

POTENTIAL USE OF SPACE TECHNOLOGY FOR DISASTER MANAGEMENT IN THE GREATER HORN OF AFRICA.

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1. Introduction

Over 70% of natural disasters in the GHA are related to extreme climate events such as floods, droughts etc. Extreme climate events in the GHA are often associated with very severe socio-economic impacts that include lack of food, water, energy and many other basic needs. Such impacts often retard socio-economic growth of the region.

Monitoring, prediction and timely early warning of extreme climate events is one of the best strategies for mitigating the negative impacts of such events and also for taking advantage of the good years. The potential to derive maximum benefit from climate information, products and services can be enhanced considerably through their practical application to problems related to public health, agriculture, natural resources management and disaster management for sustainable socio-economic development.

The current high degree of vulnerability of the regional systems to climate extremes is expected to recur in the future thus adequate measures should be undertaken to address the associated challenges.

DMCN ACTIVITIES

The main mission of the current DMCN is timely climate Information and prediction services and enhanced **Applications of** such products in order to reduce climate and weather related risks to food security, water resources and health for sustainable development in the Greater Horn of Africa". Present DMCN has ten members in the eastern Africa.

The severe impacts associated with extreme climate events can be reduced through good understanding enhanced monitoring particularly, early warning, and effective and timely disseminated early warnings. Scientific expertise (value judgments included) is necessary to Identify and monitor specific hazards, while a combination of regulatory advice (political) and scientific judgment is required to evaluate the risks to weight up the ramifications of setting particular standards for different interest groups and hence to set guidelines for actual regulation, including enforcement and persecution (Wilhite, 2000).

The best strategies to minimize negative impacts associated with the climate extremes are enhanced monitoring and timely availability of weather and climate information and prediction products, together with the availability of effective disaster preparedness policies.

In the sub-region, application of remotely sensed data in disaster management is relatively new. However the potential for such data and its associated products is quite high. Early warning Institutions such as the DMCN are faced with challenges to demonstrate the usefulness and full capabilities of factoring remotely sensed data not only in disaster management but in other socio-economic activities as well.

There has been a significant increase in demand for satellite data in some Institutions in the GHA sub-region. However, data and products derived from space in all sectors of the regional economies has, not been fully addressed. This is mainly because the value of the satellite data and products is yet to be appreciated by many. It is a new science and there are limitations regarding the reception and processing of the data. The problem becomes more compounded due to lack of repackaging of the satellite derived products for specific sectoral users.

Some of the natural hazards that could easily translates into disasters in the sub-region include:

- Drought
- Floods
- Lightning
- Sand-storms
- Fire Risks
- Tropical cyclones

Use of space data and products has enabled DMCN to forewarn decision-makers and other target groups on potential occurrence of the hazards well in advance.

- However much more is needed particularly to develop both human and equipment capacity in the sub-region. DMCN is facing to these challenges through enhanced capacity building not only to the regional climate scientists but also in disaster management Institutions in the sub-region among other sectoral users.

Together with other partners, DMCN is developing capacity for the region to cope with the enormous data from the Meteosat Second Generation satellites which have enhanced the capabilities in space observations.