The second International Conference on Regional Climate - CORDEX 2016 will bring together the international community involved in regional climate research and its applications, with particular emphasis on CORDEX and related WCRP regional climate activities. The Conference will promote the CORDEX vision to advance and coordinate the science and application of regional climate downscaling through global partnerships.

The conference will address the following main themes in regional climate research:

- Enhance understanding of physical processes of relevance for regional climate variability and change.
- Comprehensively assess and improve different climate downscaling techniques, such as regional climate models (RCMs), high resolution and variable resolution atmospheric global models, and empirical-statistical downscaling (ESD) methods.
- Produce a new generation of regional climate projections based on integrating across multiple downscaling techniques.
- Develop methods and tools to distill reliable and actionable climate information from large multi-model, multi-method ensembles.
- Ensure relevance and accessibility of regional climate information for Vulnerability, Impact and Adaptation (VIA) studies.
- Contribute to the development of observation data products relevant for downscaling development, validation and assessment of added value.
- Enhance the two-way dialogue between the science, stakeholder, and policy-maker communities in order to work together in the context of wider global challenges.

The conference will consist of plenary, parallel and poster sessions on the themes outlined above, where the oral sessions will include both invited and contributed papers. These will be complemented by round-table discussions, involving representatives of all relevant communities, focusing in particular on key results and emerging issues from the CORDEX activities to date and how these guide the implementation of future activities. Parallel sessions and side meetings are envisioned on technical issues pertaining to the various downscaling techniques, methodologies for deriving integrated information, and on different regional activities.

One of the aims of the conference is to discuss the main future challenges for the CORDEX community and the definition of suitable experiment strategies to address these challenges. Examples of scientific challenges in need of better investigation are:

- Added value of downscaling techniques, including the development of very high resolution cloud-resolving models
- Innovation in methodologies and tools for multi-model multi-method analysis
- Incorporation of the human element in RCMs, including coastal urban environments
- Enhancement and coordination in the development of Regional Earth System Models (RESMs)
- Representation and projection of precipitation events, including extremes
- Representation and projections of regional wind systems

Addressing these challenges will require the development of targeted projects, experimental frameworks, and close collaboration with the relevant stakeholder and VIA communities. Keynote speakers, contributed papers and interactive discussions will also be invited on this topic.

For more information on the conference please see the conference webpage.