

# From weather forecasts to the field: New partnerships reduce drought risks in South Asia

## Partnerships for agricultural climate services in South Asia will reduce drought risks for resource-poor smallholder farmers

Millions of farmers across Afghanistan, Bangladesh, Nepal and Pakistan lack access to irrigation and rely on increasingly unpredictable rainfall to grow the crops that sustain their families. Science generated by researchers in South Asia is being applied to tackle one of the region's greatest threats to resource-poor smallholder farmers: drought. Increasing farmers' access to drought forecasts – especially before the crop seasons begins – is powerful way to help farmers reduce farm production risks by using drought resistant crop and varieties.

The USAID supported Climate Services for Resilient Development (CSRD) is a new partnership that connects climate, agricultural and data science, to generate new information to be transferred as decision support tools and training to agricultural decision-makers and farmers. CSRD is led by the International Maize and Wheat Improvement Center (CIMMYT) in South Asia, and has embarked on a new partnership with USAID, and with the International Center for Integrated Mountain Development (ICIMOD) through the National Aeronautics and Space Administration (NASA) supported SERVIR-Hindu Kush Himalaya (HKH). The SERVIR-HKH leverages NASA's satellite products and Earth Observation Platforms to monitor water balance and agricultural drought risks across the region. With the support of CSRD, drought risk forecasts are being translated into easy to understand messages in the form of crop choice and management advisories for farmers.

Faisal Mueen Qamar, Remote Sensing Specialist with ICIMOD commented that "The products generated through this service will be utilized by both national meteorological agencies and institutions involved in designing locally relevant climate services. CSRD support will enable field validation and capacity building activities and operationalize these products in decision making process."

CSRD collaboration with SERVIR-HKH was kicked off in May of 2017. Scientists are first building the computing facilities needed to make pre-season drought predictions in Bangladesh, in partnership with the Bangladesh Agricultural Research Council. Subsequent work will test different types of drought forecasting for their accuracy before translating them into formats that farmers can apply to mitigate drought impacts on food production and security.



CSRD partners are forecasting drought risk and also translating into easy to understand messages in the form of crop choice and management advisories for farmers. Photo: Faisal Mueen Qamar

**Climate Services for Resilient Development (CSRD)** is a global partnership whose core mission is to translate actionable climate information into easy to understand formats to spread awareness and use of climate services. The CSRD consortium in South Asia is led by the International Maize and Wheat Improvement Center (CIMMYT) in partnership with the Bangladesh Meteorological Department (BMD), Bangladesh Department of Agricultural Extension (DAE), Bangladesh Agricultural Research Council (BARC), Bangladesh Agricultural Research Institute (BARI), International Center for Integrated Mountain Development (ICIMOD), International Institute for Climate and Society (IRI), University de Passo Fundo (UPF), and the University of Rhode Island (URI).