

## HARNESSING DIVERSE KNOWLEDGE AND BELIEF SYSTEMS TO ADAPT TO CLIMATE CHANGE IN SEMI-ARID RURAL AFRICA

Farmers in semi-arid areas are finding that established coping mechanisms such as place-based climate forecasting using observations are becoming less reliable. Meteorological forecasting based on numerical predictions is helping to enable adaptation, but this climate information is sometimes uncertain and has a broad temporal and spatial scale. This study uses the case of Bobirwa subdistrict, Botswana to investigate the role of traditional norms and religious beliefs in the use of place-based and national meteorological forecast information to inform adaptation.

### WHAT WAS DONE, AND WHAT WAS NOVEL?

This work highlights that some farmers are particularly vulnerable to climate variability and change because they do not use climate forecast information on account of their traditional norms or religious beliefs.

To enable adaptation to climate change, it has previously been suggested that meteorological forecasting based on numerical prediction and place-based forecasting based on observations should be integrated into a more relevant and useful communication product. We agree with this; however, we add that this climate information should be integrated and communicated in a way that will enable the uptake of this information by people with different belief systems.

### KEY FINDINGS

We find that the use of place-based and national meteorological forecast information is affected by traditional norms and religious beliefs. Some farmers disregard climate information because they prefer to farm as they always have done, or they must wait for the chief's permission before starting planting. Other farmers believe that God controls the rain and it is not possible for humans to predict the future. They also have faith that God will provide and therefore do not have to change their farming practices.

### KEY IMPLICATIONS FOR POLICY, PRACTICE AND RESEARCH

To enable successful adaptation, climate information integrating place-based and national meteorological forecast information as well as recommendations on appropriate agricultural practices, needs to be developed together with, and disseminated through traditional and religious leaders.

This dissemination could include the incorporation of religious and traditional narratives and relevant methods of climate information sharing, for example at *kgotla* (community meeting place) or churches.

Without this consideration particular traditional and religious groups of people will not use this climate information, they will not adopt adaptation practices, and they will remain particularly vulnerable to climate change.



Hilary Masundire

