

# 'Climate services' go global

UN meteorological body approves framework for managing climate predictions.

Daniel Cressey

02 November 2012

An international framework for providing information about how Earth's climate will affect everything from health to disaster planning is set to bring order to an area that has given some scientists cause for concern.

The field of 'climate services' has boomed in recent years, with various organizations and individuals using climate models to advise policy-makers and local people on crop production, infrastructure planning and disease management. At the first ever 'extraordinary session' of the United Nations' World Meteorological Organization (WMO) in Geneva, Switzerland, which finished on Wednesday, members of the organization agreed on an implementation plan for a 'Global Framework for Climate Services' to manage how such information is gathered and communicated.

"It's the first time the international community had come together to implement a proper formal framework for climate predictions," says Julia Slingo, chief scientist of the UK Met Office in Exeter, who has been heavily involved in the process. "This is a real landmark in much the same way as when the Intergovernmental Panel on Climate Change was established."

The framework was initially set out in 2009, and this week's agreement is the result of a lengthy period of consultation and negotiation. More than 300 scientists were consulted, says Jerry Lengoasa, the deputy secretary-general of the WMO.

Lengoasa says the framework will focus on four priority areas: food security, disaster risk reduction, water and health. A series of objectives has been drawn up, beginning with short-term pilot projects to kick-start capabilities in Niger, Mali and Burkina Faso. There is also an ambitious ten-year plan to provide most of the 70 countries that the WMO has identified as having little or no capability in the area with the capacity to make their own predictions.

The framework will be "user driven", says Lengoasa, allowing those who need climate services to feed back their wants to the researchers upstream. "It will certainly be a two-way flow of information," he says. This should assist in breaking what has sometimes been a "silo driven" approach to climate research, in which those working in physics, for example, were not linked to those in earth sciences or those in social science, he adds.

Slingo says that the scientists themselves can benefit from engaging in this way. As an example, she points to a Met Office project that worked on predicting the onset of rains in Africa. Although this is vital for local farmers, it is not something that had typically been of interest to scientists. Met Office researchers found that they could provide useful predictions, she says, and "that also challenged our science and our models".

## Climate service concerns

The global framework's implementation comes amid increasing concern in some quarters that climate-service providers may sometimes be overselling their abilities.

"The biggest concern that I have is using climate models to project regional climate change," says Judith Curry, chair of the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology in Atlanta. "Climate models have demonstrated little to no skill here, and increased resolution of the global models is not helping."

Curry says that the limitations of models are well understood in the climate-modelling community, but that the climate-services community sometimes "seems to be accepting these climate models based on faith" and has "developed a cottage industry of downscaling the climate-model simulation results to apply to regional decision-making". The key focus, says Curry, should be on



Gideon Mendel/Corbis

Predicting the onset of rain in Africa is one of a growing number of 'climate services' on offer.

improving the data sets.

Martin Visbeck, a marine scientist at the GEOMAR Helmholtz Centre for Ocean Research Kiel in Germany who was previously involved in the science programme for the WMO framework, agrees that some people providing climate services promise more than they can deliver. “That’s precisely why the Global Framework for Climate Services is needed. To put those ambitions into perspective,” he says.

Slingo admits that those involved in climate services have to be careful to manage expectations. But she says the work itself is vital. “This is the beginning of a very long road,” she acknowledges. “But a necessary road we must travel down.”

*Nature* | doi:10.1038/nature.2012.11724