



ASIA-PACIFIC NETWORK FOR
GLOBAL CHANGE RESEARCH

The CORDEX Southeast Asia Workshop

8 – 9 November 2022

JOINTLY ORGANISED BY



CORDEX Southeast Asia Workshop: Regional Climate Downscaling and Applications

Hosted by RU-CORE and UKM

Venue: Mandarin Hotel, Rama 4 Road, Bangkok, Thailand

Participation mode: Hybrid (Physical / Virtual)

Join Zoom Meeting : Meeting ID: 928 9122 1735, Passcode: 904915



Zoom Meeting

Introduction

In the decade that followed the establishment of the Southeast Asia Regional Climate Downscaling / Coordinated Regional Climate Downscaling Experiment - Southeast Asia (SEACLID/CORDEX-SEA), much progress was made in providing robust climate change information for the region. The Phase 1 of the project, which downscaled several CMIP5 GCMs to 25 km resolution for Southeast Asia, contributed significantly to the assessment of climate change in the region as detailed in the IPCC Sixth Assessment Report. This workshop builds on previous regional climate downscaling activities of the project, with particular focus on the achievements of Phase 2 on high resolution simulations over key vulnerable areas in Southeast Asia. This workshop is also a platform to discuss the use of climate information for vulnerability, impact and adaptation communities especially as we move towards downsampling the CMIP6 GCMs. Recent progress in regional climate downscaling, including Empirical Statistical Downscaling (ESD) and high-resolution urban climate modeling, will also be discussed to foster new research and collaborations for the region. This two-day workshop will be conducted in hybrid mode with the aim to bring scientists, users, stakeholders, policy-makers together to not only highlight the work of CORDEX SEA, but also to emphasize the importance of regional climate downscaling and information in addressing issues related to climate change and sustainability in the region.

CORDEX Southeast Asia Workshop: Regional Climate Downscaling and Applications

8 NOVEMBER 2022 (FIRST DAY)

Venue: Mandarin Hotel, Rama 4 Road, Bangkok, Thailand

Participation mode: Hybrid (Physical / Virtual)

Time (BKK, GMT+7)	Activities
8.00 – 9.00 am	Arrival of participants and registration
Opening Ceremony	
9.00 – 9.15 am	Arrival of Guest of Honour
9.15 – 9.20 am	Participants and delegates to take their seats for the opening ceremony
9.20 – 9.25 am	Welcoming remarks by <i>Asst Prof Dr Jerasorn Santisirisomboon</i>
9.25 – 9.30 am	Welcoming remarks by <i>Prof Fredolin Tangang</i>
9.30 – 9.40 am	Welcoming remarks by <i>Dr Monthip Sriratana</i> (APN National Focal Point Thailand and SPG Member)
9.40 – 9.50 am	Opening speech by <i>The President of Ramkhamhaeng University (TBC)</i>
9.50 – 10.00 am	Group Photo
10.00 – 10.15 am	Coffee Break
Session I: CORDEX and CORDEX SEA progress	
Chair: Dr Faye Cruz, Manila Observatory, Philippines and Prof Edwin Aldrian, BRIN, Indonesia	
10.15 – 10.35 am	CORDEX, its roles within the new WCRP structure and relevance to Southeast Asia region in addressing Climate Change Issues by <i>Dr Irène Lake, Director, CORDEX IPOC Sweden (TBC)</i>
10.35 – 10.50 am	CORDEX Southeast Asia: Where it began, its achievements and future direction by <i>Prof Fredolin Tangang</i>
10.50 – 11.05 am	SEACLID/CORDEX SEA Phase 2: The high-resolution downscaling in Southeast Asia by <i>Asst Prof Dr Jerasorn Santisirisomboon, RU-CORE Ramkhamhaeng University, Thailand</i>
11.05 – 11.20 am	CORDEX SEA 5 km simulation over Peninsular Malaysia: Key findings by <i>Dr Chung Jing Xiang, UMT, Malaysia</i>
11.20 – 11.35 am	CORDEX SEA 5 km simulation over Vietnam and Thailand sub-domain and key findings by <i>Assoc Prof Dr Thanh Ngo-Duc, USTH, Vietnam</i>
11.35 – 11.50 am	High-resolution climate information for Mindanao: results from CORDEX SEA Phase 2 by <i>Dr Julie Dado, Manila Observatory, Philippines</i>
11.50 – 12.05 pm	CORDEX SEA 5 km simulation over Java by <i>Dr Dodo Gunawan, BMKG, Indonesia</i>
12.05 – 12.20 pm	CORDEX SEA 5 km simulation over IndoChina and Malaysia by <i>Dr John McGregor, CSIRO</i>
12.20 – 1.30 pm	Lunch and break

Session II: CORDEX SEA simulations and downscaled climate data application in addressing climate change

Chair: Assoc Prof Dr Thanh Ngo-Duc, USTH, Vietnam / Dr Julie Dado, Manila Observatory, Philippines

1.30 – 1.45 pm	WCRP Regional Information for Society, relevance for Southeast Asia and link with CORDEX SEA by <i>Dr Izuru Takayabu, Meteorological Research Institute, Japan</i>
1.45 – 2.00 pm	Actionable platform for resource use efficiency by matching demand and supply of climate data by <i>Prof Dr Attachai Jintrawet, Chiang Mai University, Thailand</i>
2.00 – 2.15 pm	The use of CORDEX-SEA data to project hydro-climatic extremes in Malaysia by <i>Dr Tan Mou Leong, Universiti Sains Malaysia (USM), Penang, Malaysia</i>
2.15 – 2.30 pm	Climate information to support shift to renewable energy in the Philippines by <i>Dr Faye Cruz, Manila Observatory, Philippines</i>
2.30 – 2.45 pm	CORDEX SEA data application in Thailand in addressing climate change by <i>Asst Prof Dr Jerasorn Santisirisomboon, RU-CORE, Ramkhamhaeng University, Thailand</i>
2.45 – 3.00 pm	CORDEX SEA data application in Malaysia by <i>Assoc Prof Dr Liew Juneng, Universiti Kebangsaan Malaysia</i>
3.00 – 3.15 pm	Coffee break
3.15 – 3.30 pm	CORDEX SEA simulations for Climate change adaptation under different emissions scenario for paddy and coffee in Indonesia by <i>Prof Edwin Aldrian, BRIN, Indonesia</i>
3.30 – 3.45 pm	The Mapping of Drought Vulnerability in Rice Fields Based on Climate Projection of RCP4.5 Scenario (Case Study: Bali Province) by <i>Ms Tamima Amin, Center for Applied Climate Information Services, BMKG, Indonesia</i>
3.45 – 4.00 pm	Projection of drought characteristics for Vietnam and Southeast Asia using CORDEX-SEA downscaled CMIP5 data by <i>Prof Phan Van Tan and Ms Phuong Nguyen-Ngoc-Bich, VNU Hanoi University of Science, Hanoi, Vietnam</i>
4.00 – 4.15 pm	Projected drought over Malaysia, Brunei and Indonesian regions of Sumatra and Kalimantan based on CORDEX-SEA simulations by <i>Mr Abdul Azim Amirudin / Prof Fredolin Tangang, Universiti Kebangsaan Malaysia</i>
4.15 – 4.30 pm	Application of CORDEX-SEA in climate change risk assessment on coastal resources along the Gulf of Thailand by <i>Asst Prof Dr Patama Singhruck</i>
4.30 – 4.45 pm	Process-based analysis of the impacts of sea surface temperature on climate in CORDEX-SEA simulations by <i>Ms Angela Magnaye, University of Tsukuba, Japan</i>
5.00 pm	End of First Day Workshop

Session III: Empirical Statistical Downscaling (ESD) and Bias Correction in Southeast Asia

Chair: Assoc Prof Dr Liew Juneng, UKM, Malaysia / Dr Patama Singhruck, Chulalongkorn University, Thailand

Time (BKK, GMT+7)	Activities
8.00 – 9.00 am	Participants arrivals and registrations
9.00 – 9.20 am	Presentation by Assoc Prof Dr Koji Dairaku on ESD, University of Tsukuba, Japan
9.20 – 9.35 am	Added values with multi-variable bias adjustment for heat stress assessment by Mr Kelkar Saurabh, University of Tsukuba, Japan
9.35 – 9.50 am	Statistical downscaling of CMIP6 over the area of Thailand by Asst Prof Dr Waranyu Wongseeree, RU-CORE, Ramkhamhaeng University, Thailand
9.50 – 10.05 am	ERA20C Constructed Analogue Statistical Downscaling for Indonesia by Ms Trinh Wati, Institut Teknologi Bandung, Indonesia
10.05 – 10.20 am	Empirical-Statistical Downscaling in Thailand by Dr Atsamon Limsakul, Department of Environmental Quality Promotion (DEQP), Thailand
10.20 – 10.30 am	Coffee break
10.30 – 10.45 am	Bias-corrected future precipitation and extreme indices of CORDEX-SEA simulations by Dr Ngai Sheau Tieh, Tropical Marine Science Institute, NUS, Singapore
10.45 – 11.00 am	Bias adjusted climate data for climate risk assessment by Mr Emilio Gozo, Manila Observatory, Philippines
11.00 – 11.15 am	Effects of bias correction on simulation and projection of drought characteristics by Ms Phuong Nguyen-Ngoc-Bich, VNU Hanoi University of Science, Hanoi, Vietnam
11.15 – 11.30 am	Evaluation of rainfall bias-corrected in high resolution CORDEX-SEA over Java Island by Dr Donaldi SP, Research and Development Center, BMKG, Indonesia
11.30 – 11.45 am	Building a High-Resolution Projected Climate Dataset for Vietnam based on the Bias Correction and Spatial Disaggregation method by Dr Quan Tran-Anh, Hanoi University of Mining and Geology, Vietnam

Session IV: Urban climate and land surface-atmosphere interactions

Chair: Prof Dr Phan Van Tan, VNU Hanoi University of Science, Vietnam

11.45 – 12.00 pm	Urban climate study within CORDEX SEA framework by Dr Doan Quang Van, University of Tsukuba, Japan
12.00 – 12.15 pm	Establishing a modeling system to investigate urban climate impacts on climate change over large cities in Vietnam by Dr Thanh Nguyen-Xuan, USTH, Vietnam
12.15 – 12.30 pm	Tropical extreme droughts drive long-term increase in atmospheric CO ₂ growth rate variability Dr Luo Xiangzhong, National University of Singapore, Singapore
12.30 – 1.30 pm	Lunch and break

Session V: Regional climate change issues and needs for regional climate change information from the perspectives of users and policy makers

Chair: Prof Fredolin Tangang, Universiti Kebangsaan Malaysia, Malaysia /
Asst Prof Dr Jerasorn Santisirisomboon, RU-CORE, Thailand

1.30 – 1.45 pm	Presentation by <i>Dr Vanny Narita, Senior Officer, Science and Technology Division, Sectoral Development Division, ASEAN Economic Community Department ASEAN Secretariat, Jakarta</i>
1.45 – 2.00 pm	The importance and needs of climate projection data for river basin research in Malaysia by <i>Mr Mohd Syazwan Faisal, NAHRIM, Malaysia</i>
2.00 – 2.15 pm	The application of CORDEX-SEA's data in hydrometeorological disaster prevention by <i>Kadarsah, Center for Climate Change Information, BMKG, Indonesia</i>
2.15 – 2.30 pm	Climate change information in the Philippines by <i>Dr Marcelino Villafuerte II, PAGASA, Philippines</i>
2.30 – 2.45 pm	The application of CORDEX-SEA's data in contribution to national climate change scenarios for Viet Nam by <i>Mr Truong Ba Kien, IMHEN, Vietnam</i>
2.45 – 3.00 pm	The needs for regional climate change information on adaptive agriculture by <i>Dr Pakon Petchaprayoon, Geo-Informatics and Space Technology Development Agency (GISTDA), Thailand</i>
3.00 – 3.15 pm	Coffee Break
3.15 – 3.30 pm	Application of dynamical downscaling and bias correction for the impact assessments and role of AP-PLAT by <i>Dr Noriko Ishizaki, National Institute for Environmental Studies, Japan</i>
3.30 – 3.45 pm	Regional and Local Highres climate modelling using WRF by Singapore by <i>Dr Srivatsan Vijayaraghavan, Tropical Marine Science Institute, NUS, Singapore</i>
3.45 – 4.00 pm	How climate science informs competencies for human and ecosystem transitions in climate and disaster resilience by <i>Ms Jessica Dator-Bercilla, University of the Philippines Visayas, Philippines</i>
4.00 – 4.15 pm	Regional Climate Change Issues & Key Strategies: Brunei's Perspectives by <i>Dr Saiful Azmi Hussain, Universiti Brunei Darussalam (UBD), Brunei Darussalam</i>
4.15 – 4.30 pm	Solar Radiation Management (SRM) and DECIMALS Project by <i>Prof Dr Heri Kuswanto, ITS, Surabaya</i>
4.30 – 5.00 pm	Overall Discussion Session
5.00 pm	End of CORDEX SEA Workshop