SOUTH ASIA REGIONAL PROGRAM FOR HYDROMET SERVICES AND RESILIENCE

Bolstering weather forecasting to build resilience

AT A GLANCE

Region South Asia

Risks Extreme weather events exacerbated by climate change

Area of Engagement Strengthening hydromet services and early warning systems

The South Asia Regional Program for Hydromet Services and Resilience is supporting countries in the region better respond to natural hazards by strengthening their weather forecasting capabilities and hydromet services.

Satellite photo of flooding on the Ganges and Koshi rivers in Bihar, India

Source: NASA

OVER 50% OF SOUTH ASIANS AFFECTED BY NATURAL DISASTERS

South Asia is highly prone to weather and water-related disasters such as flooding, drought, thunderstorms and cyclones, the impacts of which often transcend national boundaries. In August 2017, devastating floods caused by heavy monsoon rains claimed the lives of at least 1,200 people in India, Bangladesh, and Nepal. Climate change has raised the specter that both the frequency and intensity of extreme weather events could increase in the coming decades.

Continued urbanization and economic growth is resulting in more people and more assets being exposed to natural hazards. In the past two decades, over 50% of South Asians, that is, more than 750 million people have been affected by at least one natural disaster. The poor are typically the worst affected as they tend to live in the most vulnerable areas.

The social and economic costs of such hazards have been staggering with almost 230,000 people dead and $45 billion in damages between 1970 and 2008. Weather hazard damage shaves off between 2 to 6 percent of South Asia's yearly GDP.

A REGIONAL RESPONSE TO STRENGTHENING RESILIENCE

Recognizing the cross-border nature of hydrological and meteorological (hydromet) hazards in South Asia, the Global Facility for Disaster Reduction and Recovery (GFDRR) and the World Bank are supporting the South Asia Regional Program for Hydromet Services and Resilience, which aims to strengthen institutions, facilitate knowledge exchange and enhance cooperation with respect to hydromet services in the region.

Specifically, activities carried out under this program are designed to bolster the capacity of South Asian countries and institutions to respond to weather and water-related hazards and climate risks at the national and regional levels by supporting improvements in monitoring, weather and flood forecasting, community-based early warning systems and delivery of hydromet services to users and communities.

Hobbled by outdated hydromet infrastructure and understaffing, many of the region's hydromet systems have only limited real-time data collection and forecasting capacity, especially relating to cross-border meteorological events.

The program has two main areas of action:

- National level preparedness, resilience and services. The main objective is to strengthen the capacity of national/sub-basin institutions to manage hydrological and meteorological hazards and the delivery of weather-based information. To meet this objective, the program provided technical assistance and operational support for national meteorological agencies in Afghanistan, Pakistan, Bangladesh, Bhutan, and Nepal, and also helped setup collaborations between these agencies and other relevant national agencies such as departments of water, agriculture and aviation.

- Regional cooperation to strengthen resilience. The main objective is to strengthen disaster preparedness and climate resilience through cross-border and regional dialogue, sharing lessons learned and best practices and scaling up ongoing sub-regional collaborations. Activities include a review of good practice examples of transnational river basin flood prevention activities, and regional knowledge sharing workshops and forums such as the South Asia Hydromet Services Forum held in September 2018.

LESSONS LEARNED

A "bottom up" approach which starts at the country level can prove beneficial for regional projects

Rather than engage with countries collectively at a regional level, the project partnered with each participating country to support national hydromet efforts and cross-border and regional dialogue. This helped the project navigate the variation in policy and institutional arrangements across the region, while still fostering action at a regional level.

Proactive steps should be taken to ensure that hydromet services are responsive to demand

The project made every effort to take user needs and priorities as a starting point for the design of service delivery systems. For example, in Bhutan, the project assessed capacity needs for meteorological services in the agriculture sector prior to initiating the development of agrometeorological (agromet) products. Across the region, the project has placed a heavy emphasis on promoting interagency collaboration at the national government level, in part to help ensure that the services provided by hydromet agencies are responsive to the needs of other relevant government agencies.

373
government officials given hydromet training

HUNDREDS OF GOVERNMENT OFFICIALS TRAINED

Since the project was approved in 2016, 373 government officials from South Asia, including 57 women, have received hydromet training through various workshops, activities and events organized across the region. In Pakistan alone, 10 national trainings and two international trainings have been organized.

HYDROMET COVERAGE EXPANDED

At this early stage, the project is already yielding results in terms of expanding the service coverage of hydromet services. For example, in Nepal, farmers in all 25 target districts are now receiving agro-advisory bulletins that are helping inform decision-making at the farm level.

REGIONAL KNOWLEDGE SHARING STRENGTHENED

Regional knowledge sharing has been strengthened through South-South learning workshops and forums which have facilitated peer-to-peer dissemination of national and regional lessons learned. Most recently, in September 2018, the South Asia Hydromet Services Forum brought together high-level representatives from government agencies and development institutions working on weather and climate services from across the region.

"This project will enable us to scientifically visualize the data and make the hydro-met information and services more usable to the general public."

-- Tashi Namgyal. Engineer, Hydro-Met Operations and Infrastructure Division, National Center for Hydrology and Meteorology, Bhutan

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October 2018
www.gfdrr.org