

WCRP

17TH-20TH MAY 2016 STOCKHOLM, SWEDEN

CORDEX

ICRC-CORDEX 2016

Flagship Pilot Studies

 CORDEX **ICRC-CORDEX 2016**

Scientific challenges (ICRC-CORDEX 2013) identified needs for:

- Better assessment of the added value
- Better understanding of processes relevant for regional CC
- Broader, more process-based assessment of downscaling
- Better integration of ESD within the CORDEX framework;
- Moving towards convection permitting models
- Coupled regional earth system models (including urbanization, dams, pollution emissions, adaptation etc.)
- Effects of regional forcing (land-use change and aerosols)
- Distillation of actionable information
- Better integration of CORDEX with other WCRP programs

Criteria	Essential	Highly recommended
<p>1 Targeting fine scale processes and clear scientific questions of interest (e.g. see list above)</p>	<ul style="list-style-type: none"> • Not addressed by GCMs or coarser resolution downscaling • Have potential to demonstrate the added value of downscaling • Not addressed within the existing standard CORDEX framework. 	<ul style="list-style-type: none"> • Can be usefully approached by both dynamical and statistical downscaling methods, so as to allow an intercomparison of the approaches • Investigate regional processes, circulations and forcings of interest.
<p>2 Use of observational data including not only meteorological but also derived data (e.g. soil moisture, streamflow etc.)</p>	<ul style="list-style-type: none"> • Studies should be based upon data of sufficient quality to support the objectives. 	<p>The observation data should enable the capability to:</p> <ul style="list-style-type: none"> • Investigate regional processes • Validate dynamical models down to convection permitting resolutions and sub-daily scales • Provide information suitable to calibrate and validate statistical downscaling tools • Enable cross analysis and validation of multiple variables, processes, feedbacks and interactions across climate system components

Criteria	Essential	Highly recommended
3 End-to-end perspective and potential to support demonstrated local/regional needs	<ul style="list-style-type: none"> Impact of the study from the physical science and/or VIA viewpoints (whether near or long term) should be evident. 	<ul style="list-style-type: none"> Stakeholder needs determined by the interactions with VIA community or existing literature on the topic. Potential to generate funding support Potential to produce actionable climate information
4 Applicant group	<ul style="list-style-type: none"> Multiple participants must be involved in the study. 	<ul style="list-style-type: none"> Transnational and multidisciplinary applicant groups are encouraged.

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Selected FPS from the first submission (out of 9 in total):

- SAM: Extreme precipitation events
- EUR+MED: Convective phenomena
- EUR: Impact of land use changes on climate
- MED: Role of the natural and anthropogenic aerosols
- MED: Role of air-sea coupling and small scale ocean processes on the regional climate

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Procedures:

- FPS can be suggested by the regional CORDEX communities
- Deadlines for FPS proposals - 15th February, 15th June and 15th October
- Submission to ipoc@cordex.org
- Assessment of proposals by the SAT + external experts
- Formal CORDEX endorsement by the SAT
- Feedback including suggestions for modification
- It is expected that approved FPS will report to the SAT at least once a year