

Climate study to generate high-resolution projections

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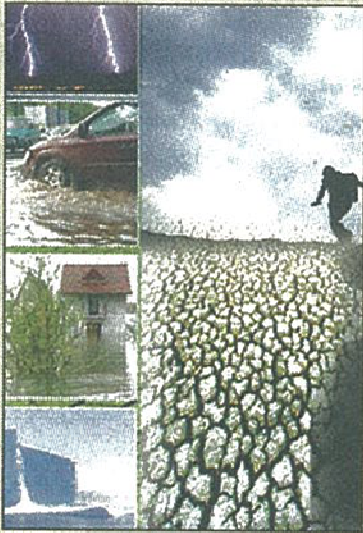
Pune: The Centre for Climate Change Research (CCCR) at the Indian Institute of Tropical Meteorology (IITM), Pune, recently undertook a major project, 'Co-ordinated regional climate downscaling experiment (CORDEX - South Asia), aimed at generating high-resolution climate projections over the South Asian monsoon region, including India.

This study using high-resolution models will be able to divulge information on climate extremes (droughts, floods, cyclonic storms, heat waves, etc) and their impact on major sectors of economy. The CORDEX - South Asia project is an initiative of the World Climate Research Programme (WCRP) of the World Meteorological Organization (WMO). The CCCR at IITM, Pune, has been identified as a nodal agency for coordinating CORDEX South Asia.

As part of CORDEX - South Asia, the CCCR is actively involved in the generation of high-resolution regional climate scenarios and is also coordinating the participation of several climate modeling and impact assessment groups from India and other countries, such as Germany, Sweden, Japan, Norway, Australia, etc.

R Krishnan, executive di-

CORDEX - SOUTH ASIA



- ▶ High-resolution dynamic downscaling of the South Asian regional climate and monsoons
- ▶ High-resolution essential especially for climate extremes and its impacts on major sectors of economy
- ▶ Multiple model ensemble simulations
- ▶ Quantify and reduce uncertainties in regional climate projections

rector, CCCR, and J Sanjay, senior scientist at CCCR, told TOI that the projections based on climate models involve some degree of uncertainty. "Projections of rainfall are complex to understand, particularly over smaller areas, and need to be evaluated based on multiple models. So, the idea of having multiple high-resolution models in CORDEX is very important because it not only provides more reliability about regional climate change, but this approach also allows quantification of uncertainties in the model projections, which would be essential for impact assessment studies and policy decisions."

Krishnan said CORDEX

will use high resolution (every grid area of 30-50 km) that gives more precise and good accuracy for Asian monsoon projections. Often resolution of grid area of 200-300 km are used for the same.

Sanjay stressed that the study was taken up recognizing the importance of climate information and capacity building in the South Asian region. The monsoon projections will help in developing and managing water resources, agriculture and other sectors of economy. The inputs from this study will be used in the inter-governmental panel on climate change (IPCC), fifth assessment report in 2014," he added.