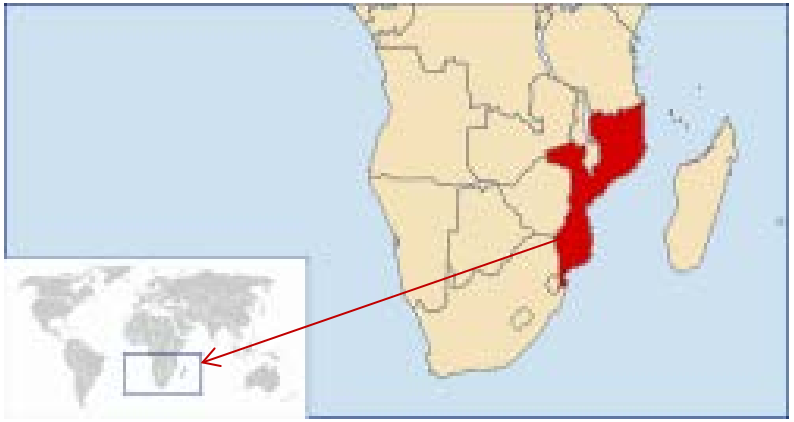
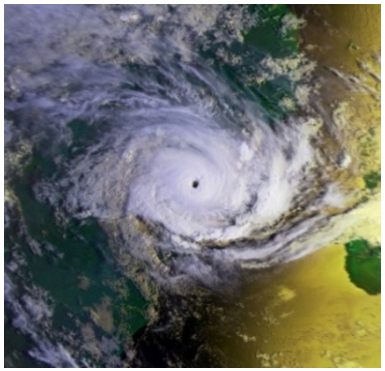
MINISTRY OF STATE ADMINISTRATION AND PUBLIC FUNCTION
NATIONAL INSTITUTE FOR DISASTER MANAGEMENT

Meteorological and climate Services to support Disaster Risk Management in Mozambique





By

Xavier Junior Xavier Gulele

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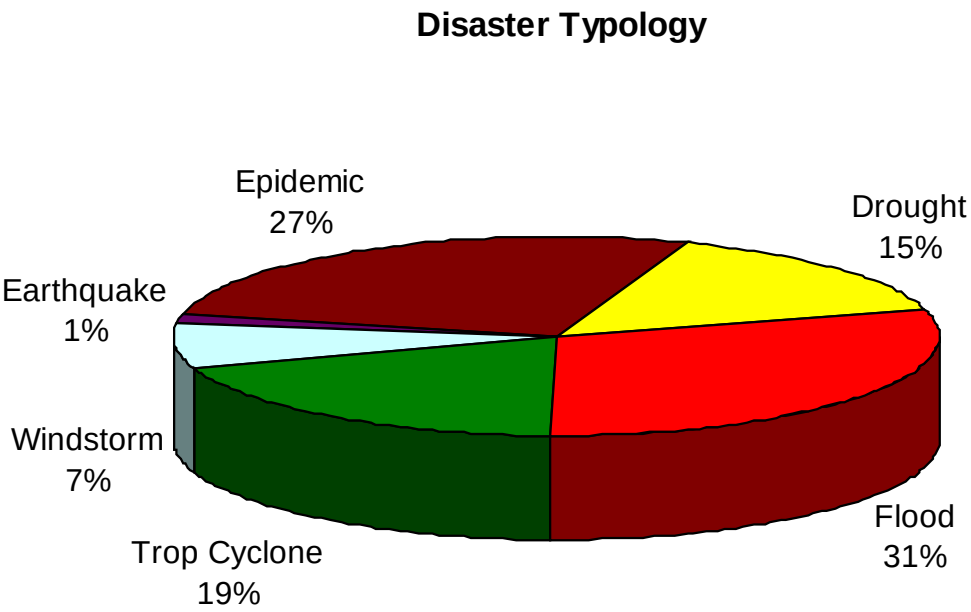
Pretoria, 28 October 2015

Presentation Outline

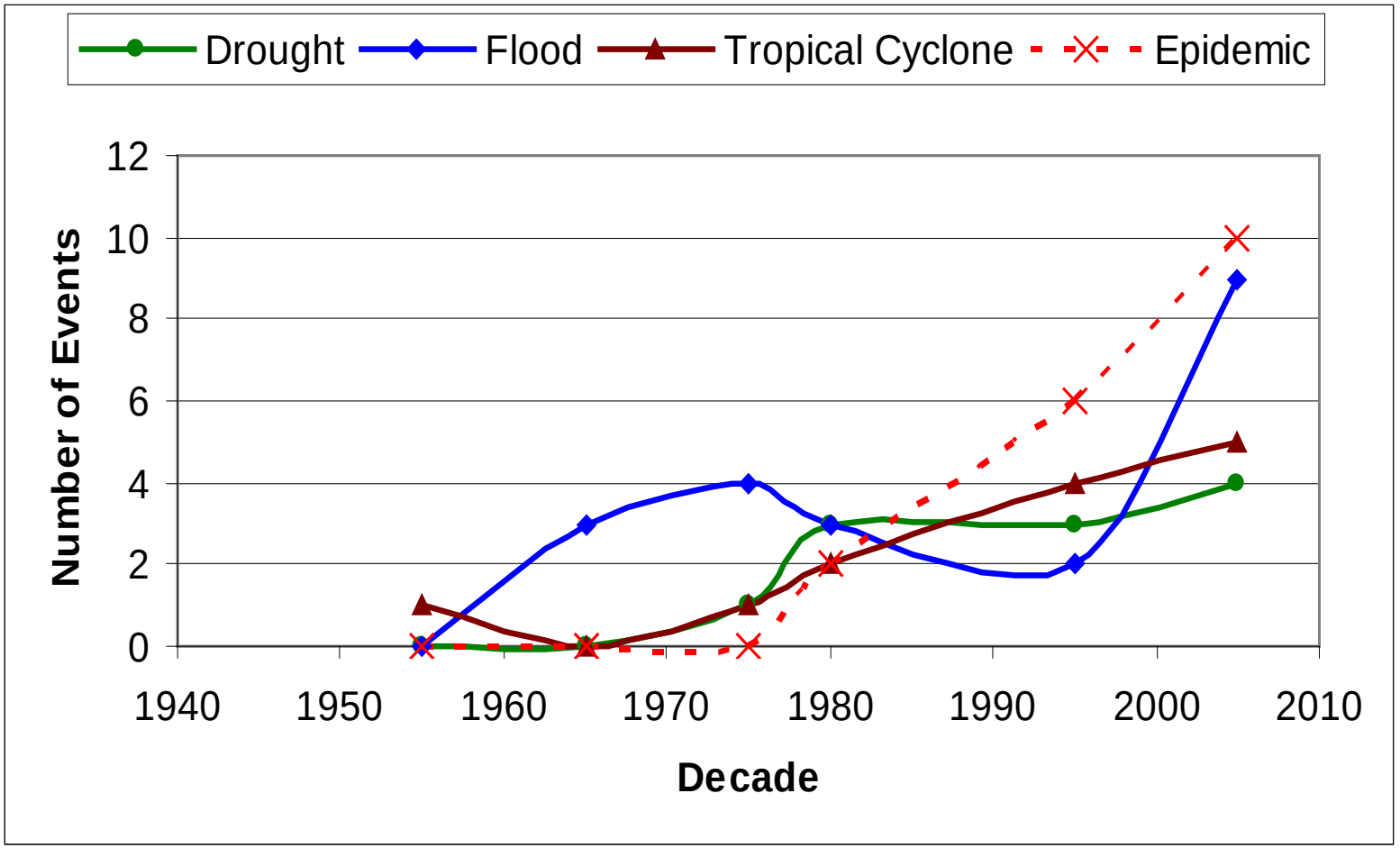
1. Trends of disaster impacts in Mozambique
2. Changes in DRM over time
3. Examples of Use of Climate information
4. Types of Forecasts
5. Example of rainfall forecast/estimation based on the SWFDP
6. Challenges to access and use climate information

Disaster typology in Mozambique

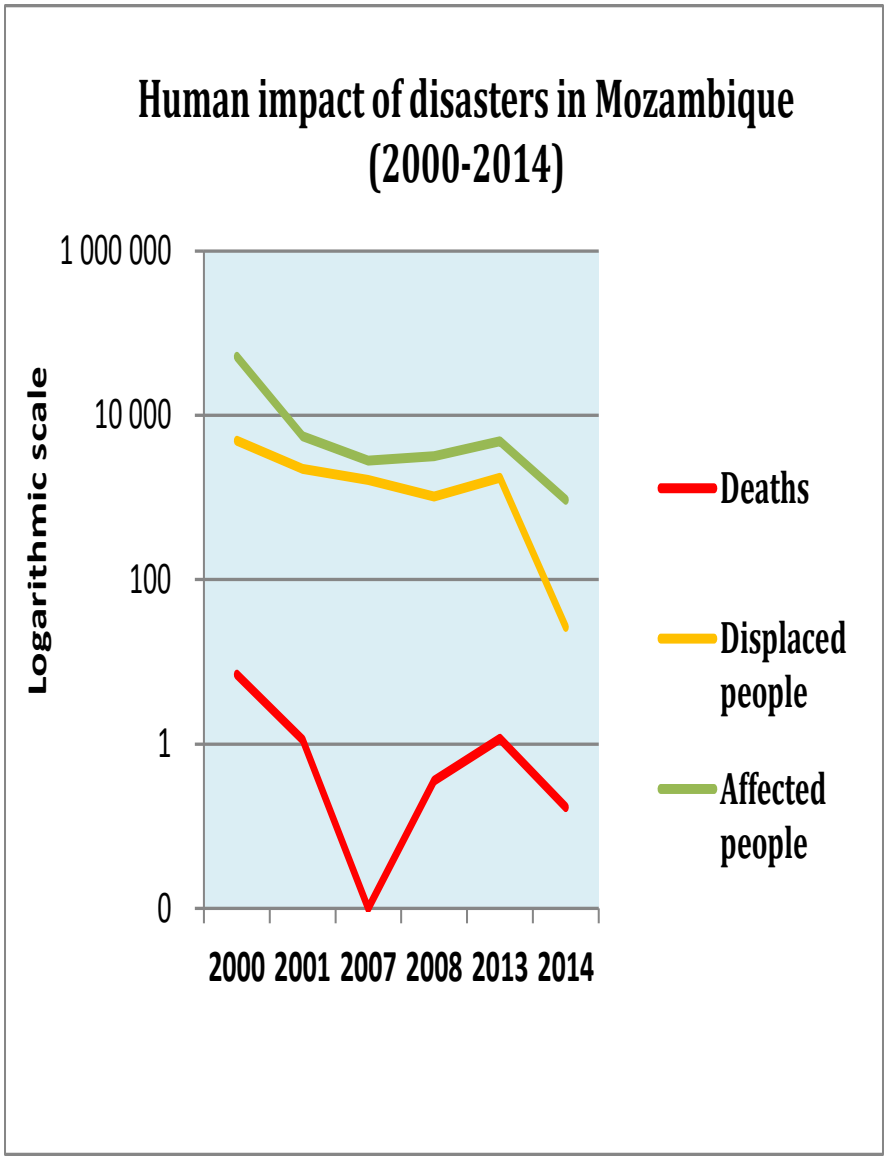


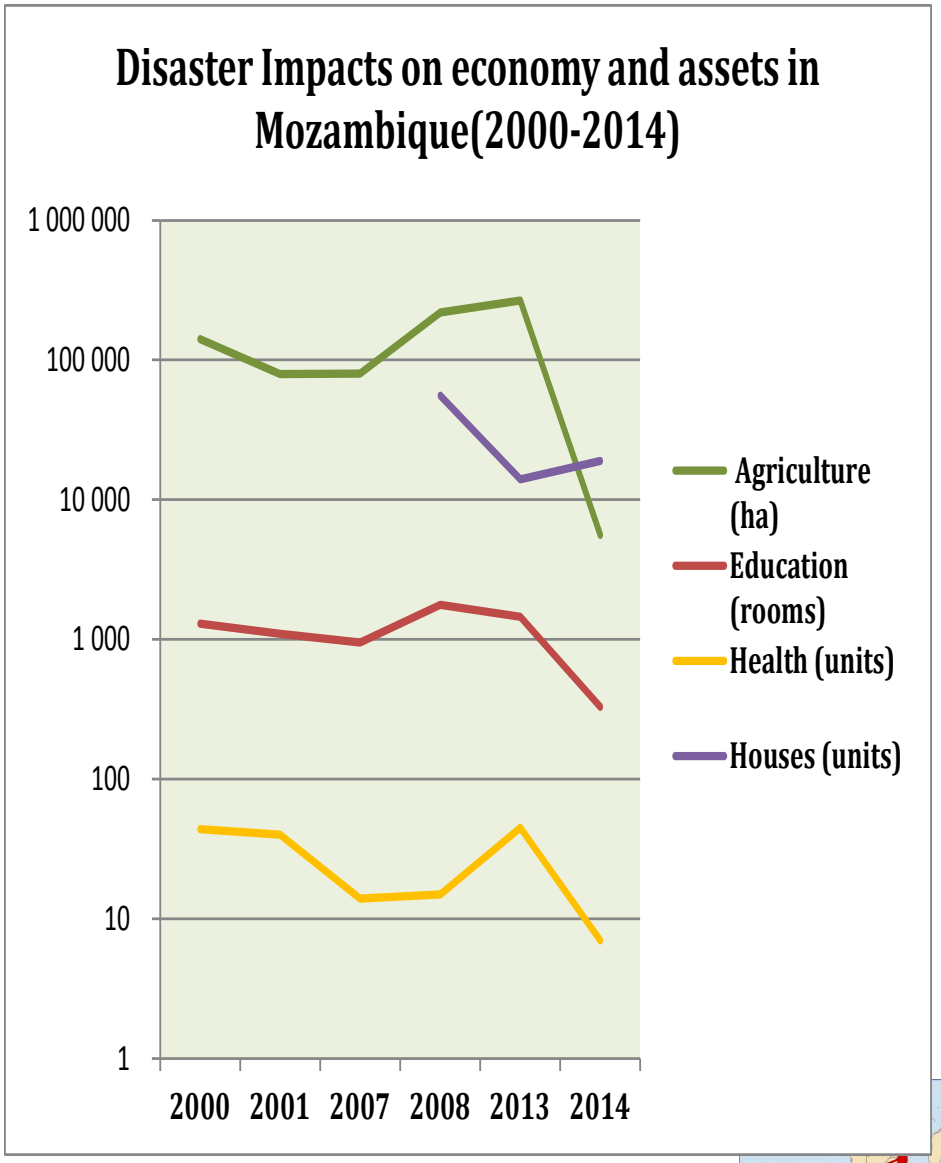
Floods are the most frequent hazard in the country followed by epidemics, tropical cyclones and droughts

Trends in disasters in Mozambique (1956-2008)



Trends of disaster impacts in Mozambique





Trend Analysis:

Season	River Basin	Afected People	Deaths
2000	Limpopo	4.500.000	
	Incomate		
	Umbeluzi		699
	Save		
2010/2011	Zambeze	118.528	0
	Incomate		
	Limpopo		
2011/2012		0	0
2012/2013	Zambeze	478,892	117
	Limpopo		
	Incomate		
2013/2014	Incomati Buzi Licungo Messalo	92,775	30
2014/2015	Licungo	408,711	163
	Zambeze		
	Pungoe		
	Buzi		

Changes in DRM over time

The 2000 and 2001 floods provided key lessons for:

i.Rapid investment for improving early warning network for climate and weather data collection

ii.Focus of dissemination of risk information on end-users

iii.Strengthening of preparedness and response capacity at national and local level

iv.National leadership of DRR actions, including in disaster preparedness and response

v.Improvement of cross-sectoral coordination mechanisms for all DRR activities

vi.Policy reforms to foster DRR mainstreaming at national sector development planning

Examples of Use of Climate information

i. **Climate predictions for 2040-2060 (in 2009):** bases for conduction of Disaster Risk Assessments at national and sector levels (in 2012)

ii. **Seasonal weather forecast (SARCOF)**: enables preparation of the Annual National/Sector Development Plan and the Contingency Plan at all levels

iii. **Weather forecast:** helps refine disaster response mechanisms

iv. **Warnings:** allows ignition of disaster response operations

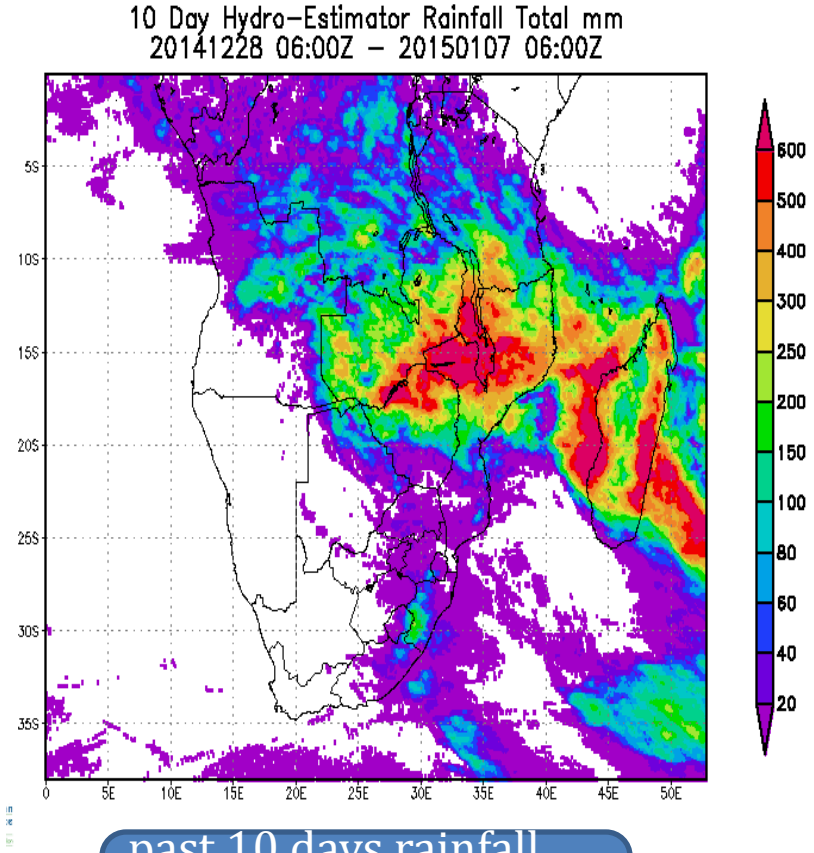
Types of Forecasts

I. Daily recorded Precipitation and next 24h forecast;

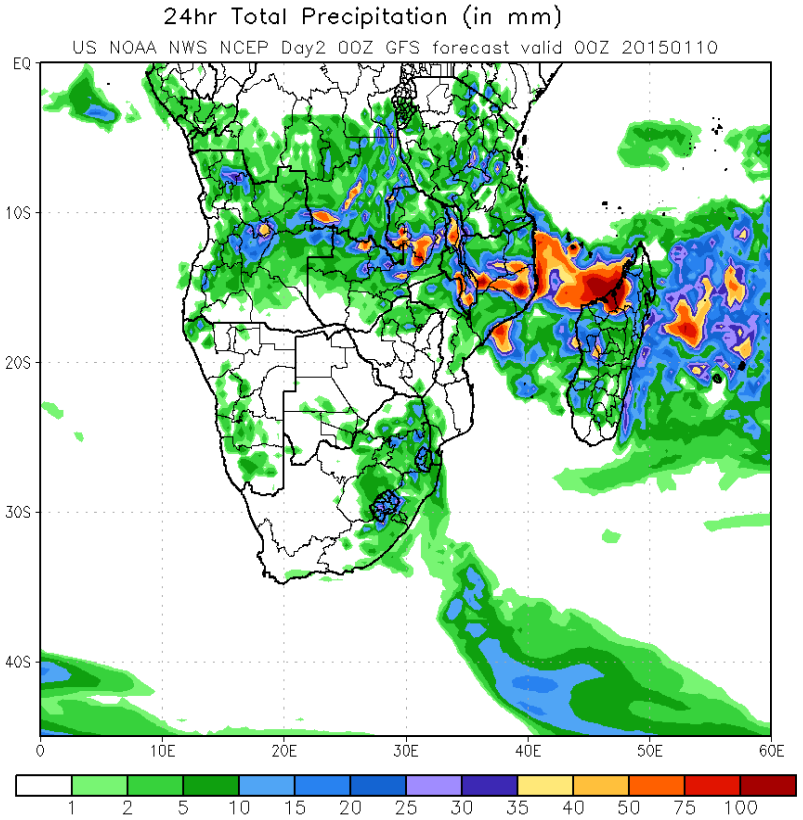
ii. Daily recorded maximum and minimum temperatures and 24h forecast

iii. Special warnings for heavy rain and strong winds, thunderstorms, tropical cyclones heat waves...

Example of rainfall forecast/estimation based on the SWFDP

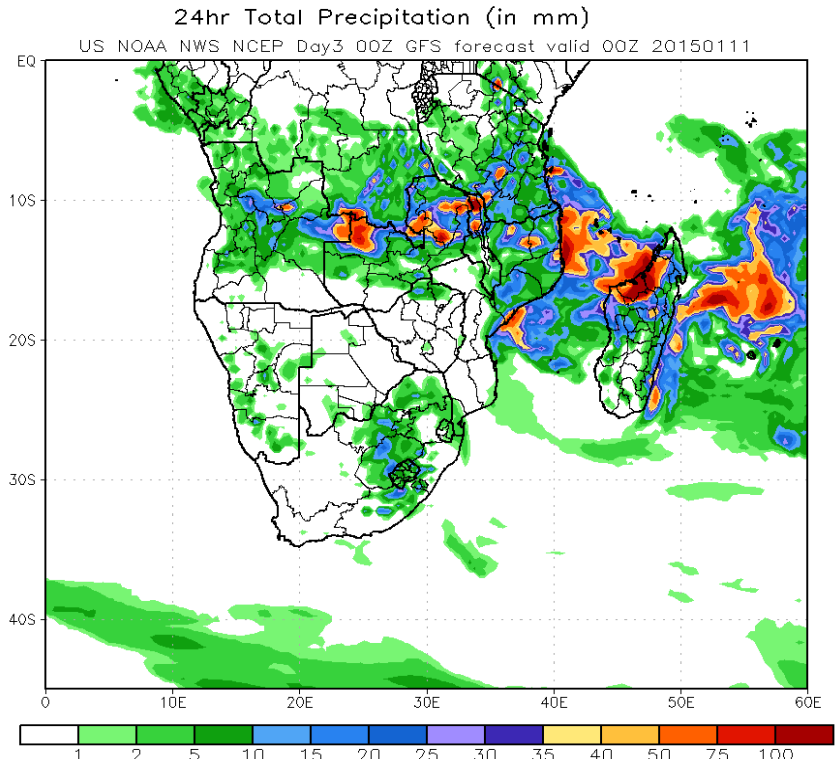


past 10 days rainfall estimation (in mm)

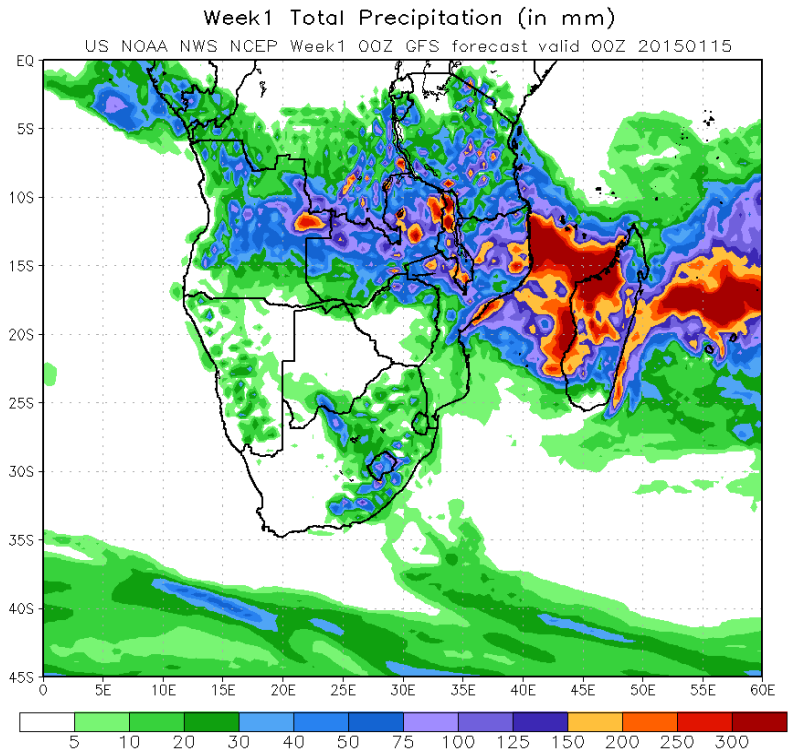


24h rainfall estimation (in mm)

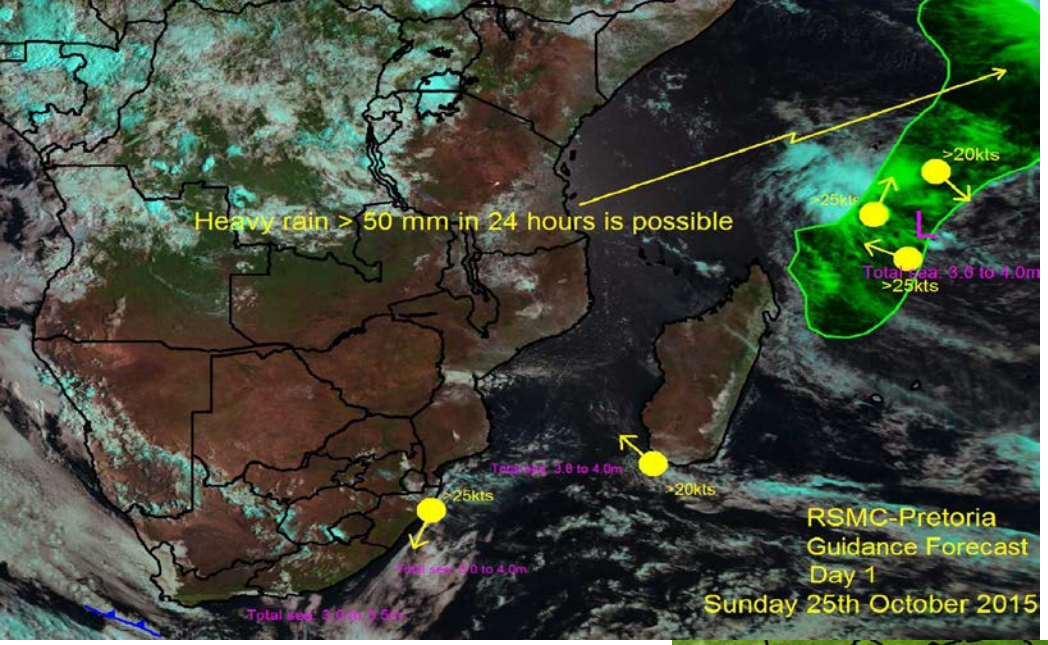
Example of rainfall forecast/estimation based on the SWFDP

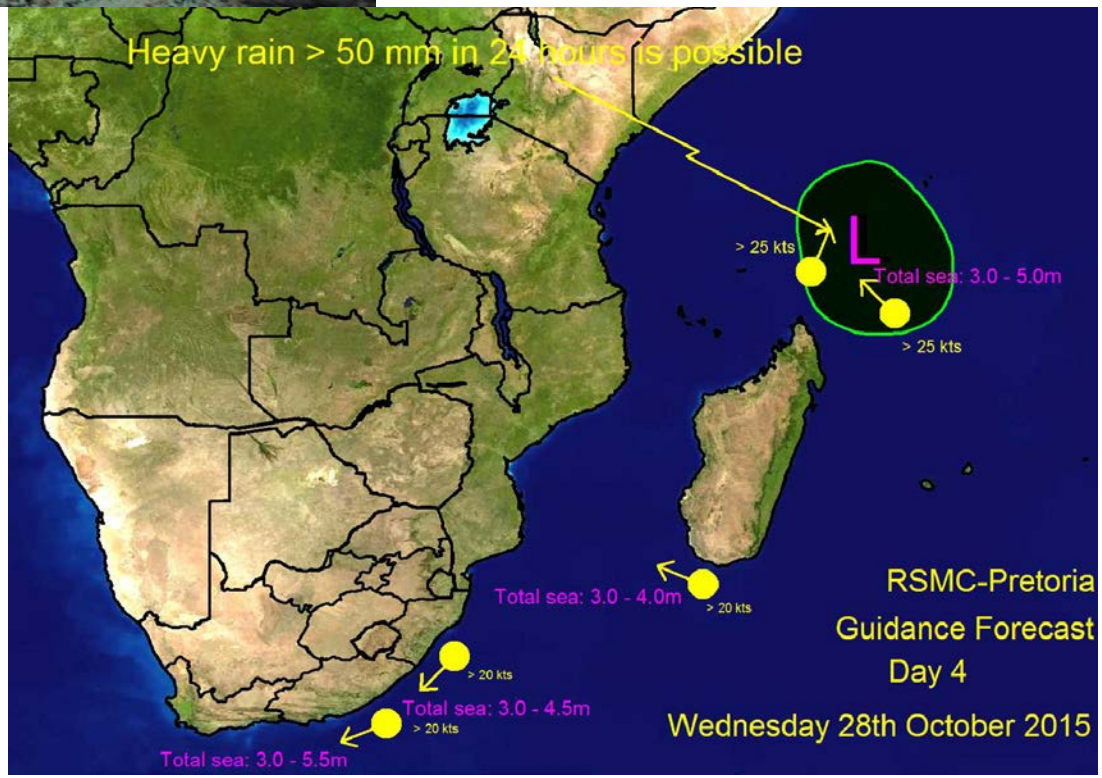


48h rainfall estimation (in mm)



7 days rainfall estimation (in mm)


Heavy rain > 50 mm in 24 hours is possible
>20kts
>25kts
L
Total sea: 3.0 to 4.0m
>25kts
Total sea: 3.0 to 4.0m
>20kts
>25kts
Total sea: 3.0 to 4.0m
RSMC-Pretoria
Guidance Forecast
Day 1
Sunday 25th October 2015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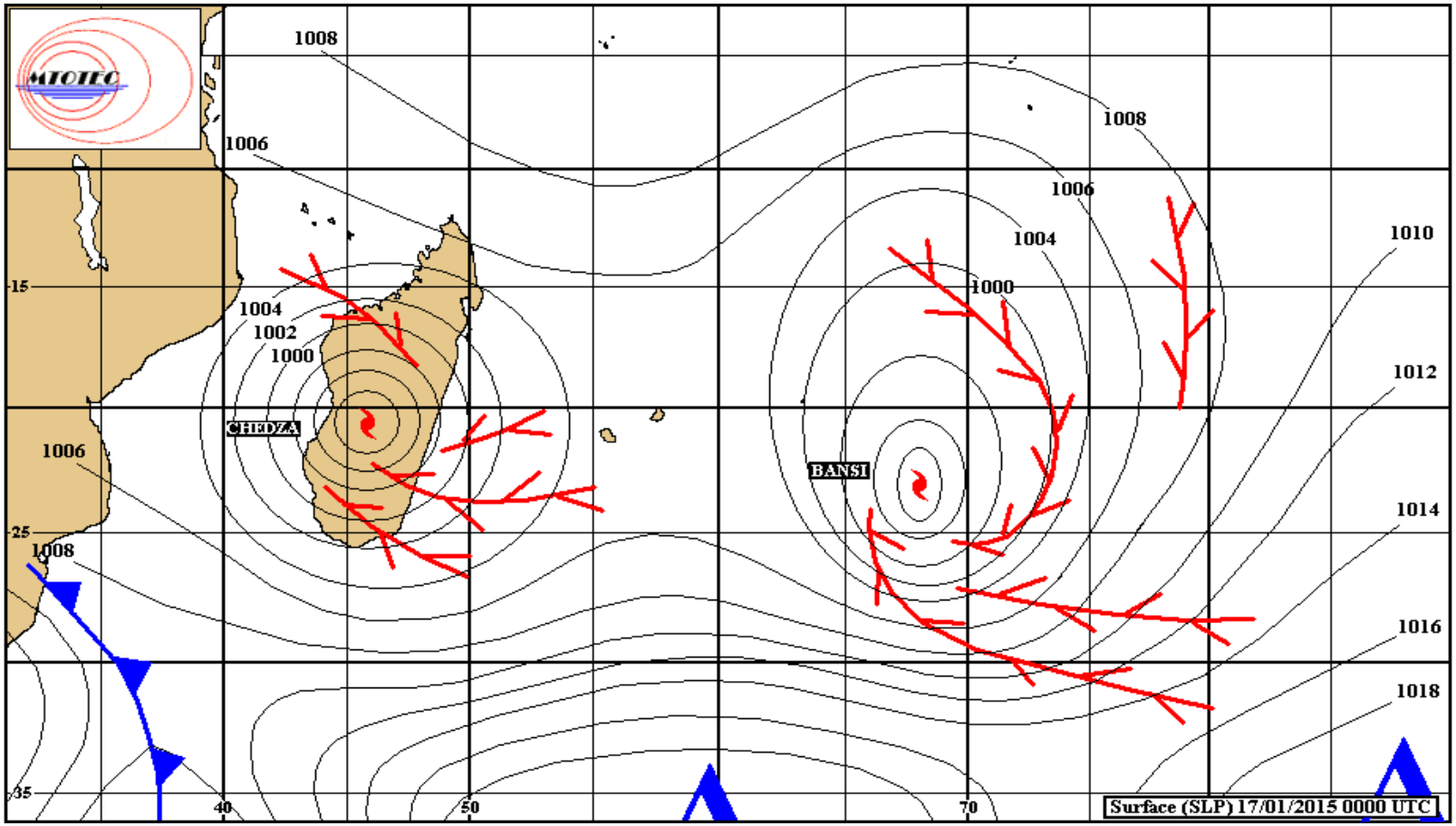
L
Total sea: 3.0 - 5.0m
> 25 kts
Total sea: 3.0 - 4.0m
> 20 kts
> 20 kts
Total sea: 3.0 - 4.5m
> 20 kts
Total sea: 3.0 - 5.5m
RSMC-Pretoria
Guidance Forecast
Day 4
Wednesday 28th October 2015

Monitoring of Cyclonic Activity



Challenges to access and use climate information

- INGC has free access to climate information

Remaining challenges

i. Limited geographic coverage of hydro-meteorological network
ii. Lack of climate information products to timely respond to specific demands of end-users
iii. Technical barriers to translate and disseminate climate information in a clear and understandable language to all users
iv. Forecast and warning of meteorological events and potential impacts (multi hazard impact-based).
v. Impact matrix related to hazard (flash flood) occurrence
vi. hourly or 6 in 6 hour forecast precipitation and possible local of flash flood occurrence.

Thank you for your attention!!!