

Activities at ICPAC on Disaster Risk Reduction within the GHA Sub-region



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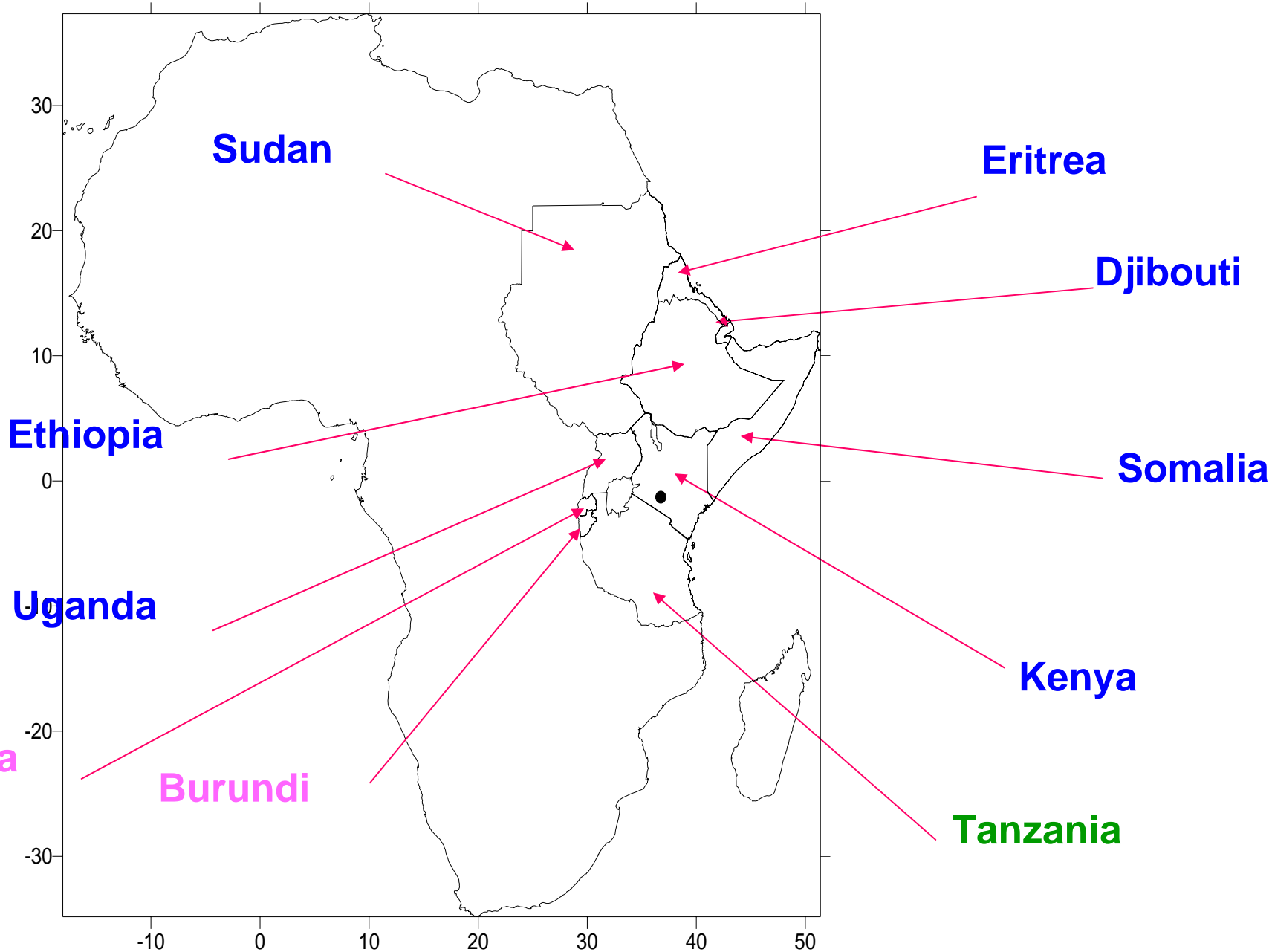
Introduction

- **Extreme climate events** are very common within the IGAD sub-region and whenever they occur, they are associated with loss of life and property, destruction of infrastructure resulting in large losses to the economy and sometimes retarding national economic growth backwards by several years.
- **Climate monitoring, prediction and timely early warning** of such extreme climate events is one of the best **strategies** for mitigating the negative impacts resulting from these events.
- **Climate information** can also be used to improve crucial decisions required in all the components of an integrated disaster management, namely early warning, prevention, mitigation, preparedness, relief and rescue, rehabilitation and reconstruction.

ICPAC'S Strategy

- **To contribute to climate monitoring and provide timely climate information and prediction services for early warning and mitigation of the adverse impacts of extreme climate events on various socio-economic sectors in the region. The early warning products enable users to put mechanisms in place for coping with extreme climate and weather related risks for sustainable development in the Greater Horn of Africa (GHA).**

ICPAC PARTICIPATING COUNTRIES IN THE GHA



ICPAC's CORE PROGRAMMES



- **Data Processing, Computing and Climatology**
- **Climate Monitoring and diagnostic– Near real time**
- **Climate Prediction and Early Warning**
- **Climate Applications**
- **Capacity building training and research**
- **Climate Outlook Forums for enhanced interactions between climate experts and sectoral users of climate Information and Prediction services (End-Users)**

Operational activities



- ✓ **Development and archiving of regional and national quality controlled databanks**
- ✓ **Data processing including development of basic climatological statistics**
- ✓ **Timely acquisition of near real time climate and remotely sensed data**
- ✓ **Monitoring space-time evolutions of weather and climate extremes over the region**
- ✓ **Generation of Climate Prediction and Early warning products**
- ✓ **Delineation of risk zones of the extreme climate events**
- ✓ **Networking with the NMHSs and regional and international Centres for data and information exchange**
- ✓ **Timely dissemination of early warning products**
- ✓ **Public awareness and education of sectoral users of meteorological products**
- ✓ **Development of sector specific climate information and prediction products**
- ✓ **Interactions with users through regional and national users workshops and pilot application projects, etc**
- ✓ **Climate change monitoring, detection and attribution**
- ✓ **Assessment of the impacts and vulnerability associated with climate extremes**
- ✓ **Research in climate and related fields**

ICPAC's Products



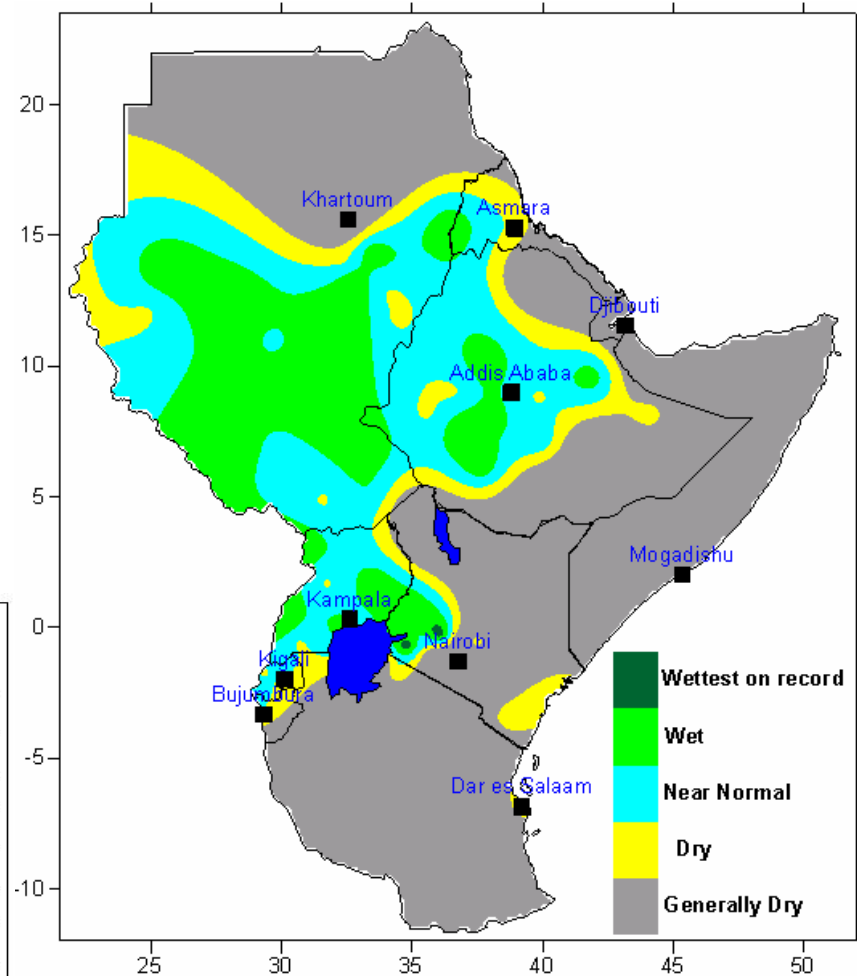
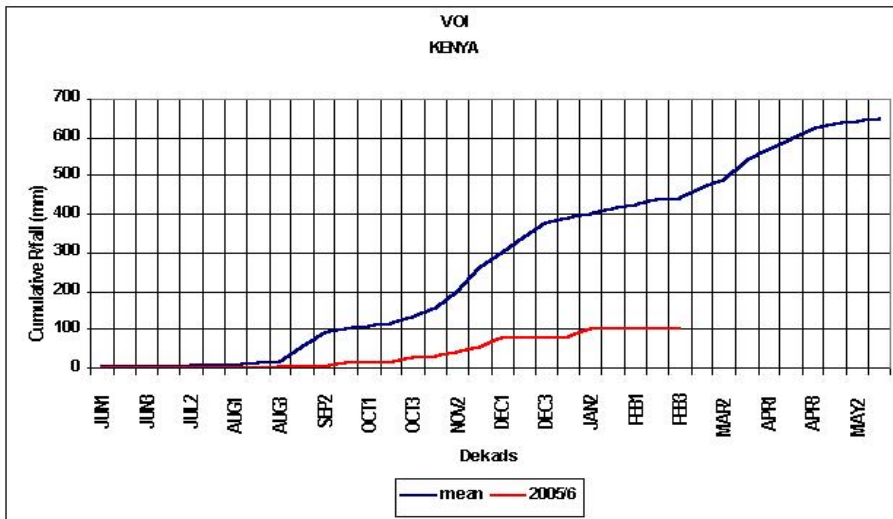
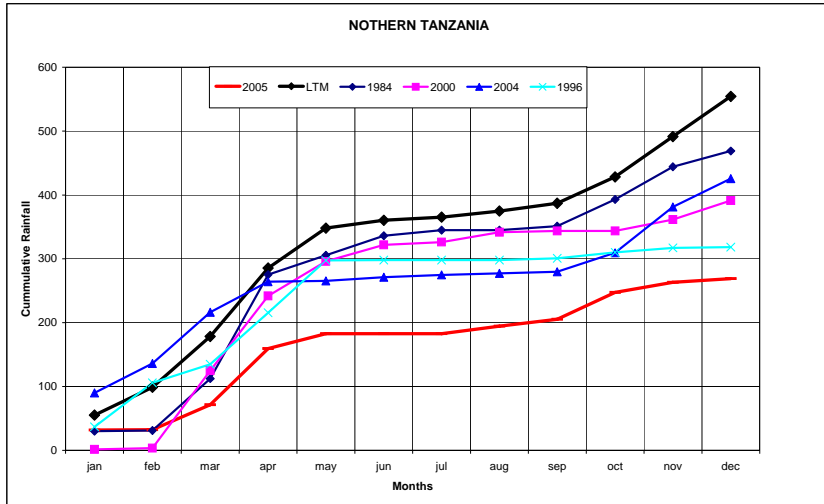
DEKADAL PRODUCTS

- RAINFALL DISTRIBUTION
- DROUGHT SEVERITY
- AGROMETEOROLOGICAL CONDITIONS
- GENERAL IMPACTS
- WEATHER OUTLOOK
- CUMULATIVE TIME SERIES GRAPHS

MONTHLY AND SEASONAL PRODUCTS

- CLIMATOLOGICAL SUMMARIES
- DROUGHT SEVERITY
- AGROMETEOROLOGICAL CONDITIONS
- DOMINANT SYNOPTIC SYSTEMS
- CLIMATE OUTLOOK.
- GENERAL IMPACTS
- PRE - SEASON CONSENSUS OUTLOOKS
- CUMULATIVE GRAPHS
- CLIMATE WATCH – Provides an update regarding the current and projected state of extreme climate events and their potential impacts

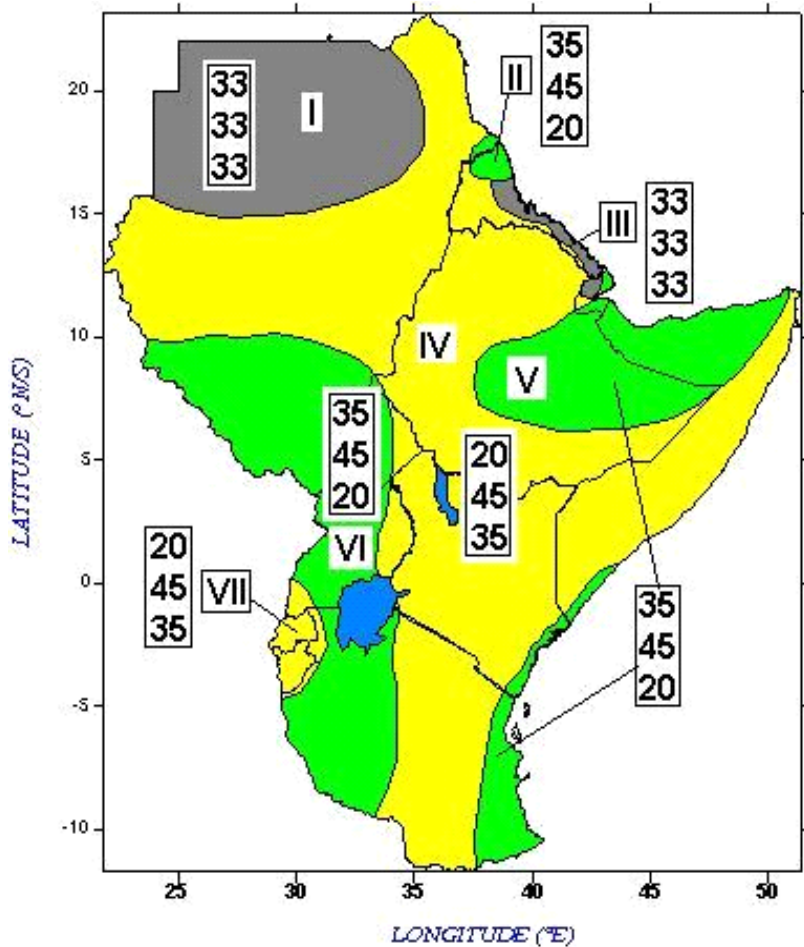
Examples of products



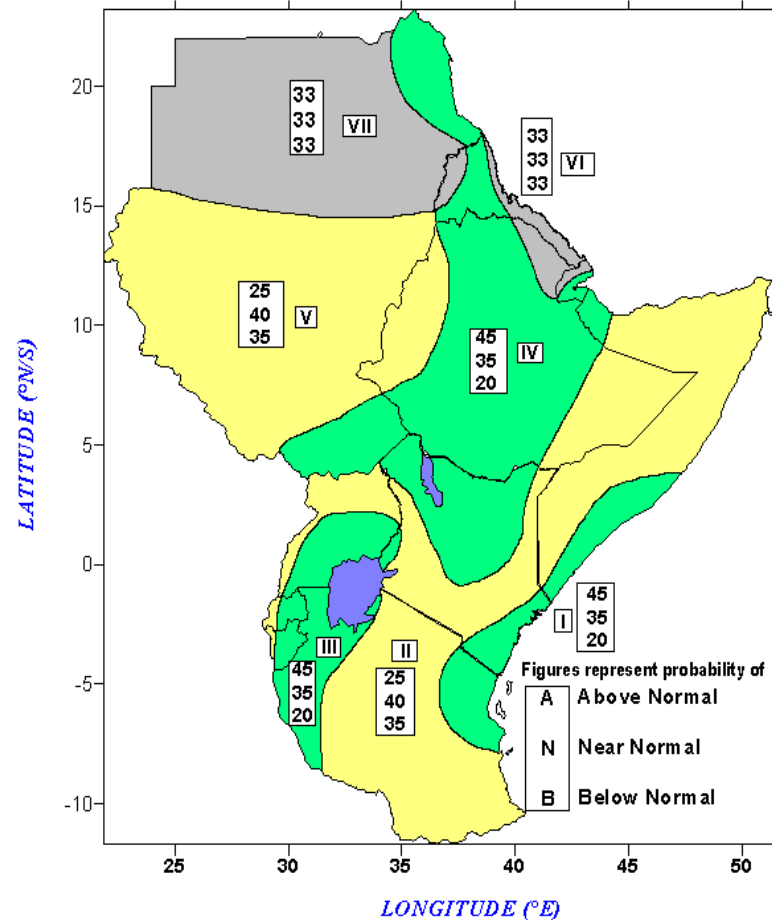
Drought Severity Index for Dekad 26 (11-20 September) 2005

Regional Stress Monitoring and Risk/ Vulnerability Zoning And Mapping

CLIMATE OUTLOOK FORUMS (COFs) PRODUCTS



Consensus Climate Outlook for March –May 2006



Consensus Climate Outlook for -
Sept – Dec 2006

Figures represent probability of

A	Above Normal
N	Near Normal
B	Below Normal

ICPAC's CONTRIBUTION TO DRR

- **Development of climate data / information base required for risk mapping and assessment**
- **Development of the specific products required by disaster management institutions**
- **Develop framework for timely availability and dissemination of climate information and prediction / early warning products required by specific sectors, stakeholders and the public.**
- **Multi disciplinary capacity building of the relevant national and regional public institutions in partnership with relevant disaster management institutions.**
- **Support the integration of climate information and products in the national / regional disaster risk reduction initiatives and policies.**

CONTRIBUTION Cont..

- **Enhance regional / national capacity in Risk / vulnerability zoning and assessments.**
- **Raise awareness on how to cope with climate related risks.**
- **Education and awareness on how to live with climate related risks.**
- **Develop and implement new training programmes / curriculum on various aspects of disaster management.**
- **Sensitise and work with other partners to demonstrate the use of Indigenous knowledge (IK) in disaster management practices in the region (Pilot project being done in Kenya).**
- **Collaborations with all relevant national, regional and international bodies working on various environmental and disaster risk reduction challenges**

Pilot Application Projects (PAPs):

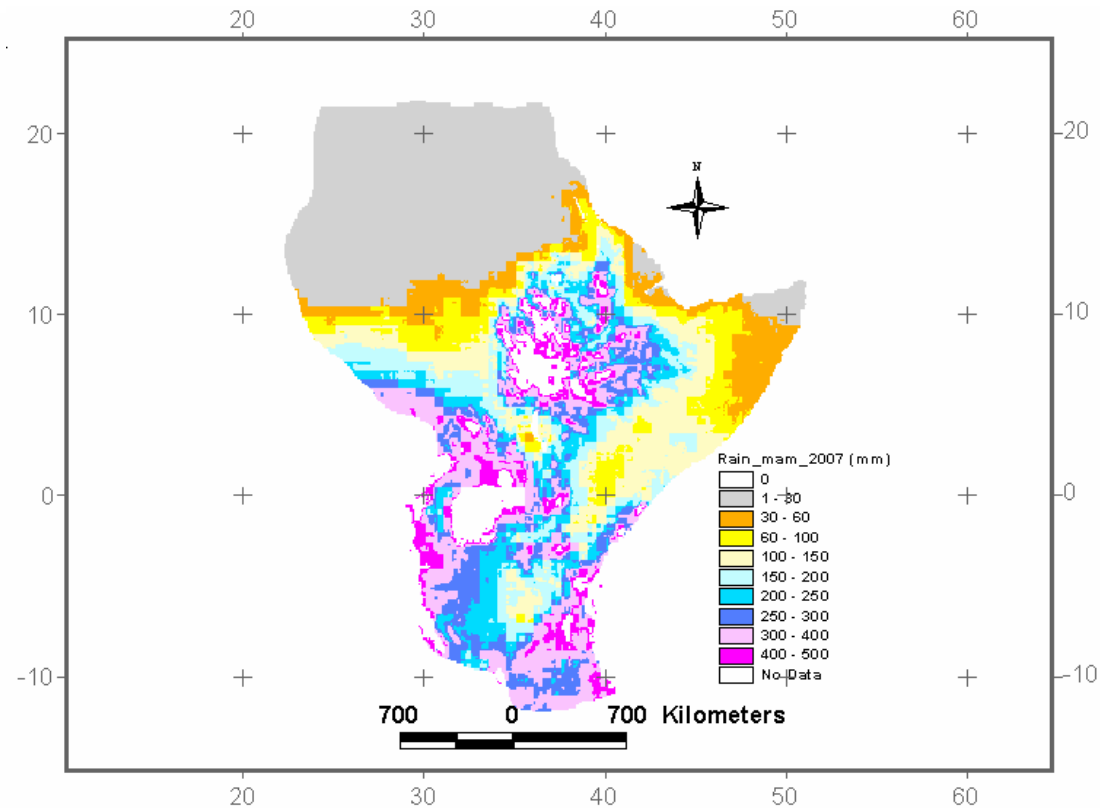
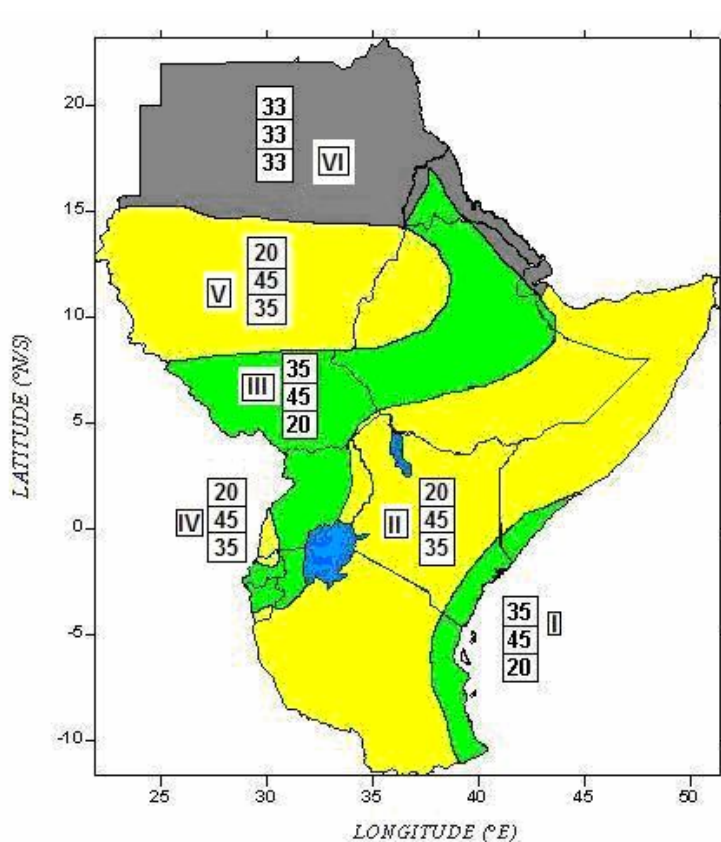
- A number of pilot application projects have been successful completed and documented at ICPAC. These PAPs broadly cover the following areas:
- *Assessing and communicating examples of successful use of seasonal climate prediction products while describing how the products have influenced sectoral decision-making process by specific users.*
- *Assessing and communicating examples of impediments to successful use of seasonal climate prediction products.*
- *Development of new methodologies for better production, dissemination, interpretation, use, and evaluation of climate information and seasonal prediction products in the mitigation of extreme climate events such as floods, droughts and frosts among others.*
- *Developing tailor made prediction tools that enables decision-makers to take advantage of seasonal climate forecast information (Hydropower sector).*

- Downscaling regional climate outlook for applications in ***Agriculture and food security***
- Downscaling climate outlook for ***water resources and hydropower management***
- Downscaling regional climate outlook for applications in the ***Livestock sector***
- Downscaling regional climate outlook for applications in the ***Health sector***
- Downscaling regional climate outlook for applications in ***Disaster management***
- Education and awareness creation for the ***Media sector***
- Awareness workshop for ***Gender and Youth***

WATER RESOURCES APPLICATIONS- USGS / FEWS NET

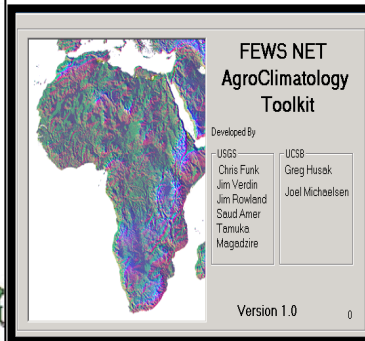
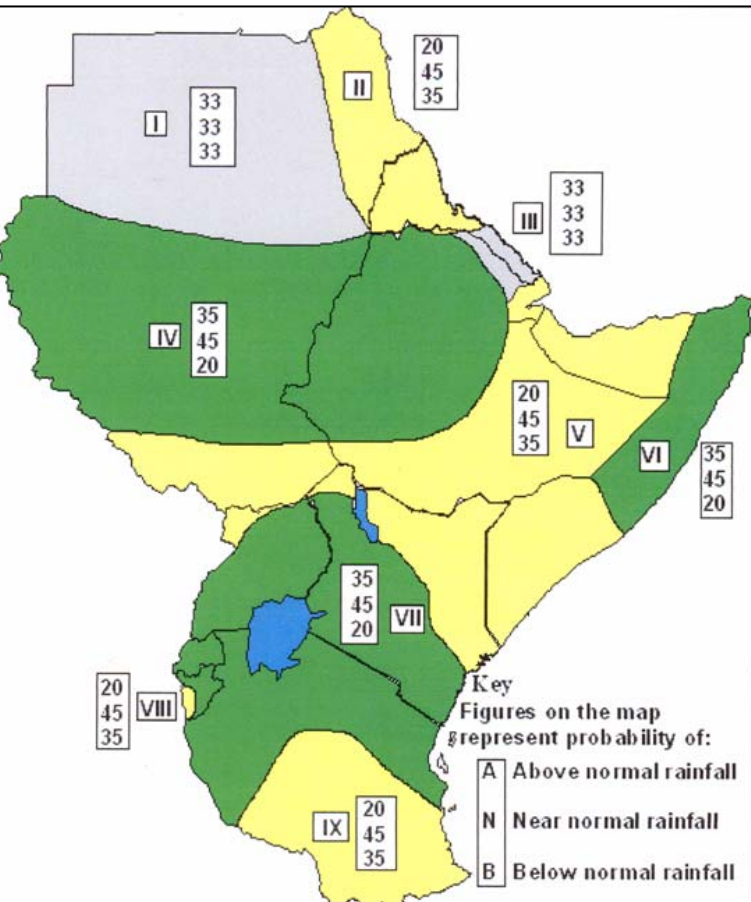


Translation of Seasonal Forecast into Potential Rainfall amounts using FACT/FIT Tool

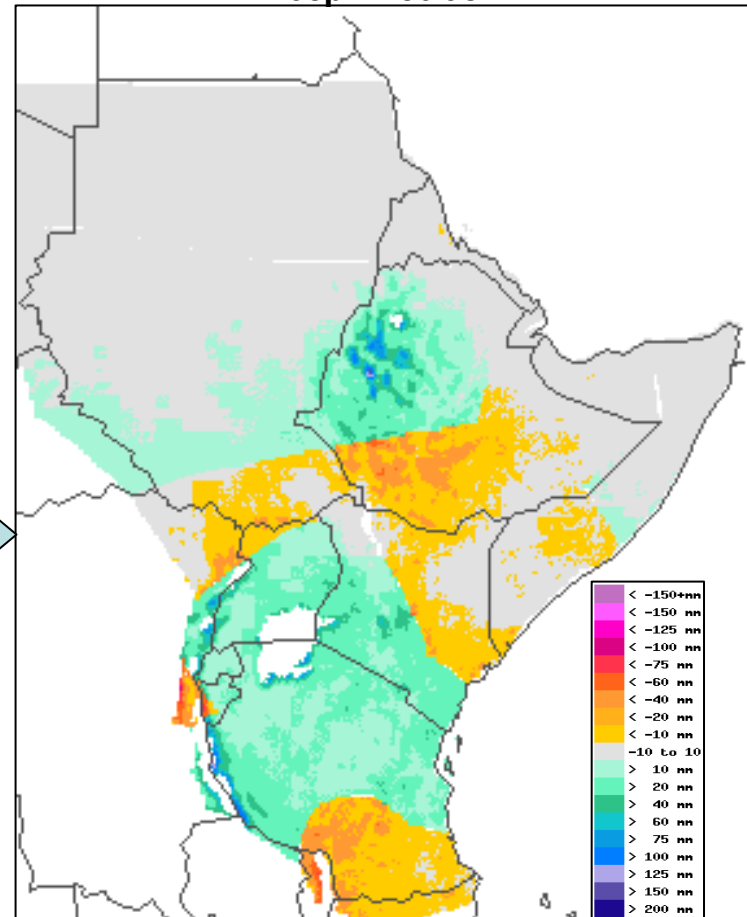


FACT/FIT: Seasonal Forecast Interpretation into Rainfall Anomalies (Risk Maps)

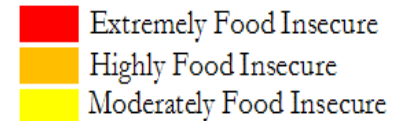
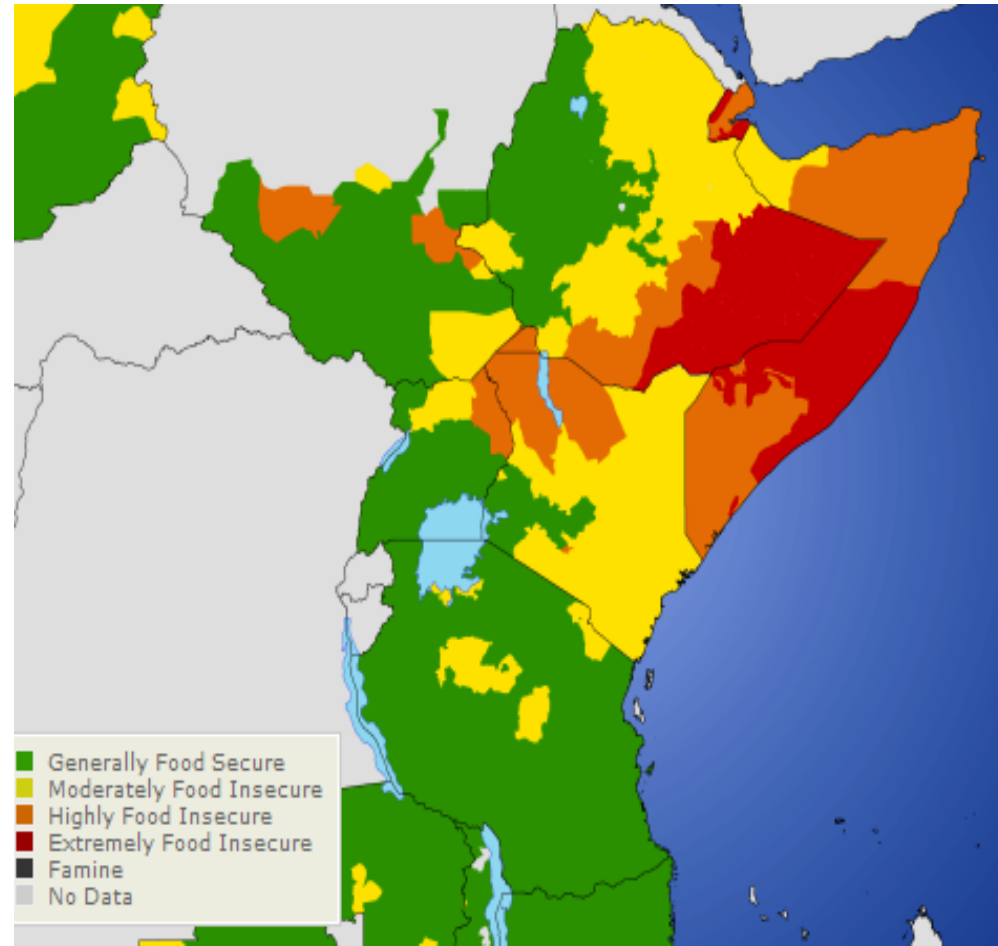
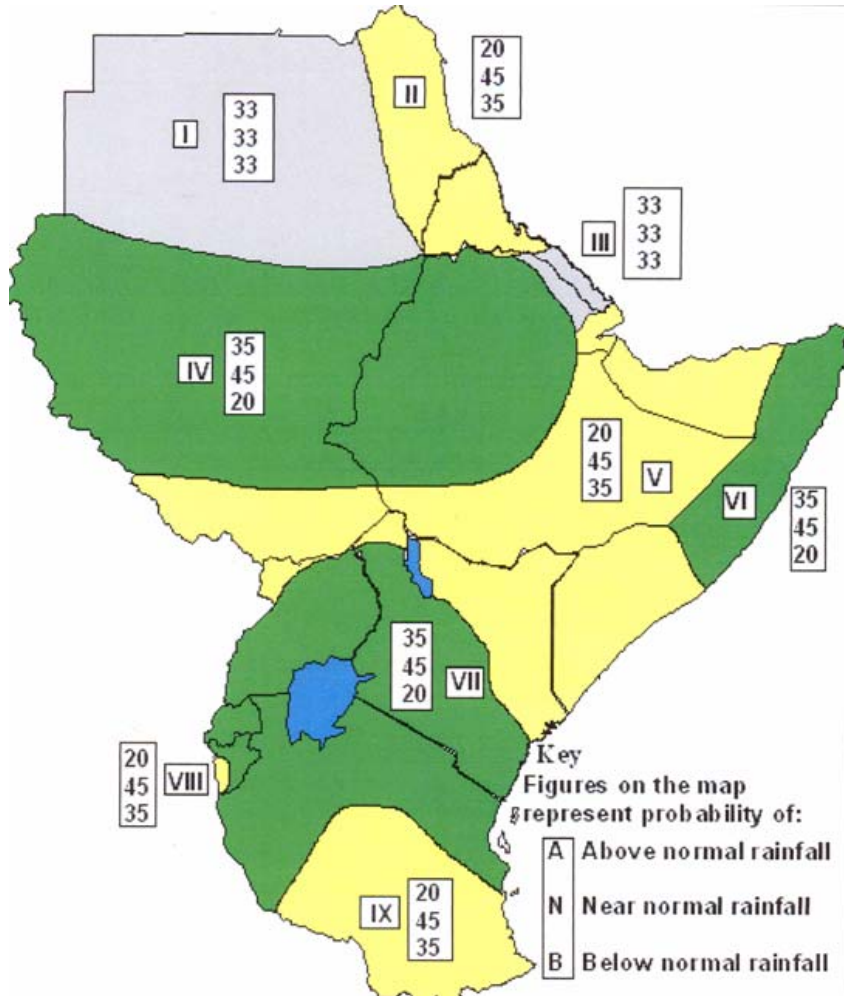
ICPAC SOND forecast



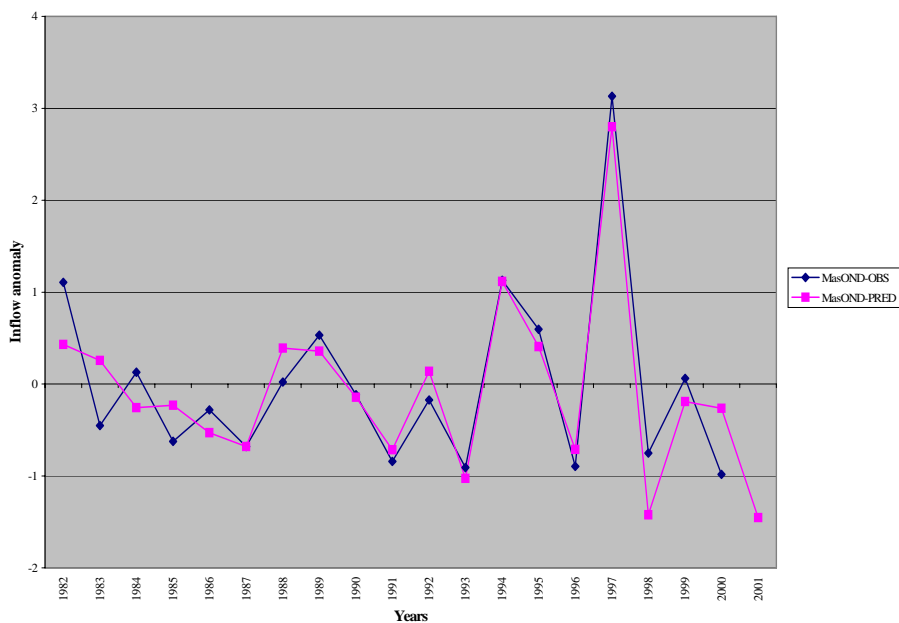
Most-likely Rainfall Anomalies Scenario:
Sept -Dec.08



Sept – Dec 2008 Climate and Food Security Outlook



Development of Inflow Predictions into Masinga Dam



KAJIADO SOUTH - MAASAI COMMUNITY



Water stress due to poor rainfall performance



A lady herding her animals



Wells used as watering points during dry periods



Pupils go through interpreted vernacular forecast



Sensitization of women on use of forecasts



Community and stakeholders after interpretation of seasonal forecast

WESTERN KENYA - LUHYA COMMUNITY



Local Community taking climate experts through the use of indigenous method of forecast



Introduction to varieties of indigenous trees



Interaction between local community and Stakeholders



Forecast interpretation to the local community



Community being taken through the forecast



Climate experts, stakeholders and the Ngunyi community after seasonal forecast interpretations

**REPUBLIC OF KENYA
MINISTRY OF TRANSPORT
ICPAC CLIMATE PREDICTION AND APPLICATIONS CENTRE**

FORECAST AS GIVEN IN ENGLISH

... (Detailed text of the English forecast) ...

**REPUBLIC OF KENYA
MINISTRY OF TRANSPORT
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FORECAST TRANSLATED INTO LOCAL MAASAI LANGUAGE

... (Detailed text of the forecast translated into Maasai) ...

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FORECAST TRANSLATED INTO LOCAL LUHYA LANGUAGE

... (Detailed text of the forecast translated into Luyha) ...

**DISSEMINATION
CLIMATE
INFORMATION
To rural
Community**

CONCLUSIONS

- **Weather/Climate monitoring and prediction is one of the best strategies for mitigating the negative impacts of weather/climate related disasters.**
- **ICPAC plays an important role in providing the IGAD subregion with weather and climate advisories and more importantly, timely early warnings on extreme climate events.**

END

THANK YOU