International Conference on Regional Climate-CORDEX2019
Theme: Advances in regional downscaling
Session: A3: Downscaling tools and methods
Day and time: 16 October 2019, 08.30-11.30
Chairs: Koji Dairaku, Tannecia Stephenson
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In the A3 session, new/modified tools and methods, and intercomparisons of dynamical and statistical downscaling techniques were presented.

In this oral session, the 9 out of 10 scheduled presentations were given. The poster session had the 9 out of 14 posters. Both the oral and poster sessions had presentations on new and modified tools and methods on dynamical and statistical downscaling. Some showed added values of the new/modified methods while some illustrated intercomparison of the multi-methods.

Key Findings;

- New tools and methods such as web-based interactive application, deep learning, a hybrid downscaling approach, and large ensemble downscaling have been developed and tested over Europe and Asia. The added values of these were illustrated by the intercomparison of multi-methods. Some tools and output data are publicly available. These are expected to be used and evaluated by many potential users.

- The new tools and methods can be shared with and expanded to other CORDEX regions.

- Quality of observation data is a major concern and a drawback to developing reliable regional climate information.

- Uncertainty in the regional climate information remains a big challenge, as various stakeholders have various needs/purposes and want simple/best information.

- There are great opportunities to improve the tools and methods through collaboration among scientists and stakeholders in the region (policy-relevance). For instance, challenges of statistical-dynamical downscaling of regional climate models for impact studies at the city scale and combination of multi-ensemble downscaling with crop model for irrigated crop lands were presented.

- The tools have great potential to significantly contribute to the CORDEX-CORE initiative.