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Conservation Cooperative
Bridging science and action, land and sea



Joint Workshop Connects Data Users to New Caribbean Climate Information

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Dr. Ryan Boyles, Deputy Director of the Southeast Climate Science Center, presents at a joint workshop by the Caribbean Landscape Conservation Cooperative and USDA Caribbean Climate Hub for Tropical Forestry and Agriculture in August 2016 in San Juan, Puerto Rico. Photo Credit: Kasey R. Jacobs, U.S. Forest Service

By Kasey R. Jacobs, USFS IITF, Partnership and Communications Coordinator for the Caribbean Landscape Conservation Cooperative

A joint workshop in August 2016 connected climate data users in the Caribbean region to the information, tools and people necessary to use a brand new dataset of dynamically downscaled climate data for Puerto Rico and

the United States Virgin Islands. The two-day workshop was co-hosted by the Caribbean Landscape Conservation Cooperative and USDA Caribbean Climate Hub at the U.S. Forest Service International Institute of Tropical Forestry in San Juan, Puerto Rico. For three years, climate modelers at the University of North Carolina – Chapel Hill, Florida State University and the U.S. Geological Survey Southeast Climate Science Center at North Carolina State University have been developing this unique dataset of more than 60 climate variables at 2-km resolution, a scale never completed before in the Caribbean.

The joint workshop was designed to make the 33 remote and in-person participants more familiar with the dataset and its capabilities through interactive exercises, small group discussions, a tutorial and a series of presentations. A status update and release of preliminary results were given. Participants included researchers and government officials from both territories.

Three years ago, the USGS Southeast Climate Science Center (SE CSC) and the Caribbean Landscape Conservation Cooperative (CLCC) sponsored the development of the dynamical downscaled climate projections for Puerto Rico and the United States Virgin Islands. The climate parameters modeled were chosen by users at a similar workshop in 2013 so model outputs could be used by ecologists and natural resource managers, not just climatologists. This innovative approach to science delivery is sometimes called “co-production” (see [DOI guide to actionable science](#) or [USFS scientist research article on co-production](#)). Using the user selected variables and time-steps the modelers then spent two full years building and running the models using super computers at the [Renaissance Computing Institute](#) and Florida State University.

Dr. Jared Bowden, University of North Carolina Chapel Hill, a modeler for the Caribbean Dynamical Downscaling Climate Project presents preliminary findings at the August 2016 workshop at the U.S. Forest Service International Institute of Tropical Forestry Conference Room in San Juan, Puerto Rico. Photo Credit: Ryan Boyles, U.S. Geological Survey

In addition to providing a glimpse at the preliminary results and a status update on the 3-year project, the August workshop served to identify potential research projects to guide post-processing of the data so outputs could be utilized by local researchers and decision makers. The results will also assist the CLCC to identify indicators for new Landscape Conservation Design efforts in PR and USVI. Workshop outcomes included an informed and engaged CLCC and Hub research community on the status of the dynamical downscaling climate project, a survey of where participants are in mainstreaming climate change information and modeling outputs into decision making processes, project development or research projects in order to tailor science delivery efforts of these data and other products coming out of the CLCC, Hub, and SE CSC, a list of potential questions or frequently asked questions for future science delivery products, a list generated by participants on what is needed to improve utility of data and next steps for this research, and an informed understanding of how much we gained by undertaking high resolution dynamical downscaling compared to [prior efforts that used statistical downscaling](#).

The official project title is “*Developing multi-model ensemble projections of ecologically relevant climate variables for Puerto Rico and the U.S. Caribbean*” (a.k.a. the U.S. Caribbean Dynamical Downscaling Climate Project). The principal investigators of this research are Adam Terando, Ryan Boyles, Jared Bowden, Jaime Collazo, William Gould, Vasu Misra, and Lydia Stefanova.

The workshop will be repeated in the U.S. Virgin Islands and presentations and a workshop report are forthcoming. More information will be available at www.caribbeanlcc.org soon. Interested stakeholders can view a June 27, 2016 a #CaribbeanClimateTalks webinar recording with Dr. Jared Bowden about the project [here](#) on YouTube.

This post is also available in: [Spanish](#).