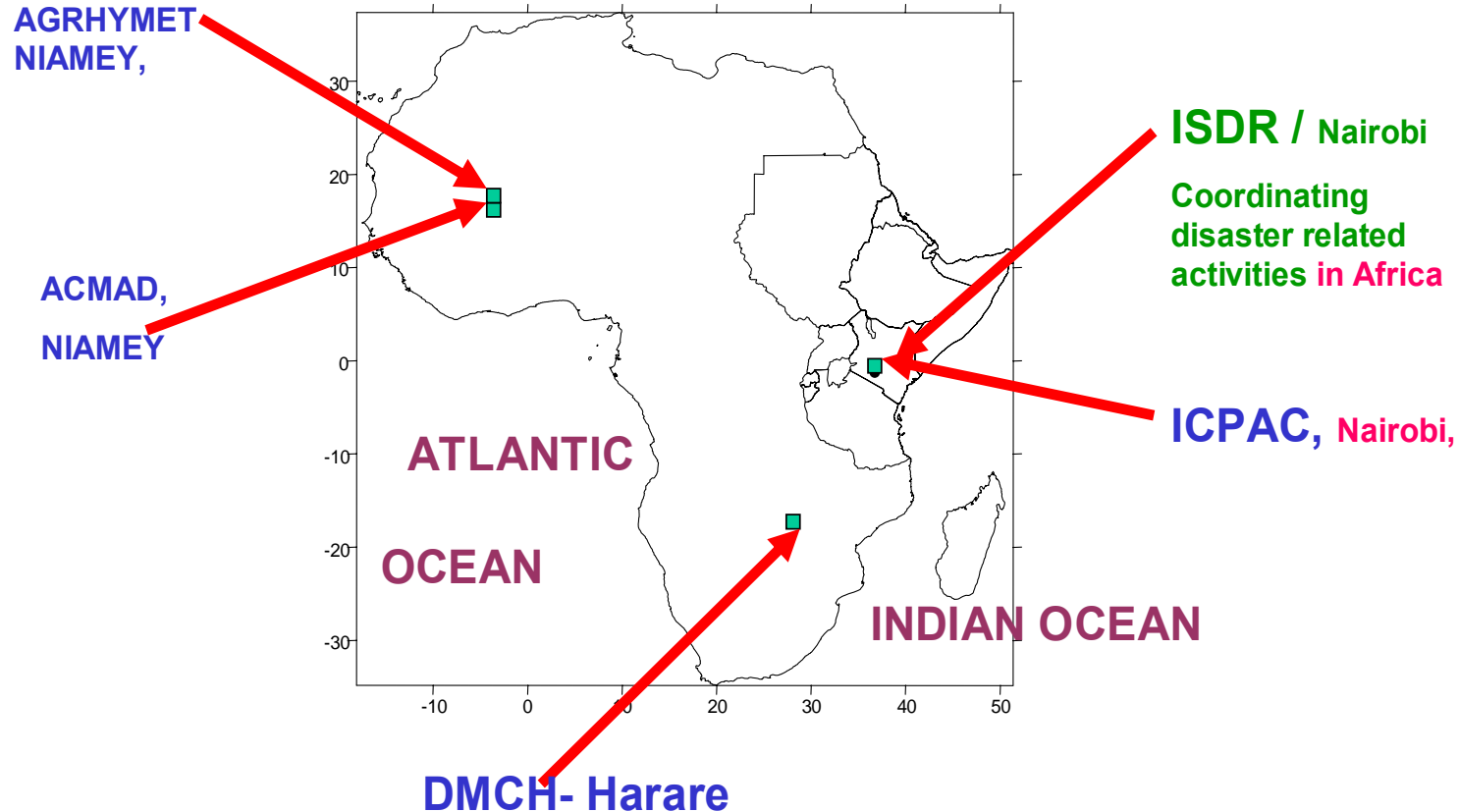


# INTERGRATED CLIMATE EARLY WARNING ACTIVITIES BEING UNDER TAKEN IN THE GREATER HORN OF AFRICA WITHIN THE FRAMEWORK OF ICPAC and NMHSs

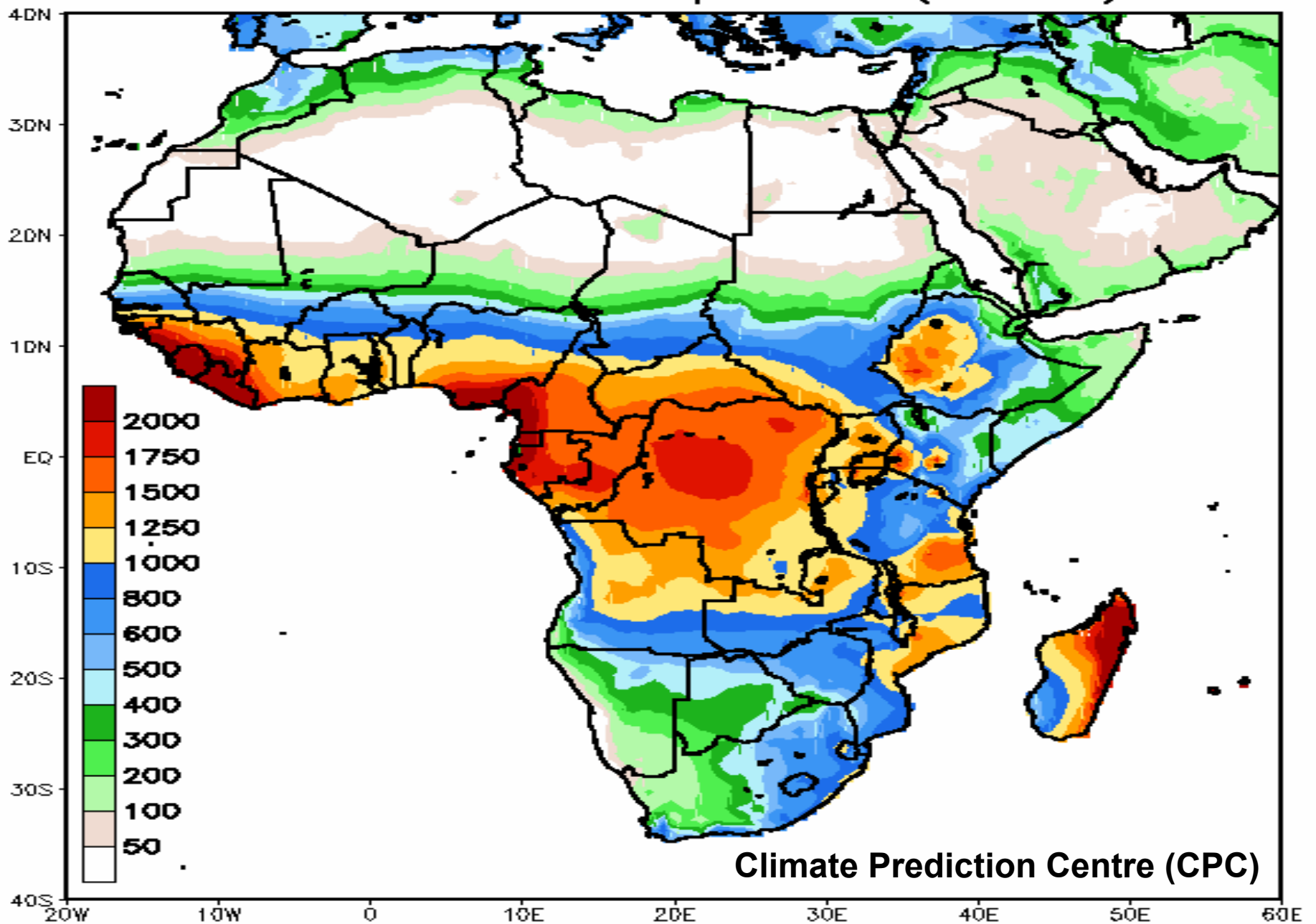
**L.A.OGALLO**  
**IGAD CLIMATE PREDICTION AND APPLICATIONS CENTRE (ICPAC)**

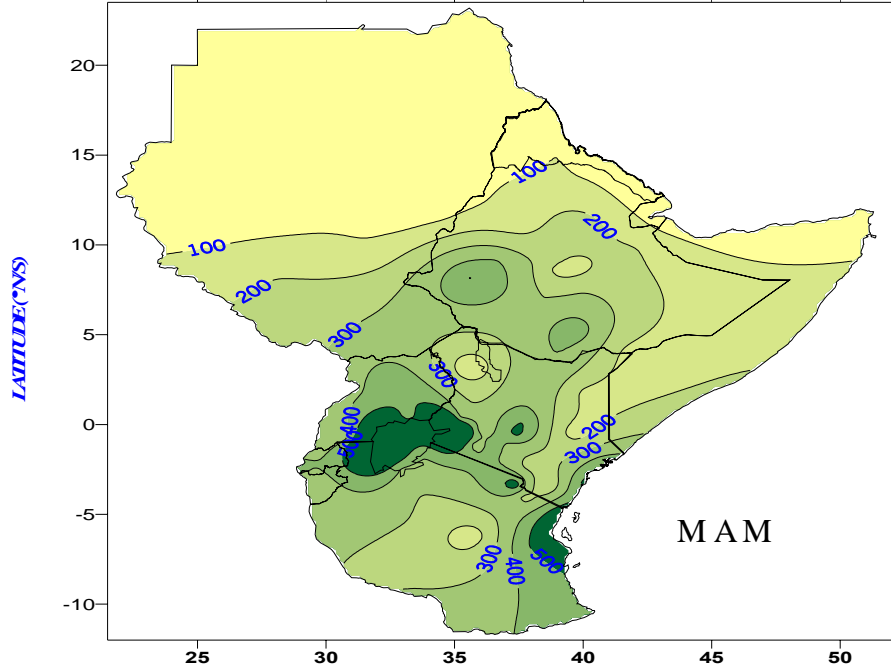
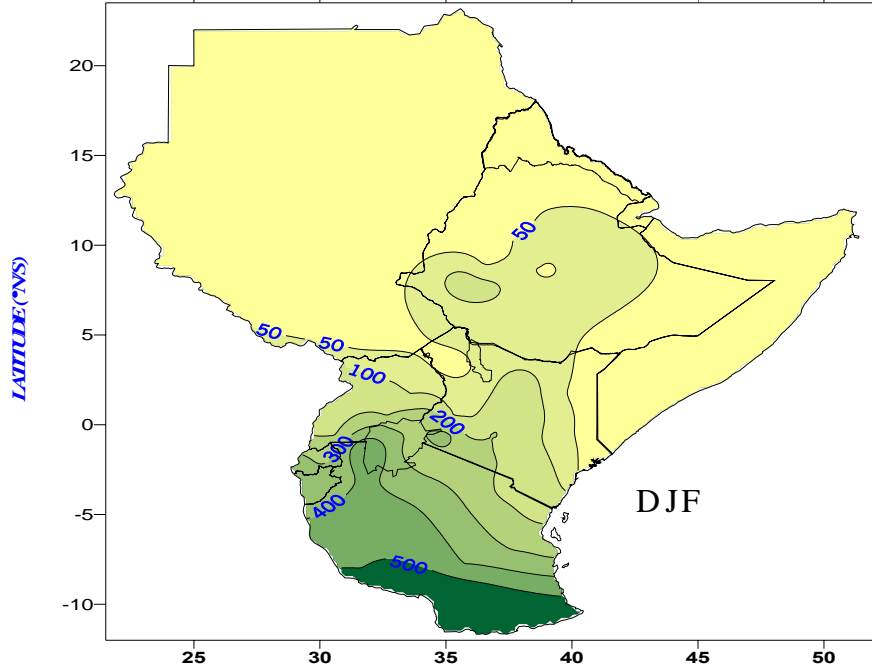


# MAJOR AFRICAN DISASTERS

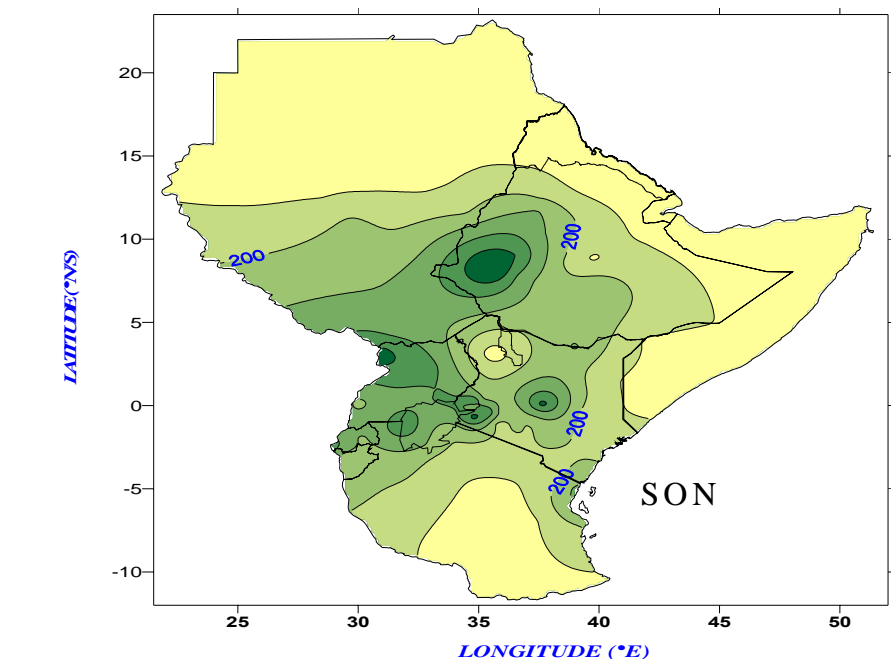
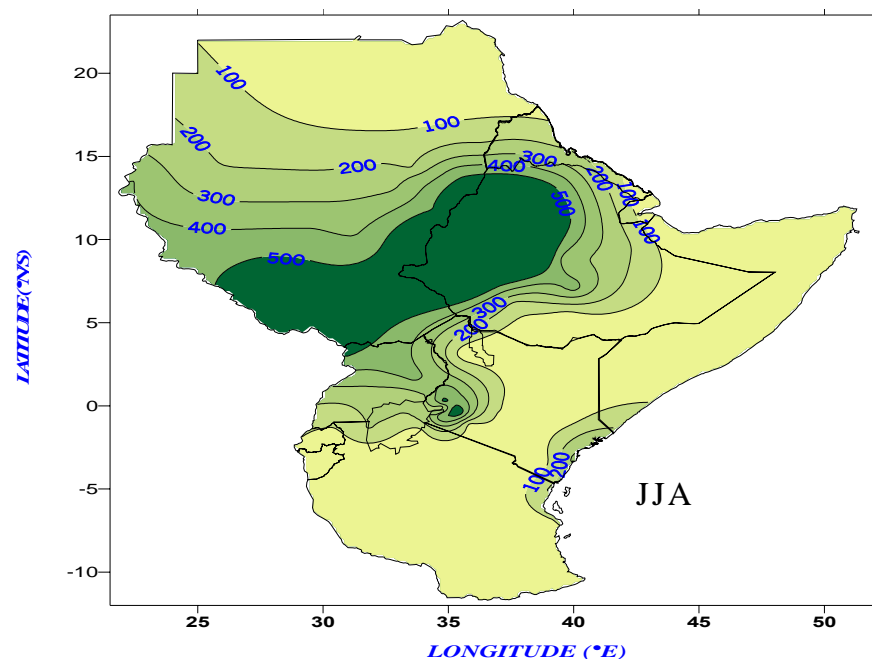
- **DROUGHT- TOO LITTLE WATER RESULTING FROM DEFICIENT PRECIPITATION**
- **FLOODS - TOO MUCH WATER FROM EXCESSIVE PRECIPITATION,**
- **HIGH/LOW TEMPERATURES**
- **LAND SLIDES, DESERTIFICATION; FOREST FIRES; DUST STORMS; HEAT WAVES**
- **HAZARDS OVER LAKES AND OCEAN/COASTAL ZONE**
- **Disappearing Mt Glaciers**
- **LOCUST, ARMY WORM, MALARIA; VECTOR BORNE PESTS AND DISEASES**
- **TSUNAMI; BIRD FLU**
- **DISASTERS OF GEOLOGICAL NATURE**

# Annual Total Precipitation (in mm)

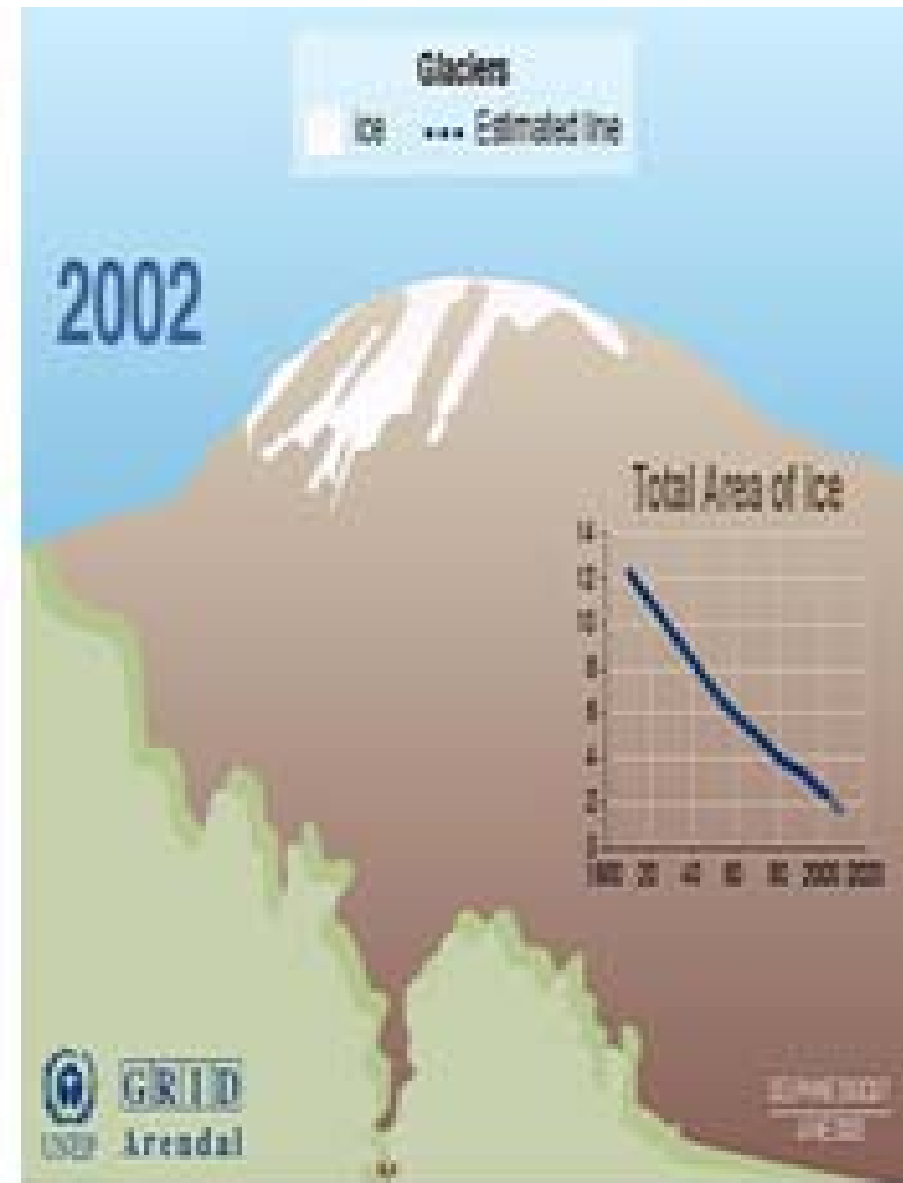




**Seasonal Rainfall over the GHA Region; Seasonal WATER AVAILABILITY**



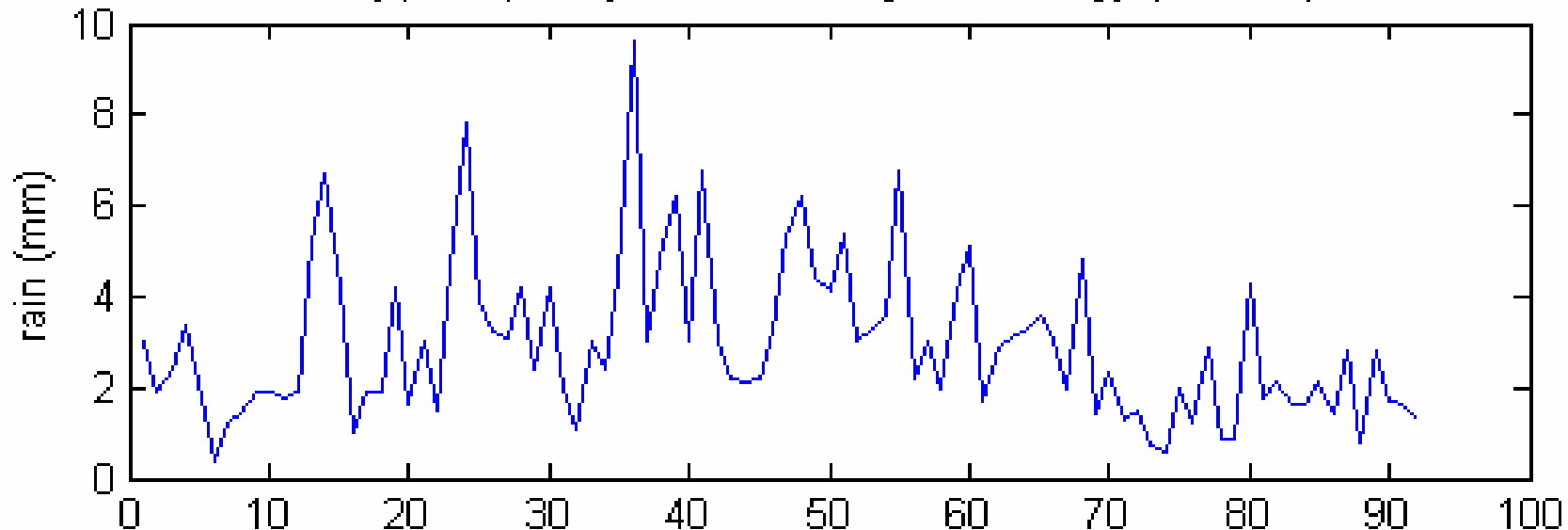
# Disappearing Glaciers, floods / droughts



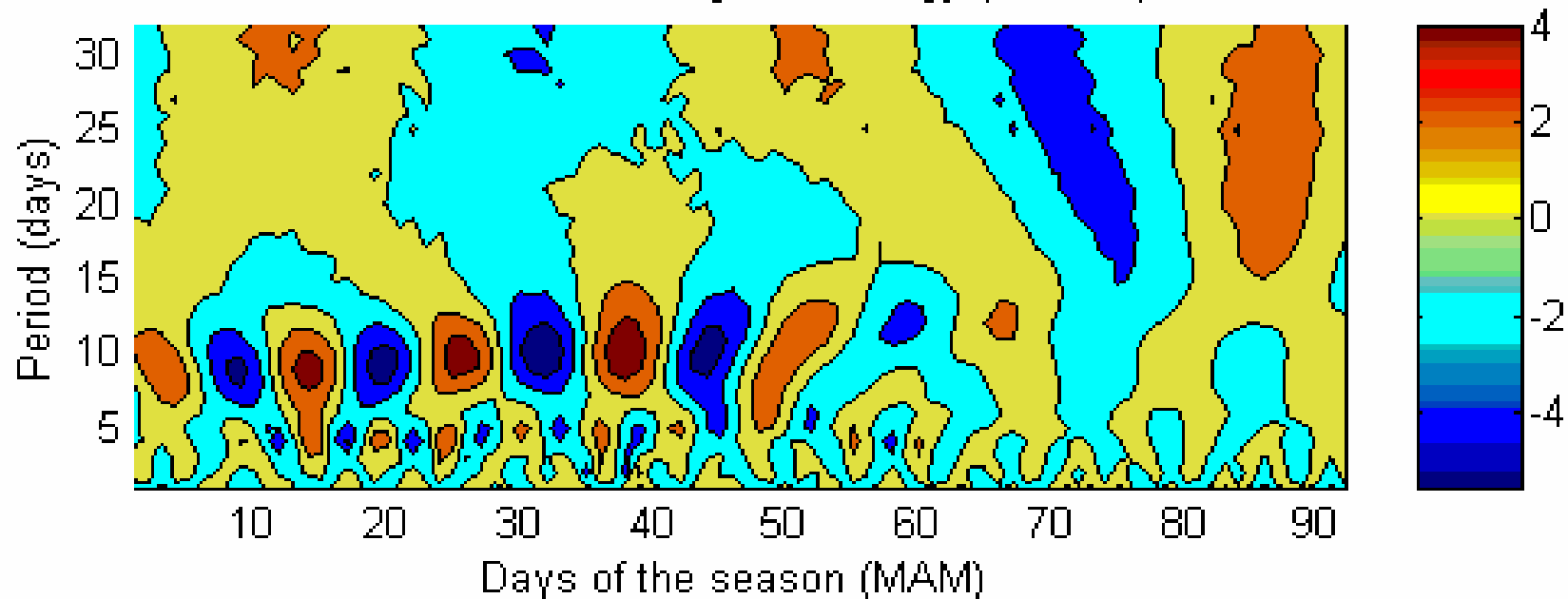
# ICPAC EARLY WARNING EXPERINCES FOR DISASTER RISK REDUCTION

- ◆ **DATABASE: PAST STATISTICS:** RISK ZONING AND MAPPING; VULNERABILITY / IMPACTS ASSESSMENT; DEVELOPMENT OF SCENARIOS
- ◆ **CURRENT STATE** - MONITORING INCLUDING USE OF REMOTE SENSING PRODUCTS
- ◆ **EARLY WARNING** - 10 DAY, MONTHLY AND SEASONAL PRODUCTS
- ◆ **CAPACITY BUILDING** OF SCIENTISTS AND USERS
- ◆ **DESSIMINATION, OUTREACH AND POLICY** ISSUES INCLUDING ROLE MEDIA

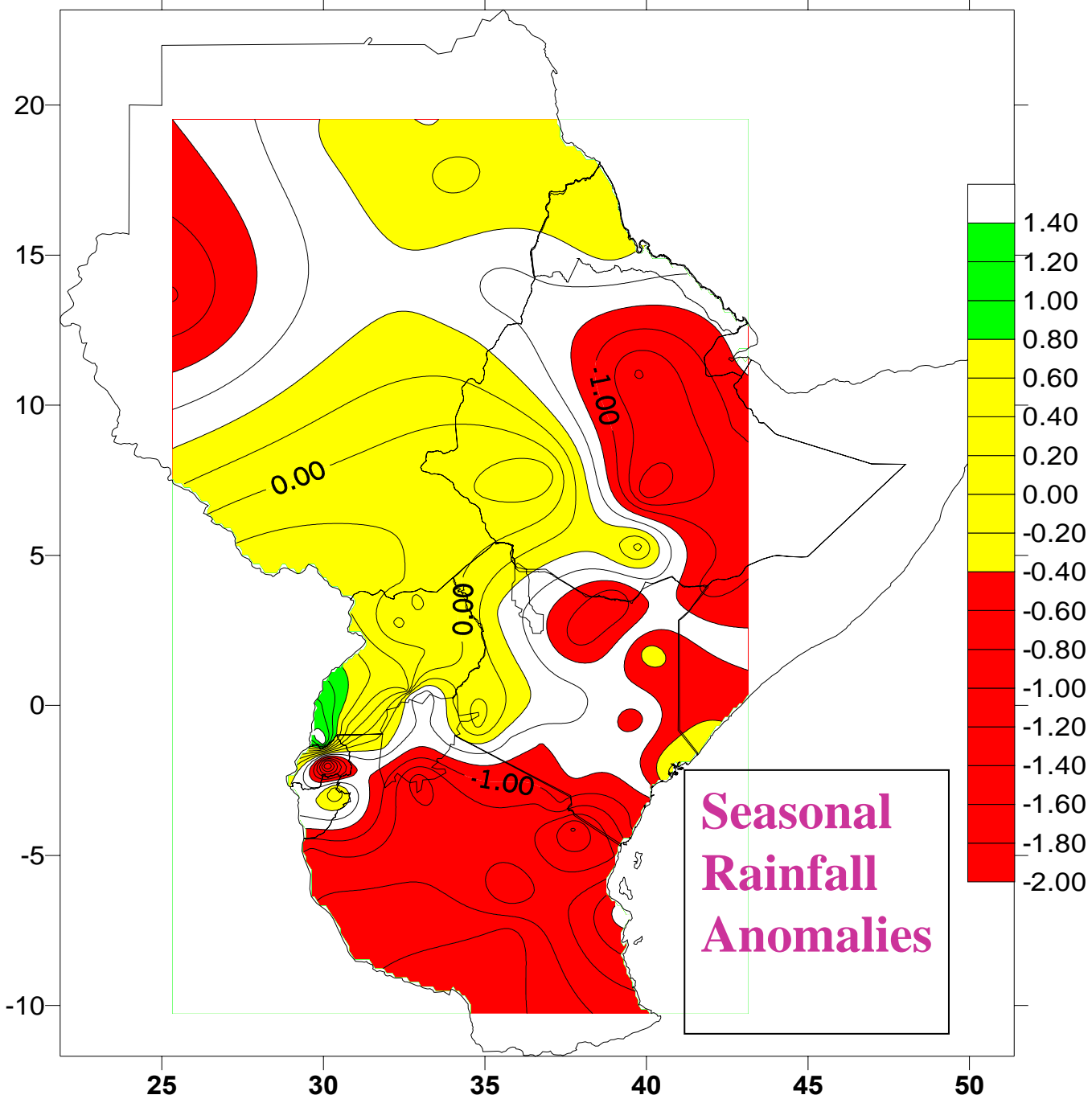
March - May(MAM) Daily Rainfall during Climatology (1961-90) at Same



Morlet Wavelet for MAM during Climatology (1961-90) at Same



LATITUDE (°N/S)

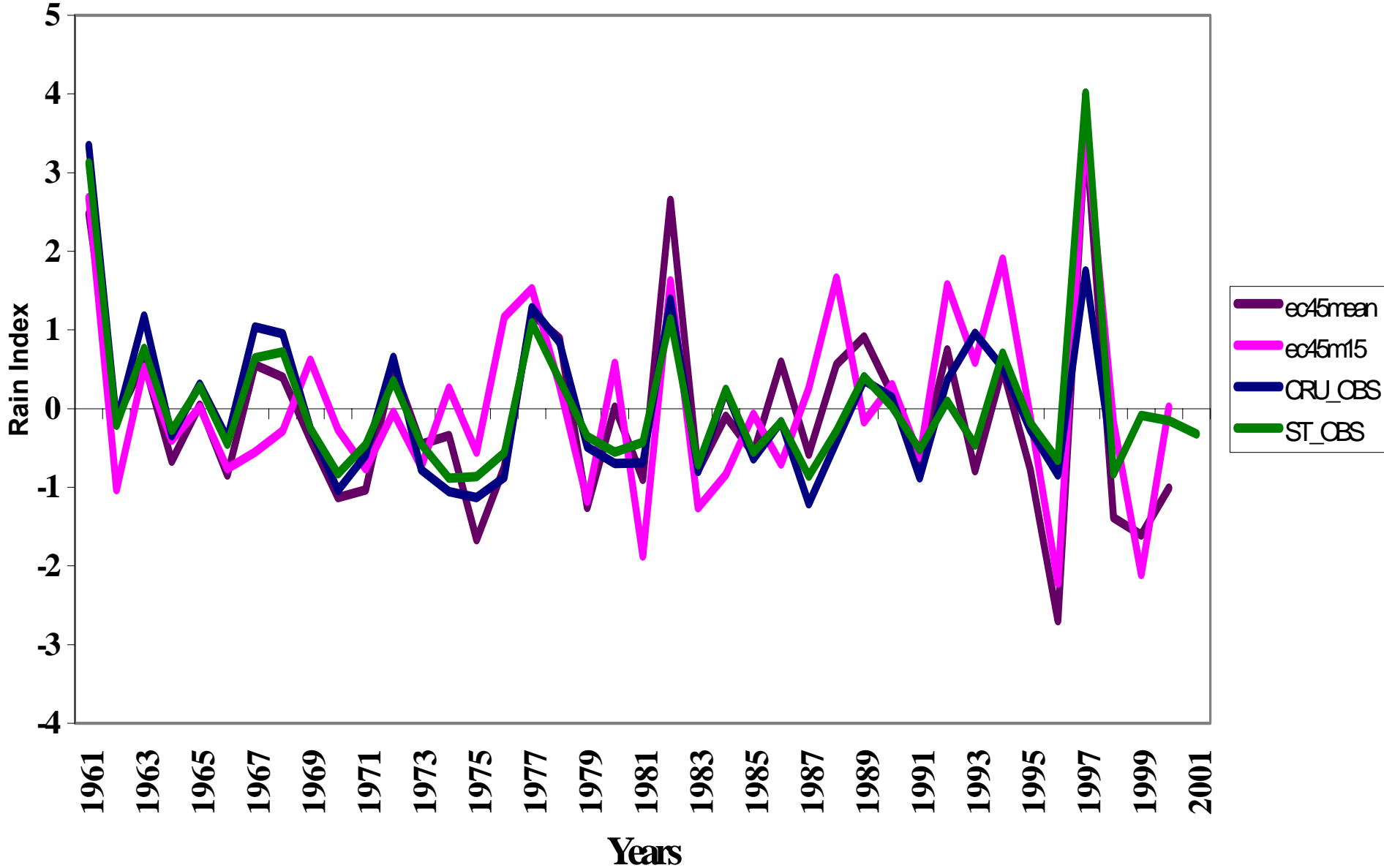


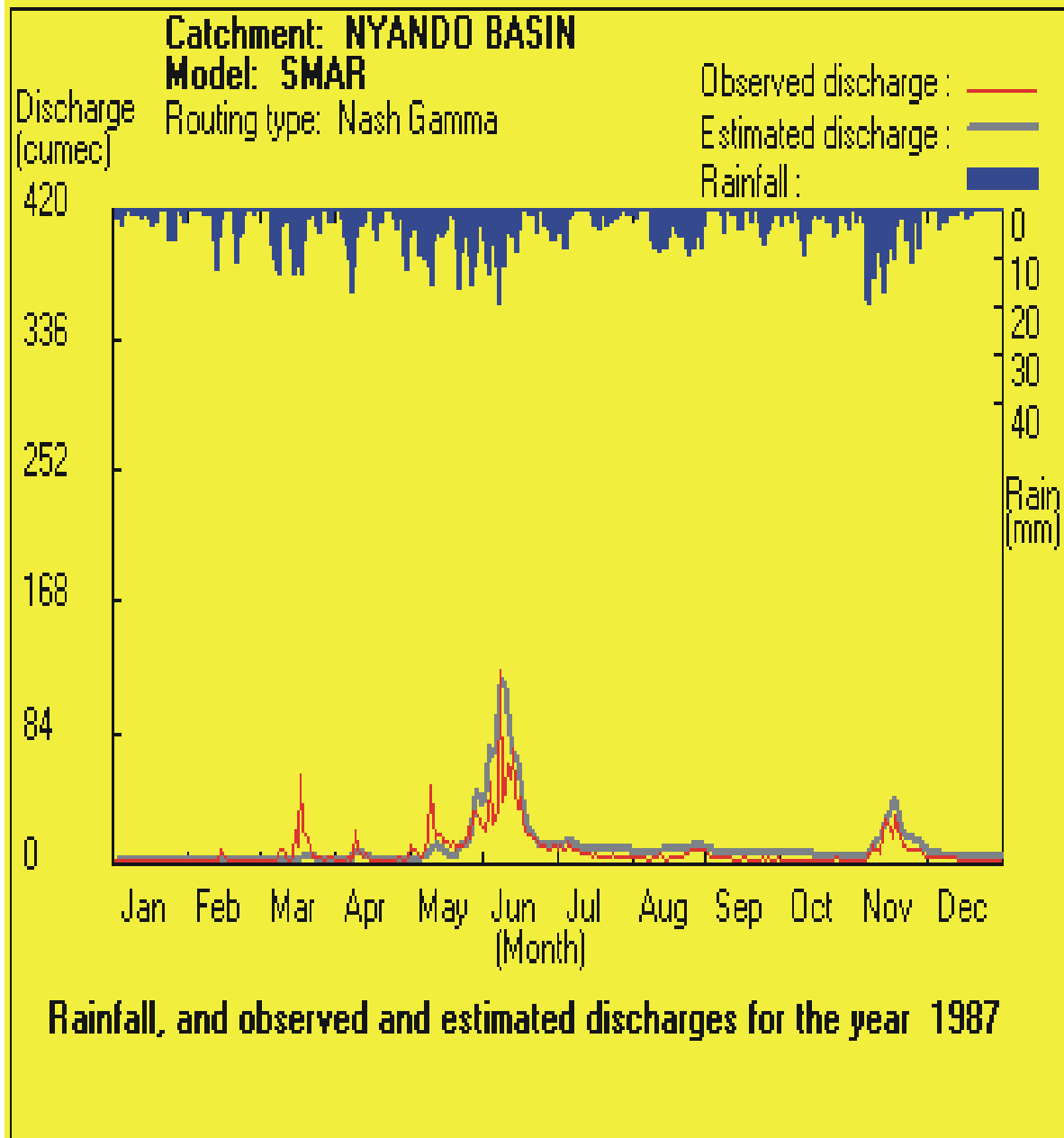
LONGITUDE (°E)

Seasonal  
Rainfall  
Anomalies



# The ECHAM4.5 model simulation of Interannual variability during the season October to December over Eastern Africa.





## Streamflow Modelling at ICPAC.

## KEY CHALLENGES

- Lack of required technologies
- Need for Skilled Human resources
- Lack of warning system
- Ineffective use of the available National Meteorological data, products, predictions and early warnings
- Lack of effective policies which demands a holistic approach linking social and economic development with the protection of natural environment and appropriate management of both land and water uses

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