water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

Address to the Seminar on Climate Services and Early Warning Systems for Water in Agriculture

Speech by
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As we all know drought occurs when a region receives consistently below average precipitation, that is, below normal rainfall and as such drought has become a permanent feature in South Africa. This is usually interspaced with flooding arguably due to climate variability. Although droughts can persist for several years, even a short, intense drought can cause significant damage and harm the local economy. As a result, South Africa has a long history of drought risk management. This has evolved tremendously during the mid-90s in response to changing focus from reactive to more proactive approaches to drought risk management. Most importantly, it changed as a result of the governments gradual but focused process of transformation in the agricultural sector.

This process started with the development and launch of the Green Paper on Disaster Management 1998, and followed by development, in 1999, of the White Paper on Disaster Management. All stakeholders were given an opportunity to reflect on the [then] approaches to disaster management and risk reduction and to provoke thinking around future strategies that will match with international trends and those

that are more appropriate to current and future needs within the country as well as in the Southern African region.

This paved way for the development and promulgation of the Disaster Management Act (DMA), (Act no 57 of 2002) which made provision for “an integrated and coordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters and post disaster recovery” at various levels of government. One of the key components of the act is that it requires all spheres of government – national, provincial, and local – to develop their disaster management plans. The implementation of the act started in April 2004 for national and provincial spheres and in July 2004 for the municipal spheres of government. As a result of these developments, there has been a growing emphasis on the move from reactive, crisis management approaches to a proactive, risk management approaches.

The Drought Monitoring Desk at South African Weather Services (SAWS) provides information on observed rainfall and long range forecasts for easy access to the public. Seasonal forecasts and daily extreme weather warning are also issued by government based on information from the SAWS. The effectiveness of the drought early warning system depends largely on four key elements, namely:

1) prior-risk knowledge,
2) monitoring and warning service,
3) dissemination and communication, and
4) response capacity.

Some examples of drought early warning systems include the Agricultural Research Council developed system known as *Umlindi* which provides information on drought conditions based on the interpretation of satellite and climate data. The information is used for crop estimation by the National Crop Estimate Committee (NCEC) and is also disseminated through the provincial departments, the National Agro-meteorological Committee (NAC) and subsequently to the farming community.

To improve the uptake of weather and climate products, the Department of Agriculture Forestry and Fisheries is packaging and translating the information into easy understandable messages for the communities. This is usually followed by an assessment of uptake of early warning information (EWI) to evaluate the effectiveness of the information and preparedness of the farming community to utilize and act on it for drought planning.

INFORMATION MANAGEMENT AND COMMUNICATION

The role of communication technology is integral in drought disaster risk management to communicate awareness messages with the vulnerable communities in time. Although application of communication technology has a role in all reduction measures namely, mitigation, preparedness, prevention, response and recovery, some of the application has traditionally been in response and recovery phases.

Various communication systems are available including the Internet, mobile phones, fax, e-mail, radio and television as well as face-to-face visits. There are, however, both social and technical aspects to the application of these communication technologies and the effective application depends on their appropriateness in a social and economic context in which they are applied.

Communication technologies will help establish preparedness for disasters, track approaching hazards, alert authorities and warn those who are likely to be affected and build resilience within communities. Because communication is vital during the whole cycle of disaster risk management, it is important that communication infrastructure in a disaster prone areas is established well.

The drought hazards cannot be altered hence the focus is on improving the coping capacity thus reducing its severity and impacts. If drought occurs and the severity and magnitude is such that communities cannot cope with the effect using their own means and resources furthermore that amongst other factors prevention and mitigation measures were taken into account, a state of disaster is declared in line with the DMA. Declaration of state disasters usually leads to the establishment of disaster assistance schemes.

The post disaster support measures for the farming communities usually address both the short-term (e.g. supply of fodder) and long term (e.g. revitalization of infrastructure for livestock drinking water) development needs. In ensuring applicability as well as sustainability with regard to post disaster interventions, government continuously conduct research to update and review the programmes.

Furthermore, the department promotes the implementation of disaster risk reduction measures such as reduction of livestock to protect and conserve the natural resource base.

In conclusion, South Africa believes that water community should address and focus on policies and measures to:

- Improved field training and capacity building to grow climate-resilient crops to maintain soil productivity and increase food production in drought-affected dry lands.
- Increased emphasis on reducing vulnerability due to the projected adverse impacts on food production and food security particularly in Africa.
- As droughts may become more frequent and severe in nature, more importance should be placed on water-sharing agreements between countries in search for practical options to ensure equal access while avoiding potential water conflicts.
- Strengthening the legislative framework to promote sustainable water resources management and agricultural practices; and institutional capacities for implementation.

- Support the acquisitions, adaptation of and access to appropriate technologies, scientific research, education, data collections, monitoring and capacity building in developing countries.

- Promote participation of local communities, indigenous people and other civil society groups in decision making.
- Support the establishment of disaster management capacities and centres at regional levels, in particular where they do not yet exist as outlined in the African Regional Strategy for Disaster Risk Reduction.

- Support drought monitoring systems and early warning capacities in affected developing countries and regions, particularly in Africa including strengthening regional and international drought monitoring centres and early warning systems, such as the Global Climate Change Observation System (GCOS), and support the establishment of Regional, Remote Sensing Units (RRSU).
- Enhance South-South sustainable development co-operation with co-benefits that are directed at combating drought.
- Encourage the 'Index-based weather insurance' as an emerging innovative market scheme for managing risks associated with drought.
- Development partners to provided new, additional and adequate financial resources, technical and human capacities to developing countries to enable implementation of programmes and projects on drought risk management.

I thank you.