

THE UTILITY OF WEATHER AND CLIMATE INFORMATION FOR ADAPTATION DECISION MAKING: CURRENT USES AND FUTURE PROSPECTS IN AFRICA AND INDIA

Developing countries share many common challenges in addressing current and future climate risks. A key barrier to managing these risks is the limited availability of accessible, reliable and relevant weather and climate information. We looked at the different types of climate information and who uses them in several case studies in India and Africa, demonstrating the challenges in meeting information needs in different contexts.

WHAT WAS DONE, AND WHAT WAS NOVEL?

We reviewed examples where climate information has been used to inform adaptation decision-making in Africa and India. Our review showed that even with currently available information, successful decision-making can be achieved but mainly in the short-term (daily to seasonal data). This finding goes against common arguments that say we don't have sufficient or quality data.

Our research indicated that farmers tend to respond to short term weather forecasts, while seasonal forecasts are sometimes used by governments and NGOs. There was little evidence to show who was using long-term climate information because of the levels of uncertainty in the data, the coarse scale of the projections, a lack of support for decisions on issues that may occur far into the future, and typically limited institutional capacity to deal with long-term planning.

KEY FINDINGS

Despite an increasing volume of global and regional climate model simulations, there are very few clear examples of long-term climate information being used to inform decisions at subnational scales. We found barriers to utility and uptake of climate information, including: (1) challenge of considering long-time horizons in managing immediate risks, (2) challenges in assessing the success of integrating long-term climate information, (3) issues around uncertainty and the coarse scale of climate projections, and (4) the lack of institutional capacity to deal with long-term climate risks.

There were some enablers too, which included building mutual trust (in the context of information provision and mode of delivery), and contextualising climate information to local contexts and realities.

Short-term coping actions taken by farmers can have cascading and incremental benefits for longer-term adaptation, and in time, maybe even transformational change. Ideally these decisions and actions should be influenced by knowledge of both short-term and long-term consequences.

KEY IMPLICATIONS FOR POLICY, PRACTICE AND RESEARCH

We developed a framework that shows how existing wins (used for short-term climate information) can be built upon to consolidate for longer-term adaptation (by using long-term information).

Climate information providers have a responsibility to develop contextual, timely climate information such as weather advisories that can help address farmers' different needs and risks. This requires a collaborative effort between multi-level institutions – with funding support – in order to develop forecast systems, maintain and strengthen observation networks, and engage with different communities to co-develop relevant information. Climate information is most useful in helping farmers manage their risk when it is integrated with other information such as disease outbreaks or market prices and demand.

As climate continues to change there is an increasing need for long-term information to be integrated into decision making. If this information is context driven it can help people adapt to the changes.

