

Overview of the Regional Carbon Budget Assessment and Processes (RECCAP2), and activities on Southeast Asia

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Understanding the mitigation potential of the land and ocean against anthropogenic GHG emissions hinges upon accurate assessment of their net carbon fluxes. The net amount of carbon exchanged between the atmosphere and land, and the atmosphere and ocean comprises of multiple pathways of carbon fluxes, such as from atmosphere to terrestrial ecosystem, terrestrial ecosystem to inland water, inland water to atmosphere and to estuary, and estuary to ocean. Until today, our ability to diagnose carbon fluxes of terrestrial ecosystems (forests, grasslands, and crops), hydrosphere (rivers, lakes, and estuaries), and ocean have progressed by the development of observation networks and modelling in respective fields. Under the circumstances that anthropogenic emissions exacerbate climate change, a need for accurate assessment of the net land and ocean carbon budgets has been growing, which requires collective efforts of multiple fields towards integration of data, knowledge, and assessment of carbon fluxes.

Bringing together expert researchers from institutes and academia across the world for GHG budget assessment of the land and ocean, the REgional Carbon Cycle Assessment and Processes (RECCAP) was formed under an umbrella of the Global Carbon Project. Here I describe the overview of the second phase of RECCAP (RECCAP), including the objective and methodology, progress over the previous RECCAP1, current state of the project, etc. As an example among the 11 land, 4 ocean, and special interest regions (permafrost, semi-arid, coastal blue carbon, global synthesis) to be analyzed in RECCAP2, this presentation shares the research plan, aim, current state of GHG budget assessment for Southeast Asia.

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