View in browser

WCRP CORDEX News

Coordinated Regional Climate Downscaling Experiment

New FPSs endorsed

WCRP CORDEX FLAGSHIP PILOT STUDIES

Flagship Pilot Studies (FPSs) were established to enable the CORDEX communities to better address a number of the challenges.

The FPSs focus on sub-continental-scale targeted regions, so as to allow a number of capabilities towards addressing key scientific questions motivated by several issues

Read more about the Flagship Pilot Studies.

We are happy to annnounce that so far four new Flagship Pilot Studies have been endorsed and will start during 2025. The new FPSs have the below titles. (Clic the link to read more about each FPS)

Australasia: Sub-Hourly Extreme Precipitation (SHEP)

Macaronesian Archipelagos: Convection Permitting projections focused on island processes (FPS-I-Mac)

Island Climate - Pacific (IC-Pac)

Enhancing climate downscaling at km-scale in sub-tropical South America using machine learning CPRCM-CMIP6 emulators

The report from the hybrid CORDEX Science Advisory team meeting is now published

In September the CORDEX Science Advisory Team met in Santander, Spain and online for an extended meeting to move forward in the restructuring of CORDEX, including selecting new SAT members and defining responsibilities. There was also an open part of the meeting that aimed to involve the CORDEX community in the discussions on the newly established Task Forces, new scientific topics, challenges, collaborations with various WCRP activities as well as with non WCRP initiatives and future plans.

Read the report here.

At the 4th International Vietnam Conference on Earth and Environmental Sciences (iVCEES-2024) in Quy Nhon, Vietnam during 26-28 November 2024, **CARE for SEA Megacities and CORDEX-SEA had a special session.**

CARE for SEA MEGACITIES

Summary report of the CARE for SEA Megacities and CORDEX-SEA: A *Special Session*
In the "4th International Vietnam Conference on Earth and Environmental Sciences (iVCEES-2024)"

International Centre for Interdisciplinary Science and Education (ICISE)
Quy Nhon, Vietnam
26-28 November 2024

The "Climatic hazard Assessment to enhance Resilience against climate Extremes for Southeast Asian megacities (CARE for SEA megacities)" project is the latest activity under the Southeast Asia Regional Climate Downscaling / Coordinated Regional Climate Downscaling Experiment Southeast Asia (SEACLID / CORDEX-SEA) collaboration. Started in October 2023, this three-year project is funded by the Asia-Pacific Network for Global Change Research (APN). CARE for SEA megacities aims to generate city-scale climate hazard information for SEA megacities (Bangkok, Hanoi, Jakarta, Kuala Lumpur and Manila) under multiple SSP scenarios that will be relevant and useful for policy-making to enhance urban resilience in a globally warmer future.

A special session for CARE for SEA megacities and CORDEX-SEA was held on 26-28 November 2024, as part of the 4th International Vietnam Conference on Earth and Environmental Sciences

The aim of the session was to coordinate

and discuss updates on the empirical statistical downscaling (ESD), and land surface physics-based downscaling (LSP-DS) activities under the CARE for SEA megacities project and to coordinate and discuss updates on the CMIP6 downscaling activities of CORDEX-SEA and identify opportunities for collaboration with similar initiatives in Southeast Asia and also to provide a platform for engagement between climate researchers and stakeholders.

Read the report from the session here

The call for proposals to host the International Project Office of CORDEX is open until 28 February!

The World Climate Research Programme (WCRP) has a call open for proposals to host the International project office of CORDEX.

More information about the call can be found at the WCRP website.

CORDEX North America

NA-CORDEX began around 2012, following its precursor, the North American Regional Climate Change Assessment Program (NARCCAP). However, unlike NARCCAP, the ensemble of CMIP5 simulations created to support NA-CORDEX is more of an ensemble of opportunity. Simulations were contributed by three Canadian institutions: Ouranos, the University of Quebec at Montreal, and the Canadian Centre for Climate Modelling and Analysis; two European organizations: the Swedish Meteorological and Hydrological Institute and the Danish Meteorological Institute; and three organizations from the United States: the National Center for Atmospheric Research, Iowa State University, and the University of Arizona. Some coordination led to a reduction in inherited GCM bias (due to careful choices in GCM) compared to NARCCAP, which had fewer options available, and also enabled the examination of results from multiple RCMs that all downscaled the same GCM, the effect of resolution, the influence of different scenarios, and the importance of spanning the full range of GCM equilibrium climate sensitivity.

While some NA-CORDEX-CMIP5 data are available on the ESGF and through collaborator websites, our main archive is located at https://na-cordex.org. This small archive is designed to be as user-friendly as possible, with minimal funding. Therefore, while it may include only a limited selection of the most requested variables, it features several value-added products, such as derived variables, bias-corrected data, and model outputs regridded to a common latitude-longitude grid. (The archiving and generation of derived data products were supported by the U.S. Department of Defense's Environmental Security Technology Certification Program.)

We view our archive as a success. It holds approximately 40TB of data but has consistently seen around 5TB downloaded each month; it has garnered over 160 dataset citations, has been used in more than 100 publications across various fields,

and, like all other CORDEX data, was utilized in the IPCC AR6 Atlas.

North America's involvement in CORDEX Flagship Pilot Studies (FPS) includes the following FPSs:

- LUCAS (Land Use and Climate Across Scales), via transferability studies by Asselin et al. (2022 and 2023),
- Dynamical downscaling experiments and hydrological modelling for Canada and Mexico, and,
- Assessing the Use of Regional Models in a Storyline Framework for Understanding Climate Hazards.

CORDEX-CMIP6 downscaling is underway, and we anticipate updating our website soon to reflect this.

We would like to sincerely thank our former Points of Contact and SAT representatives from North America: Linda Mearns, Bill Gutowski, Anne Frigon, and Sébastien Biner.

The current Points of Contact in this domain are:

CORDEX North America: Stefan Rahimi, Rachel McCrary, Dominique Paquin, Chris McCray and Sara Pryor

More information on activities can be found at the CORDEX website under Domain activities.

At the December 2024 American Geophysical Union meeting, NA-CORDEX hosted a drop-in information and coordination session. Among those in the photo are Points of Contact Rachel McCrary, Stefan Rahimi, and Dominique Paquin, along with SAT Member Melissa Bukovsky and attendees who came to gather information and coordinate with us.

Have you published a new publication related to CORDEX recently? Don't forget to submit it on our website!

SUBMIT YOUR PUBLICATIONS

Follow us on social media to get all

updates on CORDEX and more!

If you have colleagues who are interested in subscribing to our newsletters, please tell them to register through the link below:

Do you want to subscribe to the CORDEX newsletter?

You are recieving this email because you have subscribed to the CORDEX newsletter.
If you do not wish to receive further communication like this, unsubscribe here.

The International Project Office for CORDEX is hosted by Swedish Meteorological and Hydrological Institute (SMHI), Folkborgsvägen 17, 601 76 Norrköping, Sweden

CORDEX WEBSITE

E-MAIL