

MAKING EARLY WARNING SYSTEMS WORK FOR KENYAN FARMERS

Climate change is seen as a great livelihood and ultimately a development challenge, not only in Africa but globally. Africa however faces greater challenges due to both location and capacity constraints to mitigate and adapt to climate change. In Kenya, extreme weather conditions have affected agricultural productivity, which directly affects the livelihoods of farmers. Enhancing early warning systems has been identified as critical in addressing this challenge.

What are early warning systems?

Early warning systems can be broadly defined as the provision of information, predicting an emergency situation and how that information can be used to respond to such a situation to minimise or adapt to its impacts. In the agricultural sector, it refers to the prediction of weather information, which is under the mandate of Kenya Meteorological Services (KMS), circulating this information to users, which in this case are farmers, and preparing them to face the expected extreme weather conditions i.e. drought and floods. The agricultural sector is very important in the Kenyan economy, employing more than 75 percent of the workforce and accounting for around half of the country's Gross Domestic Product (GDP).

Agriculture is affected



Droughts have led farmers to sell off their livestock in a desperate attempt to salvage some income from the dying animals

Agriculture has been affected in areas vulnerable to drought, especially in Turkana that was hardest hit. According to National Drought Management Authority (NDMA), the County received very poor or no rainfall in the first week and proceeding weeks of January 2014. Only Lokichoggio, Lomelo, Kibish and Kerio recorded traces during the month. As a result, there was a reduction in milk production at the household level from 29.01% in December 2013 to 19.68% in January 2014. The livestock sales rate also increased from 0.97% in December 2013 to 1.43% in January 2014, with highest rate of 1.40% in pure pastoral. This indicates a desperate attempt by farmers to salvage some income from the dying animals as a coping mechanism. There is need to strengthen mechanisms for predicting such a scenario

and passing a simplified and well packaged information to farmers.

QUICK FACTS

» Almost on an annual basis by every end of January, many herds of cattle are lost to droughts and farmers are forced to sell off their livestock in a desperate attempt to salvage some income from the dying animals.

» The year 2013 saw rain failure in some parts of the country and these were not expected which subsequently confused farmers on the reliability of weather information.

» Community-based Early Warning System needs to be adapted. This is a "people-centred" approach that empowers individuals and communities facing threats of hazards to act in a bid to mitigate risks.

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Almost on an annual basis by every end of January, many herds of cattle are lost to droughts and farmers are forced to sell off their livestock, which not only deprives them of their livelihoods but also undermines the livestock industry from realising its potential. Livestock traders also take advantage of this to gain more from the low prices, without any direct benefit to consumers in terms of reduced prices for animal products.

The importance of accuracy

Accuracy in weather information dissemination and interpretation is an important component for early warning system. For farmers to effectively use weather information in making farming decisions, they should be confident of its accuracy. For instance, the year 2013 saw rain failure in some parts of the country and these were not expected which subsequently confused farmers on the reliability of weather information.

Downscaling weather information which falls within the mandate of KMS County Directors is important in promoting accuracy. This should go alongside reviving meteorological centres at district levels. The County Directors should also use this as an opportunity to enhance behaviour change among farmers. This is because farmers on a number of occasions ignore the warnings issued especially in regard to expected droughts.

Towards community-based systems

There is need for coherence in early warning system initiatives across the country. There have been a number of efforts at national and local levels by both government and other interest groups to improve early warning systems. It is a good idea for these efforts to be synergized such that responses are coherent in order to maximize the benefits of each initiative.

Stakeholders need to explore modalities of enhancing media engagement in climate change early warning systems. This should go beyond print and electronic media utilisation to include Corporate Social Responsibility (CSR). It needs a well thought and executed arrangement to go beyond emergency assistance to support structures for food production which take into consideration the extreme weather conditions and its response mechanisms.

Community-based Early Warning System needs to be adapted. This is a "people-centred" approach that empowers individuals and communities facing threats of hazards (extreme weather conditions) to act in sufficient time and in an appropriate manner in a bid to reduce the possibility of personal injury, loss of life, damage to property, environment and loss of livelihood. The five features can be summarised as: Involvement of all community members; Special consideration of community needs; Community ownership; Local capacity development; and Effective and efficient community participation. In the execution of community-based early warning system, traditional mechanisms of early warning system need to be

enhanced by improved mechanisms to strengthen capacity for dealing with extreme weather conditions.

As stakeholders intensify efforts to enhance early warning systems, a community-based approach should be at the core of all interventions. This is because it considers traditional knowledge and uses modern methods to improve on these methods. CBEWS is also critical because it promotes participatory approaches in development and it takes into consideration the unique needs of different communities, which is so evident in Kenya in terms of pastoralist communities and crop cultivating communities. The uniqueness goes beyond this to include upstream and low stream communities, areas prone to droughts and those vulnerable to floods. All these require special measures which can only be provided by a community-based approach.

USEFUL RESOURCES



Otieno, G., Mungai, O., Ogalo, V. (2013) **Climate, Food, Trade: Where is the Policy Nexus?**, CUTS International.

For Kenya, besides the already well-documented relationship between climate change and food security, the study provides an intriguing insight into the climate change-trade nexus that had received less attention before.

► <http://bit.ly/14JFyZh>



NDMA Early Warning Bulletins. Drought monthly bulletins by county developed by the National Drought Management Authority. Includes seasonal calendar, environmental indicators (e.g. rains), Condition of Natural Vegetation and Pasture, water availability etc.

► <http://bit.ly/1pSccAm>