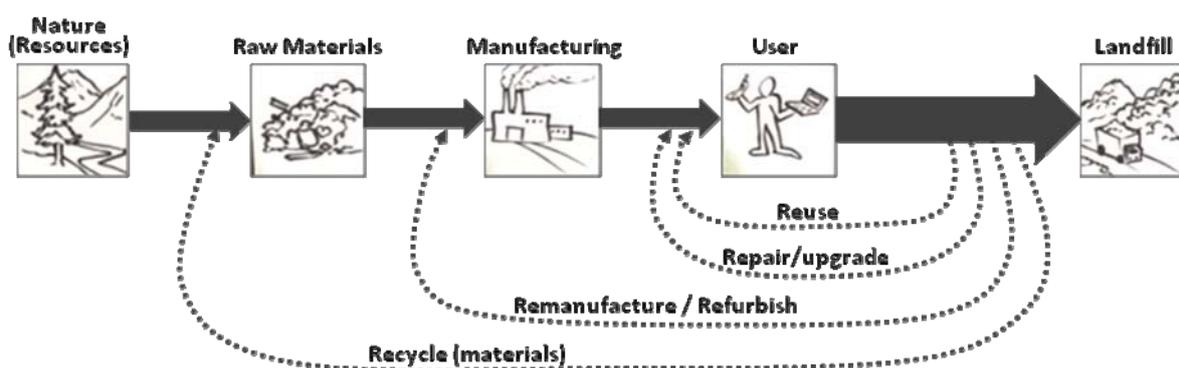


Figure 11. General processes of production, consumption and recycling

<sup>37</sup> “The day when American Army garbage trucks came in was our festivity. We got all sorts of snacks and cookies or even raw meats” (Interview with Jae-Soon Yoo).

<sup>38</sup> Freeganism is a coinage derived from ‘free’ and ‘vegan,’ which also has a meaning of free gaining, an extreme anti-consumerist and anti-capitalist ideology. Historically it began in New York in the mid 1990s and spread throughout major wealthy cities around the globe including London, Berlin and Paris. Freegans’ practices were extended to squatting, sharing, urban gardening etc. (Jieun Shin, ‘Waste and the Reconstruction of Urban Consumer Culture,’ *Journal of Modern Social Science* Vol. 17 (2013), pp. 17-38). Such alternative consumption methods have been discussed since the global economic crisis around 2008 and influenced on the design direction, too.

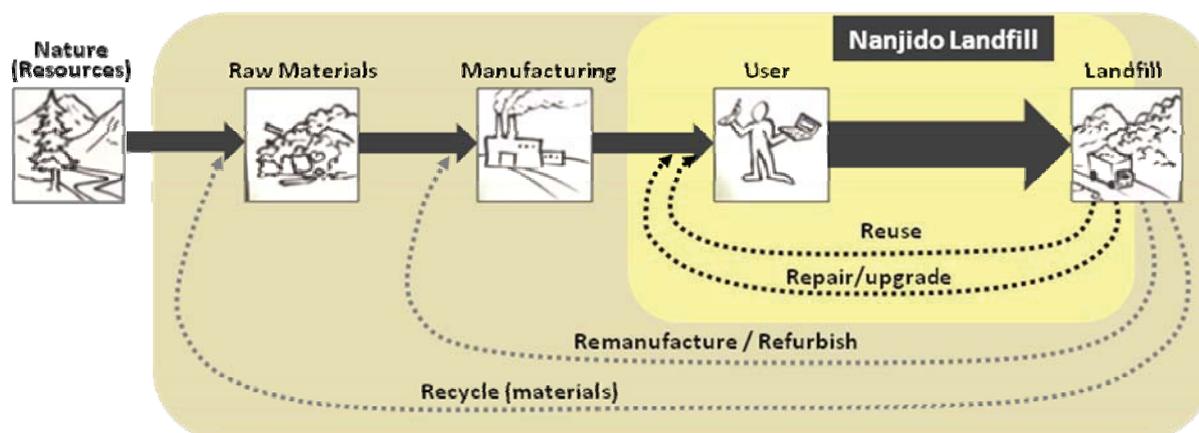


Figure 12. Nanjido landfill: daily living through reuse of found objects and economic activity through remanufacturing/refurbishing and recycling of raw materials collected from the landfill

During the high consumer capitalist society of South Korea, all sorts of biodegradables including wood and fabric as well as non-biodegradables entered into the non-sanitary landfill of Nanjido. Even electronic items such as televisions and refrigerators were mixed together with discarded food. In Nanjido, garbage collectors separated and categorized the recyclable items: reusable electronic items, mechanical parts (for reuse or remanufacturing/refurbishing) and raw materials including metal, plastic, fabric, wood and paper. Before trading with the second-hand shoppers, they organized the materials by packing them in certain size and dimension. Through these processes, the garbage collectors sorted out the recyclable items from the bulk of waste, selling any steel, plastic, vinyl, can, paper and glass to second-hand shoppers, who, in turn, re-sold them to material-processing factories.<sup>39</sup> The second-hand shoppers would come to the landfill regularly (average every 10 days) to purchase the items they needed and paid by cash. The price of materials was decided normally based on weight.



Figure 13. (Left) Fabric (c. mid-1980s), (Right) Paper (c. late 1980s - early 1990s)

<sup>39</sup> See 'Digging Life from the Waste Dump,' *Dong-A Ilbo* (15 July 1980); 'Nanjido: People Who Stake Their Lives on Waste,' *Dong-A Ilbo* (23 July 1984).

In South Korean context, ragpicking used to be performed before a large-scale municipal landfill opened and it often meant both cleaning city streets by removal of abandoned objects and collecting reusable items from refuse. In fact, however, ragpickers focused on collecting recyclable objects in the street rather than cleaning public spaces, which eventually contributed to a clean environment. In this sense of salvaging materials to be reused, there is a lineage between ragpicking and garbage collecting in the landfill.

Early on in the early twentieth century, Walter Benjamin, while reflecting on Baudelaire as the writer of modern life, found the analogy between the poet and the ragpicker in their collecting useful things in the refuse (in modern French context, ragpicking means rummaging through refuse in the street to collect material).<sup>40</sup> Benjamin points out that the ragpicker and the poet are both concerned with refuse, doing their work while other citizens are sleeping. Baudelaire himself also captures the very essence of ragpicking: collecting and categorising potentially valuable objects from the refuse on a daily basis. By comparing the ragpicker with the poet and Baudelaire's own practice, Benjamin suggests a creative potential of ragpicking.

In the twenty-first century neoliberal economy, Zygmunt Bauman, drawing on Mary Douglas's idea of 'dirt,' interpreted this concept as either something that has lost its use value or someone who lacks the ability to become proper producer and consumer, thus remaining as surplus. He, in this line of thought, elucidates the relationship between modern capitalism and the meaning of waste. To put it more precisely, garbage removal from the city space as an act of cleaning is distinguished from garbage collecting practiced in the landfill as an act of sorting out and re-evaluating the material value. Since the landfill is a separated topological entity of refuse—consumed, abandoned and removed in the urban space—it, in principle, must be remained separated and left intact for it not to be blended with useful things in the proper city space. Garbage collecting in the landfill, in this sense, is an inverse process of removal, or saving and returning the wasted yet still valuable things to the city, while crossing the absolute borderline between zones of the useful and the useless.

Reuse or recycling of the landfill was neither an intended practice nor confined to the anti-consumerist or anti-capitalist ideology. Rather, we need to understand recycling in the landfill as something fundamentally based on the act of disturbing the separated waste dump—scavenging. The act of scavenging, in its essence, holds a potential threat to the

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<sup>40</sup> “The poets find the refuse of society on their streets and derive their heroic subject from this very refuse [...] This new type is permeated by the features of the ragpicker, who made frequent appearances in Baudelaire's work” (Walter Benjamin, *The Writer of Modern Life: Essays on Charles Baudelaire* [Cambridge, MA: Harvard University Press, 2006], p. 108).

existing socio-economic norm as it disrupts what has already been defined as improper and discarded as waste outside the boundary of the modern city. In Egypt, scavengers are known as *zabaline*<sup>41</sup> predominantly consisting of Coptic Christians, and in Mexico, scavengers are called *pepenadores* who are unionized and even powerful.<sup>42</sup> The intimidating power of the scavengers, as in these examples, derives from their identity as an anomaly and the group's subversion of the existing social norm.

## Socio-spatial Position of the Nanjido Landfill community

### *Precarious life*

While in imaginary geography,<sup>43</sup> the Nanjido landfill was almost mythical place, not existing in reality, often forgotten in the people's mind, thereby becoming a space of exception,<sup>44</sup> for the landfill dwellers, it was a lived space<sup>45</sup> where they led abnormal or exceptional, or possibly alternative socio-economic lives, harbouring a subversive potential. With a conceptual framework based on a relational dynamics between the body, security and space, Joe Penny argues that extreme insecurity produces the space of exception<sup>46</sup>—this can be interpreted that, drawing on Foucault's idea of biopolitics, the break between people who must be secured and those who must not leads the latter group to be posited in a state of exception from sustainable preservation of the secured. Insecurity, particularly in studies on troubled regions (e.g. the Palestinians in East Jerusalem), is often concerned with the precarious geographies, and the wall, the checkpoint and systematic municipal discrimination function as spatial materiality that causes and controls the in/security of life. In the Nanjido landfill, with no militant political confrontation involved on a state level, there were no significant material structures of division such as wall or checkpoint, and thus, literal geographical precariousness is not exactly the case in the landfill area.<sup>47</sup> Rather, it would be

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<sup>41</sup> The Zabbaleen (زبالين) Zabbalīn) literally means 'garbage people' in Egyptian Arabic and it also refers to 'garbage collectors' who serve in the Mokattam village in Cairo. The Mokattam village, known as the Garbage City is assumed to be the largest city specialized in informal garbage processing. The total population of the village is estimated to be 60,000 (Ragui Assaad, 'Formalizing the Informal? The Transformation of Cairo's Refuse Collection System,' *Journal of Planning Education & Research* Vol 16 (2) (1996), pp. 115-126).

<sup>42</sup> Rathje and Murphy, p. 40.

<sup>43</sup> "The protean power of imaginative geographies is immensely important because the citational structure is performative: [...] imaginative geographies are not only accumulations of time, sedimentations of successive histories; they are also *performances of space*" (emphasis original) (Derek Gregory, 'Defiled Cities,' *Singapore Journal of Tropical Geography* Vol. 24 (3) (2006), p. 308).

<sup>44</sup> Agamben's theory on the space of exception begins with the camp where the life can be stripped of subjectivity and rights, and exposed to death—bare life (Giorgio Agamben, *State Of Exception* [Chicago, IL: University of Chicago Press, 2005]).

<sup>45</sup> Andy Merrifield, following Henri Lefebvre, defines Lived Space as 'the space of everyday experience' (Andy Merrifield, *Henri Lefebvre: A Critical Introduction* [London: Routledge, 2006], p. 109). Lived space, in Marc Purcell's words, "represents a person's actual experience of space in everyday life" (Penny, p. 22; Mark Purcell, 'Excavating Lefebvre: The right to the city and its urban politics of the inhabitant.' *GeoJournal* 58 (2002), p. 102).

<sup>46</sup> Penny, p. 5.

<sup>47</sup> *Ibid.*, p. 17.

appropriate to look at the landfill as an internally colonised space within the city, seized by and for the city's own socio-economic purposes. In this sense, Agamben's paradoxical notion of 'inclusive exclusion' can be aptly applied to the landfill's position in the city.<sup>48</sup> The landfill is separated from other urban spaces not by visible architectural structures but by perception or imaginaries about the place. Whether it is material or psychological, bordering apparatuses similarly cause individuals' physical insecurity that ultimately challenges their sustainable living in the place. The landfill residence is inherently unstable as their residency is vulnerable at any moment to being compromised by the declaration of a national or municipal development planning. The life in the Nanjido landfill, in its constant uncertainty that obstacles sustainable living, was made, in Judith Butler's term, 'precarious life.'<sup>49</sup>

### *Subversive potential*

The conceptions of the unsanitary, unhealthy, disease, and death is the keywords typically mentioned in modern discourse of hygiene or biopolitical power characterized as an ability to make live and let die.<sup>50</sup> In order to create and maintain the purity and security, society must be insulated by Others including the sick, the mad and the criminal<sup>51</sup> by way of diverse regulative regimes including constitutions, border controls, the law, policy making, bureaucracy, population censuses, invented histories and traditions.<sup>52</sup> In the case of the Nanjido landfill, there were no constitutions, laws and policies that separated the region from other urban areas. Instead, social imaginaries of the place—being unsanitary—made the landfill site be bordered and isolated. To the minds of the non-landfill residents, landfill was a topological mass of waste which was perceived as equal to, and as dangerous as the sick (the unsanitary, potential disease and death), the mad (the abnormal) and the criminal (against order). Moreover, such imaginary ideas identified the dirt (of the refuse) with the garbage collectors and their lives, too.

As Derek Gregory states, society must be insulated by the state from "the outside (the sick, the mad, the criminal)." What is notable here is that the 'criminal' is aligned with the sick and the mad as one of the symbols of anomaly. Whereas the sick and the mad represent a latent state of physical and psychological disease and abnormality, the criminal is a subject who actively causes disorder by violating the laws and regulations. If the sick and the mad signify potential cause (germ) of anomaly, the criminal is an active component and practitioner of violation, disruption and subversion. Generally, the criminal is defined as an existence that may endanger the security of property and of life of the citizens; depending on the

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<sup>48</sup> Ibid.

<sup>49</sup> Judith Butler, *Precarious Life: The powers of Mourning and Violence* (London: Verso, 2004).

<sup>50</sup> Penny, p. 3; Ronit Lentin, 'Introduction-Thinking Palestine,' Ronit. Lentin (ed.) *Thinking Palestine* (London: Zed Books, 2008).

<sup>51</sup> Gregory, 2007, p. 4.

<sup>52</sup> Penny, p. 3; Lentin, 2008, p. 7.

socio-political standard, however, the criminal, especially the political criminal or dissident against current regime, could hold a subversive power of challenging certain conventional rules or ideas. In terms of the zone of abandonment—the landfill in this case—it has its own power of maintenance, production, and even disruption, not merely remaining as an excluded space; the two separate zones are in the relationship of reciprocal exclusion.<sup>53</sup> The subversive characteristics of the landfill stems from its ambiguity as well; the useful and the useless, the valuable and the valueless, and the proper and the improper are all mixed together in the landfill, waiting to be salvaged. The act of digging or disrupting the wasted is, therefore, the initiative of an exploration of the embodied ambiguity.

## Conclusion

The Nanjido landfill community has several borderline characteristics. First of all, in terms of housing, from squatting to a registered but not sanctioned collective housing complex, it exposed the people to constant precarious living conditions. Due to its legal-illegal borderline residence position, the dwellers could not have adequate access to diverse infrastructures and welfare services, which ultimately brought them a ‘precarious life.’ Precariousness stems not only from the lack or short of infrastructure and social security systems, but also from the loss of income sources required to sustain affordable, livable and secure living. The problem of recent large-scale urban re/development implemented by large real development corporations lies in its deprivation of the living and working ground from the existing inhabitants. Financial compensation must be re-viewed in terms that it cannot guarantee a sustainable living.

Second, the job of garbage collecting has two layers: recycling and scavenging. In essence, both activities are one and interrelated. Recycling is possible only through the act of scavenging, or digging and disrupting what has been separated as refuse. Their practice of recycling—now turned into a business of large corporations—suggests an alternative form of sustainable living. Above all, we must have a broadened conception about garbage collecting, not limited to a service to make clean and orderly urban space, but a practice of disruptive and thus creative potential for alternative production and consumption. Ultimately, the disruptive act of scavenging challenges the modern norms of separation between what must be secured and what must not.

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<sup>53</sup> Frantz Fanon argues that in the colonial city or town, there is the principle of reciprocal exclusivity. The zone where the natives live is not complementary to the zone inhabited by the settlers. The two zones are opposed to each other and no conciliation is possible (Ibid., p. 17; Frantz Fanon, *The Wretched Of the Earth* [London: Penguin Classics, 1990/1963], p. 30).

Last, on one hand, the Nanjido landfill was a space of exception, intentionally separated from the *normal* urban space. It worked well by seizing the body and relating the discourse of security and space. On the other hand, as it held an independent and alternative socio-economic system and power, the space was in the position of inclusive exclusion or reciprocal exclusion. In sum, it was the society that removed the refuse and set up a clear boundary, but what were outside the border for its valuelessness could actually cross the border as they need. Being on or crossing the border causes the very ambiguity and ensuing uneasiness, which the modern society has desperately rejected.

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A Seoul city public official who was in charge of Nanjido residents' relocation

Interview with Rev. Chang, Kyung Whan (13 August 2014)

Former reverend of Ban-Seok Church in Nanjido, who lived in Nanjido from 1980 to 2001

Interview with Yoo, Jae-Soon (21 August 2014)

A novelist/journalist who lived and worked as a garbage collector in Nanjido in the early and mid-1980s

Interview with Nun Magdalena (26 August 2014)

A nun who lived and worked as a garbage collector in Nanjido for 3-4 years in the late-1980s

## Community Based Tourism to a Village of Migratory Birds,

### Cheorwon

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#### Abstract

The Korean Demilitarized Zone (DMZ) area could increase in resilience to the shocks that the Korean Peninsula is facing in the constantly changing relationship between North and South Korea. Cheorwon is the city located in the plain area where the military demarcation line is set. The city is in an ironic situation in which the economic development has been restricted but the ecological and cultural value of the region has been conserved. Especially Yangji-ri is the village in Cheorwon called ‘the village of migratory birds,’ where the participation of local people has been encouraged in the process of constructing cultural infrastructures planned for the invigoration of ecotourism. This research is to study the flourishing of a civilian village in a border region while conserving the ecological and cultural values of the DMZ and how they could increase the resilience to the political situation of Korean Peninsula through the participant observation method in Yangji-ri village. The village is at the early stage of developing Community Based Tourism (CBT). With the combination of the top-down and bottom-up models for CBT, new economic and social conditions have been created in this typical Korean farm village, changing it from aged and hollow and making it sustainable in spite of the changeable situation of the border region. The ecological and cultural stature of Cheorwon is the motive for CBT to conserve the current significance of the region, which enables it to be the neutral position and mediate the dispute between North and South Korea even after the unification of Korea.

Keywords: Border Region, Community-Based Tourism, DMZ

#### Introduction

There are some possibilities that the Korean Demilitarized Zone (DMZ) could increase in resilience to the changes and shocks that the Korean Peninsula is facing in the constantly

changing relationship between North and South Korea. DMZ symbolizes the tragic history of Korea and the people's longing for the peaceful reunification of the country. With place-making strategies and cultural events to reinforce the meaning of the DMZ, its aura could be sustainable regardless of the military situation on the Korean Peninsula, even after unification. Moreover, it could become a place where North and South Korea would have an opportunity to better understand each other.

Especially Cheorwon is the city located in the wild plain area at the center of the Korean Peninsula where the military demarcation line is set. The city is in an ironic situation in which the economic development has been restricted but the ecological and cultural value of the region has been conserved. Cheorwon is famous for its migratory bird habitat. The ecological status of Cheorwon as a migratory bird habitat could form a basis for conserving the DMZ as a neutral and mediating area between North and South Korea. Yangji-ri is a village in Cheorwon called "the village of migratory birds," where the participation of local people has been encouraged in the process of constructing cultural infrastructure planned for the invigoration of ecotourism. Yangji-ri is now located before the checkpoint as a result of the policy of northing the Civilian Control Line. This helps people to visit the village and reproduce the meaning of the DMZ area in any military situation.

This research is to study the flourishing of a civilian village in a border region while conserving the ecological and cultural values of the DMZ and how they could increase the resilience to the political situation of Korean Peninsula through the participant observation method in Yangji-ri village. We have participated in Community Based Tourism (CBT) activities with key informants, including the head of the village and a few other leaders, and have conducted in-depth interviews with both residents who are active in activities and those who are not.

## **History and Agents**

Cheorwon became a territory of North Korea after liberation from the Japanese colonial army according to the 38th parallel. Because the South Korean Army recaptured part of Cheorwon during the Korean War, the site of Yangji-ri village has become South Korea's territory. To stabilize the national system after the ceasefire, the South Korean government built strategic villages for reclaiming the abandoned land in the truce line area and propagating toward North Korea. Yangji-ri village was one of these villages, built in 1973 with 100 households. Today, there are 80 households consisting of 150 people in the village, and there is a serious aging problem there. The youngest group of residents is in their fifties, and half of the residents are over 65. Yet Yangji-ri still has a large number of residents, as compared to other farming villages in rural areas. The younger age groups tend to leave the villages and move to Seoul. Some people in the older age groups also leave the village,

following their children.

The main leaders of Yangji-ri are the head of the village, the office manager and the head of the women's association in the village. Hee-Seop Chung, the head of the village, is the most important person in handling every situation in the village. He tries to support artists, scholars and researchers visiting Yangji-ri who are considered to be helpful in promoting the village. Yong-Seok Kim, the office manager, moved to Yangji-ri two years ago after retirement and has been in charge of managing the guest house owned by the village. He also does office work related to tourism business or other events in the village. After seeing the positive changes made by these leaders, the people of Yangji-ri have placed their trust in them.

There are other agents involved in Yangji-ri. Hong Yoo, the town mayor, has a close working relationship with Chung. He and his wife attend every significant event in Yangji-ri. Anna Choi has moved to Yangji-ri for the purpose of publicizing the village overseas. Koreans think it's important to maintain what Yangji-ri has now, rather than develop businesses with large-scale facilities. Choi is studying what the residents can do to promote the value of the village. Jong-Soo Choi is a migratory bird expert who is well-informed about the bird's generally unknown habitat, having observed the birds for 20 years. Through his private network, he guides foreigners and government officials interested in migratory birds. But the people of Yangji-ri, including Chung, disagree with Jong-Soo Choi's ideas on birdwatching tourism.

### **Assets of the Village**

The most famous and important resources for tourism in Yangji-ri are the migratory birds (Figure 1). There are cranes, ducks, eagles and wild geese who come to the village to find food and sleeping places during the winter. The advantages of the village as a bird habitat are assumed to be the better stability, proximity to food sources and the larger rest area as compared to the wetlands in the DMZ. Birdwatching is possible from November through February.

There is also a distinctive atmosphere in the village because of its closeness to North Korea. Visitors can hear cannon fire in Cheorwon, but it sounds louder in Yangji-ri. It's also possible to hear propaganda broadcasts which originate in North Korea and target South Korea. The people of Yangji-ri say they are used to these sounds, but it provides a special experience and atmosphere for visitors. In front of the village, there is a large rice field which has different views seasonally. The landscape is quite typical of a rural area, as there are no high buildings around.

In the village, there are several empty or abandoned buildings which have been remodeled to be used for other purposes. One of these is a closed school which has been remodeled into a public space for the CBT as a government design project. The other example is a residence for

artists created by the county office which remodeled another empty house. There is also a conventional rice mill being left unused because of the high cost of remodeling the building (Figure 2). Because the old mill has a unique atmosphere, it has inspired many artists to create art or conduct performances there. It's expected to become another artwork showcase because an owner of an art center in Seoul has purchased it to lend to other artists for their works. There are also other empty houses in the village, but they are not technically “abandoned.” The owners of those houses simply left them empty, not choosing to sell them even after they moved out of the village.



**Figure 1. Migratory Birds of Cheorwon**



Figure 2. Abandoned Rice Mill in Yangji-ri

## Community Based Tourism

### *Top-down Project*

All of the remodeling of empty buildings in the village has been done via the top-down method. “DMZ Migratory Bird Peace Town” was designed by experts in various disciplines including landscape architecture, architecture, ecology, community activity, etc. (Figure 3). The closed school area in Yangji-ri was repurposed as a demonstration project for the Ministry of Land, Infrastructure and Transport in 2011. The building was completed in 2015 and began operations on November, 2016. The Cheorwon county office and the village, however, had different opinions about managing operations. While the county office wanted to entrust the management to the village, Chung thought that the scale of the facility was too large for the people of Yangji-ri to handle. Eventually, it was decided that the county office would operate the facility, with the exception of the café, which was to be managed by Choi. But because Choi does not socialize with other people in Yangji-ri, the participation of the villagers in the operation of the facility is restricted. Moreover, it’s predicted that this situation will create a conflict between the café and food selling business operated by the women’s association of the village which targets the birdwatching tourists during the winter season.

Samuso, an art planning company in Seoul, supervises a project called the “Real DMZ Project,” which has been installing site-specific artwork in the DMZ border region since 2012. As one of the projects, they have been operating an artist-in-residence program in an abandoned house in Yangji-ri since 2014 (Figure 4). The Cheorwon county office has ownership of the house and pays management fee to Samuso. The artist who lives in the

residence receives a commission from Samuso and is expected to create a community project with the Yangji-ri people. From 2014 to 2015, artists had lived in the village for only one week to one month. The residence period of artists has been longer since 2016, when So-Young Chung, the artist, lived in the residence for four months. However, there are distinctions between what the artists expect the village to be, and what the Yangji-ri people want the artists to accomplish. While Chung, the head of the village, wants the village to become an “art village” with wall paintings created by the artists, the artists are not interested in those works and do not want the village to be changed by them. Meanwhile, the artists tend to see the village from a romantic point-of-view. One artist said the landscape of the village looks like a stage set for a play, and the residents are like the actors. Another artist said he expected the village to be smaller and more isolated. Most of the local experts of Cheorwon are of the opinion that the art produced by the artists is disconnected from the reality of the residents.



**Figure 3. DMZ Migratory Bird Peace Town**



**Figure 4. Artist Residence in Yangji-ri**

### *Bottom-up Activities*

Because the environmental conditions of the village – an artificial reservoir constructed in 1976, a large rice field in front of the village, and a remote environment – are advantageous for migratory birds, this brings birdwatching tourists, researchers and professional photographers to visit Yangji-ri village. As a result, the people of the village have operated accommodations and food selling business for the visitors since the early 2000s. The village fund has been raised through the community business. Although the community business does not run a deficit, the accommodations are not suitable for single guests, who are the main visitors to the village (mainly researchers and photographers). The guests who seek accommodations mostly come during the summer vacation season, from July through August, and during the winter birdwatching season.

For most of the year, the identity of Yangji-ri is as a typical rural village where rice farming is the most important means of making a living. However, greenhouses capable of producing a higher profit are increasingly popping up in the middle of the rice field. Even though some people are opposed to greenhouse farming, as it reduces feeding places for birds, greenhouse products such as paprika have become as important as Odae rice – the specialty of Cheorwon. Because the rice field is a significant factor in sustaining a community based on birdwatching tourism, it's important to make ample income from rice farming. But it's difficult for the people of Yangji-ri to launch a community business: for example, selling rice directly to visitors to reduce the retail margin, or producing processed goods made of rice to create added value. The cause is the high proportion of elderly individuals and the lack of unity among the

people who are from different regions, as the village was first constructed according to the government's strategy.

After the busy farming season is over, the people of Cheorwon hold the annual "Straw-rope Festival." In contrast to the many local festivals targeting tourists throughout the country, the "Straw-rope Festival" is a genuine event where local people can entertain and socialize with each other. By virtue of Chung's leadership, the elders of Yangji-ri who know how to make the straw rope and thatch used to make decorations for the festival arena take on an important role in preparing for the festival (Figure 5).



Figure 5. Straw-rope Festival in Cheorwon

## Results and Conclusions

The village is at the early stage of developing CBT. Professional photographers and experts with academic purposes are the most important visitors for the community business operated by natives. Although the people of Yangji-ri is getting old and empty houses are increasing, there are some people moved in the community to introduce the significance of the site to other visitors unfamiliar with the village. Besides, outsiders affiliated with an organization planning an art project and artists introduced by them also contribute to develop new content at the village. Moreover, the project of constructing the government sponsored "School for Migratory Birds and Peace" was completed at the end of last year and it is the main infrastructure to motivate more various community businesses. The economic effect of CBT on the village is not outstanding yet, but the top-down development by government has helped to establish the foundation for long-term growth and has reduced the risk that the community has to bear. However, the artwork of young artists flowing into the community hasn't made much of a contribution toward driving bottom-up CBT activities, as yet. Though residents of Yangji-ri are positive about operating the artist-in-residence program, which is the motive for young people to visit the village, the artists' short duration of stay and the purpose of their art

has not had a lot of influence on the sustainability of the community. It's necessary to bridge the gap between what the artists want to do in the village and what the residents need. Because the strategic villages in Cheorwon (including Yangji-ri) are not just ordinary rural villages but also have significant meaning both ecologically and culturally, sometimes, it is overlooked that these villages are also places to live for ordinary people.

With the combination of the top-down and bottom-up models for CBT, new economic and social conditions will be created in this typical Korean farm village, changing it from aged and hollow and making it sustainable in spite of the changeable situation of the border region. Therefore, the ecological and cultural stature of Cheorwon is the motive for CBT to conserve the current significance of the region, which enables it to be the neutral position and mediate the dispute between North and South Korea even after the unification of Korea.

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## Neighborhood's Place Attachment to an Old Apartment Complex:

### Focusing on Banpo Reconstruction site in Seoul

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#### Abstract

This study intends to understand the people's emotional and psychological attachment to the old apartment complexes in Korea. Recent urban redevelopment plans aim at revitalizing old apartment complexes, with ages of more than decades, to improve the living conditions as well as the local economy. However, the old housing environment is still viewed by the inhabitants as an ecologically and socially sustainable form of residential housing. We identified the factors that influence 'place attachment' in the physical environment of the early types of the apartment complex. The research area consists of the apartment buildings built around the 1970s. We first defined the relevant concepts of place attachment through literature reviews and, then, identified the characteristics of the research site. A series of interviews were conducted with current and past residents for empirical data collection. The answers were analyzed, using three categories: the surrounding environment, community, and opinion on a new redevelopment plan. The result shows that spatial experience in the apartment complex was a critical factor for place attachment rather than the surrounding plant environment. Psychological attachment to the place was recognized at the individual level but not so much at the community level. Community organization was not solid as to generate common opinion to take direct action against the government and developer-led redevelopment.

Keywords: Place attachment, old apartment complexes, urban redevelopment

#### Introduction

Discussions about the people-place relations have been held in many research fields. In empirical research on this discussion, there are many studies which seek to find out what kind of factors establish people's emotional bonds with a place (Giuliani, 1993; Hidalgo, 2001; Bonaiuto, 2002; Fried, 2000; Brown et al., 2005; Lewika, 2010). This study intends to investigate the factors influencing the formation of a "place attachment" of the residents who dwell in an early type of residential apartment complex, which account for a significant portion of residential types in Seoul. There have been many criticisms of the apartment complex built in the last 40 years for the bulk supply of housing that they have caused community dissolution due to its uniformity and resulted in a loss of place. Even though the early type of apartment complex is being considered for a target place for an urban redevelopment due to its decrepit physical condition, it is still viewed as a sustainable form of residential housing for the ecological and social life of inhabitants. There are precedent

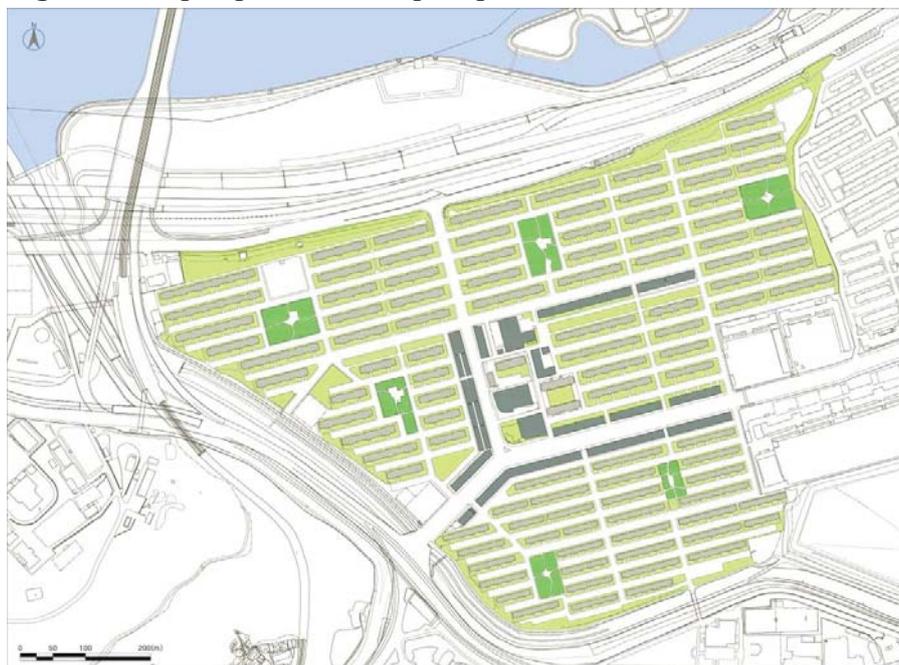
studies that discussed the spatial and physical characteristics of apartment complexes in Korea (Ahn, 2007; Park, 2011; Lee et al., 2012), but few studies have addressed on the formation of the place attachment of the apartment occupants and its relevant factors. This study intends to demonstrate the extent to which the place attachment of the people in an old apartment complex has formed for an extended period. Then we identify the factors that may have influenced the place attachment. The research area is the apartment complex built in the 1970s, when the quantity of apartment supply was the largest. To this end, we first defined the relevant concepts such as place-ness and place attachment through literature reviews and then identified characteristics of the apartment space in the research site. A series of interviews and surveys were conducted with current and past residents for empirical data collection.

### *Research Site*

Since the Korean War, in the 1960s, the Seoul government has begun to develop public residential apartment complexes due to the rapidly expanding urban population. In 1964, the Mapo apartment complex was built targeting mid-income families, but it was not received well by the general public due to the uncompromising traditional lifestyle and anxiety about high-rise buildings. A decade later, the Banpo apartment complex, a large-scale complex of 4,000 households, was built on the Han riverbank by Korean National Housing Corporation (KNHC). The Banpo complex was aimed at the upper middle class and actively introduced modern residential facilities such as central heating. Since Banpo complex gained popularity, the apartment complex became a landmark image of Korean economic growth and a modern lifestyle. Banpo's success has become a turning point that has created an apartment construction boom in Korea. In the late '70s and early '80s, large apartment complexes spread along the riverside of Han River to the east of Banpo apartment complex, creating a unique cityscape of Seoul. After the '86 Asian Games and '88 International Olympic Games were held in Seoul, deregulation of high-rise buildings was achieved, and the speculation of apartments in the real estate market started. In the 1990s, a new town centered on apartment complexes was developed throughout the country; redevelopment boomed around the aged apartment complexes which were 30 to 40 years old since the 70s. Gelezeau (2007) referred to this phenomenon as the "apartment republic." Since Korean society has experienced rapid urbanization and development, the renewal period of the settlement was very fast compared to that of the West. Apartment owners tended to treat the house as a consumable property rather than a generational asset. Therefore, the general trend of urban renewal until recently was to eradicate obsolete buildings and to construct newest apartment complexes. In the 70s and 80s, most occupants in Banpo apartment complex were highly educated people. At the time of the construction, the Seoul government assigned a large number of apartment units to the households of university faculties, civil servants, and researchers in government institutes. The developer made an effort to create attractive residential features, such as an outdoor shopping arcade and a community park, to attract new residents. The school district, in particular, was a very compelling feature to the families concerned with their children's high education; this created an optimal educational environment to train the elite. Because of the good school district and sound environment, businessmen, lawyers, and other high-income earners gradually flowed in. In recent years, the proportion of those in their forties who have relocated so that their children enter prestigious schools has been increasing due to the relatively low price of the complex that was delayed in reconstruction. The Banpo apartment complex is largely divided into four blocks. The study site, district 1, has the oldest blocks on the premises. Despite its old history, the rebuilding process in block one had been the slowest compared to the other blocks. It was not until the year 2011 that the reconstruction discussion began among the residents in this district. Currently, the second phase, out of the four

phases authorized by the government, is underway. To authorize the establishment of a resident union, the consent rate of all owners should be 75%, and the approval rate of the residents in each building should be 2 out of 3. Nevertheless, It was impossible to move on to organizing the union because some residents voted against the reconstruction. Moreover, the counterclaim was continued until 2015. It is currently aiming to complete the year 2020 (Figure 1).

**Figure1.** Banpo apartment complex plan view (source: Ye-hwa Yun)



### *Theoretical Background*

Many studies account for place attachment as an emotional and psychological bond to a geographical location (Giuliani, 1993; Hidalgo, 2001; Bonaiuto, 2002; Fried, 2000). The conceptual base of the place attachment is the fact that a given place has a symbolic linkage to a person beyond functional or physical needs. A person, as an individual or the member of society, is associated with a certain physical environment through one's experience over the course of one's life. Cognitive and emotional status is affected by particular setting (Knez, 2005). Research areas which relate to place attachment vary according to the research objectives and variables. Particularly, in the studies that examine the factors and the process of psychological attachment to the place, individual variables such as age, position, and life cycle, local variables such as density, diversity, and region, time variables such as residence period are covered (Bonaiuto, 1999). Lewicka (2011) identified three categories of predictors that influence place attachment: socio-demographic, social, and physical-environmental. Studies on the physical predictors, which are relevant to our study, were carried out by many researchers; studies of the housing types and their size for the predictors of place attachment (Lewicka, 2010) and studies of individual blocks for revitalization of the neighborhood (Brown et al., 2003) are examples.

## Method

### *Applied methods*

To explore the extent of the place attachment to an old apartment complex and the factors relevant to it, we used an interview-based qualitative research method to analyze the characteristics and values reflected in the research site. This research method is preferred when the research topic is the current phenomenon revealed from the context of life (Yin, 1994). The method provides a basis to make a comprehensive judgment by providing a detailed and rich description for the developing claim based on the context (Stake, 1995). In this study, we applied the qualitative method to analyze why life in the old apartment complex has sustained for an extended period despite its outmoded condition and then to provide a rich variety of perspectives and values in this persistence.

### *Data sampling*

Research data were collected by a total of five researchers from May to October in 2016. In-depth interviews were conducted to recruit personnel through the on-site and social network. Some interviews were replaced with a written interview via e-mail when personal meeting were difficult to accomplish. The total number of interviews was 15: 4 with current residents and 11 with former residents. The interviewees were recruited through purpose-driven sampling. Their age range was 10s-70s. Regarding occupation, the interviewees consisted of six students, four office workers, four housewives, and one retiree (Table1).

### *Analytic framework*

The open coding method was used for data analysis as an inductive method (Glaser & Strauss, 1967; Werner, 1987). This method analyzes independent but repetitive thoughts and translates them into the implicit concepts. The title of coding was generated through the condensing process of the syllables and expressions by the interviewees. After scripting all the data obtained from the in-depth interviews, the conceptual or metaphorical themes were generated through the process of finding a connection, contrast, and hierarchy. The factors of place attachment were categorized into three main groups and the category-dependent items.

**Environmental factors:** The surrounding natural environment in the place of residence influences the development of an individual's or group's place attachment. Based on the precedent studies, we composed our interview questions so that it becomes evident what the perception of the surrounding environment, including street trees and community parks, has done to the interviewee's sense of belonging to the apartment complex. The answers were subdivided into the biological factors, visual factors, and spatial factors concerning the green environment. The questionnaires also involved the outdoor physical space, and thus the answers were subdivided according to the pedestrian path, the location of the park, and the presence of a parking space (Table 2,3).

**Table 1.** Profile of respondents

Code	Interview date (2016)	Gender	Age	Occupation	Living period
R1	Jul.25	W	30s	Housewife	2014 - 2015
R2	Aug. 1	M	20s	-	2006 - 2013
R3	Aug. 1	M	20s	-	1991 - 2003
R4	Aug. 1	M	20s	-	2002 - 2016
R5	Aug.10	M	20s	College student	1994 - 2013
R6	Aug.10	W	20s	College student	1998 - 2005
R7	Aug.11	W	20s	Graduate student	2004 -
R8	Aug.11	W	30s	Office worker	2009 - 2012
R9	Aug.12	M	10s	Junior high school	2011-
R10	Aug.12	M	10s	Junior high school	2009-
R11	Aug.17	M	40s	Office worker	1984 - 2012
R12	Aug.20	M	40s	Artist	1983 - 1988
R13	Aug.29	W	20s	College student	2007 - 2011
R14	Oct. 7	M	70s	Head of an accountant office	1972 -
R15	Oct. 7	M	50s	Manager at apartment management office	None

**Table 2.** Environmental factors

Environmental elements	Behavior / activity	Value judgement
Worms	Catching worms	
	Close windows	Noisy
	Stepped on worms	
Light	Sunlight shrouded in trees	Cool in summer
Fruit trees	Pick up ginko fruits	
	Eat cherries	Good childhood memory
	Fruit dyes the road	
	Drink Nectar	
Trees	Hide and seek	Good childhood memory
	Tree riding	

	Walking	
	Avoiding rain	
Planting and nursing	Plant trees with children	Good memory with children
	Watch the tree grower	Communication with neighborhood
Tree shade	Trees cover buildings	A forest rather than an apartment complex
	Walking under the large trees on roadsides	Green life
		A refreshing mood
		Visually stable

**Table 3.** Spatial factors

Spatial elements	Behavior / activity	Value judgement
Trail and path	Flower viewing	
	Walking around town	The most preferred pathway
	biking	Good childhood memory
	Waking with a dog	where you can rest well after work
	Chatting with friends	
Playground	Playing with friends	Good for children's play space
	played all day	Good shelter for children
		Good childhood memories
		Good leisure space
Low- level buildings	Open space to meet friends	Each apartment has different atmosphere
		Cool and open feeling
		Open view
Obsolete interior	Plant trees with children	Unique sensibility of the Neighborhood
	Watch the gardener	Softness
Elementary school	Group playing	Feeling sad when leaving friends
Shopping arcade	Chatting in a café	-

Parking space	-	Lack of past parking space No underground parking lots
Community Park	Playing in community parks Creating a hideout Playing football, baseball, and all kinds of sports	Form a meeting place Feel relaxed Felt like my front yard
Planting bed	Growing crops	Each block has a flower bed

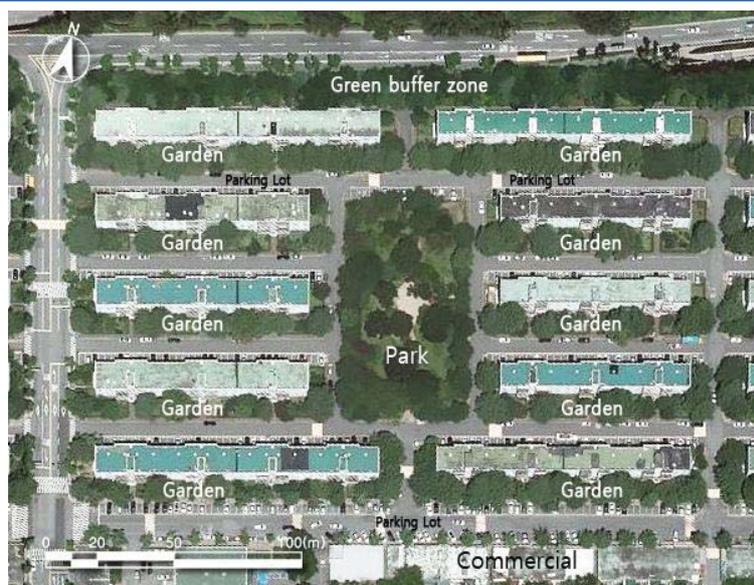
**Community factors:** More than half of the residential housing types in Korea is an apartment complex. However, there are insufficient studies on the formation and organization of the residents' community in the complex. Hence, the interview questions included a mutual relationship with the members of the resident community, and then the given answers were analyzed in that the memory of the community activities have affected to the place attachment. Given that many current residents have been living in the research site since the '70s, the questionnaires also included if the sustained community was one of the reasons for the delay of the apartment reconstruction. All the answers were subdivided into the age composition, neighborhood relations, and hierarchical differentiation according to income.

**Resident community's view on reconstruction:** The apartment renovation, in ways that dismantle the previous complex and then reconstructs a new one on the site, may provide a new opportunity for living for both old and new residents. However, this method inevitably brings about the dissolution of the legacy of the indigenous community, destruction of the urban ecosystem, and the rise of land prices in the surrounding area. Given that the research site is expected to undergo a reconstruction in the next 10 years, we have asked all interviewees a question about their opinions relating to reconstruction. Each answer was classified based on satisfaction with current living conditions, opinions about the necessity of reconstruction, and expectations of and disappointment with the reconstruction.

### Research area

In contrast to the large-scale 15- or 25-floor high-rise apartment complexes built since the 1990s in Korea, Banpo apartment complex in the study site features low-rise, low-density residential buildings. The surrounding environment provides an open skyline and wide greenery. A total of 99 south-ward, plate-shaped buildings are arranged in parallel. A strip of greenway crosses on the north of the boundary, and six community parks are located in the center. Sinbanpo Road, which crosses the town, separates the residential rental housing complex, and commercial buildings align on each side of the road. In sum, despite the simple and uniform design of the residential buildings, Banpo apartment complex has convenient facilities in the vicinity and a relatively spacious green environment (Figure 2).

**Figure 2.** Banpo apartment complex plan view (source: Ye-hwa Yun)



On the south-facing side of the apartment block, there are 8m-wide flowerbeds surrounded by boxwood. Since the street trees (i.e., metasequoia, ginkgo tree, cherry tree) on the flowerbeds have grown for more than 40 years, they are taller than the buildings, and the tree shadow impacts the temperature and lighting of the buildings. The beds also contain shrubs (i.e., silk tree, Japanese maple) and herbaceous flowers that the tenants have planted. The flowerbeds are being regarded as a 'common garden' where residents can cultivate their plants (Figure 3).

**Figure 3:** Section of flowerbed (source: Hansol Cho)



## Results

### *Environmental factors*

#### *a. Flora*

We focused on the various plants and community parks in the apartment complex as some of the important vehicles for place memory. The interview analysis shows that they are important factors in place attachment; many interviewees have remembered certain places using plants as parameters. Their memories of plants were often associated with sensational aspects such as the coolness of the tree shade or the vivid green color. Certain actions were also associated with the trees, such as taking shelter from the rain or catching cicadas. We assumed that the results would show an interviewee's strong attachment to the particular tree to which one's memories were related; however, most of the interviewees remembered the trees as a 'collective' form rather than a particular one, except for the trees they had planted

themselves. Most interviewees had a positive opinion on the ecological environment compared to the other apartment complex. They tend to do visual, ecological, and historical value judgments by this memory. In some cases, the interviewee's detailed memories about the trees (i.e., insects, fruits) did not merely remain as a positive, but a negative.

*Trees purify the polluted air in the Banpo area. The reconstruction plan would destroy the lungs of our town. It is the same logic of protecting the Amazon rain forest. I hope, even if the reconstruction is inevitable, it should be done in a way in which the trees coexist with us (R11).*

*Some affinities seem to exist between trees and our apartment complex. I do not think there is any apartment complex in Seoul in which the trees are a quintessential part of the buildings (R9).*

*I liked such a nature-friendly environment because my character was somewhat close to rustic. I will return to such an environment if I am allowed. I can tolerate some discomfort like cicada noise and worms (R12).*

*We always suffer from bugs coming through the window. There were lots of dead cicadas in front of the window screen (R3).*

#### a. Spatial environment

The number of spatial elements that appeared in the answers were more than the plant environments. A trail leading to Dongjak Station was the most frequently appearing spatial element, followed by community parks, low-rise buildings, wide walkways, and spacious parking lots. Spatial elements that reveal 'antiquities' were closely linked to the interviewees' emotional states: a comforting feeling when living in lower story buildings, a familiarity with the obsolete look of the residential complex, and a spaciousness due to the large distance between the buildings. Many interviewees recognized the 'stigmatized' symbols of the place, such as the dilapidated appearance of the building, as being an important medium for the affection to the place (Figure 4).

**Figure 4.** of Banpo apartment complex street view



*I'm so comfortable with living in a low-rise apartment building more than anything else. I can feel the spaciousness while walking along the path between the apartment buildings. Children's playgrounds and community parks are larger than the ones in any other residential complex. Since I settled in this place in 1974, I moved into the apartments in the same complex. I always have chosen our family's new apartment by the fact whether a large green park was in front of the window. (R2)*

*I think there is a complex sensibility in our district; it's old but neat, obsolete but distinctive. The outdoor appearance may look outdated, but the indoor space is clean. If our place were to be renovated into a high-rise apartment compound, this uniqueness would disappear forever. That's a sad thing. (R4)*

*Banpo apartment complex was an open space for everyone. I have lots of memories of hanging out with many friends from another town in there. It was also nice to have a view of the Han River from the window at the lower floor. It will be a shame if all the good spaces are gone. (R3)*

The interviewees' memory of the space was largely related to their childhood memories, mainly to their elementary school days. Most of the space memories of the young interviewees in their 10s to 20s were based on the facts that had been experienced here during elementary school. Parents who have spent time in the complex with their children tended to answer about their children's experiences rather than their own.

*My memory of playing around in Banpo complex is until the elementary school days. After that, my leisure space has switched to the riverbank and its surrounding playground. These days, I usually go to Han River with my friends, but I do not play in the complex anymore. (R7)*

*When I lived in another newly built apartment complex for a while, there was not enough space for my children to play and rest. But in Banpo apartment complex, the large tree shade serves as children's shelter. (R12)*

### *Community factors*

#### *a. Social characters*

Currently, the residents in the Banpo apartment complex are mainly composed of two types of families: elderly families who settled in during the first apartment sale in 1976 and middle-aged families with children who recently moved into the premises. The first group is mainly distributed in the first, second, and fourth districts, where the large-sized apartment buildings are; the tenants' group lives in the third district, where the small-sized apartment buildings are. According to the interviewees, most of the first-group people have high-income occupations such as senior officials and professors; hence, their social tendency is largely conservative. Many of them have lived in the same apartment complex with their children for several generations. On the other hand, most tenants live in the Banpo complex in pursuit of the advantages of low-rent price and excellent school conditions for their children's education. All the interviewees were aware of this separate resident groups.

*Our neighborhood is very quiet because there are many retired senior residents. They have been living in here raising their grandchildren for three generations. (R5)*

*Among the residents in our place are high-ranking, socially renowned people. The rumor says that Dongjak Subway Station was installed close to Banpo apartment complex due to the influential people. (R3)*

*The reason that my parents moved into this apartment was to have me study in the prestigious after-school academies around here. Half of the street mall are occupied with these academies. (R9)*

*b. Neighbourhood Relationship*

There have not been notable changes in the apartment space over the past 40 years, and the settlement rate of the original residents is high. Nevertheless, the interview analysis shows that few neighborhood community organizations or programs have been formed; all interviewees have answered that they were not involved in any community organization, except for individual-level acquaintances who shared the same elevator or stairway. Some of the interviewees looked for this cause in the social class of apartment residents and also saw it as the tendency of the contracted tenants who moved in for the special purpose of education for their children.

*There are few conflicts among the residents because they have little interest in each other. Therefore, community management is fairly stable. Since the abolition of the official neighborhood meeting, our apartment community has almost disappeared. However, as the Seoul government raised financial support for the community revitalization, a new neighborhood community has organized to improve the uncommunicative situation, which exists despite the fact that many residents have lived together for more than 40 years. Three community groups have been active since 2011: a seniors' community, a women's community, and a volunteer group. The most active among them, the volunteer group, runs an "autonomous crime-prevention uni" consisting of about 30 residents. (R15)*

*Although I have lived here for more than 40 years, I have never seen our neighbors organize any community group or take part in any community organization-based activities. The only communication I have had with neighbors is face-to-face chats or church meetings. (R6)*

*My elder brother went to the United States since junior high school. My parents keep telling me that they wouldn't have to come to live in such an old apartment if they'd known my brother would be studying abroad. A good school district was the only reason that my family came here. Since I am going to graduate, there's no reason to keep living here. (R13)*

*I usually greet my close neighbors and then pass them by. I don't know their names; they don't know my name either. Most neighbors do not know each other unless they share the same elevator or live on the same floor level. There's no greeting or sharing culture. (R10)*

*Opinion on the apartment reconstruction*

The discussion on the direction for the Banpo apartment reconstruction was underway among the neighbors for two reasons: inconvenient living conditions due to the old facilities (i.e., plumbing, heating, parking) and a strong desire to upgrade the quality of life with

completely new housing conditions. Most interviewees recognized that reconstruction was necessary for the improvement of their residential quality. Some were against the reconstruction, but they were sympathetic to the pro-reconstruction opinion of the neighbors. Each interviewee had a different view on the direction of reconstruction; although they were dissatisfied with the outmoded facilities, the degree of satisfaction was high on current outdoor environments (i.e., street trees and community parks). Also, most interviewees were against the high-rise building complex plan for which the Seoul government aimed.

*The Banpo apartment building has no elevator. I see many seniors who have a hard time going up and down the stairs. Unlike a new apartment complex in which the parking lots are underground, our apartment complex has outdoor parking lots by the street, which makes it inconvenient to manage the car. (R12)*

*As the facilities become old, I feel that the old facility should be replaced with new ones. The residential place is where people live. Thus, the basic safety and convenience should be guaranteed; I think positively about complete reconstruction. (R9)*

*Although Banpo is a wealthy neighborhood, it is a low-rise residential area, and the space utilization is low. Apartment owners expect a great amount of compensation, which construction companies suggest. Therefore, reconstruction seems inevitable in such a capitalistic society. (R5)*

*I've no objection to the opinion that such obsolete apartment buildings should be renovated. Nevertheless, I'm doubtful why all the buildings should be uniformly shaped as gated, glass-walled, high-rise units. In fact, it would be advantageous for a construction company to raise the number of floors rather than keep the current floors. However, I believe that now is a time for a new reconstruction paradigm; I would hope Banpo complex were a first of this case. (R7)*

*Large trees in a greenery pathway are a great asset to our place that cannot be seen in any other apartment complex. If possible, I hope that the present trees will be transplanted and contribute to the creation of a new green apartment complex. (R11).*

## **Conclusions and discussions**

The results are summarized as follows: first, the respondents' responses suggest that there was a correlation between place attachment and plant environment, but not significantly. Prior to the interview, we had expected that there would be a strong attachment to the particular plant, but the affection to trees was atmospheric since most respondents' memories were closely related to the experience in early childhood. Secondly, many interview answers revealed that spatial experience was a critical factor for place attachment compared to the plant environment. The spatial factors yielded emotional reflections such as comfort or familiarity. Thirdly, most respondents respected the privacy of the individual relative to the common value. Hence, place attachment was largely effective at the individual level of the residents, but it did not influence the community level to form a common opinion. Community organization was not solid to take direct actions against the apartment redevelopment. However, it should be noted that a majority of the residents shared a common consciousness to pursue the quality of life. Additionally, the place attachment of Banpo apartment complex residents is developed through the process of the residents' personal, social, and physical factors connecting to each other. Thus, the apartment complex

redevelopment plan should consider not only the physical environment but the methods to reinforce the community ties and maintain the place attachment established to the residence. Moreover, more studies should follow by comparing and analyzing the processes of place attachment depending on the types of residence and relative factors, thereby providing the foundation for establishing a theory concerning place attachment.

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## Curry Caravan: A Communicative Placemaking Approach for Resilience of Local Communities

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### Abstract

The Curry Caravan started in March 2012, as fun “cook-out” activity in urban areas. We have visited more than 60 places in more than 50 cities in Japan, and cooked curry in various open spaces such as parking lots, parks, and storefronts. Curry has a great capacity to facilitate communication and is one of the most popular and easy-to-cook dishes among people of all ages in Japan. The purpose of our project is making communicative places. It is also a good way for people to explore and acquaint themselves with the place, create connections with each other and between people and the place. We go for a trip with just spices and mobile kitchen equipments. Local coordinators assist in exploring the place and obtaining local ingredients for preparing curry, a process that creates active communication with local people. Once it’s cooked the curry is shared for free among participants and street users. It is neither a volunteer model nor a business model but rather a method to recognize the value of communication.

In conclusion, the communication process is very important in the Curry Caravan. In many cases, the cooking activities are carried out at the border between public and private spaces. By this spontaneous approach, unexpected encounters and dialogues emerge and make it easy to access. Therefore, the Curry Caravan has become an approach for communicative placemaking that promotes a sense of belonging to the community, through raising our consciousness.

Keywords: Placemaking, communication process, community planning, communal meal

## Introduction

Placemaking is a multi-faceted approach to the planning, design and management of public spaces. It capitalizes on a local community's assets, inspiration and potential, ultimately creating good public spaces that promote people's health, happiness and well being (Project for Public Spaces, 2009). Placemaking is the process of building and nurturing the relationship between a community and their environment for stronger resilience (Ethan Kent, 2015). A public space that is open to all people, regardless of their ethnic origin, age or gender, provides a democratic forum for citizens and society. (Urban October, 2015) Many studies showed that public space is one of important urban environment elements which give positive contribution to quality of life.

Most of the public spaces in Japan are controlled and managed by local governments; many of the private spaces are not open for the public, and are owned and managed privately. There are only a few opportunities to do activities in public spaces in Japan. It accelerates the isolation of societies. The idea of placemaking is important to prevent it. In recent times, placemaking approach is gradually gaining attention for creating the relationship between a community and their environment in Japan. Some private spaces have been opened to the public for placemaking activities such as public art and common meals. Therefore, the definition of Placemaking should be extended to cover these private spaces.

We started the Curry Caravan project in March 2012, as fun "cook-out" activity in urban areas. Through the project, we recognized it is spontaneous and temporary placemaking activities and creates dialogue and communication, make the border vague between public and private spaces and connect people. The aim of this study is to analyze the process of this project and evaluate how it can strengthen community resilience.

## Beginning of the Curry Caravan

### 【BOKUTO University project】

Curry Caravan project began as one of the programs of BOKUTO University. BOKUTO University is the project that Fumitoshi Kato, Takeyo Kimura and Daisuke Okabe launched in Sumida-ku, Tokyo from October, 2010 through March, 2012, and it is one of the Tokyo art project in The Tokyo Artpoint project<sup>i</sup>. In this project the main theme was to offer learning places in the east side of Sumida-district in Tokyo called BOKUTO areas. It is not a typical

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<sup>i</sup> The Tokyo Artpoint Project is one of programs of ART COUNCIL TOKYO. It is an initiative that creates numerous "art points" via art projects undertaken in partnership with NPOs that play a key role in their local communities. ART COUNCIL TOKYO: <https://www.artscouncil-tokyo.jp>

university, but the idea is genuine; we consider the whole BOKUTO area as the campus and we were able to offer opportunities of various learning and knowledge exchange. A vacant store in KIRAKIRA TACHIBANA SHOPPING STREET was our school building. There were programs that anyone could participate in willingly from both within and outside BOKUTO area.

### 【Curry Studies at BOKUTO University】

"Curry Studies at BOKUTO University" was planned as one of the programs of BOKUTO Univ. by Aiko Kimura. BOKUTO Univ. is a project for knowing and learning from the local area. This program was planned to know and learn there through "curry".

There are various styles of curry all over the world such as Indian, Nepalese, Thai, and Japanese. Even in India as the birthplace of curry, every region has its own style for curry with various ingredients, spices, and recipes that are suitable for the land and climate. There are various differences in not only ingredients or recipes but also staple food (rice, naan or chapati ...), how to eat (spoon, hand or fork...), and tableware (plate, thali or leaf...). The curry which was born in India 3000 years ago was spread all over the world, traveling more than 40000 kilometers and taking over 400 years from the age of geographical discoveries. In other words the curry is a meal that was changed diversely and was adapted to each area, and it was developed flexibly, reflecting local characteristics. Therefore I consider that to think about curry is synonymous with knowing the area. We, therefore, tried to learn about BOKUTO area through finding ingredients, making recipe, cooking and eating curry in "Curry Studies at BOKUTO University".

We had two rules.

1. Get the ingredients on the site.
2. Make curry from spices. Don't use CURRY ROUX.

CURRY ROUX is common instant curry sauce in Japan. CURRY ROUX makes it the same delicious taste in about 30 min even with any ingredients.

We tried to cook curry only using spices without roux to make original curry that can only be cooked in this place at this time.

At first we explored KIRAKIRA TACHIBANA SHOPPING STREET and researched about ingredients and the area. One neighborhood child came and asked us what we were going to do. We explained the program; he got interested in and participated. He introduced us to the local ingredient in this area KOMATSUNA, Japanese mustard spinach, which he learned while at elementary school. The woman of the fruit shop gave us bananas for curry, and the butchery gave us some advice. It was a little bit difficult to make curry in limited ingredients, so we cooked through trial and error. The vacant store we used was open to the shopping street, some passers-by noticed our cooking and talked to us. They tasted our curry and gave some their ideas of secret ingredients and where we could buy them. Finally, the curry was

prepared due to the ideas of many people and we shared the curry with those present. In addition, one man gave to us beer mugs from the pub next to our place in return for curry. After "Curry Studies at BOKUTO University", we recognized that curry has a great capacity to facilitate communication and is one of the most popular and easy-to-cook dishes among people of all ages in Japan. Our curry-pot was like "Stone Soup" which is an old folk story, in that delicious soup is made by strangers and villagers, each adding various ingredients. Similarly, curry-pot creates a place for talking, cooking and eating together. The trip of curry caravan began in this way.

### Detail of the Curry Caravan



Between March, 2012 and November, 2016, we visited more than 60 places in more than 50 cities in Japan, and cooked curry in various open spaces such as parking lots, parks, and storefronts. The purpose of our project is making communicative places. It is also a good way for people to explore and acquaint themselves with the place, create connections with each other and with the place.

Figure 1. Trajectory of the Curry Caravan

## Process of Curry Caravan

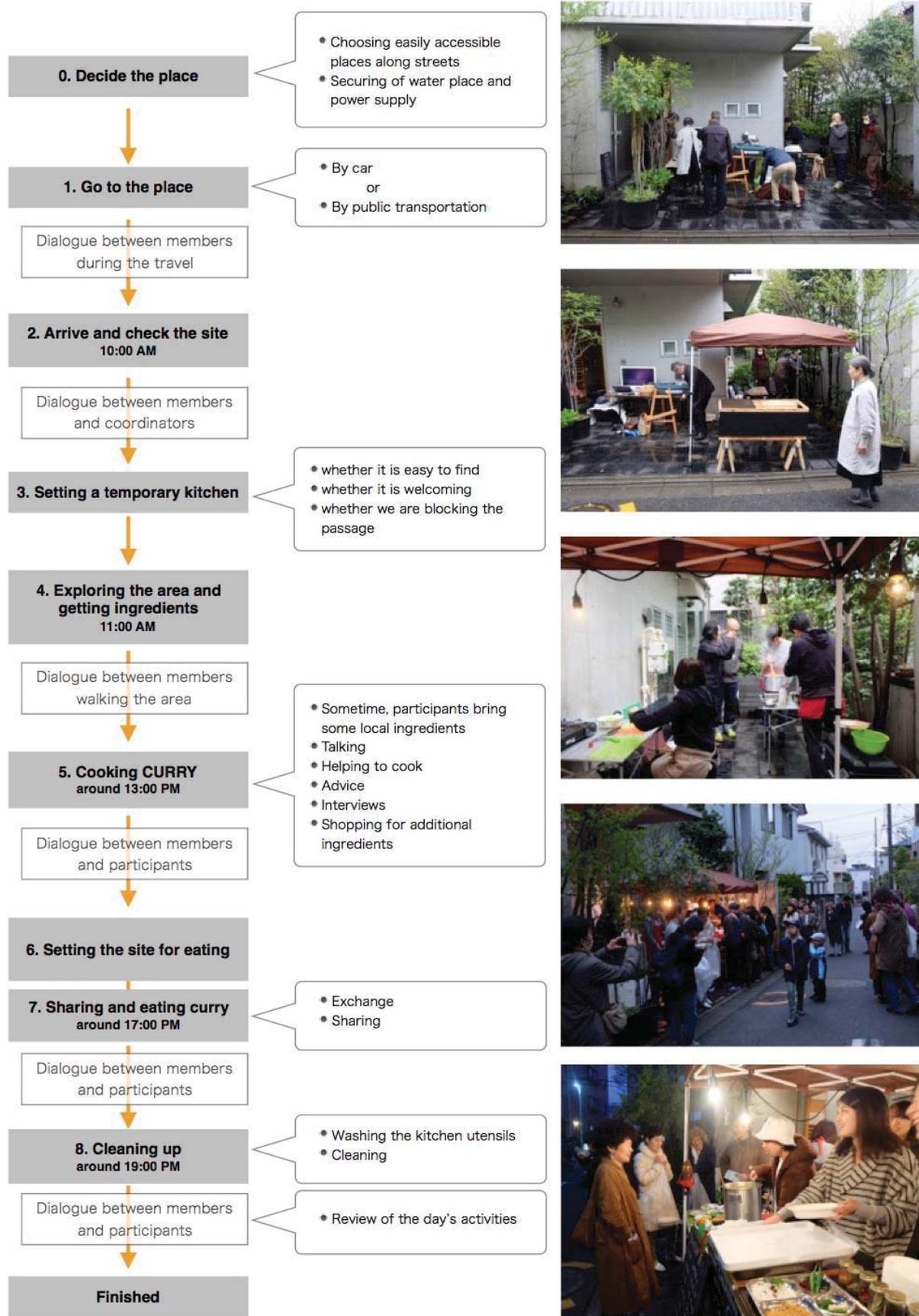


Figure 2. Process of the Curry Caravan

### **Places for Curry Caravan**

Before we visit, we discuss and decide the site for Curry Caravan with the coordinator of the area that we will visit. Miazzo (2014) pointed out bottom up movement such as tactical urbanism (Lydon et al., 2010; McFarlane, 2011), guerrilla urbanism (Hou, 2010) and DIY urbanism (Iverson, 2013) are initiated by local individuals or grassroots groups; they are not sanctioned by any higher authority and sprout from the needs and ambitions of citizens or communities. In many cases of the Curry Caravan project, we are invited and coordinated by local individuals or groups.

The Curry Caravan activity takes place in easily accessible places along streets. Local residents and people walking by the street often join us and interact with the participants. When we arrive in the area, we set our mobile kitchen equipment. We discuss about whether it is easy to find, whether it is welcoming, or whether we are blocking the passage, and carefully set our place.

### **Local Ingredients**

After setting, we go to explore the area and get ingredients. We try to get ingredients that are produced in the area. We prioritize how and where we obtain the ingredients in order of ; 1.

Crop field, 2. Wild herbs, 3. Vegetable brought from participants, 4. Farmer's market, 5. Private owned grocery store, 6. Local supermarket, 7. Franchised supermarket. We can obtain more local ingredients so that the connection of coordinators and the place are strong.

Sometime the coordinators took us to a crop field, and we pick up vegetables. From ingredients and how we can get them, we can know the area and the local characteristics. The more local the ingredients are, the more participants are amazed and discover new ways to use them, which will facilitate active conversation among the participants.

### **Co-cooking**

When we cook curry in an open space, various people come and start to talk to us. Curry is one of popular dishes, which is now called a national food in Japan. Almost all the people have experienced cooking and eating curry together in elementary school or camping. People of all generations in Japan therefore know how to make curry and have ideas of some secret ingredients. That's why anyone can participate whenever or whichever the process of Curry Caravan may be. Some give us advice of a secret ingredient, and others help us to cook. Of course there are the people who only participate in eating curry together. In each case, curry, as a trigger, initiates communication.

Three members of Curry Caravan are not curry cooking professionals. If those who are good at cooking see us, we appear to make curry with unpracticed hands, it will make them feel

like giving us advice or offer help. Helping us from the beginning to the end, sometimes these helpers are mistaken as part of the Curry Caravan crew.

Kaneko (1992) mentioned “Vulnerability” in Network theory. The people who work as volunteers know that unexpected situations and mysterious attractive relationships are presented by making oneself vulnerable from his/her experience. Our vulnerability of cooking skill might be one of the elements that pulls many people to our project.

### **Sharing curry free**

We share cooked curry for free among participants and street users. It is neither a volunteer model nor a business model; we refer to our model as the "Deficit model", but rather a method to recognize the value of communication. Actually, we get various priceless things such as encounter with local people and place and discovery of local assets and identity. The communication that we experience in Curry Caravan is quite unique. It may resemble the structure of the relationship by the potlatch type primitive communication or gift economy as a new wave.

### **NOT Event but happening**

This is not a special organized event but a spontaneous approach. The coordinators of each area keep the space for us, however we tried to be done like happening for people who live there. We expect that an accidental encounter happens even without much announcing. With sufficient advertising, participants tend to come to just eat free curry from our experience. In the few cases that were advertised, we could not communicate very much; we just served curry one after another. We recognized that one of our aims of the project is to enjoy ourselves, encounter people by chance and produce dialogues. This is a new traveling style. When we stay in one place and spend a day cooking curry, we can meet impressive sceneries and people; this does not happen in a normal trip.

### **Results**

In the following section, 3 cases will be introduced according to the type of the places;

- ① A private open space; a parking space in front of a cafe; and the stationery shop “genro & cafe”, Suginami, Tokyo (April, 2015)

Coordinator: the owner of the shop; a leader of Machidukuri; town planning group

Collaborate event: the film screening ” Himself He Cooks ”

Participants: neighbors, passers-by and audience of the film

Permission: the owner and the neighbors

Local ingredients: Wild herbs picked up from the surrounding area

Findings: We set the kitchen on the border between public and private spaces temporarily.

When we started sharing curry, the distinction between public and private spaces become

indistinct. The atmosphere such as the local festival appeared there. One participant said that it was an opportunity to be attached to this area. She had lived in that area more than ten years, but did not know much about the area and people. It was an opportunity to contact the local area and place.

One of the members of the Machidukuri group picked up wild herbs from the surrounding of this area. It was a surprise for all participants that there are edible wild herbs in urban area Tokyo.



Figure 3. Setting the kitchen on the border



Figure 4. Wild herbs



Figure 5. Blurring the border



Figure 6. Sharing curry

② Public open space; West side park in Matsudo, Chiba (August, 2013)

Coordinator: Kinoshita Isami Lab. of Chiba University

Collaborate event: Cross Culture Design Collaboration III in Matsudo 2013

Participants: Students, park visitors and passers-by

Permission: An official document submitted to Matsudo city government

Local ingredients: Vegetables; local agricultural production in a franchised supermarket

Findings: West side park was considered that it has issues, such as, hard to access for children and their mother since drunkards hang from the day, or other public morals issue.

We stayed all day as the Curry Caravan, and we found that the park was used in the daily life by wide-range of people in all ages, such as children, mothers with small children, young students and elder people. There were actually a few drunkards, but the users did not disturb each other and enjoy relaxing time themselves. When the curry was ready, scattered people gathered around the pot and ate the same curry. One man started singing and another man started drawing on the ground. We shared time with curry temporarily.



Figure 13. Gathering around the curry pot



Figure 14. One man started drawing

③ Public open space; the square in front of Kawaguchi Station, Saitama (May, 2015)

Coordinator: Information media center “Media Seven”

Collaborate event: the film screening ” Himself He Cooks ”

Participants: participants of the film and passers-by

Permission: An official document submitted to Kawaguchi city government

Local ingredients: We could not get local ingredients in a supermarket facing the square. Some participants brought secret ingredients.

Findings: The open space is almost a square shape about 3000 square meters. Trees and benches are designed around and the center part is just a flat open space. It is mainly used as a route to the station. During cooking curry, most of the people just passed by the open space. The coordinator prepared a tent, chairs and tables; many of participants sat and ate curry calmly. It seems that in the place that was completely prepared for, the dialogues were not created much.



Figure 15. many people passed by



Figure 7. Eating curry calmly

We had two that were done in public open spaces such as a park. For that we had to submit an official document to the local government to get permission. Most of the cases were set out in private-owned areas close to the border to the public place. In the private-owned place, things go along with the community rules by the owners and residents. We learned that it is easy way to open the private space to the public for placemaking activity in Japan, and that it is important to make a certain room to create the place that anyone can willingly participate in.

In summary, each process of the Curry Caravan created dialogues naturally between the members, coordinators, participants and passers-by. The Curry Caravan activity gives opportunities for conversations. These conversations revolve around curry: local ingredients, how to cook curry and our mobile kitchen equipment. It produces a triangulation.

“Triangulation is the process by which some external stimulus provides a linkage between people and prompts strangers to talk to other strangers as if they knew each other” (William H. W., 1988) Triangulation occurs spontaneously in process of the Curry Caravan and it makes casual connections.

This is not a specially organized event but a spontaneous approach. A joint process of cooking is a way to creatively blur and loosen the distinction between public and private spaces. The Curry Caravan members go for a trip with just spices and mobile kitchen equipments. Local coordinators assist in exploring the place and obtaining local ingredients for preparing curry, a process that creates active communication with local people. And sometimes, new communicative placemaking projects start.

### **Spreading communicative placemaking activities**

Communicative placemaking activities are spread. Through the Curry Caravan project some people began their own initiatives.



### 1) Garden of October

The coordinator of Curry Caravan in Sugunami (case①), Tokyo started sharing coffee project “Garden of October”. He identified with our activity. He is an owner of a cafe and stationary shop, and also the leader of MACHIZUKURI association of this area. Their project “Garden of October” is held in his shop’s parking space. Their aim is to create ENGAWA space that is a Japanese traditional semi-public space, to enjoy ENGAWA between garden and street, and to feel the atmosphere and nature surrounding the site. They serve a cup of coffee to passers-by or visitors and Neighbors come and enjoy the conversations. People can know each other there.

### 2) WAIWAI Curry Kitchen

The coordinator of the Curry Caravan in Asaka in Saitama Prefecture started a curry project “WAI WAI Curry

Figure 17. Garden of October

Kitchen” with her daughter’s group. She got some findings from Curry Caravan. People who meet each other for the first time can enjoy casual communication through cooking curry together regardless of gender, age and disability; she has a disabled daughter. When we cooked curry together participants naturally cooked, talked and ate together. Some people seem to have a preconception whereby they have difficulties communicating with disabled people. However through the communication brought by cooking curry together, the people can engage in conversations with the disabled persons and create acquaintances, their minds will be changed and some of them will be able to feel “all are different, and all are good.” It is also a good opportunity for children to have confidence to cook curry together.

WAIWAI Curry Kitchen is held in SHIBAURA HOUSE in TOKYO. SHIBAURA HOUSE is an office building for a print company designed by Kazuyo Sejima. Ground and second floors are open to the public like a park. Neighbors and people who work in the surroundings use the space in their daily life. WAIWAI Curry Kitchen is the cooking activity and there after eating curry together with Konan junior high school students includes disabled students. The aim of this project is to get an opportunity to learn from the real society and communities and create connections for neighbors to help each other.



Figure 15. WAIWAI Curry Kitchen

### Conclusions

In conclusion, the communication process is very important in the Curry Caravan. In many cases, the cooking activities are carried out at the border between public and private spaces temporarily. By this spontaneous approach, unexpected encounters and dialogues emerge and make it easy to access. Therefore, the Curry Caravan has become an approach for communicative placemaking that promotes a sense of belonging to the community, through raising our consciousness. Casual connection will become the preventive safety network not only in daily life but also in the case of emergencies such as disasters; in addition it will strengthen community resilience.

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Ikuyou K., 1992. Volunteer; Another information society, Iwanami

# **Inter-generational Risk Communication through Evacuation Map Making for Creating Resilient Community Against Earthquake, Tsunami and Landslides Disaster in Japan**

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## **Abstract**

This presentation reveals the information and experience of an evacuation map workshop conducted with children. It promoted risk communication within the community with the focus of verifying evacuation routes and considered improvement points against such disasters.

In case of the Great East Japan Earthquake on March 11th, 2011, 15,894 people died and 2,561 people are still missing,. Most of victims were directly affected by the Tsunami. After the tragedy, hazard maps and evacuation plans were made by each municipality. However, as time goes by, evacuation concerns fade. This evacuation map workshop with children is a challenge enhancing risk communication range from children to adults in order to build resilient, safer communities.

“Niige Chizu” is the term for an evacuation map, and indicates the length of time required from the evacuation point, through checkpoints to finally reach a safety zone on the map. The specialized representation of this functions by using classified colors drawn on the route,

beginning at the evacuation point, counting each color stripe as 3 minutes. As the route progresses, the colors change, indicating a continually longer time frame from the origin. Considerations include elderly people evacuating to the hillside at a slope of 10 degrees. Referencing a statistical review, we set the unit of the color stripe as 129m per 3 minutes. Beginning at each evacuation point, a green color stripe starts, yellow green follows after that, meaning it will require 6 minutes to evacuate. In this way, the consecutive color stripes are: yellow (9 minutes), orange (12 minutes), red (15 minutes), purple (18 minutes), blue (21 minutes) and black (24 minutes). Thus, if all streets are color-coded, one can easily extrapolate the required time for evacuation from any point..

Using our method, the conversation and ideas to reduce risk in the area was promoted and gave conclusive results. Also during the process, conversation among the participants led to additional action to check the safety of the streets, bridges, buildings, etc. Thus, this method gives as its purpose is not only map itself but the risk communication process through map-making.

We conducted the workshops at primary schools in Izu Peninsula where it is predicted that at the highest point, a 33m Tsunami produced by a Nankai Megathrust Earthquake will happen once every thousand years. Using the workshops with children, we realized that the children could understand the complexity of the disaster of the earthquake, tsunami, and landslides, and investigate their environment to create a proposal for the improvement of the physical environment towards a safer community. Also during the process, children worked with community adults, creating an interactive communication opportunity for children to learn about disaster history and geographic conditions of the area, and for adults to in turn become motivated to initiate action for the improvement of their environmental and community programs of mutual help against disaster. It is shown that this method may be useful to apply not only tsunami disaster but also to typhoon, floods, and other natural disasters.

As a result, it has been made clear that Niige Chizu (evacuation map) workshops with children and community members results in a very useful program for promoting risk communication to build a safer, more resilient community.

Keywords: Disaster, Evacuation, Map, Risk Communication, Inter-generation, Children

## 1. Introduction

The Great East Japan Earthquake happened on March.11, 2011 gave a big damage in Northern Japan. 15,894 people died, 6,152 people injured. Furthermore serious is the fact that 2,561 people are still missing (at the moment on March.10, 2016, source of National

Police Agency).

Most of victims were directly affected by the Tsunami. After the tragedy, hazard maps and evacuation plans were made by each municipality. However, as time goes by, evacuation concerns fade.

The usage of map for disaster prevention, some unique methods to involve the inhabitants have been created. DIG (Disaster Imagination Game) is getting popular from the governmental side, which was created by Takashi Komura (National Institute for Defense Studies), Atsushi Hirano in 1997 applying the military training on the map. This DIG is the training of the participants to imagine that what kind of problem would happen in case the disaster would happen.

Komura(2014) has reviewed the DIG itself after 17 years while the DIG workshop became popular. And he mentioned the important three points to care as follow: such as 1) enhance the prevention consciousness and activities, 2) capture the disaster image based on scientific data, 3) facilitation skills trained to make people in daily prevention activities. So challenging issue is how can we connect the map making workshop to the daily lives of the community people for disaster prevention.

Actually, the society has changed to lose mutual help as many of sociologists had criticized. Affluent society make people apt to think they can live by themselves as Baudrillard,(1970) explained as a phenomena of the consumer society. Convenient society makes cutting the people's connection as it is different than the old days the people had to help each other. This invisible connection is said as a social capital which include the mutual help in the case of emergency.

Such a place connecting people was the street as Jacobs said. Especially in Japan, those mutual help was very important to live together in the settlement against the big power of nature sometimes bringing disasters. However streets are occupied by cars therefore the connection of the people and places have been cut. It became an uneasiness of the people in case the disaster might happen how they could evacuate and survive. Therefore, Niige Chizu evacuation map workshop would be an opportunity for community people to connect each other through the map making process, being encouraged the communication to check the safer rout and physical environment of the street. Most victims at the disaster area were children and elderlies who are said weak people against disaster. We focus on children in this paper.

This Niige Chizu evacuation map workshop with children is a challenge to enhance risk communication range from children to adults in order to build resilient, safer community.

“Niige Chizu” is the term for an evacuation map, and indicates the length of time required from the evacuation point, through checkpoints to finally reach a safety zone on the map. The specialized representation of this function by using classified colors drawn on the route, beginning at the evacuation point, counting each color stripe as 3 minutes. As the route

progresses, the colors change, indicating a continually longer time frame from the origin. Considerations include elderly people evacuating to the hillside at a slope of 10 degrees. Referencing a statistical review, we set the unit of the color stripe as 129m per 3 minutes.

Beginning at each evacuation point, a green color stripe starts, yellow green follows after that, meaning it will require 6 minutes to evacuate. In this way, the consecutive color stripes are: yellow (9 minutes), orange (12 minutes), red (15 minutes), purple (18 minutes), blue (21 minutes) and black (24 minutes). Thus, if all streets are color-coded, one can easily extrapolate the required time for evacuation from any point..

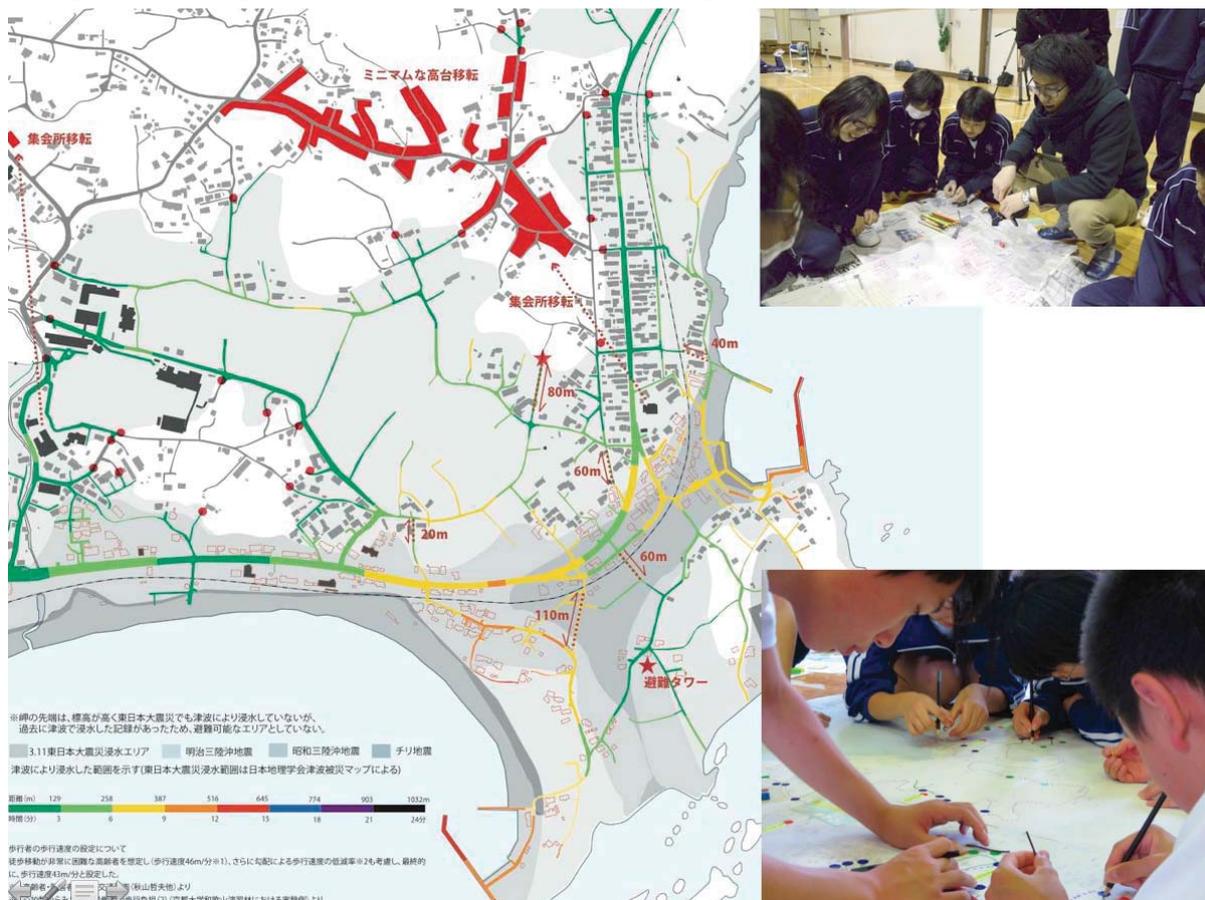


Figure 1 Niige Chizu sample

This methodology was created by the volunteer group of architects belonging Nikken Sekkei, to apply the reconstruction for making safer community. However, this method may be useful not only for the reconstruction but also the area where was said that tsunami disaster would be serious if the Nankai Trough earthquake will happen. This method was open for everyone can do, then we organized a research team together with this volunteer architects group of Nikken Sekkei, Meiji University, Chiba University and others, getting the grant from RISTEX (Research Institute for Science and Technology for Society) in JST (Japan Science and Technology Agency).

This paper introduces a part of this research result especially focusing on the effect of

this evacuation map for creating resilient community against disaster. This is aimed at making clear the effect for the intergenerational risk communication by applying to children. This was the new challenge for the volunteer architects group who initiated this evacuation map, because they thought that those works reading map and drawing on map might be able to be done only the age above junior high school age. So this is the new challenge to extend this method to involve primary school children and different generations for empowering risk management in community.

### 逃げ地図ワークショップの流れ

#### 1. 地域で想定されている災害を調べる

住んでいる地域で想定されている災害をインターネットなどを使って調べます。住んでいる行政のホームページで配信されているハザードマップや避難場所を示した防災マップなども参考になります。

災害は複合して起こります。地震の際には津波だけでなく土砂崩れや地震火災、大雨の際には洪水や土砂崩れが起こる可能性があります。そこで、自分の身の回りでのどのような災害が起こりそうか、あらかじめ想像をします。



津波



洪水



土砂災害



火災

#### 3. 道に色を塗り、コメントを付ける

地図の準備ができたなら、みんなで一緒に色塗りを始めます。逃げ地図では、避難地点から順番に、緑→黄緑→黄色→と色を塗っていきます。



逃げ地図ワークショップの目的は、みんなで一緒に地図を作ることでコミュニケーションを行い、地域の防災情報を共有することです。

地図を作りながら気になることが出てきたら、どんどん付箋にメモをとって、地図に貼っていきます。






#### 2. 白地図に避難場所や危険な場所を書き込む

みんなで作業ができるように、縮尺のしっかりした大きな白地図を用意します。白地図には、防災マップに記された避難場所や、ハザードマップに記された災害の影響範囲などをあらかじめ示しておきます。

大人気で作業を行う場合は、複数の逃げ地図を作れば比較することもできます。

- 沿岸部に避難タワーを建設した場合
- 新しい道路を整備した場合
- 土砂崩れが発生した場合

白地図の準備が難しい時は、市役所や近所の建築事務所に相談してみると用意して貰える場合があるかもしれません。

僕は過去の津波がきた範囲を塗っておこう。

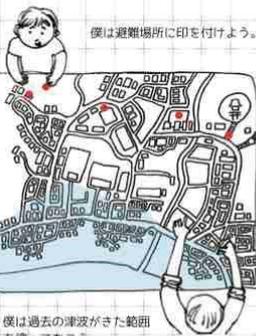


Fig. 2 Niagechizu workshop process

## 2. The Object Area and Methodology

For applying this Niige Chizu Method, Izu Area was selected. Because those area was announced by the governmental authority that tsunami will be 33m highest point and 15m in average at Shimoda city where is the core city in Izu peninsula, which will be the second highest situation in Japan, when the Nankai Trough Earthquake Level 2 (Magnitude 9.1 ) will happen. This announcement became a big threaten in this area in 2012. The tourism is main industry in this area because of its location to close to Tokyo and nice natural landscape, fresh seafood, and nice hot spas. The influence to tourism were seen after the news of this Nankai Trough Earthquake was reported. Furthermore serious thing is that many old people thoughts that it might be difficult to evacuate.

Against Tsunami disaster, most important thing is to evacuate sooner as possible to safer hill side area. This area is announced that Tsunami will come 15 minutes later after the

Nankai Trough Earthquake will happen. How can we run away in 15 minutes after the earthquake happen? Considering the time to lose before leaving house, it may be within 10 – 12 minutes.

For that the evacuation map making workshop would be suitable to measure the time from the safer rising points. Through the workshop, people would talk about the suitable route to the safer points and increase the literacy of the disaster prevention information. The role of this evacuation map making workshop is this point of risk communication. However those people who need this kind of communication may not take part in the workshop. How can we access to the people who are said disaster weak people such as elderlies, disabled and children?

Learning from the experience of the Great East Japan Earthquake, the episode which was said “Miracle of Kamaishi” gave us many hints. Children who are educated by the disaster prevention study survived without no victims and furthermore they helped people for sooner evacuation. As it is said in local dialect “Tsunami Tendenko” , the each sooner evacuation individually is the way to survive against tsunami, which is the local wisdom learned from the experience from the ancient time. Children learned how tsunami is strong even though low level, how the disaster happened by tsunami, how is the mechanism of the tsunami, how we can observe the sea level change, etc.

Then we set the approach from children to adults to encourage the risk communication through the Niige Chizu evacuation map making workshop. Coincidentally we are asked to organize a Niige Chizu making workshop at the Kawazu Minami primary school at Kawazu town in 2014. This became the opportunity to collaborate with this primary school for the disaster prevention study using a part of curricula of the school in 2015.

Applying the Niige Chizu evacuation map to the primary school children was the first time for us. Therefore there was a discussion worrying about the ability to read map, to control their fear to tsunami, etc. As a first trial, we conducted the Niige Chizu evacuation map making workshop for the 5<sup>th</sup> and 6<sup>th</sup> grade children in the February in 2015. For this facilitation, students played a big role to prepare the materials and explain kindly so that children could understand easily and be motivated with fun.

### **3. The program at the school**

Before the starting the new spring term in 2015, we had a meeting with teachers how to organize the collaboration of teachers and us from outsiders. Then about 13 hours (times) program was planned to implement from September to November. All of 79 pupils from the 5<sup>th</sup> and 6<sup>th</sup> grade at the school took part in this program. The program is as shown on Table 1.  
Table 1 The Curricula of Niige Chizu as a disaster prevention study program

**10<sup>TH</sup> CONFERENCE OF THE PACIFIC RIM COMMUNITY DESIGN NETWORK: AGENCY AND RESILIENCE**  
**15-17 December 2016**

program	STEP1. forecasting	STEP2.Rethinking	STEP3.Sharing
Using the collected information and materials, to find out the safer place to evacuate and talk.	<ul style="list-style-type: none"> <li>Revising the evacuation map by the new information learned from the lectures and workshop.</li> </ul>	<ul style="list-style-type: none"> <li>Sharing the information with other groups.</li> <li>Sending the information to other grades and community people.</li> </ul>	
dates	2015/10/6	1.10/22, 2.11/9, 3.11/12, 4.11/18	12/05
hours	2 (45 minutes 1 class)	10	1
Cooperated persons	Prefectural officials、 Councilors	Prefectural officials、 Community people, Disaster prevention specialists	Prefectural officials、 Community people, Councilors, Disaster prevention specialists
Curricula	<ul style="list-style-type: none"> <li>work: "Now, in case tsunami will come, where will you evacuate? Think the safer place and the rout to evacuate!"</li> <li>lecture: how to read the hazard map.</li> <li>work: Group discussion to think the safer and dangerous places.</li> </ul>	1.field work visiting the place to evacuate 2.Reviewing the field work 3.lecture "Earthquake and tsunami" 4.work : "Think more, rethinking the evacuation places and routs!" 5.lecture: "Preparation for disaster prevention together with monsters" ※home work sheet : Interview to parents and community people about the past disaster etc. 6.work : Reviewing the safer places and routs	work: drawing the rout with the colors indicating the time to walk and talk the findings.  <b>【After school】</b> <ul style="list-style-type: none"> <li>Presentation to the community people</li> <li>Niige Chizu –evacuation map with intergenerational participants</li> </ul>
Example of the comments by Questionnaire and interviews	"I would like to check at the site if it is safe or not." "I want to check the dangerous point in my neighborhood."	"I found the dangerous points which I could not think before." "I learned what kind of disaster happened here in the past."	"I found the different way of thinking of our children's to compare with adults."
Additional material	<ul style="list-style-type: none"> <li>Action Manual</li> </ul>	<ul style="list-style-type: none"> <li>Worksheet</li> </ul>	

We supported the work focusing on these following five points that had difficulty in an elementary school teacher carrying it in duties in this curriculum formation and enforcement.

1) Involvement of different stake holders. 2) Supporting the activities and facilitation, 3) Designs such as an explanation document or the teaching aid, 4) Rearranging of information written in on the map, 5)Advice from the specialized standpoint. As a result, we established the opportunity of the lectures linking with other subjects, such as earthquake mechanism in the "Science" and learning from the past experience and thinking about the evacuation of elderly people in the subject "Society". Concerning to the Niige Chizu evacuation map making, we set the suitable constitution of the curricula as a comprehensive learning subject, utilizing its curricula time. Then the program would be greatly divided into three phases like table 1.

**3. Niige Chizu applying in the program of the disaster prevention education curricula**

## and its result

### 1) Outline of the program

Children of the 5<sup>th</sup> and 6<sup>th</sup> grade studied for all together 13 class hours (1 class hour means 45 minutes) in the group separated to the neighborhood unit.



After the Nigechizu making, children visited the site guided by the community people



Fig. 3 Nigechizu workshop and field work

### 2) Step 1 Forecasting

The first step was focused to forecasting. Based on the fact children know, and the collected materials and information, they thought about the safer evacuation place and rout. Imagining the situation when the disaster will happen, they thought the appropriate evacuation place and rout. After that, they got a lecture about how to read a hazard map and checked there selection of the rout was in safe or not. There were reflection from them after the workshop finished. There were many comments from children to need to check at the site the safety. Especially the hillside to evacuate is designated as the dangerous zone of landslide. This makes children at the dilemma where they should evacuate. In case Tsunami will come from the sea, and at the hillside of the direction for evacuation may happen landslide, where shall we evacuate. This double bind situation is very difficult question not only for children but also for adults. However some children told that they can distinguish hard safer cliff and

soft cliff which may happen landslide because they knew because they knew from their experience of play in the hillside. And they discussed that on the road going up to hillside, there are several spots enough high level than the tsunami level. They found that the place to evacuate against the tsunami is not only designated evacuation points and also not always the designated evacuation places are safe. They found they have to see the site and check by themselves.

## **2) Step 2 Niige Chizu making process**

Step 2 is focused on rethinking. The collected data and information through the field work, lectures, and workshop were put on the map. After that, they made the Niige Chizu evacuation map by checking their evacuation places, the dangerous spots to be decreased and the evacuation rout on the map. At the field work, children had collaborated with the community people to be given the information of the places from the history of the site by the adults. And also it was a good opportunity for the encouraging intergenerational risk communication about safety by watching the site and talked on concrete things. We shared those information and other collected materials and information with the school, officials, and local community people (fig1). This collaboration with the local community developed to the next step of the action. And also the homework to listen the past disaster was very effective for children to communicate with older generation and neighbors and also know concretely what kinds of risk are there in their neighborhood. This process was a good opportunity for the enhancement of the risk communication in the community through children's activities.

## **3) Step 3 Sharing**

After the school curricula finished, one neighborhood of Kawazu town planned to organize the Niige Chizu evacuation map making workshop when the big event of the disaster prevention training was held on Dec. 5 in 2015. This is the prefectural designated date event everywhere in Shizuoka prefecture holds mostly in the style of evacuation simulation. For this combination 11 children were invited to take part in. At first children gave their presentation which they learned at school and their idea to build safer community indicating concrete issues they found to be improved. Children didn't hesitate to ask the adults. The Niige Chizu evacuation map making workshop was held after the evacuation training was ended together with the community people. In this way, Niige Chizu evacuation map making workshop was the process for encouraging intergenerational risk communication in the community.

One community tried to make Nigechizu inviting children. A university student was asked to facilitate the workshop. Dec. 5, 2015

### Outline

- Participants 22  
    children 8  
    mothers 4  
    Men 10
- As a Training of Evacuation
- In 2 groups
- 90 minutes



Selecting Evacuation Place : It took long time for the meeting  
Adults Selection →Yellow、 Children's selection →Safe-blue, Danger-red



At the presentation time, it became a good interactive communication between children and adults.

Fig. 4 Community was influenced to organize Nigechizu workshop by themselves.

#### 4. Conclusion

Using our method, the conversation and ideas to reduce risk in the area was promoted and gave conclusive results. Also during the process, conversation among the participants led to additional action to check the safety of the streets, bridges, buildings, etc. Thus, this method gives as its purpose is not only map itself but the risk communication process through map-making.

Using the workshops with children, we realized that the children could understand the complexity of the disaster of the earthquake, tsunami, and landslides, and investigate their environment to create a proposal for the improvement of the physical environment towards a safer community. Also during the process, children worked with community adults, creating an interactive communication opportunity for children to learn about disaster history and geographic conditions of the area, and for adults to in turn become motivated to initiate action for the improvement of their environmental and community programs of mutual help against disaster. It is shown that this method may be useful to apply not only tsunami disaster but also to typhoon, floods, and other natural disasters.

As a result, it has been made clear that Niige Chizu (evacuation map) workshops with children and community members results in a very useful program for promoting risk communication to build a safer, more resilient community.

#### Note

This research project is supported by the grant of RISTEX (Research Institute for Science and Technology for Society) in JST (Japan Science and Technology Agency).

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# The Tokyo Street Count as a Way of Enabling Collaboration among Stakeholders to Address Homelessness Issues: Citizen Involvement towards the Tokyo Olympic and Paralympic Games 2020

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## Abstract

Homelessness is one of the complex social issues expressed in urban space of our time. How should a city deal with homelessness? For homelessness in Tokyo, it is a time of uncertainty due to legislative changes and the up-coming Olympic and Paralympic Games. Considering this backdrop, the current article identifies some gaps in the existing approaches to homelessness in Tokyo and examines a grassroots effort to fill such gaps: the Tokyo Street Count (TSC). The TSC is an attempt by volunteer citizens to grasp the actual condition of rough sleeping in central Tokyo. The two TSCs examined in this article have revealed that daytime and night-time counts lead to significantly different results. It has also been demonstrated through the TSC process that citizens have latent energy and can take a more active part in addressing homelessness in their cities and neighbourhoods, especially in the context of making a positive Olympic legacy. Homelessness has a potential to trigger diverse people in the same local area to share their concerns, get connected to each other and work together.

Keywords: Tokyo Street count, the Olympics, homelessness, citizen involvement

## 1. Introduction

Homelessness is one of the complex social issues expressed in urban space of our time. How should a city deal with homelessness? For homelessness in Tokyo, it is a time of uncertainty against the backdrop of legislative changes in relation to homelessness assistance and the

coming Olympic and Paralympic Games. In international mega sporting events like the Olympics, homeless people could be marginalised and excluded. On the other hand, a number of past host cities have witnessed stakeholders take the Olympics as a chance to change the situation for the better and enhance homelessness assistance.

The authors have visited two past Olympic cities (Sydney and London) and learnt their approaches to homelessness at the time of the Olympics. In Sydney, dialogue took place between the public and voluntary sector stakeholders in the years leading up to the Olympics, which led to a protocol being developed that recognised the right of homeless people to be in public places<sup>1</sup>. In London, an ambitious goal to end rough sleeping by the Olympic year was set by the Mayor and voluntary sector organisations. A board of wide partnership was established to achieve this goal and it developed many innovative programs<sup>2</sup>. The initiatives developed in the lead up to the Sydney and London Olympic Games are positive social legacies for homelessness assistance.

Learning from the past Olympic cities, the authors have been exploring the possibility of changing the homelessness situation of Tokyo for the better. We established an organisation named ARCH (Advocacy and Research Centre for Homelessness) in 2015, and introduced good practices of different countries and cities to Tokyo's homelessness sector stakeholders. We also conducted research interviews with these stakeholders and discussed the current condition of homelessness and homelessness assistance in Tokyo. This series of actions has been our attempt to see whether we can enhance homelessness assistance in the years leading up to the Olympics just like stakeholders in Sydney and London did. At the same time, this is our action research to test such possibility.

In this article, we focus on one of these interconnected activities: the Tokyo Street Count (TSC). It is a survey carried out by citizen volunteers to learn the actual conditions of rough sleeping in Tokyo. By looking at the TSC, this article aims to: (1) grasp the actual condition of rough sleeping in Tokyo and demonstrate the social impact of the TSC; and (2) consider how various stakeholders such as public authorities, voluntary organisations and citizens can approach homelessness and address the issue in cooperation.

## **2. Current approaches to homelessness in Tokyo**

This section provides an overview of existing approaches to homelessness in Tokyo. Three different approaches are reviewed: social welfare approach under homelessness legislation,

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<sup>1</sup> Kitabatake, Kasai, Dohi(2014)

<sup>2</sup> Kasai, Dohi(2016)

public space management approach especially related to the Olympics; and voluntary sector approach. Identifying some issues of existing approaches, the final part explains why the authors and our colleagues carried out the TSC.

### *2.1. Homelessness and rough sleeping policy*

While the general public assistance has long existed and has been playing an important role in helping homeless people in Japan, the dramatic increase in visible homelessness during the 1990s after the collapse of the bubble economy led to an introduction of the “Act of Special Measures Concerning Assistance for the Independent Living of the Homeless” (Homelessness Act) in August 2002. The Act was the first national legislative response to homelessness and clarified the responsibility of central and local governments in assisting homeless people. Under the Act, the central government is required to conduct the national survey on conditions of rough sleeping in cooperation with local authorities and develop national guidelines for assisting rough sleepers<sup>3</sup>.

Nearly 15 years on from then, the Homelessness Act is scheduled to expire in August 2017. The Act was temporary legislation with a specified duration of validity from the beginning, because it was supposed to respond to a suddenly emerging problem at that time. Although new, more permanent legislation to take over the function of providing homelessness programs has already been in operation since April 2015, critics point out that the Homelessness Act is about much more than just providing programs. The repeal of the Act will mean that there is no nationally recognised definition of homelessness. Moreover, the central and local governments will have no legal duties to conduct a survey on homelessness and publish a homelessness strategy. It is in fact expected that many local authorities will stop their counting and planning effort for homelessness assistance.

In central Tokyo, homelessness programs have been jointly funded by the Tokyo Metropolitan Government (TMG) and local authorities of the 23 special wards. These programs together form a so-called “independent living assistance system”, and the main program provides five independent living assistance centres across central Tokyo. Homeless people, through an intake procedure at a local authority welfare office, can move into one of these centres where they are provided with emergency shelter services including health checks, temporary accommodation, and assistance to get a job and long-term housing. Other TMG/wards joint programs include a street outreach program which funds five outreach teams attached to the centres, and a short-term shelter program that focuses on San’ya, a traditional underclass district in eastern Tokyo.

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<sup>3</sup> The target of Homelessness Act is basically rough sleepers.

Another important function of the TMG in homelessness assistance is to investigate the actual conditions of street homelessness. The TMG started to conduct a street count in central Tokyo from the mid-1990s to understand the extent of street homelessness, and now conducts the count twice a year in winter (January) and summer (August). The information collected in this survey forms a basis for the planning of homelessness programs. According to the TMG’s official count, the number of rough sleepers in central Tokyo peaked at over 6,000 in the early 2000s and has been decreasing since then, hitting a low of 1,302 in the most recent survey of August 2016<sup>4</sup>. These figures are produced by adding together the numbers that different public space management authorities, such as local authorities’ park and street divisions and river management offices, report to the TMG’s homelessness unit in the social welfare bureau<sup>5</sup> (Figure 1). And importantly, each authority counts rough sleepers within their management area during the day. It is therefore likely that those who sleep out and become visible only at night are often missed out in the official survey. While daytime counts are useful to some extent, especially in grasping the size of the less-mobile rough sleeping population with well-established structures such as cardboard shacks, it is commonly known by frontline workers that there are many who are less visible during the day because they go to work or visit job centres and other places. If the official figures are biased and underestimate the rough sleeping population considerably, effective policy design would be difficult. Another thing to point out is that local authorities’ welfare divisions are bypassed in the survey process (see Figure 2.1). Since they are best positioned to have regular conversations with frontline workers and reflect their local situations to homelessness policies, the survey data (not only the total number but information about demographics and locations of rough sleepers) would be utilised better if they are more involved.

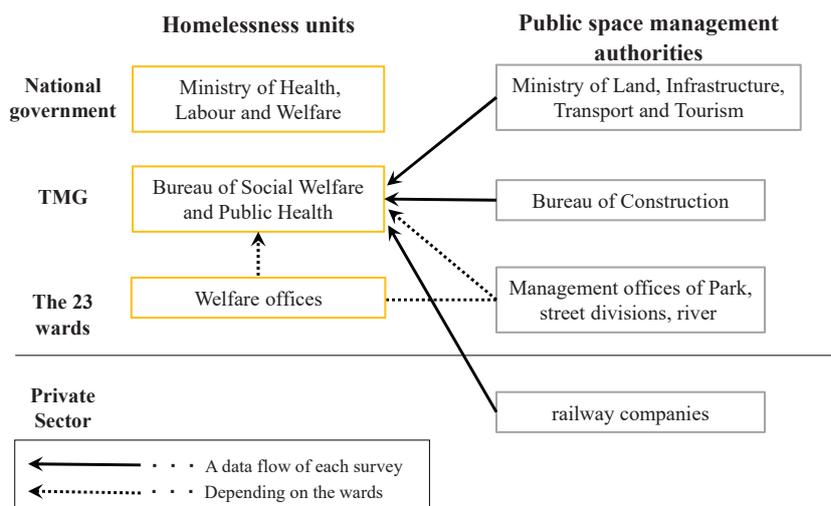


Figure 1. The data flow of the TMG’s count

<sup>4</sup> From the web site of Bureau of Social Welfare and Public Health (<http://www.metro.tokyo.jp/tosei/hodohappyo/press/2016/10/21/03.html>)

<sup>5</sup> By the interview to Bureau of Social Welfare and Public Health

## *2.2. Olympic-related public space management and homelessness*

From the spatial perspective, what is striking about Tokyo's current homelessness situations is the impact of Olympic-related developments and public space management. International mega sporting events like the Olympics are known to have substantial impact on the hosting city and its local communities. In the past Olympic host cities, incidents reportedly occurred where rough sleepers were swept out for the sake of the city's good appearance, or where poor tenants were evicted by landlords as they planned to take advantage of the Olympics by charging tourists many times the usual rent.

In fact, there has already been trouble in central Tokyo concerning Olympic site redevelopment and homelessness. The TMG recently closed down a certain area of Meiji Park so that the land can be used for the redevelopment project of the New National Stadium, but the area was resided by a number of rough sleepers at the time of the closedown and their resistance resulted in an aggressive removal<sup>6</sup>. On the TMG's side, it is also suspected that procedures of getting an approval to change the land use and implementing it had some legal problems<sup>7</sup>. It would have been much more ideal if relevant agencies and individuals including the public space management agencies, social welfare agencies, rough sleepers and local residents had sat down around the table and reached a solution together – but the reality was different, and there is a fear that the same thing could happen again as the Olympic year of 2020 approaches.

Since rough sleeping mostly occurs in public places, the issue often attracts both welfare approaches and public space management approaches. Indeed, the Article 11 of the Homelessness Act stipulates that public space management agencies “should take necessary measures to ensure the proper usage of the public place” when it is inhibited by a rough sleeper residing there. Rough sleepers can be referred to an appropriate service through the cooperation of welfare agencies and public space management agencies, and at the same time, they may be removed due to complaints by local residents and redevelopment projects.

## *2.3. Efforts of voluntary sector organisations working with homeless people*

In addition to the efforts of the TMG and local authorities to address homelessness, voluntary sector organisations provide homelessness services, many of which are run independently of public sector services. In Tokyo, there are around 20 homelessness organisations of different size. Only a few of them are large enough to employ full-time staff. Homelessness organisations tend to concentrate in areas with a large rough sleeping population (such as business and commercial districts of Shinjuku, Shibuya and Ikebukuro, and traditional

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<sup>6</sup> R(2016)

<sup>7</sup> <https://sites.google.com/site/dandysworldg/newnationalstadium2>

underclass districts in East Tokyo), and their geographic coverage is often confined to one local district that is considerably smaller than one ward (i.e. a local government area). Services provided by these organisations include soup runs, street outreach, advice and consultations, shelters, assistance to move into permanent housing, free medical treatment and free legal consultations. Once a homeless individual starts to engage with such services, most organisations collect information on the person and keep records in the form of paper or computer software files. However, the collected data is rarely utilised for the improvement of services, for example, by analysing it or sharing it with other organisations.

Although we should acknowledge that voluntary sector organisations play a significant role in helping homeless people, their limited geographic coverage and poor information sharing with public sector services and other voluntary organisations mean that they hardly have a comprehensive understanding of Tokyo-wide homelessness and rough sleeping conditions.

#### *2.4. From finding the gap in knowledge to filling the gap*

In this section, we have identified gaps in the knowledge on Tokyo's homelessness conditions. The snapshot number of rough sleepers is one of the most fundamental datasets for policy design under the current system; however, the TMG produces this number through daytime counts and therefore is likely to be underestimating the issue. On the other hand, the ability of voluntary sector organisations to grasp the entire picture of rough sleeping in Tokyo is highly limited due to their organisational size (i.e. unable to cover a larger area or to have a research section within the organisation) and poor information sharing. The lack of knowledge of the extent of the issue, combined with the current legislative situation that could lead to rather passive attitudes of local authorities towards the provision of homelessness assistance, may suggest a high risk of negative consequences.

It is not our intention, however, to simply criticise the homelessness sector stakeholders and instigate readers' sense of crisis. We view ourselves as relevant to this matter because Tokyo is our city and we have our own part as a citizen to address the issue of our daily life. In fact, we came to learn the gaps mentioned above through the process of our action research on Tokyo's homelessness towards the 2020 Tokyo Olympic and Paralympic Games (part of this process will be further discussed in Subsection 3.3.) Having discovered existing gaps, our next step was to conduct the Tokyo Street Count, which is now discussed in the following pages.

### **3. Tokyo Street Count**

The Tokyo Street Count (TSC) is a grassroots effort to capture a night-time snapshot of rough sleeping in central Tokyo. Coordinated by ARCH (Advocacy and Research Centre for

Homelessness; of which the authors are core members) and supported by frontline workers and researchers as well as many volunteer citizens, the TSC is intended to complement official daytime counts and provide a more realistic picture of rough sleeping based on which more effective strategies can be made.

For ARCH, the TSC is not just about enumerating and analysing Tokyo's rough sleeping population. An important feature of the TSC is citizen involvement, that is, making opportunities for citizens to get to know the actual conditions of rough sleeping in their own cities through a direct experience and start to think and talk to each other about what can be or needs to be done to improve the situation. To illustrate these two aspects of the TSC, this section is organised as follows: the first half deals with the *survey* aspect of the TSC, explaining the counting method of two TSCs (Winter and Summer) in Subsection 3.1 and showing the count results in Subsection 3.2. The second half concerns the *citizen involvement* of the TSC process. Subsection 3.3 describes the entire process of the TSCs with an emphasis on how various stakeholders have been involved in different phases. Finally, Subsection 3.4 attempts to demonstrate the social impact of the TSC.

### *3.1. Counting Method*

The Winter TSC took place over three nights in the mid-January 2016 to cover three wards in central Tokyo and the Summer TSC took place over two nights in the early August to cover five wards (including the three wards covered by the Winter TSC; Figure 2). On each night, volunteers gathered at a designated meeting point after the last train (Figure 3) and were given instructions on how to record sightings of people sleeping rough. They were divided into teams of three to five people and most teams walked each street and other open spaces such as parks, stations and riverbanks in their designated geographic area while a couple of other teams went by car to relatively small stations and parks that were distant from the meeting point and not covered by the teams travelling on foot. The actual count took around three hours on average and a total of 111 and 171 volunteers (on the person-days basis) participated in the Winter and Summer TSC respectively.

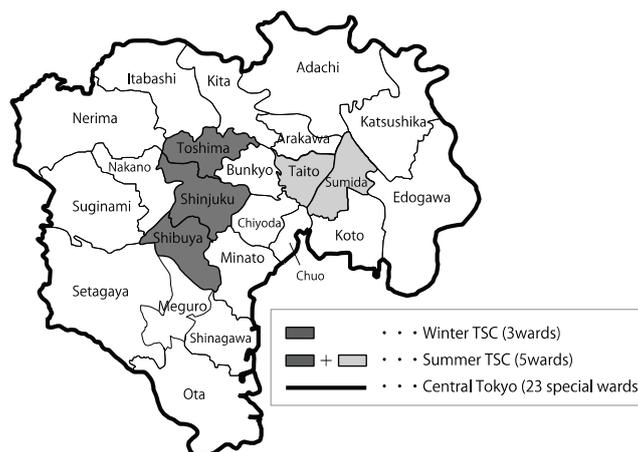


Figure 2. The wards covered by the Winter and Summer TSC



Figure 3. Volunteers gathered at the station after the last train

The counting tools provided to a team consisted of a map of the team's counting area and a counting form. When a team found a person bedding down or a person sitting or walking around and being likely to be sleeping rough (judged mainly based on their belongings), they marked the location of the person on the map and wrote down more information on the form. Items recorded on the form included: (a) time and description of location; (b) type of place (streets, railway stations, parks, riverbanks, or other); (c) number of individuals; (d) form of rough sleeping (well-established shacks and tents, makeshift cardboard shelters and sleeping bags, or not bedding down); (e) description of the person's appearance and belongings; and (f) gender.

### 3.2. Results of the Count

Table 1 and Table 2 show the numbers of rough sleeping individuals identified in the Winter and Summer TSCs with the numbers identified in the TMG's daytime counts conducted in the same month as TSCs. The Winter TSC found 671 individuals in the three wards, which was 2.8 times more than the official figure. The highest number of rough sleepers (366) was recorded in Shinjuku Ward and the lowest (116) in Toshima Ward. In the Summer TSC, a

total of 1,135 individuals were counted in the five wards and this was again 2.8 times more than the corresponding figure in the TMG count. The highest was 370 individuals in Shinjuku Ward and the lowest was 126 in Toshima Ward. The large gaps between the TSC figures and those of the TMG counts point to the incapability of daytime counts to capture a realistic picture of the entire rough sleeping population.

Table 1. The numbers of rough sleeping individuals (Winter TSC)

	a)Winter TSC Jan 2016	b)TMG count Jan 2016	a/b
Shibuya	189	107	1.8
Shinjuku	366	97	3.8
Toshima	116	35	3.3
<i>Total</i>	671	239	2.8

Table 2. The numbers of rough sleeping individuals (Summer TSC)

	c)Summer TSC Aug 2016	d)TMG count Aug 2016	c/d
Shibuya	181	85	2.1
Shinjuku	370	140	2.6
Toshima	126	35	3.6
Taito	287	79	3.6
Sumida	171	68	2.5
<i>Total</i>	1135	407	2.8

Figure 4 shows the number and proportion of individuals counted in different types of places at both TSCs. Those found on streets accounted for the largest proportion, 35% in Winter TSC and 30% in Summer TSC. This difference may be partly explained by those found on riverbanks in the Summer TSC. Because the three wards covered in the Winter TSC do not have large rivers while the other two wards have ones, only the Summer TSC found rough sleepers on riverbanks, which in turn reduced the proportion of rough sleepers found in other types of places. An interesting finding is that the proportion of individuals counted on streets and railway stations was significantly higher than that of the TMG counts. Although the TMG only provides such figures for the entire Tokyo prefecture and therefore an accurate comparison is impossible, it is probable that many people sleeping on streets and in railway stations at night were not included in the official daytime counts. Other findings of the TSCs include that the proportion of rough sleepers living in shacks and tents accounted for less than 20% (Figure 5), and that few of those found in railway stations had this kind of structures. The fact that people sleeping rough in railway stations rarely have an established structure (less than 1%) may well mean that they tend not to stay there during the day.

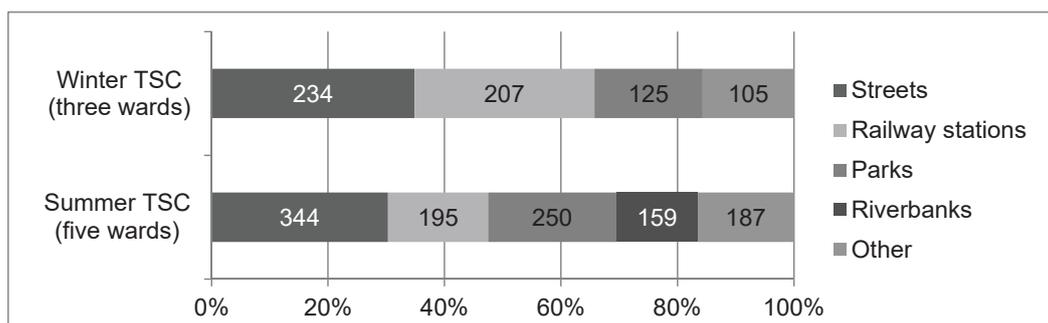


Figure 4. The proportion in different types of places

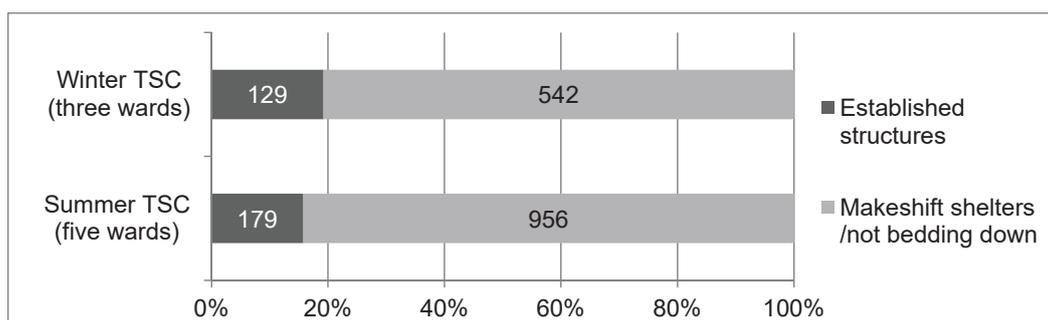


Figure 5. The proportion in different types of the way of sleeping

### 3.3. Tokyo Street Count as a process of citizen involvement and social networking

Viewed from a different angle, the TSC is a series of actions to provide opportunities for citizens to come together, get to know the actual conditions of rough sleeping in their own cities and start conversations. The whole process of the TSCs are summarised in Figure 6 and Figure 7.

In the Winter TSC process (Figure 6), ARCH initially proposed an idea of carrying out a night-time street count in Tokyo to frontline workers and researchers at a small meeting at the end of October 2015. Receiving positive and neutral reactions by the attendees, ARCH decided to make it happen, and its members visited homelessness organisations providing services in Shinjuku, Shibuya and Toshima Wards. ARCH members explained to them the plan to carry out a TSC in January and asked about areas their services usually cover as well as places of high concentration of rough sleeping. Scholars researching homelessness were also contacted, and some of them agreed to help conduct the Winter TSC and introduced the volunteering opportunity to university students. The information collected through these visits and contacts was used to determine the survey area. ARCH also estimated the number of volunteers needed for the count based on similar practices operated overseas, and decided to look for at least 84 volunteers. The call for volunteers was disseminated via existing

mailing lists and other social networks. For registered volunteers, a TSC orientation was held twice in prior to the count. There, ARCH members and volunteers surrounded a large map of the three wards and discussed ways of operation that would work well and be easily understood by volunteers.

After the three-night count was completed, ARCH announced preliminary results late January and held a small feedback meeting twice in March. The feedback meeting was for TSC participants only. Finally a large public reporting conference of the TSC took place in April, and the attendees, including TSC participants, frontline workers, welfare officers, researchers and other members of the public, exchanged their opinion on how we address the issue of homelessness.

For the Summer TSC (Figure 7), ARCH decided at the end of May 2016 to carry the second TSC. The basic counting method of the Summer TSC followed that of the Winter TSC, but the coverage of survey was extended from three wards to five and the days of survey shortened from three nights to two. In order to conduct counts in multiple wards simultaneously it was necessary to have multiple meeting points and headquarters, which in turn required more staff members. Thus, ARCH organised a steering group with frontline workers and researchers with whom ARCH had already built a good relationship through the Winter TSC and other activities. The steering group discussed the operation plan at meetings, visited the actual sites to check areas of concentration of rough sleeping, and ran headquarters on the nights of the TSC. The call for volunteers was disseminated by the steering group members and through speaking opportunities such as lectures and conferences that ARCH got thanks to the first TSC, and thus it reached more people. The TSC is expanding in size and the social network generated through the TSC process is strengthening.

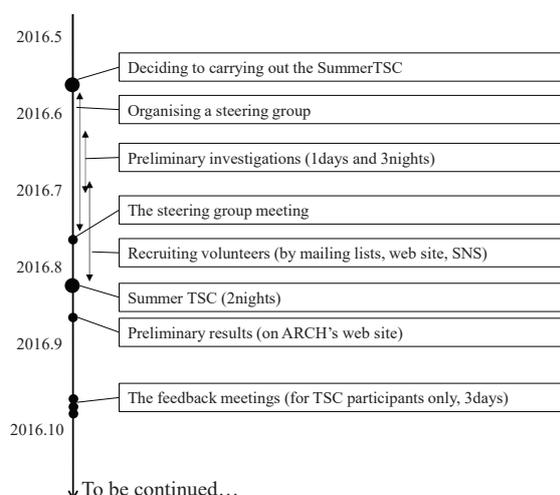


Figure 6. The Winter TSC process

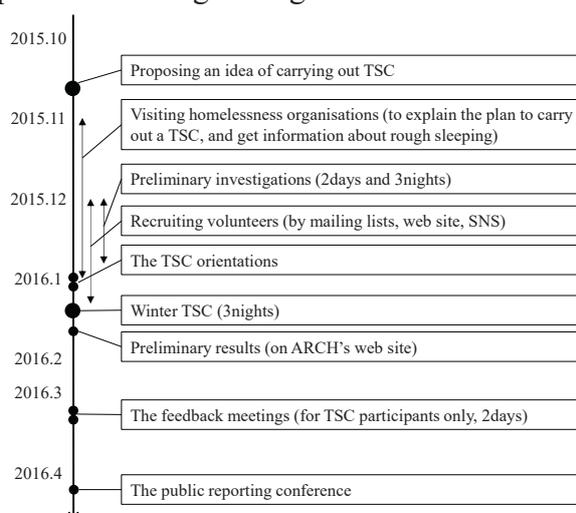


Figure 7. The Summer TSC process

### 3.4. Social impact

Table 3 shows some indicative measurements of the TSC’s social impact. 82 and 134 individuals volunteered in the Winter and Summer TSCs respectively, and this is equivalent to 111 and 171 person-days. Various people including university students, researchers, social workers, local authority officers and private company workers participated in the TSCs. Those who do not usually take part in homelessness assistance and research accounted for more than a half. Some also had been homeless in the past. The variety of participants as well as the number increased through the two TSCs.

We calculated estimated distance that all volunteers walked during the counts. The result was approximately 500km for the Winter TSC and 1,200km for the Summer TSC. Also, assuming that the average time of the count for each team was around three hours, the total time devoted by volunteers was approximately 300 hours in the Winter TSC and 500 hours in the Summer TSC. The fact that this much energy was given voluntarily by citizens to an attempt to capture the actual conditions of Tokyo’s rough sleeping is itself socially meaningful.

In addition to volunteer participation on the TSC nights, the entire TSC process involved 21 and 41 attendees at feedback meetings for the Winter and Summer TSCs, and 92 attendees at the Winter TSC public reporting conference. Through both TSCs, this activity was covered 17 times by media such newspapers, television and radio.

Table 3. Social impact measurements

	Indicative measurement	No.
Winter TSC	Homelessness organisations visited during the preliminary research phase	6
	Volunteers who attended the orientation	30
	Volunteers who participated in the Winter TSC (individuals)	82
	Volunteers who participated in the Winter TSC (person-days)	111
	Volunteers who attended the feedback meeting	28
	Attendees of the public reporting conference	92
	Media coverage (newspaper, tv and radio)	12
Summer TSC	Volunteers who participated in the Summer TSC (individuals)	134
	Volunteers who participated in the Summer TSC (person-days)	171
	Volunteers who attended the feedback meeting	41
	Media coverage (newspaper, tv and radio)	5

Finally, Figure 8 summarises participants’ answers to a question in the questionnaire distributed at the end of each night count in the Summer TSC. Almost all participants responded to the questionnaire (122 respondents out of 134 participants). The question was: “was there any change in the image of rough sleepers or how you view people’s rough

sleeping conditions before and after the TSC? If yes, how did it change?” 24 respondents answered there was no change while 81 respondents described the change they experienced. The most common answer among these 81 respondents was that what they saw on that night was different from the image they had had in prior to the count.

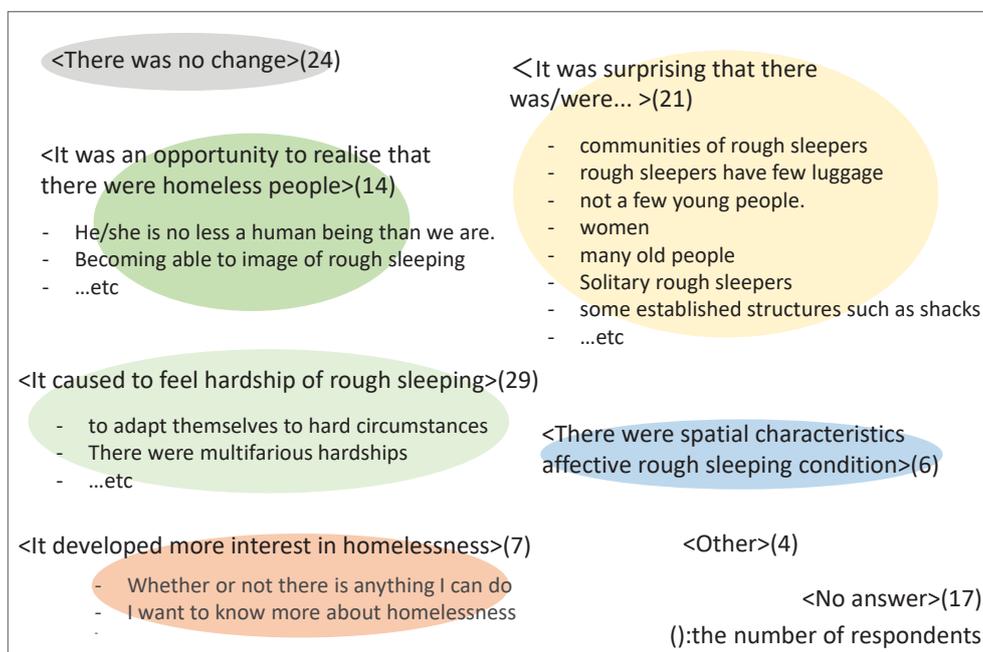


Figure 8. Responses of the Summer TSC participants to questionnaire

#### 4. Discussion and Conclusion

The two TSCs have revealed that daytime counts and night-time counts lead to significantly different results. The official TMG rough sleeping figures are clearly an underestimate, and this is a serious problem given that homelessness policies and programs are designed based on this data. Effective policy design should start with collecting reliable information, and the public sector is responsible for at least trying to design effective policies and programs.

Having said that, the public sector is not necessarily the only stakeholder that is responsible for addressing homelessness. It is an issue expressed in the public space of our city. Through the TSC process, many citizen volunteers got actively involved and had a direct experience to see the actual condition of people sleeping rough. And the questionnaire results show how that kind of experience could change one's perception. Looking at the results, we could argue that people somehow started to feel it was happening in their own city, something related to their daily life. This suggests a possibility that citizens can take more active part in addressing homelessness in their cities and neighbourhoods. When there is an opportunity like the TSC,

many citizens show a sign that they have latent concerns and energy to give to their shared issues.

The TSCs were achieved as a result of the energy devoted by citizens from different backgrounds. They demonstrated a positive sign for changing Tokyo's homelessness situation for the better in the years leading up to the Olympics. Because of the fact that the TSCs were carried out through cooperation of various stakeholders, we can argue that the possibility of making a positive social legacy of the Tokyo Olympic and Paralympic Games has not been denied.

We have observed that citizens from various backgrounds started to recognise homelessness as a shared issue when they had a direct experience to witness the actual condition. Thus it can be said that homelessness has a potential to trigger diverse people in the same local area to share their concerns, get connected to each other, and work together. The TSCs have shown the potential, and currently, a new social network is growing through the TSCs.

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# Survivors' Grassroots Disaster-Archive Activity Aids Revitalization after the Great East Japan Earthquake

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## **Abstract**

The March 2011 Great East Japan Earthquake and the following tsunami flattened towns in the Tohoku region. In this post-catastrophe situation, the Japanese government should ensure support for infrastructure and for resilience through cultural and environmental measures. This study, therefore, aims to increase resilience by using disaster services' soft power, focusing especially on grassroots disaster archives—in the Hisanohama area in Fukushima Prefecture and on the Kataribe (storyteller) phenomenon in Miyagi Prefecture. Stricken by disasters, both communities are typical rural areas where a decreasing and ageing population causes serious economic and physical problems. After the disasters occurred, elderly survivors were encouraged to record and archive their disaster experiences. Besides providing valuable expertise, their high motivation to do so increased their resilience and dignity within their communities.

Keywords: Great East Japan Earthquake, disaster archive, tsunami, Kataribe

## **Introduction: Vast numbers of disaster archives created**

After the 2011 Great East Japan Earthquake, the Japanese government held an inaugural emergency meeting and, on April 14, 2011, established the Reconstruction Design Council in Response to the Great East Japan Earthquake.<sup>(1)</sup> The Japanese government formulated Seven Principles for the Reconstruction Framework and presented them for public release. Principle 1 states:

For us, the surviving, there is no other starting point for the path to recovery than to remember and honour the many lives that have been lost. Therefore, we shall record the disaster for eternity, including through creation of memorial forests and monuments. We should use such precious disaster archives for future disaster mitigation.

After this statement, vast numbers of disaster experiences have been recorded.

### Hisanohama community-based disaster archives

Hisanohama, in Fukushima Prefecture, sustained huge damage from the 2011 tsunami, and the majority of survivors had to relocate to temporary housing, thus scattering the local community. In fact, many communities were scattered because of governmental relocation planning, and the majority of survivors felt trapped in solitude. In response, Hisanohama residents decided to rebuild temporary shopping streets, including a small disaster exhibition room, showcasing a variety of disaster stories with historical background and pictures of Hisanohama. Created by local elderly disaster victims, this exhibition room plays an important social role in the disaster-stricken area because its activities help alleviate survivors' feelings of isolation. Many survivors who had lived in Hisanohama visited the cosy exhibit room and chatted with other survivors, making them feel less alone. Furthermore, every shop owner was willing to talk to tourists about the disaster experience. Table 1 displays some comments collected in the current ethnography survey.

Table 1. Summary of comments collected through the ethnographic survey

Research collected	Area	Profession	Outline of comments
Three times	Hamakaze shopping arcade	Entrepreneur, owner (Ramen shop owner)	The owner opened a temporary shop in response to local people's requests.
	Hisanohama local	Pensioner	Feeling like before the disaster, I can again find my place.
	Iwaki	City recovery NGO	Many events should be collected for disaster mitigation planning.

### Kataribe phenomenon

After the 2011 earthquake, many survivors in disaster-stricken areas established *Kataribe* (Japanese for *storyteller*) tour organizations, listed in table 2. This spontaneous response by survivors informs the public, future generations and tourists about experiences and reactions to the disaster—how they evacuated and saved their lives before being caught in the tsunami resulting from the earthquake. In fact, many expressed regret that they had not taken the tsunami warning more seriously. These storytellers create three positive reactions: 1) improvement of disaster prevention awareness by local residents and 2) increased tourism, especially by those who would like to discover more about the disaster of 3.11 as shown in figure 1; and 3) to enable the visitors to understand more about disasters and the experience

of living through a disaster. As a result, they will not only empathize with disaster victims but can also be better prepared themselves should a disaster occur again.zx

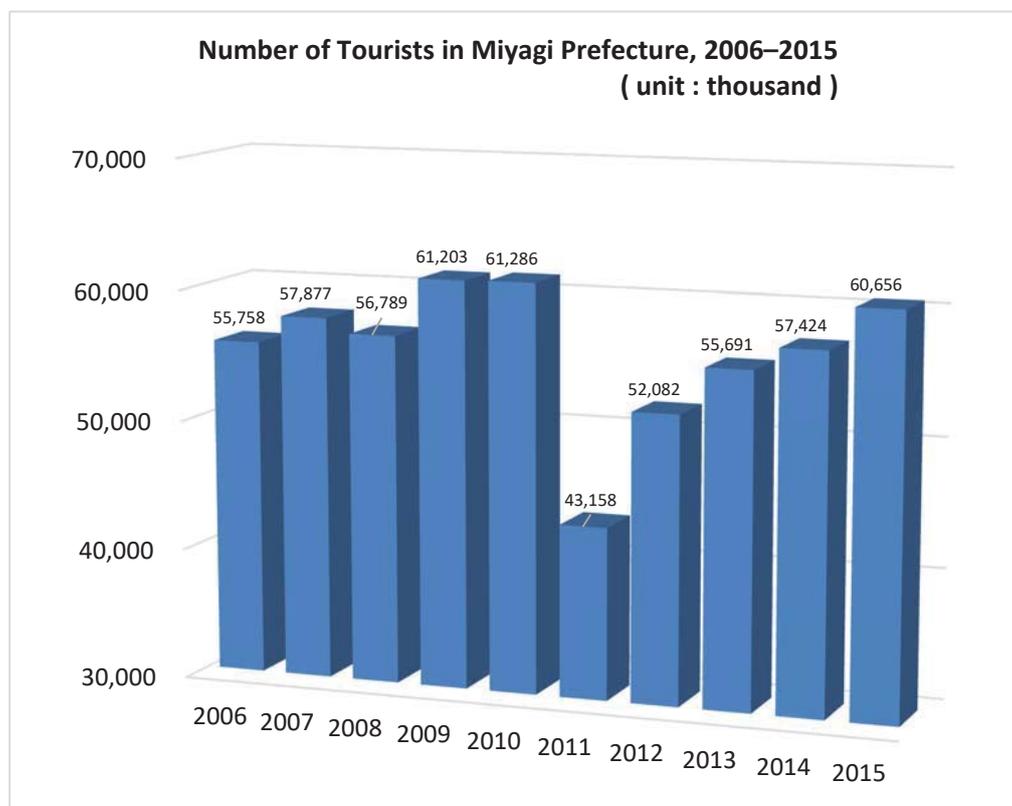


Figure 1. Number of tourists visiting Miyagi Prefecture before and after the Great East Japan Earthquake <sup>(2)</sup>

Table 2. Kataribe (storyteller) tour organizations established after the 2011 Great East Japan Earthquake

Name of organization	Number of Kataribe	Average age
Kesenuma Kataribe guide	30	65
Karakuwa visitor centre	3	70
Minami Sanriku tourist board	20	60
Ishinomaki volunteer organization	10	70
Onagawa tourist board	11	50
Yuriage organization	4	50
Okumatushima tourist board	8	60

## Results

The current ethnographic survey shows that most Kataribe are elderly people and, in fact, more than 70% are pensioners. Because otherwise their experiences and observations may be forgotten, we must maintain their records as a disaster archive. Besides, the Kataribe activity has several advantages. One is attracting many regular tourists, the majority of whom have developed empathy with survivors. This may be a reason tourists return many times to the same area. A second advantage of Kataribe activity is positive economic development and a third advantage is active participation. In this approach, recording disaster archive needs grass-roots types of structures. Thus there is a responsibility for collecting various disaster records such as at small-scale community and national government scales. To maintain small-scale archives, which are made by the community people themselves over a long for a long time, lack of funds and of technical knowhow are major future issues to be considered. One of the solutions is to keep the small-scale community records as part of governmental or larger archive systems.

## **Conclusion**

Results show that the disaster survivors' storyteller movement positively influenced disaster-stricken areas economically and also in morale and psychological resilience. Thus, such a soft-power approach could be helping to increase community resilience. Still, two types of recorded disaster archives are needed: one structured from the top down and the other from the bottom up. Responsibility for collecting disaster records naturally varies in scale—from the national government to small communities, so following the disaster, our country has been constructing various kinds of disaster archives. In addition to these activities, residents creating records for themselves and handing them down to the next generations are valuable and useful post-disaster activities.

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## **Experience of Community Design in Recovery Following the 311 Earthquake**

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### **Abstract**

At the beginning of this paper, the authors illustrated the framework for discussing community issues and argued the situation of communities in recovery following the Great East Japan Earthquake. It could be said that community design practice for people affected by the disaster had become one of most important issues, the authors outlined the recent efforts on community design taken by national, prefectural, and local municipal government, and private entities such as NPOs. After that, The authors demonstrated cases on community design practice as most successful and innovative cases of community design practices in recovery following the Great East Japan Earthquake. As the conclusion, the authors indicated the importance of ensuring the continuity of community development and an elaborate strategy for ensuring the continuity, then described the necessity of creating community design practices based on collaborative multi-actor partnerships in the process of recovery following the Great East Japan Earthquake. These practices could be useful models not only for community design in recovery following future disasters but also for community design in any urban areas with aging of the population and falling birthrates.

Keywords: Community Design, Temporary Community Period, Machizukuri, Placemaking

### **1. Introduction: Framework for discussing community design in recovery from 311 earthquake**

First of all, it is necessary to outline the framework for discussing community design in the context of recovery and reconstruction following the 311 earthquake. There are, at the very least, four main issues in community design:

- Sustaining and regenerating territorial communities such as neighborhood associations;
- Formation of communities of interest that address challenges in the disaster-stricken area;
- Mutual collaboration between them, and partnership and cooperation with public administration and private enterprises; and

- Construction of systems and mechanisms for achieving progress in the foregoing issues.

Moreover, community design in the context of recovery and reconstruction following the 311 earthquake must be discussed with consideration for the specific characteristics of this disaster, which include the following: 1) The damage occurred over the extensive area (500km); 2) Urban areas and villages along most of the coastal region suffered the catastrophic damage when the tsunami struck; 3) The aging of the population and falling birthrates were already a more acute problem in most of the disaster-stricken areas than elsewhere in Japan; and, to make matters even worse, 4) There is the complicating factor of a nuclear disaster (Fukushima).

This paper discusses reconstruction in a disaster-stricken area in southern part of Iwate Prefecture, with particular reference to perspectives 2) and 3) above.

## **2. Reconstruction Project Frameworks and Consideration for Communities**

### **2.1 The infrastructure-focused approach to modern reconstruction projected onto the Great East Japan Earthquake**

Reconstruction in Japan is still being pursued on the basis of the infrastructure-focused approach, even after the Great East Japan Earthquake, so the approach to reconstruction planning is almost identical to that adopted when planning infrastructure development projects, as described below. One could regard this as a sign that Japanese urban planning, which began with plans for facilities, is still “topsy-turvy urban planning,” which cannot ensure the primacy or dominance of the act of planning.<sup>i</sup>

In what form does this infrastructure-focused approach to reconstruction manifest itself in current post-disaster reconstruction efforts? I shall outline the main points below.

- **Surveys carried out directly by central government (mainly the Ministry of Land, Infrastructure, Transport and Tourism—MLIT)**

Shoring up administrative capabilities of local municipal governments was one key element in the post-disaster reconstruction efforts, due in part to the fact that the administrative capabilities of municipalities in disaster-stricken areas had been decimated by the effects of the disaster. Given that regeneration and reconstruction were needed in a comprehensive sense, planning was naturally required to be undertaken in a wide range of fields. However, this was, in the very beginning, undertaken solely by the City Bureau of MLIT. By the end of the fiscal year, surveys had at last begun to be directly conducted by the Housing Bureau of MLIT and the Fisheries Agency, but other ministries and agencies did not provide any active support for reconstruction planning.

- **The principle of restoration to the original state**

The basic approach adopted in the restoration of facilities is restoration to the original state.

Accordingly, the construction of a complex with combined a school and welfare facilities is apparently deemed to be unfeasible, even if it is preferable from a planning perspective and would also save money, because it goes against the principle of restoration to the original state. However, in the case of road infrastructure development, it is permissible not simply to restore the road to its original condition but to modify it to a more “modern” and appropriate form; in a Japanese word, *Fukko*, means reconstruction with adding something new to the original state. This is probably due to the fact that infrastructure development through land readjustment projects has become the established principle of reconstruction as *Fukko* since the Great Kanto Earthquake in 1923.

- **Reconstruction subsidy systems and their management that prioritize infrastructure development**

The author and a number of other experts have pointed out the need for comprehensive subsidies, which also relates to the matters described above. In reality, though, individual infrastructure and facility development projects (40 types) were designated as core projects, and it is created that a project menu focused primarily on tangible projects. Having said that, it was permitted up to 35% of the core project subsidy could be used for projects to promote effectiveness, raising hopes that these could be leveraged. However, at the time of writing, while 1.2 times the project cost (when including projects to promote effectiveness) has been provided for infrastructure development projects, the allocation of subsidies to projects to promote effectiveness for other purposes has been limited.

## **2.2 Problems with the infrastructure-focused approach to modern reconstruction**

Now, what kinds of problems have arisen from the infrastructure-focused approach to reconstruction in the current case?

- **Lack of planning other than in infrastructure development projects**

Planning is weak and sometimes even non-existent in such areas as medical care and welfare, industry, the environment, and community regeneration, which are considered to be vital for the future, not only in disaster-stricken areas but also throughout Japan. Deliberations concerning housing are progressing rapidly, due in part to a series of surveys conducted directly by the Housing Bureau; in some local government areas, these deliberations are being undertaken in conjunction with infrastructure development. However, if things proceed as they are right now, these could become ghost towns lacking the intangibles needed for people’s daily lives, even if infrastructure and housing development progress consistently.

- **Fairness and equality vs. a roadmap for diverse reconstruction**

Since the perspective of swift industrial regeneration is weak, in many cases – even in infrastructure development – a policy of ensuring that the whole process remains in complete lock step is espoused, bound by the principles of fairness and equality. From the perspective of swift industrial regeneration and cultivating people who can take the lead in resolving local

social issues (which relates to the formation of communities of interest that address issues in the disaster-stricken area), it would seem necessary to “extract” those projects with a high level of maturity or for which there is considerable need, and to implement them first, even if only partially. The kind of planning required involves diverse actors and units proceeding reconstruction projects individually, which are then harmonized with each other from the perspective of their overall effect.

- **Spatial planning limited to the project area**

Although undertaken under the banner of *Fukko*, the main focus has basically been civil engineering projects such as seawalls, and urban development and regulations concerning flooded areas and districts to be relocated to higher ground. In other words, from a spatial perspective, these initiatives are restricted to the districts requiring infrastructure development projects, and they are unlikely to have been planned from a comprehensive viewpoint with the aim of ensuring the sustainable reconstruction of the region as a whole. For example, when considering the reconstruction of facilities in disaster-stricken districts, initiatives should, by rights, be rational, efficient, and sustainable from the perspective of medium- to long-term service provision for the whole of the district covered by the local government, including districts other than those stricken by the disaster (for example, the potential for consolidation of facilities in rural areas outside the district with the rebuilt facility in question). However, one could probably say that frameworks based on the restoration of disaster-stricken districts have limitations in and of themselves.

### **3. Reconstruction and the Sustenance and Regeneration of Communities**

Next, let us take a look at the current state of the (non-) sustenance and regeneration of communities in the actual reconstruction process.

#### **3.1 The derailing and collapse of efforts to sustain and regenerate territorial communities when people moved into temporary housing**

In the 311 earthquake, mutual support and assistance frameworks were maintained in units based on the pre-disaster territorial communities (neighborhood association, administrative district, hamlet, etc.), through to the stage when people moved into evacuation shelters (the emergency response stage). However, once people relocated to temporary housing, those frameworks collapsed in many cases, with the exception of a few small settlements and some municipalities, such as Miyako City.

In a small fishing village, where it is easy to perceive the territory of the community and easy for those affected by the disaster to see each other face-to-face, it prioritized relocation into temporary housing near the existing settlement from the time when temporary housings were being built. In contrast, where there was blanket destruction of the urban area, it was unable to devise ways to ensure that people could move into temporary

housing complexes in units of the former neighborhoods or placed in the same or adjacent complexes as their former neighbors.

Since this disaster caused particularly extensive damage and the Sanriku region is characterized by precipitous terrain, it was difficult to secure land for development, which in turn made it hard to make plans at an early stage for building the temporary housings required. Design and construction of each temporary housing complex began as soon as the requisite land was secured, with efforts to secure land, arrange contractors, and undertake construction work proceeding in parallel. At time that the first temporary housing complexes were completed, local governments were unable to tell disaster-stricken local citizens when and which complexes they would be able to live in. Under these circumstances, fairness made it difficult for local governments to adopt a stance of prioritizing residents from a particular district or neighborhood, so the tenants for each complex were chosen by means of a lottery, in many cases.

Moreover, when temporary housing was first provided, quantity of supply had to be the priority. Consequently, one would have to say that the quality of the housing and the built environment of housing complexes on which it stood ended up being poor. One issue was the adoption of a layout plan for the temporary complexes in which all units were arranged in parallel, facing south, so residents had few opportunities to stand and chat with each other, which hindered the formation of a sense of community. In addition, in many cases, only temporary housings constituted temporary complexes, as a result of the lack of coordination in its construction with efforts to build temporary shops or offices. Therefore, while there were few problems in places where the temporary housing was in or near existing downtown areas, daily life in the other temporary housing was very difficult, whose location was isolated from the existing downtown area or in municipalities where the downtown area and residential districts had virtually vanished as a result of the tsunami.

### **3.2 Difficulties in regeneration of territorial communities in disaster-stricken urban areas**

As described above, where there was blanket destruction of the urban area, most of the residents were assigned temporary housing by lottery without any consideration to their former territorial communities (neighborhood association, administrative district, hamlet, etc.), which in turn made a community-based approach extremely difficult to the reconstruction projects that followed.

First of all, since residents have been dispersed across different temporary housing facilities, people are, in many cases, unable to find out where their former neighbors currently live, making it nearly impossible for the residents to spontaneously get together with other members of their former neighborhood. Even if the local government did attempt to arrange such gatherings, many of the victims lost their vehicles in the disaster, so were unable to

travel independently.

Furthermore, in the reconstruction projects that followed, each zone of an urban area that had suffered blanket destruction was, in many cases, designated as a single land readjustment project unit, without any consideration to the size or scale of the area, nor to the fact that the area covered by each project unit had formerly contained many territorial communities (e.g. neighborhood associations). This kind of approach to the designation of a land readjustment project was probably due to the desire of the project organizers to secure a large project area, because a larger area offered greater flexibility in the replotting design. Due in part to this approach to designation, examples of a finely tuned community-based consensus-building process have been few and far between<sup>ii</sup>.

In addition, since some of the flooded areas had been designated as disaster hazard areas, meaning that the land could no longer be used for residential purposes, residents of such areas had no choice but to relocate to higher ground. This also made regeneration of pre-disaster territorial communities difficult. In many cases, parts of the original territorial communities were excised to facilitate the move to higher ground. Furthermore, in the cases of urban communities suffered from blanket destruction, the decision on where to relocate to was left up to each sufferer (household affected by the disaster), since systematic mass relocation of an entire neighborhood association was judged difficult due to the large number of relocating residents and difficulty in securing the lands suitable for large scale developments.

### **3.3 Creation of new communities as actors in problem solving**

#### **• Situation and issues noted as of September 2011**

The above being said, as of September 2011, six months after the disaster, new communities were sprouting and launching new activities. Let us now look at how things were then<sup>viii</sup>.

**1) The birth of various community organizations, such as temporary housing complex neighborhood associations, temporary shopping streets, *machizukuri* (town/community development) companies, and community-based nonprofit organizations:** Around this time, in disaster-stricken areas, neighborhood associations were starting to be established in temporary housing complexes. At the same time, construction of temporary shops funded by the Organization for Small & Medium Enterprises and Regional Innovation was finally getting underway. In areas where shops were being constructed at a rapid pace, a new type of shopkeepers' association (different from those in existence before the disaster) were being formed by shop owners determined to reopen their shops as quickly as possible after the disaster. Furthermore, in areas such as Rikuzentakata City and Otsuchi Town, new organizations such as nonprofits pursuing community regeneration, *machizukuri* companies born out of existing businesses, and similar bodies were beginning to be formed.

**2) Establishment of collaborative mechanisms among NGOs and NPOs at the**

**prefectural level:** One of the key characteristics of this disaster recovery process is the active role NPOs and NGOs are playing in recovery and reconstruction (in addition to continuous support offered by municipalities outside of disaster-stricken areas).

Collaborative Reconstruction Centers – whose roles and issues do need to be discussed with care – were established at the prefectural level soon after the disaster. With the support of the relevant prefectural center, NGOs and NPOs working in each prefecture came together to study issues common to disaster-hit municipalities and are now engaging in the necessary activities. In Iwate Prefecture, for example, Tono No Magokoro Net and other NPOs founded in the wake of the disaster were quick to provide logistic support, such as distributing goods and dispatching volunteers immediately after the disaster; six months down the line, they had begun to shift the core focus of their activities to support for community formation.

**3) Issues noted as of September 2011:** While neighborhood associations were starting to form at some temporary housing facilities, they were not necessarily running smoothly. In order to clearly understand the needs and suggestions of disaster victims, it is essential for residents to communicate and share their interests and problems with each other. However, given that, in some cases, residents were not entrusted with the management and operation of the meeting room at the temporary housing complex or had no acquaintances or friends at the same complex, it was felt that the principal need was to support their *placemaking* where people could talk to each other about these things.

Supplies needed for activities had been lost in the disaster, places that could be used for activities were difficult to find, and know-how and start-up funds were lacking. All of this meant that an array of support was in fact necessary to bring the ideas of residents to fruition – even when they did demonstrate the willingness to take the initiative – and to enable temporary shops and *machizukuri* companies to undertake the activities, businesses, and services that they wanted to provide.

It was becoming apparent that it was difficult for prefectural-level organizations and logistic support organizations alone to address rapidly changing needs and circumstances on the ground.

- **Situation and issues noted as of November 2014**

Next, let us discuss how things were in November 2014, three years on<sup>ix</sup>.

**1) Current state of the various activity groups based in disaster-hit municipalities:** Each temporary housing complex neighborhood association faced different issues: while some were successfully developing independent activities, others were virtually moribund or, in some cases actually had stopped operating. These differences seemed to arise from various different factors, such as the organizational structure of the neighborhood association, the original hometown of the complex residents (whether many of them came from the same

neighborhood, or were from different areas), and the existence of groups that support community activities. Moreover, with residents' stay in the temporary housing complexes had expected to be prolonged, the number of people moving out was gradually rising. As a result, maintenance of neighborhood associations and management of temporary housing were facing new difficulties.

In the meantime, community activity groups and NPOs based in disaster-stricken areas had had their labor costs for various projects paid by the Job Creation Fund Project of the Ministry of Health, Labour and Welfare. As a result, many young people in the disaster-stricken areas had been able to take the opportunity to actively engage in community activities and *machizukuri* projects, and in many cases they had demonstrated some level of achievement. However, the outlook for the Project was gloomy (as it was being downscaled), and these organizations were faced with the need to restructure the business models for their operations and projects.

On the other hand, few of the groups from outside the disaster-stricken areas had stopped providing support after three years. While many still continue to provide support, some groups might not be able to continue to do so after FY2015 due to difficulties in securing funds.

**2) Expanded support by prefectures and the national government:** Since FY2012, community support funds from prefectures had been augmented by an additional reconstruction quota. The Reconstruction Agency also had started providing assistance in 2013 (New Tohoku Leading Model Project), which targeted not only tangibles but also intangibles. However, support for organizational management and activities that demonstrated a sensitivity to the needs of each area and group continued to be necessary.

**3) Creation of a community activity support system at the municipal level:** Some municipalities were taking the lead in creating a system to provide support to various community organizations and activity groups. For example, in Rikuzentakata City, the nonprofit organization Respite House Hands, which is based in Ichinoseki City, got involved in the development of a temporary shopping street (Osumi Tsudoi-no-Oka Shopping Street), using one of the units there to establish the Rikuzentakata *Machizukuri* Collaboration Center. The Center provided the basic services offered by *machizukuri* centers and collaborative activity support centers. These services included advice about *machizukuri* activities, information about grants, PR activities for groups, seminars on the skills and knowledge that community groups needed to improve their skills, and loan of meeting rooms, etc. They also held six meetings of the Rikuzentakata Citizens' New *Machizukuri* Conference between October 2013 and February 2014, based on which they compiled a report with proposals on four themes: industry and tourism, medical care and welfare, local community and disaster prevention, and education and child rearing. They also operated an information portal called the *Machizukuri* Platform.

In Otsuchi Town, the municipal government and the University of Tokyo had concluded a comprehensive agreement on reconstruction assistance. Under this agreement, the author and others were working with town officials on various community regeneration projects, including the resumption of the Hometown Creation Partnership Grant, a scheme that the town had operated before the disaster. We helped to revive the town's Reconstruction Council and also establish similar councils in areas outside the disaster-stricken areas. We also created a mechanism for collaboration between support organizations (NPOs and NGOs) and territorial residents' organizations (establishment of a residents' community council).

Furthermore, we were operating a community activity grant scheme in partnership with the municipal government as part of the aforementioned New Tohoku Leading Model Project, as a separate initiative from the municipal government's own projects. This grant scheme should be understood and regarded as an attempt to deploy a national government scheme at the municipal level, using local intermediary organizations (or the like) with a deeper understanding of the needs and challenges faced by each area and group to allocate and distribute the necessary resources.

#### **4. An Attempt at “Fukko *Machizukuri*” Focused on Community Development: Based on An Initiative in Which the Author Was Involved**

##### **4.1 Practicing “temporary *machizukuri*” aimed at community care**

A team from two universities, the University of Tokyo (including the author) and Iwate Prefectural University (under the guidance of Professor Kanou), proposed the establishment of a “community-care-based temporary housing facility” to disaster-stricken municipalities in Iwate Prefecture and Tono City (in the same prefecture), which was providing logistic support. Tono City has already built temporary housing based on our proposal, while Kamaishi City has taken our proposal a step further by integrating it into a “temporary *machizukuri*” initiative with an emphasis on community care, which it is currently undertaking in the Heita Park district.

To summarize, the problems with temporary housing described above are as follows: problems with the housing plan itself, layout of individual housing units in the complex, location of the complex and its spatial relationship with other facilities and existing downtown areas, selection of residents, and continuity of communities. In contrast, “community-care-based temporary *machizukuri*” has the following characteristics: 1) efforts are made to create a physical environment for the “community” that has been well thought out from the perspective of community care; and at the same time 2) community organizations are created and run there. Such organizations 3) create a situation in which members of the community care for other members of the community; and finally, to make this possible, 4) various mechanisms or systems that respect the ideas and inclinations of the

community are developed. In other words, this type of *machizukuri* places an emphasis on fostering both the tangible and intangible aspects of community development and mutual support.

Figure 1 shows the layout of the temporary community in Heita Sougo Park. This community in the park is located far from the existing downtown area and is also intended to be as an experimental model for relocation to higher ground.

It has a number of notable features from a spatial planning perspective, including the following: (1) a wooden deck has been used to create an alley, to nurture interaction among neighbors in the smallest unit of a community; (2) this alley is linked to the support center, which has a day care service and a clinic, and to the shopping street, creating an environment where the elderly and the disabled can easily go out and be looked after by others; (3) the temporary community contains not only residential units but also medical/welfare centers, shops and offices; and (4) to maximize these advantages, a *Machizukuri* Council (Figure 2) has been established in addition to establishing neighborhood associations, in the hope that community activities will emerge from collaboration among various actors.

There is evidence that these features are functioning as hoped. As far as (1) is concerned, residents bring chairs to sit on the deck and you see groups forming as people chat with each other. In the case of (2), a business operator (Japan Care Service, Inc.) has taken the lead in an initiative in which doctors at the clinic and staff at the Daily Life Support Center are working together to care for elderly people living alone. Regarding (4), the neighborhood association was founded in November 2011, while the shopping street was established the following month, just before Christmas. Right at the end of 2011, the Support Center held a *mochi* (rice cake) pounding event for children with the cooperation of the neighborhood associations and the shopping street. This event was the *Machizukuri* Council's first full-fledged activity. It continues to carry out various activities, and a survey conducted to ascertain the psychological state of residents confirmed that activities of this kind by the *Machizukuri* Council are achieving positive results, to some extent.

This initiative is positioned as a means of creating in a temporary community a residents' organization (territorial community) that embraces residents who come from different neighborhoods. This can also be said to be an attempt to design a model for next-generation communities with an emphasis on care, which can be applied not only to the disaster-stricken areas but also elsewhere in Japan, in places that are or will be faced with a decreasing birthrate and an aging population.

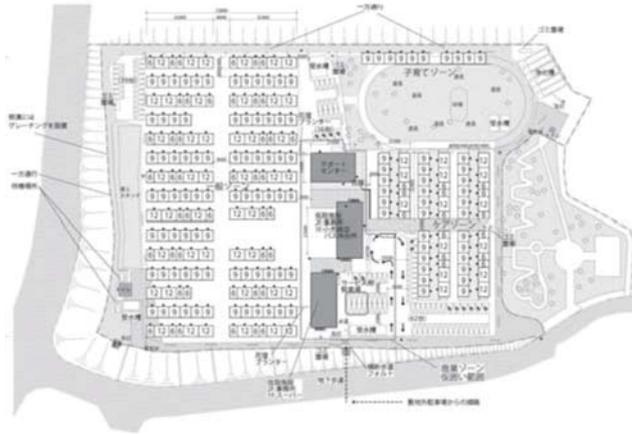


Figure 1: Plan of Heita Temporary Community



Figure2: Organization Structure of Heita Temporary Community



Photo 1: Self Assessment Workshop in Heita Temporary Community

#### **4.2 Attempt at reconstruction based on pre-disaster communities in the Machikata district of Otsuchi Town**

As mentioned above, in the reconstruction of urban areas that had suffered blanket destruction, the regeneration of territorial communities is quite difficult. This was the case in the Machikata district of Otsuchi Town. As of March 2013, they were at a loss as to how they should proceed with land readjustment projects and *machizukuri*. The author and others came to be involved with the district as advisors and subdivided the project district so that workshops could be held on the basis of pre-disaster neighborhood association groupings. Our intention was to revitalize residents' organizations, such as pre-disaster neighborhood associations and shopping streets<sup>x</sup>.

One key to success was our carefully crafted outreach when holding workshops, inviting people to participate in groupings based on their pre-disaster neighborhood associations. We intended to change the flow of communication from an approach that the local government explained projects to landowners to the one that residents initiated the process of information exchange and communication with each other.

To this end, we designed the workshops so that people's views regarding reconstruction would be presented spatially to share them with each other. As a result, we were able to provide former residents who had not seen each other since the disaster with an opportunity to gather and talk, and to share their views regarding reconstruction with each other. By clearly acknowledging the current "situation" through the workshop, they were able to reflect on what they have to do and how regeneration of the community should be carried out. In other words, this workshop made the residents moved on from individual views on reconstruction to building a group process toward collective decision on community regeneration.

To carry out this kind of carefully crafted decision-making process it needs the expertise of many professionals. Community regeneration of disaster hazard areas in particular requires tremendous efforts, including the coordination of destinations for group relocation. A challenge here is whether, in addition to urban civil engineers, we are able to dispatch enough experts in community design or *machizukuri* with citizen participation when conducting community regeneration and seeking to harmonize people's views in these areas.

東広町まちづくりワークショップへ地区別まとめ

## 商店街エリア

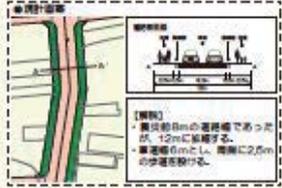


### 6号公園

- ・利用されている公園周辺の交通量は、買い物時、交通量が少なくなる。
- 位置の再検討
- ・子供が利用することも考えられることから、安全面に留意が必要がある。
- ・本広町商店街から公園側に向かう丁字路付近の駐車場であった場所に移動しても良いと思う。住宅地の中なので、イベントの際も可能である。
- 公園の設備
- ・ベンチや遊具も必要が良い。

### 交通

- ・大塚の駅前として一歩進めがある通りであり、昔からの通りで暮らイベント（土曜）を行ってき、復興後にも活用したい。
- ・道幅4mでは、歩行者が狭く危険である。
- ・道のアスファルトがそろそろなることも多分。
- ・本広町駅には住宅地の中心通り抜けられる道があり、対策が必要している。



### 商業

- 商店の集約
- ・本広町商店街の再建は、再建意向の事業者が多い。この区域に集約するとともに早い段階に復活できるだろう。ただしそのためには、町が土地を確保する必要がある。
- 集客力の向上
- ・商店から商店街への入り口付近に本広町商店街の案内を設置したい。
- 店舗数の確保
- ・新しく事業を始める意向を持っている人が、チャレンジできるまなびづくりを進めることが重要である。
- ・本広町以外で事業を行っていた方にも来てもらうために、特約を受け入れる土地を確保したい。面積や価格を提示することで、再建の意向を把握できるだろう。
- ・外から本広町商店街で再建する意向を持っている人のために、土地確保とその条件（面積、価格、移入方法）の整理が必要となる。

### 再建の考え方

- ・復興は商店街の再建のみを優先して進めたい。
- 土地の形状、利用
- ・開口が狭く奥行きのある土地が多かったが、土地の形状を変更する際には開口を広げてほしい。
- ・開口を広げた敷地の形にすれば、様々な土地の利用ができるようになり、再建しやすい。
- にぎわいの再生
- ・復興は商店街の再建のみを優先して進めたいのではなく、住宅も確保された方が良いのではないかと。
- ・売却意向の土地を併用地区として、特約区域で管理していた事業者に併用住宅として再建して欲しい。商店街としてにぎわい。

### 景観形成

- 植木・緑化
- ・道沿いの植木は景観が大変なので不要である。
- ・復興前は歩道沿いの植木を植えていた。今後も景観を地域住民で行う方向が良い。
- ・地盤を下げるために工夫が必要である。各事業者や民家でプランターの設置や歩道での緑化と緑化に努める必要がある。
- 歩道・歩道美化
- ・歩道については歩道幅を確保したい。
- ・歩道についてはアスファルトではなく、本広町らしいデザインで整備したい。

### 駐車場

- ・復興前は、近隣の4車庫（約10台分）の駐車スペースを確保していた。現在は20台分の確保がされているが、足りない状況である。
- 駐車場の確保
- ・土地所有者の意向次第ではあるが、売却されずに所有されている土地を併用し、駐車場としての利用できないか検討したい。
- ・民間管理も併用駐車場があると良い。
- ・磐石大町のように道沿いにパーキングスペースがあると良い。

### 歩道空間の整備イメージ

- ・復興前の8mでは、歩道を確保することは難しい。拡張をする方向が良い。
- ・道幅約12mだと隣接する店舗もあるので、他の歩道幅を削いで縮小したい。
- ・歩行者の安全から、歩道は必要である。
- ・通常の歩行者だけでなく、車イス等も安全に通行できるように歩道幅が良い。
- ・歩道や車道は、段差を削いでフラットにしてほしい。
- ・本広町商店街の歩道の歩道には、道沿い植木に植えられる道があった方がよい。
- 白線車の通行
- ・一方通行にして、駐車スペースを確保することもできるのだが、住民の日々の利便性や歩道の幅や歩道を確保すると歩道交通としたい。
- ・一方通行では歩道に歩道がある。車で来るお客さんの利便性を優先して考えたい。
- 駐車場
- ・道路に歩行者用の駐車スペースを確保することも検討したいが、どのような方法が良いかは歩道確保も合わせて様々なパターンの検討が必要である。

Figure 3: Newsletter on the Result of Participatory Workshop on Machikata District

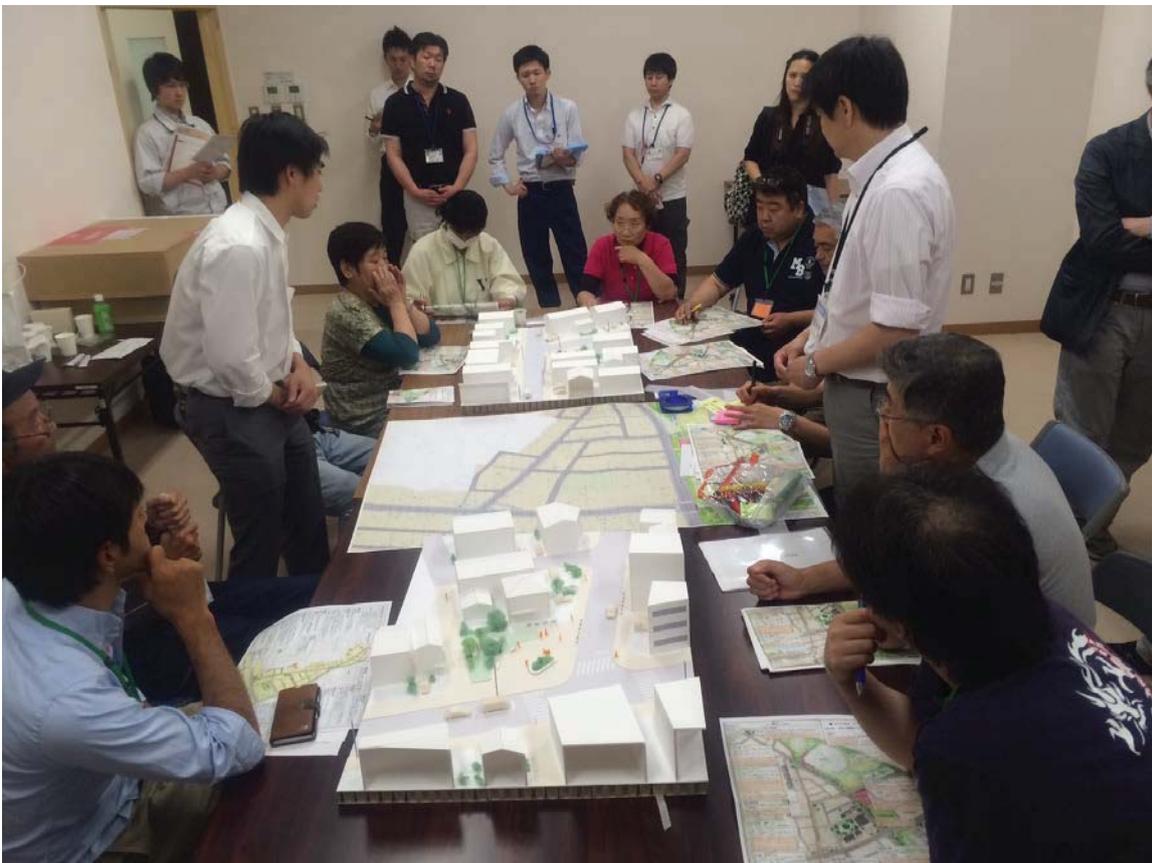


Photo 2: Workshop with Models of Shopping Street

### 4.3 Riku Café: Community Living Project in Rikuzentakata City

While this project has no direct relationship with the construction of temporary housing, it is included here to point out the importance of *machizukuri* while people are living at temporary housings through creating and operating a place that local residents can freely visit (=community living room). It is located in Rikuzentakata City in Iwate Prefecture, which suffered immense damage as a result of the tsunami, leaving nowhere for people to go and enjoy casual conversation.

While a lack of land is always an issue in disaster-stricken areas, local doctors in Rikuzentakata were already working toward reconstruction by opening a clinic, dentist, pharmacy and stores for daily necessities on their own land as early as April 2011. Their idea was to create a community space in the area. Agreeing to cooperate on this project, professionals from the University of Tokyo first established a support framework and invited businesses to assist, and ultimately built a temporary café, which opened in January 2012.

The local housewives who first came up with the idea of a café took charge of running it once it opened in January. It has become a haven for residents, who use it not only to enjoy conversation while drinking coffee or tea, but also as a place to wait for the hospital, pharmacy, or bus. It is also used as a base for doctors making home visits to patients, and can be rented for various events.

This café plays a number of roles in community regeneration. (1) Gathering place for former neighbors: members of pre-disaster territorial communities have become scattered because they now live in different temporary housing facilities or are home evacuees, so this café functions as a place for them to get together. (2) Venue for group activities and recitals involving people living in different temporary housing facilities and home evacuees: the café functions as a gathering place for people with the same hobby or interest. (3) Place where local citizens affected by the disaster can drop by and share information. (4) A haven for the elderly.

Another unique aspect of this project is the fact that this café was built in the temporary housing complex, but with a view to turning it into a permanent facility in the future. The spatial layout of the current café was determined on the assumption that it will become permanent in the future. Residents and experts together used a model (Figure 4, Photo3) to simulate the rebuilding of the café. It was our intention for the temporary café to grow with local actors as a *core place* for community regeneration that will lead into full-fledged activities at the permanent café in due course.

In October 2014, the café was indeed rebuilt as a permanent facility (Photo 4). Local residents who run it and its supporters (including the author) worked together to secure grants from NGOs, raise money through crowdfunding, and obtain donations from many corporations.

The physician who provided the land for the café, a dentist and a pharmacy located on the same site have launched a collaborative initiative to offer preventive care for the elderly at the permanent facility. By November 2014, the café had started offering lunches based on calculations of the calorie counts and salt content of the dishes. In 2015, classes featuring short lectures and exercises to promote health and prevent disease was be offered, with a view to becoming one of the city’s community support projects in 2016. This café is in fact becoming a successful example of “reconstruction through collaborative partnerships.”

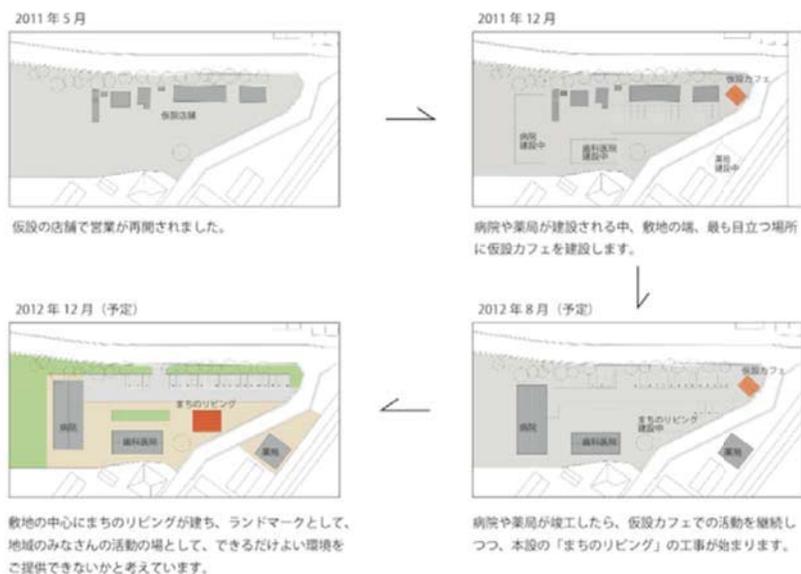


Figure 4: The result of Design Game on Rebuilding from Temporary to Permanent Buildings



Photo 3: Design Game on Rebuilding from Temporary to Permanent Buildings



Photo 4: Riku Café of Permanent Building

## **5. Toward Community Design for Reconstruction through Collaborative Partnerships**

To close this paper, let us discuss approaches to community design in recovery and reconstruction following future disasters, in light of the discussion above.

### **5.1 Ensuring the continuity of community formation (during the evacuation period, temporary housing period, reconstruction period, and post-reconstruction period)**

One of the most important parts of community design and machizukuri aimed at the formation of diverse communities is ensuring continuity from the evacuation period through to the period following reconstruction. In particular, temporary housing resettlement and reconstruction projects can fail to sustain existing territorial communities in the transition from the evacuation period to the temporary housing period, as well as failing to sustain newly formed territorial communities and communities of interest in the transition from the temporary housing period to the reconstruction period. One could say that the temporary housing period is the most important phase for ensuring the continuity of community formation.

For example, in areas affected by the Great East Japan Earthquake, practical moves aimed at community regeneration and the birth of new communities are at last beginning to spread in each area. To make these moves more meaningful, it will be vital to ensure the connectivity and simultaneity of reconstruction projects and machizukuri in the reconstruction period. If communities regenerated during the temporary housing period are destroyed again in the process of undertaking reconstruction projects, all the initiatives undertaken during the temporary housing period will become meaningless. It will be

necessary, for example, to provide social means of promoting community building in reconstructed public housing such as intermediary for management and activation of communities, as well as spatial means, and to solicit applications as small community units to make use of the communities regenerated during the temporary housing period.

Disaster-stricken areas are seeing burgeoning efforts to build systems and structures to support community design during the temporary housing period. Continuing, improving, and developing these as reconstruction projects get underway in earnest could help to lay the institutional infrastructure required to ensure that community organizations can be more active even in post-reconstruction period. As well as the development of community development centers, machizukuri funds, and other mechanisms for supporting reconstruction machizukuri, of course, this also includes the creation of new collaborative structures and hub for industrial development with enhancing community businesses, and the provision of medical care and welfare services.

Adopting a strategy for maintaining continuity of community formation and regeneration in this way will be vital.

## **5.2 Community design based on collaborative multi-actor partnerships>**

The community design aimed at reconstruction in areas affected by the Great East Japan Earthquake examined in this paper could be described as “community design aimed at reconstruction through collaborative partnerships.”

The term “community” as used here refers not solely to (the maintenance and regeneration of) territorial communities, but also the formation of diverse communities and the design of partnerships and collaborative relationships between them, including theme-focused NPOs, communities of business operators seeking to provide various services, and external NGOs and companies involved in supporting them. The key is to create new collaborative partnership structures involving diverse actors that will continue to be useful in the post-reconstruction period, while placing a high value on the perspective of empowering victims as actors and organizations in disaster-stricken areas.

In urban areas of Japan facing a variety of issues associated with the aging of the population and falling birthrates, the construction of collaborative partnership structures involving diverse actors working to resolve problems will be essential. Both in current initiatives focused on reconstruction after the Great East Japan Earthquake and reconstruction initiatives following any major disasters that might strike in the future, community design must adopt the mindset of building collaborative partnership structures involving diverse actors that would contribute to solving problems in the post-reconstruction period.

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#### Notes

- i A comment by Kei Minohara at the FY2012 General Meeting of the Japan Society of Urban and Regional Planners.
- ii According to the interview carried out in September 2011 by the author to the municipal officials in the disaster-stricken municipalities in the Southern part of Iwate Prefecture indicated the following: “Rather than carrying out a carefully crafted decision making in regard to planning with professionals, we were faced with the great number of contracting works we have never experienced, and we were overloaded with the work that we needed a few dozen staff just to take care of them.” On the other hand, residents expressed their hope to have experts with them to carefully review the situation and their disappointment in the municipality’s way of doing things. The issue then was this great gap between the municipal government and the hopes of the residents.
- iii Some parts have been revised based on Koizumi (2012a).
- ix Based on the findings at Rikuzentakata City, Kamaishi City, and Otsuchi Town, where the author is involved in reconstruction.
- x As reconstruction advisors, there are also Professor Nakai and Assistant Professor Fukushima of the University of Tokyo

# Continuity of Social and Environmental Relationships in Temporary Housing: A Case Study of Community Support in the Temporary Housing Complex in Sumita, Iwate, Japan

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## Abstract

Sumita Town in Iwate Prefecture is located nearby the area struck by the Great East Japan Earthquake. Consequently, Sumita municipal government rapidly built 93 temporary housing units. Furthermore, a support organization has been cooperating with the local community to support community activities at the temporary housing complex for five years. We interviewed three residents currently vacating the complex and surveyed the reusing case of temporary housing units. Through this case study, we attempted to examine the possibility that building a new community of temporary housing residents will provide continuity of their social and environmental relationships.

An analysis of the case of reusing temporary housing indicates that the wooden materials are useful when renovating and reforming the house. Various ways to reuse the structures are evident, for example as a second house or community space. It is also possible that the reuse of these units plays an important role in establishing them as symbolic places. The results of the interviews show that residents found the situation difficult when first arriving in Sumita, but later adapted to the new environment. Finally, they not only understood the value of building a new community, but also adapted to the new way of living. The results of the survey reveal that social and environmental relationships in the temporary housing community can continue if community activities are actively implemented and the temporary homes are reusable.

Keywords: Great East Japan Earthquake, Temporary Housing, Community Support

## Introduction

It has been approximately five years since the Great East Japan Earthquake struck on March 11, 2011. Sumita Town in Iwate Prefecture is located nearby the disaster-stricken area. Consequently, the Sumita municipal government rapidly built 93 temporary housing units for people who had lost their homes. In the temporary housing complex, “Yu-support” (an NPO) has cooperated for five years with the local community and government to support community activities. Now, about half the residents have relocated to public housing constructed after the disaster or to their new houses. Most residents decided to return to the districts they lived in before the disaster, although some have decided to stay in Sumita Town. Despite moving away, some still participate in community activities at times. There are now many vacant temporary housing units, and some have been removed and reused.

Here, we describe the status of three reused vacant units and the change of environment in the temporary housing complex. Moreover, through interviews conducted with three residents vacating the units, we reveal the influence of their lives in other areas on their perception of the living environment and community. To conclude, we examine the possibility that creating a community of temporary housing residents enables continuity of their social and environmental relationships.

## The temporary housing situation in Sumita

Culture or industry is deeply and historically rooted in the “Kesen-area” including the two coastal cities Rikuzentakata and Ofumato and the inland towns of Sumita. Soon after the Tsunami, the Sumita municipal government implemented relief activities in the affected area, and many evacuees took refuge in towns in Sumita, where relatives or acquaintances resided. In addition, the government was able to rapidly build wooden temporary housing for the people affected, because towns in Sumita have a long-established forest industry and were able to use local wood as building material. There are 93 temporary housing units in 3 complexes in Sumita. Most residents moved there from tsunami disaster areas such as Rikuzentakata and Ofunato cities, which are located 15 km from the coast.

Generally, temporary housing in Japan is constructed from prefabricated steel plates in the style of row houses. In contrast, the style of temporary housing in Sumita is an independent wooden house for the family household, which measures 29.8 m<sup>2</sup>. Each unit comprises two bedrooms and one bathroom. Unlike the usual type of prefabricated temporary house, the wooden interior of the Sumita style provides quiet surroundings and comfortable living.

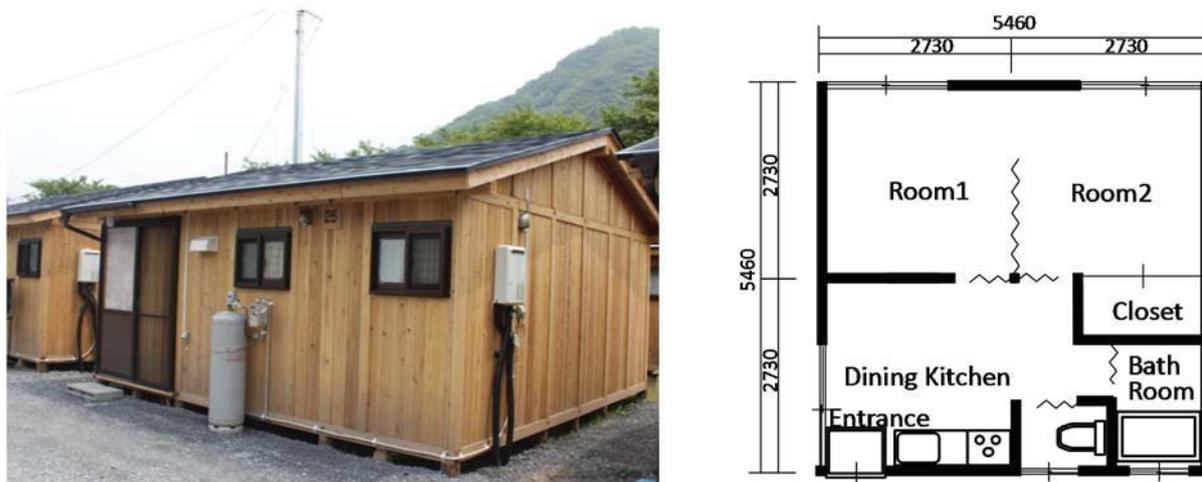


Figure 1. Temporary housing style in Sumita

When the municipal government of Sumita sought affected people to live in the temporary housing complex, many people applied. Therefore, in some complexes, occupation was determined through a lottery. Fig. 2 shows the number of residents and households in the complexes from December 2011 to September 2016 in three-month intervals. The graph indicates that the number of households remained similar from December 2011 to June 2012, but began to decrease in June 2012. By September 2012, 9 households had vacated their units. The number then remained steady again for 6 months, but decreased by 14 households from March to September 2013. The decreasing trend continued, and by September 2016, only 30 households remained, meaning that 68% of the units were vacant. As mentioned, the number of residents in temporary housing in Sumita is decreasing gradually, and influenced by the schedule of public housing construction or homeowner assistance programs.

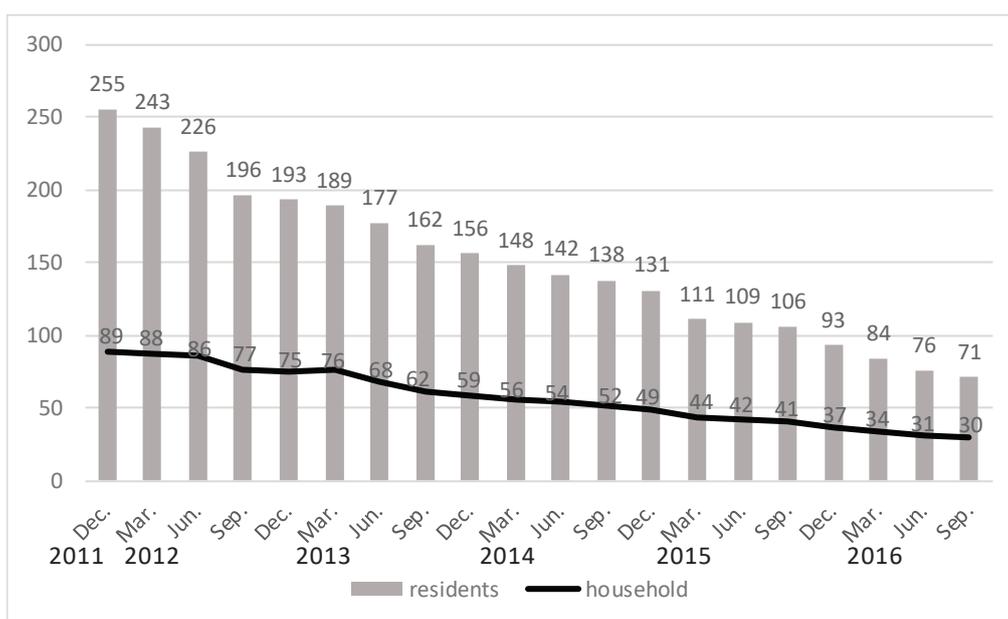


Figure 2. Changing number of residents and households

Fig. 3 indicates the location of vacant units in three complexes in September 2016. The vacant units include houses in which residents currently do not live, even if documentation does not indicate that they have left. Therefore, the number is unequal to the number of households vacating the complexes.

In Hiishi complex, vacant units total 10 of 13, because residents were forced to relocate to another complex when construction to widen the road began in March 2017. In Nakagami complex, there are many vacant units, which are dispersed rather than located in one area. One reason is that residents did not decide on the units they would occupy, regardless of their former addresses. In addition, after the units were removed, only vacant lots remained in Nakagami complex. Residents primarily use these spaces to store the snow cleared from paths and roofs in winter. Furthermore, a community space named “Minna No Butai” was created through workshops with college students in the center of the vacant lot. For safety reasons, the vacant units should be removed starting with those at the end, as they are connected by a single electric cable.

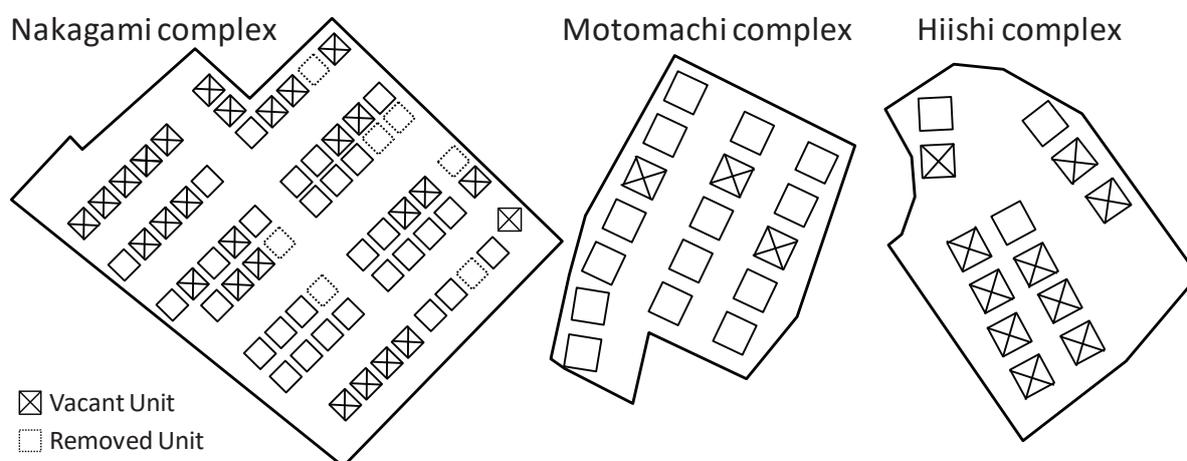


Figure 3. Location of vacant and removed units

We conducted two questionnaire surveys on temporary housing residents from 2011 to 2014. Table 1 shows where the residents hoped to live after leaving the temporary housing complex in November 2012 and December 2014. First, regarding housing type in the table, 22% of the residents responded that they wanted “to live in public housing” in 2012, while 27% gave the same response in 2014. On the other hand, from 2012 to 2014, the percentage of those who responded that they wanted “to build a new house of their own” increased by about 10%, while the percentage of those who responded “unknown, no plan” decreased by 16%. While

many residents decided to rebuild or move to public housing units, some were unable to decide where to live after leaving the temporary housing complex.

Second, regarding location, 25% of the residents responded that they wanted “to live in the same area they lived before the disaster occurred” in 2012, while 18% responded the same way in 2014. The percentage of those who wanted “to live in Sumita” remained similar, changing from 12 to 16%. While some residents had decided on a housing type, approximately 30% noted that this was “unknown, no plan” in 2014.

Regarding their intentions for housing types and locations after leaving the temporary housing complex, the tendency had not changed from 2012 to 2014. It was found that some residents could not yet make decisions related to either housing type or location.

Table 1. House and location where residents hope to live

	Response	2012(N=57)		2014(N=45)	
		N	%	N	%
house	To live in public housing	12	22%	12	27%
	To build a new house of my own or move old house	18	32%	19	42%
	Unknown, no plan	27	47%	14	31%
location	To live in the same area you lived before the disaster occurred	14	25%	8	18%
	To live in another area you lived before the disaster occurred	23	40%	16	32%
	To live in Sumita	7	12%	7	16%
	Unknown, no plan	13	23%	14	31%

### Reusing temporary housing in Sumita

The local government of Sumita sells vacant units for 30,000 yen per household. This price does not include removal and transport costs. If many people or organizations wish to buy the units, the government sells them to former residents and organizations planning to reuse them to contribute towards publicity and community on a priority basis. Thus far, three units have been sold and two of these have been reconstructed and reused.

Prefabricated temporary housing built as row houses can only be removed once all residents have vacated the premises. However, as the temporary housing in Sumita comprises detached units, these can be removed whenever they become vacant. Furthermore, because the houses were constructed using wooden panels, they are easier to remove. When a unit is rebuilt and used for a purpose other than temporary housing, concrete foundations should be constructed in compliance with the building standards law. While it takes labor and time to finish the

ground work, painting and modifying does not require much effort as the house was constructed of wood.

Now, we report three ways in which to reuse vacant units. All the units in the following cases were relocated from their original locations.

First, Mr. K and his family, who originally lived in the temporary housing unit, now use it as a second house. They built a new house in Sumita in April 2014. The father, Mr. K, a carpenter, spent three days demolishing one unit with the help of several friends, transporting the panels and sections by truck. The procedure was complicated and it took time to start rebuilding the unit. In the rebuilt housing, a kitchen and bathroom were removed and replaced with a closet.

The first reason they reused the temporary housing unit is their feelings of attachment to it. They therefore intend to use it as a second house in their garden. The second reason is that they want to remember the three years they lived in the temporary housing complex. Mr. K improved their unit to make it easier to live in. For example, he expanded the eaves to so that laundry could be hung from them. Mr. K and his family frequently participated in community activities while living in the temporary housing complex, and continue to do so after leaving. To visualize the relationship between the temporary housing community and their fond memories of the place, they decided to rebuild the unit near to their new house. Now, friends of their son sometimes stay there, and a barbecue party was held around the unit.



Figure 4. Reuse as a second home

Second, a vacant unit was renovated to use as both a facility for disaster prevention education and community space in Kume, Matsuyama City, Ehime prefecture, located approximately 1,200 km from Sumita. In Kume district, the community center plans and manages community activities. The relationship between the mayor of Sumita and the director of the

community center, developed over the long term, enabled them to reuse a vacant unit in a non-affected area. They transported the panels over more than 1,200 km by truck, and planned to rebuild it near the community garden, which sprawls over a gently sloping area at the foot of the mountain. There are many fields and paths, and many residents come to plow and gather there over a weekend.

While they were rebuilding the unit, sections that had buckled and broken prevented them from proceeding quickly. In this case, they tried to construct new panels by themselves. Relying only on diagrams without advice from experienced carpenters, they at times did not know how to construct some sections. Rebuilding the unit cost more than expected, but they overcame these difficulties to rebuild it in June 2015.

The layout of the renovated house changed drastically. They removed a bathroom and kitchen as well as the floors of these rooms to use the space as an earthen floor by pouring concrete. People can enter while wearing their shoes, and there is place to store agricultural equipment used in the community garden. As people can come here easily even if their clothes or shoes are soiled, it is also a rest house when farming. Similar to the layout, the house's appearance changed by painting it brown and extending the entrance. Community members gather and enjoy talking, eating, and drinking in this community house. It will be the primary location of activities in the future.



Figure 5. Reuse as a community space

Third, one unit will be used for eco-tourism in an affected fishing village in Ofunato city. This project is in the planning stage. In Koishigahama area, the cultivation of scallops has been a prosperous industry, and so a group of fisherman rushed to recover their livelihoods after the disaster by widely advertising their scallops to promote sales. They also initiated

efforts for eco-tourism in collaboration with a non-profit organization, so that others can experience and study the eco-system in the bay area.

The planning site is located on a high piece of ground overlooking the sea at their house, which has a balcony and is the main location of their activities. As the number of activities and tourists increased, the house became so cramped that they needed to build another. As soon as they heard they could reuse the temporary housing in Sumita, they decided to buy a unit, as the temporary house, which was constructed from local wood and is recyclable, fitted with their concept of respecting the eco-system in the Kesen area. Currently, demolition work has been completed and work on the foundation is about to start.



Figure 6. Image of reuse as an eco-tourism space

### **Perception of residents who vacated temporary housing**

We interviewed three residents vacating their temporary housing units. One household is returning to their hometown, while the others still live in Sumita Town. We asked them to evaluate their lives in the temporary housing complex and their perception on the change of environment from the coastal areas to the mountains.

Mr. T had been gardening before the disaster occurred, but his garden and home was swept away by the tsunami in Rikuzentakata. He and his mother moved to the temporary housing complex in Sumita, which had no garden where he could grow plants and flowers. At first, he had little motivation to garden, but was given flowerpots by the support organization. He therefore tried to take care of these flowers. Watering flowers and pulling up weeds gave him the opportunity to talk to other residents. By getting residents involved in gardening, his

advice on growing flowers has resulted in his complex being filled with flowers and plants. Furthermore, gardening and talking to residents also helped make his elderly mother feel better.

One and a half years later, Mr. T and his mother moved out and built a new house with a garden, the design of which he took part in in Rikuzentakata. This garden, which is stocked with roses and other seasonal flowers, is open to residents or visitors on the weekends. They enjoyed their private garden before the disaster occurred. However, thanks to the experience of communicating through gardening in the temporary housing complex, he knew of the power of the garden in connecting people, and decided to open his to the public. At times, their old friends and residents who lived in Sumita come to see them and talk after seeing the beautiful flowers in the garden.

Mr. K and his family applied to reside at the temporary housing complex in Sumita while living at a refuge shelter, as he had heard that pets would be prohibited in the prefabricated temporary housing units available in Rikuzentakata. His and his wife's family home is located in Sumita, which is why they did not hesitate to move from a coastal to an inland area.

In the beginning, the family of five lived in only one unit; however, they soon took up occupation in two. They were comfortable living in the wooden house, despite the smaller space. His wife was working part-time for the local farm near the temporary housing complex. They also participated in all the community activities, in which they played an important role as the active residents. Having considered their good relationships with local residents, an elderly aunt's health condition, and prolonged construction in the disaster-affected area, they decided to build their new house near to the temporary housing complex in Sumita.

They built a new house only hundreds of meters from Nakagami complex. Being near the temporary housing complex enables them to continue participating in community activities and maintain their relationships with residents after leaving. They note that local residents supported them during their refugee lives, and they remain grateful to these people.

By relocating their home from a coastal to inland area, they have continued to participate in the traditional festival "Tanabata Matsuri" as members of their previous community. For this reason, they can maintain their connection with their attached community.

Ms. Y evacuated to the temporary housing complex with her parents. She had felt like a stranger in Sumita during the first year of living there. The shock of the disaster and

discouragement at having their house destroyed demotivated her in terms of trying to do anything. She sometimes participated in community activities and events, but could not find happiness in her heart.

She changed her mind two years after moving to Sumita. After seeing a local rock band, whose members were volunteers and residents, and how the residents enjoyed playing music at community events, she became motivated to play music. She used to play the drums in the brass band club when she was in high school. A member of the rock band invited her to join the local music group, “Negura,” and she decided to do so. When she joined the group, there were many young members like her, and she has enjoyed playing music, participating in other activities, and making local friends through the group. She is now married to the band member, who farms in Sumita, and moved to his house in June 2016. Her parents built a new house and will be moving to Rikuzentakata. She does not think that her connection with the former community will end, because her office is located nearby in Rikuzentakata. Furthermore, she will visit her parents often at their new house.

The experience that residents had been supported by Yu-support members, supporters, and volunteers made her awaken to a new perception of the community’s value. For this reason, she was challenged to do something new and develop new relationships with local people in Sumita.

## **Conclusions**

Considering the need to quickly construct temporary housing, the government of Sumita used wooden panels for construction. This method makes it easy to remove and rebuild the units. Furthermore, the wooden sections are useful when renovating and reforming the house, which provides various ways to reuse the unit as either a second house or community space. This is an important characteristic not seen for prefabricated temporary housing. Concerning the memories of affected people who live in temporary housing units, it is possible that their reuse plays an important role in creating a symbolic place.

The results of the interview research indicate that residents were in a difficult situation when first living in Sumita, but quickly adapted to being in a new environment. Finally, they understood the value in building a new community and adapting to a new way of living. The results of this survey indicate that social and environmental relations in the temporary housing complex can continue if community activities are actively organized and the temporary house is reusable. It is presumed that relationships and memories of the place are both positive and negative in terms of getting through difficulties such as recovering from a

disaster. Continued support activities for residents contribute towards their living in the temporary housing and building positive continuity of social and environmental relationships after leaving.

# Mapping Modernity Through Historicizing and Spatializing

## Marketplaces In Taipei

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### Abstract

As one of the very essential components of the city, marketplace is a contested terrain intersected by urban food system, everyday life practice and urban governance. The network composed of a variety of trading spaces and actors. Their everyday practices contributed to the marketplace and the city. Moreover, the building of urban marketplace is a project of ‘modernity.’ Taking a historical analysis of the governance of urban marketplaces in Taipei, this research attempts at mapping different imaginations of modernity and their implications in different urban marketplaces. First, it traces the changes of marketplaces over time, from Qing dynasty, Japanese colonization to the contemporary, with a focus on how the spatial typology of marketplace evolves with various policy focus from public health principle to adding maximum value in market land properties. Secondly, it pays attention to how street vendors around the ‘formal marketplaces’ continuously negotiate if not confront with the top-down institution and play an important role in everyday life urban landscape, forcing the state to temporarily accommodate them outside of ‘formal marketplaces’. In order to take control of vendors, the municipality legalized illegal vendor aggregate spaces as ‘open air-markets’. By tracing the socio-spatial historical development of marketplaces the research provides a mapping of contemporary urban market landscape, which importantly reflects the changing urban governance in the name of modernity over time. It is argued that the concept of modernity is heterogeneously embodied in a long-term contest between the formal and the informal and the top-down governance and everyday practice of the grassroots.

Keywords: marketplace, modernity, urban food system, governance of urban markets

### Introduction

‘Trading’ is one of most pivotal functions in a defined city. Street markets exist long before the development of urban governance. More than merchant trading, marketplaces are contextualized in a between social, economic, political and cultural interactions in society (Mele et al., 2015; Brown and Miller, 2008; Hunt, 2007). As one of the very essential components of the city, marketplace is a long lasting contested terrain intersected by multiple layers of social-spatial interactions such as urban food system, citizens’ everyday life practice in community and urban governance from management approach (Amin, 2004). The network composed of a variety of trading spaces and actors, such as merchants, traders, consumers and even people just peddle around (Watson, 2009). Their everyday practice contributed to the marketplace and the city.

Although the spatial presentation of marketplace might change through different governance model as well as civil engineering technique over time, but it has never vanished from the urban landscape nor did totally replaced by super markets. Moreover, from different spatial form of marketplaces, each of them could trace back to its policy behind the architecture and urban fabric at specific time in history. By taking a historical analysis of the governance of urban marketplaces in Taipei, this research attempts at mapping different imaginations of modernity and their implications in different urban marketplaces.

This research approaches the governance of the urban marketplaces in twofold. First, it traces the milestone of spatial changes of marketplaces and the discourse support the changes over time, from Qing dynasty, Japanese colonization to the contemporary. Secondly, it pays attention to the informal economy landscape surround the ‘formal marketplaces’. The scale of vending landscapes are often much bigger than the formal marketplace. Out of portions of market landscape, it creates the pressure for institutions to continuously negotiate with them instead of simply evicted the ‘illegal vendors’. Transformation of discourses from stigmatizing illegal vendors as urban poverties, creating ‘grey zone’ (McFarlane and Waibel, 2012) such as temporary and conditional legal open-air market to marketing the semi-legal open-air market for official touristic attraction points, can be observed aligned with shifting concepts of the municipality’s governance modernity. It is argued that the concept of modernity is heterogeneously embodied in a long-term contest between the formal and the informal and the top-down governance and everyday practice of the grassroots.

### **The study**

There are 233 marketplaces categorized in 8 types according to Taipei city market administration office (Table 1). Note that small scales informal street markets and private supermarket within private properties are not counted in this official statistic data.

Considering the land area of Taipei city (271.8 square kilometers), there is almost at least one marketplace in every square kilometer in the city.

Marketplaces in Taipei exist in a variety of spatial form, legal status and business hours. From super market or fixed stalls in buildings to open air street markets, each of them are regarded as legal, semi-legal or illegal through different social process contextualized by the social and political policy in specific time and the negotiation between institutions and business holders.

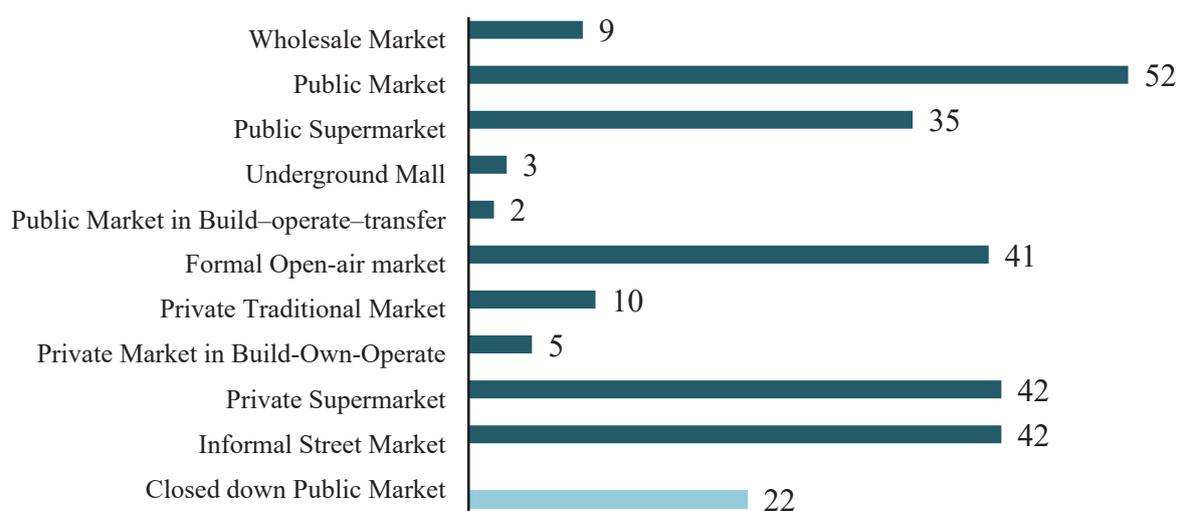
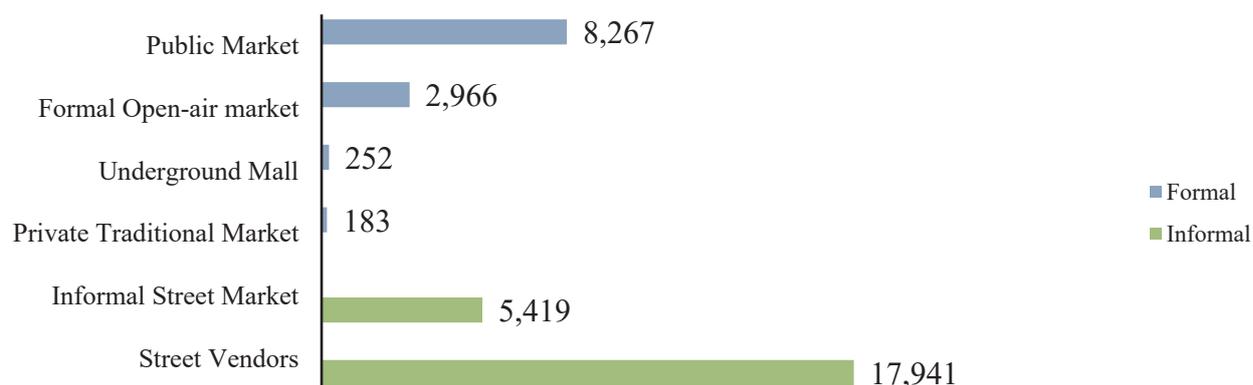


Table 1. Numbers of different types of market in Taipei

This study will take from historical analysis perspective, by analyzing archival materials from case studies of specific markets in Taipei, government policy reports and newspapers, it aims to trace under what policy decisions, the spatial form of marketplaces are shaped, deployed and thus used in the everyday life landscape of Taipei city.

Regardless its legal status and business hours, spatial form of marketplaces in Taipei city can roughly separate into vending along with street and stalls or shops within architecture. Some of places are combined with two. Most marketplaces in architectures are built to resettle vendors used to vending along on streets. However, total amount of vendors are always much more than the designated stalls within market buildings. In respond to take control of the street market, regulations for legal or semi-legal ‘open air markets’ are invented for the management of vendors. Even though, from statistic data of estimated amounts of vendors in Taipei in the Table 2, it is shown that the informal street vendors and stalls are far more than what is recognized as ‘formal’ within marketplace buildings and licensed stalls in formal Open-air market. In following analysis, this paper will discuss the shifting policy and how



policy shaping the spatial form from this two major types and context of marketplaces, and how are ‘informal’ markets and vendors treated in current Taipei city.

Table 2. Number of Formal and Informal stalls in Taipei

### Marketplace buildings and Modernity

This part of discussion will focus on the shifting architectural form of marketplaces under different subject of social policy and tasks of governance over time. The timescale started from Japanese colonization up till contemporary. Table 3 indicates key shift on policy making.

#### ● Public health and national revenue

Public marketplace buildings were first appeared during the Japanese colonization in 1908. Before the colonization era, trading places were presented in the form of shopping street and organic street vendors aggregate near temple squares under the ruling of Qing dynasty. Without any public infrastructure, those marketplaces were described as dirty and messy by the committee of social habit investigation in 1911 (Matsuda, 2005:21).

Under the purpose of improve public health environment, a series of marketplace management were executed by the Japanese colonial government. The governance technique started with restrict marketplace in certain area under private or public manage organization and charge ‘cleaning fee’ from vendors. Eventually, in 1908, three public market buildings were built in Taipei city, following 1911, the ‘Regulations of banning Taiwanese Marketplace’ official prohibited the running of private marketplace (Matsuda, 2005).

	Year	State/Central Government	Municipality
Public Health	Japanese Colonial Period 1895-1945		
		<b>Regulations of Public Sanitation</b>	
	1904	<b>Cleaning Fee</b> -Charge 'cleaning fee' for development of public sanitation infrastructure and public market	
	1911	<b>Regulations of Banning Taiwanese Marketplace</b> -Marketplace shall be public and hygienic -Private market is prohibited.	
	1922	<b>Regulations of Marketplace</b> -Stipulate rules of manage, trade, sanitation in the marketplace. -Separate retail market and wholesale market.	
Resettlement as Social Welfare	1936	<b>Taiwan Urban Planning Law</b> -Stipulate marketplace as necessary public facility for sanitation.	
	After War 1945-		
	1945	<b>Regulations of City Construction in Retroration Area</b> - Designate existing marketplace as public building.	
	1947	<b>Regulations of Public Market Management in Taiwan Province</b> -Financial Authorities in charge the management -Private is prohibited in construction of marketplace.	
	1962	<b>Standards of Retail Market in Taiwan Province</b> -Regulate building coverage ratio and sanitation etc.	
	1964	<b>Amendment of Urban Planning Law</b> -Marketplaces as public facility shall be installed according to the number of households and spread of residents in the area. -May encourage private sector invest in construction of marketplaces if necessary.	
	1971	<b>Regulations of Retail Market Management in Taipei</b> -Stipulated "retailers market should sell fishes, meats, fruits and vegetables, beams, grain, groceries, flowers". -Marketplace should be public, also should encourage private sector to build the market.	
	1973	<b>Amendment of Urban Planning Law</b> -Private sector could manage marketplace. -Government should encourage private sector in investment of marketplace.	
	1975	<b>Authority of construction of marketplace change in Taipei</b> -Authority of planning new marketplace building were shift from the construction bureau to the development bureau of Taipei city government.	
	Land Use Efficiency	1978	<b>Regulations of Multi-use for Public Facilities Land in Urban Planning Area</b> -Allow multi-functioning use embedded in one single public building for encourage the efficient use of urban public land.
1980		<b>Regulation on Encouragement of Investment to Build Public Facility</b> -Encourage investment of marketplace.	
1990		<b>Amendment of Regulations of Retail Market Management in Taipei</b> -Stipulate all of the development of newly marketplace in urban planning, shall be developed as supermarket.	
2000		<b>Act for Promotion of Private Participation in Infrastructure</b> -Attract private capital , lower the financial burden of municipality. Use "Build–operate–transfer" as the way to develop or regenerate public marketplace.	
2015		<b>Regulations of Developed Market Land Apply to Multi-use for Public Facilities in Taipei</b> -Not multi-use market land could change to multi-use. Allow market land develop into multiple public facility , including public housing.	

Table 3. Policy of Public Market Shifting From 1895 up till now

The governance of marketplace in Japanese colonization is embedded in the project of modernization. Modern urban planning and zoning regulation were applied to the land use management along with street market management. The introduction of marketplace building is a symbol to prove the governance efficiency at colony to the mainland Japan. In fact, the public marketplace system in Taiwan was even built 15 years earlier than the mainland Japan (Chung, 2006). The spatial deployment of marketplace not only aiming at take better control of public health environment and gain revenue from vendors, the planning of entertainment and business district were also part of the modern implication (Matsuda, 2005; Chung, 2006).

#### ● Social welfare resettlement

After the Japanese colonization, the new regime governs Taiwan brought nearly 2 millions of political refugees from the Chinese civil war in 1949. Since then, for a long period of time, vendors were considered jobs for social minority. Except existing public marketplace derive from Japanese colonization, a certain ‘grey zone’ was allowed for citizens to keep themselves self-sustain. On one hand, the government kept the regulation that private marketplace is prohibited to set. On the other hand, in many case, when public construction sites meet the occupation of ‘illegal’ vendors, government would resettle certain vendors to stalls in newly built public marketplace.

For example, Shinwei market and Yuanshan market were one of earliest cases that public marketplace built for resettle the street vendors for widen the main city avenue and construction of Taipei fine art museum. Shinwei Market located at the basement of Shinwei Resettled Tenement. The building was built for resettling local residents and vendors from private Shin-an market, who were relocated by the traffic construction of widen Fuxing South Road and Heping East Road in 1952. Tenement completed in 1971 and the Shinwei market was open in 1973 (Shaw, 2015). However, the decision of putting market in basement floor was environmentally lack of consideration in ventilation, lighting and the socially ignore the affinity relationship between market and street. Gradually Shin-Wei market lost its competitiveness, the half vacant market will be closed at the end of 2016 (Figure 1.).

As for Yuanshan market, it was the first market building for resettle vendors gathered at the planned construction site of Taipei fine art museum in 1966. The Yuanshan street market's history can traced back to Japanese colonization, vendors gathered due to the business opportunities which Taipei Zoo was located in Yuanshan. However, after the Taipei Zoo moved in 1986 and the new viaduct blocked the entrance of the market in 1994, made the business plummeted (Yang, 1995). Yuanshan market closed down officially in 1999, the

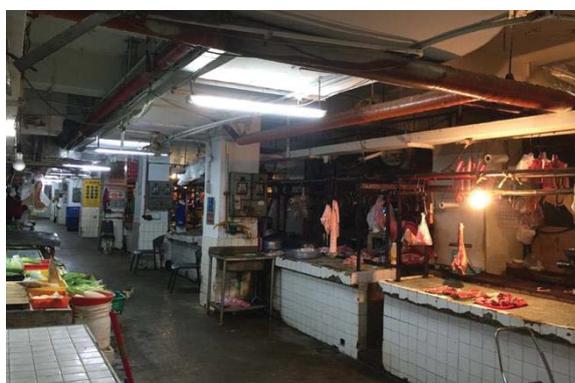
Figure 1. Shinwei Market in 2016  
building transferred as police station  
(Taipei City Market Administration Office,  
2010) (Figure 2.). These cases show that

although many market buildings were claimed built for resettle vendors as part of social welfare policy, spatially we see that the policy execution merely acted to help the social minorities. In the end, vendors moving back to street, leaving stalls in market buildings vacant.

Figure 2. Yuanshan Market after closed  
Retrieved from: <https://goo.gl/images/xR91NZ>

### ● Demand of efficiency land use management

After Chinese civil war, massive waves of immigration from China and countryside hit Taipei city greatly, to fulfill the everyday life function and facilities become one of the most important task to the municipality along with the modernization of the city. Market, as the most essential function for citizens' daily life, was inevitable not to be neglected. In 1964, the amendment of Urban Planning Law stipulated marketplaces as public facility shall be "installed according to the number of households and spread of residents in the area" and conditionally allow private investor to build marketplace in order to speed up the



development of the marketplaces (Yin, 1994). Meanwhile the Regulation of Retailers Market management in Taipei City clearly limit the category merchants were allowed to sell in the market, stipulated "retailers market should sell fishes, meats, fruits and vegetables, beams,

grain, groceries, flowers”. The function of marketplace was clearly defined for provide the everyday life basic needs for citizens.

Aligned with the policy encouragement in private marketplace investment, there was also a shifting management focus on the marketplace building. Since 1975, the task of management and planning of new marketplace building project were shift from the construction bureau to the development bureau of Taipei city government. The observed changing hint that the policy of marketplace management since then were much more related to the urban planning strategy accustomed to the modern urban development scenario.

In 1978, Regulations of ‘Multi-use for Public Facilities Land in Urban Planning Area’ allowed multi-functioning use embedded in one single public building for encourage the efficient use of urban public land. This regulation was seen as release the pressure to develop public service infrastructure in limited public land property. Under this regulation, spatial program such as public housing, library, vertical parking lot and government office could be options combined with either public or private marketplace buildings. Large amount of public and private marketplace buildings were built under this incentive character policy. For instance, the most popular marketplace nowadays South Gate Market was built in 1982 under the circumstance (Taipei City Market Administration Office, 2016). However, in contrast to the few successful cases, much more public and private marketplaces built at that time suffered from fail design. Then were soon abandoned by owner of stalls. This results to the next transformation of marketplace buildings.

There are mainly three reasons cause the under-used of stalls in marketplace buildings. First, the interior design of marketplace buildings very often lack of ventilation lighting. It caused the shopping area perceived as smelly and dark, which decrease the competitiveness of merchants by how they were displayed. In contrast, merchants outside of marketplace buildings sell by vendors were displayed in a better condition also relatively cheaper because they don’t have to pay the rent of stalls. In the end, both consumers and stall owners went back to street, leaving the market building empty. Secondly, although the Multi-use for Public Facilities Land in Urban Planning Area allowed other functioning spatial program emerged into the buildings, in many case, the design of building was actually made the spatial demand of stalls in least priority instead of first. Taking Zhulun Market (Figure 3.) for instance, the marketplace building was first set to resettle in semi-legal vendors from the temporary open air market. However, there were only 86 stalls planned for vendors out of 153 from the open-air market in the 7th floor building, while rest space were for parking lot, community space and social bureau related office spaces (Chen, 2006). The short of spaces

and the conflict use between marketplace and other function of the building made vendors feel discriminated from the design result. Thus stalls were not really attractive to vendors.



Figure 3. Zhulun market became supermarket in 2005

(Retrieved from: <http://blog.yam.com/catshih/article/53221923>)

Aligned with the previous reasons, the increasing of middle class citizens in 80s regarded ‘traditional’ marketplace as a sign of fogyism. Like Cross (2000) argued that the elite and governance class from third world countries has tendency seeing transplant first world countries system as practice of modern and progress. To adopt the indoor marketplace from stalls into supermarkets were welcomed by both middle class citizens and urban governors. Therefore, from both public sphere debate to amendment of regulations relate to marketplace, it is obvious that supermarket was encouraged than stalls (Yin, 1994; Kuo et al.,1997; Wu, 2004). In result, many indoor marketplaces in building buildings were rent to the supermarket enterprise, which the ensembles the supermarket category in table 1. Besides, the amendment of Regulation of Retailers Market management in Taipei City in 1990, stipulated all of the development of newly marketplace in urban planning, shall be developed as supermarket.

Similar attitude of anti-vendors can be observed in the report of marketplace policy research published by the Taipei city market administration office (Kuo et al.,1997). Rather than review the failure spatial and system design policy caused the vacant market buildings, the report accused vendors who received re-settlement under the social welfare policy were under educated and not work hard enough on their business, in which lead to the failure of marketplace building (Kuo et al.,1997). Also in the same report, it admitted the resettlement policy was a mistake which wasted city budget and caused marketplace idle. The viewpoint reveals that in later policy direction, vendor issue would not be treated with form of re-settlement, but compensation instead.

### ● Marketplace under urban regeneration approach

Starting from 2000, for better accommodate public facilities and reduce the financial burden on the government, ‘Act for Promotion of Private Participation in Infrastructure Project’ was enacted. The law opened up more chances for private enterprise invest on public property under the ‘Build–Operate–Transfer’ (BOT) mode. On the other hand, at the municipality level, the ‘Notice on Encouragement of Investment to Build Retailers Market’ in Taipei City is also amending for facilitate the diversified use the regeneration of existing, abandoned marketplaces. With the change of the law, abandoned or under-used marketplace buildings are able to integrated with other public or private properties for larger scale of urban regeneration project. And the most important of all, regulations related to re-settle vendors and stalls are largely taken off in the latest amendment. It is obvious that to resettle vendors to stalls in the marketplace building are no longer considered in policy agenda.

Under the regeneration policy orientation, vacant marketplace buildings are re-used and re-build to create more add-value besides market itself. The reuse of Shuanglian Market (Figure 4.) has become the model of repurposing of low-used marketplace building. It is a four stories building built in 1978 with third floors’ market and one floor library. Since 1990, stalls above the ground floor had gradually vacant, some of stall owners closed their business and turned their shops and stalls as their residence, which is illegal to do so. After the market administration office withdrew these stalls, they rent out one entire floor to hotel manage company to makeover the market stalls to youth hostels (Chen, 2006). The strategy of makeover the vacant marketplace into hostel seem attractive to the municipality, the similar re-use model is planned to apply in varies marketplace building in the city such as Shin-shin Market (Tsai, 2014).



Figure 4. Shuanglian market became Youth Hostel  
(Retrieved from: [http://www.yh.org.tw/hostel\\_info\\_in.asp?ID=146](http://www.yh.org.tw/hostel_info_in.asp?ID=146))



Figure 5. Zhonglun Market BOT project  
(Retrieved from: <https://goo.gl/images/ErXYXh>)

Besides the makeover adapting to existing space, the newly re-build plan of marketplace buildings seem not to learn the design failure from the past. Taking Zhonglun Market (Figure 5.) for example, with the BOT model, the private developer only designate one floor for the market stalls and another floor for supermarket, leaving rest 10 floors to become private hotel business, in which question its validity by city councilors (Kuo, 2016). In another case, the re-build plan of Chenggong Market (Figure 6.) is a plan combine parking lots, park and marketplace. From the official press document, it shows that the market will be a semi-basement market with park on the ground (Chang, 2016). Though vendors considered underground market would cause ventilation problem and lack of flexible space to use, municipality insisted on it is the best design in balance with other spatial program on site.- In a nutshell, the urban regeneration approach is originally intend to increasing economic value and efficiency use of marketplace building and the land property. However, the subjectivity of market itself often put in least priority and thus gradually hidden or disappeared from the landscape.

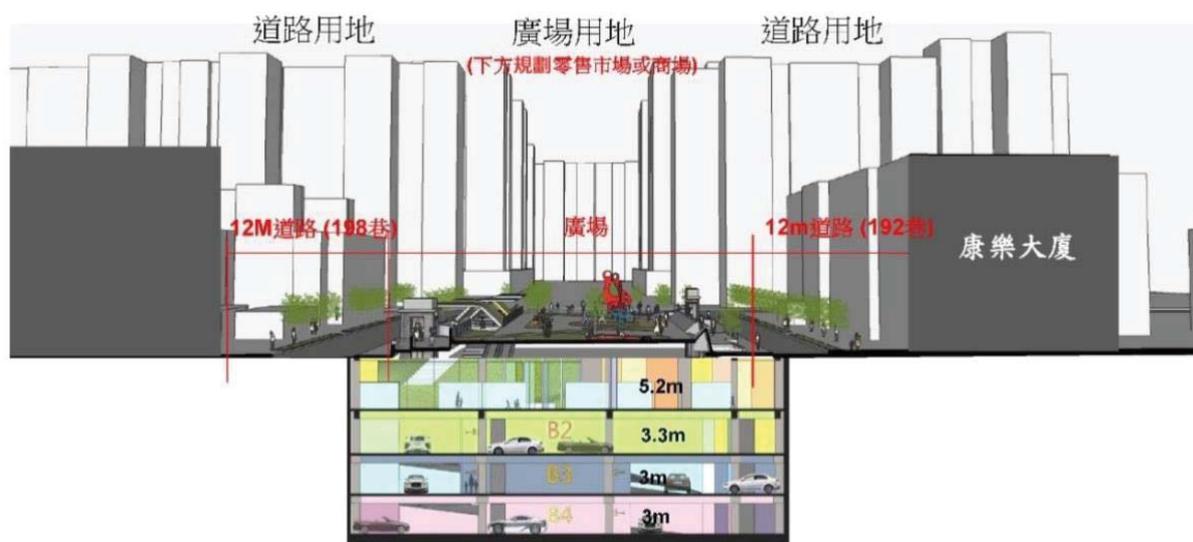


Figure 6. Chenggong Market Regeneration Project, new market will be situated at B1 floor  
(Retrieved from Taipei City Market Administration Office)

Through historical analysis of shifting discourses in shaping public marketplace building in Taipei, it is shown that from public health concern for demonstrate the efficiency of colonization governance to the financial wise public-private-partnership contemporary marketplace regeneration, discourses in driven of marketplace governance may change over time, yet the ideology behind is embedded in the imagination of modernity. In another words, the concept of ‘modernity’ is a heterogeneous representation as we view from the historical change of marketplace buildings.

### Legalization and semi-legalization of vendors on open-air street market

As mentioned above, the re-settlement of street vendors to public marketplace buildings are only small part among all. Even among the re-settled stall owners, due to policy and spatial design failure, many of them choose went back to street sale instead stick in the building. In facing large numbers of vendor business, semi-legal ‘open-air’ street market is a ‘grey zone’ like category partially associate with the municipality but mostly self-organize by vendors. The second part of study will discuss the shifting and more flexible strategy of open-air street market management in Taipei city. In contrast to rather clear legalization policy of indoor stalls in marketplace, vendors in open-air markets and other informal markets are regulated in a more ambiguous strategy.

The analysis will start from the stereotype to recognize vendors as social minorities rooted in vending management system. On the purpose of helping the minorities, the rule setting for

vending license and semi-legal ‘open-air market’ were related to social welfare approach. On the other hand, with the social welfare approach, the policy setting is genuinely expected vendors will eventually disappear through proper assistance from the government thus go back to formal labor system. Regardless the real vending situation, vending management policy made change based on the expectation of decrease vendors in Taipei city. Vending management related affairs were shift from police system to divided departments in municipality. However, although licensed vendors were decrease with a structural reason, illegal vendors got even more. The contradiction between government’s expectation and increasing illegal vendors demonstrate that the segregation of vending management had deep influence to the indecisive and inconsistent policies in vending management. On the basis of the vending management framework above, we will examine the shifting key discourses in street market governance (Table 4.).

For long, vendors are perceived as jobs for social minorities from government’s view. According to the requirement of apply vendor license from Taipei municipality-, only elderlies, jobless or disabled people will be qualified to give license. Licensed vendors are legitimately allowed to organize self-manage group. In respond to the limited number public marketplace buildings could offer to resettle street vendors, a certain ‘grey zone’— partial legalize street market ‘open-air market’ was created by the municipality. According to the ‘Regulations self-governing street vendors of Taipei City’ which first enacted in 1977, it states ‘open air market’ is conditionally legal under the self-manage group on permitted private properties. This can be seen as a compromise strategy in coping with the fact the municipality was not able to offer enough stalls in marketplace building but still willing to take certain control of the rest vendors. Therefore, it is typical to see one or more ‘open-air markets’ operate by different self-manage groups vending nearby the marketplace building. This kind of vending landscape is often recognized as ‘one market’ in people’s perception, yet they are the combination of multi-markets according to their legal status.

Table 4. Policy of Street Market in Taipei

Year	State/Central Government	Municipality
After War 1945-		
1952	<b>Stipulated Regulations Governing Street Vendors of Taiwan Province</b> -Regulated vendors with license and, centralized them in public market or certain area .	
1975	<b>Amendment of Regulations Governing Street Vendors of Taiwan Province</b> -Government should build more public market to resettle vendors.	
1977	<b>Stipulated Regulations Governing Street Vendors of Taipei</b> -Police were in charge the management of vendors.	
1984	<b>Policy of improving the management of street vendors</b>	
1985	<b>Amendment of Regulations Governing Street Vendors of Taipei</b> -Authority of management of legal vendors shifted from police department to market administration office.	
1990	<b>Exercise the Strategy of Improving the management of Street Vendors</b> -Educated citizen not to purchase from vendors -Develop supermarket, convenience store, or vending machine	
1995	<b>Mayor Chen proposed the Strategy of Consulting Street Vendors.</b> -Consulting legal vendors operate in formal business. -Neighborhood offices were authorized in inspection of vendors.	
1998	<b>Mayor Ma proposed Strategy of Street Vendor</b> -Planned street markets toward night market, weekend leisure, local culture, tourist site, environmental conservation.	

Donyuan Market is a typical case shows the contradiction between everyday life and governance. Vendors gathering at the street at Japanese colonization era formed Donyuan Market. After the war, in 1961, municipality resettled street vendors into building nearby, while building wasn't big enough, there was only 55 stalls. Therefore, the market has been extending from the inside of the building to the outside, sprawling to the lanes and alleys. For the local residents, "Donyuan Market" means where the place vendors gathered whether they are on street or inside the building (Figure 7.). But for the municipality, only the vendors who had license and operated inside the marketplace building are legal and formal vendors, those who vended without license and outside the building are illegal and informal hawker and peddler. While the street market was too thriving to control, the municipality designated main area where illegal peddler gathering the most as 'open air market', as a conditionally temporary formal street market.



Figure 7. Donyuan Market (Open-air market)

The policy of temporary legalizes the ‘open-air market’ significantly both ease the pressure of banning illegal vendors and building more official marketplaces for resettlement. However, comparing to the relative linear imagination toward modernity governance of legal marketplace buildings, governance of street markets is rather indecisive. Contradictions can be observed in regulation and policies in between different institutions and periods of governance.

In the case of Taipei city, under the policy orientation directed by the central government in 1984, in which asked to divide vending management affairs into business department and encourage local government to build marketplace building for resettle vendors. In 1985, the amendment of ‘Regulations self-governing street vendors of Taipei City’ officially shifting vending management affairs from police system to divided department in municipality. For instance, the development bureau is responsible for vendors with licenses; banning the illegal stands remained in the police’s work. food security and safety are in charged by the Health department. In same year, the development bureau stopped issuing new license, only accepted license renewal from vendors received their licenses before 1984 (Chuo, 2004).

In short, two major yet influential change in 1985 had made: first, stopped issuing new licensed vendors and further rare new ‘open-air market’ set in the city. Second, even the development bureau only responsible for semi-legal open-air market, it was almost impossible for a 19 people department in charge 4000 vendors and more than 40 open-air market in the city (Lai, 2013). Since then, vending management in Taipei city are rather passive: no new ‘open-air market’ was set, meanwhile the development bureau would not

actively banning illegal market but just track these illegal gathered street market on record (only if they are more than 20 vendors).

In 1990-1994, another trend from municipality tried to advocate the anti-vending through public communication. The discourse behind on one hand encourages consumers to buy merchants from shops instead of vendors. On the other hand, it made an opposition between ‘formal’ and ‘informal’ job. Along with the decreasing number of license vendors, the municipality also encourage vendors change their career into a ‘formal job’ (Wang, 2005:45). However, this advocate work did not stop citizens went off their vendor career. In opposite, whilst the licensed vendor decreased more than 50% from 80s to early 90s, number of illegal vendors never stops growing (Chuo, 2004; Lai, 2013). The intention to weaken the vending business in this period seemed to be effortless.

Since 1994, the democratic transformation made local government leader possible to be voted by citizens. Under the democratic governance, main focus on vending management were shift from preventing vendors block the fluidity of urban traffic to passive facilitate street markets between vendors and neighborhoods (Wang, 2005). Not until the two fires happened at private and illegal street market in 1997, the policy re-focuses to the social security and disaster prevention perspectives.

Under the request of mayor Chen— who is the first elected mayor in Taipei city, the governance was emphasis on public safety, regardless street markets’ legal status. According to the *Resettlement Modes of Existing Open Air Market in Taipei* (Wang, 1999), the management of street market was first scale down to the urban design and stall design. The report made a sophisticate research about stall and street design on street market should prevent itself from fire and should not block passages on fire fighting. For example, Longquan Market (Figure 8.) and Qingguang Market (Figure 9.) were redesigned after the fire. The Development Bureau of Taipei and the Market Administration Office, focused on the safety to the fire and theft, uniformed stand’s sign and billboards, requested to wear the uniform.

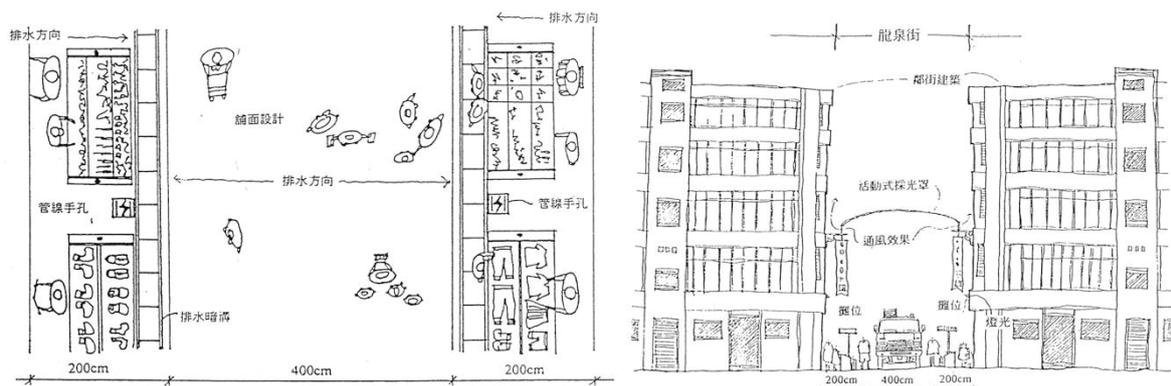


Figure 8. Longquan Market Redesign Project (Wang, 1999)

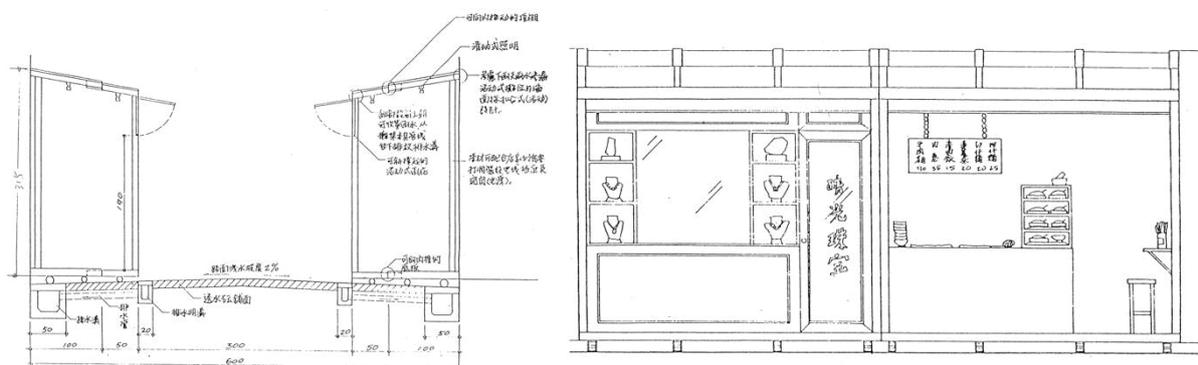


Figure 9. Qingguang Market Redesign Project (Wang, 1999)

Until late 90s, policy of street markets (especially night market) experiences a key shift to the touristic focus. This new wave of street market policy introduced the idea of urban recreation marketing to the street market management. Under the semi-legal recognition of some ‘open air market’, interventions such as pedestrian and urban marketing strategy create new attractions for the urban recreation spots (Chen, 2006). “Qingguang Shopping District Development Project” was one of the successful projects initiated by the chief of local neighborhood. The proposed shopping district was the combination of the redesign project of Qingguang Market after fire and Shuangchang Night market. With the new urban design approach, new shopping district was turned into pedestrian zone, which much more friendly to users and local business vendors. Besides, the municipality proposed several night market redevelopment project, made these street night market into pedestrian zone and promoted as tourist sites, such as Ningxia Road, Roahe Street, Linjiang Street, Guangzhou Street, and Huaxi Street. However, the street market has never been fully accepted by the city government. Like the Linjiang Street, the night market was promoted while the morning street market was outlawed and accused by illegally occupy street recently (Huang, 2016). The municipality asked vendors should organize the self-manage group and apply for the ‘open-air market’, but as we mentioned before, it is almost impossible for vendors to get

license. It is obviously that the outdated regulation needs to be reviewed. Note that even there is a flexible line of law enforcement and varies strategies in street vendor management, the municipality never stop claimed that illegal vendors should be removed from the city. It shows that it's an endless battle for institution to take informal business such as vendors into the formal system.

From partial compromise approach to take the initiative into cooperative relations with vendors for recreational marketing, the argumentation of legalize vendors on street market is never a strict line, but swing back and forth slowly to fit the modernity imagination. What's even more, the urban marketing approach affect to the marketing of stalls in marketplace. In promoting the World Design Capital event celebrating in Taipei city in 2016, a series of makeover design from merchant display to re-design billboards (Figure 10.) were taken in different markets in Taipei (City Yeast, 2016).



Figure 10. Billboard and stand redesign in Sanshui market

## Conclusion

As a functional space exists more than history of urban governance, marketplace is never purely a space for trading, but contextualize in every moment of complex socio-spatial interactions across social, cultural, political and economic perspectives. By tracing the socio-spatial historical development of marketplaces in Taipei city, the research decodes different spatial typologies of marketplaces co-exist on contemporary urban market landscape. Within each categories of marketplace building or street market, it carried specific governance goals under the vision of modernity.

For marketplace buildings, the purpose of build marketplace architectures started from improving public health condition in Japanese colonization period; then social welfare resettlement after civil war to the value-adding development plans on market land properties. It is arguable that recent re-development of marketplace building is structurally minimizing the volume of market stalls, or even replace market stalls to supermarkets begin with spatial design. Under the umbrella of modernize old marketplace, the traditional trading socio-spatial type is gradually excluded from every regeneration place of marketplace building.

As for the open-air market and other informal street markets struggle between indecisive governance swing back and forth with different governors, the limited administration resource had to compromise with large number of illegal vendors or even licensed vendors from marketplace stalls back to street in certain perspective. Therefore, govern discourses were observed from blocking public transportation, advocate vending isn't a formal job to recent cooperate with street markets and night markets in urban recreation marketing.

For both marketplace buildings and street markets, the socio-spatial dynamic are both keep shaping by the power struggle between institutions, consumers and business holders with emerging discourses to a very Western-centric gaze of modernity. It is argued that the concept of modernity is heterogeneously embodied in a long-term contest between the formal and the informal and the top-down governance and everyday practice of the grassroots.

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## Exploring Participatory Design for Sustainable Landscape for Public Housing Neighborhoods in Singapore

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### **Abstract**

Singapore's reputation as a green city is largely achieved through political will, strong policies, and effective execution of policies. While greening Singapore for most of the past five decades can be generally described as a public-sector led approach, where citizen engagement was not necessarily the focus, in recent years the public sector is increasingly interested in engaging the community in the planning and design of public green spaces. As this is a nascent movement, there remain considerable gaps in the types, process, and efficacy of participatory design. In this paper, we describe a research project that aims to provide a sustainable landscape design framework—based on the concept of ecosystem services—through a participatory process. Our study focuses on public housing estates, locally referred to as “HDB” (Housing and Development Board) estates, which houses 80% of Singapore's population in high-rise, high-density towns. We describe the research process, in which we include multiple stakeholders in the planning and design of HDB neighborhood landscapes. They include relevant public agencies, design professionals, residents, and NPOs/NGOs. We also discuss the lessons learned through such a process. Since a participatory approach to landscape design remains to be fully explored in Singapore, we anticipate that this research project could provide valuable insights into the adoption of participatory design in Singapore to promote a more bottom-up approach to the planning and design of public green and open spaces.

**Keywords:** Participatory design; ecosystem services, landscape design, Singapore, design framework

## 1. Introduction

Through five decades of active urban greening, Singapore can rightly claim to be a green city, one in which there is a pervasive presence of greenery in large parts of the city. Such a status can be attributed to a clear vision backed by political will, effective laws and policies, and able execution of greening policies (Tan, 2016). In spite of this achievement, the city-state continues to carry out policies and programs, such as the LUSH (Landscape for Urban Spaces and High Rises) programme and the Landscape Excellence Assessment Framework to further promote urban greening. Additional evidence of the continued focus on greening as a key urban development feature of the city-state can be seen in the sustained financial expenditure on greening programmes over the last decade (Tan, 2016: 182).

In examining the urban greening history of Singapore, it can also be said that the primary approach adopted in the formative years of the greening programme is a public-sector led approach in its planning and execution. This is one in which the public sector takes on a primary role in the planning, design and management of public green spaces with little involvement from the citizenry, which is a general reflection of the predominant mode of urban planning up to early 1990s (Soh and Yuen, 2006) and governance (Leong, 2011) This has changed in recent years, with increased efforts to seek public feedback on key public green space developments, such as the Jurong Lake Gardens<sup>1</sup>, as well as township development of the Bidadari estate<sup>2</sup> and Tengah Forest Town<sup>3</sup>. On a larger scale, public engagement is also seen as an integral part of national land use master planning, highlighting the increased emphasis on seeking input of the community<sup>4</sup>. For landscapes and nature conservation in particular, there is also a growing Community in Bloom programme<sup>5</sup>, which has seen the proliferation of community gardens being set up in neighbourhoods through self-organized community efforts, as well the more recent Community in Nature programme<sup>6</sup>, which seeks to “connect and engage different groups in the community to conserve Singapore’s natural heritage”.

Yet it can also be said that the public sector’s efforts to involve the community in the design of their living environment is still in its budding stages in Singapore, one which requires not just the public sector, but different stakeholder groups to take ownership and explore methods of collaboration (Mohan, 2013). Recent research conducted in Singapore clearly points to the role

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<sup>1</sup> <https://www.nparks.gov.sg/juronglakegardens/faqs>

<sup>2</sup> <http://www20.hdb.gov.sg/fi10/fi10296p.nsf/PressReleases/59C49C5CADB16CA048257BD6002D8A64?OpenDocument>

<sup>3</sup> <http://www.hdb.gov.sg/cs/infoweb/press-releases/corporate-pr-unveiling-the-masterplan-for-tengah-08092016>

<sup>4</sup> <https://www.urab.gov.sg/uol/master-plan.aspx?p1=view-master-plan>

<sup>5</sup> <https://www.nparks.gov.sg/gardening/community-in-bloom-initiative>

<sup>6</sup> <https://www.nparks.gov.sg/biodiversity/community-in-nature-initiative>

of the built environment in influencing community bonding in Singapore, but it also raises questions on what would be the suitable means for effective participatory planning in Singapore (Cho et al., 2014). The need for active efforts in community engagement for developing community bonds, sense of belonging and eventually social resilience is well-recognized, as is the recognition that more efforts need to be invested to develop the awareness, methods and processes of effective community engagement.

In the context of planning and design of community green spaces, a participatory approach is necessary for achieving sustainable landscape—that is, landscape that promotes human wellbeing in an ecologically-wise fashion and one in which the community has sense of ownership and care. A sustainable development encompasses sustainable communities, which is addressing sustainability as a local level (Gyorgy, 2004, McGinley & Nakata, 2012). Such a view also resonates with the clear position reflected in Singapore's urban planning approach, in which sustainable development is not just about the physical environment but also about "putting the community at the heart of development" through building rooted and cohesive communities (URA, 2012). Involving the community in the design and management of their environment and exploring various approaches to achieve is thus a relevant area of work. Residential landscapes, in particular should be given specific emphasis, as they are a key determinant of human wellbeing given their omnipresence in the daily lives of residents. As of 2015, 80%<sup>7</sup> of Singapore's population lives in public housing estates designed, built, and managed by Singapore's public housing agency—the Housing Development Board (HDB). Public housing estates are locally referred to as HDB estates. The HDB neighborhood landscape (Figure 1), given that it is closely associated with most Singaporeans, presents both a grand opportunity and challenge to promote an alternative design approach to sustainable landscape.

Since December 2014 we have been conducting a research project based on the concept of ecosystem services to develop the Neighbourhood Landscape Planning and Design Framework (NLPDF) to achieve sustainable, or what we considered socio-ecologically wise, HDB neighbourhood landscapes. We adopt a research process that not only involves relevant public agencies and design professionals but also HDB residents, and the purpose of this paper is to report on our exploration on such a participatory research process and the lessons learned through the process. Since a participatory approach to landscape design in Singapore requires further understanding in Singapore, as with different methods of participatory planning in general (Cho et al., 2014), we hope to provide some insights into the adoption of such an approach in Singapore.

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<sup>7</sup> <http://www.singstat.gov.sg/statistics/latest-data#22>

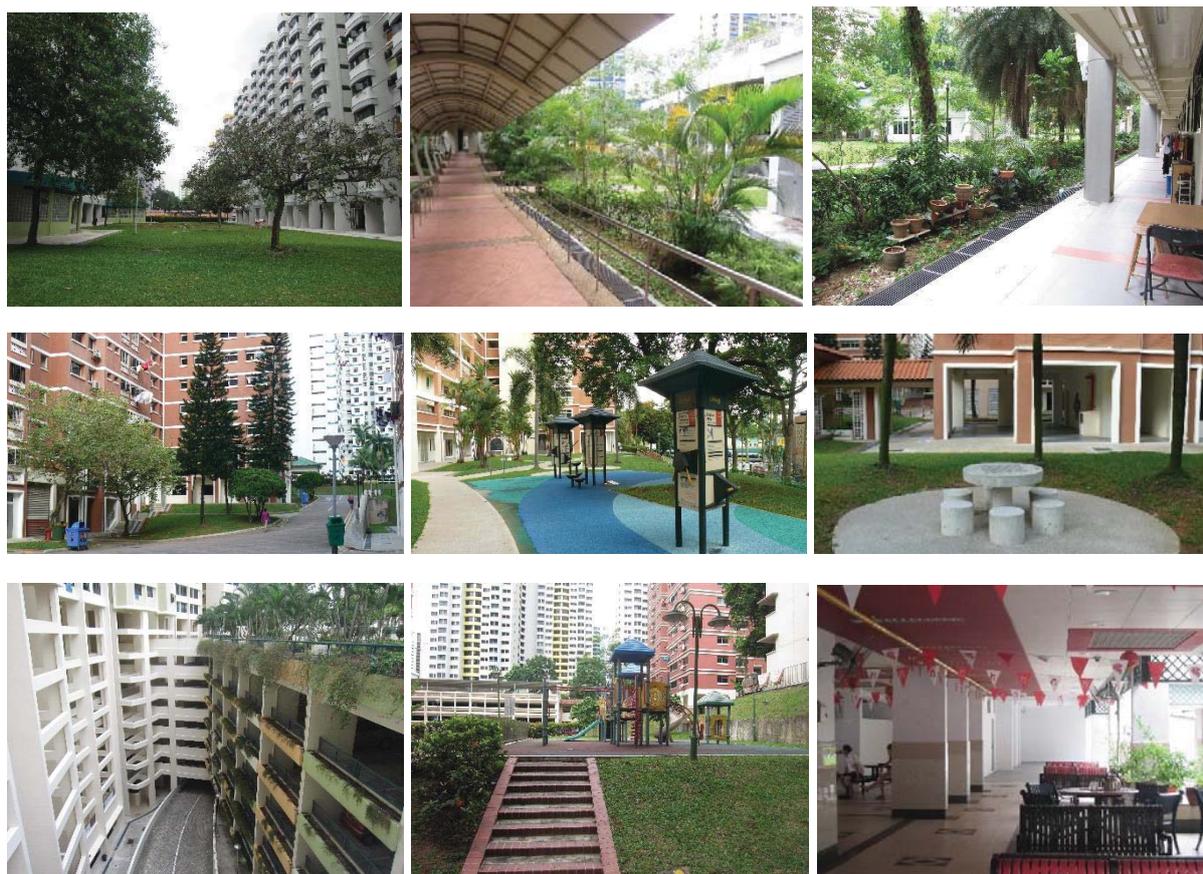


Figure 1. HDB neighbourhood landscapes

In the remainder of this paper we first provide a background of the design and planning process of HDB neighborhood landscapes. Then we briefly introduce our on-going research project—NLPDF, followed by a description of the participatory process adopted in the project. Finally, we discuss the lessons learned from this part of our study.

## 2. Current Design and Planning Process for HDB Neighbourhood Landscape

For HDB neighbourhood landscapes, in the 1960s when HDB needed to build as many estates as quickly as possible to house a large population, its approach to landscape design was simple greening, e.g. through provision of green open spaces and simple recreational facilities like playgrounds. This is a reflection of a similar emphasis on rapid greening of the city in the formative years of greening the nations. In the last one to two decades, with increasing emphasis on diversity and liveability, the greening of HDB neighbourhoods has shifted to a more sophisticated approach to consider sustainability in its town development, as seen in the implementation of water sensitive urban design, green roofs, roof gardens, high-rise and vertical greenery (HDB, 2013). In general, for majority of new housing estates development, the conceptual plans for neighbourhood landscapes, as with the rest of the residential buildings,

amenities, and other infrastructure are conceived by professional design teams before these are used for consultations with other stakeholder groups, including other sector agencies, NPOs/NGOs as well as the public. One of key challenges of consultation is that it is not possible to seek the input of future community in a new estate, for the simple reason that the community is still not present when the overall design of a housing precinct and its amenities, including the neighbourhood landscapes, has already been determined. This is by no means, unique to public housing, nor to Singapore, and we elaborate on this point later in the paper.

Besides new developments, HDB has also carried out the Neighbourhood Renewal Programs (NRP) since 2007 in existing mature estates built between 1989 and 1995. NRP is intended as a consultative approach for public engagement with objectives including improving the physical environment, strengthening community bonding, and fostering a greater sense of ownership through resident involvement (CLC, 2015). NRP is fully funded by the government and encompasses two stages of public engagement—public consultation and Consensus Gathering Exercise. Public consultation is first carried out through various platforms like Town Hall meetings, mini-exhibitions, dialogue sessions, house-to-house surveys and block parties (HDB, 2015). Feedback gathered through these activities are then considered and if feasible, fed into the design proposals for the Consensus Gathering Exercise, where residents are required to indicate their support. The NRP proceeds only if 75% of votes are in favour. The support level for past NRP proposals is usually high, averaging 89%. However, it has been pointed out that there is insufficient breadth and depth in community engagement through the use of survey as the main method of engagement, and community engagement would only occur after a schematic design has been drafted (CLC, 2015).

This observation perhaps reflects the constant dilemma between achieving outcome, versus focusing on process in community engagement. As noted by Fainstein, in the US in which community engagement has been entrenched in urban planning, there is a risk that community input is “a kind of routinised thing where the stalwarts appear at meeting after meeting, and no one else very much bothers” (CLC, 2013). Also suggested by Fainstein, on the other hand in Singapore, there is arguably a stronger emphasis on achieving outcomes of urban planning, and less on the process that leads to the outcomes. To balance the two objectives is obviously a challenge, and is strongly context dependent, i.e. on the socio-political state of the city. Nevertheless, given the strong public sector interest in community engagement, there should be greater exploration on means and outcomes of fresh approaches to community engagement. In particular, how could participatory approach be implemented for the design of HDB neighbourhood landscapes as an exploratory method of dealing with the *process* of neighbourhood landscape development?

### **3. The Research Project: The Neighbourhood Landscape Planning and Design Framework (NLPDF)**

The participatory planning work that we report in this paper is part of a larger research project. The purpose of this research project is to develop a transdisciplinary planning and design framework to enhance the ability of HDB neighbourhood landscapes towards socio-ecologically wise landscapes that deliver more values to residents and improve environmental and ecological qualities. The framework, which is still under development, is tentatively named the Neighbourhood Landscape Planning and Design (NLPDF). The ultimate goal is for NLPDF to serve as a guideline for designing new and retrofitting old HDB neighborhood landscapes.

#### **3.1. Why focusing on HDB neighbourhood landscape?**

HDB neighbourhood landscape is a prevalent form of greenery in Singapore, accounting for almost 30% of total vegetation cover of all managed green spaces in Singapore, about three times the area of all Singapore's public parks combined (unpublished data). HDB neighbourhood landscapes, rather than national gardens, destination parks or nature reserves, provides HDB residents with the most direct and frequent contact through greenery, or natural elements. Neighbourhood landscapes thus have large potential to contribute to individual and community well-being as the connection or contact with nature has been positively linked to well-being (Capaldi et al., 2014a), community attachment (Arnberger and Eder, 2012), pro-environmental attitudes and values (Halpenny, 2006; Stedman, 2002; Vaske and Kobrin, 2001), and a sense of place and identity (Jorgensen and Stedman, 2001; Jorgensen and Stedman, 2006; Proshansky, 1978; Stedman, 2003). Through explicit design approaches and considerations developed in the NLPDF, our research project aims to improve the potential of neighbourhood landscapes to deliver greater landscape values and improve the quality of the environment.

#### **3.2. Landscape services provided by HDB neighbourhood landscape**

In this research project we consider “landscape” a conceptual construct as much as it is a space—it is “simultaneously a natural and a cultural space” (Cosgrove, 2004). Landscape “delivers a wide range of services that can be valued by humans for economic, socio-cultural and ecological reasons” (Termorshuizen and Opdam, 2009). To emphasize the ability of HDB neighbourhood landscape to provide multiple ecosystem services, we term these ecosystem services “landscape services”, specifically pointing to the contributions of landscapes to

human wellbeing (Bastian et al., 2014). The landscape services that HDB neighbourhood landscape could potentially provide are listed in Table .1

Table 1. HDB neighborhood landscape services

<b>Provisioning Services</b>	
<b>Fresh produce</b>	The ability of neighbourhood landscapes to provide opportunities for communities or individual residents to grow their own food.
<b>Water for irrigation</b>	The provision of irrigation water through rainwater harvesting, as well as through hydrologic cycling and nutrient cycling to maintain the quantity and quality of the water of the aquatic system.
<b>Regulating Services</b>	
<b>Heat mitigation</b>	At the micro-scale where vegetation can be used to shade buildings, structures and footpaths to produce favourable microclimate conditions.
<b>Erosion control</b>	The retention of soil through vegetation root matrix and soil biota.
<b>Stormwater and domestic waste water treatment</b>	Removal of water-borne pollutants and silt by vegetation, biota, and soil to improve water quality.
<b>Abatement of noise pollution</b>	Using urban soil and plants to attenuate noise pollution through absorption, deviation, reflection and refraction of sound.
<b>Vector control</b>	The control of vector populations (mainly mosquitos) through predator-prey relationships.
<b>Flood hazard mitigation</b>	Mitigation of flood by landscapes through their ability to allow infiltration, detention and storage of stormwater.
<b>Socio-cultural Services</b>	
<b>Mental and physical health</b>	The contribution of natural elements to emotion, mood, stress reduction, fatigue release and to the promotion of physical health.
<b>Sense of place</b>	The emotional, cognitive and conative information provided by the landscape and the human-environment relationship, shaped by the physical traits of the landscape.
<b>Aesthetic appreciation</b>	The quality of the landscape perceived through a range of visual criteria such as prospect, refuge, organized complexity, diversity, extent, colour, naturalness degree, coherences, mystery, order.
<b>Social relations</b>	The ability of neighbourhood landscapes to promote neighbouring and other relationships with the cultivation of pro-social attitudes and behaviours.
<b>Educational values</b>	The potential of landscape to promote environmental education
<b>Recreation</b>	The open spaces in neighbourhood landscapes for recreation
<b>Heritage landscapes and specimens</b>	The recognition that cultural landscapes emerge and accrue values to communities when humans associate with the larger environment and become seen as part of a society's heritage
<b>Spiritual and religious fulfillments</b>	The spiritual and religious associations of humans with landscapes or types of plants
<b>Supporting Services</b>	
<b>Maintenance of soil quality (physical, chemical, biological)</b>	Recognition that soil is a natural stock of capital which supports many ecosystem processes
<b>Provision of habitat for species, including pollinator species</b>	Urban landscapes serving as habitat for diversity of species by providing food, water and shelter.
<b>Nutrient cycling</b>	When microbes decompose organic matter into inorganic constituents, nutrients are returned to terrestrial or aquatic ecosystems to support vegetative growth at the base of a food chain which in turn support other organisms higher in the food chain.
<b>Water cycling</b>	The interception, evapotranspiration, infiltration, retention, and storage of water by the landscape to regulate the surface runoff and river discharge.

Between different landscape services, tradeoffs inevitably exist. The provision or increase in one service may compromise the provision of another (Bennet et al., 2009; Raudsepp-Hearne et al., 2010). Focusing only on certain services could result in unexpected losses of other services that are equally important to human wellbeing (Bennett et al., 2009). For example, there may be tradeoff between the regulating service of heat mitigation and recreation, in the case of, for example, sports that require open turf.

To plan and design for multiple landscape services of an HDB neighbourhood, it is important to recognize and accept that tradeoff between different landscape services exist. Who, then, should determine the prioritization of different landscape services when tradeoff exists? Participatory design, when incorporated into the design process of HDB neighbourhood landscape, allows the residents—who are most directly affected by the result of landscape design—to have a say in such decision-making. Proponents of participatory design have cited empowerment and an increased sense of belonging to and ownership of the neighbourhood as a major benefit of participation (Hester, 1990; Sanoff, 2006). When majority of residents take part in the making of their own living environment, it could help to foster place attachment to their own neighbourhood.

#### **4. The Participatory Research Process**

The participatory research approach adopted in NLPDF involves two objectives. First, it is to gather inputs for NLPDF that is currently under development and to test its feasibility. For this purpose, we have carried out an Analytical Hierarchical Process (AHP)—a structured decision-making process developed by Saaty (2008), and we also involve three landscape design firms. The second objective is to understand the attitudes of regular Singaporeans towards participatory design. For this purpose, we involve Participate in Design (P!D), a local non-profit organization that specializes in participatory design, and we also carried out participatory design workshops with HDB residents. In this section we provide more details for all the participatory activities in the research process.

##### **4.1. Analytical Hierarchical Process (AHP): May – October 2016**

Because of the existence of tradeoff between different landscape services, the prioritization of various HDB neighbourhood landscape services is important in the planning and design process. We adopted the Analytical Hierarchical Process (AHP), a structured decision-making process developed by Saaty (2008), to explore the perceived importance of different landscape services by different stakeholders.

The participants involved in AHP are those directly or indirectly involved in the planning and design process of HDB neighbourhood landscape. They include public agencies, academics, NPOs, landscape professionals, and HDB residents. Public sector agencies who are the collaborators in this research project include HDB, National Parks Board (NParks), which is responsible for the planning, design, and maintenance of Singapore's green and open spaces; and Urban Redevelopment Authority (URA), which is the authority of Singapore's land use planning and conservation. Academics include the research team of this research project and comprises professors and research staff from National University of Singapore and Chinese University of Hong Kong. NPOs/NGOs include members from Ground-Up Initiative and Participate in Design. The NPOs/NGOs that responded to our questionnaire all share the mission of giving empowerment to regular people. Landscape professionals include members from Singapore Institute of Landscape Architects. HDB residents include 15 people who live in the vicinity of Tengah, a forested area that is slated to become a new HDB town in western Singapore and is the study site of this research project. Since the future residents of Tengah cannot be identified, those who live in nearby HDB estates of Choa Chu Kang are involved as a proxy.

In AHP, each participant was asked to complete a questionnaire, which contains 16 landscape services (including all services listed in Table 1 except for the supporting services) and a scale for pairwise comparison. In the pairwise comparison the participant compared and rated the more important landscape service for human and environmental wellbeing in HDB neighborhood landscape. Before the 15 HDB residents commenced the questionnaire, we held a focus group with them to explain each landscape service to their understanding. The results from all participants were then computed to determine a final collective ranking, which will then serve an important reference for the prioritization of landscape services in NLPDF.

#### **4.2. Landscape design firms trying out NLPDF: April – November 2016**

In order to test the feasibility of NLPDF, we carried out a design exercise to include three landscape design firms to try out the first draft of NLPDF, using Tengah—the forested area slated to become a HDB new town—as the study site. These firms include Ramboll Studio Dreiseitl Singapore, Classic Design from Taiwan, and Dongsimwon Landscape from South Korea. Classic Design has expertise in participatory design, while Dongsimwon Landscape is experienced in ecological landscape design for high-rise residential estates. The overseas companies are involved so as to provide fresh design perspectives on the neighbourhood landscape of Singapore. The mix of local and overseas landscape design firms also allows for exchange of ideas in the design processes and design thinking.

The three firms were asked to develop the design schemes for the landscape of the Tengah new town by following NLPDF. As participatory design is one of the design approaches specified in NLPDF, the three firms were required to incorporate it into the design process. In a four-day workshop during June 22-25, 2016 all three firms gathered in Singapore to familiarize themselves with Tengah and with design and planning issues relevant to HDB neighborhood landscape. In early October, each design firm submitted their design scheme, along with an assessment report on how exactly NLPDF was used in the design process and on the applicability of NLPDF. The assessments by the three design firms will be analyzed and synthesized as an important reference for us to improve the feasibility of NLPDF.

### **4.3. Participatory design with HDB residents**

During the aforementioned workshop in June, each design firm also held a participatory design session called Co-Creation Workshop with the HDB residents in Keat Hong in Choa Chu Kang, a neighborhood abutting Tengah to the west. As mentioned earlier, since the potential residents of Tengah cannot be identified, HDB residents in Choa Chu Kang were involved as a proxy for future Tengah residents in the design exercise. As the development of Tengah would likely affect the nearby Keat Hong residents, they can also be considered stakeholders.

Besides the Co-Creation Workshops in June, there are plans to hold a small exhibition of the three design schemes early next year, where the Keat Hong residents who participated in the Co-Creation Workshops will be invited to the exhibition to provide their feedback on the design schemes. The feedback from Keat Hong residents is also expected to help to improve NLPDF.

### **4.4. P!D facilitating the participatory process: April 2016 – January 2017**

As the three design firms are not familiar with community engagement in Singapore, we involve Participate in Design (P!D), a local non-profit organization that specializes in participatory design, in the design exercise to serve as a bridge between the design firms and the Keat Hong residents. Currently P!D is the only organization in Singapore that specializes and work exclusively on participatory design. Arguably P!D's emergence represents an emergent demand on citizen participation in Singapore.

In the design exercise, P!D worked closely with three design firms, taking on the role of recruiting the Co-Creation Workshop participants, collecting information on Keat Hong community, helping with logistics of the workshops. Prior to the Co-Creation Workshops by the three firms in June, P!D conducted the groundwork with the Keat Hong community with no

involvement from the design firms, such as building relationships with community partners, getting permission from the Grassroots leaders<sup>8</sup>, conducting site studies and observations, producing publicity posters, and coordinating with Town Council and Residents Committee. P!D also conducted other participatory activities including in-depth interviews with the community members and online survey to gather opinions from the Keat Hong community. Insights from these preliminary studies were compiled into a report for the three design firms as input in the design process. The participatory activities that P!D has conducted or helped organized to date are listed in Table 2.

Table 2. Participatory activities conducted by P!D

Activity	Description	Purpose	No. of participants	Location
<b>May 2016</b>				
<b>In-depth interview with Residents Committee members and residents</b>	Questions ranging from their personal values to ideas and opportunities to create in the public HDB space were asked	To understand stories and experience and gain insights into underlying needs and aspirations of the community	7 interviewees	N/A
<b>May 2016</b>				
<b>Man-on-the-street interview</b>	Questions ranging from their personal values to ideas and opportunities to create in the public HDB space were asked	To understand stories and experience and gain insights into underlying needs and aspirations of the community	60 residents	5 neighbouring sites
<b>22 May</b>				
<b>Stories market</b>	Pop-up stations were set up in the neighbourhood to engage passers-by on their views	To understand how residents view nature in relation to the built environment in their neighbourhood	90 residents	Void deck of Choa Chu Kang HDB block and Neighbourhood plaza
<b>28 May</b>				
<b>Neighbourhood explorer challenge</b>	Explorative journey around neighbourhood	To make residents think more about each of the landscape spatial typologies in their neighbourhood	P!D members & residents	7 stations in Choa Chu Kang neighbourhood, including Tengah forest
<b>01- 02 June</b>				
<b>Field observations</b>	Site studies on neighbouring sites	To gather information on how people are currently using the spaces	N/A	5 neighbouring sites
<b>16 June</b>				
<b>Focus group for AHP</b>	Each neighbourhood landscape service and the process of AHP is explained in simple terms to the residents	For residents to understand the NLS in order to complete the AHP questionnaire	4 NUS 2 P!D members 15 residents	Lam Soon Community Centre
<b>23 June</b>				

<sup>8</sup> The term “grassroots” in Singapore refers to volunteers appointed by The People’s Association (PA) to serve in various grassroots organisations (MCI, 2016).

<b>Neighbourhood site visit and walking trail with design teams</b>	Design teams are led on a walking trail and introduced to the common landscape spatial typologies of a HDB estate	To allow the design teams to familiarize with a typical HDB estate	10 designers 5 P!D members	Keat Hong neighbourhood
<b>23 June</b>				
<b>Co-Creation Workshop with Classic Design and residents</b>	Residents were shown a presentation on “pattern language” and wrote down the pattern they liked and disliked. They were then asked to imagine themselves as designers of the future HDB development and using 5 wooden cubes to decide how they would develop the plot of land.	To educate residents on patterns and scale, to find out how residents tend to develop a plot of land	5 designers 5 P!D members 16 residents	Lam Soon Community Centre
<b>25 June</b>				
<b>Co-Creation Workshops with Dongsimwon Landscape and residents</b>	Residents were asked to list the pros and cons of the spatial typologies of South Korea as well as the design intentions of a hypothetical HDB development at the site	To find out what residents’ opinions of various spatial typologies and design intentions	3 designers 5 P!D members 13 residents	Keat Hong Zone 4 Residents’ Committee
<b>25 June</b>				
<b>Co-creation workshops with Ramboll Studio Dreisetl Landscape and residents</b>	Residents were to use brainstorming, forced connections, model making to imagine their ideal living neighbourhood	To find out resident’s idea of ideal neighbourhood	3 designers 5 P!D members 18 residents	Keat Hong Zone 4 Residents’ Committee
<b>18-26 Aug</b>				
<b>Post workshop online survey</b>	Questions collected from design and research teams are put together as survey questions to the residents	For residents to address questions from design teams, primarily their preferred type of spaces	24 residents	Online

## 5. Lessons Learned from the Participatory Research Process

As this participatory research process is still ongoing, instead of drawing conclusion, in this section we outline a few issues or challenges observed in the process. In particular, we focus on the issues arising from the interaction with HDB residents.

### 5.1. Understanding the concept of landscape services

To involve the residents in the process of creating their own neighborhood landscape that is socio-ecologically wise, it is necessary for them to first understand the concept of landscape services. While the concept of ecosystem services, on which our idea of Neighbourhood Landscape Services is based, is widely discussed in academia, it is little known by the general public. How the concept of landscape services can be effectively communicated to a layperson, who may not even have environmental awareness, can be challenging.

It was expected that HDB residents might not readily comprehend the concept of Neighbourhood Landscape Services. In the event called “Stories Market” held by P!D in May 2016, pop-up stations were set up in the neighbourhood to engage passers-by. Slightly more than half of the 90 participants are elderly above 50 years old who may not have had much education or may not understand English. In order to communicate the concept, P!D reinterpreted various HDB neighbourhood landscape services identified in Table 1 and translated them into simpler, more friendly terms (Table 3).

Table 3. Translation of HDB neighborhood landscape services

Neighbourhood landscape Services	Translation to participants
<b>Provisioning Services</b>	
<b>Fresh produce</b>	Providing edible plants
<b>Water for irrigation</b>	Recycling rainwater for watering plants
<b>Regulating Services</b>	
<b>Heat mitigation</b>	Providing shade
<b>Erosion control</b>	Preventing loss of soil
<b>Stormwater and domestic waste water treatment</b>	Absorbing and cleaning rainwater / Clean rainwater and waste water
<b>Abatement of noise pollution</b>	Using greenery to block the noise
<b>Vector control</b>	Using nature to prevent dengue
<b>Flood hazard mitigation</b>	Buffering storm surge using landscape
<b>Socio-cultural Services</b>	
<b>Mental and physical health</b>	Promoting wellness and relaxation
<b>Sense of place</b>	Promoting social activities through green space
<b>Aesthetic appreciation</b>	Promoting attractive sceneries and pleasing ambience
<b>Social relations</b>	Fostering community bonding
<b>Educational values</b>	Providing opportunities for learning from nature
<b>Recreation</b>	Inspiring recreational use through nature
<b>Heritage landscapes and specimens</b>	Strengthening and reflecting local culture and identify with heritage values
<b>Spiritual and religious fulfillments</b>	Providing space for religious practices to enhance spiritual well-being
<b>Supporting Services</b>	
<b>Maintenance of soil quality (physical, chemical, biological)</b>	Regenerating soil quality naturally
<b>Provision of habitat for species, including pollinator species</b>	Providing suitable environment to attract wildlife
<b>Nutrient cycling</b>	Allowing vegetation to grow in the natural way
<b>Water cycling</b>	Regulating water flows naturally

Besides setting up the voting stations at the void deck and neighbourhood plaza, P!D members went around the neighbourhood to capture votes and opinions from other residents. The purpose of the Stories Market is to understand how HDB residents view nature in relation to their built environment and to understand their views on the different neighbourhood landscape services. This event was marketed through social media and word of mouth as “*How might we use nature to make your living environment and daily lives better? Your Involvement will Help HDB design greener neighbourhood!*” The concept of Neighbourhood Landscape Services

was reframed into questions that are relatable to their daily life and immediate living environment. Alongside images and descriptions of the Neighbourhood Landscape Services, the 4 questions in Box 1 were posed to the passers-by.

**Box 1**

1. Which are the top 3 factors that are most important to you?
2. Why are these factors important to you? (Choose 3)
3. Which are the top 3 factors that are least important to you?
4. Why are these factors not important to you? (Choose 3)

“Factors” in Box 1 are translated Neighborhood Landscape Services (the right column in Table 3). Table 4 shows the top five most and least Neighborhood Landscape Services to the Stories Market participants. It is observed that participants were more comfortable with talking about the landscape services they are more familiar with in their living environment, and they found the non-tangible services (e.g., nutrient cycling, erosion control) difficult to understand, even when these terms have been translated and simplified.

Table 4. Most and least important neighbourhood landscape services

<b>Most important factors</b>	<b>Least important factors</b>
Habitat for species	Spiritual and religious fulfilments
Fresh produce	Nutrient cycling
Heat mitigation	Erosion control
Physical and mental health	Flood control
Social relation	Maintenance of soil quality

While the result from the Stories Markets provides some insights, it is far from clear how much a regular Singaporeans could really grasp the meanings of these neighbourhood landscape services and whether the ranking by one person would be dramatically different from another. To incorporate participatory design in NLPDF and to make community participation meaningful, it is paramount for the participating residents to have a clear understanding of neighborhood landscape services. They need to understand the benefits (including the long-term ones) of all neighborhood landscape services, as well as the tradeoffs among them, so as to make informed decision on the prioritization. In particular, we anticipate that regulating services, among others, might be most difficult for a layperson to comprehend because many of them are intangible or invisible/less visible processes, such as vector control and flood hazard mitigation. It is therefore important to explain these services in a way that could be easily understood, which could be a challenging task.

## 5.2. Unknown future HDB residents

A major challenge in implementing participatory design in any future HDB neighbourhood is that its residents are not known before the site planning commences. The public are informed of the location, indicative prices, preliminary designs, and the number of available units through HDB sales launches either on newspapers and on the website. Interested buyers will then check their eligibility to purchase a flat, eligibility for loans, and ability to pay the down payment and other fees before submitting an application for a flat. At the end of the application period, HDB ballots the applications for queue position and inform the applicants of the outcome. Such a process makes it not possible to involve future residents—since they are unknown—in the early stage of the planning and design of their HDB neighbourhoods.

In our design exercise, because the future residents of Tengah are unknown, we involved the residents from Keat Hong community, which is right next to Tengah, as the proxies. However, using proxies in the participatory design process is not a genuine form of participation since the proxies are after all not as emotionally attached and invested to the design and development of a new neighborhood that they do not call home. It will not help to develop a sense of ownership, which is central to the idea of participatory design (Creighton 1992).

Therefore, involving future HDB residents in the early stage of the design of HDB neighborhood landscape would require some major change in the current process of HDB project development, sales, and application, which may be difficult in the short term. The feasibility of such change is beyond the scope of our research project. However, the current process does not necessarily preclude any form of community participation in HDB neighborhood landscape. Unlike architecture, landscape—dominated by natural elements—is more dynamic and continues to evolve. The changing nature, hence some inherent flexibility, of landscape provides some opportunity for its users to participate in its evolution over time through tending it. Furthermore, some “white space” can always be left intentionally for the future residents to work on latter on. Despite the existing constraint of unknown HDB residents, HDB and design professionals can work together to make some degree of community participation possible.

## 5.3. Motivating civic participation

In order to attract participants for the participatory activities mentioned in 4.3 and 4.4, vouchers and meals were promised as incentives. P!D, which has accumulated many experiences in participatory design over the past years, considers incentives as necessary to encourage participation in Singapore, where there lacks a culture of civic participation. It is unknown

whether it is truly the case that residents would not actively participate in any design and planning related activity associated with their living environment unless some reward is guaranteed. However, the idea that some reward is necessary perhaps reflects some level of indifference to civic participation.

Admittedly, some form of encouragement is always necessary before a culture of citizen participation is formed. The question is whether appealing to direct benefits, such as vouchers and food, is an appropriate form of encouragement. Would it eventually lead to a misconception that civic participation is merely something external to their everyday life and therefore must be incentivized by some form of reward? How to motivate people to actively participate in public affairs, including the design of their everyday neighborhood landscape, is a challenging yet important issue that requires much more research and action.

Nevertheless, many of the HDB residents involved in our research project were inspired by the idea of participatory design. After each Co-Creation Workshop held by the design firm and P!D, the participants were asked to provide their feedback on the workshop activity and their views on participatory design in Singapore. The participants were presented the four statements in Box 2 and asked their degree of agreement on each. In general, they were mostly positive about the participatory experience and believed that it is important for residents to be involved in the decision-making process of neighbourhood improvement projects. However, participants were mixed in their sentiments towards whether their inputs would make a real impact. Some felt that agencies and professionals are better equipped to make decisions on the planning and design of the neighbourhood, while others think that it is necessary for participatory efforts to be held at a bigger scale and their inputs should be taken more seriously. Many agreed that the state of neighbourhood should be a shared responsibility between the public agencies and residents.

#### **Box 2**

1. I feel that it is important for me to be involved and participate in neighbourhood improvement projects.
2. We should leave neighbourhood improvements to the government agencies and town councils because it is their responsibility and not mine.
3. I believe that this workshop/project will not lead to improvements for future HDB developments.
4. As a resident, I would not want the right to have a say in the decision making process of any physical improvement.

In general, after the participatory activity, the participants seem to gain new insights and hold more balanced perspectives on the issues raised. They better appreciated the multiple challenges involved in the decision-making for the neighbourhood and understood that there can be different and even opposing views. Apart from having their opinions heard, through the Co-Creation Workshops the participants were also educated on the design process; the importance of neighbourhood landscape; and the diversity of needs, interests, and perspectives within a community.

## 6. Concluding Remarks

In this paper we have presented the participatory process of a research project that aims to develop a design framework for socio-ecologically wise neighborhood landscapes in Singapore's public housing estates. Instead of confining this research project within the academia to the researchers ourselves, we strive to make the research itself as participatory as possible to involve as many relevant stakeholders as possible. We note that participatory design itself is not necessarily a focus but only one of the many components of our research project, but we use this research project as an opportunity to explore participatory design in Singapore, as participatory design has attracted increasing interests in NGOs/NPOs, government agencies, and academics.

With changing demographics, higher expectation from the more educated populace, and the reach and use of social media, we expect that more attention would be paid to community engagement in the planning and design of public spaces. Incorporating some degree of participatory design into HDB neighbourhood landscape is useful to engender the benefits of community engagement arising from greater use and ownership of such important spaces.

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# Life Above The Market: Unpacking the Community Network of the Mixed-use Jianguo Market in Taichung

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## Abstract

Located near the Taichung Railway Station, Jianguo Market was developed into a mixed-use market in 1972, with rental housing on top of about 500 stalls. The market will be relocated in September 2016, with all stalls accommodated in the new market. But no more rental housing will be provided. The market's mixed-use, live/stall spatial arrangement that allowed for the formation of a special community over the years. Both as stall keepers and residents, the market community combined dwelling and working in the same place. Their lives were interconnected through mutual care, au pair, festivals and a variety of practices of and through the market.

Therefore, this study would like to explore the following questions: What is the history background of the live/stall special arrangement? How do people form a community through a mixed-use market? How do their lives interact with one another? With a better understanding of the community dynamics as resulting from the mixed-use, live/stall spatial arrangement, it is believed that a more caring planning can be achieved to support a community network oriented in the marketplace.

Adopting field research and participatory observation, this research will analyze the particular spatial patterns accumulated in the market, especially regarding social and public space. In-depth interviews are also taken to complement the research to understand people's life experiences and community relations with their dual role as both stall keepers and residents. These insights will shed light on the origin and evolution of the mixed-use, live/stall market and perhaps its future in land-use planning.

**Keywords:** traditional market, community network, mixed-use market, live/stall

## Introduction

Taichung Jianguo Market, located at the intersection of Jianguo road and Bade street, was moved to the other side of the railway in late September 2016. Even after several years of struggle with the municipal government, nearly 2000 stall keepers of 700 stalls and 176 families still have to reorganize everything and take efforts to face the truth that they must leave and restart. As the largest traditional market in Taichung, Jianguo Market was the food source of many government branches, retail markets and night markets in the middle of Taiwan. It was also where many people get used to purchasing household food ingredients.

Over the past forty years, many stall keepers have worked from young to old, passing the career to their children. It seems ordinary that stall keepers were just busy at the same thing day after day. But in fact, there are several major events behind the seemingly abiding market life. In chronological order are the following: part of illegal stalls and houses were removed and resettled into Jianguo Market in 1970s; part of stalls were moved out after the 921 Earthquake for safety sake; in 2016, all stalls were relocated at the new Jianguo Market but no more rental housing were provided.

In the 1950s, many immigrants from rural areas to Taichung cities failed to settle down in an appropriate living environment, thus they built simple and temporary cabins on the bank of Green Stream and Willow River. However, these stalls and houses were regarded as “illegal construction” in law by Taichung City Government (TCG) who consequently removed and resettled part of them into Jianguo Market, which started operation since 1972.

The TCG initially planned to evacuate all the stalls and close down the market after the 921 earthquake, which caused damage to some parts of the market building. Under the strong resistance of the stall keepers and residents, the government compromised to restore the impaired building in the original place. However, fish and meat stalls on the second floor were relocated to the Gancheng Temporary Jianguo Market about two-hundred meters away. From then on, the Jianguo Market divided into two growing further apart.

As the recent profound change, the relocation of Jianguo Market in 2016 undoubtedly brought about a re-establishment of the order of stalls and the relationships among the community network. On the eve of relocation, several photographers, students and “children of Jianguo Market” took the initiative to document the market culture in the

form of photography and documentary. Through the action they built a closer relationship with stall keepers and residents, hence some unprecedented activities and events were also occurring at the moment.

Rather than coping with all the abundant aspects of Jianguo Market, this study would focus on the live/stall spatial arrangement, thus exploring the following questions: What is the historical background of the live/stall special arrangement? How do people form a community through a mixed-use market? How do their lives interact with one another? With a better understanding of the community dynamics as resulting from the mixed-use, live/stall spatial arrangement, it is believed that a more caring planning can be achieved to support a community network oriented in the marketplace.

### **Research Methods**

Adopting field research and participatory observation, this research analyze the particular spatial patterns accumulated in the market, especially regarding social and public space. In-depth interviews are also taken to complement the research to understand people's life experiences and community relations with their dual role as both stall keepers and residents. The fieldwork is conducted during September 2015 to August 2016. These insights will shed light on the origin and evolution of the mixed-use, live/stall market and perhaps its future in land-use planning.

### **the Historical Context of Live/Stall Arrangement in Jianguo Market**

In most occasions, markets appear up in the area with dense population. Under the historical context of Taiwan, the market development also followed the trend of population change. In the period of Japanese rule, the Taichung Market (later the First Market), the Second Market and the Third Market were all established near the railway station, where many people gathered and dwelled. (Chung, 2006)

When the government of the Republic of China retreated to Taiwan, a large number of immigrants were also brought in. About 200,000 of them came to Taichung, nevertheless, the government was unable to provide adequate housing. Some of these immigrants set up "diao jiao lou(吊腳樓)" on the banks of the Green River and Willow River. In particular, the Green River was near the railway station and the First Market, hence both sides of the Green River became a prime commercial area and attracted lots of stalls lining up along the river. (Liu, 2011)

However, under the economic growth, the municipal government were

correspondingly motivated to pursue the order and the appearance of the city. The informal housing sector, which had been tolerated during the 1950s, was crowned the name of “illegal construction”. According to the “the Disposal Regulation of Previous Illegal Construction(舊有違章建築處理辦法),” declared by the Ministry of the Interior in 1963, the TCG announced that as long as there were compensation and resettlement measures, those “illegal construction” could be positively demolished. (Cheng, 2009) The Green River, near the railway station and the First Market, often appeared as an image of dirty and danger in the newspaper, hence it also became the prime target with which the government wished to deal.

The construction of infrastructures such as roads and river remediation brought about the demolition of those illegal stalls and houses. Therefore, the TCG established the Jianguo Market, arranging rental housing in the third and fourth floors and the stalls in the first and second one. In 1968, the TCG decided to adopt the “build before demolish” approach, then it embarked on the construction with demanding the stall keepers and residents to pay off the nine-year-and-ten-month rental expense in advance as part of the construction cost.

In October 1968, *the Economic Daily News* reported the official position stated by Lin, the Commissioner of Economic Affairs Bureau of the TCG:

These two rivers flowing through the urban areas are crowded with illegal stalls and houses. For the safety sake and wishes to let them make a living, Jianguo Market must be constructed as soon as possible<sup>1</sup>.

Three years later, *the United Daily News* reported the delayed project and pointed out:

The purpose of the city government is to solve the problem of illegal construction and to accommodate those people whose houses or stalls are demolished consequently. The priority has been limited to those who lived in Jianguo Road, Nanjing Road , both sides of Green River and Willow River<sup>2</sup>.

It is clear that the TCG regarded the Jianguo Market as a solution to accommodate those in need. The mixed-use of stalls and rental housing laid the foundations for the live/stall spatial arrangement.

However, compared to the stalls, the occupancy rate of rental housing was not ideal. The city government conducted four successive leasing registration in 1968 and 1969,

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<sup>1</sup> 1968, October 22, *the Economic Daily News*, the 7th section

<sup>2</sup> 1971, October 6, *the United Daily News*, the 6th section

with almost all the stalls occupied but eighty-seven (almost 1/3) houses left over. It seems not clear how the city government dealt with the remaining ones but I have informed what the situation was like at that time. According to the informant, Lin, the TCG was unable to effectively manage the rental housing with low occupancy rate in the beginning years. Hence some “outsiders” just “occupied” at the discretion and equipped the houses with doors, windows, and interiors. Similarly, *the United Daily News* reported that the municipal government provided no delay for rental expenses and put a ban on transferring the rented houses to others. However, it was difficult to prohibit the above acts in fact<sup>3</sup>. Furthermore, Lin indicated that most residents including herself could not pay off a nine-year-and-ten-month rental expense within the required time.

One could not simultaneously rent both of a stall and a house due to regulations, then some stall keepers without their own houses directly lived in their stores or rent houses in the nearby military dependents' village. When the business became stable and brought in enough income, these stall keepers privately found ways to buy the right of access of the rental housing from the original residents. Therefore, residents and stall keepers gradually overlapped. With the support of the low-rent housing, Jianguo Market helped many people to establish families and careers. However, the low-rent housing which was average only 35 square meters seemed cramped when their children grew up. Hence, most stall keepers chose to move away and bought their own when family economic conditions turned better.

After the 921 earthquake, with worries about the possibility of demolition of the Jianguo Market, some people moved out but still kept the rental houses, which were a temporary lodging when they were too busy to go home. But in fact, the actual number of residents gradually reduced. Moreover, the TCG had taken negative ways of management all along, without formally leasing the empty rental houses to new residents. According to the informant Yue-Xia, only about 40 houses were actually dwelled in on the eve of relocation.

Because of the redevelopment of the old city center and the “Urban Renewal Project of Taichung Train Station and the Surrounding Area” programmed by the TCG, Jianguo Market, forced to give way to the future parking lot and the transfer station, was planned to relocated to the other side of the railway. In the public information on the website of Economic Development Bureau, an open document titled “the Reconstruction of Jianguo Market” indicated that the new market will serve as a driving force for the redevelopment of the surrounding area.

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<sup>3</sup> 1971, October 6, *the United Daily News*, the 6th section

Through new Jianguo Market as a pioneer in future major construction projects, it can improve the urban landscape and enhance the living quality in the Eastern District....<sup>4</sup>

However, this document did not mention the original live/stall arrangement at all, and even the slightest trace could not be found in the design of the new market.

*The Records of the 201th Taichung City Council* in March 2015 indicated the new instruction shows:

Since residents living on the third and fourth floors were not able to be rehoused due to the previous incomplete ordinance, the City Government approved a new law to allow residents to obtain resettlement subsidy.<sup>5</sup>

The “previous incomplete ordinance” refers to *Article 16 of Retail Market Management Act* modified in 1997, which stipulates that the public market “shall not make all or part of the stalls available for other purposes or residential use.”<sup>6</sup> As the first to-be-relocated public market with live/stall arrangement in Taichung, Jianguo Market of this case prompted the TCG to amend the “Regulations on Resettlement Subsidy Distribution of Taichung Public Retail Market under Reconstruction” and added the Article 7:

Tenants whose public retail market renting license registered for residential use may be issued the resettlement Subsidy for NT\$ 400,000 when the Economic Development Bureau plans to reconstruction public retail markets.<sup>7</sup>

The TCG rationalized its act out of the excuse of the previous incomplete ordinance and explained why rental housing disappeared in new Jianguo Market. In addition, the TCG employed resettlement subsidy as a means of compensation, thus it indicated that other retail market with live/stall arrangement would face the same fate. However, when taking a closer look at *Retail Market Management Act*, one would find that the prohibition seems against the unauthorized transformation of stall use. Inconsistently, the Jianguo Market’s rental housing was under the TCG’s plan. Furthermore, there seems no prohibition of live/stall arrangement within public markets both in *Land Law* and *Urban Planning Law*. It is worthy of further

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<sup>4</sup> 2016, September, the Reconstruction of Jianguo Market(建國市場遷建工程說明), <http://www.economic.taichung.gov.tw/lp.asp?CtNode=26446&CtUnit=14174&BaseDSD=7&mp=1110>  
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<sup>5</sup> 2015, March, *The Records of the 201th Taichung City Council*, the Taichung City Government

<sup>6</sup> Laws & Regulations Database of the Republic of China, <http://law.moj.gov.tw/>

<sup>7</sup> Laws & Regulations Database of the Republic of China, <http://law.moj.gov.tw/>

investigation what the actual process to exclude rental housing in new Jianguo Market.

It seems to be that residents' ineffective use of rental housing and the TCG's long-term negative attitudes both counted. In addition, new Jianguo Market's role maybe no longer responsible for resettling people whose stalls or houses are demolished due to illegal status as in the 1960s. It appears to be expected to drive tourism and regional development. But some of my assumptions lacks actual data to support and maybe the future research could go further and deeper.

### **Into the Market: What is the Community Network like**

#### **I. The Previous Research**

A market is a place where the goods gather and spread out, and all the process are woven by wholesalers, stall keepers, and vendors. Compared to supermarket and hypermarket, traditional market more relies on those people to incubate and maintain it. Hence, despite the nature of market closely related to business, diverse and rich community network emerge in traditional market.

Even though many types of research focus on the economic functions, there are also some scholars concerned about the networks and relationships in the market. Shepherd, an anthropologist, takes the case of the Eastern Market in Washington DC. (Watson, 2009) He observes that the senior vendors identify themselves as a community and have a tacit understanding of certain norms, hence it causes tensions between the existing vendors and the newcomers. The community takes gossip and story-telling between vendors as a form of shaping community norms. For example, vendors who only care about making money will be gossiped and complained by others who value "moral economy."

A market is not just a commercial space; it promotes people's face-to-face interaction, thus it has a role of public space. Sophie Watson, who researches the markets in the UK, argues that previous researchers tend to focus on market's economic role while ignoring its potential as a public space. (Watson, 2009) She points out that the transaction and market's openness of space create encounters and links between people, especially for the elderly and other marginalized groups due to the characteristics of social inclusion in markets.

Crawford pays attention to the new type of garage sales and street vendors in the

United States in the 1990s.(Crawford, 2009) He remarks that garage spaces, originally private spaces, are converted into temporary public spaces by people staying and gathering, otherwise they are just walking by.

These researchers point out several important characteristics of markets. First, vendors and stall keepers will agglomerate or divide into different communities depending on the order of arrival, seniority, and race, etc. Second, a market basically welcomes whoever comes and does the shopping; it is relatively open and not excluding marginal groups outside, thus creating the possibility of encountering and interacting.

## **II. Community Network within the Live/Stall Arrangement**

Naturally, markets of different regions also have their own characteristics owing to unique local cultures, social and economic conditions. In terms of community network in the Jianguo Market, Liu (2011) analyzes that “money” weaves the networks of vendors, customers, neighbors, and gods. When exchanging commodity, joining the loan club, and receiving free entertainment, through “money” the stall keepers establish a trust relationship with one another. In addition, money turns to be an achievement symbol of work and life for those stall keepers.

The Jianguo Market was half-wholesale. Most of the vendors not just sold goods to the family consumers but also cooperated with wholesalers, restaurants, and vendors of night markets, therefore, a huge amount of money circulated every day. It seems accurate that Liu catches the role of “money” in the community network.

However, it was likely that money was not the only media linking all the community network. After all, the Jianguo Market was also home to many stall keepers and residents. In addition to the residents of the third and fourth floors, some stall keepers lived in the second-floor stores, which were gradually declining and finally closed down or transferred as warehouses after the 921 earthquake. Some impoverished people even dwelled in the basement designed for the parking in the beginning years.

Compared to the relationships which were linked through money circulation, the live/stall arrangement enriched the community network in the form of neighborhood. Lin and Huang, two senior female stall keepers, told me that people choosing to live above the market were mostly impoverished immigrants from other counties, and most of them had no houses of their own in Taichung. Those immigrants established families and careers in the same market, living and working in the neighborhood, hence they created rich community network.

About forty years ago, Lin and her parents moved from Nantou to Taichung, and they rented houses on the bank of the Green River. When the Jianguo Market was completed and started operation, they caught the opportunity to settle down in the market.

Our neighbors were also immigrants from the countryside. We were all friendly to communicate. People from the countryside were easy to talk with. But the countrymen were easily bullied and cheated, so they often made sworn brothers. (2016/5/13)

Lin recalled that the rental houses provided by the TCG were just semi-finished, even without doors. Therefore the neighbors cooperated to raise funds in order to hire carpenters and electricians to furnish the houses.

Lee family had lived in the Jianguo market for twenty years. About ten years ago they moved out of the rental houses for security considerations. Lee said that if not the worsening public security at that time, they are reluctant to leave.

The advantage of living above the market was convenience. My wife and I just each held a child in arms, we could go downstairs and start the business. When we were too busy to take care of the children we asked the neighbors for help. We were like a big family. And your neighbors became your most loyal regular customers. (2016/4/22)

Even after moving away, Lee did not sublet the house to others. Sometimes he would go back upstairs to stay overnight if necessary.

Chang, now working in the chicken stall, grew up in Jianguo Market. Chang and his peers of the same age regarded the whole market as their playground.

We were usually playing in the space between staircases and houses. We were so naughty that we did everything you can imagine. Water fight, baseball, throwing things from the upstairs, and even firecrackers. We would make lanterns from fruits in the Lantern Festival. I think that is a unique game of the children in markets. We always acquired necessary materials locally. (2016/4/28)

Sometimes the children acted so naughty that other seniors would tell on them to their parents. Most of the children's parents were too busy at the stalls to take care of them, however, they were under the care and supervision of other seniors.

Ying closed her bun store after the 921 earthquake, then she received daily orders of a

certain restaurant to process bean sprouts to earn a little living expense. She often worked comfortably in the corridors near her store with the radio on. Since Ying spent most of the time during the daytime in Jianguo Market, her old friends and neighbors could still easily come to visit her.

Last month, one of my close neighbors moved away. If she stayed, she comes to chat with me. But when the old market is demolished and I move to the new one, we may no longer meet with each other again. (2016/5/13)

### **Conclusion**

In the 1960s, the TCG designed the live/stall arrangement in Jianguo Market in order to accommodate the people whose illegal stalls and houses were demolished. The formation of the market community was not in the planning of the TCG, but the form of live/stall arrangement did help to create rich community network. Although the tenants of rental housing and stall keepers should be separated, it gradually evolved into the situations that stall keepers were mostly residents as well. These people lived and worked in the same market, sharing the similar experience and feelings, thus they identify themselves as “children of Jianguo Market.” Their lives were interconnected through mutual care, au pair, festivals and a variety of practices of and through the market.

Many Taichung people know the existence of Jianguo market and have some fragments of memories and experience there, but few of their memories are spanning over forty years from its beginning to relocation. However, stall keepers and residents who have practiced daily market works and regarded the market as their home for such a long time, can still recount changes of the years. They do string these scattered and rarely recorded memories together.

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# Research on Community Development in Changsha: A Case Study of Sharing Home Community Development Center in Changsha

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## Abstract

It can be found that the development of Chinese non-government organization (NGO) is still in its infancy comparing with the development of NGO of the western countries. With the transformation of government functions in recent years, the development of NPO meets new opportunities and it is flourishing in communities and cities. This paper takes the practice in Fengquan Gujing Community and Wangfujing Park shared home, the Urban Sociology Class, the Children Participation Workshop and the community construction competition co-organized by Sharing Home Community Development Center(Sharing Home for short) and universities as examples, analyzes the role of each participant and discusses the model for social organization to participate in community development, and provide beneficial reference and thinking for the follow-up community construction.

Keywords: Social organization, Community Development, Changsha, Sharing Home Community Development Center

## 1. Introduction

With the transition from incremental planning to inventory planning of Chinese inland cities, the community, as the most basic unit of social organisms, its construction receives much attention. Since the reform and opening up, China's community development has gained some achievements, however, the lack of community vitality, decreasing of communication between Community residents and the sense of belonging and responsibility, lacking the concept of autonomy and participation etc. are still prevalent. How to motivate the residents to participate in the community, increase vitality and the sense of belonging of the

community while creating a better space environment has become an important issue of concern in various fields.

The method of Community Development---Emphasizing the core of human being, promoting the community's material space environment and people's active concern, participating in community affairs, reshaping community's "community consciousness", thus reaching the goal of community development---is used by Western countries alleviate the above problems effectively. Since 1951, the United Nations began to promote "community building", the United States, Japan, Britain, Australia and other countries have tried and achieved some success. Since 1960s, the US community development companies have risen and intervened in the local community to committed to creating a harmonious community atmosphere, to giving the rights of community residents and to achieving sustainable development of the community. Japanese residents' spontaneous volunteer activities also have begun active since the "tsumago-juku" historic district preservation movement in the 1960s. In 1990s, the emerging of a large number of NPOS had played an important role in attracting and retaining talents and relieving the continuous decline of local economy when Japan suffered from the an aging population, community exchanges reduced, local urban hollowing invasion caused by the rapid development of urbanization. At present, Japan has formed a community building system that community residents are the main body in community development. China's Taiwan has also taken a similar approach to create community, with the support of the executive authorities and various non-governmental organizations, Baimi and Taumi community have been built successfully. In China's inland areas, community construction began in the nineteen-ninties, however, it was not until 2010 community building began to flourish as early community construction were main focus on physical space environment construction. Thus, the related theories and practice are still in the exploratory stage. This paper takes the practice in Fengquan Gujing Community and Wangfujing Park shared home, the Urban Sociology Class, the Children Participation Workshop and the community construction competition co-organized by Sharing Home Community Development Center(Sharing Home for short) and universities as examples, analyzes the role of each participant and discusses the model for social organization to participate in community development, and provide beneficial reference and thinking for the follow-up community construction.

## **2 Overall Situation of Changsha Community Developments**

In 2011, the Central Government promulgated the "Opinions on Strengthening and Innovating Social Management, stressed the needs to innovate grass-roots social management, strengthen community autonomy, set a focus on community planning and construction.

Changsha City has put forward the slogan of creating a child-friendly city in 2050 and has launched “community micro-transformation competition”, “Beautiful Rural Planning and Design Competition” and other activities to attracting parties to participate in community building. At present, the initial results of these activities have been presented, but not yet implemented.

At the same time, the social organizations concerning about the community building are also developed rapidly. According to statistics, up to the October 2016, there are 210 social organizations participate in community building. We may divide them to two types according to its business(Table1): one is the organization who provides single social services(Type 1 for short), the other is the organization who provides integrated social services (hereinafter referred to as type 2). Type 1 aims at solving single problem such as environmental protection, vulnerable groups care, social organization, its form is mainly carrying out activities, publicity and education, the establishment of elderly care centers and so on. Type 2 generally contains two or more single society Organization functions, a small number of social organizations will also assume responsibility for assisting the government to build the community. Among them, Sharing Home Community Development Center of Changsha is the most prominent. Since its inception in 2011, the sharing home has established 36 rooms, the Bank of China • sharing home cafe, Wangfujing Park sharing home, 24-hour public library study of Fengquan and other physical space points; it also organized a series of Community activities to stimulate community vitality and organize residents to self-management, and played a great role in promoting community development.

Table 1. Classification and Service Scope of Social Organizations in Changsha (Data source: Sharing Home)

NO.	Types	Number	Service Scope	
1	Environmental protection	4	Environmental management, environmental knowledge popularization; environmental protection activities planning; environmental assessment and consulting	
2	Care for vulnerable groups	101	Providing services for vulnerable groups such as children, elderly, migrants etc.	
3	Psychological category	12	Providing psychological counseling and help for young people, the elderly, community residents etc.,building the relevant platform	
4	Education	21	Publicizing and organizing activities related to disaster prevention and mitigation, anti-narcotics legal publicity, youth and nature education, etc.	
	among	Legal education	4	Providing the necessary social services for anti-drug, marriage mediation and other publicity
	Cultural education	13	Promotion Chinese traditional culture, knowledge of traditional Chinese medicine and children's natural education and other related knowledge	
	Security education	4	To carry out activities related to disaster prevention and mitigation	
5	Sports activities	26	Organization of public cultural performances	

6	Social organization incubation	13	Nurture and train community volunteers, organize related community activities, set up community workers' continuing education platform, and evaluate social organizations, etc.
7	Community development	3	Attention to the relationship between community members, families, urban and rural residents
8	Information services	1	Provide service information related to Old-age service, public welfare activities; communication business consulting and promotion
9	Disaster relief	2	provide emergency social assistance for disasters such as natural disasters and car accidents
10	Medical hygiene	1	Community health services
11	Charitable	1	Charity
12	Miscellaneous	25	Assisting vulnerable groups; advising on community services; nurturing social organizations; participating in community space and cultural development, etc.
13	Total	210	/

### **3 Practices of Sharing Home' Community Building**

#### **3.1 Cooperation with Grass-roots Government**

Community residents are strongly dependent on the government on account of the long-run top-down administrative management. How to mobilize their enthusiasm and activity to participate in public affairs and democratic management becomes the keypoint of grass-roots community governance. In order to promote their own development, the leader of Fengquan Furui community<sup>3)</sup> try to establish Garden Council, District Administrative Committee and other innovative management agencies to keep good relationship between residents of the community. In order to improve the public space environment, cartoons wall is drawn at the same time (Figure 1). Since 2015, the no-government organization--- Sharing Home has settled into community and provide new ideas on community construction. By cooperating with community committees, sharing home try a new construction model named “Three-body and one interaction”, that is, Community building needs four parties' joint participation, the government is build carrier, residents, volunteers are the build body, sharing home is the build conductor, and the social capital provides mutual aid, interaction during the community development.



Figure 1. Fengquan Furui community comic wall(photo source: taken by author)

### 3.1.1 Hardware construction --- Fengquan study

Culture is the engine of social change, but also the adhesives of social cohesion. To create a good community cultural atmosphere, attract residents to participate and cultivate community service volunteers to build sustainable volunteer system(Figure 2), sharing home set up the Fengquan Study at first.



Figure 2. Working pattern of sharing home(Picture source: drawn by author)

The 24-hour public library, which is made up of the storage room of police room, has a total area of 80 square meters. It is divided into main reading area, parent-child reading area, calligraphy room and children's hall (Figure 3). It is the first public welfare co-built by government, social organizations, enterprises, residents and other parties. Residents is the main force, and all of the hardware and software equipment are built by community and society together. Now, the facilities of the study have been gradually improved. It becomes the main host of various activities of the community, and is selected as one of the most beautiful bookstores of Changsha subway circle.

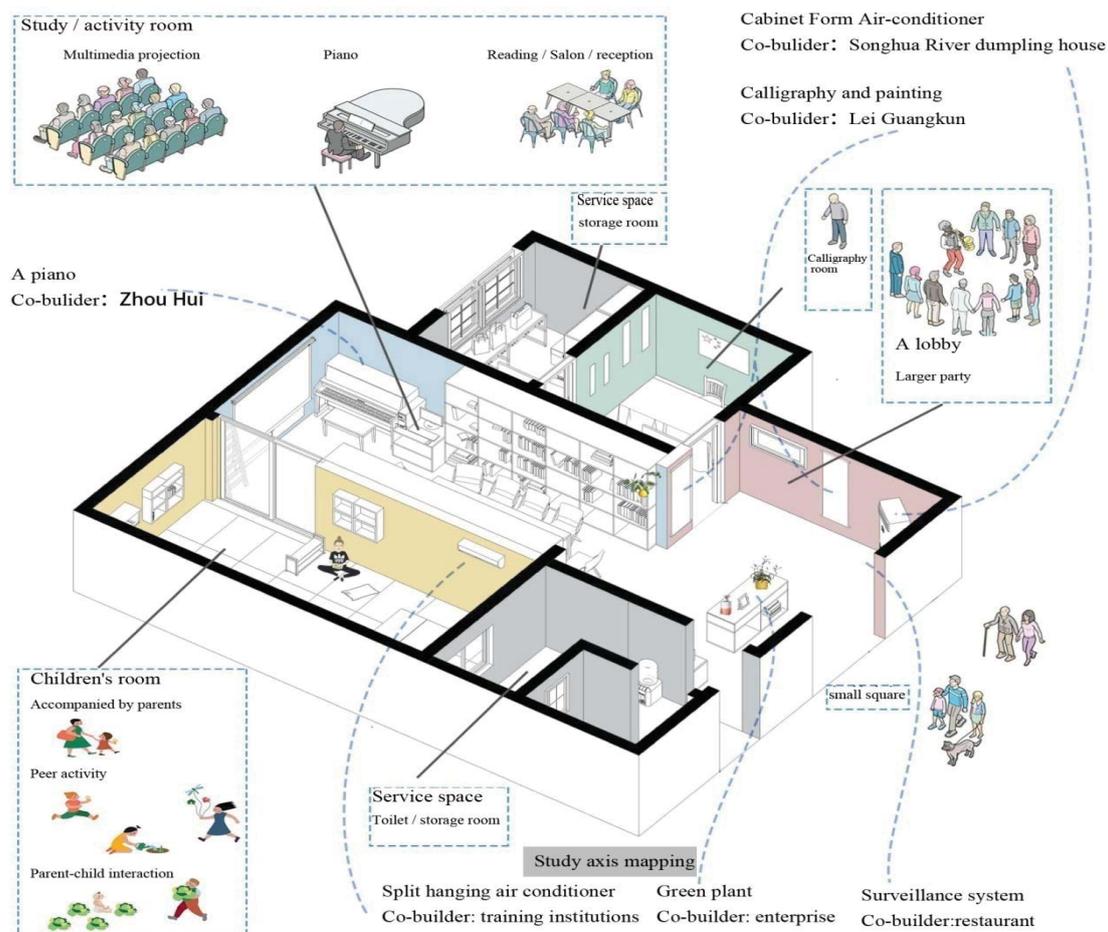


Figure. 3 Analysis of Study space (Photo source: Huang Huiru, Chen Yamei etc. Shen Yao (guidance), 2016. Planting community sharing center -- A Research Report on the construction method and organization mode of two yuan community based on NGO)

### 3.1.2 Social integration --- Fengquan study activities

Past practice of community building shows that "people" is the core of community's sustainable development. Attracting residents' participation, mobilizing and enhancing the community's sense of belonging and responsibility is the main purpose of community development. Since its inception, more than a dozen regular activities covering culture, handmade creation, entertainment and other aspects have been carried out in Fengquan Study (Table 2, Figure 4), which enrich the lives of community residents greatly.

Table 2. Classification table of activities held in Fengquan study (Data source: Sharing Home)

NO.	Type of Activities	Number of activities	Number of participants (person)
1	Parent - child interaction	4	238
2	Culture education	30	381

3	Preparations for small migratory birds	6	8172
4	Community interaction	3	653
5	Volunteer interaction	1	30

Note: many social people also participate in Small numbers of migratory bird activities, community interaction, so the number is large.

Fengquan Furui community, a very old community, attracts a large number of migrants to live for its low rents, including migrant children. It is difficult for them to adjust themselves to urban life quickly. In response to this reality, the sharing home has developed migrants children inclusion program and started on May 30, 2016. By selling Dragon Boat Festival handmade dumplings to obtain funds, and help small migratory birds accommodate to urban life faster (Figure 5).

Figure 4. Photos of activities held in Fengquan study(Photo source: Sharing Home

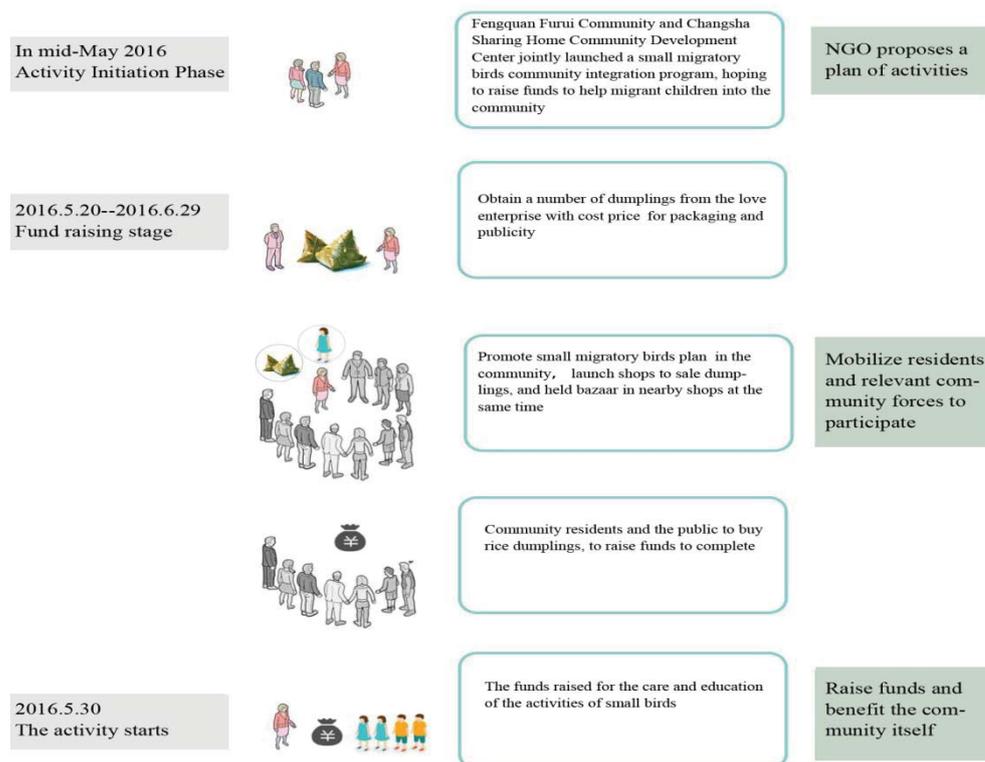


Figure 5. Flow of Migratory Migratory Children Integration Program(Photo source: Huang Huiru, Chen Yamei etc. Shen Yao (guidance) , 2016. Planting community sharing center -- A Research Report on the construction method and organization mode of two yuan community community based on NGO)

### 3.1.3 Attracting attention of universities

The establishment of the study also attracted the eyes of some universities in Changsha. In April 2016, volunteers from Central South University, Hunan University and Hunan Normal University took part in a one-month weekend public welfare classroom. What's more, many scholars take here as the site for Children's Painting Work shop. Using co-built model, impression test, hand-drawn plan to lead the children to feel the community, design their own home(Figure 6). Some urban sociology classroom teaching are also held in the study (Figure 7).



Figure 6. Children's painting work shop activities in Fengquan study(Photo source: taken by author)



Figure 7. Urban Sociology Class from School of Architecture, Hunan University School  
 (Photo source: taken by author)

Now, the study has formed a communal communist party member shifts system, the community residents organize and plan activities spontaneously. The first set of community postcards, drawn with the participation of volunteers and residents, has had a great impact on the community.

### 3.2 Cooperation with Social Capital---Park sharing home

In addition to community building practices in community, sharing home is also trying to cooperate with business organizations actively. Park sharing home is co-sponsored by Wangfujing department Store and sharing home. Using the conceptive cooperation model, Wangfujing Department Store provided site,family co-founders and sharing home volunteers jointly operation. Park sharing home provides service for 0-12 years old children, aiming at linking children, to establish a family culture, parenting, family education exchange platform.

From December 12, 2015 to October 29, 2016, 44 activities like handcrafting, cultural and educational activities, parent-child interaction are held there (Figure8). There are 399 family participated in, among these, 82 family are repeatedly involved.

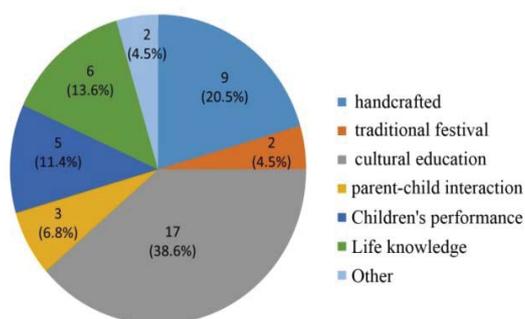


Figure 8. Types of activities held in Park sharing home

### 3.3 Nurturing community volunteers --- HCD contest

Community development requires not only the participating of community residents, but also attracting more volunteers to pay attention to and participate in community building. Therefore, sharing home host the Home Community Development Competition(HCD for short),and carry out Aoki 9 + youth charity training camp for students who are interested in public welfare projects to let them know how to making and implement their plans(each project should be implemented in community for more than 3 months). According to statistics, more than 1,000 students from 6 universities in Changsha participated in the first HCD contest in 2015, and 65 entries were handed in(40 projects were carried out at last).

Diverse types of projects, diverse clientele (Table 4), wide range of radiation is the characteristic of HCD contest. It covers 21 communities, space and schools such as Fengquan Furui Community, Fuyaping Community, Chaozong Street Primary School and so on. More than 1,500 community residents are involved. Eventually there are 12 entries to the final, the results will be announced in November this year.

Table 4. HCD public service competition entries classification table(N=65)(Data source: Sharing Home)

No.	Types	Number	No.	Types	Number
1	Traditional handmade	4	5	cultural transmission	5
2	Environmental protection class	9	6	Agriculture	3
3	Education	22	7	Diet health	7
4	Activity class in the elderly	10	8	Other classes	5

### 3.4 Other related construction practices

Sharing Home also concerned about the development of rural communities. They once tried to build organic farm with farmers together. They taught farmers the knowledge of planting organic food ,and helped farmers find ways of selling products, so that farmers could be rich without transfer of land. Besides, the existing urban resources were used to lead the urban children to participate in agricultural activities, carry out nature education .They wanted to establish a new mechanism for urban-rural interaction.

### 3.5 Feedback of Community Development Practice

At present, the study has become an important place for residents' gathering and children's daily activities. Activities held in the study have also been widely recognized by the residents.

More than 90% of the residents surveyed will come to study once a week. Closing to home, rich activities have become the reason why they come here. The repetition rate of participating activities for resident is quite high, thus interaction of residents become frequency.

At the same time, the study also provide more learning opportunities and activities place for migrant children, which have enriched their after-school life and promoted their integration of community life.

As the Park sharing home, by analyzing the 182 questionnaires collected, we can find that satisfaction of volunteer service and activities has reached more than 90% (Fig. 9/10). Many respondents also made comments and suggestions on the types and forms of activities etc. At the same time, more than 95% of the respondents expressed their willingness to join the Park co-building process.

Besides, HCD contest not only gives college students a better understanding about public welfare and the needs of community residents by specific practice, but also helps Home to find real community volunteers and successors of community service work. At present, the second HCD contest has also been launched.

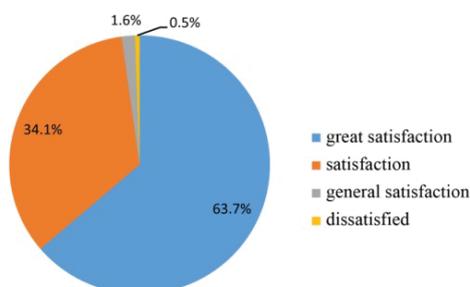


Figure 9. Satisfaction of participants with volunteer service (N = 182)(Data source:Sharing Home)

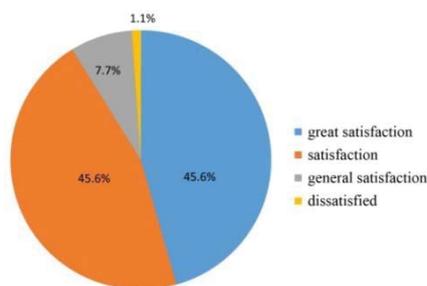


Figure 10. Satisfaction of participants with activities (N = 182) (Data source:Sharing Home)

## **4 Analysis of Community Development Mode**

### **4.1 Current Problems in Sharing Home's development**

There is some predicament in the development of Home in spite of those successful attempts that Home has created. In recent years, the state's support and encouragement is objectively conducive to the development of social organizations. However, the lack of stable funds, professionals and the unconstrained relationship with government has always restricted the development of Home.

### **4.2 Analysis of the main participants**

In the process of community development, the government, residents, Sharing Home and social capital such as enterprises and universities etc. have played an important role.

Government: the main decision makers, the leader of guider of community development. Government plays an important role in community development when Chinese residents' participation consciousness is weak and the participation way is little.

Sharing Home: the conductor of community development, bridge of social relations. In the process of cooperation with the government and commercial organizations, the Sharing Home always plays the role of co-constructing conductor.

Home can establish sustainable social volunteer service system by using the its own extensive social resources by calling for residents, the public to participate in all kinds of activities and building the space.

Community residents: direct stakeholder of community development. They are not only the community construction planners, implementers, but also the direct beneficiaries of community building.

Social capital: the interest entities involved in community building, plays an important role in providing supplementary funds, personnel, resources.

The structure of each participating subject is shown below (Figure 11):

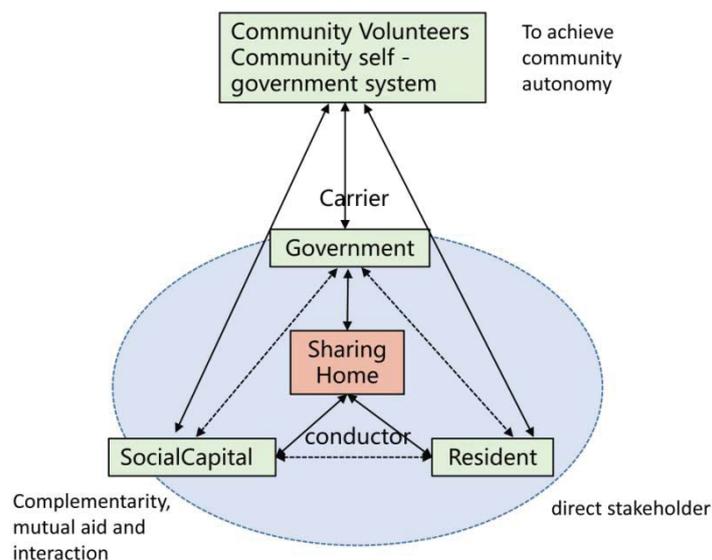


Figure 11. community to create the main structure of the relationship between the various participants

Picture source: drawn by author

### 4.3 Participation Mode Summary

Current community building model in Changsha is an community building model that takes build a space as a carrier, no matter cooperating with the grass-roots government or business entities. The government or commercial organizations provide physical space or idle buildings, operated by NGO, motivate the residents and volunteers participating into the construction, Then take this space as carrier, cultivate residents, and carry out the transformation of space and community self update from the bottom up.

### 5 Conclusions and Prospects

Analysis of the role of each participant on the basis of the introduction of the community building practice carried out by Home in Changsha City, this paper discusses the mode of community construction with social organization, grass-roots government, commercial capital and universities. This model is a relatively effective way of coalition government, social capital and residents' participation in the current stage of domestic community construction, which is still in its infancy and the development of social organization is not mature. But the model is currently to do experiments only a single community in Changsha City, its extension can be further explored. In addition, in view of Home determined at the same time to carry out culture, education, community, rural construction characteristics, Whether it is possible to try to integrate the resources of the existing urban and rural communities through resource, personnel and technology exchange, realize the sharing of

urban and rural resources, and promote the interactive development of urban and rural areas, also worth in-depth exploration and reflection.

**Notes:**

- 1) In China's interior regions, community construction has the same meaning with community development in theory.
- 2) In the comprehensive social organizations, Changsha Sharing Home Community Development Center and Changsha Yuhua District Gui Tong Street South Bay Hospital Happy Bay Volunteer Group raise the issue of community-building clearly. However, Volunteer groups are mainly concerned with neighborhood relations and community-based public facilities, the main goal of sharing home is  
promote a sustainable way of life, build a sustainable community (rural communities + urban communities), foster practitioners who are suitable for sustainable community development. There are four major sections: culture, education, community, rural construction. It is the only one NGO to promote sustainable lifestyles in the central China.
- 3) Fengquan Furui community: As the typical representative of the old community, Fengquan Furui community locates in bustling commercial center. There are many old houses and courtyards, residential and commercial are mixed. small road scale, high road density, less leisure venues, streets and alleys texture obvious. It has rich historical relics: Fengquan Furui, the ninth Gonggou site etc. The population has shown those features: large elderly population and high quality, lots of businessman, and large immigration population, it is also a typical floating population gathering area. Community has formed the Garden Council, District Administrative Committee and other innovative management agencies. They play an important role in community management, community image shaping.

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## **Modes of Resident Participation in the Housing Reconstruction Process in Tacloban City, Philippines after 2013 Typhoon Yolanda**

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### **Abstract**

On November 8th 2013, Typhoon Yolanda caused devastation across the Philippines. Yolanda passed directly over Leyte Island, where the storm surge heavily damaged coastal areas of Tacloban City. Including the enforcement of a coastal no build (later no-dwelling zone) Tacloban City's housing reconstruction policy focuses on moving almost 16,000 coastal households, primarily informal settlers, into new housing in resettlement areas in the northern part of Tacloban. Resident participation in post-disaster reconstruction projects is usually discussed in the context of owner-driven or cash-based housing recovery, which encourages residents to have a leading role in the decision-making and implementation of their own housing reconstruction. In recent years, post-disaster shelter recovery experts have also called for and emphasized a shift away from a welfare approach of providing housing to passive victims, towards a development approach in which residents are increasingly empowered to be in control of their own recovery. However, as is the case in Tacloban, post disaster housing recovery support often still takes the form of a commodity provided to survivors. Of the residents who are already living in first nine permanent housing resettlement sites in Tacloban, none of them were involved in the planning or design of any of these houses or sites, and their participation in housing construction was also limited. However, many residents have started to modify their new homes after moving in, and this paper considers how the idea of participation in housing reconstruction could be applied beyond what is usually considered as participation in housing recovery.

Keywords: housing reconstruction, resettlement, Tacloban, Typhoon Yolanda, post-disaster recovery

### **Introduction**

After Typhoon Yolanda, recovery in the Tacloban City, Philippines has focused on the provision of new housing for survivors from devastated areas. The majority of these households are from low-lying coastal areas, any many were informal settlers without land tenure. This process is complex and varies widely, as residents experience different and

multiple housing situations between pre-Yolanda homes, interim housing (provided by government, NGOs or self), towards permanent housing (provided by government/donors). The focus of government coordinated housing provision projects are concentrated in the Northern part of Tacloban City (Figure 1). Among the many different organizations and agencies are involved in post-Yolanda housing provision, the majority of permanent housing, over 13,000 units as of November 2016, is planned to be constructed by the National Housing Authority (Tacloban City, 2016), and the construction of more than 2600 housing units is planned through combined support of various NGOs and donors (Tacloban City, 2016). Three years after Yolanda, as of Nov. 2016, residents have moved into nine of the new permanent housing resettlement sites (Figure 1), including more than 1000 households in three NHA projects, and over 1000 households in six projects implemented by various NGOs and donors (Tacloban City, 2016).

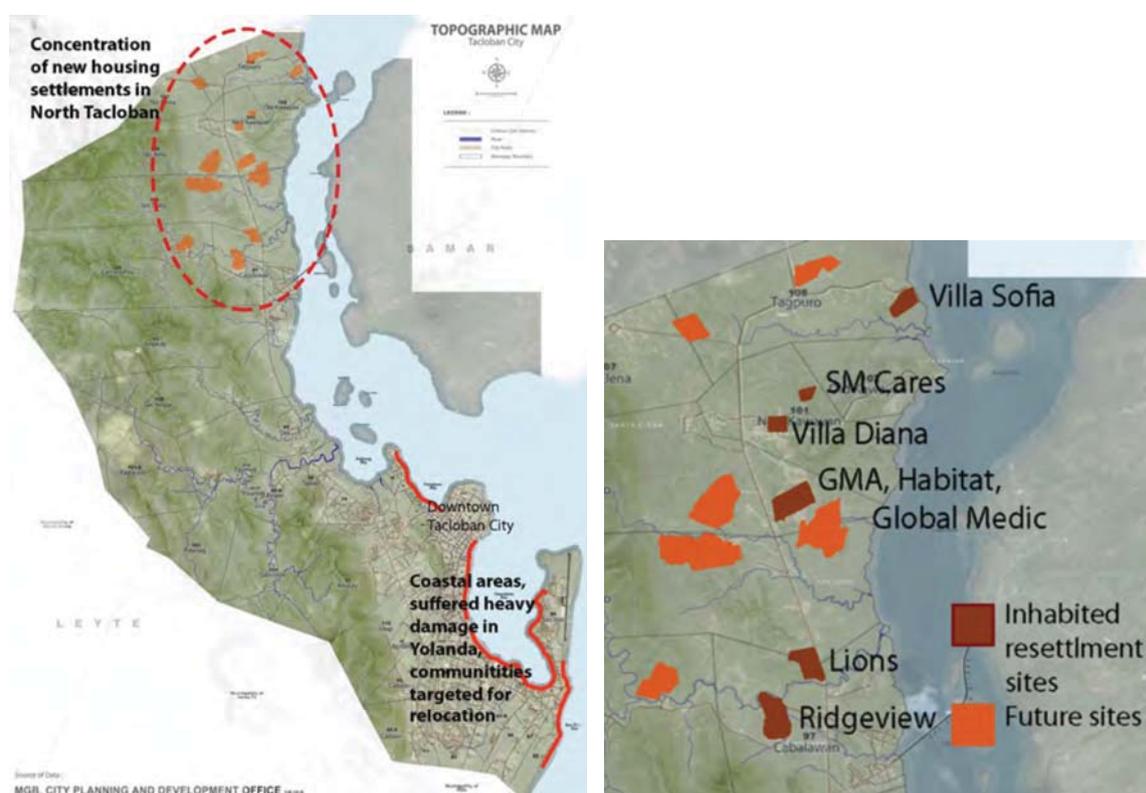


Figure 1. Left: Overview map of Tacloban City, showing the coastal areas that suffered heavy damage from Yolanda, with communities targeted for relocation as part of the City's recovery plan. The majority of new housing is being constructed in North Tacloban.

Right: Map of the housing resettlement sites that are the target of this paper

Residents are not involved in planning or construction of housing or the site in any way for NHA (contractor-driven) housing, which is the largest number of new housing. The first housing resettlement site to be completed was GMA Kapuso, over 400 houses built

with support by the foundation of the GMA media corporation. GMA housing was built by hired contractors, but residents were required to contribute 500 hours of sweat equity in construction. On another site nearby, Global Medic supported the construction of 16 houses using compressed earth block technology, and this small project is the only one that involved residents directly in building houses along with volunteers; residents were also trained in building construction, a useful skill for future employment. Although residents were not involved in the planning of any of the houses in the already-inhabited sites, and also not significantly involved in the construction, after moving into the new resettlement sites, residents have started to modify and improve the houses to meet their needs.

### **Participation in Housing Recovery**

The idea of residents' participation in housing reconstruction has become broadly supported and mainstream within disaster recovery communities of practice in recent years (Lyons, 2010, and Jha, 2010). The problematic nature of the use of the term "participation," has also been well established. As John Turner asked at the beginning of the chapter entitled 'Participation in Housing' in *Housing by People*: "Whose participation in whose decisions?" (Turner, 1976). Created by Arnstein, the idea of the "ladder of participation," was modified by Choguill and then by Davidson to consider different levels of participation of residents in the housing recovery process, which includes a range from 'empowerment' that results from full community control at the top to 'manipulation' (Arstein, 1969, Choguill, 1996, and Davidson et al, 2007).

### **Owner-driven or cash-based housing recovery**

In terms of participatory housing reconstruction, "owner-driven" or "cash-based" housing recovery has become broadly supported among disaster recovery experts (Barenstein, 2006). However, these programs whose successes well known, such as in Pakistan Rural Housing Reconstruction program (Arshad, S. and Athar, S., 2013) or in successful cases in after Gujarat earthquake in India (Barenstein, 2006, and Thiruppugazh, 2016) or in Yogyakarta, Indonesia after the Central Java Earthquake (Maly et al, 2015), are cases of in-situ rebuilding after earthquake. In these contexts, where most survivors are rural homeowners, two main factors for success are 1) availability of land, and being able to rebuild on former lots, and 2) targeting support to pre-disaster homeowners covers the majority of survivors' needs. In the case of post-disaster housing relocation, which experts agree should be avoided if at all possible, (Jha, 2010), the role of land becomes a crucial factor. If land (or compensation for it) is provided along with support for housing reconstruction, it may be possible to carry out owner-driven or community-driven reconstruction, as in the case of housing rebuilding after the 2010 volcanic eruption of Mt. Merapi in Indonesia (Maly et al, 2015). Providing lots along with housing could also be a

way to provide broader support to renters or others without land tenure, who can be excluded from “owner-driven” programs.

### **Welfare vs. Development**

Another major shift in housing reconstruction discourse over the last several years is away from the idea of providing housing to passive victims, towards supporting a development approach (IFRC, 2015, David and Alexander, 2015). Although this shift away from welfare support towards development empowers survivors to have a greater role in and control over their own housing reconstruction, the provision of housing as part of social welfare or social housing is still a crucial factor for adequate housing and poverty alleviation. Unless they are completely driven by outside actors/organizations/donors, post-disaster housing recovery programs and policies reflect that countries stance towards housing support for social welfare in non-disaster times. In the case of Philippines after Typhoon Yolanda, housing recovery that relies in a large part on the construction of new townhouses by the National Housing Authority (NHA), the national agency with the mandate to provide social housing, is similar to existing precedents to provide housing to poor households. In Tacloban City, whose recovery plan focuses on providing housing for informal settlers from devastated coastal areas, NHA’s housing provision scheme is similar to previous social housing projects for squatter settlement upgrading. Whereas the larger discussion of people-centered housing recovery focuses on a shift towards development concepts, there can still be a role of participation within housing that is part of a social welfare approach, such as in the case of Tacloban.

### **Research Purpose**

The survivors who have already moved into the new resettlement sites in Tacloban have had minimal involvement in the processes of planning and construction of these houses and sites. This paper asks: what are the modalities of resident participation in housing construction in these settlement areas? How can we consider resident participation within this context where the majority of construction was donor-driven and done by hired contractors and workers? Whereas limited by rules as well as physical and financial constraints, the ability of residents to modify their own houses in order to better fit their needs may be a key factor for their overall satisfaction with their house and living environment. However, other factors such as livelihood and access/location may overshadow any concerns about housing design. In addition, other factors related to housing and site design, such as the quality of materials and larger size of the initial houses and site, are also likely to increase the satisfaction of residents in certain sites, whether or not they choice to extend or modify their houses.

## **Methodology**

This paper presents an overview of the nine post-Yolanda resettlement sites that are inhabited as of Nov 2016, three years after Typhoon Yolanda, with a focus on the six settlements that were constructed with various donor support (non-NHA housing). Information was gathered through interviews with City officials, Barangay (smallest unit of community government) leaders, representatives of NGOs and international organizations, and local community leaders and residents. This paper primarily draws from information gathered in October-November 2016, including interviews with 8-10 households in each of the nine settlements, and also incorporates background and contextual information from previous interviews and field surveys between 2015-2016. To examine how residents' participation can be considered in the context of the various resettlement sites, this paper includes the following sections: an overview and comparison of post-Yolanda housing resettlement sites in Tacloban; overall findings and those specific to certain sites; and final reflections and future directions.

## **Overview of Post-Yolanda resettlement sites in Tacloban**

In addition to NHA, post-Yolanda housing reconstruction programs in Tacloban City also include various combinations of support from different actors/donors (Table 1). Some of the first permanent housing to be complete was constructed by NGO/donor support, on land owned by Tacloban City, in the 3 sites: GMA, Habitat, and Global Medic. Other donors/agencies have supported the construction of houses in resettlement sites on land they have acquired independently. With various levels of coordination with the City, criteria for eligibility for these different sites also varies greatly, as does the design and construction of the houses, and rules and contracts. With varied housing design, materials, and construction, the plans for the houses have to comply with building code requirements. One site has single family housing, one site has duplexes, and the other four sites have a row house design, similar to the NHA (Table 1, Figure 2).

Residents were not involved in any planning related to house unit or site design at any of these sites. At one site, residents were involved in housing construction, and at one they contributed 500 hours of sweat equity. However, the majority of construction was done by contractors. The design and the siting of the housing units allow for various types of extensions, additions or modifications; there are also rules and regulations that stipulate allowable modifications, which vary from site to site.

Table 1: Overview of the 9 resettlement sites already inhabited as of Nov. 2016

Site name	Support from	Number of units planned	Number of houses inhabited
Villa Sophia	NHA	584	95
Villa Diana	NHA	409	322*
Ridgeview 1	NHA	1000	885
GMA	GMA Foundation	403	382
Habitat for Humanity	Habitat for Humanity (INGO)	503	319*
Global Medic	Global Medic (donor)	16	16
Lions	Lions Foundation and Habitat for Humanity (INGO)	52	52*
SM Cares	SM (CSR), Archdioceses, other partners	600	384*
Operation Blessing	Operation Blessing (NGO)	300	74*

Source: Tacloban City Housing and Community Development Office, “Housing Projects Update” Oct. 10, 2016. As the process of residents’ transfer is continuing, numbers with (\*) represent updated information from officials and local leaders in the respective sites during visits between Nov 1-Nov. 5.



Figure 2. Photos of the 9 types of houses at the 9 sites.

Table 2. Categorization of the 6 sites supported by various organizations (non-NHA sites).

Site name	Location	Land and Housing	Design and Construction	Eligibility, priority, selection
GMA Kapuso	Brgy 106 Sto Nino	Land: Provided and owned by City House: Funded by GMA foundation, built by contractors with 500 house sweat equity.	Row house; Concrete Block,	From Brgy 88; priority to large families,
Habitat for Humanity	Brgy 106 Sto Nino	Land: Provided and owned by City House: Funded by Habitat for Humanity, built by contractors	Row house; Concrete block, Can add 2 <sup>nd</sup> floor.	From Brgy 88;
Global Medic 16 houses	Brgy 106 Sto Nino	Land: Provided and owned by City Housing: funded by Global Medic, built by volunteers and residents.	Row house Compressed Earth Blocks	From Brgy 61
Lions Village 52 houses	Brgy 97 Cabalawan	Land: Provided and owned by City Housing: Lions Foundation with Habitat for Humanity	Duplex, Concrete Block	From Brgy 88, also those from this site.
SM Cares	Brgy 101 New Kawayan	Land: Acquired by project partner, owned by Archdiocese of Palo House: provided by project partners.	Row house, Concrete block, can add 2 <sup>nd</sup> floor concrete ceiling	From anywhere in Tacloban City, have to agree to follow the rules of this site.
Operation Blessing	Brgy 103 Palanog (not in the North)	Land: acquired by the project; House: constructed with support from Operation Blessing.	Detached single family house, Bamboo and concrete	From anywhere in Tacloban City, have to agree to follow the rules of this site, requires future payment for the house for 20 years.

### Findings and Analysis- Construction materials and house shapes

Most of the houses used concrete blocks, or variations such as compressed earth blocks or bamboo with concrete. Most are row houses, sharing the side walls with their neighbors. Initial house designs were some variation of a simple rectangular floor plan with no interior walls, and a front and back door. All houses included a small room with a toilet, either within the overall rectangular plan, or as an addition in the back of the house.

Many sites had rules regarded allowable extensions: some were not allowed in the first year; some allowed lightweight structures if they were not attached to the house; some were not allowed in the front of the house. Most sites allowed for the addition of a “dirty kitchen” (area for cooking) in the back of the house, and this was one of the most popular types of room extensions for all the resettlement sites.



Figure 3. Extension of kitchens behind the house in Ridgeview (NHA) left, and Villa Sophia (NHA) right. In sites without much spaces, maximum extensions have already filled the spaces behind these houses.

The other modification that most residents had or desired was the addition of separate rooms or *quartos* within the house. To create these separate rooms, residents built interior walls or partitions; if they could not afford this kind of construction, some also used furniture or curtains to delineate interior spaces.



Figure 4. Left: An added *quarto* (interior separate room) made of plywood; Right: spaces delineated by curtains.

Houses in several of the sites were initially constructed as double height buildings; residents could then add a loft or 2<sup>nd</sup> floor.



Figure 5. Examples of 2<sup>nd</sup> floor lofts added by residents. These two houses are Villa Diana, NHA housing

### **Findings and Analysis-Global Medic**

Unlike others nearby, the houses at Global Medic were built from compressed earth blocks. The initial house is a rectangular plan 4 meters wide and 5.5 meters deep, with a small room for a toilet inside the back right corner. With only 16 houses, Global Medic is the smallest resettlement site, and the residents know each other well. With few exceptions, residents had participated for several days each week during the housing construction process. They were therefore familiar with the building technology used, and understood its passive cooling properties that were preserved by leaving the walls unpainted. They expressed the opinion that their Global Medic houses were more comfortable than other nearby settlements because of their cooler temperature, also because of the open areas in front of and behind the houses. Part of their agreement for receiving this house included preserving the open spaces in front of their houses and not expanding their houses in that direction. Some residents had expanded their houses in the back, adding a kitchen (Figure 6).

### **Findings and Analysis- Lions Village**

The houses are duplexes, with the interior dimensions of around 5 by 6 meters or 30m<sup>2</sup>, which is a slightly larger than houses in most of the other sites and the 22.5 m<sup>2</sup> standard of NHA. In addition, the toilet room was provided behind the house, outside of the main floor area. The construction quality is high, and residents appreciate having some space around their house. Residents reported that additions attached to the front of the house are not allowed, and neither are they allowed within the first year. Although the gable roof is not designed to support the addition of a 2<sup>nd</sup> story, one resident with construction skills and experience was able to add a 2<sup>nd</sup> story sleeping area in the unfished attic, as well as separate rooms for sleeping areas for his family (Figure 7).



Figure 6. Global Medic houses, made of compressed earth blocks. Top left: front, showing the setback and open space for gardening, etc. Top right: interior of the original house with no modifications. Lower left: interior, with unfinished walls that support passive cooling. Lower right: rear of the house; the last house has already extended their dirty kitchen.



Figure 7. Expansion of 2<sup>nd</sup> floor in Lions Village.

### Reflections and Future Directions

The housing projects discussed in the paper are not the kind that are usually considered to be people-centered or participatory; usually these ideas support owner-driven or cash-based reconstruction, where the residents themselves are the ones making their own housing

recovery decisions. However, although current discussion of housing supports development approach over welfare approaches of providing housing, there can still be a vital role for social housing as a support for life recovery. In Tacloban, where housing recovery projects aim to provide almost 16,000 new housing units to primarily informal residents without land tenure, the use of NHA programs that are similar to non-disaster settlement upgrading can be a useful way to provide large number of houses.

There are also several participatory housing reconstruction projects at various stages of planning and implementation. These include the Pope Francis Village project of the FRANCISCO Consortium, which includes the pro-poor Urban Poor Association, along with Development and Peace (Caritas Canada), and the Archdiocese of Palo. Pope Francis Village is a truly participatory reconstruction project, with the survivors/homeowners taking the leading role in project management and construction, and involved from the early planning and design stages. Catholic Relief Services is also in the planning phase for another resettlement project that will include the participation of future residents starting from the in the planning and phase. In addition, Tacloban City is also planning for the coordination of an upcoming community-driven “core housing” project at one of the resettlement sites. To understand the potential impact of various kinds of participation in housing recover in Tacloban after Typhoon Yolanda, it will be important to follow the outcome of these projects, as well as the longer term developments in the resettlement sites discussed in this paper.

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# Hidden Conflicts in Urban Redevelopment: the Case of Kowloon East (Hong Kong)

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## Abstract

Although the political system in Hong Kong presents numerous democratic shortcomings, participatory processes in urban planning are increasingly incorporated into specific projects and areas. Since 2007 the HK government has set up plans for the redevelopment of its former airport (Kai Tak) and industrial hub (Kowloon Bay and Kwun Tong) in which is renamed now as “Kowloon East Business” area. With the opening of a special office (EKEO) responsible for the implementation of a Master Plan in 2012 which aims at pushing forward a second CBD in the city, the rhetoric of civic engagement continued to gain traction. Our research shows first that only some dimensions of the planning endeavour are subject to public participation. Secondly, we examine one case of institutional participation run by EKEO and a private consultancy in order to identify its achievements and main limitations. This is contrasted with two other social initiatives that manifest the underlying conflicts in the conceptions of the urban governance of Kowloon East. On the one hand, artists and related small creative companies promoted autonomously their own networks and activities while criticising the pro-market approach by the government. On the other hand, activist-professionals suggested an alternative plan for Kai Tak in order to increase the percentage of public housing, although they were not able to modify the official proposal after going through various bureaucratic stages and negotiations. We finally conclude that these two non-institutional and cross-institutional forms of civic engagement illuminate the constraints in terms of representation, legitimacy and redistribution of most institutional mechanisms of participatory planning in the central urban areas of Hong Kong.

Keywords: Hong Kong, Redevelopment, Participatory Planning, Social Conflicts, Urban Governance

## Introduction

One of the leading scholars on urban planning, while introducing a special issue on civic engagement, raised a fundamental question: “What is the hope that a more participative model can address the challenges of promoting more liveable and sustainable urban places, for the many and not just the few? (...) What kind of polity and governance culture am I [as a planner] contributing to when I work with citizens in policy development and operationalisation?” (Healey 2008: 381-382) In the same journal a contribution from a Hong Kong engaged scholar casts light over a local tradition in which public participation faced all kind of hurdles. “Planners lamented at how wasteful of resources citizen participation endeavours were. (...) We were repeatedly told [by the Urban Renewal Authority, URA] that tenants were greedy while owners’ concerns with urban renewal were merely matters of compensation. (...) Very often, the government is forced to engage (...) [but] people know that the process could be frustrating, manipulative and exhausting.” (Ng 2008: 401-402) Despite this critical assessment, she also shows some advancement and hints of change over the last two decades within the quasi-democratic political regime of Hong Kong. For instance, consultation mechanisms have been widely implemented in various policies, not just in the sphere of spatial planning. Many self-organised citizen initiatives and community protests increasingly voiced out their claims and pressed the authorities to modify their overwhelmingly “growth-first” policies. This article follows these hopes by conducting a critical examination of one of the latest cases of civic engagement in the redevelopment of a former industrial area in Hong Kong –Kowloon East. Drawing on past participatory experiences and the prevailing governance framework in which any new attempt of public engagement in urban planning is performed, I will determine the main limitations observed and will suggest an explanation of the outcomes achieved.

Ng (2008: 404) concludes her piece by calling for institutional mechanisms able to overcome uncertainties, ensure inclusivity, representativeness, legitimacy and accountability. Similarly, Booher (2008: 391) advocates for “new ground rules for dialogue and deliberation that create a space for divergent cognitive styles, listening, and mutual respect.” Both are consistent appeals with an institutionalist approach to participatory planning. They are concerned about more sophisticated rules and mechanisms, interactions between diverse social groups in the process of planning and the local contexts of opportunities, demands and decisions (Healey 2003, Coaffee and Healey 2003). However there are still many open questions when it comes to explain the linkage of civic participation with substantive social justice (benefits “for the many”) (Uitermark and Nicholls 2015), democratic quality (“the kind of polity” we contribute to) and grassroots empowerment (Fung and Wright 2003, Fainstein 2010).

A theoretical alternative through the lens of ‘agonistic pluralism’ highlights the autonomous,

mainly non-institutional and contentious character of many participatory civic initiatives (Rogers 2016) as a democratic option given the practical constraints and dissatisfactions that more consensual, institutionalised and depoliticised processes of participation and urban governance entail. Similarly, political economy scholars were initially reluctant to endow institutionally-driven participatory planning with a high transformative capacity (Castells 1976) but a more recent attention to grassroots' strategies within the contexts of neoliberal governance and the continuity between local engagement and social movements (even with some global orientations) (Jessop 2012, Marcuse 2012, Mayer 2016, Harvey 2012) brought up again to the fore the issue of political contradictions within an evolving capitalist society.

Therefore, from a conflictualist perspective (Alford and Friedman 1985, Martinez 2011, Lopes de Sousa 2006, Scott 1988) processes of citizen engagement represent a ground for the expression of social struggles over redistributive outcomes of policies and over the potential empowerment of the have-nots. Participatory governance in spatial planning is understood as tactical collaborations between the grassroots and the capitalist class (developers, investors) and other managerial mediators (political authorities, experts, mass media, etc.), although it is also admitted the diversity of groups involved and the internal conflicts within them. Participatory processes are thus a means to reshape the political conditions that allow the recognition of the grassroots groups' interests, views and proposals. Since the bases of social marginalisation are diverse and intersectional (class, gender, race, education and lifestyles, for instance, may operate in various combined manners) the key phenomena to look at are their manifestations in conflict with the local elites, mediators and structural contexts that constrain their action, rather than exclusively focus on the institutional mechanisms of, for example, inclusiveness or representativeness. Accordingly, the legitimacy of a participatory process lies on the potentialities opened up during its development in order to face the main socio-economic inequalities and the socio-political and cultural oppressions that reproduce the living conditions of the subordinated groups. Hence it is worth asking to what extent every participatory process is able to challenge the trend by which state operations essentially pay service to the corporate interests.

## **Results**

Public engagement in the policy process of Hong Kong has been reviewed recently by a number of scholars (Fong 2001, Ng 2008, Cheung 2011). In particular, environmental and urban matters within public policies enjoyed much of the media attention due to activist campaigns and governmental responses. Broader social movements striving for the democratic progress of the political regime (in particular, the protests staged on 2003, 2012 and 2014 challenging respectively the introduction of national security legislation, patriotic education and the restricted nomination of the Chief Executive) also overlapped with that

increasing engagement of Hong Kong society in public affairs (Ortman 2015, Cheng 2016).

Participatory mechanisms expanded substantially from the colonial times to the present. Despite being subject to wide criticism, some of these mechanisms ended up incorporating more activists' views and improved their regulatory provisions as well. Specific mechanisms such as the elected but almost powerless District Councils or the array of multiple statutory and advisory boards remained less accessible to the grassroots and under the scope of governmental control. Public consultation exercises were even used by the colonial government before the 1997 handover of Hong Kong to the People's Republic of China as a way "to legitimise policy decisions in an undemocratic political system" (Cheung 2011: 114).

In particular, a yearly average of 20 processes of public consultation was registered between 1997 and 2009 (Cheung 2011: 114) which has steadily grew since then. However, a parallel to consultation fatigue and distrust about the HK government have been also observed. According to a recent study: "Government consultation exercises are cumbersome and not user-friendly for youths. (...) Consultation documents are lengthy and difficult to understand. (...) It is like putting on a show. (...) The government is all talk and no action." (The Standard 1/Feb/2016) Cheung (2011: 115-116) also confirmed that "the government has dominated these exercises by setting the agendas and policy options for consultation, controlling the timing, and selectively reviewing the feedback from the community. (...) There is no real dialogue between the officials and the people. The public are passively engaged and do not know whether their views have been incorporated or rejected, and on what grounds."

In 2007 the HK government acknowledged the dominant top-down approach in policy-making while expressing intentions of amendment. This led, for example, to the appointment of more activists and civic society representatives in various consultative committees. The rising awareness about the preservation of built heritage in tight connection with an emerging localist identity politics over the last two decades challenged some of the URA projects. For instance, following the claims of civic groups, the renewal of the Central Police Station Compound and the Police Married Quarters were partially modified (Cheung 2011: 118). On the other hand, less satisfactory for activists were other renewal operations such as the removal of the Star Ferry Pier and the Queens' Pier in spite of protests that even entailed hunger strikes in the summer of 2007. A case of more successful bottom-up influence was the early struggle to halt reclamation works in Victoria Harbour which included lawsuits, objections to statutory plans as well as the inclusion of environmental activists and professionals in the Harbourfront Commission (HC, previously named as the Harbourfront Enhancement Committee, HEC). Discussions within this board contributed substantially to alter the initial plans for the redevelopment of Kai Tak (the location of the former international airport) that preempted more reclamation (Ng 2008).

In spite of the ups and downs of the civic involvement in the protection of Victoria Harbour, it has been observed that “the HEC experiments have provided living laboratories to help interested participants understand planning issues (...) [such as] how envisioning should be done, reaching a deeper understanding of sustainability indicators and (...) how to formulate spatial plans that reflect lived experiences and aspirations through more open, transparent and engaging planning processes. (...) However (...) [they] seem to be only a form of tokenistic participation, in that the HEC has failed to institutionalize other lasting changes.” (Ng 2008: 180) Therefore, advisory bodies with no legal capacities to push forward and enforce their guidelines are always at risk of being dismissed by actual planning authorities or even by the highest ranks of the government. Kai Tak is also mentioned here as an example of a vibrant public engagement whose proposals were often “screened out or downplayed because of their impracticability in the eyes of the vetting government officials.” (Ng 2008: 180)

Since 2001 a key player in the processes of urban redevelopment is the URA which continued the works of the former Land Development Corporation (LDC) established in 1988. Up to June 2016 the URA implemented a total 59 projects (URA 2016: 16). Due to their enhanced capacity to initiate land resumption and to transfer construction rights to private developers or to partner with them, the URA speeded up notably the redevelopment process (La Grange and Pretorius 2016). Favourable skyrocketing prices in the property markets partially due to the government management of land leaseholds granted the URA a wealthy financial situation. In terms of citizen participation the central point at stake in URA-driven projects deals mostly around the economic compensations to residents, owners and shop operators.

However, in order to address the general dissatisfaction with their policies they conducted a participatory review of their strategy in which, first, they collected the main criticisms addressed to their past activities: “a top-down approach in identifying redevelopment projects with little community input undermining local characteristics and residents’ social network; an imbalance in its 4R business strategy (i.e. Redevelopment, Rehabilitation, Revitalisation and pReservation) with too much emphasis put on redevelopment; a lack of compensation options for affected property owners whose aspirations for maintaining their social network or sharing the potential value of redevelopment could not be met.” (URA 2010: 2) In order to respond to them, new measures were introduced such as “compassionate treatment” for the “needy elderly owners who are relying on the rental of their rented out properties for a living” (URA 2010: 10). Although compensations to former dwellers are still the main driver of civic engagement, the URA explicitly endorsed additional mechanisms for the improvement of participation such as District Advisory Committees, “freezing surveys”, research on community opinions prior to the announcement of new projects, talks and community workshops, liaison with District Councils and the conventional public consultations.

One of the most salient cases in which the URA engaged intensively the community was the renewal of Kwun Tong Town Centre (also known as K7) starting with focus groups and interviews with 62 stakeholders in 2005 (Law et al. 2010: 24). These were followed by District advisory committees, 32 meetings between URA and specific stakeholders, “participatory design” workshops, road shows, 39 briefing sessions at the exhibitions and explanatory publications. Notwithstanding, a careful assessment of the whole process still concluded that “the compensation issue has haunted the whole redevelopment project” (Law et al. 2010: 36) in spite of the abundant participatory measures adopted. The consultation process was “generally regarded as quite adequate. Apart from the general mistrust towards the genuineness of URA in the consultation process by advocacy groups, the major criticism is related to the lack of transparency in the financial projection.” (Law et al. 2010: 29) Some conflicts regarding the relocation of small shop retailers, transport facilities and the loss of social networks due to the displacement of neighbours did not satisfied all the involved parties either (see, for example, <https://kwuntong.wordpress.com>).

In a more controversial case (Lee Tung Street also known as the “Wedding Cards Street” or H15 according to the URA acronym) the LDC first and the URA later launched a redevelopment project highly contested for not being sufficiently justified –buildings were not older than 30 years, central location for small retailers was quite convenient and many enjoyed strong community ties. Besides the usual struggle for obtaining fair compensations, the civic group called “H15 Concern Group” with the endorsement of Wanchai District Council submitted an alternative development plan to the Town Planning Board (TPB) inspired by preservation and rehabilitation principles rather than by renewal and redevelopment ones. The plan also would have enabled traditional residents and shop owners their return to the area once the works ended. However, the TPB “rejected the plan on grounds that it was technically flawed and had insufficient documentation. The board also questioned the feasibility as more than half of the property rights now belong to the URA.” (Wissink 2015: 330) Opportunities for civic participation narrowed down along the continuing acquisition of property rights and final land resumption by the URA. Before the demolition works finished, activists tried legal appeals, candlelight vigils, hunger strikes and even clashes with the police. “Lee Tung Street presents a painful example of the dispossession of underprivileged groups by capital; of a city for profit, not for people. In Hong Kong’s expert-led development regime both appropriation and participation by inhabitants are under pressure.” (Wissink 2015:332)

Gentrification in terms of displacement of poor households from old neighbourhoods and the transformation of the latter into up-market and middle-and-upper-class communities has been regarded as one of the consequences of the URA projects (La Grange and Pretorius 2016: 507-8). Furthermore, the legacy of a housing stock poorly built 30-50 years ago plus the highly substantial contribution of land-derived revenues for the government generates acute

pressures to fuel urban re/development. URA partnerships with private developers also represent a typical neo-liberal policy in which urban growth and the upgrade of derelict estates are the main drivers. Hence, although URA was increasingly more willing to listen to residents affected by redevelopment, the issue of compensations and relocations (Ley and Teo 2013: 10, 15) tended to take the lead among every attempt to introduce participatory mechanisms.

Institutionalist and political economy approaches meet in the conceptualisation of Hong Kong as a ‘property state’ and a ‘land (re)development regime’ (Ley and Teo 2013: 6, Tang 2016, La Grange and Pretorius 2016: 511-513). Land rights are leased by the state as limited private property for a determined number of years. Leases can be resumed after the leasehold period expires or if land is required for public purposes. Both new construction and the renewal of leases, let alone redevelopment of sites and property transactions, are very lucrative fiscal sources for the government. This encourages an active ‘entrepreneurial state’ and makes the government “the city’s biggest developer, if the large public rental housing and assisted home-ownership programmes are included.” (La Grange and Pretorius 2016: 512). This is reinforced by a state-led creation of land scarcity that animates property bubbles: “Land is publicly owned and a clause in the 1984 Sino-British Joint Declaration on Hong Kong’s future prescribed the normal release of only 50 hectares of public land onto the market annually.” (Ley and Teo 2013: 6) Furthermore, a limited number of local companies in tight connection with colonial and post-colonial governments erected economic empires whose original foundation is real-estate development (Poon 2011). These tycoons are quite effective in preventing outsiders from competing in the local land market given their privileged access to the authorities in a context not driven only by market speculation.

Nonetheless, Hong Kong mini-constitution (Basic Law) states quite neatly the exact meaning of the formula “one country, two systems”: “the political structure must facilitate the development of the capitalist economy in the Region” (Chapter IV, and also Article 5) and the Hong Kong government shall “safeguard the free operation of financial business and financial markets” (Article 110). This supports that civil servants, planners, political rulers and also many politicians from the pro-democracy camp usually stick strictly to this ideological bottom line in order to dismiss any governmental interference in the operations of the property markets –once the authorities set the boundaries and goals of the areas subject to urban renewal. Theoretically, this context provides a favourable and privileged ground for developers and their associates to lead most of the interactions of the government with non-governmental sectors. Participatory schemes, therefore, are strongly biased even before they are implemented.

The area nowadays designated as Kowloon East Business Area, formerly known as just “industrial area”, is located in the South-East part of the Kowloon Peninsula. After the

establishment of EKEO the geographical boundaries of KE comprise the industrial / commercial / business districts of Kwun Tong and Kowloon Bay in addition to the territory occupied before by the Kai Tak International Airport. All this land was reclaimed over the Victoria Harbour mainly in the decades of 1960 and 1970 although the original land reclamation of Kai Tak dates back to the 1920s.

The airport was removed from Kai Tak in 1998 and relocated to Lantau island. Airport facilities were steadily cleared away. Early since the closure of the airport the government planned massive residential developments and new reclamations (Leung et al. 2006). The latter were finally dismissed due to social pressures and a court ruling in 2004. The whole vacant area was used for temporary activities, such as bus depots and auto sales exhibitions, over the years (Chow 2014) until the successive planning processes were redefining their future and new buildings popped up –in particular, up to now, the Kai Tak Cruise Terminal completed in 2015, and three sets of residential buildings (public housing estates and “flat-for-flat” resettlement for displaced population in URA projects) finished in 2013 and 2016. Given the bold erasure of its past activities, more than a redevelopment intervention, then, this area is subject to a development plan. Hence URA’s absence which also determines a weak relationship with EKEO whose staff is more focused on the potential redevelopment of Kowloon Bay and Kwun Tong –also mostly away from the URA’s tentacles. Up to date, the main cooperation between the Kai Tak Office and EKEO has been the Kai Tak Fantasy project –an international competition of ideas to design a “tourism node” between the Cruise Terminal and Kwun Tong promenade.

During the heydays of the industrialization period, between the 1960s and the 1970s, Kowloon East played a central role due to its privileged location compared to other industrial hubs. The locational advantages were two-fold: centrality and proximity to populated working class neighbourhoods (Nga Tau Kok, San Po Kong and Kwun Tong mainly). Industrial activities all over Hong Kong declined dramatically following the economic reforms in Mainland China since 1978. Many companies and investments headed to more convenient places of the Pearl River Delta where labour force and land were cheaper, let alone the environmental regulations. This resulted in an accelerated post-Fordist process of industrial and spatial restructuring, first of all at the scale of the built sites. After losing the vibrancy of manufacturing activities, vacancy spilled over, rental prices went down and other economic uses took advantage of the disinvestment gap (Cheng 2015, Jayantha 2016). In addition to small and medium companies (dedicated to storage, food production, workshops, car repairing, etc.), a community of creative professionals and artists also moved in in the late 1990s lured by the affordable rental prices of the former industrial premises.

Quite frequently, the new activities did not meet the zoning regulations. Non-industrial activities such as management, trading, design, performance or book selling conflicted with

the legal licenses of the eldest and cheapest buildings. Even residential uses may be observed occasionally in the area. However, authorities turned a blind eye for many years unless lawsuits or official inspections targeted specific cases (this is the case, for instance, of the music venue Hidden Agenda: Zuser 2014). The grey area of governmental tolerance to the legal infractions contributed to a new buoyant economic revitalisation of the area which was soon attracting wealthier investors. These erected new high rise office buildings which convinced the HK government that a potential second CBD could replace the post-industrial remnants. For instance, two new-constructed commercial buildings at One Bay East were purchased and stationed by multinational corporations -Manulife and Citibank- which was timely welcome by the property and building industry: “This is a significant purchase by a major company that highlights the increasing importance of Hong Kong’s CBD2 project.” (Pacific Rim Construction 2013) In the recent years new shopping malls were also constructed in this area. The openings of Megabox and APM (within the Millennium City 5 development) are the flagship projects that are face lifting Kowloon East: “APM had brought in a new epoch to Kwun Tong District, it makes the district more energetic and revitalised.” (Wong 2009: 79)

The 2012 Policy Address disclosed the figure of 1.4 million square meters actually dedicated by then to Grade A office space in Kwun Tong and Kowloon Bay after a decade of continuous increase at a rate of 2.5 times. In the same document the HK Chief Executive set the target of 4 million square meters for additional office floor area in the coming years. This means the government was determined to facilitate this radical conversion of land use as much as possible, regardless other opinions and proposals. EKEO was set up to fulfil that goal. A CBD-2 would “support our economic growth and strengthen our global competitiveness” (<http://www.ekeo.gov.hk>). Instead of adopting a conventional planning strategy, EKEO took a post-modern approach focused on place-making and place-branding. A Conceptual Master Plan was released at different stages (up to 4.0 version by 2016) because “is always evolving to provide an update on work progress and incorporate public views and opinions” (EKEO 2013, Conceptual Master Plan 3.0) and “highlights the latest initiatives that are crystallised from our continuous dialogue with the community to bring this vision to fruition” (EKEO 2015, Conceptual Master Plan 4.0). This indicates a straight interest and attention to public engagement in a very loose and wide manner (compared to consultation processes tied to URA-driven projects and statutory plans) at the same time EKEO planners and managers devote themselves actively to attach strong images and concepts (namely “connectivity”, “diversity”, “design” and “branding” itself) to the area, in order to consolidate trust of future investors in the emerging office enclave. Symbolic and cultural reframing of Kowloon East is thus placed at the core of both the redevelopment project and any possible participatory scheme.

On the side of material and spatial assets of the area, old industrial multi-storey buildings configure the main scattered dots and pillars of the urban form. The government attempted to increase flexibility on the use of industrial buildings through the relaxation of rules to meet since the 1990s (Xian and Chen 2015: 300) which did not prevent criticisms for still performing “bureaucratic inflexibility and official inertia” (Lai, 2013) on this matter. On one account, HK government relied on the invisible hands of the “free market” in order to get the renovation and revitalisation of industrial buildings. On the other, HK government launched specific initiatives to encourage owners of industrial buildings to improve or transform their premises. For instance, the land-use rezoning initiative in 2001 aimed at facilitating the shift from “industrial” to “Other Specified Uses” annotated “Business” use (HKIS 2016). However, in response to many technical difficulties (access, ventilation, fire safety, etc.) and the usually fragmented ownership, the Lands Department (Development Bureau) introduced a ‘three-pronged approach’ in 2010 that increased the incentives for redevelopment or conversions of industrial buildings older than 30 years. The policy consisted on “lowering the ownership threshold for redevelopment [from 90% to 80%], allowing tailor-made lease modifications and giving owners the option to pay the land premium in instalments for five years” (Xian and Chen 2015: 300). This policy ended in 2016 with 226 applications for wholesale conversion (104 effectively approved) and 22 for redevelopment (21 effectively approved): “For the applications for wholesale conversion approved by the Lands Department, most of them are located in Kwun Tong and Kwai Chung, and the major proposed new uses for the converted buildings include office, eating place, shop and services, and hotel. For the approved applications for redevelopment, they are situated mainly in Kwun Tong, Yau Tong, Cheung Sha Wan, Kwai Chung and Wong Chuk Hang, and the proposed new uses after redevelopment include residential, commercial and hotel.”

<http://www.devb.gov.hk/industrialbuildings>

As observed around 2013 (Xian and Chen 2015: 301-302) and also repeatedly manifested in the interviews we conducted, even the humble figures of the “revitalisation” policy of industrial buildings, especially focused on wholesale conversions more than on redevelopment (demolition and reconstruction), carried out an immediate speculative surge in the local property market. The first victims of the rapid increases of selling and rental prices were the less wealthy artists and small companies –let alone illegal residents. Paradoxically, artists as the natural allies of EKEO in forging a cultural and creative brand for Kowloon East are the ones who are being more quickly expelled to remote, less centrally located, areas of the city. For instance, let’s remember that the 2013 Policy Address by the Chief Executive introduced the pursuit of identifying “sites to support the development of arts, culture and creative industries, with a view to turning Kowloon East into a distinctive business area.” (HKSAR 2014: 130)

## Conclusions

Crucial as it is in Kowloon East, the redevelopment of industrial buildings policy is away from EKEO's reach –and also from URA's scope of responsibilities. This has contributed to detach various social communities of *inhabitants* (workers, professionals, small retailers, civic groups, etc.) from most of the branding and participatory activities promoted by EKEO. Upgraded shopping malls and office buildings, tourism and recreational functions do not seem to motivate the post-industrial working and middle class population still remaining in the area. Their substitution and displacement point out to a process of gentrification which is springing up and more explicit every day. Apparently this was far from the government's intentions unless we remind how determined was the policy goal of giving birth to a second CBD.

Heritage preservation, as one of the four key drivers of the URA, might be also relevant for industrial buildings and culture in Kowloon East after sensible rehabilitation and policies that allow affordable occupancy such it was attempted in other sites –for example, the Jockey Club Creative Arts Centre in Shek Kip Mei and the Cattle Depot Artist Village in Mau Tau Kok. A *laissez-faire* approach such the one in the industrial buildings of Fo Tan (Sha Tin) may leave artistic communities to breed and flourish although it also prompts real estate speculation and poor interactions with the residents nearby. According to Tang (2016: 162): “The recent government proposal of promoting creative industry must then be interpreted as rhetoric. It is a cosmetic measure to quiet any possible challenge to the regime and its representations of space.” At 2012 EKEO supported educational activities (maps, on site visits, exhibitions, etc.) to revive industrial culture in Kwun Tong (in partnership with Hulu Culture). This has continued in 2014 with the transformation of Tsun Yip Street Playground into “Kwun Tong Industrial Culture Park” and the promotion of “creative industries” under the Kai Tak Fantasy project (EKEO 2015, Conceptual Master Plan 4.0). In a follow-up project entitled as “The Spirit of Creation. The Past and Future of Industries in Kowloon East” the branding intentions come to enhance the aesthetic attractiveness of icons in the verge of being loss: “Many old factory buildings and unique architectural features may be changed or lost due to redevelopment. The EKEO has commissioned a professional team to document this rich industrial culture in the urban fabric as the area transforms. The result of which will help inheriting the Spirit of Creation of the old Kowloon East and extending the spirit into the future development.” (EKEO 2016) Therefore, a double-track operation takes place: a) the expulsion of active artists from the area; b) the recuperation of industrial heritage as a means to redesign and introduce an artistic flavour able to entice future tourists, corporate staff and investors. Above “industrial culture”, at a higher tier of promotion with a more probable influx of profitable investments and in accordance with the governmental guidelines to improve technology-and-innovation-based economic growth, EKEO has already

launched in 2016 the Smart City programme by calling to new participatory workshops and consultation inputs.

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## Is This a Chance or Threat? Peoples' Understanding How You Face the Disasters in Tohoku and Kumamoto

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### **Abstract**

In recent years, we have had Great East Japan Earthquake of 2011, Kumamoto Earthquake of 2016. From the North to the South, there is NO safe place in Japan. Owners of local grocery stores around Tohoku coastal area are still not sure how their business go for the next year. On the other hand, owners of local inns around Aso area of Kumamoto do not know what would happen in their future. In this presentation, by telling you how I support victims of natural disasters as a problem solver for business administration, I show how victims see their lives after the disasters so they rebuild their communities.

### **Introduction**

From the north to the south, there is no safe place in Japan. The below is the comparison sheet for Great East Japan Earthquake and Kumamoto Earthquake.

	GEJE	Kumamoto Earthquake
Origin date	March 11 2011	April 14 and 16 2016
Magnitude	9.0	6.5 and 7.3
Death tolls	15,891	110



The Map of Tohoku  
From Google Map



The Map of western Japan  
From GSI Japan

## Part I: Tohoku's Situation after Five and a Half Years passed from the Disaster

### 1. The Origin of Temporal Market Street in Sanriku Coastal Region

After the Great East Japan Earthquake(GEJE), the construction of temporal market street would be expected not only by local retail shop owners but the tsunami victims themselves. Three months after the GEJE, consequently they started the construction of temporal market street around Sanriku coastal region.

There are two types of the preparations of the facilities of temporal market street. One is the governmental support. Another one is NGO's supported. The governmental one would be made by the central government. Once a facility was constructed, the facility would be rent for the local retailers that were lost their facilities by the tsunami through the local government. The period of rent would be extended according to the conditions of the tenants how they were ready for the rebuild of their businesses.

It has been more than five years since the JEJE. Most of tenants of temporal market street have to decide to move out to permanent ones. In many temporal market streets, the number of their visitors decreased since 2013. There are two reasons of this. One is the movement of the tsunami victims from the lowland around the coast to the highlands. Another one is the fall of the numbers of volunteers and tourists to the Sanriku coastal damaged area.

“To move to a permanent shop, to continue to stay in the temporal market street, or to give up their business?” by showing the situations of some temporal market streets around sanriku coast, I describe their problems.

### 2. The Situations and Problems of Temporal Market Streets

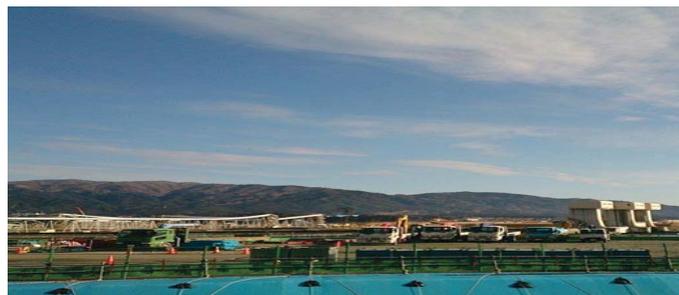
#### (1) Takata-Osumi Tsudoino-oka Temporal Market Street (Rikuzentakata-city, Iwate Pref.)

### General Information

Establishment	June, 2012
Numbers of Tenants	13
Numbers of Restaurants	5
Numbers of General Shops	6
Numbers of Others	2 (NPOs)
Address	93-1 Osumi Takata-machi Rikuzentakata-city



Mr. Akinari Ota, a local café owner, made a big effort for the establishment of this temporal market street. First of all, Ota confirmed the other local shop owners that they wanted to secure their shops in a temporal market street so they restart their own business.



Later, Mr. Ota and his folks were noticed the requirements for the construction of a temporal market street by the central government in July of 2011. The requirements are, “You need a building site. Also, you need more than two tenants.” At that time, because the local city office was flushed away by the tsunamis, the local government could not afford to give any support for the local shop owners. Therefore, in order for them to secure a building site for a temporal market street, Ota made a deal with the landlord to lease a land for local shop owners to construct a temporal market street for free.

But, they still had a problem for finance. At that time, Mr. Ota kept sending a message that they would like to build a temporal market street to anybody who visited him from the outside of the region. Thanks to his effort, Japan Platform, a supporting organization, decided to offer a financial support to build a temporal market street for them. Mr. Ota and his folks also made a design drawing for a temporal market street without any help from the government or NPOs’.

The remarkable point of this temporal market street is that Mr Ota and his folks independently made actions for building a temporal market street. They also won a support from Toyota foundation for building a wood deck to fill the gap between the buildings. This is how they completed to build a temporal market street in March 2013. In May, Mr. Ota could start his café And in June, they finally reached the grand-open for “Tsudoino-oka temporal market street.”

### The Current Situation of Tsudoino-oka Temporal Market Street

Now Rikuzentakata-city office has the ownership of the facility of the temporal market street. The site for the temporal market street is still leased from the individual landlord for free. The

tenants decided the common service expense 20,000 Japanese Yen for each. (approx. 200 US dollars) As time passes, the numbers of the visitors are gradually declined. Many locals were moved to the inland area where the altitude is high enough to avoid the assault of the next tsunamis in the future.

a. The site of the Temporal Market Street

This temporal market street is a little bit far away from “miracle lone pine tree,” the only tree still stood after the terrible tsunami. So, it is not easy for tourists for the disaster area to find the temporal market street.

b. The Building Cost for Permanent Shop

To build a permanent shop, the tenants of the temporal market street need enough money. Apparently, it is a big burden for them. By the time for building the temporal market street, Mr. Ota already paid several million Yen (several ten thousands US dollars) for the interiors. In order for him to move to a permanent shop, he needs to pay at least several million Yen more. This is why there are many tenants who want to stay at the same place without moving out.

c. Difficulty of Re-organize of a Community

Once tenants found their shops at the temporal market street, they got used to the atmospheres. So if they move to another site for rebuilding their permanent shop, they start over the same process again so they get used to the new environment.

d. Passage of the Time

In case of Rikuzentakata city, the downtown of the city was swept out by tsunamis.

Therefore, it takes more time to rebuild the centre of the city. However, the lives of the locals never stop and continue. Once they settled to the new place, it is not easy for them to change their lifestyle and business style again.

e. Paralyzing of the Local Economy

Before the disaster, the population of the city was about 23,000. Now the it was decreased to about 15,000. As the population of the area shrinks, so does the local market street. The local business runners are likely to have a problem to secure their profit out of their business.

f. Difficulty of the Decision Making to Rebuild

According to Mr. Ota, the schedule of the rebuild plan for the downtown of the city is not clearly showed to them yet. For the elder business owners, the full-scale restart of their business by financing from banks will be a cruel burden. The business owners need take into account of his family situation. It is estimated that many of them need to change their rebuild plans.

(2) Minamimachi Murasaki Ichiba (Kesenuma city, Miyagi pref.)

General Information

Establishment	24 December, 2011
Numbers of Tenants	50
Numbers of Restaurants	20
Numbers of Grocery Stores	6
Numbers of Retailers	16
Numbers of Service Stores	8
Address	2-2-28 Minami-machi



From Google Map

	Kesennuma-city
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This temporal market street is composed of the tenants of the market street that was located in the same area, Minami-machi before the disaster. Right after the coming of tsunami and the fire from the heavy oil tank at the edge of the port, nobody thought that they would be able to restart their business at the same place.

By the time of April of 2011, the local businessmen could secure a route to purchase underwear. Some began to sell them in an open-air market street. The tsunami victims have lost everything. So, the local victims bought them all quickly. When the other ex-store owners saw the situation, they thought they could do something. This is how they began to think about building a temporal market street.

Mr. Sakamoto, the leader of the temporal market street, could restart his business to sell croquette and lunch box from May 2011. At that time, they have heard that they would need to secure the site to build a temporal market street by themselves.

In order to ensure the site, they not only scrapped tsunami-damaged building by June, but established a NPO to organize temporal market street by September of 2011. For the cost of the interiors, they could get financial supports from the people of Tokyo and NPO from Kyoto.

For a big shop, the common service expense is 10,000 Japanese Yen. For a smaller one, the expense is 6,000 Yen. But this amount of money only covers the cleaning cost of bathrooms and power bills. So it is not enough for the other expense for the operation of the whole temporal market street itself.

#### The Current Situation of Murasaki-ichiba Temporal Market street

By this moment, they could ensure the subsidy for building permanent market street from the government and it is under the construction. The permanent market street will be located on the ground floor of the building and the above will be public housings for tsunami victims by April 2017. At the time of applying the subsidy, there were more than 50 tenant candidates. But the actual number of the tenant candidate now is decreased to 36. Some people who gave up their rebuild plan were running out of their budget. Others gave up because they did not have their successors for their business.

##### a. The Change of the Neighbor Environment

The Rebuild plan of the city is focusing on moving to Tanaka area that is newly getting popular from the locals instead of staying in the old city area where was inundated by tsunami.

##### b. The Difference between Tenant Candidates

Some are for joining newcomers from outside of the city and others are against. It is not easy to have a mutual agreement between them.

c. Decrease of Supports

Governmental financial supports would be likely to be ended by the time of the grand-opening the permanent market street. The interests of supporters from out of the region were fading out.

d. Decision Making of Continuation of the usage of the Temporal Market street

There are still tenants who want to stay in the same temporal market street for some more years until they give up their business. The city office needs to decide whether let them to stay more or make them get out of the site.

e. Organization for the Operation for the Permanent Market Street

The operation of the management company of the permanent market street is not easy. The president of the company has to show his leadership to organize the market street.

f. Vacancy in the Future

Most business owners are elder people. Furthermore, as the depopulation is proceeding, the local market street shrinks. The chances are, there will be some vacancies for the permanent market street and hard to find another tenant.

g. Lone-wolf type Owners

Generally, many shop owners were used to be independently running his own business. Once they join the permanent market street, they need to obey the rule for the market street. It is not easy to change their mind.

k. Magnet Power of the Market Street

The biggest problem with the permanent market street is making magnet tenants. Many tenant candidates are not customer-oriented. Whether they like it or not, they need to provide some value to make customers to stop by.

(3) Sansan Temporal Market Street (Minamisanriku-town, Miyagi pref.)

General Information

Establishment	February 25, 2012
Numbers of Tenants	32
Numbers of Restaurants	9
Numbers of Grocery Stores	9
Numbers of Retailers	10
Numbers of Service Stores	4

Address	59-1 Onmae-shita
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From Google Map

	Shizugawa Minamisanriku-town
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Facing the Pacific Ocean, Minamisanriku-town is located in the northeast of Miyagi prefecture. Before the GEJE, the number of the members of the Chambers of Commerce of Minamisanriku was 562. 473 members had some damage by the disaster. 152 members gave up their business to start over again.

a. Participation for the Nation-wide Retailers Network before the Disaster

Like Waseda shopping street, Tokyo, local retailers in Minamisanriku had a relationship with them before the disaster. Thus, they could receive supports from people of Waseda shopping street. One month after the disaster, local retailers could organize an event of market street. This was the origin of San-san shotengai and the event is held for the last Sunday for each month.



Sansan Temporal  
Market Street

b. Restart of the menu “Minamisanriku Kira-kira don(Rice bowl with fresh seafood)”

Originally this menu was invented for the revitalization of the town. Each restaurant has special toppings of salmon eggs or urchin of Minamisanriku. They change their toppings and flavors for each season so the customers will not get tired of the tastes.



The Current Situation of San-san Temporal Market street

This market street would be closed at the end of November 2016. They are planning to open the permanent market street around the bayside area from March 2017. The tenants of Sansan and tenants of another temporal market street in the town made an agreement of establishing a management company for the new permanent market street together.

The population of the town is gradually decreasing. According to the town office, the population is 13,571 in October 2016 compared to 17,666 in February 2011. Minamisanriku has lost 23 percent of its population for this five years.

Like other tsunami flooded areas, tsunami victims are expected to move to highlands so they never face the threat of tsunami. On the other hands, commercial area would be located in the downtown area. Therefore, the locals may hesitate to visit to the commercial area for the inconvenience. Not only the locals, but volunteers and construction workers from the outside of the region are gradually leaving the Sanriku area.

(4) Kibou no Kane Temporal Market Street (Onagawa town, Miyagi pref.)

General Information

Establishment	April 29, 2012
Numbers of Tenants	52
Numbers of Restaurants	13
Numbers of Grocery Stores	18
Numbers of others	21
Address	Junijin Urashukuhama Onagawa town

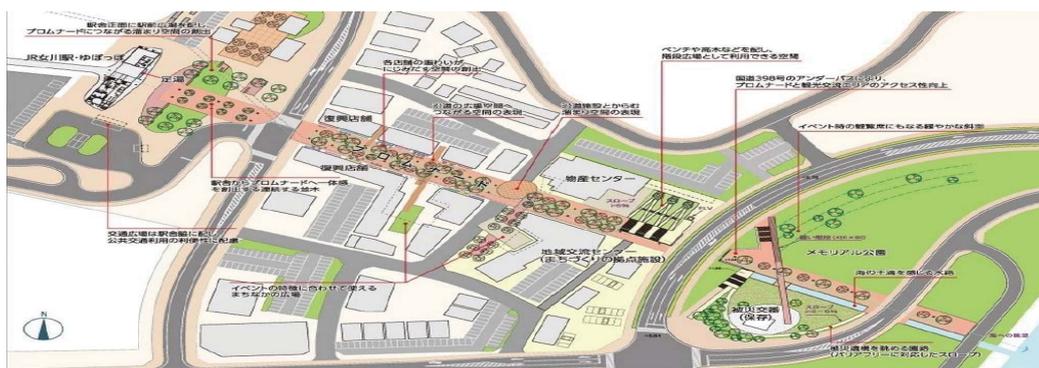
From Google Map

Onagawa town is located at the east edge of Miyagi prefecture, at the connection point between Honshu-main island and Oshika peninsula. Onagawa has one of the biggest fishing ports in the prefecture and nuclear power plants of Tohoku Power Company. The population of the town before the disaster was 10,014. In October 2016, the population is 6,779.

The chamber of commerce of Onagawa town took a good leadership to utilize governmental and private supports. The chamber of commerce took actions to ask the central government for building temporal market street in May 2011. They also welcomed the support from Salvation Army, a world-wide NGO from abroad. By utilizing the athletic field of a local high school, they decided to build a temporal market street.



The image of the side view of the downtown area of Onagawa town



The image of bird's-eye view of the downtown area of Onagawa Town

The Current Situation of Kibou no Kane Temporal Market street

By the end of 2017, the town office decided to close the market street. By now, many tenants have already moved to their permanent shop in the downtown. The rest of the tenants are felling left behind because they are still stuck in the old temporal market street. Some are quitting their business when the temporal market street close, others are moving to a new site

to restart their business.

At the end of 2015, they opened the new permanent market street at the downtown of the town. For the weekends, they have many tourists who are curious about the rebuild of Onagawa town. But for the weekdays, there are few people around the market street. Many visitors to the market street seldom buy things from the market. What they do is only eat at the restaurants. We are not sure how the market street would be in the near future.

(5) Yuriage Morning Market Street (Natori city, Miyagi Pref.)

General Information

Establishment	December 2013
Numbers of Tenants	40
Numbers of Restaurants	17
Numbers of Fish Shops	9
Numbers of vegetable Shops	5
Numbers of others	9
Address	5-23-20 Yuriage



From Google Map

	Natori-city
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Yuriage area is located at the southeast of Sendai city. This area is one of the most severe damaged area by the tsunami of GEJE. The death toll of Yuriage is 754. Yuriage morning market has its own history more than 40 years. Two weeks later of the tsunami attack, they restart their market at the parking space of the shopping mall near from the market street. At the end of 2012, they made a grand open of the market street at the previous site. The Yuriage morning market is held on every Sunday morning. They already have many people coming to the market as they used to do before the disaster.

### The Current Situation of Yuriage Morning Market Street

As you drive a car after arriving at the airport in Natori-city, you can see the vacant land of Yuriage area. That tells you the severeness of the tsunami damage for the area.



The current local population in Yuriage area is about 2,000 compared to the population of 7,000 before the disaster. But the prosperity of the market is already equal to the one before the GEJE. By providing the seafood barbeque service or giving some information about their fishes to their customers, the local retailers are making efforts to make their visitors come to the market again.

A vacant field in Yuriage

### 3. The Future of the Temporal Market Street

Through our research, we realized that local business owners are still facing a lot of obstacles for their business. I describe what is important for them to turn around for their business.

#### I. Willingness of the Local Shop Owners for Turning Around

Where there is a will, there is a way. Before they decide to restart their business, they need to make sure whether they really restart it or not. Once he makes a big investment for his restart of his business, it is not easy for him to quit. To avoid any troubles for his family or his stakeholders, a well-reviewed business plan and his determination do count.

#### II. The Environmental Change

Many victims think that the revival of their business means restoring their business as it was used to be at the time of 2011. However, the environments of the tsunami inundated areas have totally changed. Moreover, around Sanriku coastal area, depopulation and shrinking the local economies are still in the progress. They need to see the realities of the area so they make sure what exactly they need to do.



### III. The Decision Making of the Owners

Many local business owners are in their sixties or seventies. There is no guaranty of their willingness of restart their business, their budget, or their health situation. For example, “The pay-back period would be five years,” “When I quit my business, the cost would like this,” they need to make sure what they are really going to do for their challenge.

### IV. The Support from the Outsiders

In the disaster area, the lack of manpower will be a problem. Each tenant would do their own business      Opening ceremony for fish      and  
there would be nobody who can do the paper works      processing facility in Yuriage      for the  
market street. Business owners and supporters both need to make sure what kind of support  
would be needed for the job.

### V. The Responsibility for the Supporters

When Japanese people want to cheer up somebody, they rather say, “Hang in there!” or “Do your best!” than “Break your leg.” In many cases, tsunami victims have already done their best. So when you say, “Do your best!” to the tsunami victims, the victims may think that it is none of your business. We all need to pay attention to our words when we say something to somebody.

### VI. Hope for the Future

As I showed before at the case of Murasaki-ichiba temporal market street of Kesenuma, at the time of right after the disaster, one of the local needs was underwear. Now underwear would not be sold like that time. Therefore, it is important for them to redefine their business so they can sustain their lives for a long time.

## Part II: Kumamoto’s Situation after a Half Year passed from the Disaster

After the GEJE, the prefectural government of Kumamoto were offerings for the people around the coastal area of Fukushima to move to Kumamoto to avoid the influence of the high amount of radioactive from the nuclear power plant of Fukushima Dai-ichi. But unfortunately, they also have had big earthquakes twice in Kumamoto for this year. Because of the disaster, the great bridge of Aso and the tunnel of Tawarayama were both collapsed.

After the disaster, the access lines for the Aso mountain regions were stopped. It takes so much time to get to the mountainous region that tourists became unlikely to visit there. Some restaurant owners in Aso area decreased the amount of sales. Now they are going to face the winter season. Some restaurant owners may need to give up running their business because of the lack of the customers during winter.



The map of Minami-aso village after the disaster

The lack of the readiness of the local governments in Kumamoto for the rebuild of the damaged areas is crucial. Last August, some local specialists and I visited a local government to have a discussion about the construction of the public housings for the victims with the vice-mayor of the village and some officials. We advised that the local government should do some questionnaire for residences of temporal housings to know how they think about rebuilding plan for their lives. By getting the fact of their wills, the local government can make sure how many public housings would be needed for the disaster victims. But by the time of writing of this paper, the local government never did the questionnaire. The disaster victims are still not sure how their lives would be in the near future. What they do is just being patient for a long time even if they are not sure how long they need to put up with the hard time.

Not only the local governments, but local people were not aware of natural disaster. Since they never expected earthquakes would happen, they could not take efficient actions after the disaster. It has been more than a half years since the disaster happened. Victims who cannot stay in their own houses moved to temporal housings from the shelters. But still now, building demolition work is the main ongoing project. Local construction companies are not well organized enough that they cannot take the leadership for the rebuilding the disaster areas. What is likely to happen is that big construction companies take leadership and the small local ones just follow suit. In that case, local companies' share would be so small that they are not likely to make a good profit. The local governments and chambers of commerce are announcing that there are subsidies for local entrepreneurs to rebuild their facilities. But even if there was a governmental subsidy, business owners would have their own expenses for their investments. Therefore, entrepreneurs who are suffering from the disaster need to re-define their own business so they can accustom to the environment.

After the disaster, the ground became so soft that the pension owners around Aso area are at the stake of landslides. Therefore, tourists are not willingly to visit



Cracks on the ground

Aso area because of the rumors of the danger to go there. It is said that the rebuild of the great bridge of Aso takes at least a couple of years. Nobody knows that how long it takes for the revitalization of the tourism of Aso. There are some pension owners who can still run their business. On the other hand, others who had severe damages for their pensions cannot re-open their business. So when I was invited for the meeting of pension owners last June, I suggested them not to have a meeting until the situation will change. Instead, I encouraged them to focus on each one's business. Later, they decided not to have a meeting for a while until the situation will change.



Pensions at the edge of the cliff in Minami aso village after the disaster

Thus, it is obvious that it takes a long time to revitalize the local economy around Aso area.

### **Conclusion**

It is so important for entrepreneurs to see the current environment especially for the post disaster condition. If one's business model is old-fashioned and not profitable, he/she need to give up the business before the big investment will be done. Also, it is entrepreneurs themselves who make decisions for his/her business. After a careful thought, if his/her business model still looks steady, then he/she can move ahead to get over the hardships. The strongest point of local entrepreneurs is his/her agility for making decisions. Their careful and bold actions may become good solutions for the rebuild of disaster areas.

# Immigrants' Sense of Belonging to Chinatown-International District, the Changing Neighborhood

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## Abstract

Chinatown-International District (CID) of Seattle has been an immigrant receiving community for more than 150 years. The district has a history of social injustice and is currently facing the risk of displacement and public safety concerns. In this project, I wanted to document the different perspectives on and meanings of the district, to help people appreciate and respect the rich culture and identity of the CID. From the perspective of a community designer, I conducted a series of literature review, interviews, and surveys specifically about Chinese, Filipino, Japanese and Vietnamese communities and presented them to be shared among those communities.

The result revealed that the CID has evolved through the establishment of various cultural communities and the interaction among them. There are many local heritages of the CID that can serve as a foundation for preserving the identities and the uniqueness of the district: places for gathering and socializing, historic sites and places offering social services to the local communities had all strong ties to the communities in the CID that enhanced their sense of belongings.

The neighborhood also has a strong history of activism to improve the area through multiple unified, pan-Asian efforts over time. I believe these activism stems from the strong sense of belonging to the neighborhood fostered by the heritage of the CID. In order to sustain these efforts in the future, it is critical to preserve these key places for the community and protect the communities' sense of belonging to the CID.

Keywords: Immigrants, Sense of Belonging, Co-existing, Heritage, Social Injustice

## Introduction

Chinatown-International District (CID), located at the south end of downtown Seattle, has been an immigrant receiving community for more than 150 years. Multiple immigrant groups from different cultural backgrounds, who eat different foods and speak different languages, live in the same district: this makes the district one of the most diverse communities in the United States. Mr. Douglas Chin, who was the International District coordinator for the city of Seattle in 1980s, described the district as follows:

“This is the community, where different Asian immigrants settled, lived, worked, and established businesses and institution side by side.”<sup>1</sup>

However, the history of the CID is also a history of social injustice. Chin also describes its history:

“For much of its history, the District has been largely isolated, abandoned, neglected, and left on its own without much interest or assistance from City Hall or the rest of Seattle.”<sup>2</sup>

### **History and External Pressures**

Racial discrimination and displacement of housing and small businesses are all serious issues experienced by the community in the CID. In the late 1960s and early 1970s, the district, like many other inner-city neighborhoods across the nation, experienced the demolition of a portion of the neighborhood for new freeways and parking lots to serve megaprojects such as the Kingdome sports stadium (Figure 1) in 1976,<sup>3</sup> and more recently the construction of the baseball stadium in 1999 and the Centurylink Field stadium in 2002.



Figure 1. Kingdome Sports Stadium (1976-2000) from historylink.org

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<sup>1</sup> Doug Chin., 2001. *Seattle International Chinatown District: the Making of a Pan-Asian American Community*, University of Washington Press: pg.10

<sup>2</sup> Same Above, pg.11

<sup>3</sup> Abramson, Daniel. Lynne Manzo. Jeffery Hou., 2006. From Ethnic Enclave to Multi-ethnic Translocal Community: Contested Identities and Urban Design in Seattle’s Chinatown-International District, *Journal of Architectural and Planning Research* 23:4 Winter

Since 1973, a portion of the CID, mainly the west side of I-5, was registered as a historic district from the federal government in order to preserve the district's unique pan-Asian American character and to encourage rehabilitation of areas for housing and pedestrian-oriented businesses.<sup>4</sup> Despite these efforts at preservation, according to the research conducted by the city of Seattle, the district is facing a high risk of displacement because of linguistic isolation, low household income, proximity to newer forms of public transportation such as the Link light rail and street car.<sup>5</sup>(Figure 2)

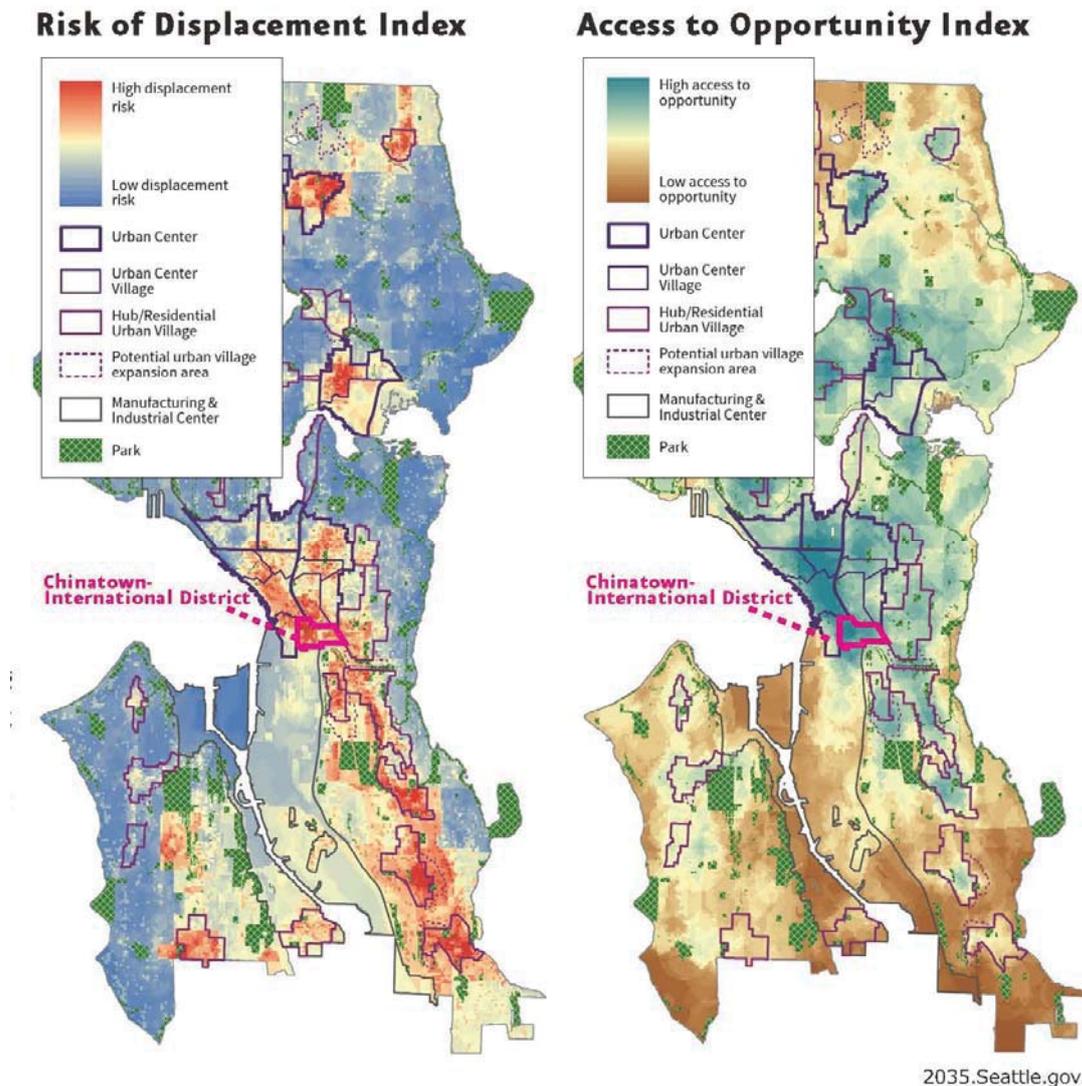


Figure 2. Risk of Displacement Index (left) and Access to Opportunity Index (right)

Today, the CID is also facing the issue of public safety. Compared to the city's average, the district has more personal crime and more property crime per person.<sup>6</sup>(Figure 3) In addition,

<sup>4</sup> <http://www.seattle.gov/neighborhoods/preservation/id.htm>

<sup>5</sup> "Seattle 2035, Final Equity Analysis" (2016)

<http://2035.seattle.gov/wp-content/uploads/2016/05/Final-Growth-and-Equity-Analysis.pdf>

<sup>6</sup> Walkscore.com

the CID community was devastated by the murder of Mr. Donald "Donnie" G. Chin in June 2015, one of the community leaders who devoted himself to the well-being of the communities in the CID for 45 years. (Figure 4)



Figure 3. Personal Crime (left) and Property Crime (right) in the CID<sup>6</sup>



Figure 4. Chin's Family's Gift Shop at the CID Became a Growing Memorial for Donald "Donnie" Chin (July 23<sup>rd</sup>, 2015) from [Seattletimes.com](http://seattletimes.com)

## Research Goal

In this research project, I wanted to find out the answers to the following three questions: 1. What kind of struggles have people experienced in the CID and how did they face them? 2. In such a culturally diverse area, what has fostered people's sense of belonging for each group? 3. Finally and more importantly, in order to help people appreciate and respect the rich culture and identity of the CID, how could I document the different perspectives on, and meanings of the district?

To find answers to the questions above, I took the approach of a community designer, as it seemed most suitable for this project. In collecting various important stories for the community, I talked with community activists, researchers, residents and visitors in the CID. Specifically, I focused on four immigrant communities, Chinese, Filipino, Japanese, and Vietnamese.

In addition, to make these stories as accessible to people of all ages, cultures, and languages, illustration were used as much as possible to explain the shared stories and problems experienced by members of various communities in the CID. The booklet project was entitled “Stories of Chinatown-International District from Multiple Cultural Backgrounds”<sup>7</sup>, and the booklets were distributed to the members of the CID in the end.

## **Methodology**

The research began with a thorough literature review, as well as community surveys and a series of interviews with community leaders, activists, researchers, and past residents. The community survey was conducted at a large neighborhood kickoff event, and was intended to obtain wide opinions from the community about two specific topics: 1. what has fostered people’s sense of belonging to the CID, and 2. where do people feel unsafe in the CID. Twenty-six responses were collected through this survey. A series of interviews were conducted in order to obtain more in-depth information about the district through face to face interaction, and supplement the survey results by gathering information from each of the four communities in the CID: Two each from Japanese and Filipino communities, and one each from the Chinese and Vietnamese communities. (Figure 5)

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<sup>7</sup> Arisa Nakamura., 2016. Stories from Multiple Cultural Backgrounds: An Illustrative booklet included in Immigrant’s Sense of Belonging to Chinatown-International District, the Changing Neighborhood, A Master Thesis in Landscape Architecture. University of Washington

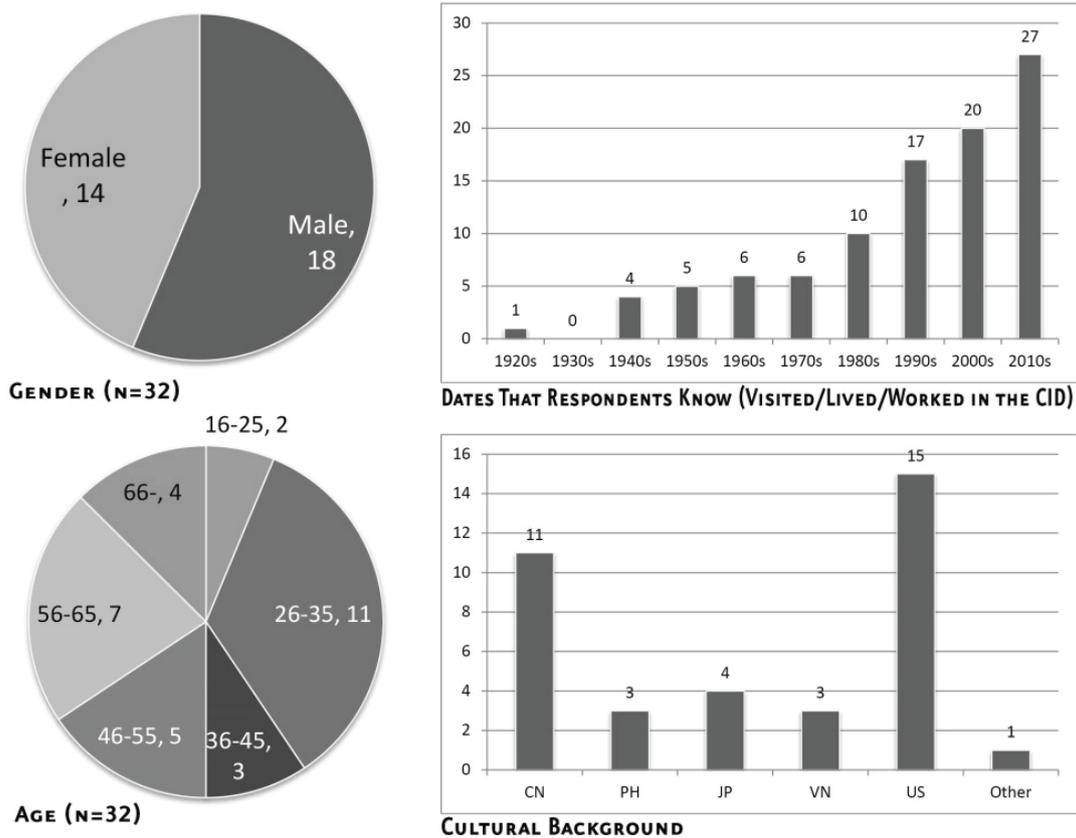


Figure 5. Information of Respondents/Interviewees

## Result

The result made it clear that the CID has evolved through the establishment of various cultural communities and the interaction among them. This close relationship is what defines the CID, and the important heritage that needs to be passed on to future generations. It is important to preserve places that are specific to one's cultural group, as well as those that relate to multiple communities. As such, each community can preserve their identities while developing an understanding and respect among all cultural communities in the CID, ultimately leading to the preservation of the CID's local heritage. (Figure 6)

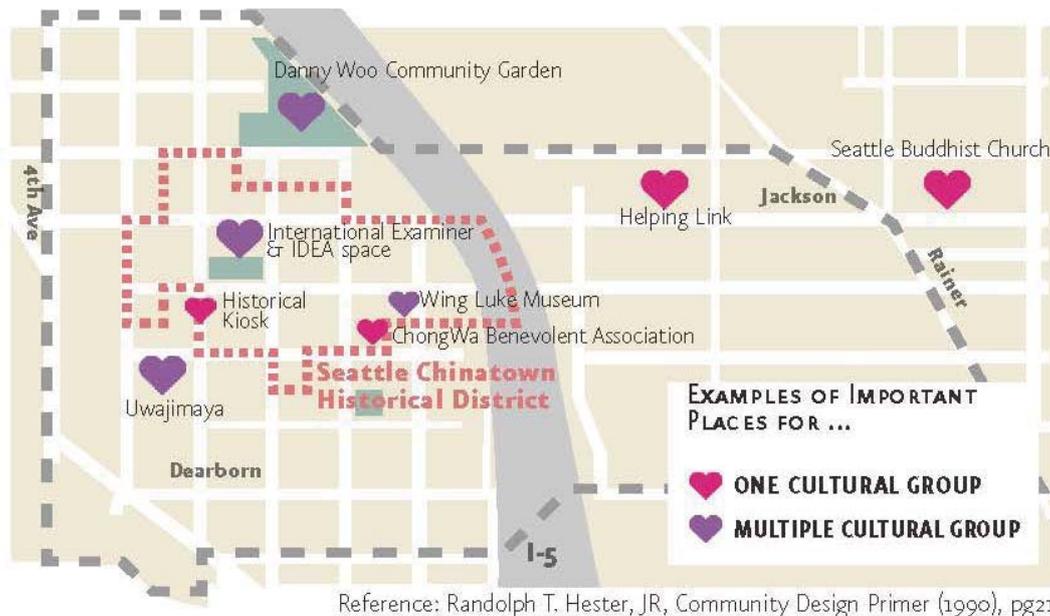


Figure 6. Sacred Places at the CID

In terms of public safety, the areas people commonly felt unsafe are, under I-5, 5th Ave, Dearborn Street, and the intersection between 12th and Jackson Street. (Figure 7) In addition, the reasons for the unsafe feeling are mainly from the presence of homeless people, darkness, and drug dealers. The research also reveals that I-5 divides the CID into two areas on the east & west sides. The Little Saigon community had concerns about the public safety on the east side of I-5. Currently, the CID is covered by two police districts, divided by I-5. Some says the neighborhood should be policed under one precinct to ensure effective use of limited police resources.

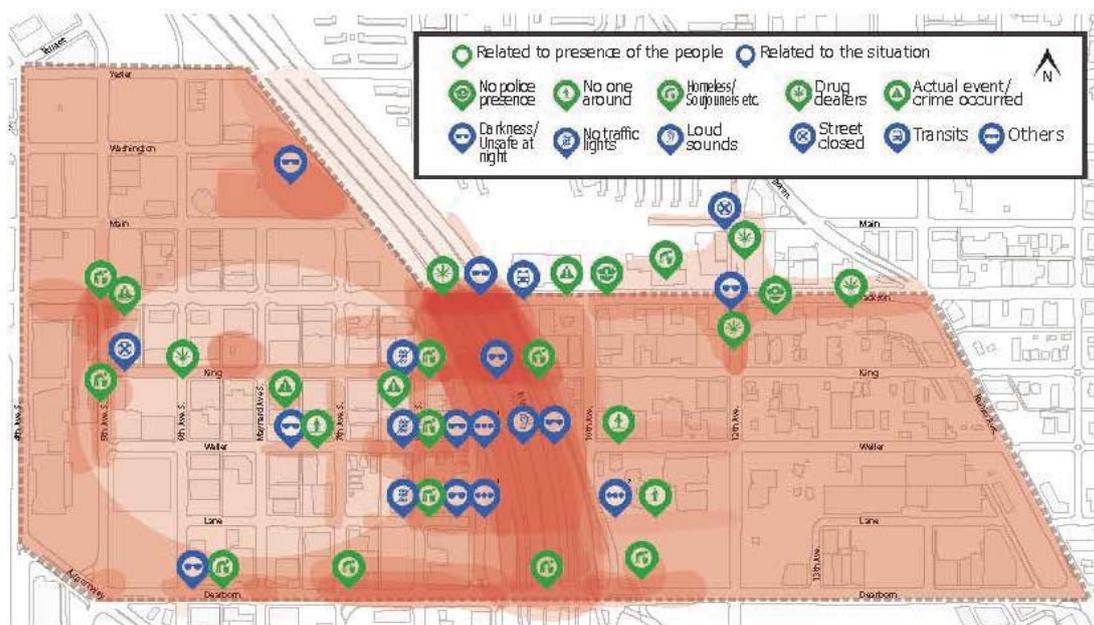


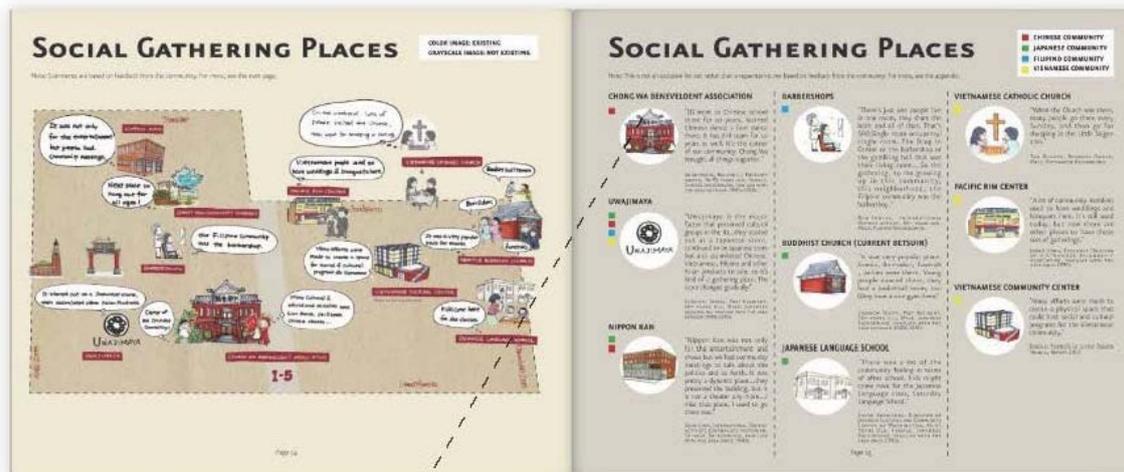
Figure 7. Heat map of Unsafe Feelings at the CID

In order to address the issue of public safety, the CID community wrote a letter to the city mayor about their concern, and holds weekly public safety walks. These are examples of the grass-root movements that the CID community has pursued since 1970s. Because of the social injustice experienced by the communities in the CID, the neighborhood has a strong history of activism to improve the area and fight social injustice through multiple unified, pan-Asian efforts over time.

## **Conclusion**

I believe these activism stems from the strong sense of belonging to the neighborhood fostered by the heritage of the CID. The research revealed that there are many places for gathering, socializing, storytelling, and social services in the CID. Each of these places provides support to the community from a different aspect, and plays a crucial role in providing a strong bond within each cultural group as well as between cultural groups in the CID. Preserving them and sharing information about their background are keys to retaining the sense of belonging among the people in the CID, which ultimately leads to preserving the power of the CID community that have faced various social challenges and turned them into opportunity.

I hope the booklet “Stories of Chinatown-International District from Multiple Cultural Backgrounds” based on my research, will help people see the CID from different perspectives, understand what it is that they have in common, as well as their differences, and appreciate its rich history and take this into account going forward – such that the culture and identity of the neighborhood is considered and respected. (Figure 8)



"[I] went to Chinese school there for 10 years, learned Chinese dance + lion dance there. It has drill team for 10 years as well. It's the center of our community. Chong Wa brought all things together."

ANONYMOUS, BUILDING / PROPERTY OWNER, 36-45 YEARS OLD, FEMALE, CHINESE BACKGROUND, FAMILIAR WITH THE AREA BETWEEN 1980S-2010S.

Figure 8. Sample pages of a booklet “Stories of Chinatown-International District from Multiple Cultural Background”, distributed to community members at the CID. The booklet shows the whole processes of the research, as well as a series of maps explaining social gathering, storytelling, social services, entertainment places and parks in the district with comments from interviewees/respondents.

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# **Strengthening of social cohesion in localities through community-based urban regeneration: A Case of Residential Environment Management Project in Samdeok Town, Seoul**

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## **Abstract**

Cities are faced with growing social and economic disparities, which can negatively affect social support networks, decrease interpersonal trust and confidence in public institutions, and lead to social and political conflicts. This erodes social cohesion in cities and reduces their capacity to effectively cope with hazardous social, economic and environmental risks in the future. Seoul Metropolitan Government has recognised the importance of social cohesion to improve a long-term resilience of the city, and introduced several community-based urban regeneration approaches to not only improve the built environment, but also to recover eroded social relationships and trust among the residents, and to build resilient communities and the city. This paper aims to explore to what extent have these approaches succeeded in meeting their aims, and to assess how much community-based urban regeneration has strengthened social cohesion in the city. By focusing on the Residential Environment Management Project in Samdeok Town, the paper argues that urban regeneration has improved social relationships among the residents, which have earlier been in decline. Stronger social relationships, established through community workshops – which were the key instrument to involve residents in urban regeneration – have contributed to better communication, understanding, and trust among the residents. Community building, however, takes time and urban regeneration in Samdeok Town is still an on-going process. In this sense, it is early to assess in details how much community-based urban regeneration will eventually strengthen social cohesion and improve long-term resilience in the city.

Keywords: community building, resilient city, Seoul, social cohesion, urban regeneration

## 1. Introduction: Social cohesion and resilient city

Social cohesion – or more specifically, strengthening of social cohesion – has been high on political agenda of national and local governments, international organisations, and civil society organisations for the last decade. It has largely become the ‘over-arching objective of countries’ social policies’ (OECD 2016, p.73). At the same time, there is still little agreement on how to understand social cohesion so in theoretical as in practical terms (Jenson 2010; Larsen 2013). In general, social cohesion is seen as the ‘glue’ that holds together social groups and societies. Berger-Schmitt (2002) argues that there are two main lines of discussion in this regard. One of them emphasises the *inequality dimension* of social cohesion. Inclusive societies are believed to be more cohesive than those with higher social inequality or social exclusion. Strengthening of social cohesion is in this case related to equal opportunities, low levels of social and economic disparities, and social inclusion. The other line focuses on the *social capital dimension* of social cohesion, which is considered as the value of social relationships and social networks. Societies with higher social capital are better off than those without it (Putnam 2000). Improving social connections, trust, communication and cooperation is believed to strengthen social cohesion.

Jenson (2010) suggests that social cohesion also has inherent *institutional dimension* since it is affected by the relationship between citizens, public institutions and forms of governance. Confidence in public institutions or the ‘extent of trust that citizens have in the political institutions of their community’ affects ‘the extent to which individuals are well integrated and taking part in social life’ (OECD 2016, p.74). Higher confidence in public institutions and better governance can positively affect social cohesion.

Different dimensions of social cohesion often overlap. Forrest and Kearns (2001) showed that social cohesion in localities is affected by rather diverse factors, including shared values and civic culture among citizens, social order and control, solidarity, trust, low social and economic disparities, social capital, as well as strong community attachment and identity. Cohesive localities are in result expected to contribute to the social cohesion of cities in general. Kearns and Forrest (2000, p. 1013), however, also warned that this is not always the case and strong social cohesion in neighbourhoods can sometimes result in ‘discrimination and exclusion and about a majority imposing its will or value system on a minority.’ This can pose a large challenge for socially fragmented and culturally diverse cities and societies at large. Larsen (2013, p.11) argues that in this case ‘the most important aspect of social cohesion is that citizens believe they share the norm of not cheating each other’. Erosion of

interpersonal trust, trust to other social groups, and confidence in public institutions can be seen as one of the key challenges today for strengthening of social cohesion in increasingly heterogeneous cities.

Moreover, cities are now facing growing social and economic disparities in the aftermath of the global economic slowdown, which negatively affects social support networks, erodes interpersonal trust and confidence in public institutions, and leads to social and political conflicts. Although Jenson (2010, p. 14) warned that ‘there is little consensus that social cohesion can do something at the level of the community, city or country’ a growing body of research suggests that strong social cohesion can contribute not only to economic growth and quality of life in cities, but can also enhance their capacity to recover from any stress while maintaining essential functions, structures, and identity as well as adapting and thriving against these negative trends (Forrest and Kearns 2001; Dempsey et al. 2011; OECD 2013, 2015). Social erosion, on contrary, reduces the resilience of cities to effectively cope with hazardous social, economic and environmental risks.

Cities around the world are approaching these challenges in different ways. Community-based urban regeneration of the substandard residential area has nevertheless been recognised as one of the key instruments that allow cities to strengthen social cohesion in localities (Manzi et al., 2010; Dempsey et al. 2011).<sup>1</sup> This approach not only improves built environment but can also address social erosion by creating inclusive and shared places, where social groups of different economic, social and cultural backgrounds can meet, communicate and eventually work to collectively resolve social, economic and environmental challenges in their neighbourhoods. Successful urban regeneration can positively affect solidarity, civic culture, social capital and collective identities in localities, which are important dimensions of social cohesion in cities (Forrest and Kearns 2001). Moreover, community-based urban regeneration can be instrumental in improving trust between different stakeholders and confidence in public institutions by actively involving citizens in planning and decision-making (Cho and Križnik 2017).

This paper aims to understand the role of community-based urban regeneration in strengthening of social cohesion in localities by focusing on *Residential Environment Management Project* (REMP) in Samdeok Town in Seoul. Seoul Metropolitan Government (SMG) has recently recognised the importance of community-based urban regeneration in addressing the growing social, economic and environmental challenges in the city, and several novel approaches, which address improvement of substandard residential areas, have

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<sup>1</sup> Community-based urban regeneration refers to the transformation of residential or other urban areas, which aims not only to improve the built environment but also to sustain and strengthen communal life and shared identities. Participation of residents in planning and management of these areas, as well as in decision-making is of utmost importance for successful community-based urban regeneration (Cho and Križnik 2017).

been introduced. These approaches aim to improve quality of built environment and to recover eroded social relationships in localities by actively involving residents in planning and decision-making (SMG 2011, 2012, 2013, 2015c, 2015d). In this way, SMG wants to increase trust among citizens and their confidence in public institutions, which is expected to strengthen social cohesion in the city (Ha 2015; Kim et al. 2015; Maeng et al. 2016; Cho and Križnik 2017).

Since 2014, the authors have been visiting Samdeok Town, attended community workshops and other communal activities in the neighbourhood, and conducted exploratory interviews with 8 individuals in order to better understand how the residents were involved in urban regeneration, how REMP has been planned and implemented, and what consequences it had on the communal life in locality. Particular attention has been placed on how REMP has affected social connections and trust among the residents in Samdeok Town and their confidence in public institutions. Interviewees included a social worker of the Jeongneung Social Welfare Centre, a community activist from Sharing for Future, an urban planner from PMA, researcher from Hanyang University and four residents of Samdeok Town. Moreover, analysis of policy documents, research reports and community websites and newspapers has been conducted to collect general data on REMP.

The paper is organised in four parts. First, negative social and economic trends, which affect social cohesion in South Korea, are presented. The second part starts with an overview of community-based urban regeneration approaches in Seoul and continues with an analysis of REMP in Samdeok Town, by discussing planning process, aims and civic participation in decision-making. The next part talks about the relationship between REMP and community building in the locality. Finally, strengthening of social cohesion in localities through community-based urban regeneration is assessed and conclusions are presented.

## **2. Declining trust and social cohesion in South Korea**

South Korea has been recently faced with a prolonged period of economic slowdown as a result of the global economic recession. This has resulted in slow economic growth, declining investments, rising unemployment, growing household debt and declining domestic consumption. Although the economy has partly recovered, its benefits remain in the hands of a few, which additionally contributes to the existing social and economic disparities in South Korea (Kim 2009). Many South Koreans continue to experience economic uncertainties, growing income inequalities and social exclusion, as well as low prospects for upward social

mobility.<sup>2</sup> These negative trends have particularly affected marginal and disadvantaged social groups. While the South Korean youth, for instance, is facing shrinking employment opportunities and rising non-regular employment, the elderly are increasingly marginalised and experience one of the highest relative poverty rates among developed countries (OECD 2013, 2014).

South Korea also has one of the lowest levels of public social spending among developed countries, which on the one hand limits public institutions to effectively provide formal material support to those in need, and to balance in this way the negative social consequences of economic slowdown. South Korea spends only about 10% of the GDP for social services, health, income support and pensions, which is less than half of the average public social spending across the OECD (2014, 2016). On the other hand, erosion of the nuclear family and social relations among the neighbours has decreased social connections in South Korea and limited informal sources of material and emotional support in the time of growing social and economic uncertainties. According to OECD (2015, p. 82), South Korea showed one of the lowest levels of social connections in 2014 with 27.6% of survey respondents claiming that they had no ‘relatives or friends they can count on’, which is twice as many as the survey average.

Social and economic disparities, unemployment and non-regular employment along with the erosion of social connections are known to decrease trust. Low-income earners or unemployed have notably lower trust than those employed, retired, or in education or training (OECD 2015). Compared to other developed countries, South Korea displays low levels of interpersonal trust and tolerance to minority groups, as well as low confidence in public institutions. Only 26.6% of South Koreans showed high interpersonal trust in 2010, while only 28% of them expressed confidence in the national government in 2014. Both levels of trust were well below the survey average of 36% and 42.3% respectively (OECD 2016). In consequence, low social connections and declining trust negatively affect social cohesion in South Korea, which OECD (2013) recognised – along with the ageing society, income inequalities, and low social spending– as one of the major challenges if the country wants to sustain economic growth and social achievements of the past.

Seoul largely mirrors the social and economic situation in South Korea. The economic slowdown, however, seems to have had a stronger impact on Seoul, where the economy is strongly rooted in services rather than industrial production, compared to the country. Average annual growth of the GRDP in Seoul shows slower recovery than that of the metropolitan

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<sup>2</sup> Among OECD countries, South Koreans are reported to worry the most ‘about losing their job or not finding one’ (OECD 2016, p. 129).

region and South Korea (Seoul Institute 2015). Unemployment and non-regular employment, income inequalities with social and economic polarisation, growing individualisation and declining social connections are believed to be major reasons for social erosion in Seoul. In 2010, for instance, 47.6% of survey respondents in Seoul claimed they trusted their neighbours. Four years later the number of these respondents dropped below 40%. The number of survey respondents in Seoul, who trusted public institutions, also decreased from 41.7% in 2010 to 32.8% in 2014, while the number of those, who distrust public institutions, doubled during the same period (SMG 2015a, 2015b). Growing distrust can be seen as a result of a dissatisfaction among the citizens with the inability – or what some perceive as unwillingness – of public institutions to effectively address emerging social and economic problems in the country and in the city.

Concerns about these problems played a major role in the 2010 local elections, when the candidates, calling for a stronger involvement of the local government in providing universal social welfare, have won the majority in the Seoul Metropolitan Council as well as in most of the district councils. In 2011, an independent candidate Park Won-soon somewhat unexpectedly won the by-elections for the new Seoul mayor, pledging in his electoral campaign that ‘universal welfare will be the engine that creates a Seoul centred on people’ (Park cited in Lee 2011). His victory and subsequent re-election in 2014 can be seen as a result of his genuine engagement with the citizens over a wide range of social, economic and environmental issues in the city to build ‘a city for the citizens and by the citizens’ (SMG 2012, p. 18). The new local government has in this regard recognised community building as the key to strengthen social cohesion, create new employment opportunities, and improve the quality of life in the city.

The city government has decided to counter this trend [of growing social and economic polarisation] by making the neighbourhood community at the centre of its policy making. [...] Re-establishing a neighbourhood community is a process by which the lost human relationship among neighbours are restored, leading neighbours to look after one another, become leading players in a more cooperative economic system, hold community gatherings and celebrations, and discuss, decide and implement changes in community affairs. (SMG 2015d, p. 240)

To achieve these ambitious goals, the local government has introduced the *Neighbourhood Community Project* in 2012 as the main community building approach, and established the *Seoul Community Support Center* as the responsible public institution to plan, implement and manage this project (SMG 2015d). Community building has also become an important goal of urban development, which has started to focus on civic participation in planning and decision-making. For this reason, community-based urban regeneration has been established

as the key approach, not only to improve the built environment but also to involve citizens in urban development in Seoul (SMG 2013, 2015c). Improvement of substandard residential areas has become in this way an important instrument of community building, which aims to improve social connections and trust among the residents, to expand their social support networks, revive local economies, restore communal life and culture, and to establish local communities as the main venues of self-management in the city. Community-based urban regeneration is expected to strengthen social cohesion in localities and to improve long-term resilience in the city (Cho and Križnik, 2017).

### **3. Case study: changing Samdeok Town together**

#### **3.1 Community-based urban regeneration in Seoul**

SMG has introduced several community-based urban regeneration approaches over the past years (SMG 2011, 2013, 2015c). These were on the one hand seen as an opportunity to build stronger communities and to strengthen social cohesion in the city. On the other hand, community-based urban regeneration has been recognised as an alternative to market-driven urban development, which used to shape Seoul in the past. Previous urban redevelopment approaches have become not only economically unviable in the period of slow economic growth, but have also proved unable to strengthen social cohesion in the city (Križnik 2014). The New Town Development Project in particular, which SMG (2010) introduced in 2002 as a comprehensive approach to addressing uneven urban development in the city, has been largely blamed for the citywide demolition of low-rise residential areas, displacement of low-income residents, aggressive gentrification, destruction of small businesses and decline of communal life. It has also caused soaring rents and living costs, negatively affected social connections among residents, and contributed to social conflicts in localities (Shin and Kim 2015).

In the past, the local government also used to be more supportive of speculative interests of landowners and construction corporations than those of the residents, which increased distrust between the residents, landowners, redevelopment associations and public institutions. This has undermined the very legitimacy of the local government in the eyes of citizens (Križnik 2009, 2014). For these reasons, SMG has decided in 2012 to fully or partly stop the ongoing urban redevelopment projects and to establish instead a more comprehensive approach to improve substandard residential areas in Seoul (Ha 2015; Cho and Križnik 2017).

SMG (2011) introduced the *Liveable Town-making Pilot Project* in 2008 and *Seoul Human Town Project* in 2010 to improve these substandard residential areas of predominately

low-rise multifamily houses for low- or middle-income households, with a poor quality of infrastructure and lacking social amenities and open space. In the past, these neighbourhoods were faced with restrictions in terms of urban development, while more recently some were released from urban redevelopment designated areas. The residents along with SMG were, for these reasons, looking for alternatives to improve living environment and quality of life in neighbourhoods, which were evidently underdeveloped as compared to the newer residential complexes. Community-based urban regeneration approaches were considered as an alternative to improve built environment in these substandard residential areas, as well as social connections and trust among the residents, particularly through civic participation (Cho and Križnik 2017).

In 2012, SMG (2013) introduced a new community-based urban regeneration approach, based on the revised national act, to promote a gradual improvement and management of substandard residential areas rather than full-scale demolition and redevelopment. The new *Residential Environment Management Project* (REMP) addressed the transformation of substandard 'residential environments in areas where low-income urban residents reside collectively, wherein rearrangement basis facilities are extremely inferior and worn-out and inferior structures are excessively concentrated' (MOLIT 2012).

The REMP aims to improve built environment and infrastructure as well as to provide basic social amenities, such as community centres and open spaces, required for community building in these localities. It has also allocated funding for improvement of private street walls, gates or parking lots. Moreover, SMG set up a low-interest loan program for improvement of private houses. Compared to the previous approaches, REMP put more emphasis on civic participation in planning and decision-making (Seongbuk-gu District Office 2014; Kim et al. 2015). Between 2010 and 2016, 63 substandard residential areas in Seoul were selected for community-based urban regeneration, mostly based on the REMP. Construction of new social amenities and infrastructure has been completed in 13 areas, while the planning was finished for another 22 of them (Maeng et al. 2016).

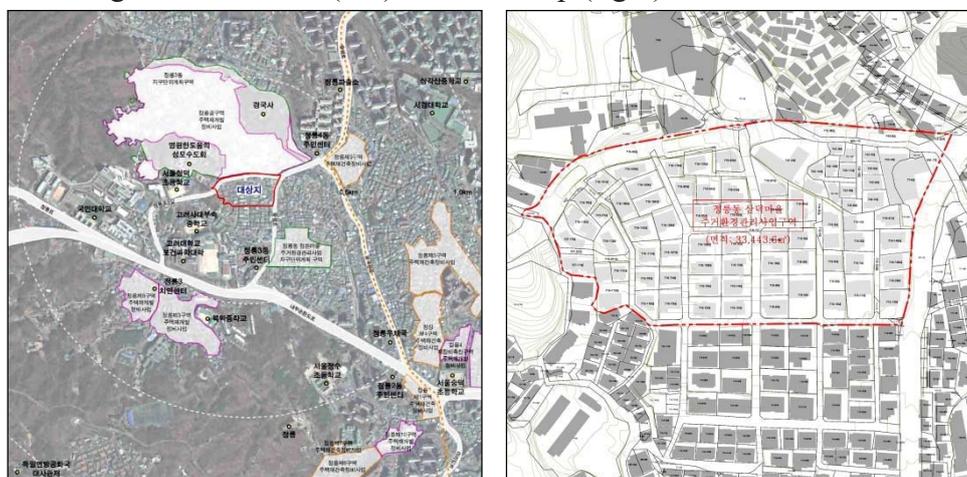
In 2014, the *Seoul-type Urban Regeneration Pilot Project* was introduced in a bid to expand urban regeneration to larger mixed-use areas. This new approach has been integrated into the *2025 Urban Regeneration Strategic Plan* to establish a long-term direction for urban regeneration in Seoul, as well as to specify detailed guidelines for the transformation of deprived urban areas citywide. With this approach, SMG (2015c) has recognised the importance of civic participation not only for its contribution to the improvement of substandard residential areas but primarily for its role in community building and strengthening of social sustainability in the city. Kim (2013, p. 139) suggests that introduction

of new community-based urban regeneration approaches in South Korea and Seoul signals a larger and systemic ‘shift of urban policy from demolition to regeneration, and from private-initiative development to public-initiative planning’.

### 3.2 Residential Environment Management Project in Samdeok Town

Samdeok Town is a small 33,444 sq. m. residential neighbourhood, located in Jeongneung-dong, Seongbuk-gu district in the northern Seoul (Figure 1). Its name originates from the REMP, where the transformation of the neighbourhood was referred to as ‘Samdeok Project’, after the nearby *Samdeok Residential Complex*. Although the REMP does not include the complex, the residents have gradually adopted the name to avoid further naming confusion.<sup>3</sup> In 2014, the neighbourhood had 466 residents and 178 households. In contrast to the nearby residential areas, Samdeok Town was a quiet middle-class area with well-educated residents, who have been living in the neighbourhood in some cases for three generations. Private single and multi-family houses were rather large and well maintained, although many were built in the 1970s and 1980s (Kim et al. 2015). In this sense, the quality of living environment was comparatively good and it is difficult to see Samdeok Town as a seriously deprived urban area in spite of lacking social amenities and infrastructure.

Figure 1. Location (left) and area map (right) of Samdeok Town



Source: Seongbuk-gu District Office 2014, p. 5–6

Although there were no obvious social or environmental problems, many landowners wanted to increase the value of their property and the neighbourhood has been earlier selected for the *Housing Reconstruction Project*, which is an urban redevelopment approach based on the full-scale demolition of the area (MOLIT 2012). Because of the nearby Bukhansan National

<sup>3</sup> Samdeok was originally the name of the construction company, which developed the residential complex in the late 1960s. The residents decided to keep the name but changed its meaning which now refers to ‘three virtues of filial duty, goodness and purity’ (Kim et al. 2015).

Park, the transformation of the neighbourhood and private houses has been restricted and the expected urban redevelopment never took place. With the support of Seongbuk-gu district office, the residents have eventually agreed to cancel the urban redevelopment and to apply instead for the REMP, in a bid to improve and maintain the neighbourhood rather than maximise their financial benefits through urban redevelopment (Kim et al. 2015).

In 2013, SMG selected Samdeok Town as a site of REMP after more than 50% of landowners had agreed with this move (Table 1). The Seongbuk-gu District Office (2014, 2015b) has selected an urban planning office PMA to plan and manage the project, based on ideas and interests of the residents. Together they produced the final master plan, which was officially adopted in July 2015. The master plan focuses on provision and improvement of infrastructure, community building and housing renovation. Improvements to infrastructure include new sewerage, pavement, parking lots, CCTV installation, street lighting and beautification, as well as a provision of a new community centre. It also guides community building, in terms of community organisation, participation methods and cultural programmes. Finally, the master plan provides guidelines for the renovation of private houses, gardens and street walls. While PMA focused on planning and management of the REMP, a local NGO, called Sharing for Future, was responsible for the involvement of residents in planning and decision-making, organisation of surveys, community workshops, dissemination of results and help with communal activities in the locality. Moreover, the social worker from the Jeongneung Social Welfare Centre assisted community building along with the community activists from Sharing for Future (Seongbuk-gu District Office 2014, 2015b).

### **3.3 Civic participation in planning and decision-making**

Civic participation in planning and decision-making is an integral part of REMP (SMG 2013). This has been achieved in several steps. In Samdeok Town, PMA and Sharing for Future have first disseminated information about urban regeneration and surveyed the residents to better understand their interests, which ranged from safety issues, waste disposal, housing renovation, parking problems, deregulation of building restrictions, damages, to installation of exercising equipment (Kim et al. 2015). In the next step, nine community workshops were organised with the residents, experts and public officials between February and September 2014 (Table 1). During the first workshop, the residents and experts walked around the neighbourhood to identify its challenges and opportunities. Later, participants discussed possibilities to improve living environment, drafted urban design and architectural guidelines, learned from other cases of REMP, and talked about the future community centre and its management (Seongbuk-gu District Office, 2015a). Community workshops have also offered an opportunity for the residents to establish a community committee, which was expected to

monitor planning and implementation of the REMP (Kim et al. 2015; SH et al. 2015).

PMA and Sharing for Future have used SNS as the main way to involve the residents in planning at the beginning. Although not many were initially involved, this kind of communication has turned out to be instrumental for the experts to receive information from the neighbourhood. In addition, community activists and social welfare centre used SMS to inform the residents about planned activities, such as community workshops, meetings and other communal events. A newspaper was also published and distributed to inform the residents about the results of community workshops. In this way, everyone was informed about the progress of REMP, which was particularly important for those residents, who were not able or did not want to take part in community workshops at the beginning (Kim et al. 2015).

Figure 2. Community workshop in a private garden, April 22<sup>nd</sup> 2014



Source: Kim et al. 2015, p. 46

Lacking participation has been known as a common problem of REMP in its early stages (Maeng et al. 2016). Samdeok Town was no exception to the point. Apart from this, another problem with civic participation in Samdeok Town was a lack of suitable public venues, where community workshops could take place. The residents, however, solved this by offering their private houses. First, a private basement was used to host communal activities for a month, and afterwards a resident invited experts and neighbours to community workshop in her private garden. Others quickly followed the case, once they had experienced the hospitality of other neighbours. Eventually most of the community workshops were held

in private houses and gardens (Figure 2). It seems that REMP directly affected social connections among residents in this early stage already (Kim et al. 2015).<sup>4</sup>

The aim of REMP, however, is not only to improve social connections among the residents on a short term, but also to provide necessary social amenities and infrastructure to maintain them in the long run. For this reason, the establishment of the community centre is considered as the key part of REMP (SMG 2013). Due to lack of suitable social amenities in Samdeok Town, SMG decided in March 2015 to purchase a private house and renovate it into a community centre, which will host communal activities and help in bringing the residents together. The residents were asked to decide about its location and are at the same time expected to maintain and independently manage the community centre in future (Table 1) (Seongbuk-gu District Office 2015a).

Table 1. REMP and communal activities in Samdeok Town

<i>Date</i>	<i>Activity</i>
10 Oct 2013	Samdeok Town was announced as REMP area
27 Dec 2013	Beginning of REMP planning and management
7 Feb 2014	Seongbuk-gu District Office officially informs residents about REMP
Feb – March 2014	Survey of residents about their needs
Feb – Sep 2014	Community workshops (9 times)
Feb – Dec 2014	Publishing of community newsletter (11 issues)
Feb – Dec 2014	Meetings of Community Committee (22 times)
May – June 2014	Survey of residents about master plan
17 May 2014	Samdeok Street Festival
25 June 2014	Social dining programme starts
24 July 2014	Residents vote for location of community centre
3 Sep 2014	Residents start with DIY workshops
22 Dec 2014	Community Committee in Samdeok Town officially established
Jan – Dec 2015	Meetings of Community Committee (18 times)
May 2015	SMG purchased private house for the future community centre
May – Oct 2015	Residents raise community funds (4 events)
July – Dec 2015	Residents organise skill-sharing classes
Jan 2016 –	Residents continue with various communal activities

<sup>4</sup> In the past, it was not uncommon to have monthly community meetings in Korea. In the interviews, the residents told that in Samdeok Town they used to have these meeting still in the 1970s. But this practice has stopped at some point. For this reason, the residents felt that they have revived a part of their culture and shared identity by starting community meetings again (Kim et al. 2015).

19 Sept 2016	Construction and improvement of infrastructure starts
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#### 4. From residents' participation towards community building

Active involvement of residents in planning and decision-making is expected not only to reflect their needs and interests in the REMP master plan but also to improve social connections and trust among the residents and to strengthen their confidence in public institutions (SMG 2013; Cho and Križnik 2017). This has also been of utmost importance in Samdeok Town, where social connections among the residents used to be rather underdeveloped. In the interviews with a community activist and a social worker, both have expressed surprise about the low interest that the residents showed about the neighbourhood and their neighbours in the past. Lee (2016) similarly reports about low levels of social capital in the locality, which seems related to particular cultural values, where the residents gave priority to privacy over other aspects of communal life.

This has radically changed after the beginning of the REMP. In her view, early communal workshops, organised by community activists and social welfare centre, have triggered community building and become instrumental in the subsequent development of a strong community in Samdeok Town (Lee 2016). Encouraged by positive experiences of these community workshops, a small group of residents started to improve the living environment in the locality. At the beginning, these communal activities were limited to street cleaning or flower planting over weekends. These voluntary activities, nevertheless, soon grew in terms of scale as well as the number of participants. In result, the residents organised the first street festival in Samdeok Town in May 2014 (Table 1). This required removal of cars from the streets, which has earlier prevented any larger activity to take place outside private houses. For this reason, the organisers had to visit each house and ask the neighbours for cooperation and help with the festival. On the day of the festival the cars were gone and the streets were filled with neighbours sharing food, trading second-hand goods, playing with kids, helping the elderly, or chatting about their lives and the neighbourhood (Figure 3).

Figure 3. Street festival in Samdeok Town, May 17<sup>th</sup> 2014



Source: Kim et al. 2015, p. 84

The street festival was immensely successful in terms of improving eroded social relationships in locality, which shows that community workshops encouraged community building in Samdeok Town. More importantly, this event showed that communal activities offered opportunity for the residents to talk to each other and get to know each other better, which has in result improved trust and increased awareness of the residents about the communal life and shared identity. Interviews with the residents have clearly confirmed this. The interviewees agreed that REMP has improved relationships among them as well as the quality of life and safety in the neighbourhood. In this way communal activities have changed the perception and meaning of the neighbourhood for the residents rather than the actual improvement of the built environment, which has only started to take shape in September 2016 (Table 1).

Communal activities have also resulted in the noticeably stronger participation of the residents in planning and decision-making. At the beginning, there were less than 20 residents taking part in community workshops. However, more than 70 residents took part in the final sessions (Kim et al. 2015). Moreover, community workshops have also become instrumental in establishing the Community Committee in Samdeok Town after it had obtained the support of more than 10% of residents in January 2015, which is a legal requirement to officially represent a particular community (SMG 2014). The committee has organised communal activities, including food sharing, helping to the elderly, selling second-hand goods, and also promoted and supervised the implementation of the REMP. In their efforts to improve communal life in Samdeok Town, the committee also received

support from community activists and welfare centre as well as additional training from the Seongbuk-gu District Office.

This has continued even after the community workshops were finished and the master plan has been adopted in July 2014, although the committee had to find alternative sources of funding. They managed to obtain small funding by selling food and used clothes, and by applying for other support programmes offered by SMG, Seoul Community Support Centre or Seongbuk-gu District Office (Lee 2016). Lacking funding, however, was not the only challenge that the committee had to face. As their activities progressed, the number of participating residents has also increased, which has brought more conflicts together. At the same time, the residents have improved their skills to deal with and resolve those conflicts by collectively learning from trials and errors in building a community in Samdeok Town (Kim et al. 2015).

The provision of social amenities and construction of new infrastructure has just started recently, but the REMP has already positively affected social relationships between the residents in Samdeok Town by involving them in planning and decision-making, as well as triggering community building in the locality. In this sense, REMP represents an important turning point in the formation and subsequent development of the community in Samdeok Town. In the due process the meaning and 'identity of the village changed from geographical and physical boundaries to the space of collective activities and mutual exchange of opinions through the community activities' (Lee 2016, p. 225).

## 5. Conclusion

Community-based urban regeneration in Samdeok Town aims to improve the quality of built environment, as well as to recover social relationships among the residents, which have earlier been in decline. The research results show that these aims have already been partly achieved. Community workshops, which aimed to involve the residents in planning and decision-making, have at the same time contributed to better communication and understanding among the residents and encouraged them to organise and take part in other communal activities in the neighbourhood. This suggests that civic participation in planning and decision-making has triggered community building, which in result improved social connections and trust among the residents and strengthened their confidence in public institutions. Community-based urban regeneration has in this way positively affected some of the key dimensions of social cohesion. Community building, however, takes time and the urban regeneration in Samdeok Town is an on-going process. For these reasons, it is early to

assess in detail to what extent will community-based urban regeneration eventually strengthen social cohesion and improve long-term resilience in the city. This calls for a follow-up research, where a larger number of residents would be included in interviews or survey over a longer period of time to observe multifaceted consequences of the REMP on social cohesion in the locality and the city.

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## Not-Designing for Safety: Case of Patna

Sharma, Nikita

### Abstract

Built environment and its interaction with humans, define a very complex process of safety. The notion of safety is subjective and our process of designing the space is filled with different ideologies. During the field work in Patna in eastern India, I came across these different concepts of space influenced by ethnic, religious, linguistic and politico- historical factors. Notoriously known as one of the most unsafe city of India, Patna is a classic example of the Indian way of Urbanisation.

Architecture/built form make the basic unit of any space in relation with its function and form. The socio- cultural importance of a space arises only when the form and spaces are elaborated into socially sectioned patterns. The scheme of a building emerged from the social logic of space with individual experience to follow a hierarchy of uses within the building. Several theories have been conceptualised to define the relation between society and its architectural and urban forms. Patna was explored to demonstrate conditions of safe and unsafe spaces with the help of a slum, Lohanipur.

Keywords: Safe city; Urban Planning; Public Spaces

### 1. Introduction

In September 2014, Patna high court commented on the bias in governance and disappointing state of public services. Court commented, " There is two type of Town: VVIP Area with all amenities and Facilities and Public area as Dustbin"(sic). It further added that the capital city of Bihar looks like a slum and this has direct impact on city economy.<sup>1</sup> With 32.91% of poverty rate, higher than the national average of 27.78%, Patna supports maximum below poverty urban population for Bihar state. According to the base line survey held by SPUR (Support Program for Urban Reform) , an estimated 65% of the population reside in slums, as squatters and have poor quality of housing. The article pinpointed the various failures of urban local bodies and it also explained the failure of urbanization in India. The rate of urbanization has consistently outstripped even the urban authority's vision to control it. This process has ignored all the forecasts and estimates. In absence of any intervention put forward by the state run infrastructure, private developers have already gained monopoly powers in the state. Patna city has now become more secluded due to increase in private

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<sup>1</sup> Prakash Pathak (PRIA), 2014

investment in terms of development and automobile dependency due to lack of any visible public transport. Indian urbanisation has spiralled out of control. About 30% of urban population of its total population lives in about 37 million plus cities and the rest in mid-sized and small cities. According to the McKinsey Global Institute Report (Sankhe et al 2010), India is set to house 40 per cent of the world's urban population by 2030. This high level of urbanization is expected to be driven by high economic growth (an average of 8 per cent between 2004 and 2009) which has been witnessed in India in the recent years. However, by global standards or even as per East and South-east Asian standards, this level of urbanization is low (which can be partly attributed to a definitional problem) and partly to the processes of exclusion built in it.<sup>2</sup>

Once seen as an indicator of modernity and progress, urban centres are no longer the centre of change but a focal point of crises. From developed global north to global south, urban area has become a core of social problems, illiteracy, disease, crime and poverty. According to the latest estimate of Planning Commission of India (2012), 20.9 per cent of population in the cities is poor. The higher incidence of poverty in the urban area is indicative of the occurrence of exclusive urban development. The urban conflict and violence is directly related to this exclusion.

The pattern of urbanization has changed, from only five cities and few small urban centres to present situation, where mid sized cities has greater proliferation. As per projections, growth will be more spatial and there will be increase in the land coverage. The census towns are experiencing elevated growth and major metro cities are expanding in to huge urban agglomeration absorbing these census towns. Peri - urban areas right now support 9% of the country's population and provide 18% of the employment and cover almost 1% country's land area. And with the rise of urban share in the economy, huge emphasis is given to empower these medium-small cities like Patna.

New and rapid urbanization has brought a significant change in the basic nature of these cities. Though cities have grown, but their occupational structure has not changed very much. Rural communities have dissolved but the impression of traditions and culture still exists and it is difficult for them to dissolve their long existing ethnic segregation. The urban spaces are elaborated by their ideology created by ethnic, religious, linguistic and politico historical factors. As Lefebvre<sup>3</sup> explained, space cannot be removed from ideology and politics. Indian cities have displayed drastic socioeconomics ideals and sharp contrast. A classic mosaic of chaos with manicured walled community stands in stark contrast to the burlap covered slums. Constant interaction and physical contact between different categories of society is visible in the public spaces. Public spaces are widely known as essential ingredients to the

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<sup>2</sup> *Dynamics of Poverty, Inequality and Violence in Indian Cities: Towards Inclusive Policies and Planning*, IHD and CEPT, 2013

<sup>3</sup> *Lefebvre, Henri, The Production of Space, Blackwell, 1991, ISBN 0-631-18177-6. p. 26.*

sustainability of cities. The fragmentations, segregation, enclosures and encounters between different sections of city have increased the chances of friction and may result in conflicts. These structural conditions of conflicts are more fuelled by the lack of urban vision and poor planning from the government.

The situation of inequality and stressed urban areas are a product of an inequitable and exclusive planning process and lack of urban design in the cities. The Master Plan approach to planning results in unachievable plans. Also, a highly regulatory approach has created unequal cities. The top-down and undemocratic approach to planning and land tenure have forced the urban poor into a situation of illegality, and even subversions of the Master Plans by the State is an apparatus itself<sup>4</sup>. The urban planning paradigm has institutionalised violence within the cities in India. The starting point of urban violence is the policy and practice of urban planning.

Patna, being an economic centre of its region has been witnessing high urban growth and increasing urban conflict and violence. I seek to explore the nature of urban design and planning and governance of the day as a key driver for conflict. This paper focuses on the pattern of socio spatial differentiation and segmentation of the Patna city in terms of its setting and governance. The main objectives will be to see the process of city design from the lens of safety (which is subjective for different categories). My objective is to show how different factors are shaping the urban landscape and have introduced spatial disturbance in Patna with time, and how it has impacted the planning process of the city. I will then further investigate at a level of neighbourhood, based on the field work in a slum called Lohanipur. We will see how spatial and social segregation is associated with deeply associated tradition and how authority on public space is based on their geographical and economic status.

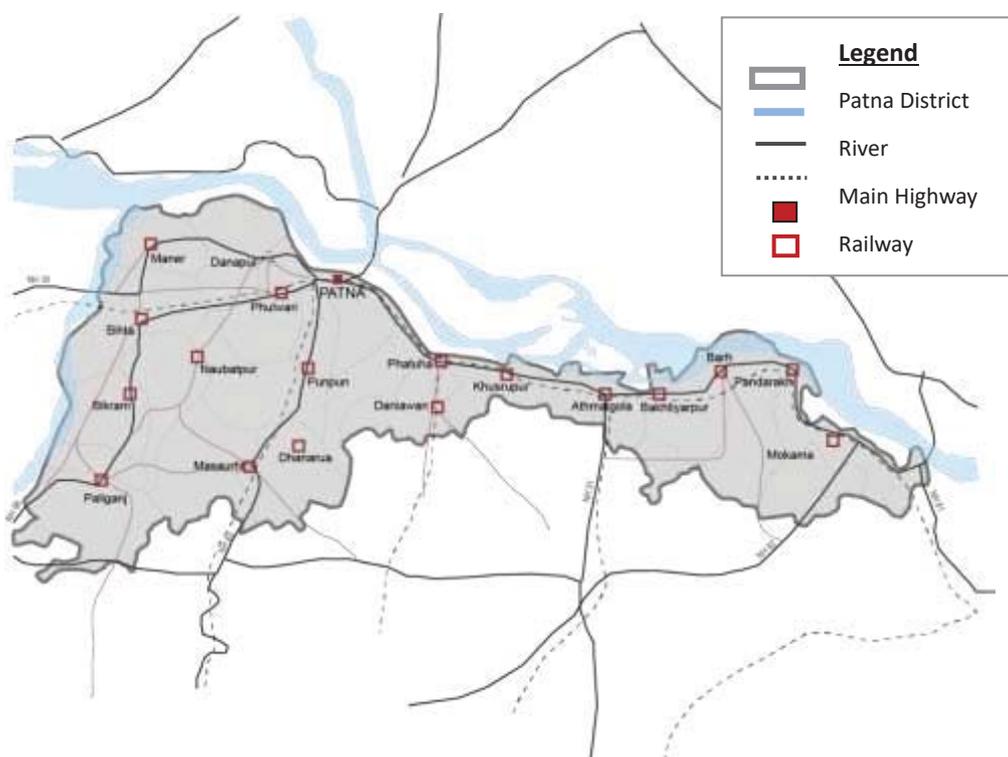
## 2. Patna

Located on the Gangetic plains of Northern India, Patna is the capital city of the state of Bihar. Notoriously known as one of the most unsafe cities of India, it is the key focus area of the urban functions of the region. It holds famous universities, major commercial and service centres, health care with Headquarters of District, Divisional and the State Administration. Studies on Patna usually border on the historical glory of the city. A typical colonial city, Patna holds its geography as a linear city due to its proximity between two rivers. It spreads about 33 kilometres with almost 8 kilometres of width. The urban makeup includes the geographic factors with historic factors, from fortified Mauryan and Mughal capital to the colonial charm and socialist era, and finally to now - post industrialisation negligence. Socio-economic composition of the population is influenced by all these factors. Now, with rapid

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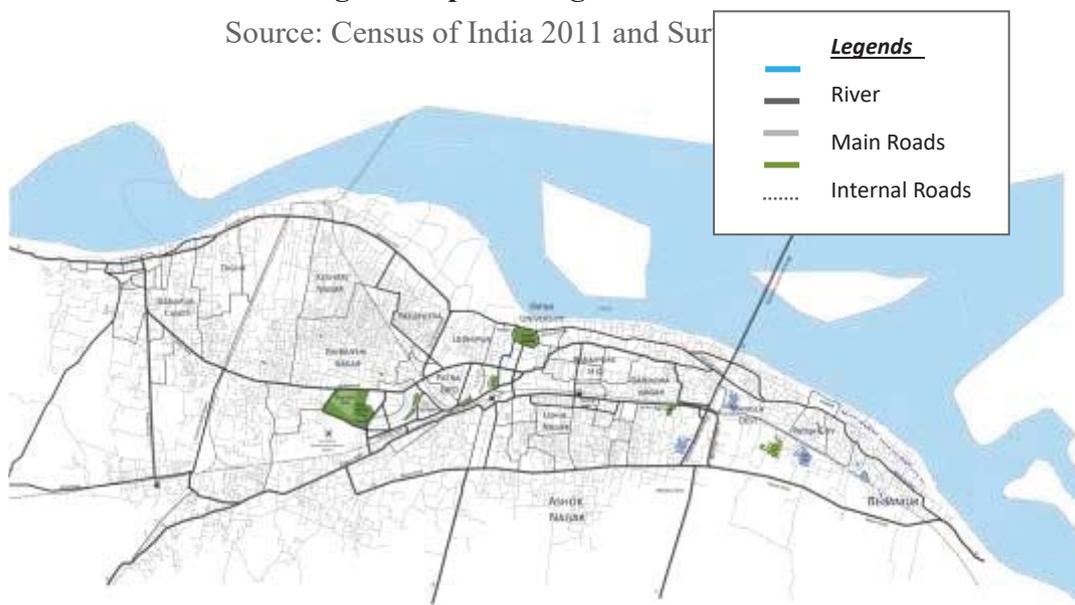
<sup>4</sup> Verma 200, Benjamin 2003

urbanisation, Real Estate market and intrusion of private developers are acting as endogenous forces of growth. In order to comprehend the present informal urban fabric, Patna experienced many stages of growth and some radical changes.



**Fig 1 : Map showing Patna District**

Source: Census of India 2011 and Survey of India



**Fig 2 : Map Showing Patna Municipal Corporation Area**

Source: Census of India 2011 and Survey of India

## 2.1. The Pattern of Growth

The location and growth of Patna is based on its major physical attribute, River Ganges. It has played an important role in controlling the growth of the city and also acted as a main public space of the city. Patna has grown linearly along the river until, a new embankment was built recently to avoid flooding from another seasonal river which flows parallel to the Ganges. Further, the growth of the city accounts to different time periods. First developed as the second capital for the King of Magadga in 490 BCE<sup>5</sup>, Patna or then known as Patligram dominated the riverine trade of the Indo- Gangetic plains. Later it was administered by Muslim invaders under whom, Patna city with extensive road system famously came to be known as the economic centre of eastern India.

Colonial period brought about new development outside the existing city. They built industries and necessary infrastructure to support the city. The establishment of army base camp on the west marked the city boundary. Later, the fortification was removed and development was expanded with new universities, schools and residential areas. The city kept growing economically and emerged as one of the most important commercial and trading centres. The urban fabric saw influence of Dutch, British and Indian architecture. New capital area was developed for the administration base of the region with spaces like district courts and secretariat. Urban parks, plazas and avenues were constructed adding to the social life of the city. In contrast to this, the older part of the city was left to grow organically without any planning regulation. Post Independence, population was mounting drastically due to migration for better education and employment opportunities. A deliberate segregation of class was seen when the colonial area was maintained to act as administration capital for the state, and indigenous features of mix use of the old city were left unchecked.

This difference in new development and old city lingered after Independence in 1947 and remains till today as an element of characterization of urban typology. Patna is a perfect example of the unwanted Indian urbanization. Being an economic centre, it keeps attracting population from rural areas around but lacks in every manner to cater to this population growth. With this haphazard urbanization, inequality and violence in the city kept rising.

**Table 1: Patna- Population Growth 1872-2011**

Year	Population	±%
1807-14	312,000	—
1872	158,000	-49.4%
1881	170,684	+8.0%
1901	134,785	-21.0%

<sup>5</sup> *Master Plan, 1962*

1911	136,153	+1.0%
1921	119,976	-11.9%
1931	159,690	+33.1%
1941	196,415	+23.0%
1951	283,479	+44.3%
1961	364,594	+28.6%
1971	475,300	+30.4%
1981	813,963	+71.3%
1991	956,418	+17.5%
2001	1,376,950	+44.0%
2011	1,683,200	+22.2%

Source: Census of India and Television and Development of Women By Preeti Kumari

## 2.2. Attempts to grow

The spatial organisation of Patna is not only marked by the timeline growth but also by the number of failed endeavours by the planning authority of the city. Being a traditional Indian city, struggling between old and new settlement, Patna saw some attempts of planning after nationwide attempts to regenerate the urban centres. But due to absence of administrative will, parcels of development were left to cope organically.

An attempt in the form of first master plan was drafted by Patna Improvement Trust in 1950s, but since no legal support was issued by the state government, it was never implemented. Influx of population brought with it overcrowding, crunch in breathing space, pollution, overloading on outdated infrastructure system, resulting in urban conflicts. Higher income group started moving out to the then outer edge, changing agricultural land into residential. In the absence of any regulation, new high income residential areas ended up with narrow roads and poor water and sanitation networks with limited public spaces. Old city was left to industries or trading zones with supporting low income population. During this time many slums came up in the old city due to increase in labour demand. This informal urban landscape of the city created socio economic fragmentation.

The second attempt of master plan came in 1980s where around seventeen new residential neighbourhoods were introduced mainly for low / middle income groups. Many successful infrastructure projects were completed under this master plan. A new bypass road on the southern side of the city increased the opportunities for private developers in housing market. This attracted the middle income class to avail affordable housing with relatively better living conditions. Number of unauthorised colonies and slums with low income group kept growing organically. To integrate within the city, the informality (people and their livelihood) negotiated their ways around the authority. Due to demand of informal sector in the economy,

encroachment by the informal population was deliberately disregarded by the authorities. According to the City Development Plan submitted under a national urban policy in July 2006, it is estimated that 63.5 percent of Patna's population resides in slums<sup>6</sup>. The limited access to proper infrastructure is now putting the city under high stress in terms of its sustainability in terms economic, social and environment.

### 2.3. Urban Spaces

Mixed land use Pattern, a combination of residential and economic activities, is a typical typology of Indian cities. An example of this pattern is the development along the main road, Ashok raj path. This combines extremely high residential densities on the higher floors and commercial spaces like small scale industries and shops on ground floor usually on the main thoroughfare.

As a hub of education, Patna University and National Institute of Technology, the city has experienced a huge floating population from all over the state. In addition, the city accommodates thousands of coaching centres to train aspiring undergraduate candidate for competitive admission examinations. These informal institutes are not under any regulation from the government. This young population has given rise to numerous guest and hostel facilities.

The new capital area introduced a marked functional allotment of land use. Since the only function assigned to this area was administration and residential area for government staff, commercial / industrial zones are very limited in this area. The western part of the city is based on a ring and radial road pattern along a central axis, highlighted by the secretariat and the government headquarter Raj Bhawan, as a terminal feature. In no part of the city except in this New Capital Area has any attempt for planning or designed development. It accommodates higher economic residential areas and several flourishing commercial complexes and a major business like Mayura Complex.

Small scale industries, trade, wholesale sectors occupy the eastern part of the city. Lack of infrastructure have left this area polluted, overcrowded and with reduced efficiency. Other economic activities remain scattered all over the main atelier road. Recently, a new industrial estate called Patliputra has been established to house hundreds of factories in the western boundary of the city. With this new industrial boom, urban sprawls are now visible on the periphery of the city.

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<sup>6</sup> *Abhishek Jha, Slum Listing, PRIA's interface with Slum of Patna, PRIA, August 2,2012*

Year	Events	Agency setup
1951	Bihar Town Planning and Improvement Trust, 1951 (Bihar Act XXXV of 1951) and prepared Master Plan for Patna	Patna Improvement Trust
1967	Master Plan approved by State Government vide Notification No. 4860 dated 20th June	-
1982	Bihar Regional Development Authorities Act	Patna Regional Development Authority
1979-81	Directives issued for Revision of Master Plan for Patna 1981-2001 (Not Notified by Govt.)	-
August, 1985	Constitution of sub-committee for scrutiny	-
1986	Draft of Revised Master Plan for Patna (1981-2001) prepared by PRDA	-
1989	Scrutiny of Master Plan completed	-
1990	Revised Master Plan-2001 approved PRDA	-
2006	Draft Master Plan 2021 prepared and approved by PRDA	
2007	Patna Municipal Act. 2007	Strengthen the Urban Local Body
2008	Draft Master Plan 2021 submitted to DoUD&H for Approval	-
2011	Revision of Draft Master Plan 2021 taken up by DoUD & H	CEPT, Ahmedabad is appoint to prepare DRAFT MASTER PLAN for 2021
2011	Preparation of Draft Bihar Urban Planning & Development Act is under taken by the department with assistance provided by CEPT, Ahmedabad	
2012	Bihar Urban Planning & Development Act, 2012	Formation of Bihar Urban Planning & Development Board (2014)
Source: CDP, Patna and Draft Master Plan Report, prepared by DCPL, Kolkata and updated by CEPT, Ahmedabad		

**Fig 3. Chronology of urban initiatives**

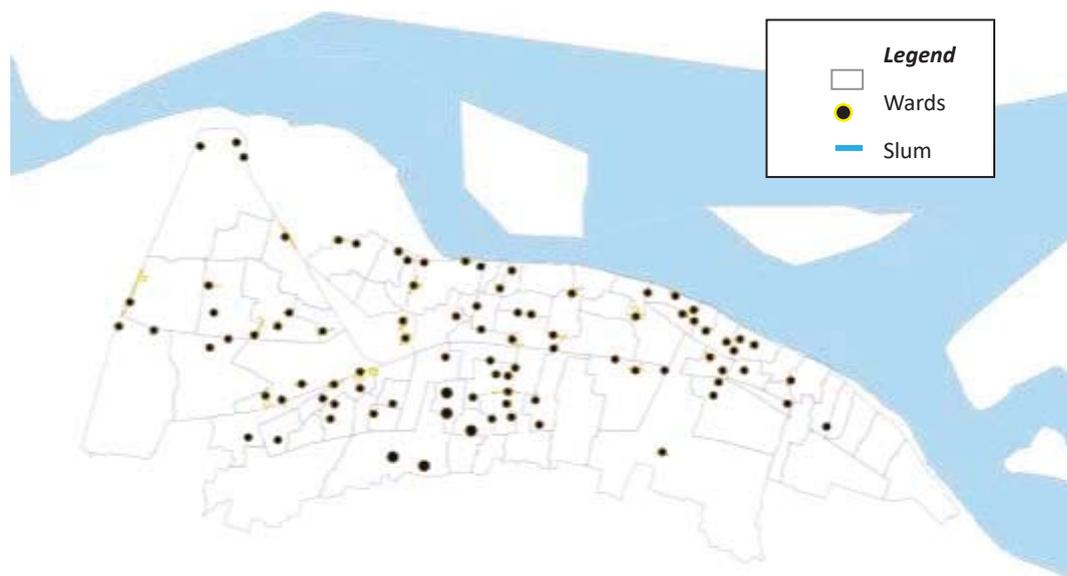
Public spaces in the city are the range of social locations offered by open spaces between the built environments. It is not a homogenous arena with dimensions. The extent of publicness is highly differentiated from instance to instance, both legally and culturally. Patna has a limited but layered variety of public spaces such as traditional/religious, colonial, and commercial

development. Users of these spaces are clearly defined as per one's economic and social status. Patna is known for its old rich religious spaces used by their specific users. Ganges river bank is one such traditional water front spaces which is used actively for religious and public interaction but lack of management and neglect has limited the users, turning it into a negative space and unsafe. Open spaces like Gandhi Maidan, which is colonial product and used as a park where people gather for daily recreation and also civic events is mostly used by lower economic section. The issue of safety in these public spaces is related to many sociological and governance factors along with urban planning efforts. Along with this, streets of Patna have now become thoroughfares for vehicular traffic from being multi-use spaces. Increased automobile dependency and complete lack of public transport have affected the pedestrian movement. This transformation of the street has not only changed the use of the street but also changed open squares to parking lots. Traditional markets, which have been reformed and relocated to Malls to make them more accessible by car. In broader terms, privatisation of public spaces has increased. Gated public spaces with restricted users are now more visible in the city. The perception of safety is very poor in the public spaces or on the street especially for the women in the city.



**Fig 4 : Planned and Unplanned Areas**

Source: Urban Development and Housing Department, Patna



**Fig 5: Location of slums in Patna Municipal Area**

Source: SPUR, Patna

#### **2.4. Social segregation**

Patna's population is largely influenced by political, religious and social factors. The spatial segregation based on economic status, as explained above, is clearly visible along with this, segregation based on caste. Patna represents all the pan Indian official caste/class categories. The proportion of lowest caste category i.e. Scheduled Caste and Scheduled Tribe is around 10 % of the total population. In perception of Indian society, the concentration of SC and ST is often taken as a proxy for poverty. SC population has a significant concentration ranging from 13 % to 22% in the eastern and central part of the city hence the poorest wards of the city. The sex ratio in the eastern part of city is low as compared to other areas<sup>7</sup>.

#### **2.5. Conflict in Patna**

Bihar is one of the poorest, most corrupt and backward parts of India<sup>8</sup>. Its capital city - Patna has gone beyond these pale terms when discussing urban conflict. Constant political and caste war from Patna secretariat to Patna College is a very common site. Widespread poverty, high rate of illiteracy, failed policing and justice system, corrupt politician and general unawareness towards the city has made it very unsafe. Media reports clearly blame the uncertainty and rampant corruption and criminalization of politics of ruling party for present situation of Patna. Violent crimes such as murder, robbery, etc have declined unlike non violent crimes such as burglary and petty crime which are increasing speedily. Crime against

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<sup>7</sup> Census 2011 : Females per 1000 males and 826 females per 1000 male.

<sup>8</sup> Class (And Caste) War Brewing in Bihar, India's Poorest, Most Dangerous State, Palash Ghosh, International Business Times

women usually gets unreported but is clearly visible. Patna's crime clearly varies significantly from a distributional perspective. The disaggregated Police data suggest that the decline in major forms of violence and rise in non violent crime is unevenly distributed throughout the city. The eastern police jurisdiction and the newer police jurisdiction at the outskirts of city have experienced a rise in crime.

**Table 2: Disaggregate Patna crime 2003 & 2009**

Police Jurisdiction	Murder		Dacoity		Loot		Kidnapping for ransom		Kidnapping		Theft	
	2003	2009	2003	2009	2003	2009	2003	2009	2003	2009	2003	2009
<b>Pirbahore</b>	10	4	2	1	18	6	-	-	11	8	90	<b>40</b>
<b>Gandhi Maidan</b>	2	2	5	-	39	8	1	1	2	7	106	<b>71</b>
<b>Kadmakuan</b>	13	8	4	1	32	5	3	-	4	9	88	<b>50</b>
<b>Kotwali</b>	7	3	-	1	56	4	2	-	9	5	200	<b>109</b>
<b>Buddha Colony</b>	6	4	2	-	38	6	2	-	1	10	73	<b>44</b>
<b>Patliputra</b>	8	3	-	-	30	13	2	1	2	8	37	<b>31</b>
<b>Digha</b>	10	4	7	-	7	2	1	-	9	13	15	<b>14</b>
<b>Rajneev Nagar</b>	-	1	-	1	-	11	-	-	-	2	-	<b>18</b>
<b>Sachiwalaya</b>	2	-	-	-	13	2	-	-	-	3	32	<b>20</b>
<b>Gardani Bagh</b>	16	5	2	1	33	6	1	-	8	5	77	<b>31</b>
<b>Shastri Nagar</b>	9	2	4	-	46	12	13	-	3	19	101	<b>107</b>
<b>Sri Krishna Puri</b>	9	-	5	-	37	5	1	-	2	5	64	<b>51</b>
<b>Hawaiadda</b>	-	1	-	1	-	3	-	2	-	2	-	<b>15</b>
<b>Kankar Bagh</b>	13	6	1	1	19	18	1	1	9	7	75	<b>62</b>
<b>Patrakar Nagar</b>	3	2	-	-	13	14	2	-	2	3	37	<b>45</b>
<b>Jakkanpur</b>	18	5	-	1	25	4	3	1	4	9	31	<b>34</b>
<b>Parsa Bazar</b>	7	7	-	-	-	-	-	-	1	11	11	<b>18</b>
<b>Phulwarisharif</b>	8	9	3	1	12	4	1	-	8	18	57	<b>30</b>
<b>Beur</b>	-	8	-	-	-	1	-	-	-	5	-	<b>11</b>
<b>Janipur</b>	2	2	-	-	10	01	-	-	2	1	3	<b>8</b>
<b>Sultanganj</b>	27	6	-	-	20	8	2	-	6	4	27	<b>10</b>
<b>Alamganj</b>	22	5	4	1	26	5	-	-	6	11	27	<b>26</b>
<b>Khajekala</b>	5	4	3	1	4	1	-	-	6	6	30	<b>12</b>
<b>Chowk</b>	12	4	1	1	15	6	-	-	3	9	27	<b>23</b>
<b>Agamkuan</b>	13	5	3	1	23	13	2	-	7	6	34	<b>36</b>

<b>Mehdiganj</b>	2	-	1	-	1	-	-	-	2	1	1	<b>1</b>
<b>Bypass</b>	-	2	-	1	-	1	-	-	-	-	-	<b>11</b>
<b>Bahadurpur</b>	-	1	-	-	-	2	-	-	-	3	-	<b>11</b>
<b>Malsalami</b>	4	11	1	-	3	-	-	-	1	6	10	<b>23</b>
<b>Danapur</b>	19	12	7	-	26	9	2	-	9	7	77	<b>35</b>
<b>Khagaul</b>	3	1	1	-	6	2	-	-	2	5	14	<b>9</b>
<b>Rupaspur</b>	-	2	-	-	-	6	-	1	-	3	-	<b>8</b>
<b>Shahpur</b>	5	2	1	-	1	-	-	-	1	4	9	<b>7</b>
<b>Akilpur</b>	1	2	-	-	-	-	-	-	1	2	-	<b>1</b>
<b>Didarganj</b>	2	4	2	2	4	5	-	-	1	3	14	<b>18</b>
<b>Total</b>	<b>258</b>	<b>137</b>	<b>59</b>	<b>16</b>	<b>557</b>	<b>183</b>	<b>39</b>	<b>7</b>	<b>122</b>	<b>220</b>	<b>1367</b>	<b>1040</b>

Source: Patna Police

The sense of structural violence<sup>9</sup> is also deeply embedded in the city<sup>10</sup>. Living in deprivation and constant conflict with the state, the resident tends to respond, often from the poor stratum of society. The sense of unrest and unsafety is prominent, particularly, amongst the most vulnerable population such as women, children and ethnic/religious minorities. Violence creates uncertainty, which creates fear and insecurity, which, in turn, leads to further violence (Agostini, et al. 2007). Lack of willingness to act by the authority has played a strong role in creating and breeding this situation.

### 3. Case Study of Lohanipur Slum

The various types of settlement and their spatial arrangement are the outcome of the interaction between institutional and non institutional actors<sup>11</sup>: Urban policies and its effect on the area. Lohanipur slum, situated in the heart of Patna, provides a good illustration of variety of situation where planning and organic design have created site for conflict. The socio economic diversity of the slum dwellers will show how their perception and response to survive amongst different social groups, may lead to a pattern of segregation even at micro scale.

#### 3.1. Methodology and Data Sources

This field work was the part of an ongoing larger research programme called "Planning and Policies for Inclusiveness: Understanding the Drivers of Poverty, Inequality and Violence in

<sup>9</sup> The concept of structural violence was first proposed and described by Galtung (1969; 1990) as violence arising from social structures (economic, political, legal, cultural, etc.) that constrain and prevent individuals, groups, or societies from reaching their full potential and when resources are monopolized by one group.

<sup>10</sup> Explaining Difference: "Culture," "Structural Violence," and Medical Anthropology, By Professor Janelle S. Taylor, Anthropology, University of Washington.

<sup>11</sup> Dupont 2002

Indian Cities" conducted by Institute for Human Development and Centre for Urban Equity. The Project is a part of an International Development Research Centre (IDRC)'s wider global research programme called "Safe and Inclusive Cities", which aims to understand and research links between urban poverty, inequality and violence in order to inform urban research and policy. For purpose of the paper, qualitative approach and different sources of information are integrated as following:

- Detailed and extensive secondary research (analysis of policy documents, Master Plans etc). This also includes collection of data based on Census, National Statistical Survey (NSS) and National Crime Records Bureau (NCRB) to obtain socio economic indicators such a literacy rate, work participation rate, poverty rates, sex ratios and to juxtapose them against the indicators of crime and violence.
- Exploratory visits to the case study and organised consultation with relevant stakeholders and key informants in order to generate a discussion regarding the methodology as well as selection of case study locales.
- Social and institutional mapping of the city and locality histories using timelines and maps.
- Semi- structured interviews with relevant stakeholders and In-depth interviews and Focus group discussion in the neighbourhood with interest groups and mixed groups, some of which would be carried out through participatory methods.
- Case studies of selected respondents with unique experience and coping mechanisms. Analysis via Photo and video documentation.
- Mental mapping by the respondents for the selected areas.

On the basis of police station crime data between 2003 and 2009<sup>12</sup>, change in crime rates were calculated and based on that six locales were selected out of 110 existing slums.

Lohanipur, in Kadmakuan police station zone and Bankipore circle (centre part of the city) of Municipal Corporation was selected for the case study. In-depth interviews and focus group discussion were conducted with various groups, mainly with females from different age groups. Mental maps were prepared with them and some additional structured interviews were conducted with slum leaders and officials of municipal cooperation. A team of five people which included three females and two males was assigned for collection of data while interviews were conducted by the project head and author of the paper.

### **3.2. The Settlement Montage**

With nearly a population of two thousand<sup>13</sup>, Lohanipur Khadur slum is located in the heart of the city, sandwiched between an elite residential area Rajendra nagar and a lower middle class residential area, Lohanipur. This area was developed as a part of post independence housing initiative of Patna Municipality. One side of the neighbourhood has planned roads with government apartments and freehold plotted houses, and narrow lanes of middle class

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<sup>12</sup> Table 2

<sup>13</sup> Census 2011

with high density neighbourhood on other. Amidst different typologies, this slum came into existence almost 65 years ago on a vacant public land. It was then used as a garbage disposal land. Migrated villagers from nearby flood hit area started occupying the land and now about 400 households from different background and social groups live here.

In Indian society<sup>14</sup>, the caste system is traditionally associated with strong social and spatial segregation. Even at the scale of the worst housing condition, the spatial makeup is based purely on these rules. Slum constitutes Hindu SC population with caste groups like Doms, Kahars and Yadavs as majority. Housing typology is based on the socio economic conditions of different caste groups. The economically dominating group of Yadavs holds a dominating status in the slum. On contrary, the Doms, also known to be on the bottom of ladder of caste list, holds the weakest position on the slum. The analysis of the residential location of caste groups highlights the pattern of grouping of caste groups and hence creating distinct mohallas (quarters). Biggest quarter is of Doms followed by Yadavs and Kahar.

Being oldest slum<sup>15</sup>, Lohanipur can present a picture of informality of city's planning. At first glance from the adjunct flyover, one observes a dense maze of informal settlement of different types of material. Area marked its boundary with a big heap of animal waste by animal husbandry and dairy shed towards one end and a pile of garbage by rag pickers on other. This is the primary source of income for most of the slum dwellers. In addition to this, they work as domestic helps and as labourers. Most children work with parents and are not formally educated. The slum has five government run preschools and two municipal schools nearby. But only very few attend the middle school. Most drop out are girls while boys help the family by working, girls stay at home until they are married off. Girls' participation is minimal.

Families who occupied Lohanipur area for over 20 years were able to obtain landownership by the authority and are enjoy benefits of tap water and electricity. They have built permanent structure with built toilets. The slum does not have a sewerage connection and uses open drains on either side of the access pathways. Slum also consists of new residents who were not able to claim their right on the property and are still at the mercy of authority and neighbourhood.

Other infrastructure like public toilet and community centre do not service the area. Toilet has a fee for every use and resident prefer open defecation. Community centre has been taken over by municipality. The empty patches of land within slum are used for festivities or as a play area by the children. Basic amenity of proper health services are bare minimum with just one dispensary.

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<sup>14</sup> Dupont, Veronique, *Socio spatial differentiation and residential segregation in Delhi : a question of scale*, 2002

<sup>15</sup> *Slum as per definition, by Bihar State Slum Policy, "A compact area of at least 20 'slum like households' of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking proper sanitation and drinking water facilities.'*

### 3.3. Safety analysis

Slum with their variety of patterns, complex social organization, scale and constant participation of population in the urban space satisfied many of the characteristics to be a quality space. Small block and dense spaces create intimate urban experience. However, high density and heterogeneity promotes "high levels of violence, insecurity and disorder". This oddity is apparent in the Lohanipur slum.

The first basis of conflict in the slum is the outer boundary. Slum is seen as an eye sore for the surrounding middle and high class resident. The dead space formed with the high boundary wall has created an unsafe zone especially for females who avoid that area even in the day time. Housing typologies does not show any visible interaction between them. Fear of eviction often created by the threats, is constant. The persistence of social and residential segregation has created many constraints for the slum and has developed a tendency of insecurity and unsafe feeling. The process of exclusion and discrimination against the most vulnerable social and economic groups can manifest even in the inferior segment of housing. The clustering in the slum is along the lines of caste. After general mapping of the locale, social hierarchy in the built environment and in the public spaces was visible. With the help of mental maps<sup>16</sup> conducted with different groups, public spaces were identified in the form of local tea shops, public tap, community toilets, local pre schools, temple and most important the narrow alleys of the slum. Public space has always been the object of conflict over its control as well as over the rights of occupation. In Lohanipur, the largest area is occupied by the strongest socio economic group called Yadav's. Other caste groups are arranged in patches creating a dense maze. Constant struggle between these hierarchal groups is apparent over negotiation of space. Certain areas were identified as unsafe areas by the women due to proximity to different caste group. Cases of harassment with young girls by dominating caste group are common.

Access to public space claim, the right to participate in the society and the struggle to use this public space, can take extreme measures. For instance Dom, the weakest caste group, has taken over a community toilet because of its proximity to their area. This type of action can be seen as a break out from the restrictions. Their claim over a public utility creates conflict and tension in the slum settlement, making it unsafe for other caste. This has forced the slum dwellers towards open defecation, resulting in more civil disorder.

Basic amenities are the reasons of competitions between these quarters. "The problem of water is worse in summer" says a middle-aged woman during the FGD. Nexus of water pipes runs all around the narrow alley which provides water to few authorised houses of the slum. For the rest, huge crowd gathers everyday for few litres of water supplied by the public taps. Cases of conflict, manhandling and harassment are common around these areas. The locations of taps are often negotiated by the authority with bribes and other favours by the

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<sup>16</sup> A mental map is a person's point-of-view perception of their area of interaction.

dominating group.

"Mohalla thodai kharaab hota hay, log kharaab hotey hayn" (It's not the location of slum which is bad, it is the people living here who are bad) perceives a local tea shopkeeper. She has been living in the slum for more than 30 years. Her perception of safety in the slum depends on the time of the day and people of the slum. Problem of alcohol consumption and misbehaviour by the men and youth creates an unsafe environment in the evening. The tea shopkeeper and other women in the group do not step outside once it is dark. They blame the government's policies which have provided easy access to more than five small scale alcohol shops in the neighbourhood.

While the focus group discussion and interviews provide a kind of image that allows us to understand the main actors playing roles in making Patna unsafe, the safety issues in the slum can easily be reflected to the city. Like, the most affected group is the youth of the slum. Males, traditionally dominating, feel agitated with their conditions and react by taking over a public space or by getting involved in anti social activities. They loiter around and get involved in many other anti social activities. On the other hand, the female group, in their vulnerable state, feel unsafe, renegotiate with the situations and reconcile their movement in public spaces. It turned out that the women questioned use very similar methods; i.e., taking precautions to avoid acts of violence or harassment in public places<sup>17</sup>, like any other women in the city<sup>18</sup>. Women are much more likely than men to develop avoidance or self-exclusion strategies with regard to public places.<sup>19</sup>

#### 4. Summing up

The western theories of planning and Indian informality do not go together. Third world megacities of India are experiencing failure of all the defined norms of rational planning and using informality for makeshift arrangements. These unregulated and forced arrangements are exclusionary and often played by a powerful segment of the society, thereby creating more vulnerable cities. The high and middle-income section are enjoying the economic growth and working towards creating a safe niche for themselves. Analysis has shown that residential patterns will be based more on the socio-economic status. This differentiation will increase more inequality. Slums, as lowest strata, are more ecological vulnerable to possible exploit due to their status in urban mosaic<sup>20</sup>. Slums of Patna reflects high fear as they can sense the underline conditions of their state of extreme deprivation which can reflect the condition of city's planning authority. They illustrate disorder- by both (i) Social, such as violence, public nonsense, drugs or alcohol use, conflicts over basic amenities; or (ii) Physical, such as lack of

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<sup>17</sup> Riger et al., 1978; Gardner, 1995)

<sup>18</sup> Quantitative survey results of Patna survey

<sup>19</sup> *Feeling Unsafe in Public Places: Understanding Women's Fears*, Stephanie Condon, Marylene Lieber, Florence Mallochon

<sup>20</sup> Liska, Lawrence and Sanchirico 1982

basic amenities, degraded housing and abandoned public spaces. They are vote banks for many political parties but their participation in actual governance is very bleak. Hence they are sensitive to issues pertaining to policies and their implementation.

The rationality for Indian cities is yet to be explored. Lack of departmental interest and manpower, poor policies towards land grabbing and privatization are the main headline problem with the urban centres. The socio political structure of the city has a deep impact on the perception of the inhabitants. In a small slum of Patna, sense of anxiety has given authority to claim the urban space in protest and the sense of awareness assure the control over the encroachment without any objection. Designers and Planners need more power to dictate the development process with public participation and government has to realize the importance of a safe city for a sustainable growth and future.

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## **Socio-Ecological Rehabilitation of the Military Site: Maehyangri Park in South, Korea**

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### **Abstract**

This study explores the park planning process of a relocated military base site that will be constructed and operated taking into consideration both the ecological resources of Maehyangri and societal circumstances of the local community. The large park requires resilience planning and design that not only is receptive to various regional issues but also retains its inherent features. Based on meticulous site analysis and communication with the residents, researchers have suggested the appropriate philosophy and vision for the sustainable park that the site should endeavor. The Maehyangri Park is intended to be actualized by preserving the history and restoring the ecology of the region; moreover, it requires the participation of the local community. The design strategy considers three concepts regarding the local history, regional context, and park's self-sufficiency: first, the park should be a historical ground of unforgettable memories that mean as a sympathy and metaphor media of healing and restoration for visitors, as well as the local people. Second, socio and ecological framework to set regional resilience would reify a country park for recovery of nature and recreation. Third, the local community will participate in park operation, playing the roles of the host and manager; gardeners; chefs of a restaurant in the Community Center, which will be run by a local cooperative; and storytellers as well as history and ecology commentators. The resilience planning and design for the sustainable park would bring about regional

rehabilitation and enhance the community's capacity to be adaptive, resilient, and participative.

Keywords: military site, resilience, large park, sustainable, socio-ecological rehabilitation

## **Introduction**

Every metropolitan region in the country has a great park. James Corner, an eminent landscape architect, wrote, “Large parks are priceless, and those cities that do not have an effectively designed one will always be the poorer.” This demand for large parks is stimulated by the global transition from industrial to service economies, creating a vast inventory of largely abandoned sites. These sites—closed landfills in old factories, decommissioned ports, former military base fields and even neighborhoods of cities from where workers have migrated and left empty tracts of towns—lend themselves to being transformed into radically new forms of public parklands and amenities (Corner, 2009:12).

Unsurprisingly, the formerly granted areas that are located throughout the Korean Peninsula are examples of classical brownfields. These relocated sites become new resources for developing public uses for urban sustainability since they are the landmarks of cities. According to a succession of cases playing a key role in urban regeneration as a strategic catalyst, the challenges involved in remediating relocated military sites to parks are increasing globally (Park et al., 2014). In particular, such returned granted areas require meticulous and deliberate approaches as the middle ground in mitigating the radical impact of comprehensive regional changes.

While the park development of relocated military base sites in Korea is either ongoing or completed in more than 10 sites, 50 more sites are in the pre-phase. For example, the Busan Citizen Park is one that was constructed from the US Camp Hialeah’s site, and the sites of US Camp Market in Bupyeong and US Camp Page in Chuncheon are at the feasibility stage with specific park plans. Once the US Yongsan Garrison, the headquarters of the US military base in Korea, moves out in 2017, the construction of the Yongsan Park will begin in accordance with the national park bylaws.

In the case of Maehyangri, although the site was returned some time back, the discussions regarding the park began only recently. The site existed as an “island,” isolated from the changes taking place in the area, and was considered a hindrance to regional growth. At the same time, the site has an image of the dark side from the past; it is critical issue that this image has to be changed. The park planning process of a brownfield like Maehyangri requires resilience planning and design that not only is receptive to the various issues of the

area and interests of the residents but also retains its inherent features.

This study presents a method for achieving the resilience to respond to independent activities arising from changes in the regional context. It is a product of the park planning process and the result of one year of park designing. Researchers investigate the following issues related to the Maehyangri Park master plan:

- What are the potential resources inherent to the site? How could this condition be stimulated to cause positive changes to the park and local areas?
- What strategies are effective in improving the environment conditions and landfill that destroyed the ecosystem?
- How can the site be restored despite its dark connotation and year of disuse and neglect?
- Which model is feasible for the sustainable park to improve the local community and its residents?

### **The meaning and capacity of resilience in socio-ecological systems**

Recently, many scholars from different fields, including ecology, psychology, pedagogy, economics, and even national security, have become interested in a discussion on the risks to society of disturbing previously unused sites. The risks are increasingly unpredictable due to the complexity of the city system and uncertainty associated with the many hazards—notably, climate change, environmental disruption, and brownfields—caused by the construction and relocation of a military base and an industrial complex. According to the City Resilience Framework, “city resilience describes the capacity of cities to function so that the people living and working in cities—particularly the poor and vulnerable—survive and thrive no matter what stresses or shocks they encounter” (Arup, 2014). The demand for “city resilience” is gaining momentum in the face of frequent occurrences of social and cultural, as well as natural, disasters: these urban crises must adopt a confrontation strategy for urban rehabilitation. The city’s system for resiliences responds to this challenge by changing the perspectives of the socio-ecological system, which is a continuation of the discussion; on a “Sustainable City” (Kim et al., 2015).

In the case of Maehyangri, resilience is a remarkable concept that can be used to search and connect the possibilities of the site and mitigate the conflicts between the complex interests of this region. The definition of the term is “the ability of an ecosystem to withstand and, to some degree, absorb the effects of sometimes unpredictable and sudden changes to prevailing environmental conditions while still maintaining the majority of its structures and functions” (Lister, 2014). Hence, in the book “Large Parks,” Julia Czerniak explains that resilience is not merely a thought as an ecological concept; instead, it is a useful guide for making decisions

amid the complexity of a city, as a tool for conceptualizing, planning, designing, and managing large parks. The extended notion of resilience from the societal perspective includes the consolidation of regional capacity for the social system. Here, the large park could signify resilience as an acceptable vision and strategy of Maehyangri Park.

For understating what or who needs to become more resilient, it is important to identify the characteristic of resilience that is required if settlements are to support economies and societies that enable their residents to lead meaningful and satisfying lives even in the face of various changes. The city can be prosperous if it has in place effective mitigation systems against threat factors or it improves its capacity related flexibility over time—these two points of view comprise a critical issue regarding resilience (Satterthwaite and Dodman, 2013). Regarding the complexity of the city, the term resilience is suggested as a new method for responding to uncertainty and unpredictability. In this condition, a regional knowledge structure connecting specialized expertise and the interests of the local community and a collective planning of the scenarios in urban regeneration planning should be being organized (Selman, 2004; Gidley et al., 2009; Collier et al., 2013). The role of the local community in promoting the social view of resilience could be a primary factor in controlling physical impacts, which can determine the resilience of urban systems (Asprone and Manfredi, 2014). Furthermore, they have the capacity of opposite action from an external economic and natural disturbance, which is an independent ability to maintain an infrastructure, care for the environment, and handle finances and the society (Adger, 2000). While numerous definitions of resilience as applied to urban systems are available in the literature, the concept has three conceptual characteristics, in summary: the resistance to external shock, ability to recover from the external shock, and ability to adapt to a new circumstance (Adger 2000; Kimhi and Shawai, 2004). Similarly, according to Lorez(2010), resilience can support socio-ecological systems; and develop adaptive, coping and participative capacities.

It is clear from several reviews that, the concept of resilience park planning and designing implies multidisciplinary approaches with integrated perspectives and community participation with various interests. Researchers suggest that the socio-ecological resilience of a region must be considered in park planning and designing and even after implementation—as part of the maintenance and management plan. Hence, the park planning site encompasses not merely the designated site and areas including the industrial complex and port. In the process of planning, the local community's interests are understood through public consultation, following which the community will be an agent in the phase of park operation. The mission of the Maehyangri Park's efforts to recover regional resilience encompasses the following: resilience regarding reusing the region, ecological resilience, and societal resilience for regional rehabilitation.

## **The Challenges involved in military site transition and rehabilitation in socio-ecological systems**

After the Korean War, areas were granted to the US Army for establishing a military base and support facilities, which were estimated 142,148 ha in 1967. Since then, the gross area has been gradually reduced over the years, reaching below 24,707 ha in 2000. Two political policies motivated the relocation of the US military base on the Korean Peninsula: the global posture review of the US military forces stationed overseas after the 2000s and granting of the autonomous leverage to the national land planning and utilization of the central government.<sup>1</sup>

The numerous sites of the former military base are huge and located strategically on the peninsula; hence, there are a lot of developed sites for residential, office, and public park uses. Their historical value and context imply that social consensus for the utilization of these places as public parks can be obtained with ease (Gye, 2006; Park et al., 2014). Although there are differences in terms of the specific cultural or urban contexts of these areas, large parks in the world are subject to various mixed uses of space—including residential and commercial facilities and themes of historical and cultural importance. In other words, the public character of such urban areas is highly influenced by the history and culture of such sites.

From the *historical distinctiveness* and *regional specificity* perspectives, the Maehyangri Park site sparked the residents' movement related to the return of the granted area and it is located in an isolated spot as the boundary between land and the west sea. Besides, this area has various other issues and conflicting interests between development and conservation. Therefore, the sensitive and complicated circumstances related to this area must be scrutinized in detail by experts, keeping in mind the regional context and fragmental planning.

The historical tragedy of the place has significantly depleted the area's wealth of resources. In 1952, Maehyangri granted a firing range (Koonni Range) to the US for 50 years. During this period, residents had to bear the incessant flashes of shells and noises of the bombing; furthermore, they lived in constant fear of death by stray bullets. The retrocession of territory that was achieved by the local people's efforts in the 1980s was the first instance of independent redemption from the US Army. The Koonni Range was closed in 2005, and

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<sup>1</sup> The Bush administration signed the Land Partnership Plan (LPP) in 2002, consolidating and relocating US forces outside Seoul, and also Yongsan Relocation Plan (YRP), relocating most US forces and the headquarters of United Nations Command activities from the Seoul Metropolitan Area.

various initiatives were undertaken to ensure the emotional restoration of the people and economic improvement of the region. Therefore, after 60 long years of indiscriminate plundering, the site was finally designated as open space. The site is located along the coast of the west sea; it has a scenic coastal landscape and an ecological mudflat. Indeed, there are vestiges of farming on the land. The building on the Range that was used as the control tower for fringe exercises remains intact to this day due to the efforts of the local community and nongovernmental organizations’.

The conditions surrounding the park site ensure the presence of challenges during the park planning process. While the prearranged park planning site was 58 ha in 2012, half of the site area (25 ha) was designated for the development of sports facilities, or the Youth Baseball Park Complex. In addition, there are other important things, including the consideration of the residents’ economy. Many individuals belonging to the local community engage in farming for their livelihood on the site, whose employment will be discontinued once the construction of the park begins. The public administration and local community expect the activation of the regional economy by making a productive system—comprising jobs, commercial facilities, and camping sites—from the park.



Figure 1. Location and Conditions of the site



Figure 2. Master Plan of the Maehyangri Park

## The vision and strategies of park planning: What is regional park planning for resilience?

Contemporary parks are examples of the belief that it is possible to reconcile land use for human activities with nature conservation and the sustainable management of natural resources. By utilizing its inherent resources the memories of a historical tragedy, environment, and scenic landscape, Maehyangri Park would become a base to promote regional rehabilitation and develop a better life for the local community. Researchers suggest the values and philosophy that must be followed for establishing the sustainable park that the site should strive for, which are based on meticulous site analyses and communication with site's residents.<sup>2</sup> This planning explores challenges while preserving the values of the historical site and conserving the environment; subsequently, it will be substantiated by the local community itself. The changes of that perspective are the vision for the sustainable park.

### (1) The Historical Ground Preserving Unforgettable Memories<sup>3</sup>

<sup>2</sup> The planning team consisted of six experts from the fields of landscape architecture, architecture, ecology, and urban planning. We conducted a literature review of the preceding journal articles on the residents' movement; regional surveys; and detailed site analyses including the total analysis of soil, the creating of vegetation lists for the site, and drawing a surveyed map of existing buildings. The result of our proposal were a suggestion regarding park system in terms of planning and design, as well as a park management plan.

<sup>3</sup> The content of this clause was partly revealed at the 53rd IFLA World Congress International Federation of

According to the noted garden historian John Dixon Hunt, “Remembrance of the past means certainly knowing what was there and then recovering memories that, however, can sustain new visions, not just fond nostalgia” (Hunt, 2014: 87-88). Maehyangri Park should be a public space for preserving the historic site, as well as giving a chance to residents to heal the wounds inflicted on them by historical tragedy. The design strategies of the park are two perspectives on history. First, the “transformation of memory” through an existing medium at the site (Koonni Range) and a non-existing medium (apricot trees); and, second, the “recovery of place” that recovers the functions of the land as a place of everyday life and production ground from a battleground.

The Koonni Memorial Zone becomes a place invoking nostalgic memories where the history that should be remembered is recollected and passed on to the next generation. The Koonni Range, where the military facilities of the US Air Force shooting range had been accumulated in the past, now accommodates three layers as places of healing. The first is the original landscape of Maehyangri, which was once a salubrious land full of natural resources. The second is the agony behind the sacrifices made by the residents during the occupation, as well as the flashes and explosions from the site of the US Air Force’s shooting range. The third is the historical movement of the residents that resulted in the return of the granted area, which was mobilized in the late 1980s. The park is planned as a place where the remaining military buildings will be maintained and utilized such that visitors can get a feel of the history and enjoy the scenic landscape of the region. For example, the shooting control tower would be utilized as an observatory to view the recovery process of Nong Island, which was once a target used by combat airplanes.

A garden of apricot trees would be created as a strategy to recover Maehyangri’s past identity—a village with the scent of apricot trees—which had been lost due to the construction of the shooting range, and a medium to reclaim the village’s function as a place of everyday life and the land of production. This strategy not only recovers the region’s symbolism and landscape but also has the purpose of reforming the livelihood of the residents, who once used to farm on the site, and laying the groundwork for a new local business regarding apricot farming.

Maehyangri Park is expected to provide opportunities to recollect, heal, and share painful memories through memorials and acquire meaning as the beginning of a strategic discussion on providing clues as to how a new regional vision can be realized.

## **(2) The Socio-Ecological Framework of a Country Park**

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Landscape Architects, which was held in Turin, Italy.

Country parks<sup>4</sup> were originally founded to protect sensitive areas of the countryside from the perceived threat of widespread urbanization. In addition, such parks aimed at providing countryside-based recreational opportunities. The Countryside Agency referred to country parks as “one of our forgotten treasures,” and acknowledging that “country parks need more support if the contribution they make to recreation, the environment, the rural economy and the viability of villages, towns and cities is to be sustained or further improved.”

An increase in leisure time and a change in the leisure pattern caused changes to park services, including those in rural areas. Maehyangri Park will be a leisure place near the locations that are one or two hours away from Seoul and the capital areas by driving. The park aims to provide “informal countryside recreation,” which is defined by the Countryside Recreation Research Advisory Group as “recreation, the main aim of which is relaxation which requires little in the way of special skill or organization, which lacks any competitive element and which requires a countryside location for its full enjoyment”(Ribeiro, 2015:13).

The design strategies of the park coincide with the recovery of the pristine natural environment and improvement of sports and leisure activities. One of the main ways in which Maehyangri Park can attract more visitors to a country park is by conducting outdoor adventure activities because this place is far away from the downtown area and has remained isolated for a long time. The importance of having attractive elements in this area is the main consideration for park researchers.

The Coastal Field Zone suggests used farmland as an arable land for landscape conservation—in this case; the land is not used for personal cultivation—and the Open Forest Zone located in the middle of the site would link a green corridor between the green areas lying inside and outside the site. With the passage of time, the restoration of natural areas can protect the ecological environment and improve the diversity of species in previously damaged territories.

An open field and a camping area in the Open Forest Zone could also be used as a sports and leisure space, including the trail route and race path within the park: once it is rebuilt, the road network within the park, especially the walking path across the wilderness, will become an important signifier of the park and attract many residents. Through a stroll along the pathway into the Coastal Field Zone, one could enjoy the unique and attractive natural landscape of the place.

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<sup>4</sup> The term “country park” has a special meaning in the United Kingdom. These are designated under the Countryside Act, with the support of the former Countryside Commission. However, in this study, this term refers to parks in rural areas alone, without its legal connotation.

Maehyangri Park provides an opportunity to link urban and rural areas; this is very important in the context of the rehabilitation of a relocated site. To ensure an improved and more sustainable future, the park would be complemented by its ability to provide land for “a combination of agriculture production, physical space and settings for residential use and recreation.”

### **(3) A Self-Sufficient System for Community-Based Park Management Planning**

In recent times, discussions on the finances of public parks and difficulties in maintaining/managing such parks are inevitable in park planning and design. In an influential book named “Large Parks,” John Beardsley writes on what he calls the “conflict and erosion of public large park”: “It is increasingly difficult to find a large park anywhere in the world that is fully public—that is, entirely free and accessible in all places at all times and fully supported by public funds. To some extent, this is a function of their physical scale and social complexity. Large parks are more difficult than small ones to finance and maintain, which has resulted in the growth of public-private partnerships to manage their construction and upkeep.” As the results of these circumstances, public-private partnership and community participation in public spaces are increasing in public park development and management.

Maehyangri Park, which scales 33 ha, is expected to incur a total cost of \$9,600 million for land purchase and construction, which will be divided between the central government and local authority. The constructed park will require \$130 million a year for its maintenance; however, public administration has not yet laid any plans to meet this requirement. In all major public parks, the maintenance costs are a burden on local finances and residents’ taxes, even though a minimum level of caring is extended to maintain such places.

New attempts at innovating public place management are currently under way in Seoul; for example, the Seoul Station 7017 and Nodeul Island projects.<sup>5</sup> These two cases exemplify a paradigm shift in public management, including development and operation. The first one is going to design phases and operation planning at the same time, which usually these processes occur in a step-by-step manner. Hence, the Nodeul Island project has reverse planning system: initially, the public administration came up with a competition for designating an operating agency for the site; in the next step, the designated team performed spatially and financial management planning through a design competition in which architects and landscape architects participated.

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<sup>5</sup>The Nodeul Island project was a cultural facility development plan proposed by the public in the mid 2000s. Later, the project was withdrawn because of limitation in the funding condition and incongruity in facility utilization. Through several public discussions with the local government and experts, an innovative public project process was drawn up.

Based on the local socio-ecological system, a management plan for Maehyangri Park encompassing a challengeable model for self-sufficiency is required. Accordingly, researchers suggest the program “Park for School” whereby the local community plays an active role in park management and the residents, who are farmers, become professionals related to various fields in the park. A “storyteller” who is well-versed in the history of the granted area and regional efforts for peace will play an important role as a guide and commentator: groups of senior play and a theater of dolls in which local seniors and children can participate will be attractive programs. A “gardener for locals” will expertly tend to the growth of plants and trees in the park, and local youth and middle-aged individuals will be employed in various jobs related to the maintenance of the park, as well as using the internship program.

A local cooperative of the residents who were involved in farming the area will contribute to ecological production, as well as cultural generation, at the right time. They can develop and create unique branding and productions of various herbs and apricots from the kitchen garden and farmland in the Apricot Trees Hill and Coastal Field: such park branding and marketing will aim to create the park’s identity. The local cooperative will run a restaurant and a cafeteria at the Community Center, as well; these will be workplaces of a chef and a barista who will be reeducated. The active participation of the local community in the park management will ensure the creation of a park brand identity, various job opportunities, and specific education programs. In the long term, this system can succeed in making profits and generating sustainable capacity with each passing year, which can benefit the local economy and contribute significantly to park keeping costs.

**Conclusion: The rehabilitation of a large park from the brownfield; possibility and limitation**

This study explores the process of developing a sustainable park from the perspective of regional resilience through the planning and designing of Maehyangri Park. The experimental suggestion is an ideal model that is constructed and operated based on the connection between ecological and societal resources. It was found that the regional development of the relocated military base is most beneficial when it is accompanied simultaneously by the strengthening of regional resilience; this result is particularly important for the socio-ecological system in the regional context.

Maehyangri Park should be maintained as a historical ground of unforgettable memories as a symbol of healing and restoration for the local people, as well as visitors. Second, the socio-ecological framework to achieve regional resilience would aim at the recovery of the natural landscape and recreation. Third, the local community will participate in park operation,

as the host and manager; a gardener; a chef of the restaurant in the Community Center, which will be run by local cooperatives; and a storyteller, as well as a history and ecology commentator. The resilience planning and design of the sustainable park would bring about regional rehabilitation and create a community that is adaptive, resilient, and participative.

Hence, the rehabilitation of a large park from a brownfield has several possibilities and limitations. The planning process of Maehyangri Park is not yet completed due to administrative and financial constraints. Besides, the third strategy, that is, the participation of the local community in the self-sufficient park model, cannot be accomplished without the independent and spontaneous will of the locals. Despite having an agreement with the residents, the preparations for implementing the park will not have sufficient support from the local community and local government. The success and significant effects of the implementation can be determined by monitoring the process of the implementation for a while.

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# Designing for Spatial Justice for the Disabled Children in Hong Kong: A Case Study of Social Design Inclusion in Public Playgrounds

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## Abstract

The paper argues that the necessity of inclusiveness is social inclusion, and designers have to consider the issue of social design inclusion. Social design inclusion concerns spatial justice to enjoy equitable users' experiences through designs. In this study, a case study of an inclusive playground is conducted to address the issue of spatial justice of disabled children in Hong Kong. In Hong Kong, the disabled children do not enjoy the spatial justice to play and to get involved in play activities in public playgrounds. In order to address the issue, this paper investigates the possible social difficulties that disabled children and other children may encounter while playing together. The findings of this study preliminarily suggest that education, friendships, and gaming possibilities are three of the factors affecting how disabled children can enjoy the playing experience with other children in inclusive playgrounds.

Keywords: Social design inclusion, spatial justice, participatory design, playgrounds, disabled children

## Introduction

Design inclusion is a philosophy of producing accessible, usable and successful designs for users with different abilities and needs. Burton and Mitchell (2006) suggest that inclusive design is to design “products, services and environments that as many people as possible can use, regardless of age or ability” (p. 5). Coleman, et al. (2007) suggest that “by meeting the needs of those who are excluded from product use, inclusive design improves product experience across a broad range of users” (p. 8, Part 1). These definitions focus on how the interaction between a design outcome (i.e., the product) and its users can be optimized so that a design can be inclusive. Following this strand of thought, it can be found that the Inclusive Design Cube, developed by Clarkson, et al. (2000), clearly summarizes and explicates the essence of the defined inclusive design. It is developed based on the concept of designing for the whole population with different motion, cognitive and sensory capabilities. According to different position of the populations being included in the cube, three kinds of designs, namely special purpose design, modular/customizable design and user aware design, are identified to address users’ different needs. Through studying the cube, designers can identify potential markets and evaluate products’ usability. The inclusive design disclosed by the cube primarily focuses on physical inclusion, i.e., whether the design features of a product are able to cater the needs of users with different capability.

However, what designers are ultimately seeking for is not limited to physical inclusive design. Imrie and Hall (2001) suggest that inclusive design “is much more than a technical response to the needs of disabled people or just an ‘add-on’ to the existing stock of knowledge...” (p. 18). It also “lead to some of the necessary changes in the social relations of development and design processes” (p. 18). It is about equality and quality of everyone’s life. It can be argued that physical design inclusion is just one of the concerns among designers. What is more important is how the development and the provision of the inclusive facilities or products bring a change to the social relations among users in a truly inclusive environment. The justice for users with different capabilities to enjoy equitable experiences with other users should be the major emphasis in inclusive design. In this paper, this kind of social inclusion through design is regarded to as social design inclusion.

In order to further explore social design inclusion, public playground is chosen to be the context of the study, as users of public space inevitably involve people with different cultures, backgrounds, abilities and that they use public space and facilities simultaneously. Children

in playgrounds often play interactively and that the social element is more important in playgrounds than in other public space. The design of public playground becomes crucial for social design inclusion, as public users often have no other option in choosing public facilities for their own needs. For instance, in a densely populated city such as Hong Kong, it is unpopular to own a private playground with different play facilities. Parents or caretakers have to bring children to public playgrounds near to their home or school to enjoy the play moment with other children.

In this kind of public space, design inclusion and being social design inclusive is exceptionally important. First of all, without suitable inclusive facilities, disabled children cannot play in public playgrounds. Despite the provision of inclusive facilities, disabled children may be unable to enjoy playing in the playgrounds because of social exclusion. The attitudes of other users and sometimes the inadequacy of the inclusive facilities may hinder disabled children from using the inclusive facilities and enjoying an equally joyful play experience. The disabled children may then be excluded by other users from public playgrounds.

One of the factors which catalyze the social exclusion in public space such as playgrounds may be the limited number of inclusive facilities among the neighborhood. In Hong Kong, although the Leisure and Cultural Services Department claimed that about 70% of the playgrounds offer inclusive play facilities (Leisure and Cultural Services Department, 2015) and that different kinds of facilities, such as lift, ramp and tactile path, are installed, some designs of the play facilities do not solve the inconveniency of the disabled. In the preliminary study, several inclusive playgrounds are visited, but it was found that some of them are not inclusive at all and does not address their needs. Disabled children may be able to get near to the play facilities through ramp and tactile path, but they are unable to use them. Guidelines for the disabled are also unclear or missing. The inadequacy of inclusive play facilities has lessened the chance for disabled children to play in a suitable playground. The lack of the inclusive facilities and the possible social exclusions in public playgrounds raise the issue of spatial justice of the disabled children.

Spatial justice “involves the fair and equitable distribution in space of socially valued resources and the opportunities to use them” (Soja, 2009, p. 2). Obviously the disabled children in Hong Kong do not enjoy the spatial justice to play and to get involved in play activities in public playgrounds. In order to address the issue of spatial justice of the disabled children, studies should investigate the distribution of playgrounds in a selected district and the possible social difficulties that disabled children and other children may encounter while playing together. This paper focuses on the latter issue to understand how social design

inclusion is or should be exercised in Hong Kong public playgrounds.

## Method

A case study of inclusive playgrounds in Hong Kong is conducted to collect empirical data about the facilities of inclusive playgrounds, the frequency of playground visits made by the disabled children and how they interact with other users in the playground. The selected inclusive playground is located in Tuen Mun district at the north-west of Hong Kong (see Figure 1), and it is one of the new towns developed recently in Hong Kong. Many disabled children live in Tuen Mun district, and there are 11 special schools (out of 60 in Hong Kong) in this and the neighboring districts (Apple Daily, 20014). Inclusive playground facilities have been installed in some new public housing estates at Tuen Mun. The facilities in the selected inclusive playgrounds are examined, and it is confirmed that the disabled are able to use the facilities. It is believed that disabled children should be observed in the selected playground.



Figure 1 Location of Tuen Mun district in Hong Kong

Researchers who are experienced in field study were assigned to stay in the playground to observe disabled children and other children at play in several randomly selected afternoons in September. However, similar to the findings of the preliminary study, there was no disabled children observed in the playgrounds during the field study. Therefore, the focus of the observation was then shifted to the children at play in the playground and their caretakers. Informal interviews with them were conducted to understand their views about the inclusive facilities and difficulties encountered when playing with disabled children. The interview questions for the children in playgrounds are:

1. Have you ever seen any disabled children playing in this inclusive playground?
2. Will you play with disabled children if they are in the playground?
3. What kinds of game will you play with them?

The questions for the children's caretakers are:

1. Have you ever met any caretakers of disabled children in this inclusive playground?
2. Are there any concerns when your children play with disabled children?

In order to complete the data set, semi-structured interviews were conducted with disabled children who seldom visited playgrounds. The children were visually impaired, and they were selected randomly by their teacher in a special school. Their teacher was the interviewer so that the children would feel comfortable to share thoughts and ideas. It is noted that visually impairment is one of the disability belonging to the sensory capability in Inclusive Design Cube developed by Clarkson, et al. (2000). Although the scope of inclusion concerning visually impairment is much narrower than that concerning disability in general, the responses given by the visually impaired children may also produce insights in social design inclusion. The interview questions for the visually impaired children are:

1. Are there any playgrounds or play facilities near your home?
2. Have you ever gone there to play? Why?
3. What kinds of facilities do you wish to be built in playgrounds?
4. Would you play with other children? Why?

## **Findings**

### Facilities in the selected inclusive playground

Not all play facilities are inclusive in the selected inclusive playground. Figures 2, 3, 4 and 5 show the floor plan, one of the entrance, and the inclusive play facilities of the playground respectively. The wide pathways shown in the figures hint that the playground caters the needs of the wheel-chaired. Some facilities are suitable for wheel-chaired children, i.e., the

motion disabled, to play. However, whether the see-saw in Figure 5 is inclusive is questionable, as it seems that it is exceptionally designed for the wheel-chaired. The categorization of abled and disabled may not help and do good for the provision of the facilities (Greed, 2003).

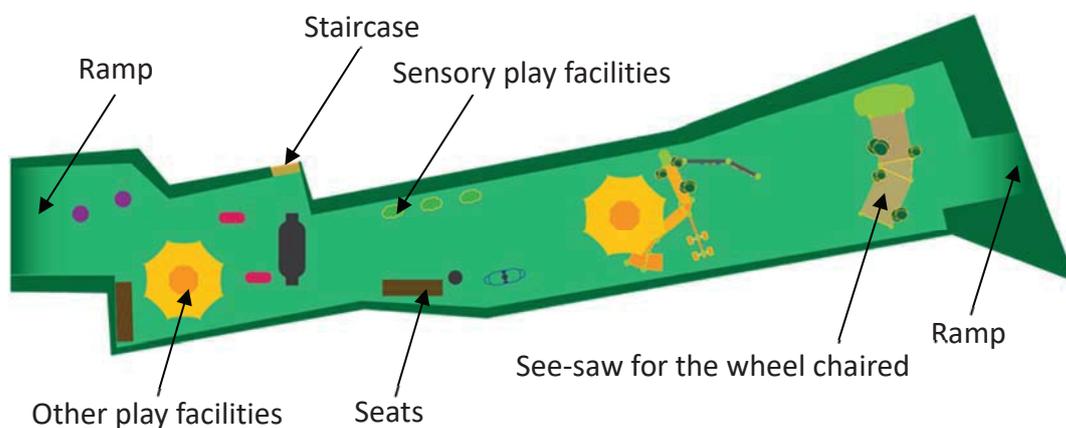


Figure 2 Floor plan of the selected playground



Figure 3 The ramp entrance of the playground (left)



Figure 4 Sensory play facilities (right)



**Figure 5 See-saw for the wheel-chaired**

In addition, while these facilities may also be suitable for children with cognitive disability, it is doubtful whether children with sensory disability, especially the visually impaired, are able to play in the playground. There is no tactile path installed either at the entrance of or in the playground.

The children and their caretakers in the playground

There were about 10 to 15 children at play and five caretakers in the playgrounds during the interviews. The researchers talked to the children and the caretakers in groups. The interviewed children were about five to seven years old. Tables 1 and 2 show the responses collectively from the children and their caretakers in the selected playground.

**Table 1 Responses from the children at play in the selected ‘inclusive’ playground**

Question No.	The children’s responses
Q1	We have never seen any disabled kids playing in the playground.
Q2	We welcome them to play with us but we do not know how to play with them.
Q3	Maybe it is difficult to play with them because we often play hide-and-seek.

**Table 2 Responses from the caretakers of the children in the selected ‘inclusive’ playground**

Question No.	The caretakers' responses
Q1	We have never seen any disabled kids playing in the playground.
Q2	It may be dangerous for disabled kids to play with our kids, as we do not know how to take care of them. Should we call the police if they get hurt or fall?

Equivalent to the researchers' on-site observation, the children at play and their caretakers responded that they had not seen any disabled children playing in the playground (see Tables 1 and 2). Although both the researchers and the interviewees used the term 'disabled children', it is believed that the interviewees were referring to the physically disabled children. This conception can be easily noted in their subsequent answers in the interviews that although the children welcomed the disabled to play together, they found it difficult to play with them because they ran around in the playground. Besides, it is possible that they had not met any disabled children, they were unable to come up with a new game which is suitable for them and also the disabled. Nevertheless, they thought that the game that they used to play, i.e., hide-and-seek, was unsuitable for disabled children.

Apart from the caretakers' comment on the visit frequency of disabled children, they also responded that they did not know the playground was designed to be inclusive. It can be argued that they did not have adequate knowledge about inclusive facilities. They also had no knowledge about how to take care of disabled children and offer help to them, according to the responses they gave for Q2.

### The disabled children

Three visually impaired children from a special school were interviewed. As these children are older than those interviewed in the playground, it is expected that they are able to give insightful and contributive comments in the topic of social design inclusion. Table 3 shows the responses from the visually impaired children.

**Table 3 Responses from the visually impaired children**

Responses	Child 1	Child 2	Child 3
Age	12	10	12
Gender	M	M	M
Vision	Partially impaired	Partially impaired	Completely impaired
Q1	Yes.	Yes.	Yes, but it is a bit far away.

Q2	No, because there is nothing to play, and I am too lazy to go out to play.	No, because there are only slides, and it is no fun.	No, because there is nothing suitable for me to play.
Q3	-	PokeStop of the Pokémon GO	I can't think of any.
Q4	No.	Yes, because they are my friends. We would chit-chat or play Pokémon GO in the playground.	Maybe.

All the children gave the same response that although they found play facilities near their home, they had never gone there to play. The children described that the play facilities were unsuitable for them or had no fun. However, when they were asked to give suggestion for the play facilities, they could only give a feature of a popular virtual reality game (PokeStop of the Pokémon GO). Apparently, the play facilities were unattractive to them. Only Child 2 found the social interaction and friendships among friends at play valuable and attractive. Children 2 and 3 found no interest to play and socialize with other friends at all.

### Summary and insights

Based on the findings above, it is found that despite the provision of inclusive play facilities for the disabled, the facilities were not interesting for the disabled children, and the disabled children did not prefer playing in playgrounds. These children may not know how an interesting play facility could be, and some of them may not be keen to play with others in playgrounds. Other children and their caretakers in the playground did not know how to play and take care of the disabled. They also had not thought about other playing methods which are also suitable for disabled children.

The information recognized from the interview fills the gap between the inclusive playground users and inclusive designer, and it is fundamental for the success of inclusive design (Keates & Clarkson, 2003) and also social inclusive design. The findings suggest that apart from the inclusive play facilities, game choices, friendships and knowledge about the disabled are essential to cultivate a social inclusive playground. In other words, inclusive designers need to not only design the inclusive play facilities but also provide opportunities for children to develop friendships and explore gaming possibilities. Aids to teach or explain how children with different disability should be taken care of should also be a part of design in playgrounds.

Designers should view the playground as a social system in order to be socially design inclusive. Undoubtedly, this study is rather general that it does not investigate different kinds of disability in detail. More investigations are needed to identify the reasons why children with a particular disability do not go to play in playgrounds.

## **Conclusions**

The paper argues that the necessity of inclusiveness is social inclusion, and designers have to consider the issue of social design inclusion. Social design inclusion concerns spatial justice to enjoy equitable users' experiences through designs. Considering physical design inclusiveness is inadequate. The findings of this study clearly suggest that the physical design inclusion is incompetent to encourage inclusiveness pragmatically. What is more important is how a playground advocates social activities so that children with different abilities and their caretakers can use and enjoy inclusive facilities without social and psychological barriers. The findings preliminarily suggest that education, friendships, and gaming possibilities are three of the factors affecting how disabled children can enjoy the playing experience with other children in inclusive playgrounds.

In this initial stage of the study, it is expected that the findings are able to offer insights to the study of social design inclusion and the implementation of the high-level participatory design research with the disabled children in the next stage of the research. More detailed investigations and more participants with diverse abilities are needed to identify factors behind and to collaborate together with inclusive and playground designers in order to generate suitable and interesting design solutions. It is hoped that there will be more inclusive playgrounds and facilities in Hong Kong, and disabled children will have more chance to get involved to play with other children in inclusive playgrounds, so that the spatial justice for the disabled children can be retained.

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## **Building Lives: A Case of Academia's Involvement in the Community Development of Smile Village, Cambodia**

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### **Abstract**

This paper presents a model of collaboration that involves the academia, Non-Profit Organisations (NPO) and industry in the building of a new village, Smile Village, in Cambodia, that will house 170 families relocated from various slums. The NPOs behind the project adopted a Community Development approach addressing dimensions of Community, Education, Environment and Livelihood to enable the underprivileged families to achieve social and financial mobility. The Smile Village has recently completed phase 1 of housing 70 families. The paper will explain the role played by the different stakeholders and how in academia we can incorporate real world issues into the curriculum and leverage on service learning to create a win-win situation where students and stakeholders can benefit mutually. The author and the National University of Singapore architecture students were involved in the project in brief formulation, design and construction of different scales with stakeholder engagement over a 4-year period. We witnessed the Smile Village community gradually forming over this period of time. Students and faculty of other disciplines were also involved with Smile Village. Key learning points and challenges are presented.

Keywords: community development, resilient community, service learning, design and build

### **INTRODUCTION**

Cities in Southeast Asia countries are growing. With economic progress, there is pressure on limited land for development in the cities. Slum eviction of the urban poor is also common in cities such as Phnom Penh, Cambodia. Many NGOs step in to provide housing for the urban poor but providing a roof over their heads is solving only one aspect of a complex issue. The solution has to be a wholistic one that addresses education, livelihood and environment as

well, in order to have impactful community development and a resilient community (Bhattacharyya 2004, Mathie2003).

### **About Smile Village**

Smile Village (SV) came about because families of children attending school at Pour un Sourire d'Enfant (PSE), a general education and vocational institute for underprivileged children, face eviction from their slum dwellings in dump sites within Phnom Penh due to rapid urban development. Without solving their housing problem, students run the risk of dropping out of school. Thus, PSE & Solutions to End Poverty (STEP) venture into building housing on a vacant land of 2.2ha located 12km from the city centre. Phase 1 of Smile Village has been completed and consists of houses for 70 families, a childcare centre, chalets for bed & breakfast (for volunteers/visitors), a community centre and a soon-to-be-completed social enterprise/training centre. The families who relocated to SV are the very poor, mostly earning income below USD1.25 per day per family member. Phase 2 will consist of completing another 60 houses depending on funds available from donors.

While the original purpose was to merely provide housing, the vision of Smile Village has evolved into a community development approach. Its vision is to build a residential community village campus to support underprivileged families from the slums to achieve social and financial mobility. Its mission is to provide decent rental home and improve livelihood of underprivileged families. By alleviating poverty, the underprivileged can afford their children's education, health care and own their home. To achieve the vision, the strategy is based on a Community Development approach tackling education, economic, social and health aspects (STEP). The strategies are as follows:

- Empower the family of SV to take their own responsibility through Business Set up either by families' initiative or common business
- To build on the current strengths of family and team in the choice of businesses
- Capability building for every one (team, members and stakeholders)
- To conduct engagement sessions with families in the self improvement of mindset through behavior adjustment
- Provide early childcare education within the community and assistance to access general education, vocational training with parental commitment in rental contract.
- Identify the key health issues, provide education to preventive actions

The plan is to help families improve their current income level to a level that they can afford their own housing within a few years and exit SV.

There are three sectors for the programs of SV, namely, Environmental and Shelter (Houses and Communal facilities), Livelihood and Enterprise (Income and Sustainability – enterprises within SV, facilitate employment and micro-businesses), Community and Education (Community Living and Training – children enrolled in PSE school, Childcare, Community Health and Youth Program).

Since the families moved into Smile Village in September 2015, the micro businesses set up were a rug-making (among a group of ladies) and a bed & breakfast service i.e. cooking, housekeeping for volunteers and visitors who are staying in the chalets. The next social enterprise businesses will be a recycling, landscape and construction industries.

### **Design of Smile Village**

The site is surrounded by fields and is accessible by a local road. Within a 3-km radius are factories, temples, market and other villages. In the centre of the Smile village is the Community Hall, Childcare and playground. The childcare is designed with an open plan and open education concept. It caters to children from 2 to 6 years old and will have an afterschool care service for 7 to 12 years old. Around the centre of the village are 2-storey paired houses, each with its own rainwater collection from the roof. There is piped water supply and sewerage infrastructure and a pond in the village that collects rainwater especially for use during the dry season. Since construction is in phases, empty plots will be used for agriculture in the mean time. A qualitative study was done by STEP & PSE on the housing and living habits among the villagers identified to move to Smile Village. They were consulted on the house type designs (stilt housing, non stilt housing and cluster house design). There was no consensus on a particular type and the stilt housing was implemented eventually. Because of the pressing deadline to house some families who were facing eviction, the house designs uses a prefabricated structural system that can be erected quickly. Five chalets are for volunteers and visitors to stay over. They pay rent and food cooked by the village ladies which forms an income source for the village management.



Figure 1. Masterplan of Smile Village when it is eventually fully built (source: Smile Village Management)

## MODEL OF COLLABORATION & ROLES

In the Smile Village project, STEP & PSE collaborate with many key partners to share expertise and resources. The key organisations are PSE and STEP who started the concept of Smile Village and they depend on many student volunteers and interns to support the various initiatives in health, social enterprise, agriculture, and design. As STEP is a Singapore based NPO, it approaches faculty and students of mostly Singapore tertiary institutions for the project so far. Industry alliance partners such as the contractor, Grenzone, understands the vision and contribute as part of their corporate social responsibility. A Singapore preschool sponsored teacher training and teaching materials for the Smile Village Childcare. As PSE & STEP are new to house building, Habitat For Humanity was to be a key partner in completing all the houses. They built the first 15 houses but subsequently exited the partnership, as they could not commit to the short timeline that PSE & STEP required. The families were being evicted from the dumpsites and Smile Village houses have to be built quickly.

Most of the partners and the role they play are as follows:

Pour un Sourire d'Enfant (PSE) – The word means “Smile of a Child” in French. It is a NPO in Cambodia that provides free education from preschool to vocational school (such as hospitality school) to underprivileged children and has educated almost 7,000 children. It provided the land, built the infrastructure, provides free education in PSE schools & childcare, provides key Smile Village staff and train some of the Smile Village ladies to be cooks for volunteers.

STEP – raise funds and bring in industry partners for the construction of buildings, provide community training, train-the-trainer program, provide volunteer with ready structure and platform to volunteer in a meaningful cause, manage volunteer program and bring in volunteers/visitors for bed & breakfast stay, and identify businesses to set up.

Habit For Humanity, Cambodia –built the first 15 houses based on a masterplan that they were involved in. The masterplan has since changed.

Grenzone – The Contractor for the childcare, houses & Community Centre with an interest in sustainable construction. They were also involved in the masterplan and vision of the Smile Village. The construction system was a prefabricated lightweight steel structure that allowed the houses to be completed within a short time. Grenzone involved some residents in the construction of the buildings in Smile Village as on-the-job-training with income and for transfer of construction skills. The hope is that the residents will thus be able to find new jobs in the emerging construction industry in Cambodia.

URBNARC & Billion Bricks – The former is a Design firm in Singapore that provided pro-bono service for SV masterplan. The latter is a NPO design consultancy based in Singapore that designed the masterplan and Khmer style houses.

Garden and Landscape Centre – partner in developing plant nursery and consultant for the SV landscape plan

Creative O Preschoolers Bay – a premier preschool & childcare in Singapore with progressive pedagogy. They together with other preschool teacher-volunteers from Singapore, conducted teacher training for potential Smile Village childcare teachers and mother-assistants two years prior to the opening of the SV childcare. They also raised funds to sponsor the SV childcare teachers' salary and teaching materials.

Volunteers – Staff and students from the architecture, landscape architecture, medicine and business faculty of the National University of Singapore (NUS), students from the Ngee Ann Polytechnic, Singapore and volunteers from Mycorp, Malaysia.

## ACADEMIA'S INVOLVEMENT

STEP had approached different faculties and student organisations in NUS to participate in the Smile Village project in whatever way they can contribute. During the Smile Village's planning stage, students from the NUS University Scholars Program conducted a Community-Asset Mapping of the dumpsite residents who will be moving to Smile Village, to understand their aspirations and priorities. These studies helped PSE & STEP plan the village and programs that met the needs of the residents. NUS medical students conducted health screening for the residents and public health education lessons. The Business school students surveyed micro businesses and proposed possible types of social enterprises. The architecture students produced conceptual masterplan ideas, designs of buildings in the Smile Village, raised funds for the design and built playgrounds and childcare furniture. The landscape architecture faculty and students came up with an edible landscape plan, conducted demonstrations of urban farming and laid the groundwork for a tree nursery in SV. The students' participation was through channels of formal academic modules, holiday enrichment programs, service learning (Sigmon 1996) and student association's activities (Tan 2013). The students documented their process on facebook and in videos to share their experience with others.<sup>1</sup>

Below is an elaboration of the architecture and landscape architecture students' involvement.

### Masterplan & Building Design

NUS Architecture students started their collaboration with STEP & PSE since June 2012. Our first trip was to understand PSE, establish the user requirements of the Smile Village Childcare with visits to existing PSE childcares, establish the user requirements for a Social Enterprise centre and to visit the Smile Village vacant site. During that trip, we engaged with PSE stakeholders through participatory methods to find out the shortcomings of their current childcare designs and their wish list for a future childcare. We also did quick design charettes to discuss ideas of childcare and social enterprise with them. After the trip, students spent one semester (13 weeks) using Design studio module to create a masterplan of the Smile Village and designs of the childcare and social enterprise centres followed. Even though the Smile

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<sup>1</sup> Playground construction video 2016 <https://www.youtube.com/watch?v=Ua8AzdjYWKo>  
PSE-NUS Smile Village Facebook <https://www.facebook.com/smilevillagenus/>

Village had an original masterplan done in partnership with Habitat for Humanity, it was a plan that is urban in character with 2 to 3-storeys cluster courtyard blocks with as many dwelling units as possible to maximise landuse. A concern was whether the residents who have been living in single-storey dwelling can adapt to living on higher floors. The Design studio explored alternative masterplans of different morphology and density, incorporating ideas of environmental and social sustainability and resilience e.g. one alternative was to provide larger shared community plots with a small garden plot for every household to enable them to grow their own vegetables. It is impossible for PSE & STEP to have the funds to build the entire village at one go and it is also not advisable to do so. Phasing land development and leverage empty land for income generation was explored in the masterplan. PSE & STEP were invited during the design process for reviews and discussions. The different design scenarios surfaced further issues for PSE & STEP to consider. It enabled them to compare the pros and cons of each alternative and sharpen their vision for Smile Village. The masterplan was later finalised by URBNARC and Billion Bricks who also designed the houses. The cluster house design of the first Masterplan were discarded for a Khmer house on stilts. Residents now have a small plot of land in front of their house for gardening. The students' designs of the childcare and buildings for their social enterprise also provided artist impressions that STEP could use for fund raising.

### **Edible Landscape**

Introducing the concept of growing your own food in a tight space is an important one as the PSE students and their families will be ready to practise it by the time the Smile Village is ready. PSE campus was the right laboratory for it. There are pockets of open space in the campus but consists of decorative plants. A group of NUS landscape architecture students did a Design studio on Edible landscape for the PSE Campus. They proposed a masterplan of greening the PSE campus with edible plants and build pilot green plots with the help of PSE students and the landscape company. PSE students were taught how to grow plants in recycled plastic bottles.

In June 2016, a group of NUS architecture students & staff, in partnership with Garden & Landscape Centre, planned a tree nursery and prepared the ground for the nursery at SV. They also taught volunteers and residents how to build bioswales. The tree nursery will be an enterprise that is a revenue source.

### **Childcare Furniture**

In January 2014, NUS architecture students went to Cambodia during university holidays to design and build prototype furniture for the future childcare using recycled materials and

upcycled materials e.g. discarded tyres from the PSE fleet of school buses were used to make seats and see-saw and wood pallets were used to make storage shelves. The Smile Village childcare has not started construction but the prototype furniture was used in other PSE childcare. This way, students can have first hand knowledge on the flaws of their design and re-adjust accordingly.

Six months later, two teams of NUS Architecture students went to PSE. One team built an improved version of the last prototype learning from the failed designs of the first attempt. They also designed new multifunctional pieces that can double up as shelves and tables. The idea of a multifunctional piece of furniture is to maximize the limited budget and restricted childcare space available. It was heartening to see that the PSE staff and students built more of the tyre play objects and improve the design using the sample pieces we constructed on the previous trip.

### **Playground & Building as Learning Aid**

The second team designed and built a playground constructed from local materials at one of PSE's childcare. The design was presented to childcare teachers and PSE management in the form of a physical model. Changes were made immediately after their feedback. Materials were then purchased and recycled tyres were also used. Teachers participated in the construction process. This playground served as a pilot for the Smile Village playground.

After much delay, finally, some houses were completed in October 2014 and families moved in. The childcare that was designed by the author was near completion. A year later in June 2015, a larger team of NUS Architecture students went to design and build a playground at the site of Smile Village. The playground was a request from PSE, meant for the children attending the childcare. The playground equipment that PSE installed in their existing childcares are made of metal, bought off the shelf and has only one way to use them. They do not encourage creative play or challenge the children physically.

Prior to commencing the playground design, NUS students obtained feedback from PSE via email and skype on the parts of the playground, built a year ago, that is more popular among children and the parts of the playground that have given way. As a supervisor to the project, the author felt that the students needed more in depth knowledge to design a better playground. The author contacted an outdoor adventure expert in Singapore and he volunteered to give consultation to the students for the playground design. Students learnt from him the gross motor skills for different age groups of children and the type of activities that can help develop those skills. Based on the feedback from PSE and guidance from the outdoor adventure expert, the students proposed an adventure playground design. They

brought the model of their design to Cambodia and had an engagement meeting with the Smile Village staff and residents. Again modifications were made immediately based on the feedback and construction began after procuring materials. A few residents were hired for the construction of the playground. The children made art on the columns of the playground with thumbprints. Students also produced a step-by-step construction manual that was left with the Smile Village staff and residents. This is intended to enable them to carry out their own maintenance and to empower them in building their own playground in other existing PSE childcares.



Figure 2. Engagement meeting with Smile Village residents and staff about the playground design



Figure 3. Playground in Smile Village

The playground was so popular that on weekends, there were nearly 300 children from Smile Village and the surrounding villages congregating and playing there. The playground located at the heart of Smile Village is not just a playground but it also serves as a social gathering

space. Parents gather there to watch their children play and chit chat with each other. For the first time, children have a safe space to play in.

STEP founder, Ong Ailin, expressed with gratitude,

*“Never before have PSE children enjoyed such wonderful evening playtime safely in the lovely cool breeze! Thank you NUS Architecture & the great efforts of the Smile Village Team! It’s truly a piece of Heaven on earth.”*

The playground as a social space can foster community bonding which is an essential building block for community development.

Some team members were in charge of interior works of the childcare. The ideas for the interior were inspired by Building as Learning Aid (BALA), a term coined by Indian architect Kabir Vajpeyi. In India, many schools do not have the budget for purchasing teaching materials. BALA’s approach makes use of every building component and surfaces as an aid for teaching and learning so that money that is set aside for construction or renovation of a school can be optimised. Students designed and painted measurement scales on the columns and floor, murals related to science, floor patterns for learning colours & shapes, and floor patterns that can be used for indoor physical exercises or play. The door and window grilles of the childcare were also designed to enhance learning of shapes and fractions.

### **“Youth Playground”**

By September 2015, all phase one houses, Community Hall and Bed & Breakfast chalets were completed and families moved in. Sessions by STEP & PSE on community building & capacity building for residents continued. The years of civil war and Khmer Rouge atrocities in Cambodia have destroyed trust among some people. In addition, families came from different dumpsites in Phnom Penh and establishing communication and trust among them is one of the priorities and an ongoing process. NUS Architecture students took a volunteered trip in May 2016 and Smile Village management requested that they design and build an Activity Circuit or “Youth Playground”. The circuit is to support their youth leadership-training program where identified youth leaders learn team building through doing activities on the circuit. This Activity Circuit is also used by volunteers for their team building program on bed & breakfast visits. In fact, after the circuit was built, it was used to conduct team-building exercises for Smile Village staff, residents and village leaders as well. Fifteen architecture students designed and built the activity circuit structure with the help of MyCorp volunteers from Malaysia. It was a challenging project as there is no specific brief. Smile Village staff and residents have no idea what it should look like. Again the same outdoor adventure expert in Singapore served as the consultant to the students on the types of

activities needed to enhance team building. Students proceeded to design a structure that can be used for multiple activities, with open-ended structures for creating new activities. Due to the difficulty of communicating remotely with Smile Village staff from Singapore, the engagement exercise on the design was done after the students arrived there. Modifications were made based on the feedback with management and residents.



Figure 4. Residents taking part in team-building activities at the Activity Circuit or “Youth playground” in Smile Village

### **Interns and student initiative**

The trips for Design Studio or Design & Build brought forth an unexpected outcome. Some participating students were so inspired about helping the Smile Village project that they volunteered as interns with STEP for longer periods of one to two months during their university vacation. As interns, they were involved in either the physical development coordination or the management of the volunteer program. Some junior students who returned from the trip also initiated projects for Smile Village in the following year and became project leaders leading other students.

## **LESSONS LEARNT**

### **Wholistic approach to problem solving**

The Smile Village project is a good example for architecture students to witness that planning and architecture alone cannot solve social problems. Empowerment and engagement of the community in changing their mindset and behavior is key. E.g. residents were taught and were involved in in-depth discussions about hygiene, organisation of trash with proper disposal

units and cleanliness of the village. When they were in the slums, throwing rubbish on the ground was a natural behaviour. Students witnessed how some residents, who once were scavengers, have found new jobs in rug making and working together as a group. They witnessed ladies receive on-the-job training as cooks (how to cook in a hygienic way) and serving skills. We were the first group that the ladies practised on – cooking and serving us food, while we were there to construct the Smile Village playground. The students saw the excitement and anxiety of the cooks as they watch us eat and wonder if the food is fine or if we get stomach upset. Interaction with the residents made the situations real for students instead of reading about it from a book.

### **Timing of project and Sustainability (Community Ownership)**

When students built the first playground in Smile Village, there were only about 15 families who have moved there. The plan was to involve residents in the construction but they were not ready, being preoccupied with livelihood issues. Only a few residents participated as paid hire. The sense of ownership by residents of the playground was not strong even though it was well used by the kids and was a popular gathering place in the evening. Perhaps the playground was built too soon but it was useful for the kids because the childcare has started operation in one of the vacant houses. A year later, when we were back, we were surprised that residents did not fix a few broken parts of the playground which was a simple job to do. It was due to management issues. The playground though well used by children of all age groups, was under the charge of the childcare management. Residents were under a different management team. The childcare teachers did not have the funds, skills and tools to fix the broken parts. The residents were also not well organised yet among themselves to take the initiative to fix the playground.

The construction of the second structure for Activity Circuit was more successful in community engagement. By then there were 70 families living there. The village was a bustling place. Unlike the first trip, we scheduled construction activity in the evening due to the hot weather in the day. In the evening after school, youths and kids chipped in to help with the construction without we asking. Hopefully, this time they will have the initiative to take care of the structure.

### **Not just hardware but also software**

Students had only planned for enough time to complete the construction of the Activity Circuit. There was insufficient time to demonstrate the use of the circuit and conduct activities on the circuit before departing for home. The Smile Village staff and residents did not really understand how to use the Circuit despite verbal explanations with the use of physical model and a written user manual illustrated with drawings. As a result, a few students and the

outdoor adventure expert made a trip back to conduct training. The staff, youths and village leaders took part in activities targeted at improving communication, building trust and team building. They now appreciated what the structure is for and will in turn be trainers to train others. The NPO found the training valuable and has requested further training. Students had to expand beyond the domain of architecture design, venture into activity design and conducting training to make a truly meaningful contribution.

### **Prototype before implementation**

To do piloting first before finally building the actual project was a sound move. Two rounds of prototyping different furniture designs and left for use by the stakeholders gave valuable lessons of what worked and what did not. Similarly, valuable insights were gained from the pilot playground that was built for use by an existing childcare. It was fortunate that there was PSE campus that serves as a “lab” for piloting edible landscape before knowledge is transferred to Smile Village.

### **Visibility and incidental learning**

The location of where work in progress is carried out can have good side effects. In the first furniture prototype exercise, we worked next to an after-school care space on PSE campus. There was high footfall of students passing by and gathering at the afterschool care space. They saw our students sketching, measuring, sanding, sawing, hammering and drilling. They were curious in what we were making from recycled materials and joined us in learning how to use woodwork tools and the measuring tape. In their mind, doing manual work is usually for the lowly educated and the poor. Knowing our students were from a renowned foreign university yet doing manual work changed their perception towards manual work and working with their hands. It also opened their eyes to how recycled materials can be given a new use. The downside of working in such a location was keeping away over-enthusiastic children from interrupting the construction.

### **Be adaptable & flexible**

Engaging with real world project is often subjected to changes of schedule, conditions and information (or the lack of) from the client. Back in 2012, we hoped that one of the selected student childcare designs could be built and students can participate in the construction. It did not materialise because the original start date for the construction of Smile Village was delayed due to changes in vision (thus changes in the masterplan), fluctuating government commitment to provide water and sewerage infrastructure, lack of funding and many other factors over the years. The author later designed the childcare centre based on the masterplan done by the professionals. The childcare construction timing also could not match the university calendar thus students could not participate. Subsequently in July 2014, we planned

a trip to build the playground at SV, but the site was not ready and we ended up building a pilot one at another childcare which turned out to be a blessing in disguise.

Using real world assignment as an academic Design studio project is also challenging as the client's decision to change the program part way affected the completion of the academic project. A curriculum that has the flexibility to allow changes and a university management that is supportive are necessary. In developing countries, things do not work like clockwork and NPOs run on lean manpower and resources. Students learned to lower their expectation for efficiency, quick response to requests and to keep to a planned schedule.

### **Learning beyond planning and architecture**

Through the involvement in planning their trip and project implementation, students get to interact with the NPO staff. They witnessed the work processes, how staff multitasked in a lean organisation, the challenges and fulfillment of working for NPO and so forth. Over the years, they also saw the politics of tussle/negotiation between different organisations and government.

They see the effects of rapid urbanisation and development of Phnom Penh and the effect on staff turn over. Some staff left the NPO for better salary in the private sector, like some of the teachers who received childcare training and middle management staff. In planning and executing the trips and their projects, students learned the soft skills of communicating with people from a different culture, project management, budgeting, scheduling, conflict resolution and team work. These are often compartmentalized into different modules in school but have now come together as an integrated learning in their projects. A student summed it up as follows:

*“This is a very different project compared to the rest I have done. It brings about a different perspective of seeing, and even more, a different attitude towards the project as it was not only a real one, but a real one with much more constraints, budget, materials, technology, culture, symbolic implications, lack of information and sudden changes in brief. Never once in my academic years did I feel such immersive real engagement to the project contexts.”* Year 4 student

### **CONCLUSION**

This paper shares the learning points from a few years of service learning and academic projects from a practice perspective. While the case is specific to Cambodia, the author believes the lessons learnt are transferable to other countries. Seeing the transformation of

Smile Village from an empty land to a vibrant community four years later has been gratifying. The transformation is testimony to how partners with the passion to help can collaborate to make a difference despite various obstacles along the way. Community development and empowerment of residents is an ongoing process and it will be interesting to follow the future outcome of Smile Village. As for the education of NUS architecture students, the author's belief is that Seeing is Believing and Doing is Learning. Empathy is the seed for a good designer. With the heart in the right place, meaningful design will result. The author hopes to train architecture students not just to build buildings but also to build lives through empowering the community.

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**UNAGI NO NEDOKO Project**  
**~ Co-working Space and Event Space for Improving the Quality of Life**  
**and Increasing Collaborations ~**

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**Abstract**

“Unagi no nedoko” is type of traditional town houses with a narrow frontage that was intended to minimize taxation in major urban areas. The resultant architecture is one of very deep interiors whose thin buildings resemble the shape of eels (unagi) lying on a bed (nedoko).

We renovated this building as co-working space and add new content.

Culture and Art base and the platform of making relationship between urban and rural areas. Small building, a renovation is easy. In addition, including contents, we can repeat short-term PCDA cycle.

As a result, little things Easy things make many happiness. The supporting the entrepreneurs who wish, making activities jumped out to the town.

Keywords: renovation , Co-working , Place making , little things Easy things

## Introduction

### ■Project location

The project is located in a very charming townscape (livingscape) designated as the zone of Dense Wooden Housing in the historical town Kita-Shinagawa in South side of Tokyo.

#### ▪ Location

The location of “Unagi no nedoko” is 12km from The center of Tokyo.

This area name is “Kitashinagawa”

#### ▪ History of “Kitashinagawa”

This area has a history of post town. Old name is “Shinagawa syuku ” (品川宿)

“Shinagawa syuku ” town developed from 400 years ago“Edo Period(江戸時代)” as first post town of an old highway “Toukaido”.(東海道).

“Unagi no nedoko” is the roadside of the way.

“Toukaido” which is one of most important highway in Japan connected the Edo and Kyoto. And Japanese feudal lord walked by a line on this road for meeting a top of “samurai” once in three years.

When japanese feudal lord was walking, habitants of the town could not cross the highway. as a result the town back alley developed.

Still now there is a small alley and a small wooden house in this areas.



Figure 1. The location of “Unagi no nedoko” in Tokyo



Figure 2. first post town of an old highway Toukaido.in“Edo Period”



Figure 3.  
Japanese feudal lord walked by a line on  
Toukaido(東海道) in“Edo Period”

■Project background

▪ Problem of general Tokyo.

The wooden houses there in makes it difficult to undertake evacuation during disasters such as earthquakes and fire.

There is a lot of large-scale redevelopment projects aimed at the 2020 Tokyo Olympics.

In 2013, the Tokyo Government introduced a policy to promote the fireproofing of buildings in Dense Wooden Housing zone. The policy consists of an economic element (a grant or tax reduction for rebuilding to a fireproofing building), and a spatial element (Height regulation) for areas of around 7,000 ha that is prone to earthquakes, and around 820, 000 vacant houses. As a result, the policy promotes large-scale redevelopment by developers which might lead to excessive supply of houses in the future. The owners of the small wooden old houses have many problems; the facilities are old and many of them have no tenants. However, they still have to pay taxes for land and buildings. The ultimate judgment of the owners will greatly change the future of the town.

▪ Problem of general Japan

In 2014.Japan's population decline began, It is a turning point.

As a large-scale re-development is how to update the city, not a valid.

There is a need to take advantage of the existing building stock.

■The project : UNAGI NO NEDOKO

The structure is more than 100 years old, with 2 levels of traditional wooden construction. It is very narrow with a great depth like a "bed of eel". It's one of the important buildings for the historical

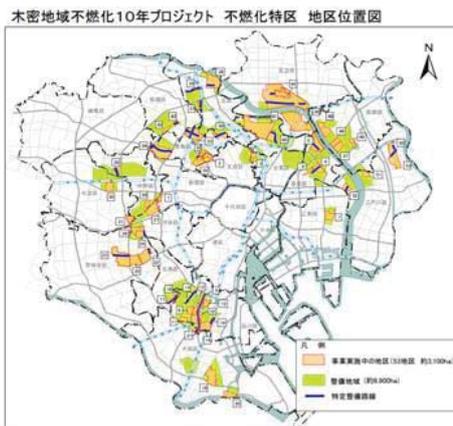


Figure 4.the Tokyo Government introduced a policy to promote the fireproofing of buildings in Dense Wooden Housing zone.



Figure 5.One of redevelopment by developers

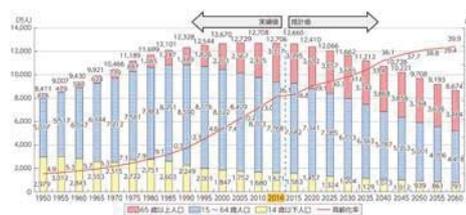


Figure 6. Japan's population decline



Figure 7. UNAGI NO NEDOKO

The face of the building/meeting room/kitchen/Japanese-style room

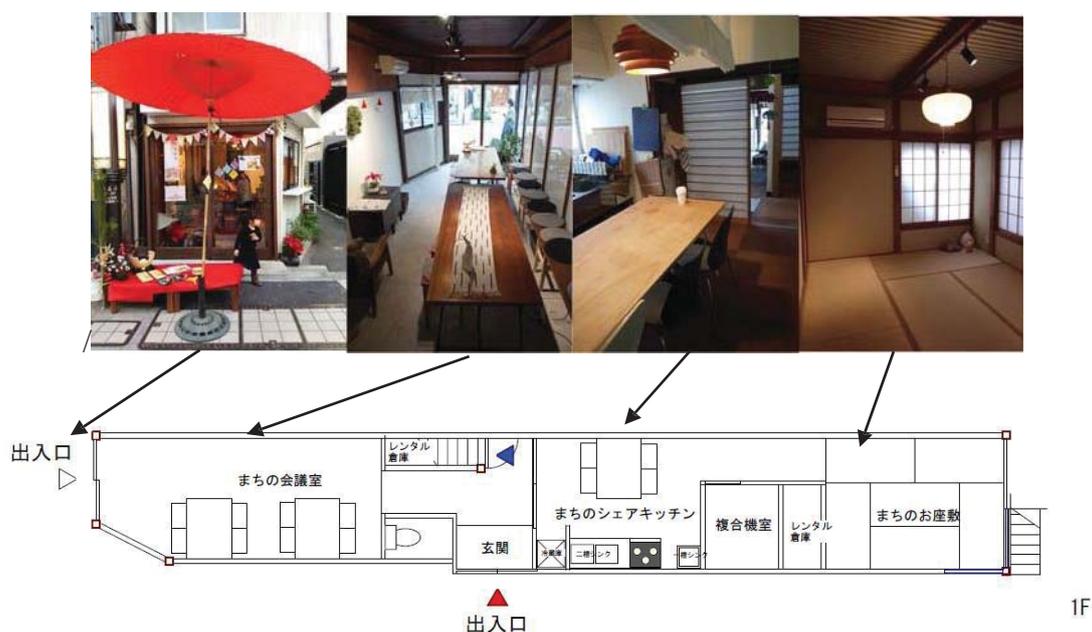


Figure 8. UNAGI NO NEDOKO 1F Plan

townscape. It was renovated as a Co-working office and Events space for improving quality of life, creating work and individual happiness and enhancing the community. The house was rented for 3years (until 2017) and low cost renovations were done.

■Purpose : Possibilities

- To show how the low risk and low return reconstruction (not large-scale development ) can reduce the economic burden on owners.
- To show that the small wooden old house has power to bring up community and produce culture by sharing the house.
- To show how the process of renovation by do-it-yourself (DIY) and do-it-with-others (DIWO) leads to marketing and securing of customers.



Figure 9. The renovation by do-it-yourself (DIY) and do-it-with-others (DIWO)



Figure 11. Neighborhood talk about memories of this house to students who have a construction

## Results

### ■The project out put: Small things, Easy things

- Make a little money enough to pay taxes and building maintenance.
- Conduct small events; more than 60 times in 11 months.
- The results or main findings of the study should be clearly presented.

### ■The project out come:

- Small events create opportunities for face-to-face interactions, opportunities for self-realization, success experiences and so on. Individual happiness makes the town scenery more lively.



Figure 13. Cultural and creative events

- Some people who joined this house's activities begun to make new projects; one person realized the dream to have her own shop.



Figure 14. one person realized the dream to have her own shop

- It has the platform of making relationship between urban and rural areas (Agriculture fishery production areas)



Figure 15. The platform of making relationship between urban and rural areas

- Inspired by our activities, neighbors wanted to make opportunity to announce their activities.

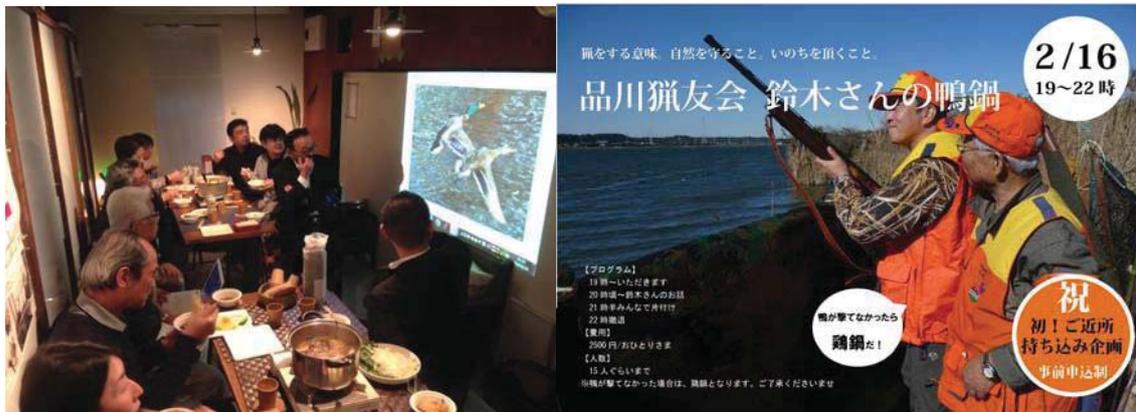


Figure 10. Neighborhood make opportunity to announce their activities

- The place making activities jumped out to the town



Figure 16. The event of jumped out to the town

## Conclusions

We will continue with this project and lead it to success and hopefully this will stir owners of similar houses to try DIY's low risk and low return reconstruction.

And it is possible to create a new happiness in the town.

## SPOON Foot-ring Project and Ecological Identity: Creating Connection among Human, Nature and the City

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### Abstract

23 years ago, Binnan industrial complex plan was proposed, planning to reclaim the Chigu Lagoon, the biggest wintering habitat of an endangered migratory bird called Black-faced Spoonbill. Local fishermen, conservationists, legislatives and organizations including SAVE International stood up and took action against the industrial development listing Black-faced Spoonbill as a symbol of sustainable local economic development and protection of the ecosystem. And they succeeded, having the government to designate Chigu lagoon and the surrounding costal area as a nature protection area, “Taijiang National Park”.

Contrary to the victory in Chigu lagoon, there are many more habitats of the spoonbills in the East Asia which are threatened by industrial and urban developments. Especially in Japan, there was a reclamation project called “Island City” in the bay area of Fukuoka. SAVE International and local conservationist claimed the city to establish a wild bird park on one part of the reclaimed land which have enough capacity and a design that is good enough to accept a variety of birds that was inhabiting in the area while the reclamation, including the Black-faced Spoonbill, but unfortunately it was rejected.

Under this situation, Team SPOON was formed under the concept of raising urban residents’ consciousness of being a part of the ecosystem by raising recognition of the Black-faced Spoonbills. By this, we hope to reinforce larger and international community of spoonbill lovers, and enable urban spaces to change and merge with natural environments, such as “Island City Wild Bird Park”. We are now mainly working on “Foot-Ring Project”, and we are making rings and sending daily news of the Black-faced Spoonbills (“Daily Black-faced Spoonbill Times”) on Facebook or E-mail for our members to be linked to a Spoonbill individual and enable them to communicate and make connections among each other. Currently, SPOON member are 126 people, mostly living in urban areas.

Main objective of this study is to reveal the social effect of our activities through surveys and interviews.

Firstly, we will sort out our activities and analyze. In specific, we will sort out the activities that we have done and the people that we have met and made connections with through those activities.

Secondly, we will also sort out our contents of the “Daily Spoonbill Times” and analyze the trend.

Thirdly, we will do questionnaire surveys to the people we have been connected to, including our 126 members and the residents living adjacent to wetlands that we have made connections through participating workshops and visiting wetlands. Through this survey we will be able to reveal the change of environmental awareness of our members and how identification of local residents’ activities among themselves has changed. After that, we will analyze and reveal the relationship of our actions and the change that happened in people’s thoughts and actions.

Through this research, we expect to reveal the social effect of our activities, and will feedback to our activities for the next term and help us mark the milestones to change urban spaces to merging with natural environments.

Keywords: black-faced spoonbill, foot-ring, community, ecosystem, urban area

## 1 • Introduction

23 years ago, Binnan industrial complex plan was proposed, planning to reclaim the Chigu Lagoon, the biggest wintering habitat of an endangered migratory bird called Black-faced Spoonbill. Local fishermen, conservationists, legislatives and organizations including SAVE International stood up and took action against the industrial development listing Black-faced Spoonbill as a symbol of sustainable local economic development and protection of the ecosystem. And they succeeded, having the government to designate Chigu lagoon and the surrounding costal area as a nature protection area, “Taijiang National Park”.

Contrary to the victory in Chigu lagoon, there are many more habitats of the spoonbills in the East Asia which are threatened by industrial and urban developments. Especially in Japan, there was a reclamation project called “Island City” in the bay area of Fukuoka. SAVE International and local conservationist claimed the city to establish a wild bird park on one

part of the reclaimed land which have enough capacity and a design that is good enough to accept a variety of birds that was inhabiting in the area while the reclamation, including the Black-faced Spoonbill, but unfortunately it was rejected.

Under this situation, Team SPOON was formed under the concept of raising urban residents' consciousness of being a part of the ecosystem by raising recognition of the Black-faced Spoonbills. By this, we hope to reinforce larger and international community of spoonbill lovers, and enable urban spaces to change and merge with natural environments, such as "Island City Wild Bird Park". We are now mainly working on "Foot-Ring Project", and we are making rings and sending daily news of the Black-faced Spoonbills ("Daily Black-faced Spoonbill Times") on Facebook or E-mail for our members to be linked to a Spoonbill individual and enable them to communicate and make connections among each other. Currently, SPOON member are 189 people, mostly living in urban areas.

Main objective of this study is to reveal the social effect of our activities through surveys.

1. Firstly, we will sort out our activities and analyze. We will sort out the activities that we have done and the people that we have met and made connections with through those activities.

2. Secondly, we will also sort out our contents of the "Daily Spoonbill Times" and analyze the trend.

3. Third, we will elicit the social effect that SPOON has given in the incidents with SPOON members

Through this survey we will be able to reveal the change of environmental awareness of our members. After that, we will analyze and reveal the relationship of our actions and the change that happened in people's thoughts. Then, we will be able to reveal the social effect of our activities.

*Environmental awareness* is often expressed as other word "*Ecological identity*".

Mitchell Tomashow defines Ecological identity as follows. "Ecological identity refers to all the different ways people contracture themselves in relationship to the earth as manifested in personality, value, action, and sense of self. Nature becomes an object of identification. [...] It also includes a person's connection to the earth, perception of the ecosystem, and direct experience of nature."<sup>1</sup>

*Senses of environment values, conception of nature* also have been discussed as related conception of *ecological identity*. OH Seon-Ah points out that a natural experience in the childhood affects an environment sense of values<sup>2</sup>. The studies about ecology logical identity are very few in number. Ecological identity is mainly discussed in field of environmental education<sup>3</sup>.

In this study, we reveal not only the change of environmental awareness of our members but also reveal the social effect of our activities.

## 2 • Vision, mission, and operation system

Black-faced spoonbill is migratory bird that migrates across East Asia. Figure1 shows flyway of black-faced spoonbill.



【Figure1】 Flyway of black-faced spoonbill

SPOON was formed in January 2015 in Tokyo, which is outside of spoonbill flyway region. Moreover, we are not a group that directly protects spoonbills or habitats of spoonbills.

SPOON was formed in 2015 to change the situation of the Fukuoka Island City Wild Bird Park incident. We thought of how we should be engaged in the issue, from outside the spoonbill flyway region. As being Tokyo which is outside of the flyway region, it is difficult for us to give large influence to a spoonbill habitat just by protesting, so alternatively we decided to raise recognition of the spoonbills and numbers of spoonbill lovers. This means that SPOON was not meant to collect spoonbill lovers, but to change people who were not interested in spoonbills or natural environment, to spoonbill lovers and nature lovers who will enable the human living environment to change in to an environment that co exists with the nature

We would like to present our 3 visions that we have.

- Having same “rings” as an individual spoonbill has will make connection between them and an spoonbill , and incorporate nature into peoples’ lives.
- Peoples’ recognition of being as a part of the ecosystem harmonizes people, and empowers them to reach out to their surrounding environment and other environments.
- Having same “rings” will make international connections and understanding, which leads to peace of the flyway region

Based on the visions, we recognize our missions as below

- Make connections between people and birds
- Recognition of being a part of the ecosystem
- Make connections among people

These visions and missions are manifest on November 2015. We have been couched our visions in various ways, but to recruit members having various backgrounds, we arranged our visions to be expressed in simple words.

### About our operation system

SPOON was formed in January 2015, and was operated mainly by the social engineering

students of Tokyo Institute of Technology and associate professor of the social engineering department of Tokyo Institute of Technology, Masato Dohi. After November of 2015, as recruiting of new SPOON members begin, and various people started to take part in our organization.

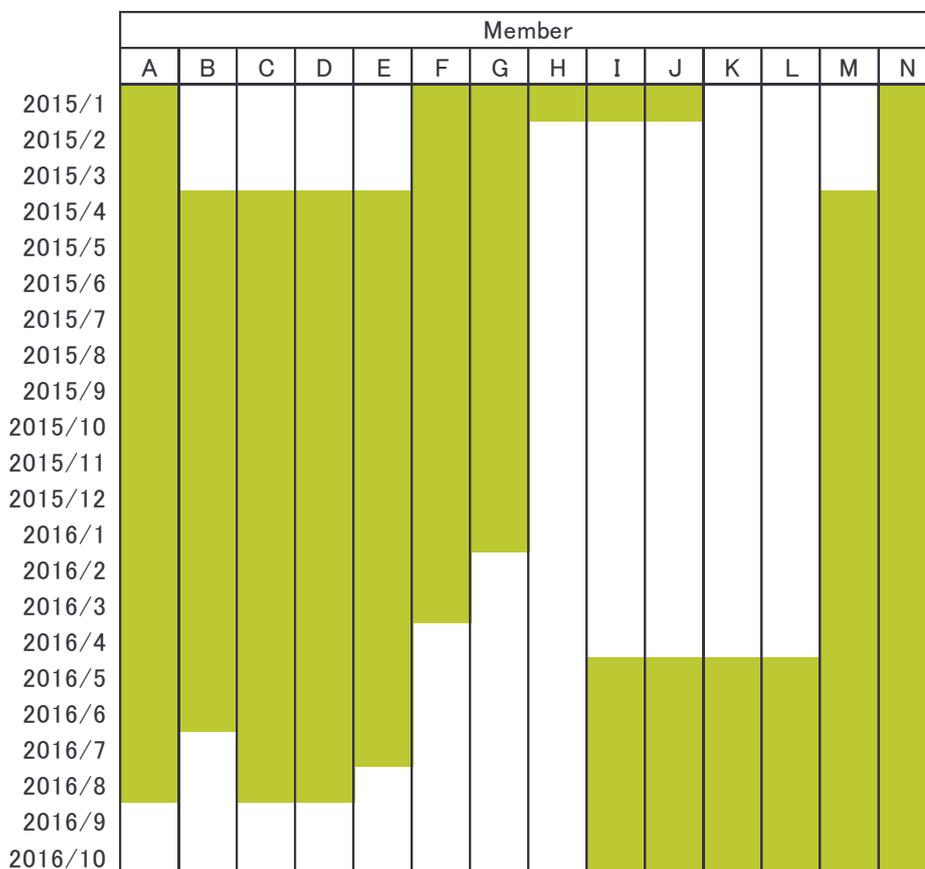
Currently, SPOON is comprised of 189 members, each of them “supporting” an individual spoonbill. SPOON membership can be categorized in to 3 according to their involvement in the operation of SPOON.

1. Regular members

Regular members are people who support our visions and missions. They attain their memberships by paying the annual membership fee of 1000 yen to the steering committee, and after registration will be given the “rings” of the individual spoonbill that they support and start receiving “Daily Black-faced Spoonbill Times”.

2. Steering Committee

Steering committee receives the membership fees and does the operational management of the “Daily Black-faced Spoonbill Times”, and the business planning. It is composed of members of the Dohi Laboratory of Department of Social engineering of Tokyo Institute of Technology, and Dohi Masato, an associate professor of Tokyo Institute of Technology. As its members are mostly students, the composition of the members change according to the events that happen to them, such as studying abroad and graduation. **【Figure 2】**



**【Figure 2】** Steering committee members

## Spoonbill Times DJ

Daily Spoonbill Times DJs are writers of the Daily Spoonbill Times. Until July 2016, Daily Spoonbill Times was written only by the members of the steering committee, but as 5 members (A,F,G,H,I) has gone abroad for studies, we started recruiting Daily Spoonbill Times DJs. Students from Fukuoka University and Kumamoto University are participating on this position since August of this year.

## 3 • Actions and Network

This chapter explains SPOON actions and its network.

### 3–1 Actions

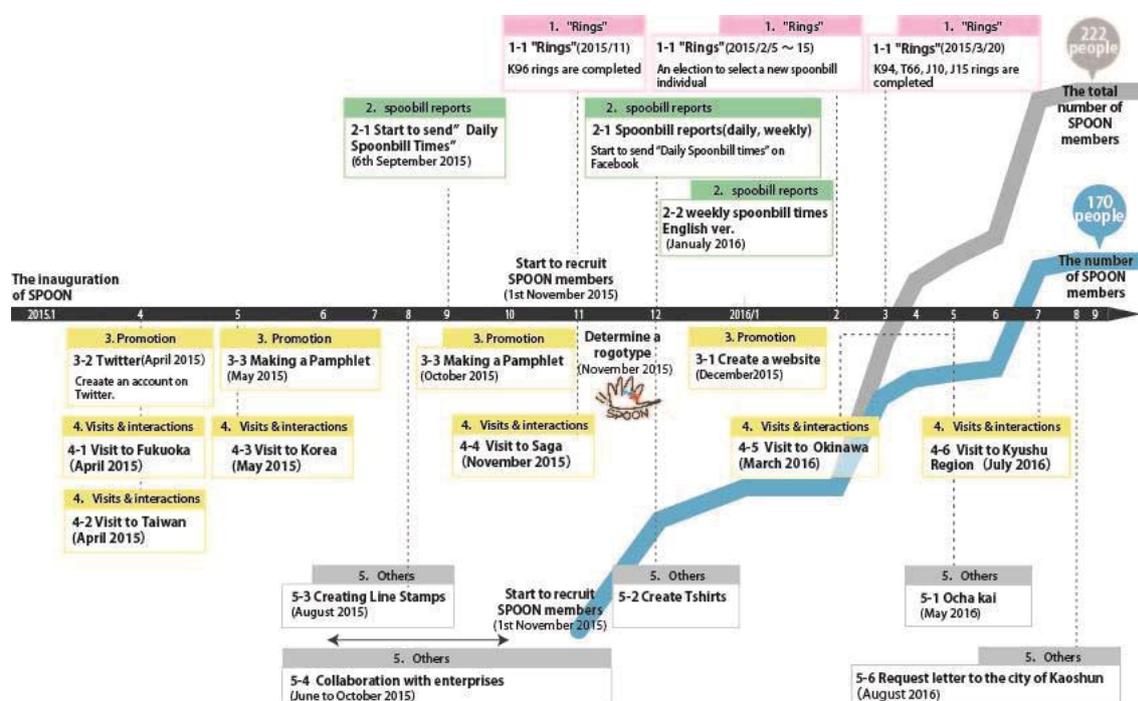
SPOON has been taking many actions since January 2015. The actions can be categorized into 3 categories. 【Table 1】

【Table 1】 Actions

Goal	Activity	outline	
w c i o n n h n e c t i o n s	1. "Rings"	1-1 "Rings"	100 sets of K96 rings were produced in November 2015. But as in January of 2016, the number of members exceeded 100. Under this circumstances, we decided to host a election for spoonbill individuals for the new "rings". We took 13 birds for candidates, and asked the members to vote. As a result, J10, J15, K94, T66, was elected and 100 set (a total of 400 sets) of rings of each individual were fabricated.
	2. Spoonbill reports	2-1 Spoonbill reports(daily, weekly)	291spoonbill reports were distributed for this year, from September 16, 2015 to October 27, 2016. There were reactions from members and interactions between the members on Facebook groups where we distribute our spoonbill reports.
2-2 Weekly spoonbill times		We started the distribution of the weekly spoonbill times in January 2016, but has been stopped during February to May of 2016. Translation is being an issue. 14 weekly spoonbill times were distributed.	
c o n n e c t i o n w i t h p e o p l e	3. Promotion	3-1 Website	Website introducing SPOON
		3-2 Twitter	Though its frequency of our use is still low, its been used to promote our activities and our website. There have been interactions with non-members on twitter
		3-3 Pamphlet	The Pamphlets were made to explain our vision and mission, and are used to recruit new members.
	4. Visits & interactions	4-1 Visit to Fukuoka (April 2015)	We introduced the concept of our activities to the spoonbill and wetland conservationists currently working in a spoonbill habitat in Fukuoka. We were introduced to conservationist working in Korea, and told about the workshop that was scheduled next month.
		4-2 Visit to Taiwan(April 2015)	Delegation of 8 members of SPOON participated in the workshops in Tainan, Taiwan. Through the workshops, we were able to meet with people of JWY(Jiading Wetland Youth), students of National Pintong University, and National Cheng Kang Universtiy. We also gave a brief introduction of our activities and got questions as "What can we do?" from the participants of the workshops
		4-3 Visit to Korea(May 2015)	Delegation of 3 SPOON members visited Korea to take part in an environmentalist training program hosted by the ERF (Environmental Ecosystem Research Foundation), UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific), and NEASPEC (North-East Asian Subregional Program for Environmental Cooperation). Many young environmentalists from east-Asia, such as Korea, Russia, Mongolia, China, HongKong, Japan participated as trainees. In the workshop, we visited Black-faced Spoonbill breeding places, DMZ (De-Militarized Zone), and Bukkansan National Park near Seoul city. And there, we learned about the preservation in Korea, environment management in protected areas and the potential the migrating birds have in international relationship. And on the last day of the workshop, we visited the UNESCAP office in Songdo and every trainee presented their experiences and wrap up of the workshop.
		4-4 Visit to Saga (November 2015)	A SPOON member participated in the workshop held in Saga on November 7&8 2015. He was able to meet Spoonbill researchers, and people who are working for conservation of spoonbill wetland habitat there. He introduced SPOON, and was able to recruit 4 members
		4-5 Visit to Okinawaw(March 2016)	Delegation of 3 SPOON members visited Spoonbill habitats in Okinawa, and was able to find spoonbill individuals J10, J15, S80. 2 spoonbill reports were distributed, and we got 31 "likes" and 4 comments on the facebook group. During our visit, we met with the Wild Bird Society members and people of "Umiera-kan", and was able to recruit 5 members.
		4-6 Visit to Kyushu Region (July 2016)	Delegation of 4 SPOON members participated in the debriefing session of Japan Black-faced Spoonbill Network held on July 18, 2016. We also visited Landscape Laboratory of Fukuoka University, Ramsar Promotion Office of Saga city government, and 2 members of Wild Bird Society, Yatsusiro chapter. During our trip, we were able to recruit 15 members.
		o t h e r s	5. Others
5-2 Tshirt	We were able to give impact to people by wearing them while visits		
5-3 Line Stamps	We started to sell the stamps at August 1, 2015, and was able to raise sales by /2110		
5-4 Collaboration with enterprises	We were discussing during the periods of June to October 2015, but was not able to implement them		
5-5 Request letter to the city of Kaoshun	We sent a letter to City of Kaoshiun in Taiwan, to request to stop the construction of the waste water plant and redesignation of the Jiading Wetlands		

We started visiting the Spoonbill habitats and discussed about our concepts and deepened our vision and mission from April of 2015. And from September, we started the distribution of the Daily Spoonbill Times. From November of the year, we started recruiting members outside. 【Figure 3】

We started recruiting members to support an individual spoonbill which is banded “K96”, in November 2015. But in January of 2016, as the number of “K96 lovers” has exceeded 100 people and ran out of the “rings”, we decided to hold an election to select a new spoonbill individual for members to support. We selected top 13 spoonbills that was found most often in the year 2015, and held an election to select 4 birds out of them. As a result the spoonbill individuals J10, J15, K94, T66 was chosen as the new spoonbills, and we are currently recruiting members to support them.

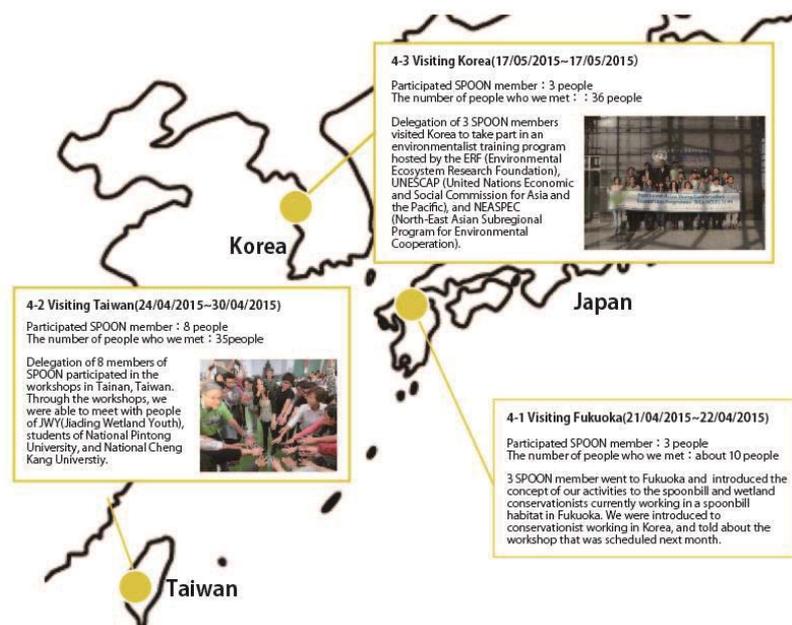


【Figure 3】 The course of SPOON

### 3—2 Network created through actions

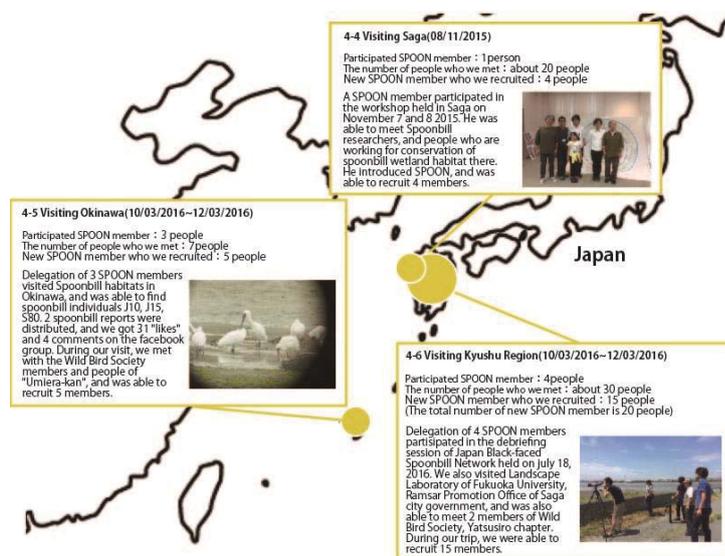
SPOON have been met various people through our actions. Especially, until we started to recruit members in November 2015, we visited various regions and interacted with various people. We visited Jiading and Haomeiliao village in Taiwan, Fukuoka city in Japan, and Incheon city in Korea, and met about 80 people through the visits. 【Figure 4】

After starting member recruitment in November 2015, we visited Kashima city in Saga



【Figure 4】 Visits & interactions before November 2015

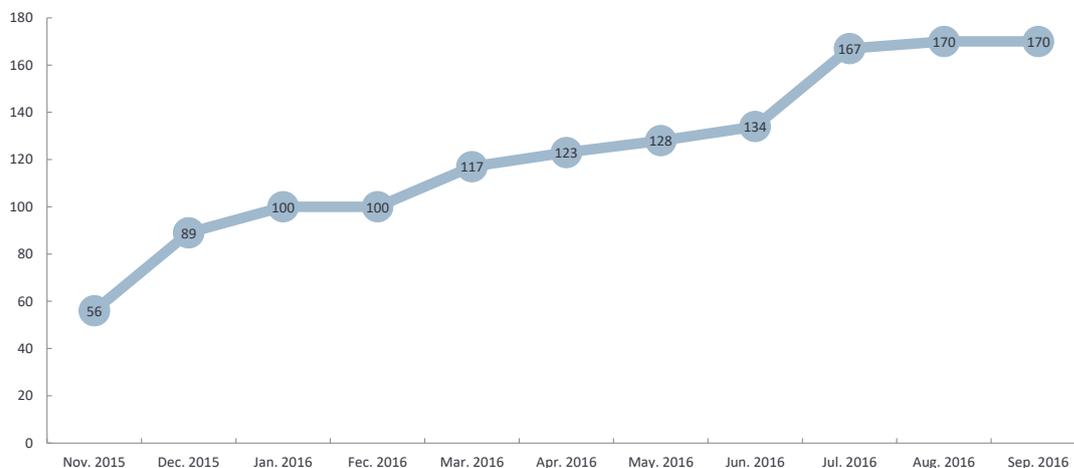
Prefecture, Naha and Tomigusuku city in Okinawa Prefecture, Fukuoka city in Fukuoka, and Yatsushiro city in Kumamoto Prefecture, and met about 57 people. 【Figure 5】



【Figure 5】 Visits & interactions after November 2015

We have been expanding our network not only by interactions through visits, but also introducing ourselves to the friends of the members after November 2015. 【Figure 6】

The month with the biggest increase in number of members were, November 2015(+33),

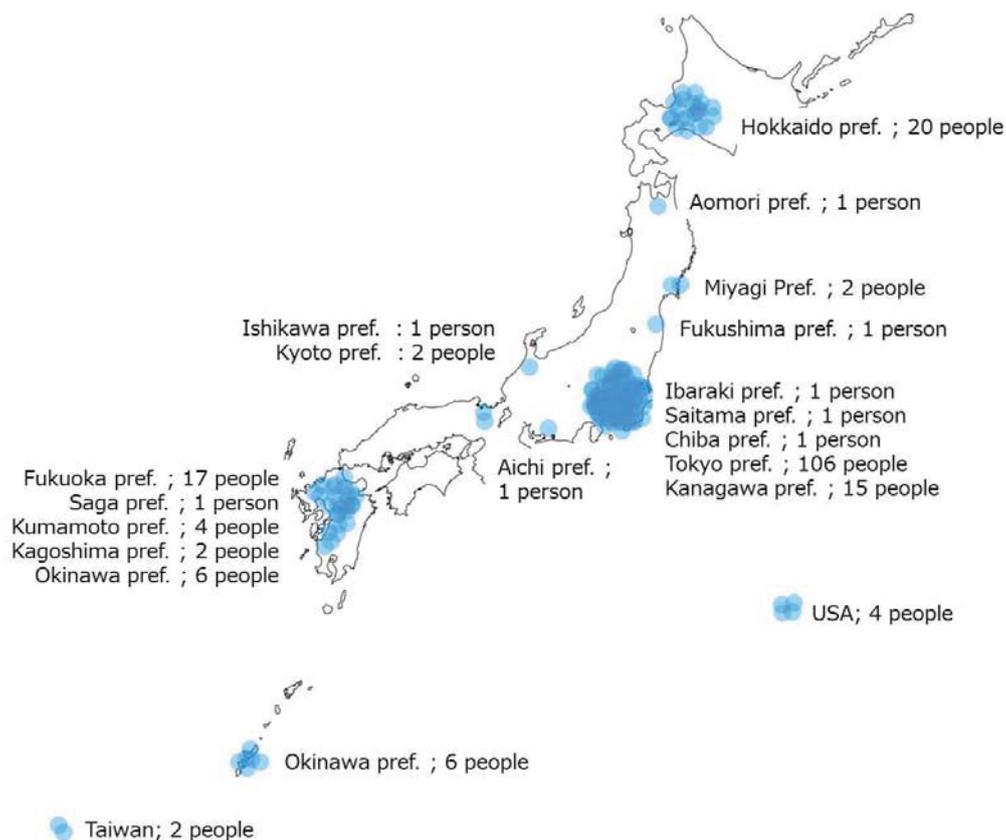


【Figure 6】 The number of SPOON members

March 2016(+17), and July 2016(+33), all months with which we carried out site visits to meet new people in places adjacent to spoonbill habitats. Though we have made connection with many conservationists and bird watchers (SAVE International, JWY(Jiading Wetland Youth), Japan Black-faced Spoonbill Network, Japan Wild Bird Society etc.) through our visits, but looking at the composition of the memberships “People affiliating in other bird or nature societies other than SPOON” were 27 people, and people who are not affiliating in other bird or nature societies other than SPOON” were 162 people. This means most of the members were not interested in Black-faced Spoonbills before affiliating in SPOON and as a fact, most of the members didn’t know about Black-faced Spoonbills before introduced to SPOON.

As members of the steering committee have been introducing SPOON to friends and acquaintances of theirs, the distribution of the SPOON members spread widely across Japan. The most concentrated region is the Tokyo metropolitan area in Kanto region. The members in Kyushu region are the people who we got to know through our visit to Kyushu region.

【Figure 7】 The 2 members in United States are also members of SAVE International, and 2 members in Taiwan are the people we got to know through our visit to Taiwan in April 2015.



【Figure 7】 The map of SPOON members

#### 4. Analyze the “Daily Spoonbill Times” or “Weekly Spoonbill Times”

This chapter reviews, categorizes the contents, and analyzes the trend of our mail magazine, “Daily Spoonbill Times”. In 4-1, we will review the contents of “Daily Spoonbill Times”. In 4-2, we will analyze the trend of “Daily Spoonbill Times” and elicit the changes in the interests and emotions of “Daily Spoonbill Times” DJs. In 4-3, we will analyze the reaction of “Daily Spoonbill Times” and we will point out the changes in operation of “Daily Spoonbill Times”.

##### 4—1 Contents of the “Daily Spoonbill Times” & “Weekly Spoonbill Times”

We started to deliver “Spoonbill Reports” at September 6, 2015. And we have sent people 291 of them in total. “Daily Spoonbill Times” will change to “Weekly Spoonbill Times”, between March and October. This is the “off season” of the “Bird year” which is based on the cycle that spoonbills come to Japan, “season” starting when the spoonbills come to Japan and ends when they leave for their breeding habitats. Our operation is also based on this “Bird Year” but as the starting of the “Bird year” being movable, we use “SPOON year” for accounting membership and our finances, which starts on October 1<sup>st</sup>.

Weekly Spoonbill Times (English ver.) started on January 10, but it has been only delivered 13 times, as translation being an issue. 【Table 2】 shows the number of Daily or

weekly Spoonbill times that we have sent.

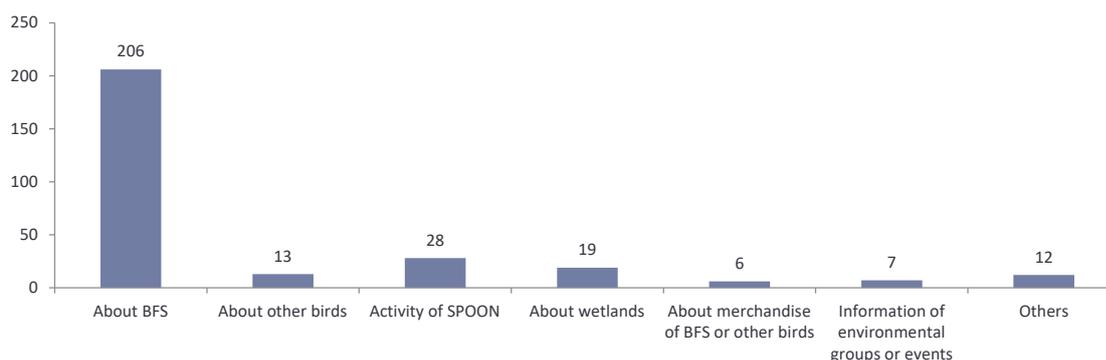
【Table 2】 The number of Daily or weekly Spoonbill times

	The number of mail deliveries	Delivery period
Daily spoonbill times	258	6/Sep/2015–15/May/2016 12/Oct/2016–27/Oct/2016
Weekly spoonbill times	20	23/May/2016–11/Sep/2016
Weekly spoonbill times (English ver.)	13	10/Jan/2016–27/Aug/2016

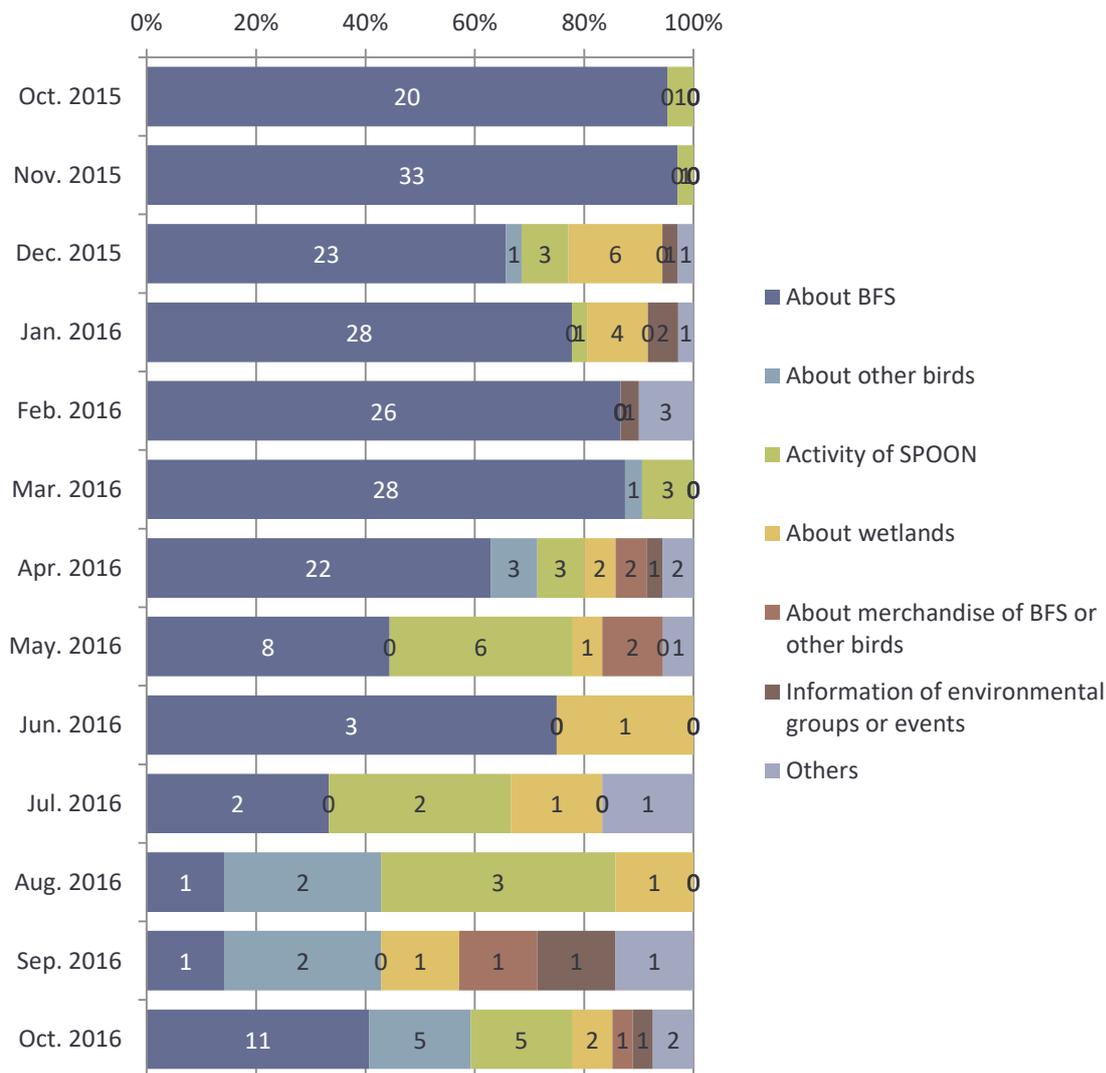
Contents of the Spoonbill Times are latest observation reports and the columns prepared daily by the Daily Spoonbill Times DJs. The observation reports are referred to the website Black faced Spoonbill Conservation Network. The contents of the columns written according to Daily Spoonbill Times DJs’ interests, and are basically free as long as it is related to Black-faced Spoonbills, their habitat environment, or other birds. Most of the Daily Spoonbill Times are written by one DJ.

#### 4–2 Reviewing the trends of “Daily Spoonbill Times” or “Weekly Spoonbill Times”

Columns by Daily Spoonbill Times DJs started on October 10, 2015. There is now limitation on the numbers of the columns for one Daily Spoonbill Times. 224 Spoonbill Times and 267 columns have been written between October 10 2015 and October 26 2016. From the titles of the columns we were able to sort out to 7 categories (About BFS / About other birds / Activity of SPOON / About wetlands / About merchandise of BFS or other birds / Information of environmental groups of events / Others). The category “About BFS” occupies the biggest ratio. 【Figure 8】



【Figure 8】 The numbers of each category of contents of “Spoonbill Times” peaked the most ratios before May 2015, but after May 2015, a variety of contents, such as “Activity of SPOON” started to come up more often. 【Figure 9】



【Figure 9】 Contents of the Spoonbill Times by months

In May of 2016, when we changed Spoonbill Times to Weekly, the 6 senior members who were writing the mail magazines wrote columns (May16~21 2016) reviewing how the first season of SPOON (October 2015~May 2016) have been. We categorized the contents of the reviewing columns. 【Table 3】

5 members other than person A wrote that they started to become conscious about natural environments. Person A has already been interested in natural environments, and has conducted a research about SAVE International in 2014, can be anticipated as a reason why he didn't feel the change in his consciousness towards natural environments. However, as a whole we recognize that even people who didn't have interest in natural environments gradually became interested in not only Black-faced Spoonbills but also other animals through participating in the activities of SPOON.

【 Figure 9】 Contents of the Spoonbill Times by months

Categories	opinions
Feeling closer to Black-faced Spoonbill	Though it was hard to write the Daily Spoonbill Times everyday, as writing the Spoonbill Times, I became a fan of Black-faced Spoonbill. It changed me to write in a positive manner.(M)
	To write the columns of the Spoonbill Times, I read through articles and documents in english, chinese and japanese. Now I feel closer and connected with the Spoonbills.(B)
Became conscious about the natural environment	As researching about Spoonbills, I acquired knowledge of not only spoonbills, but also the wetland conditions that are needed for various organisms to live in.(D)
	I came to love spoonbills, as I write about spoonbills, and became conscious about the natural environment.(D)
	I have never been to neither of the spoonbill habitats such as Chigu lagoon in Taiwan, Toyosaki wetlands in Okinawa, and nandong reservoir in Korea, but became conscious of the things happening there.
	My consciousness towards spoonbills, other birds and natural environment change dynamically.(B)
	I came to recognize through reading articles of spoonbills that they don't only introduce about the backgrounds such as social backgrounds of the wetlands and peoples' activities in spoonbill habitats. It gave me a sense that spoonbill is more related to our lives than I thought.(E)
Able to interact with many people through Spoonbill Times	I didn't have any interest in natural environment, but acquiring knowledge about ecology of the spoonbills and their habitats really changed my consciousness toward them.(C)
	Interactions among members became more frequent as we proceeded on our project. I really felt "Making connections through birds" coming true.(A)
	I came to feel the "possibility of interaction" with the readers of the Daily Spoonbill Times.(M)

### 4-3 Response of Spoonbill Times and, changes of position of Spoonbill Times in SPOON

“Daily spoonbill times” are distributed through email and Facebook group. We will first review and analyze the reactions we had on the “Daily spoonbill times” that we distributed through Facebook. Next, we will review the “Daily Spoonbill Times” that was written through interacting with the SPOON members. Then we will indicate the changes of position of Spoonbill times in SPOON.

#### On Facebook

We started posting “Daily Spoonbill Times” on our Facebook group from December 1, 2015, to nurture interactions among members. Currently (October 26, 2016), there are 95 members on the Facebook “SPOON” group, and they see the posts of the “Daily Spoonbill Times”. 203 “Daily Spoonbill Times” have been posted on Facebook between December 1, 2015 and October 26, 2016. The total “views” of the posts were 13161 times. People “Like” it 1422 times and there were 173 comments. 【 Table 4】

【 Table4 】 Facebook reactions

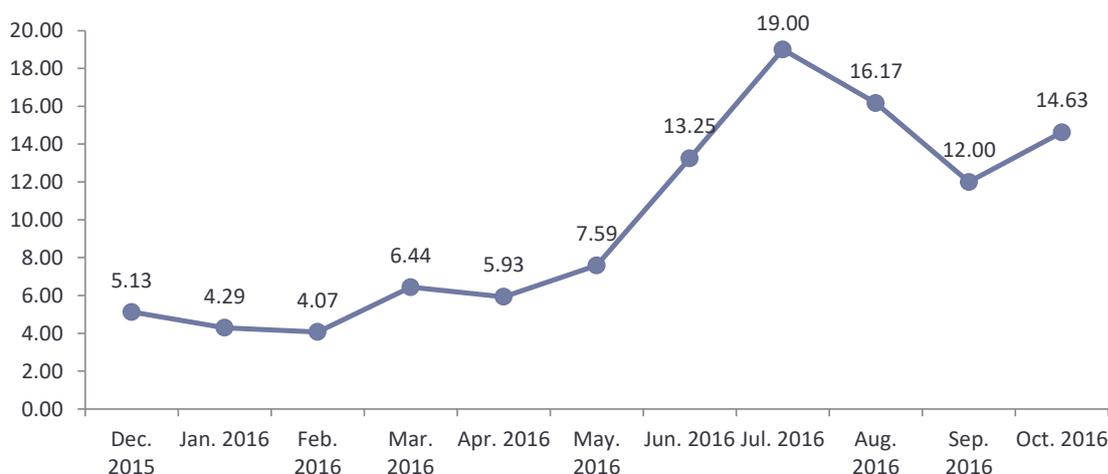
The total number of posted articles	The total “views” of the posts	The total number of “Like”	The total number of coments
203	13161	1426	173

69 out of 203 “Spoonbill Times” were with comment(s). And all “Spoonbill Times” had “Like” s.

【 Table5 】 Facebook reactions by months

Time	The total number of posted artcles	The total number of “Like”	The average number of “Like” for one “Spoonbill Times”	
Daily spoonbill	Dec. 2015	32	1426	5.13
	Jan. 2016	31	164	4.29
	Feb. 2016	28	133	4.07
	Mar. 2016	32	114	6.44
	Apr. 2016	29	206	5.93
Weekly spoonbill	May. 2016	17	172	7.59
	Jun. 2016	4	129	13.25
	Jul. 2016	4	53	19.00
	Aug. 2016	6	76	16.17
Daily spoonbill	Sep. 2016	4	97	12.00
	Oct. 2016	16	48	14.63

The average number of “Like” for one “Spoonbill Times” is 7. The average “Like” for one “Spoonbill Time” has increased from May 2016. 【 Table5, figure10 】



Interactions were not only on Facebook. There were 4 “Spoonbill Times” that were written based on observation data, photos, and movies offered from members, and 1 “Spoonbill Times” was written based on the biological facts that were offered by one of the members.

All of the information providers were members from Spoonbill habitats in Japan, in Kyushu region and Okinawa. And 3 out of 4 were members who are affiliating in other bird or nature societies other than SPOON, but 1 was not affiliating in other bird or nature societies.

### **Involving more SPOON members in Daily Spoonbill Times**

Recently, we have started to have our regular members to start getting involved in writing columns for the Spoonbill Times. We had one person to write the Spoonbill Times until May 2016, but when new members came in and we had to orient them the ways to write the columns, this system started. And in August, we were able to write the Spoonbill Times with the students of Fukuoka University and Kumamoto University who joined us through the visit to Kyushu region.

And on October 16, we collaborated with a regular member who reacted to our “Bird friendly coffee” column (September 25), and the member being also a member of the Japan Wild Bird Society, to write a more detailed column of it.

Now Daily Spoonbill Times are changing from “what we send to the members” to “what we share, and collaborate on with the members”

## **5 · SPOON’s involvement in wetland conservation movement**

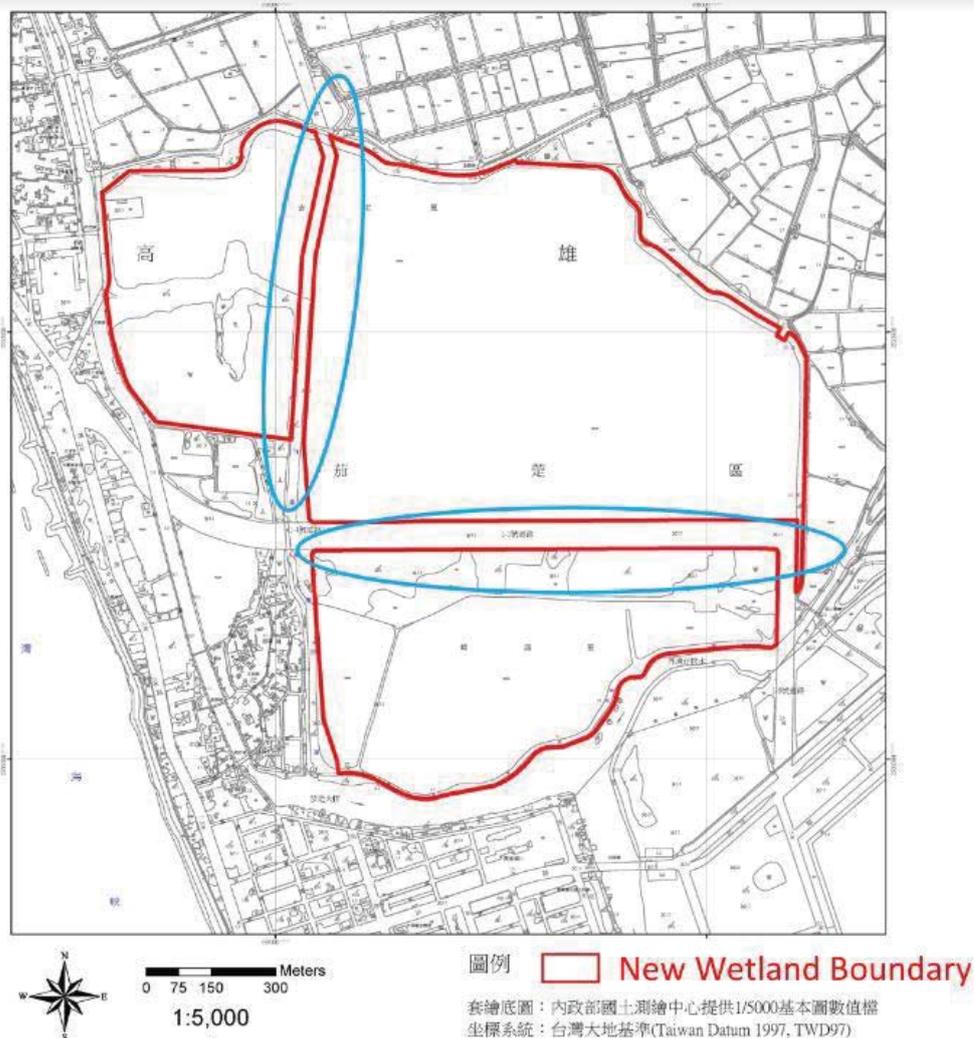
Team SPOON was formed under the concept of raising urban residents’ consciousness of being a part of the ecosystem by raising recognition of the Black-faced Spoonbills. By this, we hope to reinforce larger and international community of spoonbill lovers, and enable urban spaces to change and merge with natural environments. In this chapter

Kaohsiung City, Taiwan, the Jiading Wetland is a winter habitat to a number of Black-faced Spoonbills. The Jiading Wetland was habitat to as many as 212 spoonbills in early 2014, or nearly 8% of the total population of the species in that year (2,726) (2014 Black-faced Spoonbill Results of International Census). The local government has already built a 6-lane divided  wildlife habitat, but Jiading still hosts a diverse assortment of birds and other wildlife. Now the Kaohsiung government is planning to build another road, designated Road 1-4, through the largest remaining fragment, possibly ruining the habitat on which the spoonbills and other wildlife depend.

In this context, the local government carried out environment assessment. Then, the local government reached 2 decisions as below.

1. Jiading wetland should be the local-level importance (lowest level importance) wetland. No upgrading.

2. The designated wetland boundary will exclude the area of road 1-4【Figure 11】



【Figure 12】 Road 1-4 and the new wetland boundary of Jiading Wetlands

Source: Kaohsiung City Government. July 2016. p.53.

To this decision of the Kaohsiung City government, SAVE International decided to send a letter insisting that the Jiading wetlands must be at least graded as “Wetland of National Importance”, and they must not construct the Road 1-4 which distracts the wetland habitat. In response to this, SPOON also discussed whether to submit a letter of objection to the grading of the wetland and the construction of Road 1-4. The steering committee of SPOON explained the situation of the Jiading wetlands and obtain consensus from all the members (there were 170 members at that time.), and sent a letter. The content of the letter is same as what SAVE wrote.

On August 25, the steering committee of SPOON sent out mails and post on Facebook about the situation of the Jiading wetland, the decision of Kaohsiung city government, and the assertion that SPOON is trying to make. There were no opposition to our submission of

the letter, and there were emails from 5 members that strongly support us submitting the letter. And on August 27, SPOON submitted the letter to the Kaohsiung city government.

As in section 3-2, most members of SPOON were not originally those that have strong interest in spoonbills or the natural environment. There are members that even didn't know the existence of the Black-faced Spoonbills. If they were not in SPOON they won't even have known that there was a road constructed in the habitat of an internationally endangered animal.

## 6 • Future development

Currently, there are 189 members in SPOON and most of them reside in Japan. We are planning to expand our activities for the Black-faced Spoonbill season of 2016, so to enable us to watch and know about the Black-faced Spoonbills in all over the Spoonbill flyway region. From our visits in 2015, we already have connections with people in countries such as Taiwan and Korea who are interested in Black-faced Spoonbills, but we still don't have connections with people of various background. Recruiting new SPOON member who are not interested in black-faced spoonbill is one of our missions of this year.

However, there is another problem that we have to solve for the mission. It is the language barrier. In order to share the same contents such as Spoonbill Times among members internationally, we need people to translate our Spoonbill Times into languages such as Chinese and Korean.

## 7 • Thoughts

- SPOON's mission is to open up people minds to spoonbills and natural environment.
- Existence of this community enables people to speak up towards things. The assertion letter concerning Jiading wetlands could be recognized as one of the consequences.
- Extending SPOON community to the whole Spoonbill flyway region will enable us to track spoonbills all over the flyway. This can be recognized as one form of Ecological Democracy.
- Tracking Black-faced Spoonbills will enable us to make mental connection with the regions faraway.

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## **Self-support and Self-protection Urban Village Space - Case Study of Hongren village, Yunnan province, China**

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### **Abstract**

Chinese urbanization has largely depended upon mass demolition of suburban villages around the cities. Hongren village in Yunnan province, China, however, successfully avoided this fate despite a long and bitter process of struggling between the government and the villagers, with the involvement of scholars. The paper analyze the spatial pattern of the village that allows for the villagers to use as a tool to protect their space. A temporal analysis will show how the village space expanded and the inhabitation structure changed following the urbanization and demolition pressure. I will further show how the different social spaces collapsed or established in correspondence with the change of physical environment. Plans supplied by the government supported developers and those proposed by the villager supported scholars will be compared. The change of governmental policies will be examined as the context for all of the important events along with the development process. The paper concludes by clarifying that a modernized urban village structure maybe used a a useful tool to realized the purpose of self-support and self-protection.

Keywords: Hongren village, Spatial strategy, Self-protection, Edge space.

### **Introduction**

Urbanization has sprawled into the suburban and rural areas of Chinese cities since 1980s. This happens in all types of cities including coastal cities like Guangzhou and Shanghai and inland cities like Beijing and Chongqing. Even in remote minority areas such as Yunnan province, which is rich in cultural and historical resources, cannot avoid this trend. The urbanization process unavoidably collided with the traditional villages, their land and space as well as ecological system. In the mean time, globalization also becomes an additional trend that tremble this fragile system. It is no longer possible for the villages to persist in the traditional lifestyle and rural landscape.

David Harvey proposed the phenomenon of time-space compression under the global economic system. Henri Lefebvre argued that space production is a key character of Capitalism practice. Other scholars also suggested that in the post-modern era, a third space is created that could accommodate people's diverse needs. Spatial segregation, property re-appropriation and land re-distribution are some of the phenomena that suggest a reorganization of social power. While international power has reached the remote local rural areas partly directly, but largely through their influence on the local market and government, local residents and communities are continuously losing their control over their own land, space, and houses. Many of the villages are turned into city districts, and the villagers become city residents, along with their loss of lands to cultivate as farmlands. Sooner than later, these lands are turned into real estate, industry or tourism development projects. The villagers who lost their land either have to go to the city to work as construction workers, or as waiters or cooks in restaurants, to provide service at the lowest level of the market. Consequently, they would generally become the weak parties in the new urban population structure. This causes many problems including psychological and social degradation, however, they can not escape since their homeland has been destroyed.

This process has been going on in an unprecedented speed and amount. From 1990s-2010s, Chinese villages, the amount of rural residents, the agricultural land have all vanished extensively. The rural landscape has greatly been changed to a hybrid landscape that mixed industry and urban housing, as well as tourism developments. Rural life has become an representative of the deteriorated past, which is insufficient, unprofitable, ugly, dirty, messy, and unsafe. People would try every means to escape this place.

Facing such changes, there are mainly three types of attitudes by the villagers. First, to accept the situation as a reality, however reluctantly. These people are the weakest party, having no power in decision making, and feel their only choice is to accept whatever have been given by the fate. They occupy the biggest amount among the villagers. Second, to actively follow the upper level orders and to push other fellow villagers during the process. These are mostly village officials or enthusiasts who have been ordered by the upper level officials to accomplish this task. Third, to disobey the decision and to try to find routs to turn the direction. These are often only a small amount, but who have an innate love for the village and the traditional life style. They are familiar with both the local value and the country's laws and regulations. They have broad connections with the scholars who can give them advices. They even know how to use public media to advocate their opinions and to publicize the important events that happened in the village to gain a broader support from the outside society. Thus, they become the key persons to bring some change to this serious situation.

In order to relocate the villagers smoothly, “New village” is often established to accommodate the villagers whose old houses are going to be demolished. They villagers are firstly moved to live in these new apartments and leave the old houses to the government or to the developers. These new villages often show a planned layout, with standard high-rise apartment buildings. So they normally lack of traditional characters. It also doesn’t consider to accommodate traditional social activities and functions. It is a rural version of urban housing morphology.

The villagers are obliged to move to the new villages as quick as possible. Normally, the first and second type of people move first, and the third type would persist as long as they could resist the orders. During this process, many tragic events happened due to the resistance which is decided as illegal by the government.

Until recently, although there are few examples that show successful resistance, there do exist such cases. In this paper, we will introduce how the villagers in Hongren Village, Yunnan Province use their village space strategically to fight for their property right harshly but successfully.

## **2. Hongren village and the process of resistance**

Hongren village is located at the south suburb of Kunming, the capital city of Yunnan province. It is also located at the east shore of Dianchi lake, which is one of the biggest lakes in Yunnan province. This dual geographical feature makes it a place of competitive attractiveness for real estate developments. Since 2010, it is designated as a site for a large scale commercial complex. Thus, the village demolition process was initiated.

Figure 1. The relation between the Hongren village and neighboring developments.

The village itself was a little bit more complex than normally imagined. It was not only one part, but was composed of two parts: an old village and a new one, forming a size of about 20 ha in total. The old village has a long tradition, showing organically formed street patterns and contains multiple traditional spaces. It has a big temple and a small temple, both very old in form and style. They function as the main gathering places during important cultural events. In such circumstances, the whole village people would come and dine and watch performances together. The big temple locates rightly at the very center of the village, where most of the main roads intersect and form a square.

In 2009, the new village was built to accommodate the villagers. From 2010 on, the villagers were continuously notified by different levels of administrative officers and developers that

they should move immediately and that the old village would be destroyed. Some first and



second type of villagers moved. However, some old villagers were not persuaded by the government's reasons of relocation. Among them, a core figure (we hereafter call him W) was an experienced old person and a retired intellectual. He would examine each step taken by the government if it is in accordance with the law. He found many contradictions among them, especially the gap between what is being done in reality and what is being proposed in the Property Law, which demands that people's properties be protected. He would interrogate whether it is lawful to demolish their old village. However, no answers from the government could satisfy him.

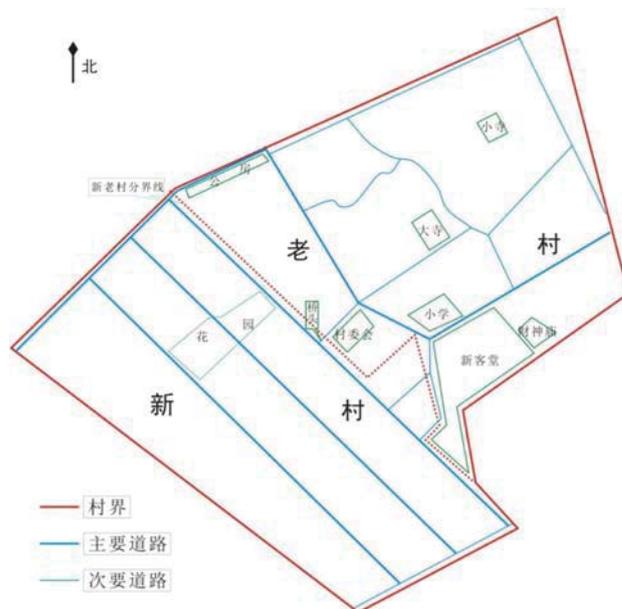
Under the pressures from the government and the developers, W turns for the outside for help. Occasionally, there was a young man, Z, who went to this village to spend his time during the "go to the countryside" movement initiated by Chairman Mao Zedong in 1970s. He later went to Australia and got a Ph.D degree there, and was thereafter employed by Peking University as a Sociology professor. After all these years, he still kept a close contact with the villagers, and was deeply trusted by them. Thus, he worked together with W and several others to against the demolition of the village. He used his knowledge on sociology and did a thorough research on related laws and regulations. He further used Weibo and other medias to communicate with the public and different overseas organizations. All these make his activity known to the outside world, which gave him a security insurance.

Since some villagers already moved to the new village, and some are hesitating to move, the government and the developer decided to demolish some of the empty houses in the old village. This is a "impetus" to warn that this is no longer a place to live, but one to be demolished, and no safety is guaranteed if people continue to live here.

Figure 2. The layout of the old and new villages.

### 3. Spatial analysis of Hongren's case.

In China's long history of urban and rural developments, there is a clear differentiation between old and new, which represents "ruin" and "paradise" respectively. The new space is established



in the purpose of replacing the old. It is regarded as a place with hope and bright future. In contrast, the old space is usually totally demolished to become a ruin, which symbolizes a place that has been abandoned and is of no value. This symptom can be especially clearly seen in palace demolition of the former dynasties when a new one is set up.

This kind of spatial custom can be tackled as lacking a conscious of cultural continuity. It is also rooted in "dialectic" way of Daoist way of thinking, which intends to brand things either as Yin or Yang, good or bad. Following these traditions, when the new dynasty get control of the power, the old spaces would tend to be disfavored, since they are seen as something that still carries the old dynasty's spirit. They are in a good sense "old fashioned" , or in a bad sense "mean" and miserable.

In Hongren's case, it follows the same logic. The old village is immediately destroyed to show that the place is no longer inhabitable. It is going to be turned into a ruin.

However, under the leadership of W and the strong support of Z, the villagers used this ruin continuously to show their different concepts toward this "ruin". In addition to their use of the old village space as frequent as possible, they gradually set up a new gathering place, although

outside of the old village, but still attached to it. It is neither in the new village, where such anti-demolishing activities are not considered as a reasonable function. It is located at the interim space where the old and new village are connected. There is a river passing here, becoming the boundary between the new and the old. The bridge that connects the old and new was selected by the villagers to be the gathering place when they need to discuss the issues. This is a strategically good place: they can both go into the old village easily, and to retreat to the new village. This become a third place for the villagers to both escape from the ruin, and to get a sense of continuity of community.

The bridge is not an important place for the village in the traditional sense, like the big temple. Instead, it is newly built to accommodate the need to transfer the villagers from the old to the new village. It therefore is important to be protected by all parties: for the villagers, the government and developers. It therefore bears a dual-function and dual-meaning both from the top and the bottom. This ensures itself to be secure in most of the situations. The villagers skillfully used this dual-meaning and avoid the destroy of the place because of their activities. This is an obvious advantage compared to other solo-meaning spaces like the big temple.

Therefore, this place is justified as a right place to gather. Since this is not the old village which is to be destroyed, the government cannot prevent the villagers from using the place. Since this is neither the new village, they are not complained to disturb people's daily life. Therefore, it gets the least threatens from all sides.

The same rule works for other public spaces like the new public dining place. It locates near the bridge. A common feature is both of these two facilities share an "edge" feature. The importance of edge space, or intermediate place, between the ruin and the new, is clearly demonstrated.

#### **4. Discussions and conclusion.**

Space is not simply a background and container for events. Instead, it both forms the activities and is formed by the activities. In Hongren's case, the bridge became a symbolic place that connects the old and the new, the "ruin" and "paradise". It thus become a joint and transient place for people to get a hope as well as to get security when the situation becomes serious.

This importance comes partly from the spatial features. The distance between the new and old is an "intimate" one. This means that people can easily move between the two parts, and to take care of the both conveniently. Although this allows the villagers to move faster, it also give them more possibilities to keep their physical as well as emotional contacts with the old village.

This makes it difficult to decrease their attachment with the old village. This might also be one of the reasons of the government's failure to prevent the villagers' gather at this place.

Along this process, the public space lost their "centerness", and get more "edgeness" characters. However, if we take both the new and old village into account, these new strategic open spaces are actually located at the new centers of the whole village. Edge thus become the center, and the villagers naturally get these new center spaces into use.

The transiency between the old and new, ruin and paradise, center and edge, become some of the spatial manipulation strategies in their fight for justice and opportunity. This is what we saw from Hongren's case.

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