Using information and communication technologies to disseminate and exchange agriculture-related climate information in the Indo-Gangetic Plains

Authors
Craufurd, Peter Q.
Balaji, V.

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Abstract/Description
This report documents and analyses emerging trends in the delivery and exchange of climate information in institutionalized agricultural extension systems, as well as through information and communication technologies for development (ICT4D) efforts that have a rural-agricultural focus. Such an analysis aims to give a clearer indication of how to best direct potential future investments in sharing climate change information with noninstitutional stakeholders. The analysis covers four countries across the Indo-Gangetic Plains (IGP): Bangladesh, India (Punjab, Haryana, Uttarakhand, Uttar Pradesh, Bihar and West Bengal States), Nepal (Terai Region), and Pakistan (Punjab Province). The critical potential impacts of climate change across the IGP include drought, flooding, glacial lake outburst floods, and variability of river runoff and coastal salinity.

CGIAR Affiliations
Climate Change, Agriculture and Food Security

AGROVOC Keywords
CLIMATE; AGRICULTURE; INFORMATION TECHNOLOGY; COMMUNICATION TECHNOLOGY
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The Indo-Gangetic Plain (IGP) was selected because it is highly vulnerable to climate change, which may adversely affect the sustainability of the rice-wheat production system and the food security of the region. Climate-smart agriculture (CSA) can mitigate the negative impacts of climate change and improve the efficiency of the rice-wheat-based production system. Using appropriate, research-based, agricultural technologies to promote food security is a major priority for many developing nations. Within this narrative of evolving technical expertise and dissemination of effective information for climate change adaptation and mitigation in the agriculture sector, the non-technical and public goods characteristics of soil and water conservation that condition farmers' technology choice also highlights the need to simultaneously promote strategies that address institutional constraints and internalise local externalities. Thus, synergising the biophysical aspects of agricultural operations with the community and institutional factors that determine local demand and viability of interventions. To this end, an attempt has been made to briefly describe the current policies and programmes that are implemented in the agricultural sector. When information is obtained from external networks, producers tend to adopt new practices on a step by step basis, rather than as a collective uptake. The majority of farmers in the study area adopted two to four CA practices, with only 21.5 percent of producers adopting an array of five or more CA practices, and less than ten percent adopting one or no practices.