

Moving from Climate Information to Climate Knowledge

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The climate science community is currently facing a host of new challenges. As evidence of climate change has become more and more convincing over the past years, and as climate change has been put in the mainstream of public discourse prompted the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC AR4), the demand for skillful and accessible climate information grows for wide use in different sectors. These include public health, environmental protection, natural resource management, coastal zone management, urban and regional planning, insurance, water management and energy industries and others. Moreover, the Third World Climate Conference (WCC-3) in Geneva in 2009 convened by the World Meteorological Organization has provided the impetus for creating the Global Framework for Climate Services (GFCS), which urge climate information service providers to supply actionable, user-friendly climate information products and services.

As a response to these challenges, more and more centers across the globe are producing data and information. Despite more data and information, more and more uncertainties also emerge due to scientific limitations, misinterpretation of data and information, and lack of communication lines across producers and users of data and information. These problems result in misinformation and confusion in both the policy circles and the general public, and sometimes in the scientific community itself. In order to mobilize economic and political resources and plan for the consequences of climate variability and change, more than a large bulk or compendium of data and information is needed. Scientists and decision-makers need to work together to find ways of converting the climate information into climate knowledge which will inform decisions, actions and adaptation measures.

What is climate knowledge? There are differences between climate information and climate knowledge. Climate knowledge is more than a collection of information. It is produced with the intent of being useful. Other key features of knowledge are understanding, insight and experience. It can be argued that climate knowledge is the use of climate science for adaptation. For example, it can be said that climate information products include outlook forecasts, monitoring maps and flood and

drought bulletins. Climate knowledge products, on the other hand, include decision-support tools, best practices in using climate information across different sectors and early warning systems.

In pursuing climate knowledge and the development of climate knowledge products, there is an array of important issues that need to be addressed. What exactly are the information and knowledge needs of various sectors? At what temporal and spatial scales would information be useful? How can we characterize and communicate uncertainty in predictions? How useful are climate forecasts in decision-making? It is important to acknowledge the limitations and existing gaps in what we can predict and in what confidence level in climate and atmospheric science.

Presently, the APEC Climate Center's (APCC) role is limited to producing climate information through its prediction and monitoring products. APCC has begun some work this year on reaching out to potential users of climate information, particularly in the disaster management sector. In the coming years, APCC plans to engage more actively with its user community and also to expand the existing user community to include decision-makers in various sectors. This will be done through the creation and implementation of a communications strategy that aims to rethink how APCC publishes and distributes information products and creates web tools, and to forge linkages in different sectors across APEC fora such as fisheries, marine resources, agriculture and others.