Horn of Africa Drought and Famine Crisis: Climate Science Influencing Regional Policy

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Economic Commission for Africa

African Union Commission

African Development Bank

ClimDev-Africa

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Theme:
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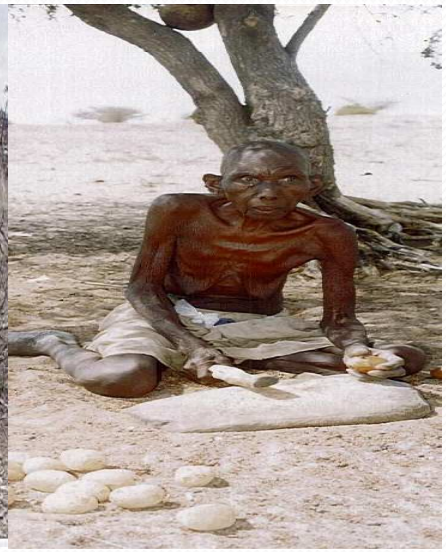
Plate: Climatic Disasters in Kenya. Drought impacts 2008 -2009 and 1999-2000.

For semi-nomadic pastoralists in N. Kenya solution is to move animals towards Mt. Kenya: Hundreds of die before reaching there, others just on the mountain area weakened by long treks, few may survive and life is hard. Rainfall failure from 2007- late 2009 had many catastrophic impacts in all sectors of life and economic in Kenya.



1998-2000 drought in Kenya was very devastating, affected even highlands. Ripple effects: Wide spread food shortages and water, death animals and ...; industries shut down due to lack of hydroelectric power, environmental degradation & worsened poverty levels among semi-arid communities..

Lives have been lost and many are years when humanitarian intervention is the only means of pulling through hard times…In Kenya government has created a special programs ministry that deals with these problems but the largest intervention is by non- governmental organizations for humanitarian activities (e.g. Red Cross) and others….

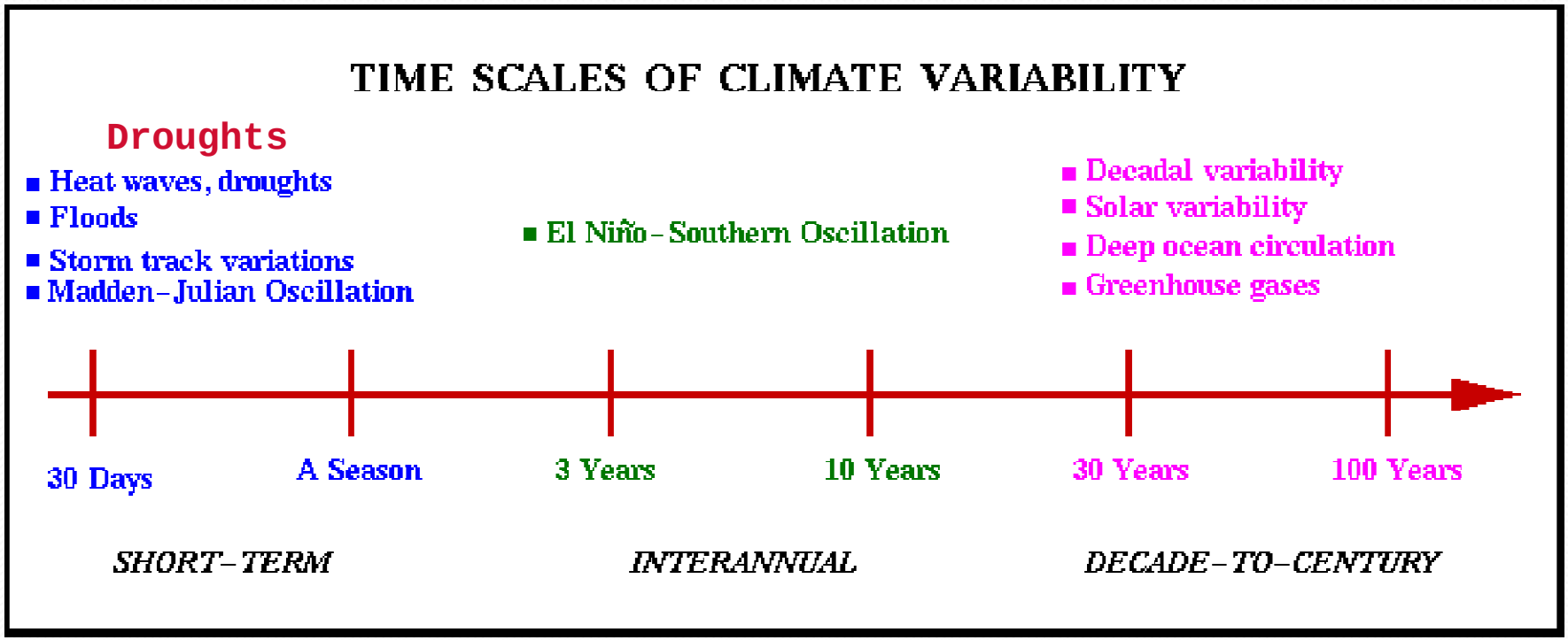
WHAT ARE POLICY ISSUES TO ADVANCE KNOWLEDGE & SUSTAINABILITY PRACTICES LEARNING THESE KIND OF DROUGHT IMPACTS

- Does it make sense to keep 1000s cattle when FCST indicated drought when in advance (3~9 months), but somebody/ authority has to enforce this kind of action, or better still buy the animals for slaughter and/or transport them to other markets. Drought in perspective of semi-nomadic and agro-pastoralist communities in many parts of Africa especially GHA. PASTORALISTs DROUGHT IS?
- Somebody has to advocate faster growing, less water demanding crops: Surely millet and sorghum would be bumper harvest when maize is failing totally because soil moisture could not last enough!: AGRICULTURAL DROUGHT IS?
- METEOROLOGICAL DROUGHT: Is weather and overall climate cycle "business as usual normal or there is possibility of unusual conditions?". Out of plausible evolutionary scenario, which is most likely to prevail for next 10dys, 1-month and 3~4 months, hence seasonal outlook?. This has implication on NATIONAL GROSS DOMESTIC PRODUCT and INFLATION RATE IF YOUR ECONOMIC BACK BORN IS RAIN-FED AGRICULTURE and WATER RESOURCES. THIS IS CRITICAL FOR NATIONAL and REGIONAL WELFARE!.

Drought: Definition may be sector specific.

- But Rainfall or Precipitation Deficit is Common factor
  - **" A persistent below normal rainfall/ or deficiency with adverse impacts rainfall dependend socio-economic activities / sectors including agriculture, water resources, on vegetation, people, animals, and enviroment…"**
  - Key components: Persistent water deficiency + adverse impacts
- Drought types:
  - Meteorology: **rainfall deficits**
  - Agriculture: Topsoil moisture deficits, agriculture impacts
  - Hydrology: Surface or subsurface water supply shortage
- Typical evolution:
  - Onset of drought:
    - Meteorology → Agriculture → Hydrology
  - Recovery:
    - Meteorology → Agriculture → Hydrology

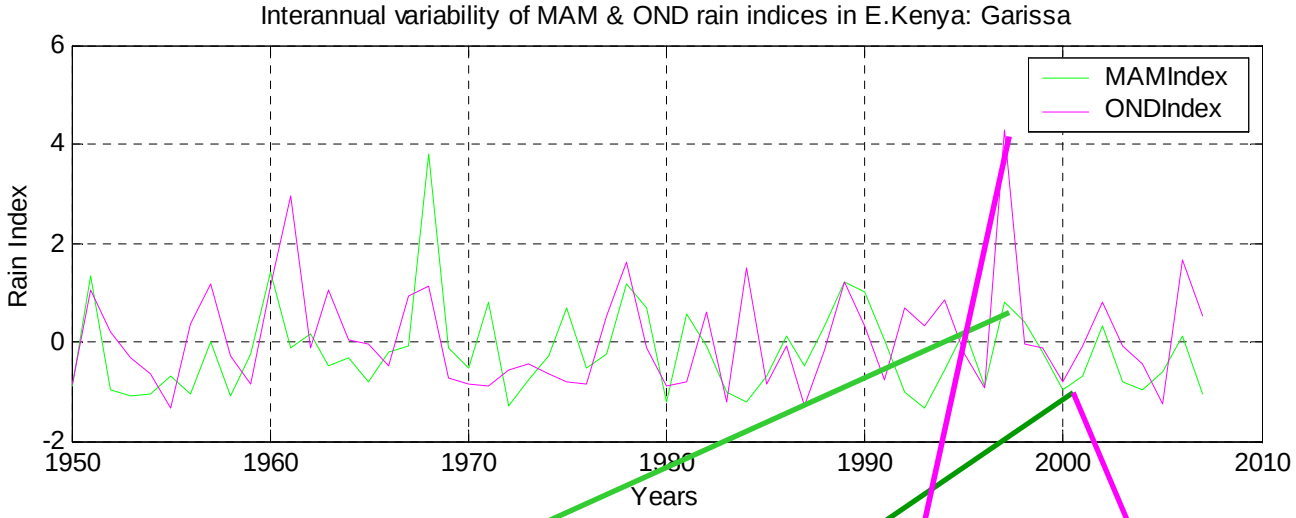
Drought Time Scales….

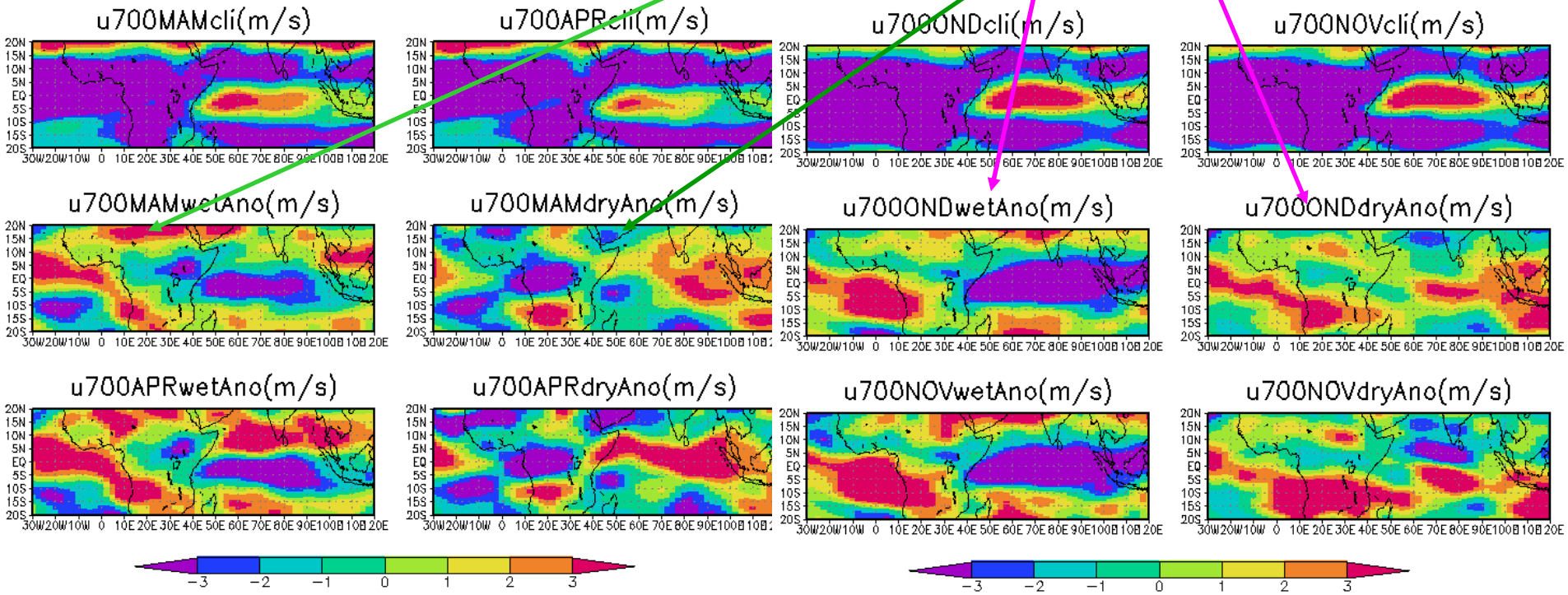


Time scales range from short-term “flash droughts” that can have major agricultural impacts to multi-year and decadal droughts (980s, 1990s, etc.) Paleoclimate evidence suggests that in the last 1000 years parts of the world have experienced “mega-droughts” that persisted for decades.

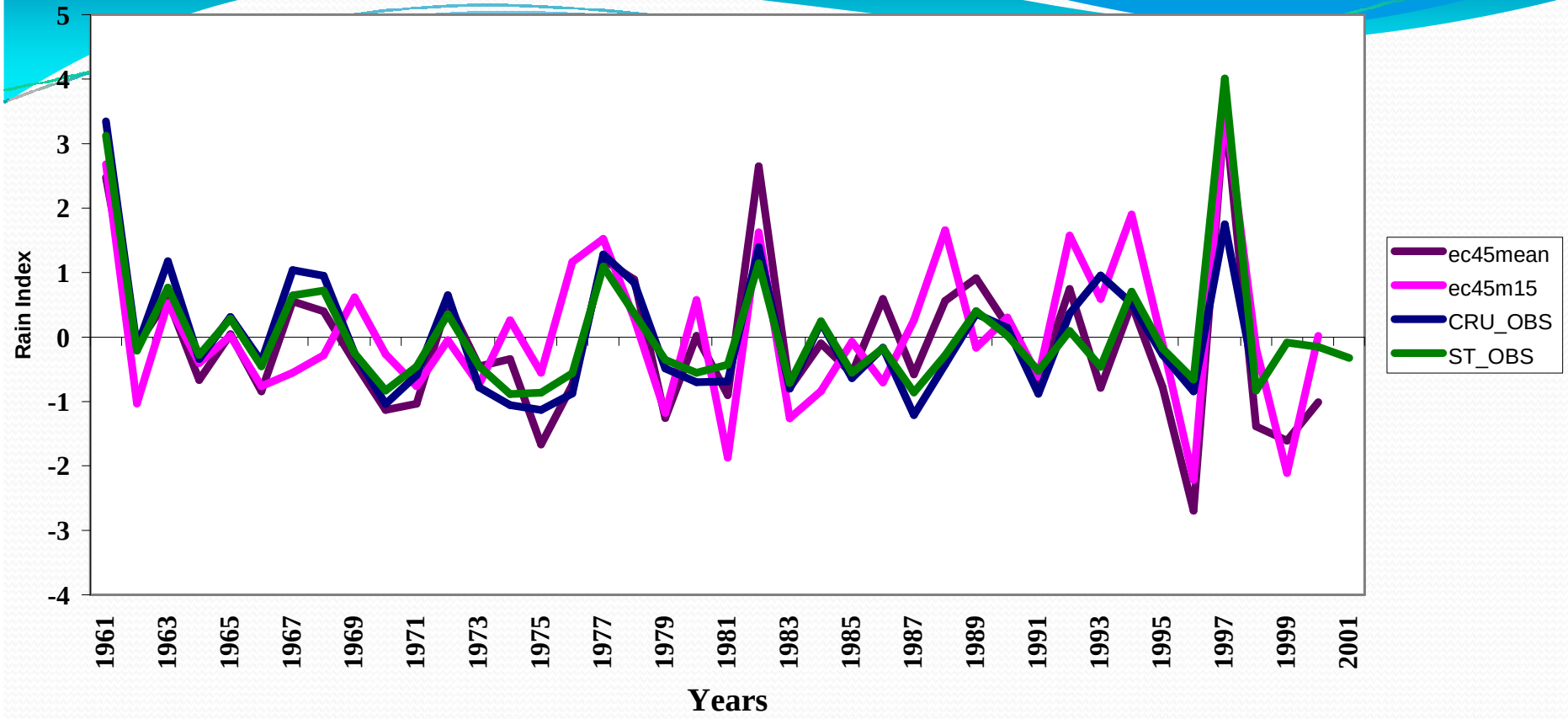
SAMPLE RESULTS FOR TROPICAL EAST AFRICA PRECIP. CPC/AFRICA DESK

Diagnosis & physical basis for quality climate forecasts for GHA\ Greater East Africa





Sample FCST over GHA, Oct-Dec seasonRecent advances in fcst do much better than this

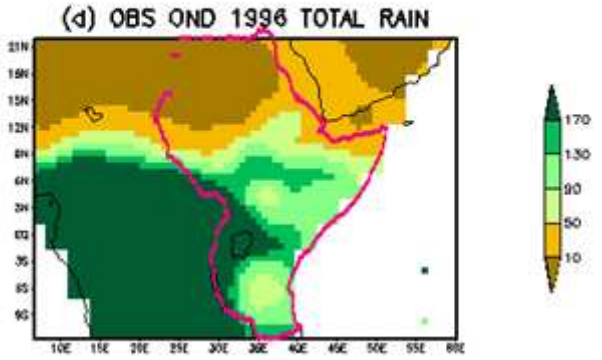


The Interannual variability of October to December Rainfall over Eastern Africa for season: OND: Simulated verses observed.

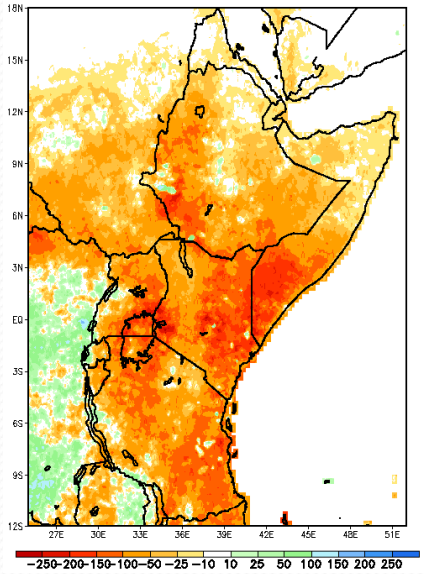
Corr_station_obs_and_echam_ensemble mean ➔0.86
Corr_station_obs_and_echam_member15 ➔0.69
Corr_cru_obs_and_echam45_ensemble mean ➔0.81
Corr_station_obs_and_cru_obs ➔ 0.88

DROUGHT IS REGIONAL……Rainfall deficiency is major strigger…

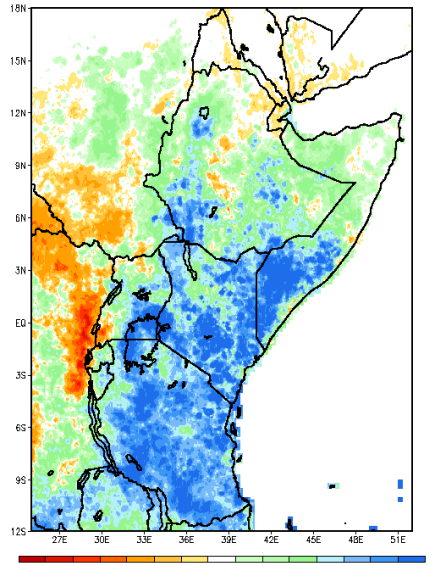
Region is regional: This is sample Obs For one event using global & regional scale data sets

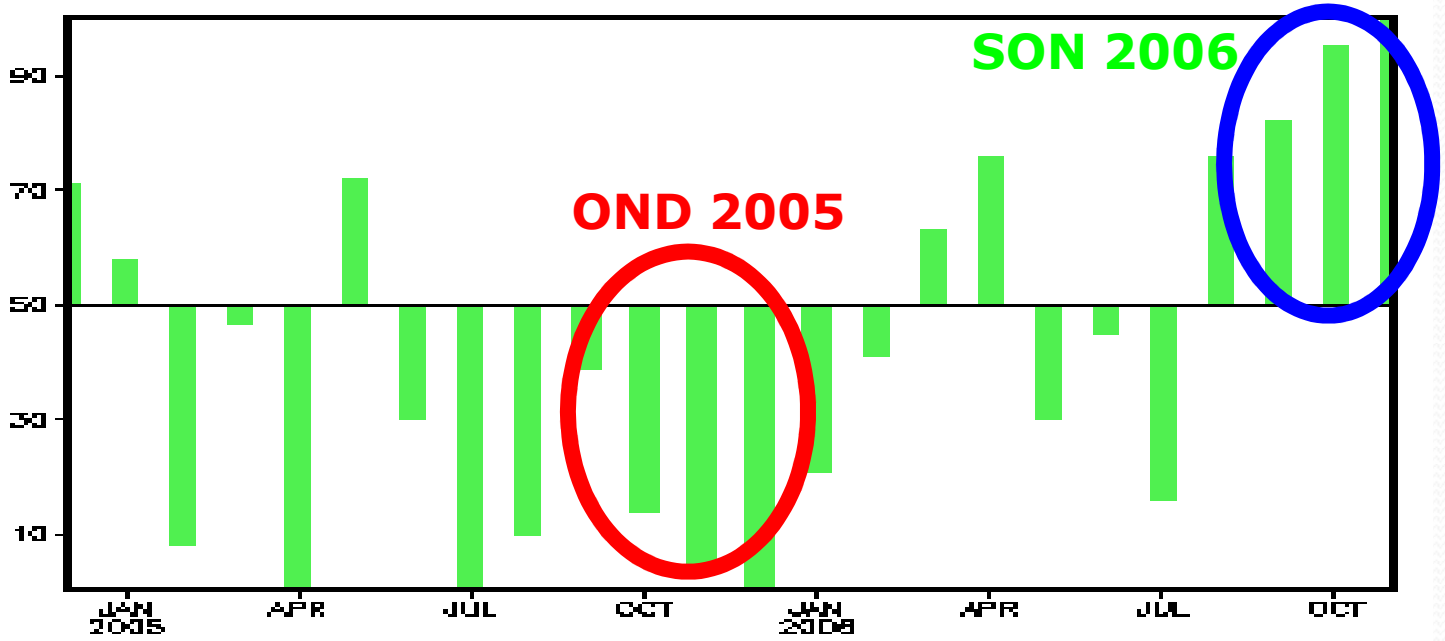


OND 2005

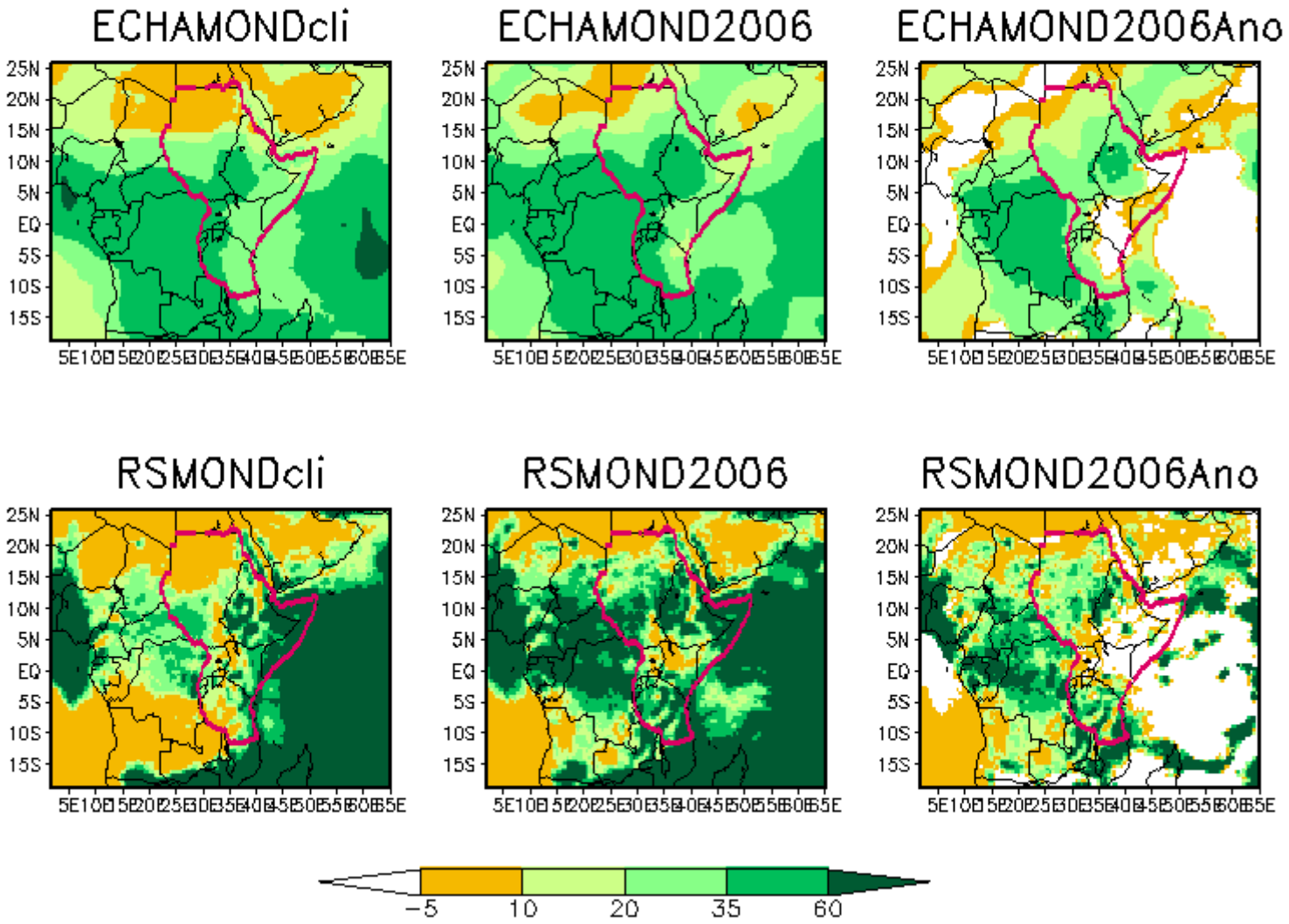


OND 2006





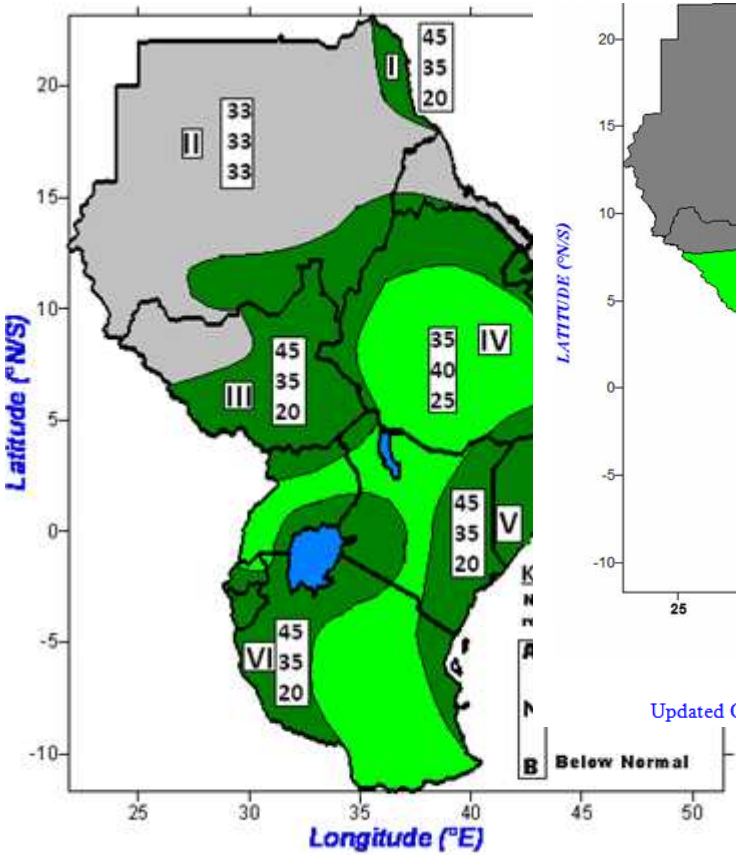
FCST_OND2006: GLOBAL MODEL & REGIONAL MODEL RAINFALL (mm)

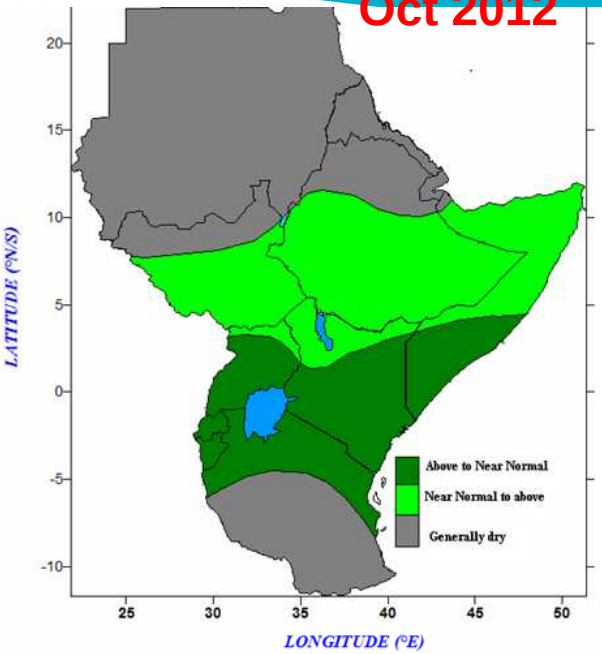


GHACOF32 outlook

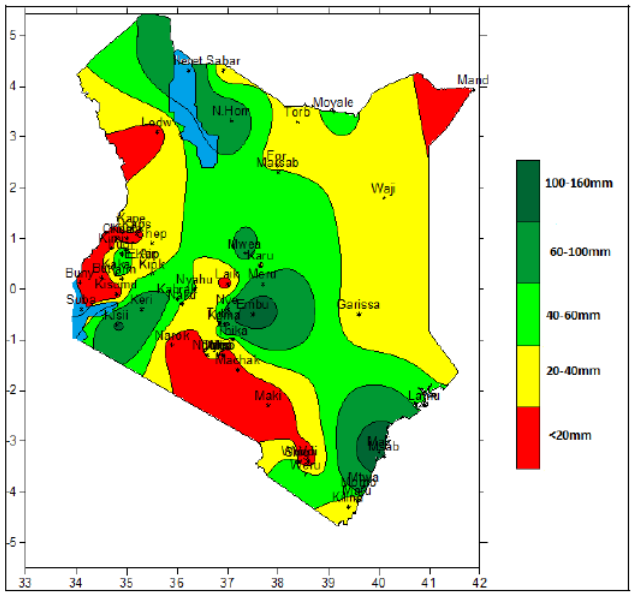
Most Recent draft update Oct 2012

Monitoring..Country wise…

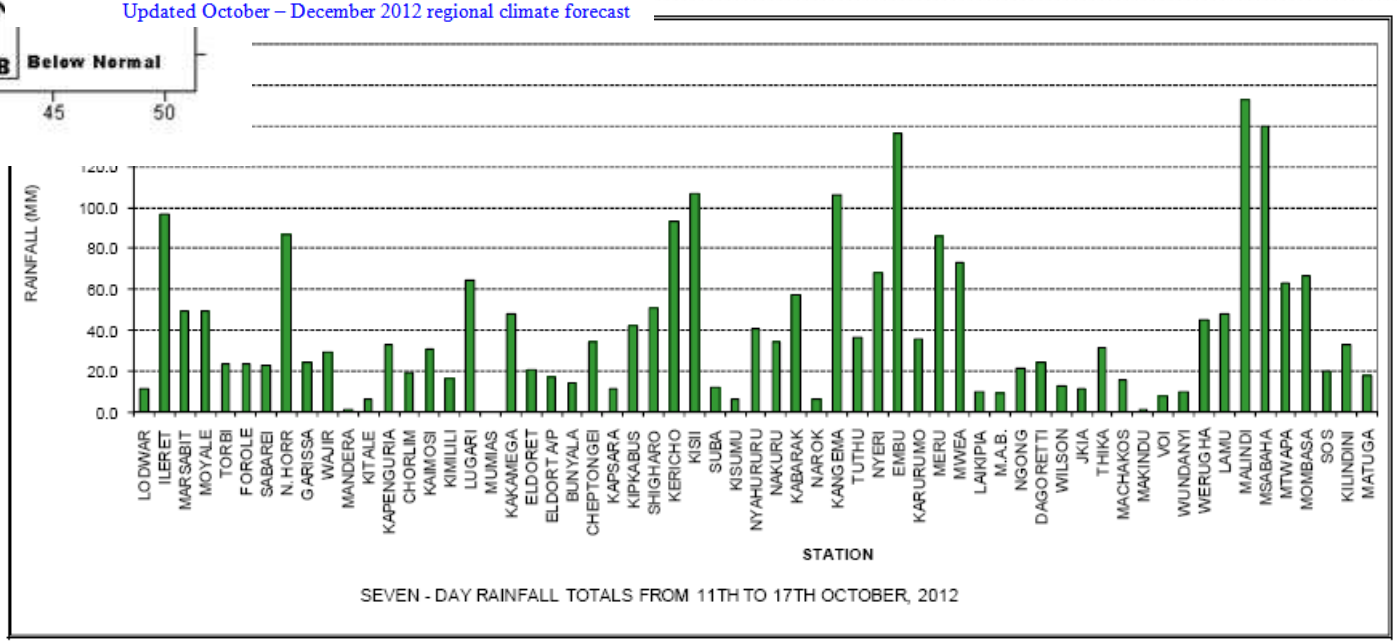




Updated October – December 2012 regional climate forecast



Spatial rainfall distribution during the Seven-day period (11th to 17th Oct, 2012)



ISSUES UNDERLYING DROUGHTS RESILIENCE FOR POLICY FOR BEST PRACTICES

When, where, how long, how much, when again?

Impacts associated droughts are usually devastating to the affected regions and areas:
These are alone mean that Regions and Nations should devote attention to the development and implementation of regional and national strategies/policies to reduce the economic, social, and environmental consequences of droughts. An essential component of this strategy is a state of the art drought monitoring, analysis and forecasting infrastructure/ facility that monitors (and evaluate drought severity and indicators routinely integrating rainfall with other climatic parameters, hydrological and environmental productivity into a comprehensive information product on current status, and future drought scenario with implications on various sectors) and provide early warning of drought including onset and end, determine its severity, and deliver that information to a various socio-economic users/ clientele in many climate/ rainfall sensitive sectors well in advance. With this information, the impacts of drought can be reduced and this can lead to ending of drought emergencies as envisioned in the joint Declaration by the IGAD and East Africa Heads of States and Governments regional policy.

Extracts from IGAD/EA Declaration/Policy on Ending Drought Emergencies in the GHA

The summit on the Horn of Africa crisis:

Ending drought emergencies:

A Commitment to Sustainable Solutions

8th-9th September 2011

NAIROBI KENYA

We the Heads of States and Government of the **East African Community(EAC)** and **the Inter-Governmental Authority on Development(IGAD)** and **The Republic of South Sudan**, meeting in Nairobi, Kenya on 9th September 2011, at the Summit on the Horn of Africa Crisis;

ACKNOWLEDGING THAT the failure to address desertification, land degradation and drought will hinder developing States from attaining the Millenium Development Goals;

AFFIRMING OUR COMMITMENT to attaining a legally binding mechanism as a way of mitigating the effects of climate change;

FURTHER RECOGNIZING the challenges facing the affected populations, including the delivery of immediate drought emergency needs, as well as medium and long-term sustainable solutions;

ACKNOWLEDGING the importance of pooling resources together as a region in concert with our development partners in order to develop long-term sustainable solutions to end the drought and famine emergencies;

CONVINCED that a pro-active and holistic approach to drought and famine management is critical in preventing the recurrence of drought related disasters;

DO HEREBY SOLEMNLY DECLARE THAT WE:

i. **TAKE NOTE** that the Nairobi Action Plan shall compliment and support medium and long-term efforts being undertaken by IGAD to mitigate the effects of drought in conjunction with the African Development Bank Group, in the up coming meeting on 14th-15th September 2011, in Djibouti;

ii. **IMPLORE DEVELOPED** countries to honour their commitments to the Climate Finances as set out in the UNFCCC in order to facilitate the transfer of technology and building of capacity for developing countries to adapt to climate change.

UNDERTAKE TO:

1. **Enhance** the provision of timely and actionable Early Warning information to all actors by strengthening the IGAD Climate Prediction and Applications Centre (ICPAC);

2. **To support** the Dry land Initiative that has been launched by six Horn of Africa countries namely; Djibouti, Ethiopia, Kenya, Somalia, South Sudan and Uganda to promote integrated rural development;

3. **Integrate** drought risk reduction and climate change adaptation into development planning and resource allocation frameworks;

4. **Create and support** a Multi-donor Trust Fund for drought and other disasters to be anchored in the IGAD Secretariat;

5. **Develop** the *Horn of Africa Regional Disaster Resilience and Sustainability Strategy Framework* to reduce the impact of disasters in the region considering existing frameworks and programmes of action.

DONE AT THE UNITED NATIONS, GIGIRI

NAIROBI, KENYA

CONCLUSION OF IGAD/EA Strategy and Way Forward for GHA

Building on lessons learnt, it is more than evident that while emergency response to drought and floods remains paramount to save lives, there is a compelling case for countries with functioning governance structures and donor partners to invest more and better in climate-resilient infrastructure development, sustainable livelihoods that protect communities from future drought and flood shocks, and developing human capital through education and improved access to health services. There is also need to address underlying environmental issues. For Somalia, a resolution to the prolonged political crisis is needed and the commitments made by the international community in finding a solution to Somalia must be followed through;

We are fully aware that follow-up to the deliberations during the course of this Summit is essential, if our joint endeavour is to bear fruits. Thus, we have requested the IGAD, in cooperation with the EAC, to monitor the implementation of the undertakings enumerated above, either collectively or on an individual basis, and submit a report to us quarterly;


Thank you !