

# ONE UNIVERSITY ONE VILLAGE 一專一村



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## 1U1V Women Construction Team @ the Shanghai Biennale

In 2019, 1U1V construction team comprising more than 50% women and led by a female leader, was established in Sichuan to implement “equal pay for equal work”. In the same year, the artists, Cao Minghao and Chen Jlanjun were invited to participate the 13<sup>th</sup> Shanghai Biennale held at the Power Station of Art, Shanghai, China. Their design project was named “Water System Refuge” (Exhibition period: 17 Apr to 25 Jul 2021). They used tents and discarded building materials of the Qiang ethnic people, to reveal the impacts of local policies and post-disaster reconstruction in the upper stream of Minjiang River. Finally, they also incorporated the research on post-earthquake reconstruction and earth construction technology studied by 1U1V team for more than 10 years into this design project.

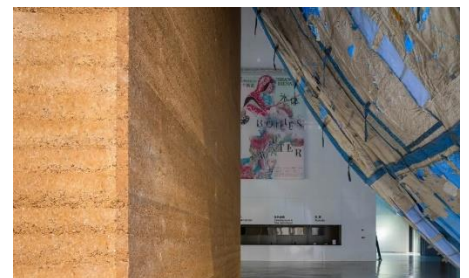
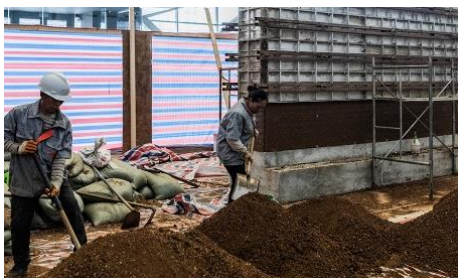


The “Water System Refuge” installation consists of a rammed earth wall with dimensions 4M (W) by 5M (H) by 0.5M (D), wooden frames, tent and display cabinets placed in the front and back. The wall is made using new anti-seismic rammed earth house construction technology by the women construction team. It is made of soil, gravel, sand and other natural materials. Suitable proportion and size of different materials can improve the compressive strength of the wall and reduce cracks so that its stability properties can reach to a safe and liable standard. No chemical stabilizer is added to make the wall which is 100% recyclable, degradable and pollution-free. In a display cabinet on one side, a piece of pure soil, a piece of soil mixture and nine different sizes of particles were displayed so that the visitors can understand the theory of making a rammed earth.



The team delivered the remaining soil during the construction of Terra Center in Kunming to Shanghai and brought Sichuan women construction team and construction technique of southwest region to Shanghai. Throughout the process, the western local customs and humanities were linked up with the eastern prosperity city. It makes rural people to reach a bigger platform to show their skills which they are proud of. At the same time, it also make urban people who are living in concrete jungle to open their eyes further and broader to see a more authentic world.

Four craftsmen from the women construction team completed the wall construction with high quality in 5 days only. Dong Yixiang, the team leader said that she was very proud of being invited to Shanghai to participate in this exhibition work at the Biennale. She felt that her work and efforts were not in vain. As long as she did the things with heart, she would always be recognized. Click the link <https://mp.weixin.qq.com/s/dkFzEB3ssRLHGQboWMiihA> for more details.



## Our Projects



**Site Location:** Gaoliangdi Village, Xiyang Township, Jinning District, Kunming City, Yunnan

**Project Nature:** Earth Building (Whole Village Rebuilding Plan)

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Oct 2018 – Dec 2022



Since the initial intention was made in 2018, the project was inevitably delayed due to the issues such as highway diversion, land use and the change of regional development plan. Until 2019, the local government proactively coordinated with the villagers to deal with resettlement issues and land use application. Thus, the project could move forward in 2020.

In accordance with the strategic requirements of poverty alleviation, the government of Xiyang Township hopes to integrate the new anti-seismic rammed earth construction technology and poverty alleviation resources to take Gaoliangdi Village as an entire village rebuilding pilot project. On the one hand, it can explore an effective rural reconstruction solution, and on the other hand, it will make Gaoliangdi Village to be the first rammed-earth building village in Yunnan Province in order to further develop other local aspects.

The team from Prof Zhai of Kunming University of Science and Technology is responsible for the architectural design which mainly adopts 2-3 storey traditional houses. Finally, 5 design layouts were confirmed after several discussions with the villagers.

In Jun, the site formation work was completed and the construction plan was finalized as well. In the end of Jul this year, the construction team started foundation work for the 1<sup>st</sup> phase of 15 households. It is expected to be completed by late Oct. The entire project is expected to be completed by Sep 2022 so that all local villagers can move in new houses by the end of 2022.



Design layouts:







**Site Location:** Daheixin Village, Xiyang Township, Jinning District, Kunming City, Yunnan

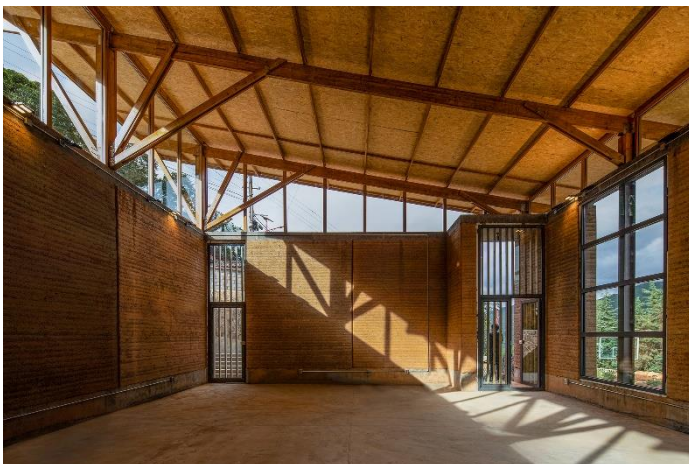
**Project Nature:** Earth Building

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Jun 2019 – Aug 2021



This public hall building is the first pilot anti-seismic pure earth construction project conducted by the team. Public hall is a public place where villagers often gather. The newly designed public hall which sits on the site of the former public hall increases not only the indoor area, but also the outdoor space to provide more usable and interaction space for the villagers. The project was almost completed in the end of Aug by a female construction team led by Ms Dong Yixiang.







**Site Location:** Xinshan Village, Xiyang Township, Jinning County, Kunming City, Yunnan

**Project Nature:** Earth Building

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Aug 2020 – Sep 2021



The construction work officially commenced on 25 Apr 2021. Total 3 households from Xiao Xiyang Village, Yadadian Village and Jiu Village participated in this rebuilding project. Although the local contractor team was trained, the progress of wall ramming work was slow due to the unskillful workmanship. Until early Aug, all ramming work was completed and started the work for roof construction, interior decoration and landscape. The team expects to complete the entire project and handover work in late Sep.

Xiao Xiyang Village:



Yadadian Village:



Jiu Village :







**Site Location:** Ganhaizi Village, Wuding County, Chuxiong City, Yunnan

**Project Nature:** Earth Building

**Teams:** CUHK, KMUST & Habitat for Humanity China

**Project Duration:** Oct 2019 – Apr 2021



Ganhaizi Village is located in Wuding County, 60 km away from Wuding County. There are 63 households in the village. It is a Miao village and believes in Christianity. About 15 households in the village are living in traditional earth houses with poor conditions and insufficient seismic performance. They require urgent need of improvement. The government officials of Wuding County have a strong interest in learning seismic rammed-earth construction technology.

The team continues to collaborate with Habitat for Humanity China (Yunnan Region) to plan and build 3 new rural houses as demonstration. However, 2 households withdrew the plan due to land use disputes before the start of construction. Although only 1 household completed the building work in Apr, the team hopes that the anti-seismic rammed earth construction technology can be further promoted in these area in the future.







**Site Location:** Baipoxiang Village, Miya County, Panzhihua City, Sichuan

**Project Nature:** Earth Building

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Dec 2019 – Jul 2021



Since 2019, the team has rebuilt over 10 rammed earth rural houses to solve the housing needs of the local villagers in Miya County and improve their living quality. These new houses demonstrate the benefits of rammed earth houses, several surrounding households have been successfully attracted to sign up for the next construction plan.

In 2020, total 5 households participated in rural house rebuilding plan. Even though the work progress was slow down under the Covid-19 pandemic, the team overcome various difficulties and finally completed all construction work before rainy season in July this year. Meanwhile, the registration work for next rebuilding plan was carried out.







**Site Location:** Badi Village, Jinjiang Town, Shangri-La City, Yunnan

**Project Nature:** Earth Building

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Dec 2020 – Sep 2022



Badi Village, Jinjiang Town, Shangri-La is located in the mountainous land beside the Jinsha River. It is about 180 km away from Shangri-La City and 120 kilometers away from Lijiang City. Transportation is convenient. Most of the villagers are Lisu people. Few are Tibetan and Han. The earth houses there were in poor condition and the structure was damaged. In Nov 2020, the team visited the village and introduced the new anti-seismic rammed earth construction to the villagers. Over 10 households expressed their interests to participate in the reconstruction plan.

Total 17 households participated in the first construction phase. The team provided construction tools, technical support and incentive to the villagers. Meanwhile, the team provided training to enable them to complete the entire construction process by themselves. It is hoped that an independent villager construction team could be formed to guide and train other villagers in the next rammed earth construction phase for about 10 households. Until Aug this year, 8 households had completed rammed earth construction work, 3 households were under rammed earth construction, 5 households had completed foundation work, and 1 household was under foundation construction. However, due to the heavy rain and repeated impact of the Covid-19 pandemic, construction progress was slowed down. After the rainy season, the team and the villagers will put more effort to complete the project as early as possible.







**Site Location:** Songlin Village, Tangtang Town, Xuanwei City, Yunnan

**Project Nature:** Earth Building

**Teams:** CUHK & Kunming University of Science and Technology

**Project Duration:** Sep 2021 – Mar 2022



Songlin Village is located in Tangtang Town, 80 km away from Xuanwei City. It is a key village designated by a poverty alleviation team stationed at a concentrated contiguous areas of extreme poverty in the Wumeng Mountain, Yunnan Province. The local traditional houses there are mostly two-storey pitched roof buildings. Most of the outer retaining walls are made in rammed earth and some are stone walls with inner wooden structure. Owing to the limitation of economic and cultural level, the village houses are in disrepair with damaged structure for a long time.

The team plans to start the construction for 3 out of 7 households first, and to carry out the foundation work after the rainy season. The project is expected to be completed before the Chinese New Year. The team wishes to train the villagers the modern rammed earth construction skill during the practice so that they can independently do the construction for next projects and lead the other villagers to learn.





## The Research and Development Centre for Rural Vitalisation in Yunnan

In the past year, the team not only conducted volunteer activities, artisan training, earth building technology research and experiments etc, but also arranged site visits for the officials, professionals, teachers and students of different departments and institutions from Ministry of Housing and Urban-Rural Development, Institute of Engineering Mechanics, CEA, Tongji University, Nanjing University, Southeast University, Harbin Institute of Technology, Chongqing University, Huazhong University of Science and Technology. In addition, activities such as work review of architecture students of Kunming University of Science and Technology and the Centre's Open Day were carried out. Due to the impact of the epidemic, the original plan for international academic exchanges and academic salons was cancelled.



## Planning Ahead

### Earth building projects:

The team will keep to launch more rural building projects in Shangri-La City, Xuanwei City of Kunming and Miyi County of Sichuan and investigate more project sites.

### Building code for anti-seismic rammed earth-buildings in Yunnan Province:

In view of the progress of current state-level preparation of the building codes for anti-seismic rammed earth-buildings, Professor Bai Wenfeng, our team member as one of the editors went through several times of coordination with Department of Housing and Urban-Rural Development of Yunnan. The editing work for building codes and local guidelines for Yunnan will be initiated again after the new building codes of state-level is promulgated. The team has finished the first draft and some experiments for such guidelines. Follow-up work is pending to complete under the guidance of Department of Housing and Urban-Rural Development of Yunnan further.





## Promotion & Publicity

### Public Lectures:

Both Dr Wan Li and Dr Chi Xinan were invited to be the key speakers of The 5th China-Asean Architectural Art Forum and the 8th Conference of Sustainable and Creative Villages Research network-southwest China 2020 and Practitioners for the China Country 2021. In addition, They were invited to give lectures in Chongqing Jiaotong University, Zhejiang University, Southwest Minzu University, Guizhou Minzu University, Shanghai Biennale, Shanghai Institute of Visual Arts to introduce 1U1V project achievement, research methods and concepts.

### Awards

The 1U1V programme won the United Nations International Green Gown Awards 2021 – Benefitting Society. The post-earthquake reconstruction demonstration project of Guangming Village received HKIA Medal of the Year Outside Hong Kong and Special Architectural Award – Social Innovation. Besides, The building project for The Research and Development Centre for Rural Vitalisation in Yunnan has been shortlisted at 2021 TERRAFIBRA Award and Hong Kong Green Building Award 2021. Award results will be announced later in Nov this year and Jan next year respectively.



### Exhibition:

The team was invited by the artists, Cao Minghao and Chen Jianjun to participate in their design project named “Water System Refuge” (built by rammed earth wall and tent) which was exhibited in the 13<sup>th</sup> Shanghai Biennale during the period from 17 Apr to 25 Jul 2021.

### Publication:

《中國西南鄉村創新與可持續發展研究聯盟作品集》（華中科技大學出版社）was jointly published by the team and Chongqing Jiaotong University in 2020.



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