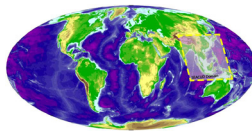


SEACLID

CORDEX-Southeast Asia



“Understanding Regional Climate Change in Southeast Asia & Meeting the Growing Demand in Regional Climate Change Information through Collaboration”

What is SEACLID / CORDEX Southeast Asia?

The Southeast Asia Regional Climate Downscaling (SEACLID) / COordinated Regional climate Downscaling EXperiment (CORDEX) Southeast Asia Project is a “bottom-up” initiative by climate scientists in the region. It is one of three established domains in Asia under the CORDEX project of the World Climate Research Programme (WCRP), a program sponsored by the World Meteorological Organization (WMO), the International Council for Science (ICSU) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO. The SEACLID/CORDEX Southeast Asia project is funded by the Asia-Pacific Network for Global Change Research (APN) and funding grants from within the member institutions and countries. Started in November 2013, this three-year project also involves a number of collaborators from countries outside the region.

What is Regional Climate Downscaling and Why SEACLID/CORDEX Southeast Asia is Important?

Climate scientists use General Circulation Models (GCM) to quantify responses of the Earth's climate system to radiative forcing due to the rising concentration of greenhouse gases in the atmosphere. While GCM is an effective tool for understanding climate changes at the global scale, its low resolution of 100 – 300 km limits its capability to simulate regional climate since it does not resolve regional and local features such as topography and coastlines. In order to simulate regional climate at resolutions as high as a few kilometers, a Regional Climate Model (RCM) can then be used by “nesting” within the GCM in a procedure also known as dynamical regional climate downscaling. For CORDEX Southeast Asia, the resolution is 25 km x 25 km. Downscaling GCM outputs is crucial in climate change impact assessments since impact models usually require high-resolution climate change scenarios as input. However, because of the requirement of multiple GCMs, multiple RCMs and multiple emission scenarios, regional climate downscaling is a technically challenging, resource-expensive and time-consuming exercise. For countries in the Southeast Asia region, the way forward is to collaborate and share tasks, expertise and computing resources. SEACLID/CORDEX Southeast Asia is designed on this basis to address the growing demand of regional climate change information and knowledge gaps in regional climate change in the Southeast Asia region.

Who are involved in the initiative?

Currently there are 17 institutions from 13 countries involved in the project including 7 from the Southeast Asia region (Malaysia, Indonesia, Vietnam, Thailand, Philippines, Cambodia and Lao PDR) and 6 from outside the region (Australia, Hong Kong SAR, South Korea, United Kingdom, Sweden and Germany).

What do we expect to achieve?

- **Publicly accessible Regional Climate Change Data over Southeast Asia**
High-resolution climate change scenarios output of the project will be archived and disseminated as part of the Earth System Grid Federation (ESGF) to be freely accessible to the user community.
- **Enhanced understanding of regional climate change in the Southeast Asia region**
This project will enhance scientific understanding of regional climate change including various regional phenomena, model performances and uncertainties. A number of scientific and policy relevant publications will be produced.
- **Capacity building**
A number of young scientists (PhD and MSc) from countries within the Southeast Asia region will be trained in regional climate modeling. In addition, workshops in regional climate modeling and related application will enhance the capacity of scientists from the region.
- **Enhanced networking**
SEACLID/CORDEX Southeast Asia provides a platform for networking for scientists, especially young scientists, from within and outside the region to collaborate in research and development in regional climate modeling and related application.

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