Use of Indigenous Knowledge Systems and Scientific Methods for Climate Forecasting in Southern Zambia and North Western Zimbabwe

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Abstract

The semi-arid areas of Southern Africa receive low and erratic rainfall which varies in both seasons and from year to year resulting in food insecurity. Few of the smallholder farmers have access to seasonal climate forecasts from the meteorological department hence they depend mostly on their indigenous knowledge systems for forecasting seasons which they make use of to develop crop management adaptive strategies. The study shows that farmers have several indicators for weather forecasting and some of these are similar in both Zambia and Zimbabwe. Some of these indicators include; floods or excessive rains in the preceding season, strong winds around October, an extended cold season that goes up to August and sometimes September and abundance or scarcity of certain fruits. The indicators conflict in some seasons and in such cases the farmers resort to using those that they know to have stronger signals from their reliability factors. Positive relationship between indigenous knowledge systems and modern science were observed between the 2008/9 season and 2009/10 which confirms that indigenous knowledge systems, when fully developed could be very helpful in seasonal forecasting. The study recommends the importance of the restoration of the confidence of the indigenous people in their traditional knowledge and skills of weather forecasting.