CORDEX-2016 Conference, Special SessionD2: Training Session on Regional Climate Model Evaluation System RCMES

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Location: Stockholm University, Stockholm, Sweden
Date: May 19th Thursday, 2016
Time: 2 – 5 p.m.

The RCMES team at JPL and Portland State University have run the training session to introduce RCMES and its software architecture to 50+ participants. Participants were instructed on how to install, run, and evaluate climate models using RCMES. Attendees used their own PC/Mac laptop.

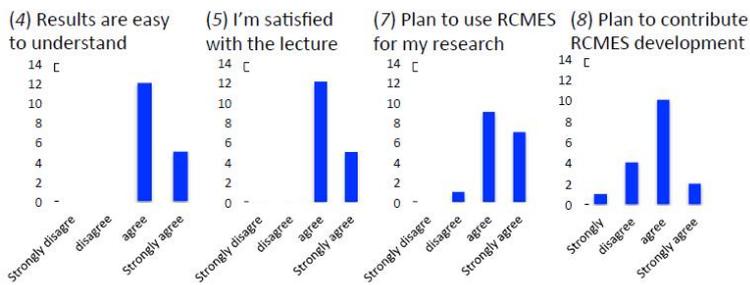| Time	Agenda Item	Process/presentations/materials
14:00-14:45	Welcome and introduction to RCMES Installation and Test	• Sign-in • USB sticks and handouts • Presentation: RCMES
14:45-15:15	Activity #1: RCMES Command Line Interface	• Evaluation of precipitation from a single NARCCAP RCM • Change the observation data
15:15-15:30		Break (Discussion, Q & A)
15:30-16:10	Activity #2: Configuration Files (CF) to run RCMES	• Evaluation of precipitation in CORDEX-Africa RCMs • Evaluation of cloud fraction/precip in six NARCCAP RCMs
16:10-16:40	Activity #3: Statistical downscaling using RCMES	• CMIP5 temperature and precipitation datasets for present and future climate • Compare the IPCC climate change scenarios • (RCP 4.5 vs. RCP 8.5)
16:40-17:00	Introduction to Apache Open Climate Workbench	• Presentation: What powers RCMES and how to get involved with development

Attended by ~50 trainees from multiple countries, mostly in their early careers (students, postdocs, climate scientists, data scientists)

Among the 50 attendees, 20 responded to the survey. The responded attendees are: graduate students (7), postdocs (2), climate scientists (7), and data scientists (4).

A eight-question survey was handed out at the end of the session. Responses to key items are compiled in the below:
- 17/17 agrees that RCMES results are easy to understand
- 17/17 were satisfied with the lecture
- 16/17 plan to use RCMES in their research
- 12/17 plan to contribute RCMES/OCW development

(4) Results are easy to understand

(5) I'm satisfied with the lecture

(7) Plan to use RCMES for my research

(8) Plan to contribute RCMES development

Strongly disagree disagree agree Strongly agree

Session Summary

This instructional training session was intended to introduce the Regional Climate Model Evaluation System (RCMES) to the climate research community and to provide hands-on training to interested users, especially in the field of climate and information sciences. RCMES, developed through a joint effort by NASA-JPL and UCLA, is a software tool for facilitating model evaluations and data analyses via easy and flexible access to model and observational data in conjunction with evaluation modules for calculating basic model evaluation metrics. The session was composed of tutorials for applying RCMES to evaluations of climate model simulation data with examples from the two regional experiments, CORDEX-Africa and NARCCAP. In addition, three related lectures by RCMES team members were provided at the Conference; an overview of the role of observational data in climate research; an example of applying statistical downscaling for regional climate research; and descriptions of the Open Climate Workbench (OSW), the software library of RCMES, and using "ipython notebook" for editing software for RCMES. About 50 attendees, most of them in their early careers, from various countries participated in the workshop using their own computers of varying operating systems (MacOS, Windows, Linux). The tutorial part of the session was composed of hands-on training including a simple Command Line Interface (CLI) sequence for illustrative purposes and the use of the Configuration File (CF) to replicate the analyses in previously published papers. A survey was taken at the end of the session that indicates that most of the responded participants intend to utilize RCMES in their research and about 70% of them are interested in contributing the further development of RCMES.

Lectures

RCMES tutorial session

Presenters, instructors and organizers