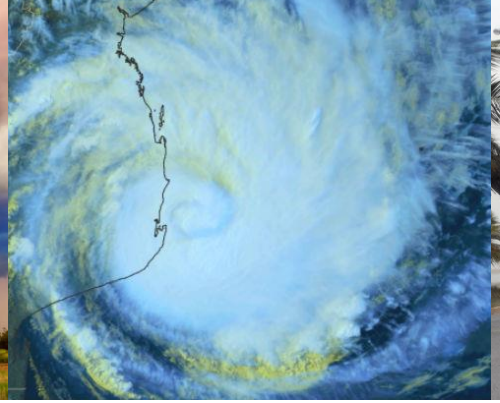



UN-SPIDER Bonn International Conference (virtual) Space-based Solutions for Disaster Management in Africa

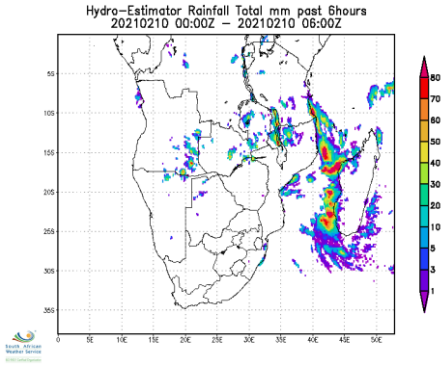
16 to 18 November 2021

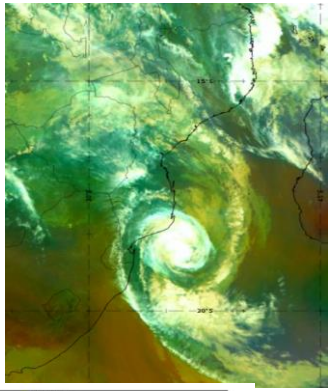
Confronting severe weather in Mozambique: the role of the National Institute of Meteorology (INAM)

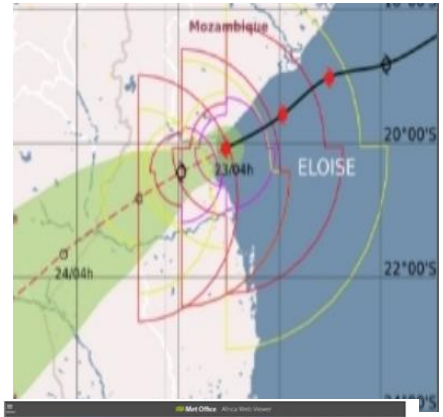
By

Mussa Mustafa (Deputy Director-General)

Monitoring extreme weather in Mozambique







Global Model (UM)
- 10km at mid-latitudes which is interpolated onto a 17km grid.
- Produced twice daily and out to 6 d… (T+144)

Tropical Africa 4km Model
- 4.4 km horizontal resolution
- Convection-permitting limited area configuration of the UM
- Runs twice daily and out to T+48

INAM relies on products from: - -
RSMC Pretoria SWFDP;
RSMC La Reunion
- UKMO – Africa Web Viewer
- NCEP
- ECMWF
- METEOSAT
- FENGYUN

Instituto Nacional de Meteorologia
Direcção de Análise e Previsão de Tempo
Departamento de Análise e Previsão de Tempo

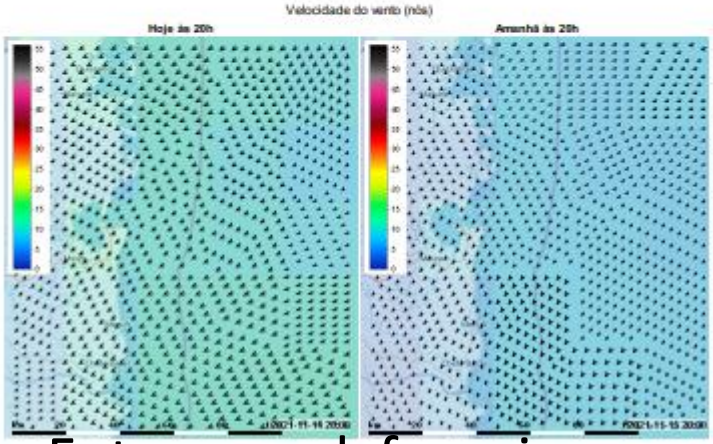
Maputo, 21 de Janeiro de 2021

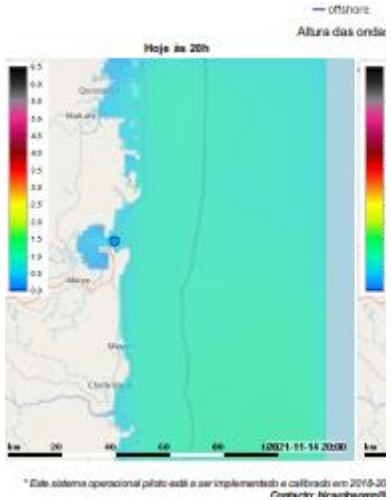
Boletim Nº	003/INAM-DAPT/250.2-CT/2021
Emitido:	16:00 Horas (Tempo Local)
Valido até:	24:00 Horas do dia 23 de Janeiro de 2021
Tipo de Comunicado:	**Aviso**
Fenómeno Meteorológico:	**Tempestade Tropical Moderada ELOISE**
Áreas de risco	**Chuvas acima de 200 mm/24h com trovoadas, ventos fortes de 150 Km/h e rajadas de 170 Km/h** **Província de Sofala** (Todos Distritos); **Província de Manica** (Machaze, Macate, Sussundenga e Mussorize); **Província de Inhambane** (Govuro, Inhassoro, Vilankulo, Mabote e arquipelago de Bazaruto). **Chuvas acima de 100 mm/24h, acompanhadas de trovoadas** **Província de Manica** (Gondola, Vanduzi, Manica, Barue, Macossa, Guro ,Tambara e Cidade de Chimoio); **Província da Zambézia** (Chinde, Luabo, Mupeia, Inhassunge , Morrumbala, Nicoadala e Cidade de Quelimane); **Província de Inhambane** (Massinga, Mabote e Funhalouro). **Província de Gaza** (Massangena, Mapai, Chicualacuala e Chigubo).
Descrição	A tempestade tropical moderada Eloise, já entrou no canal de Moçambique e desloca-se em direcção a província de Sofala, podendo se intensificar e atingir o estágio de Ciclone Tropical de categoria 3. Prevê- se que o seu epicentro com ventos de 150 Km/h e rajadas até 170 Km/h atinja a costa na região entre os distritos de Muanza e Machanga, no final do dia 23 de Janeiro de 2021.
Recomendações	Face a ocorrência de trovoadas, chuvas intensas e ventos muito fortes, recomenda-se a tomada de medidas de precaução e segurança.
Actualização	Amanha, dia 22 de Janeiro ás 10:00 horas.

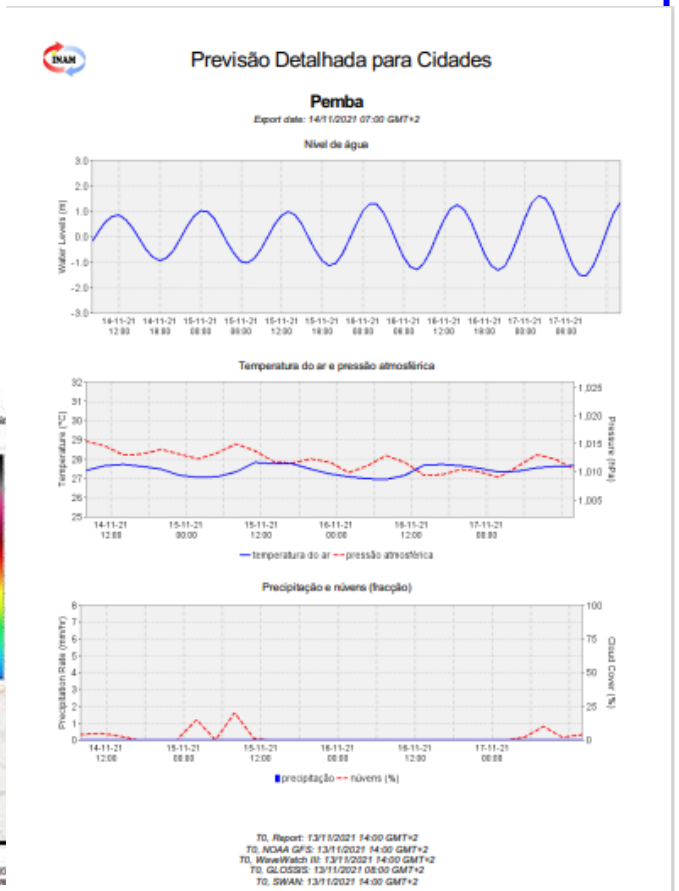
O Chefe do Departamento

Acácio M. Tembe

Storm surge forecast

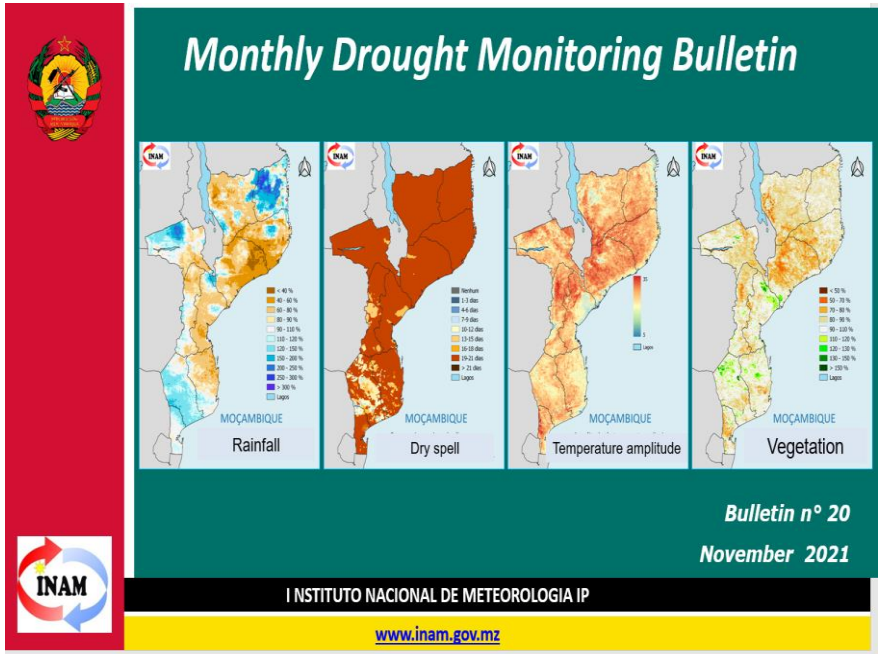




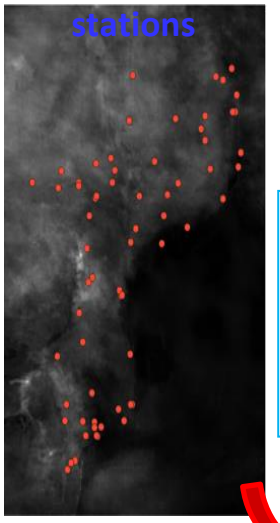


Future work focusing on storm surge from extreme events could include (i) local (downscaled) dedicated tide and storm surge numerical models near the most vulnerable cities, forced by GLOSSIS and RSMC La Reunion's TC track forecast, or (ii) empirical correction using satellite information, or a combination of these.

DROUGHT MONITORING

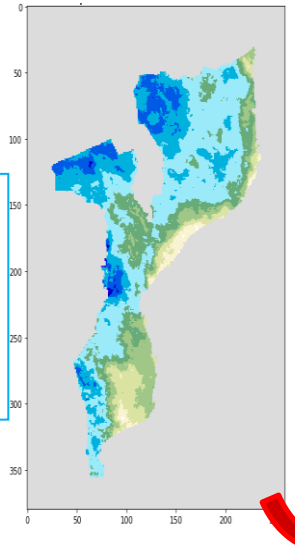


INAM weather stations



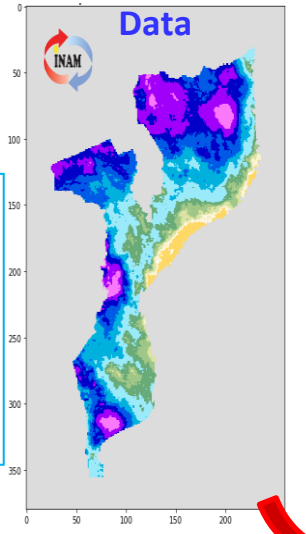
- Good precision
- Low spatial resolution

CHIRP Data



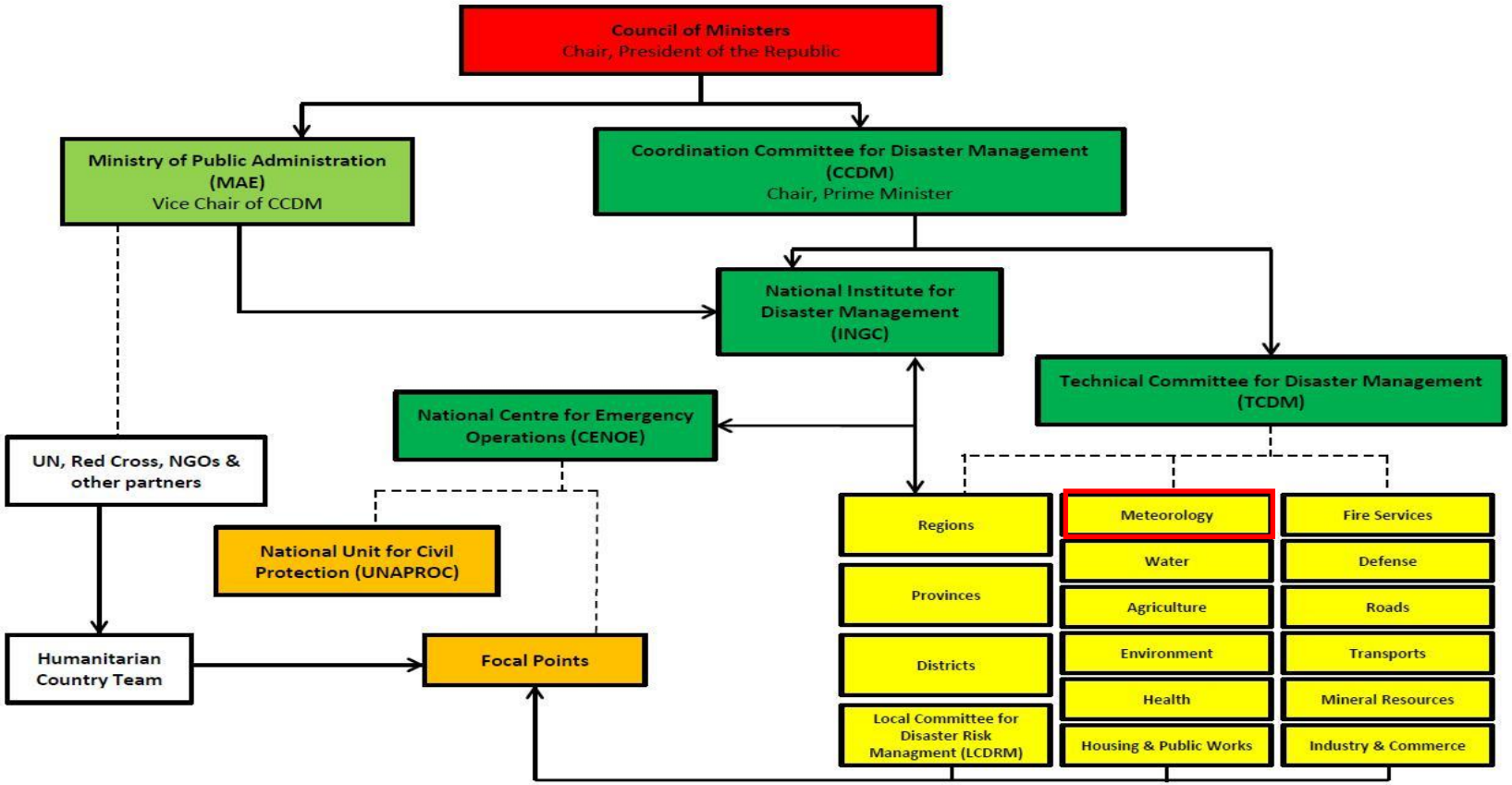
- Low precision
- Good spatial resolution

INAM Blended Data



- High precision
- Better spatial resolution

Disaster Management Structure



INAM have mandate to issue early warnings for **meteorological hazards**

Water Resource Management Authority – issue flood warnings

- Disaster Management Authority - responsible for issuing response measures to the community

Challenges

- Improvement of numerical models (WFR) to 4 km resolution;

- Improvement of observational network – one doppler weather radar to be operational until May 2022 and 11 AWS in March 2022;

- Implementation of multi-hazard and impact-based warning system in the country;

- Capacity building on the use of space-based technologies

Thank you very much