

CORDEX Report

1. Highlights for JSC: workshops

- CORDEX Africa Analysis workshops 3, Cape Town, February 2016
- Pan Asia ESGF Training workshop, Jeju, Korea, February 2016
- ICRC-CORDEX 2016, Stockholm, Sweden, May 2016
- Five FPS proposals endorsed, May 2016
- SEACLID/CORDEX-SEA Progress Meeting, Jakarta, Indonesia, September 2016
- Publication of Gutowski et al. WCRP COordinated Regional Downscaling Experiment (CORDEX): a diagnostic MIP for CMIP6, Geoscientific Model Development , 9, pp 4087-4095, 2016
- CORDEX African Atlas presentation at Cop22/UNFCCC, Marrakech, Morocco, November 2016
- SEACLID/CORDEX Southeast Asia 4th Workshop, Hanoi, November 2016
- Formation of Asian ESD7CORDEX group, Hanoi, November 2016
- Arctic CORDEX meeting, Bergen, Norway November 2016
- Special Session at UGM, Puerto Vallarta, Mexico. SE13: Modelación Regional del Clima, Nov 2016
- 2nd Workshop on Climate Change, Variability, and Modeling over Central America and Mexico, San José Costa Rica, November 2016
- Meeting on convection permitting CORDEX FPS, ICTP, Trieste, November 2016
- Conference Report ICRC-CORDEX 2016 published on the CORDEX web, December 2017
- Euro-CORDEX GA, Hamburg, Germany, January 2017
- CORDEX Australasia meeting, February 2017
- Presentation of CORDEX at CliC SSG, Wellington, New Zealand, February 2017
- Climate Services conference, Cape Town, February-March 2017
- CORDEX Climate Research and Information for Regions (conference summary) accepted for publication in BAMS, March 2016

2. Early success and/or planned activities in 2017/2018, some pending decision on funding

- CORDEX sessions at EGU and AGU general assemblies 2017
- Multi-model intercomparison studies for the Arctic and Antarctica
- Joint Polar COREX meeting, Cambridge, Sept/Oct 2017
- CORDEX Africa Atlas practical work starts
- CORDEX Africa workshop, Johannesburg/Cape Town, June/July 2017
- Impact analysis in Central Asia
- Processing and publishing new NA simulations
- First annual reports from FPSs during the year
- Some domains will contribute simulations for the 1.5 degree report

- A guide on EURO-CORDEX climate projections and its use is currently in preparation
- Australasia data to be published on ESGF
- KMA workshop, when TBD
- Two CORDEX-SEA workshops, when and where TBD
- CORDEX South America workshop, when and where TBD
- Special CORDEX session at the Mexican Geophysical Union
- CORDEX SA - Possibly training workshop on statistical downscaling back-to-back with AGU?
- Med-CORDEX GA, Barcelona, July 2017^{2nd} Mena-CORDEX Meeting, Lebanon (?), 2nd half of 2017
- Face-to-face SAT-meeting, Exeter, October

3. Primary science issues (ahead, 3 to 5 years)

- Design of CORDEX CORE – Coordinated Output for Regional Evaluations as a contribution to CMIP6 and the IPCC process.
- CORDEX has identified five Regional Scientific Challenges to be pursued as complementary to the WCRP Grand Challenges, with the four cross-cutting themes water resources/hydrological cycle, development of process based metrics, water-energy nexus and extremes;
 - Added Value
 - Internal variability as function of scale
 - Added value as a function of scale
 - Empirical Statistical Downscaling (ESD)
 - Bias correction uncertainties and consistency
 - Common and user-oriented performance metrics
 - Human element
 - High resolution coupling of regional climate and coastal megacities
 - Bridging activity with urban parameterisation community
 - Land use change
 - Coordination of regional coupled modelling
 - Ocean-ice-atmosphere
 - Dynamical land surface
 - Atmospheric chemistry
 - Carbon cycle and marine biogeochemistry
 - Aerosols
 - Precipitation
 - Convective systems
 - Coastal storm systems
 - MJO/Monsoon
 - Extreme events
 - Local wind systems
 - Wind storms
 - Strong regional winds
 - Wind energy

4. Issues and challenges, in particular:

- The interaction with other CORE projects have during 2016/2017 improved by regular IPO teleconferences but needs to be further explored. Cooperation on common routines, web-sites etc have been discussed.
- CORDEX is in the process of examining what CMIP6 modelling groups will contribute to CORDEX diagnostic MIP
- The CORDEX community keeps growing both in participating institutions/producers but also in number of users and in societal demand of regional information
- Link to the GFCS
- Distillation of information and links to the observational community
- Growing interest from IPCC calls for more coordinated and homogenous regional information and a stronger regional input in the scoping of AR6. This issue is addressed through the CORE program.
- The funding provided for 2017 means that the CORDEX office can support only part of one workshop and perhaps a couple of SAT-attendants to the upcoming meeting in Exeter. For 2017 the requested funds were larger than ever before due to increased planned activity in many domains which is a positive development and it is regrettable that many of them might not be performed due to budget constraints.