

Introduction

High-resolution climate change scenarios are essential for climate change impact, vulnerability and risk assessment studies at local and regional scales. Generation of such information requires downscaling of general circulation model (GCM) outputs. However, regional downscaling is a time-consuming and resource-expensive exercise and therefore it is in the best interest of countries within Southeast Asia (SEA) to conduct a collaborative effort in climate downscaling for the region. The Southeast Asia Regional Climate Downscaling (SEACLID) is a project established under the Southeast Asia Regional Climate Initiative (SEARCI), which is a platform for scientists within the region to collaborate in climate related projects. SEARCI was established during a workshop hosted by the VNU Hanoi University of Science from 2-3 August 2012 at Hanoi, Vietnam. SEACLID is mainly funded by Asia-Pacific Network (APN)'s ARCP program and other fundings within the groups involved in the project.

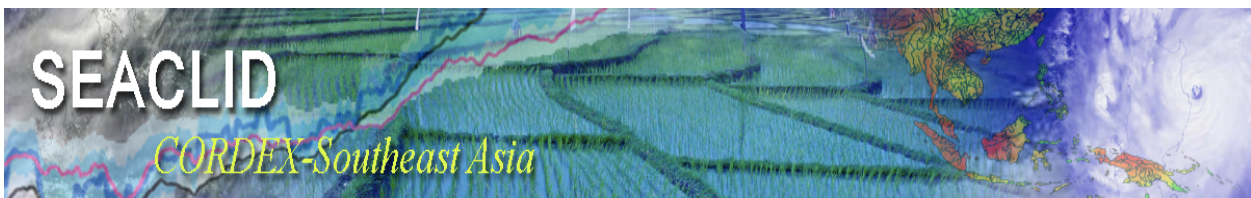
SEACLID has been streamlined and integrated into the World Climate Research Program (WCRP)'s Coordinated Regional climate Downscaling EXperiment (CORDEX) and renamed as SEACLID/CORDEX Southeast Asia (CORDEX-SEA). It serves as one of three components of CORDEX Asia. Initial member countries include Indonesia, Malaysia, the Philippines, Thailand, Vietnam, Cambodia and Lao PDR. In addition, several countries outside the SEA region have pledged their commitment to participate in the project, including Australia, UK, Republic of Korea and Hong Kong China. SEACLID/CORDEX-SEA encourages other institutions from within and outside SEA that have interest in the regional climate over the region to become a collaborator of this project. Possible contributions can be in the form of downscaling additional GCMs.

Objectives

The SEACLID/CORDEX-SEA project aims to:

- Create a platform for scientists (especially young scientists) within and outside the SEA region to collaborate on issues related to regional climate downscaling;
- On a task-sharing basis, carry out a joint regional climate downscaling activity over a common SEA domain with RegCM4 (and other RCMs) using a number of CMIP5 GCMs and RCP scenarios;
- Collectively analyze model performances, create an ensemble of regional climate projection scenarios for the SEA region, and establish a web portal and data center for efficient data dissemination;
- Narrow the knowledge gaps related to regional climate change in SEA by increasing peer-review scientific and policy-relevant publications and strengthen research capacity and capability, particularly in numerical regional climate modeling.





Countries & Institutions Involved

Eleven countries and fifteen institutions are currently involved in the project. These include Thailand (Ramkhamhaeng University, Chulalongkorn University), Indonesia (Indonesian Agency for Meteorology, Climatology and Geophysics), Vietnam (VNU Hanoi University of Science), Malaysia (the National University of Malaysia, Malaysian Meteorological Department, National Hydraulic Research Institute of Malaysia), the Philippines (Ateneo de Manila University, Manila Observatory), Cambodia (Pannasastra University of Cambodia), Lao PDR (Department of Meteorology and Hydrology), Australia (CSIRO), United Kingdom (Hadley Centre UKMO), Republic of Korea (APCC) and Hong Kong, China (City University of Hong Kong).

Project Timeline & Implementation

The SEACLID/CORDEX Southeast Asia project commenced in October 2013 and will continue for three years until September 2016. The project is implemented on a task-sharing basis among the Southeast Asia countries and collaborators. The countries involved will be downscaling various CMIP5 GCMs using various RCMs and employ a common Southeast Asia domain and resolution. For the Southeast Asia countries, RegCM4 will be used to downscale eight GCMs. Sensitivity experiments have been conducted to determine the appropriate physics options, domain and resolution. The actual downscaling is expected to commence in July 2014. Throughout the project duration, five workshops have been planned. The first / inception workshop was successfully held from 18-19 November 2013 in Jakarta and hosted by the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG). The second workshop will be held in Bangkok from 9-10 June 2014, to be hosted by Ramkhamhaeng University, Chulalongkorn University and Thailand Research Fund. This workshop aims to evaluate the progress of the project and to finalize a common domain for SEACLID/CORDEX Southeast Asia. The third, fourth and final workshop will be organized in Manila, Hanoi and Kuala Lumpur, respectively.

Further Information

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