

# 报告

## Ecosystem-scale Carbon Dioxide and Methane Fluxes in the Subtropical Estuarine Mangrove

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### 讲者介绍 Biography

Derrick Y.F. Lai is an Associate Professor in the Department of Geography and Resource Management and the Director of the Centre for Environmental Policy and Resource Management at The Chinese University of Hong Kong. He obtained his Ph.D. at McGill University in Canada in 2012. His research interests lie in the study of carbon, nutrient, and greenhouse gas dynamics in wetland, forest and urban ecosystems. He has been awarded several external, competitive research grants from the Research Grants Council of Hong Kong with a total funding of more than HK\$4 million to examine the biosphere-atmosphere exchange of greenhouse gases in the coastal mangroves, as well as the impacts of global change on soil greenhouse gas fluxes in subtropical secondary forests. He has published over 60 peer-reviewed articles in numerous scientific journals, including *PNAS*, *Global Change Biology*, *Agricultural and Forest Meteorology*, and *Environmental Science and Technology*.

### 报告摘要 Abstract

Coastal mangrove wetlands are potentially sinks of carbon dioxide and sources of methane due to their high productivity and flooded environments. Yet, few studies have measured ecosystem-scale greenhouse gas fluxes in mangrove wetlands continuously. In this study, we reported the results obtained from multi-year monitoring of carbon dioxide and methane fluxes in a subtropical estuarine mangrove using the eddy covariance technique. The temporal variability and biophysical controls of greenhouse gas fluxes in mangroves will be discussed.

### 有兴趣合作之项目 Interested topics for future collaboration

- Ecosystem biogeochemistry;
- Ecosystem services;
- Natural climate solutions;
- Global change impacts on ecosystem functions