REPÚBLICA DE MOÇAMBIQUE

INSTITUTO NACIONAL DE GESTÃO E REDUÇÃO DO RISCO DE DESASTRES

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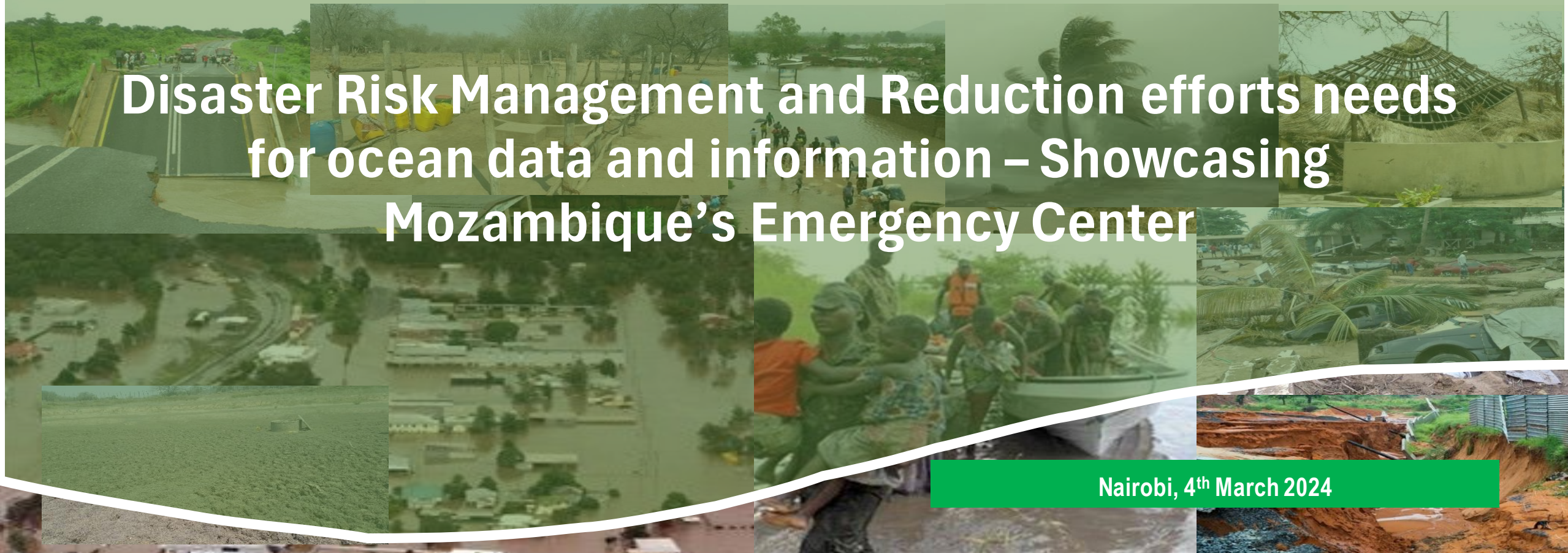
Disaster Risk Management and Reduction efforts needs for ocean data and information – Showcasing Mozambique's Emergency Center



Nairobi, 4th March 2024

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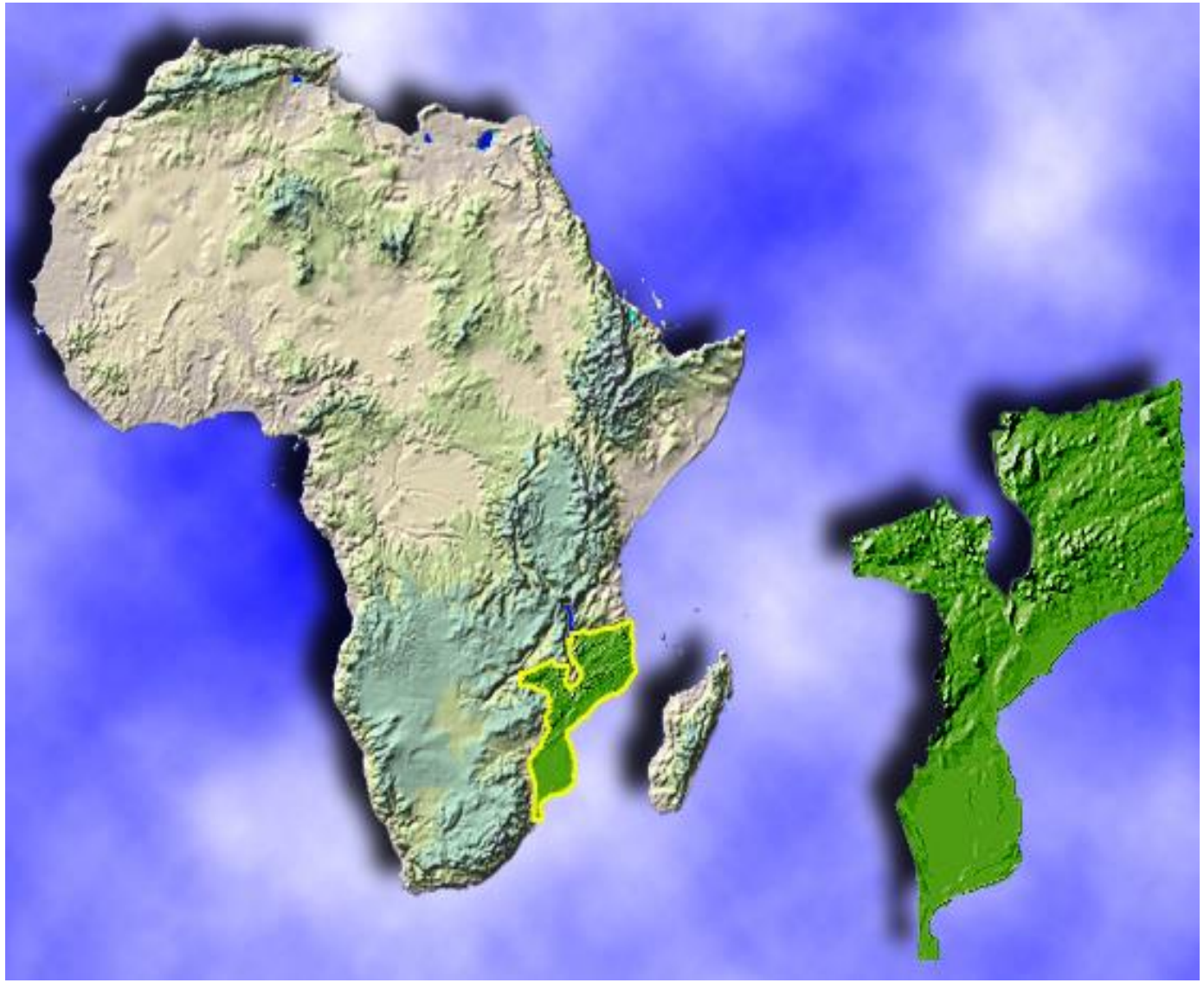
I. Background: Geographic Profile



General information:

Coordenates: 10-26º S, 30-45º E

Area: 799.380 km2

Coastline extension: 2.515 km

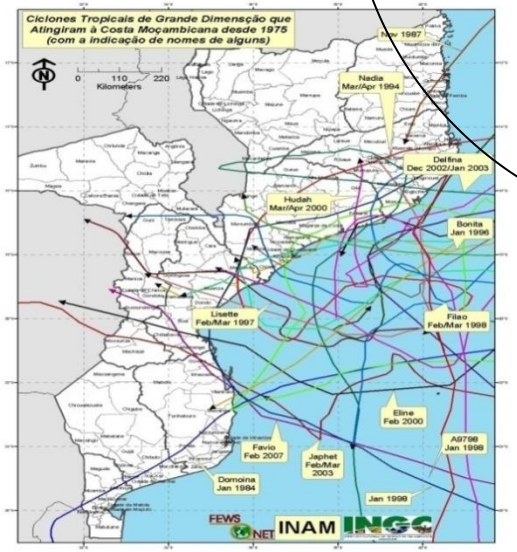
Climate: Tropical and Subtropical

Why prone to natural hazards?

- Intertropical Convergence Zone
- Southern African Thermal Depression Area
- Arid and Semi-Arid Zones
- Rift Valley
- Shared international river basins

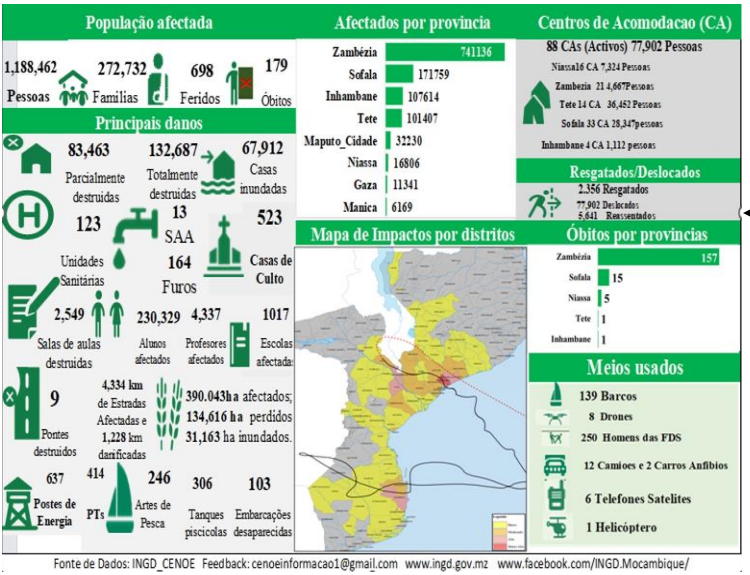
II. Major Hazards and Impacts

Cyclones

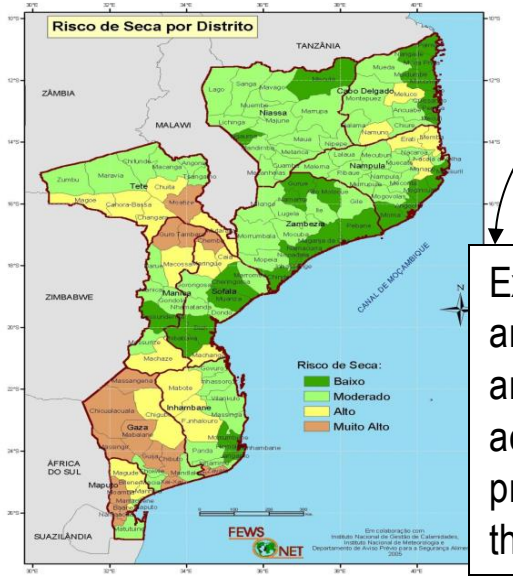


Some cyclones with greater impact:

1. Claude 1964,
2. Felicia 1978,
3. Demoina 1984,
4. Nadia 1994;
5. Hudah, Gloria, Eline in 2000;
6. Jafete 2003,
7. Boloetse 2006
8. Favio in 2007;
9. Jokwe, 2008
10. Dineo, 2017;
11. Idai, Kenneth, 2019;
12. Gombe, 2022;
13. Freedy, 2023

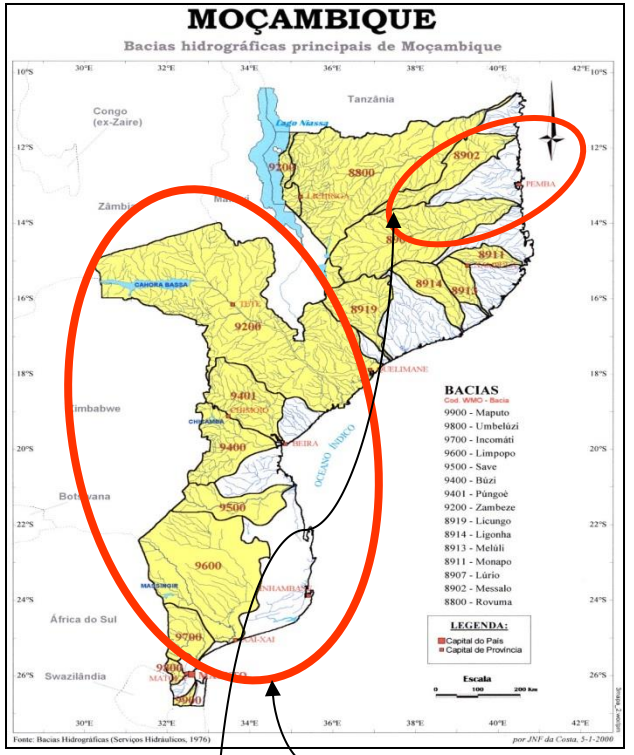


Drought



Existence of arid areas and Semi-arid, where annual accumulated precipitation is less than 500 mm

Floods



Nine main river basins in Southern Africa flow into the Mozambican coast

II. Major Hazards and Impacts

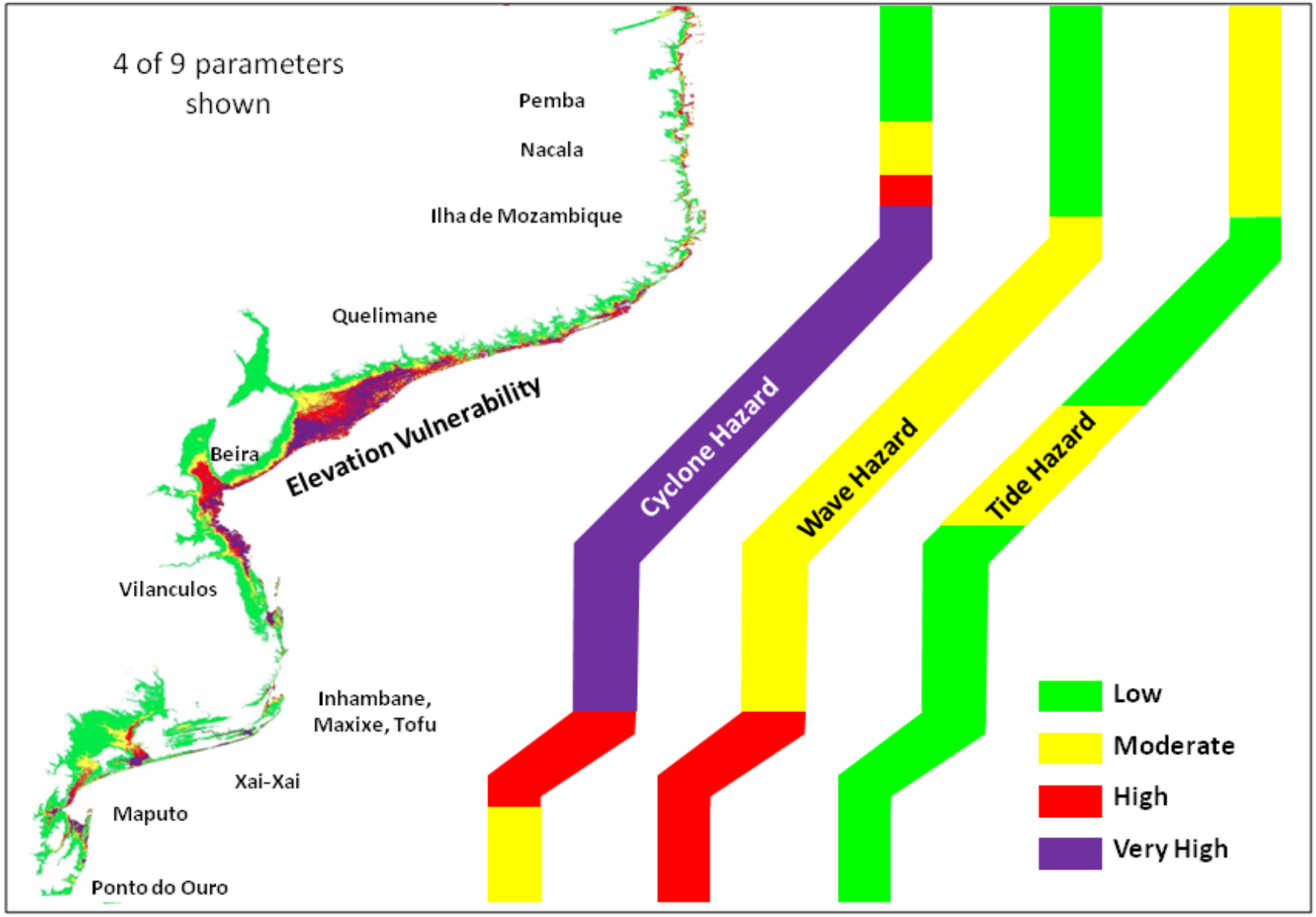
Climate Change Factors

Rising sea levels

- Flooding and inundation
- Erosion of coastal areas

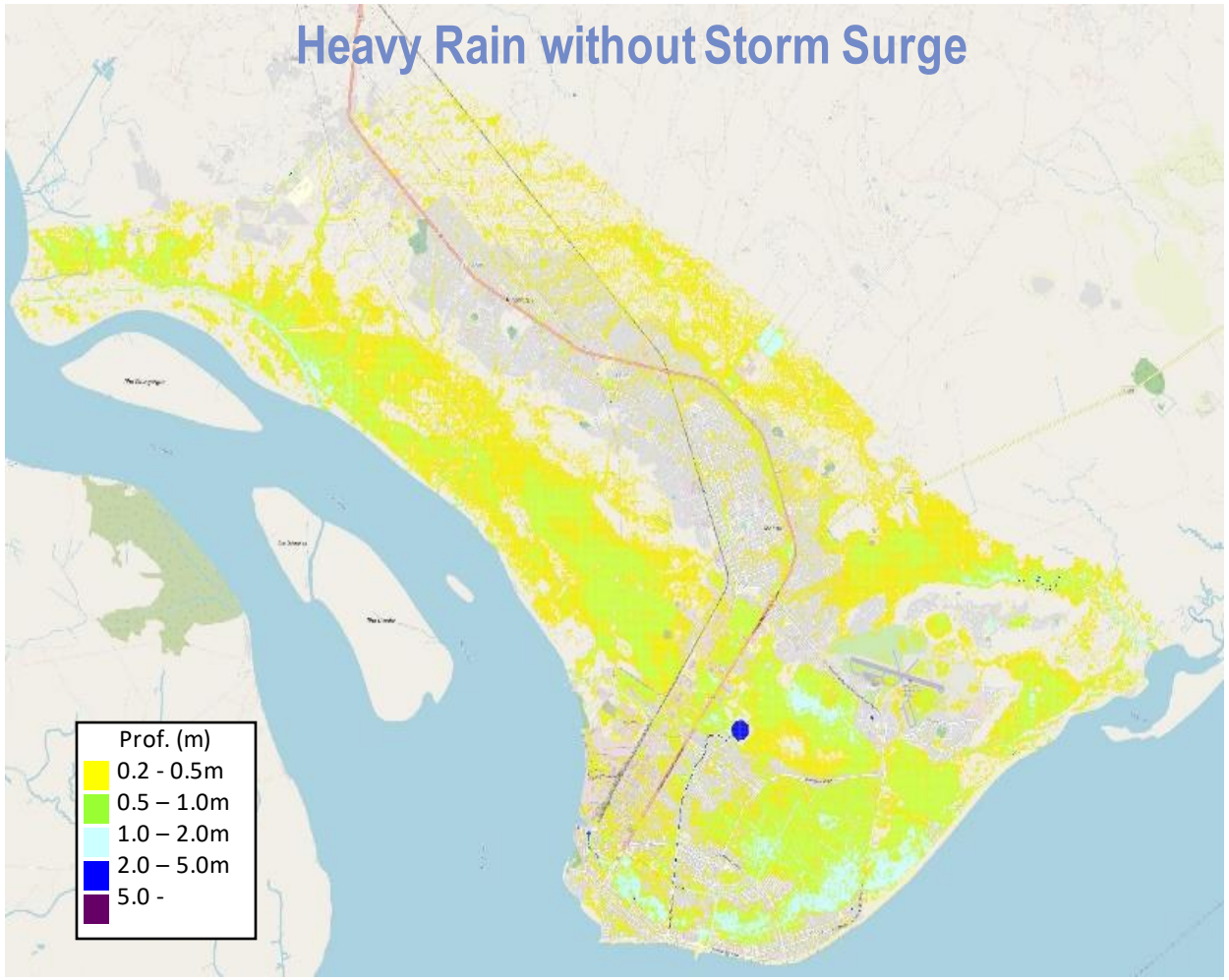
Extreme weather conditions

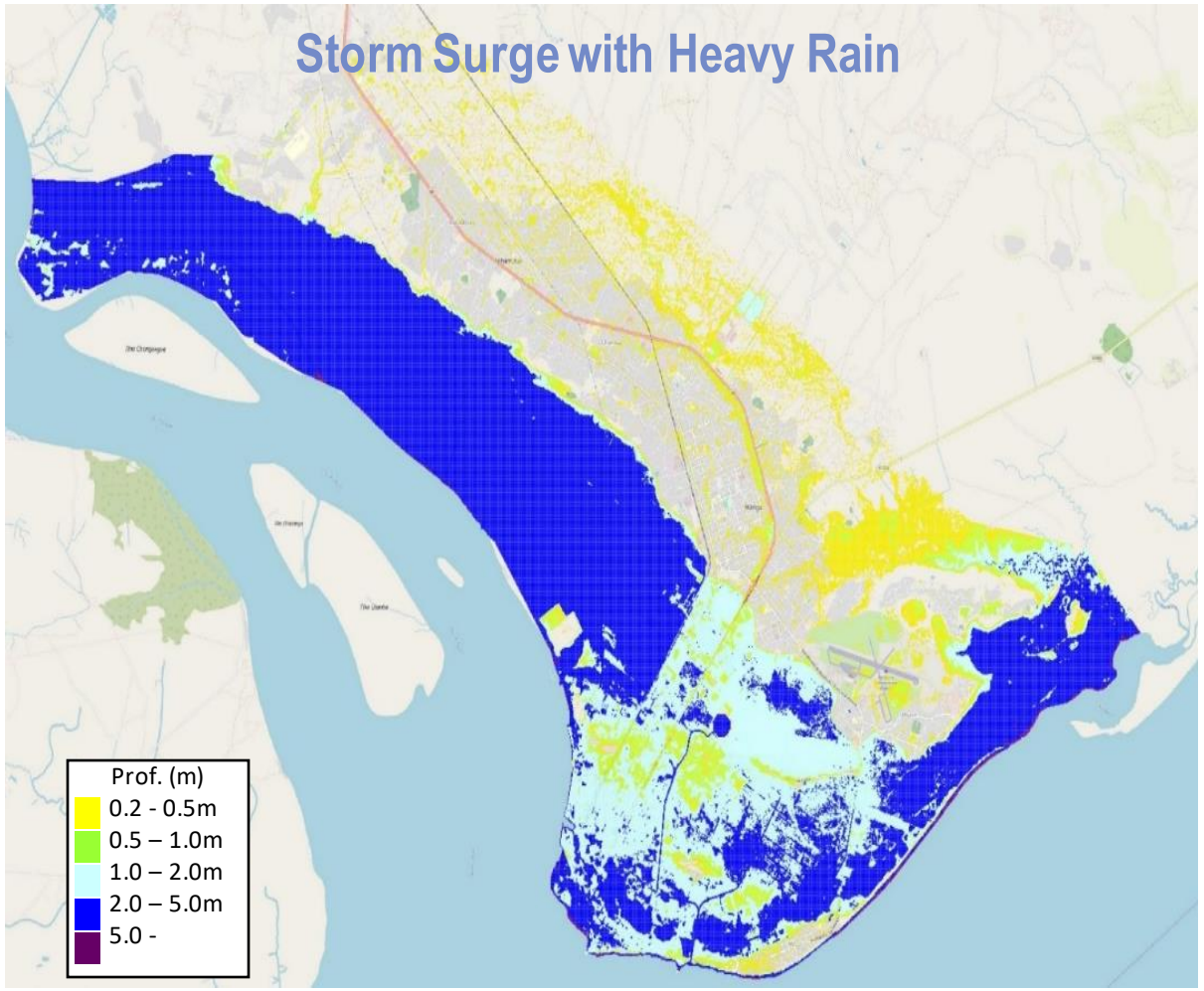
- Tropical cyclones
- Storms
- Floods
- Wind



Coarse overview of hazards and vulnerability of Mozambican coast (source: INGC 2011)

II. MAJOR HAZARDS AND IMPACTS: STORM SURGE INFLUENCE IN BEIRA CITY

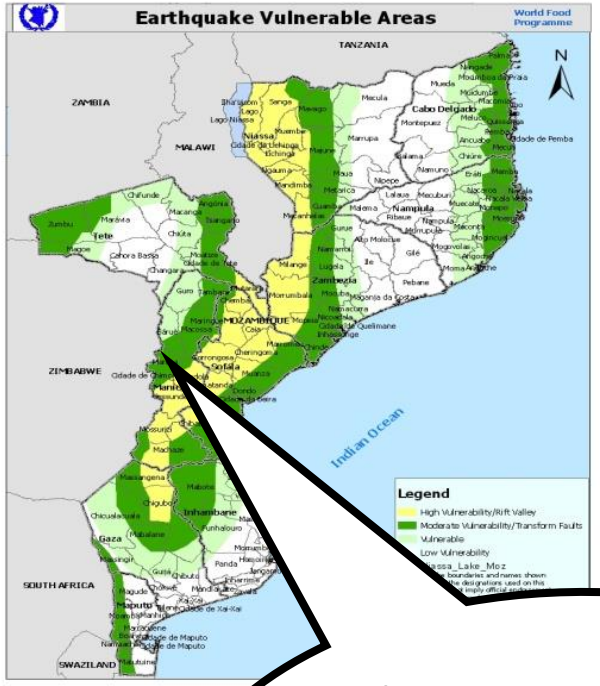




Hazard map that reflects the situation of rain and storm surge caused by the cyclone at the change of high tide.

II. Major Hazards and Impacts

Earthquakes



22nd February, 2006 of magnitude 7.0 with epicenter in Machaze (Manica Province)

Affected: 1,444

Deaths: 4

EPIDEMICS AND PANDEMICS

The most common diseases are malaria and cholera.

III. LEGAL FRAMEWORK ON DISASTER RISK MANAGEMENT AND REDUCTION

a) Law (10/2020) and Regulation (76/2020) on Disaster Risk Management and Reduction;

b) Master Plan for Disaster Risk Reduction 2017-2030;

c) Disaster Management Fund, approved by Decree 53/2017, 18 October;

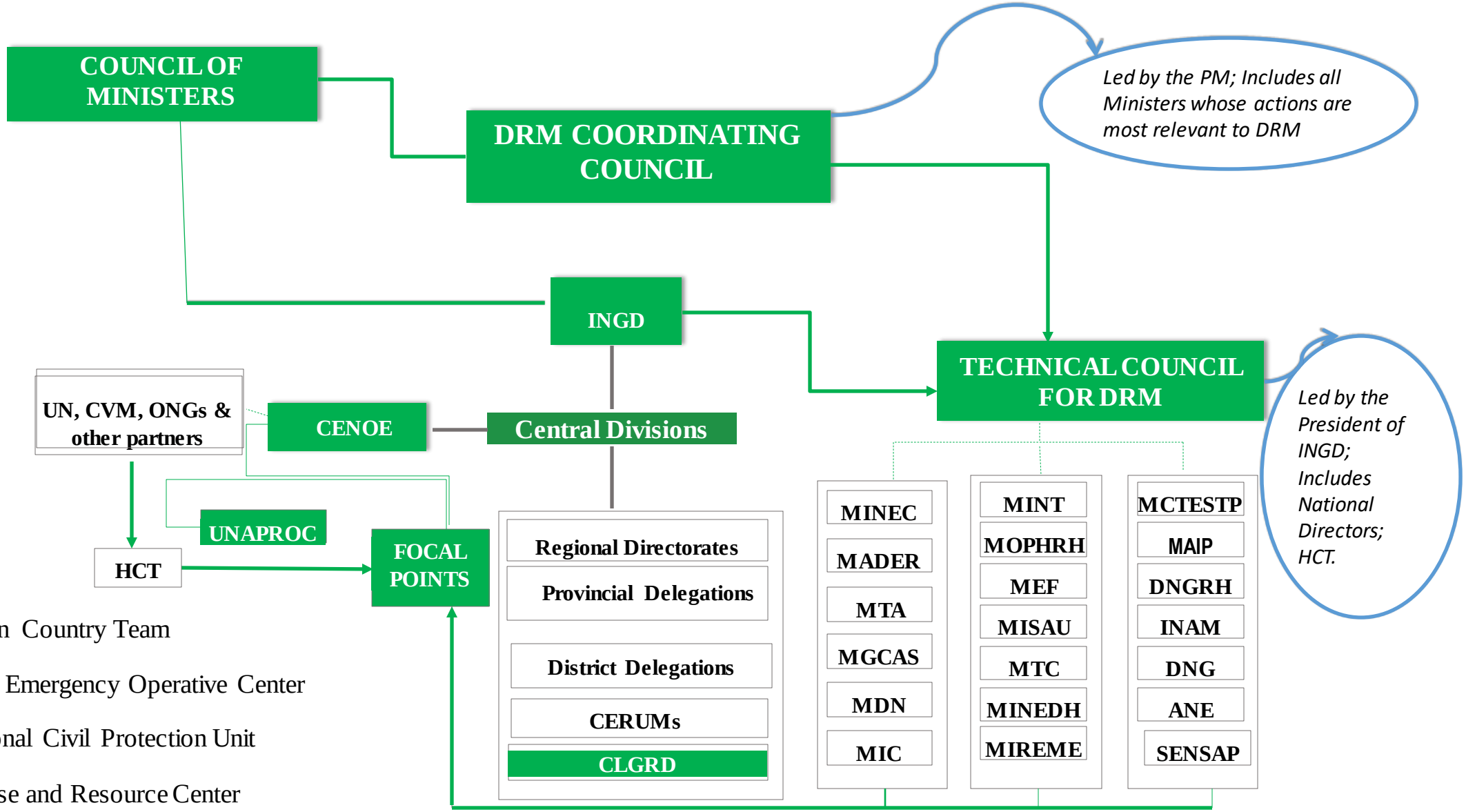
d) Policy and Strategy for IPDs Management - Resolution 42/2021 of 8 September;

e) Regulation for the operationalization of the Integrated platform for disseminating and communicating early warning for floods and cyclones (Decree No. 27/2022 of June 6, 2022);

f) Strategy for the information flow system for Early Warning of Floods and Cyclones;

g) National Financial Protection Plan against Disasters (June 2022).

IV. DRM STRUCTURE AND COORDINATION MECHANISM



HCT – Humanitarian Country Team

CENOE – National Emergency Operative Center

UNAPROC – National Civil Protection Unit

CERUM – Multi Use and Resource Center

CLGRD – Local Committees for DRM

IV. DRM STRUCTURE AND COORDINATION MECHANISM: ROLES OF INGD AND CENOE

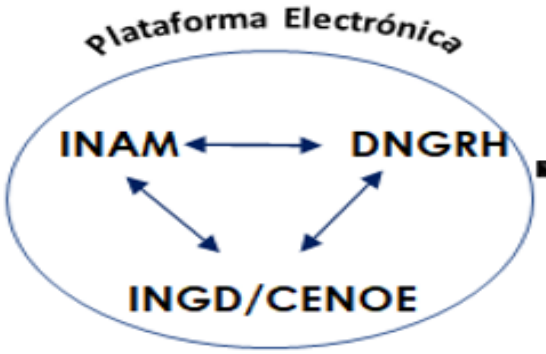
INGD:

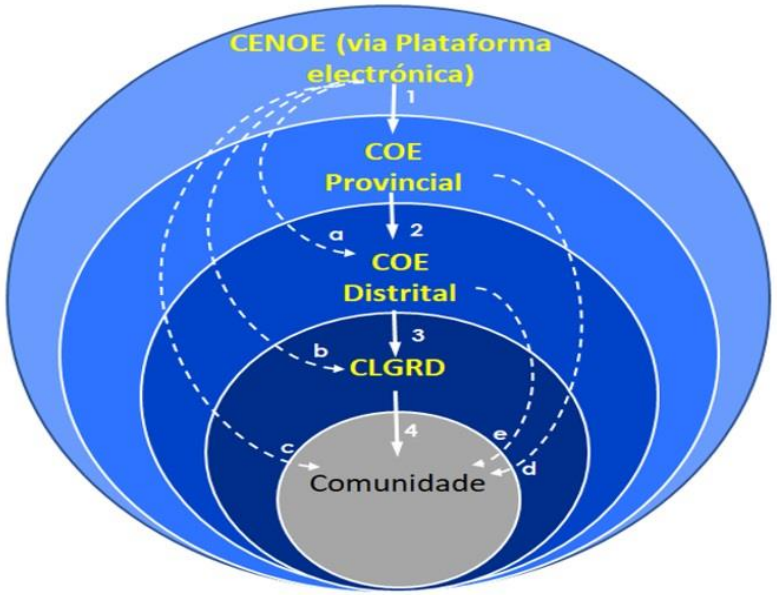
a. prevention, mitigation, preparedness and response to disasters;
b. Emergencies response;
c. the development of arid and semi-arid zones;
d. post-disaster reconstruction;
e. the National Civil Protection Unit;
f. resilience and disaster risk management programs.

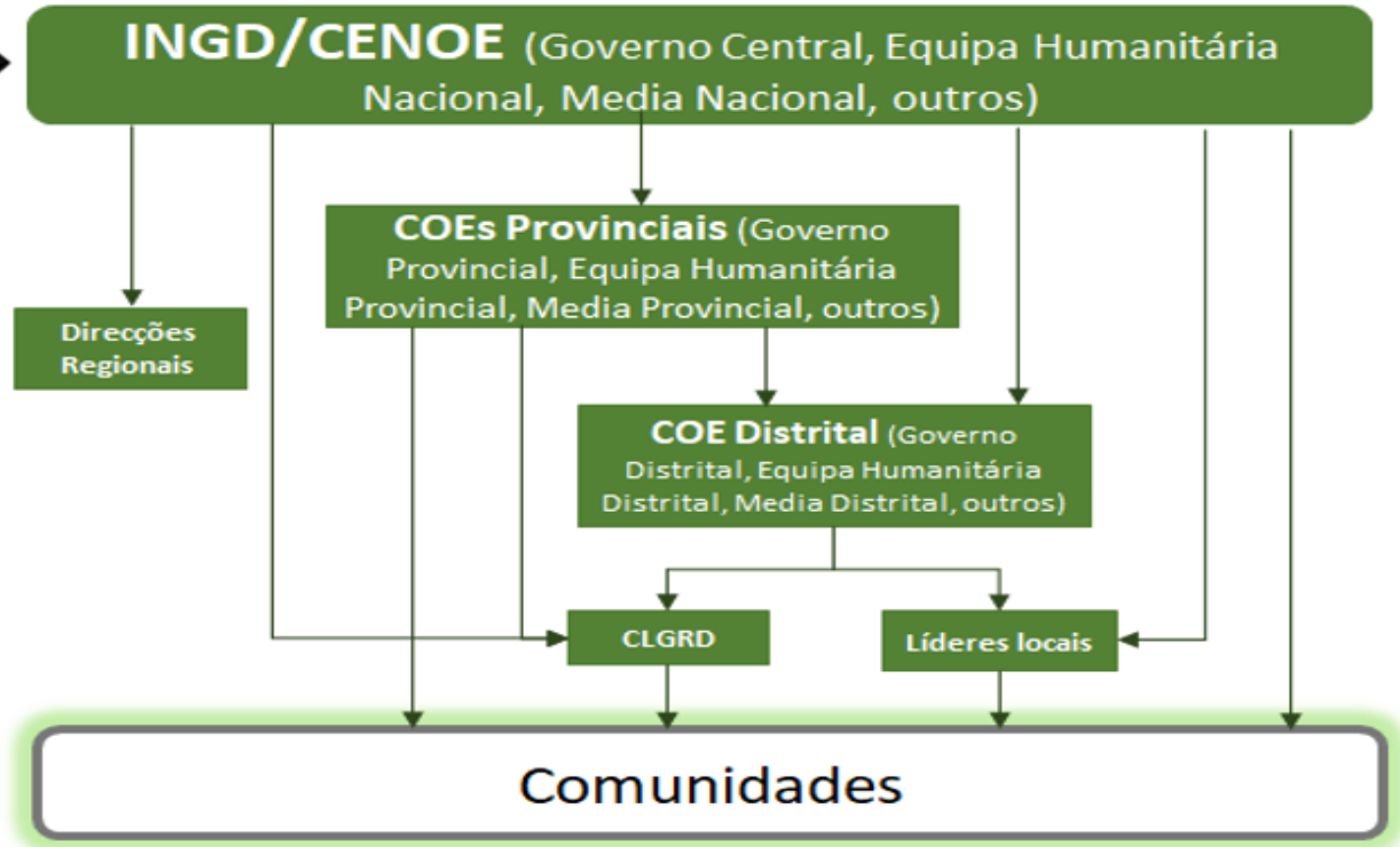
CENOE:

a. Monitoring extreme events;
b. Collect, process, analyze and disseminate information on disasters or emergencies in a timely manner;
c. Establish working rules for actors involved in responding to emergencies;
d. Carry out, in coordination with other units, emergency operations;
e. Propose the activation and deactivation of alerts.

V. INFORMATION MANAGEMENT FOR DRM: INFORMATION FLOW FOR EARLY WARNING

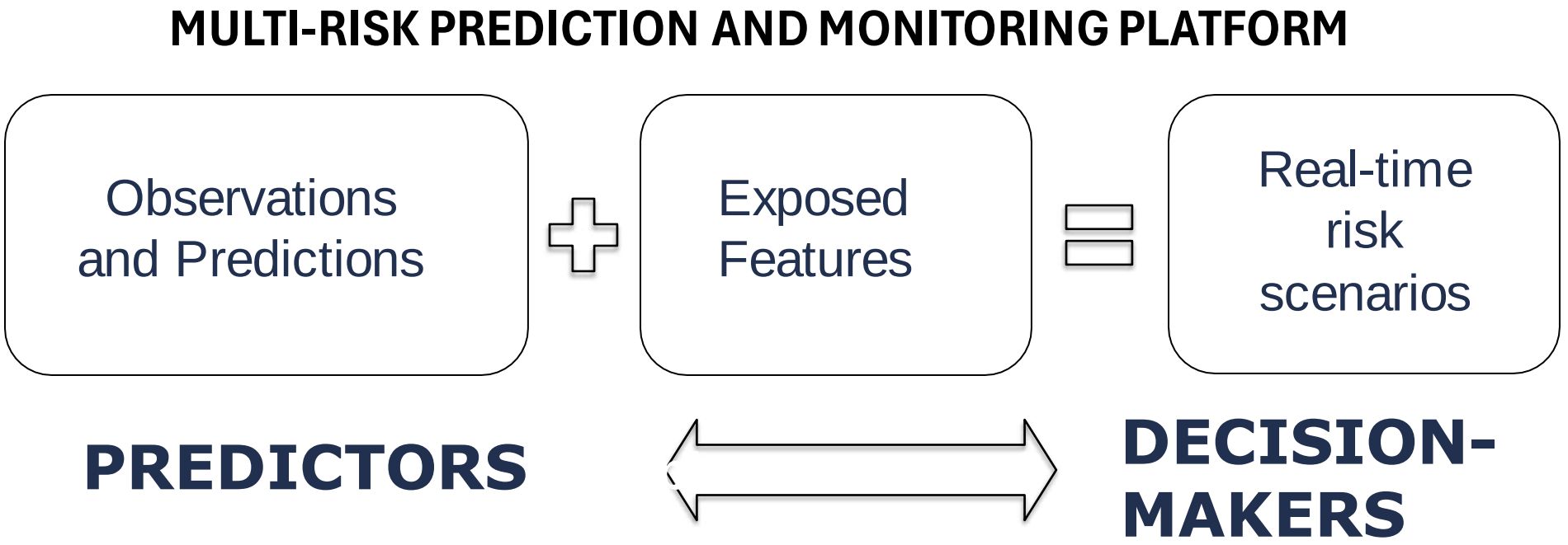




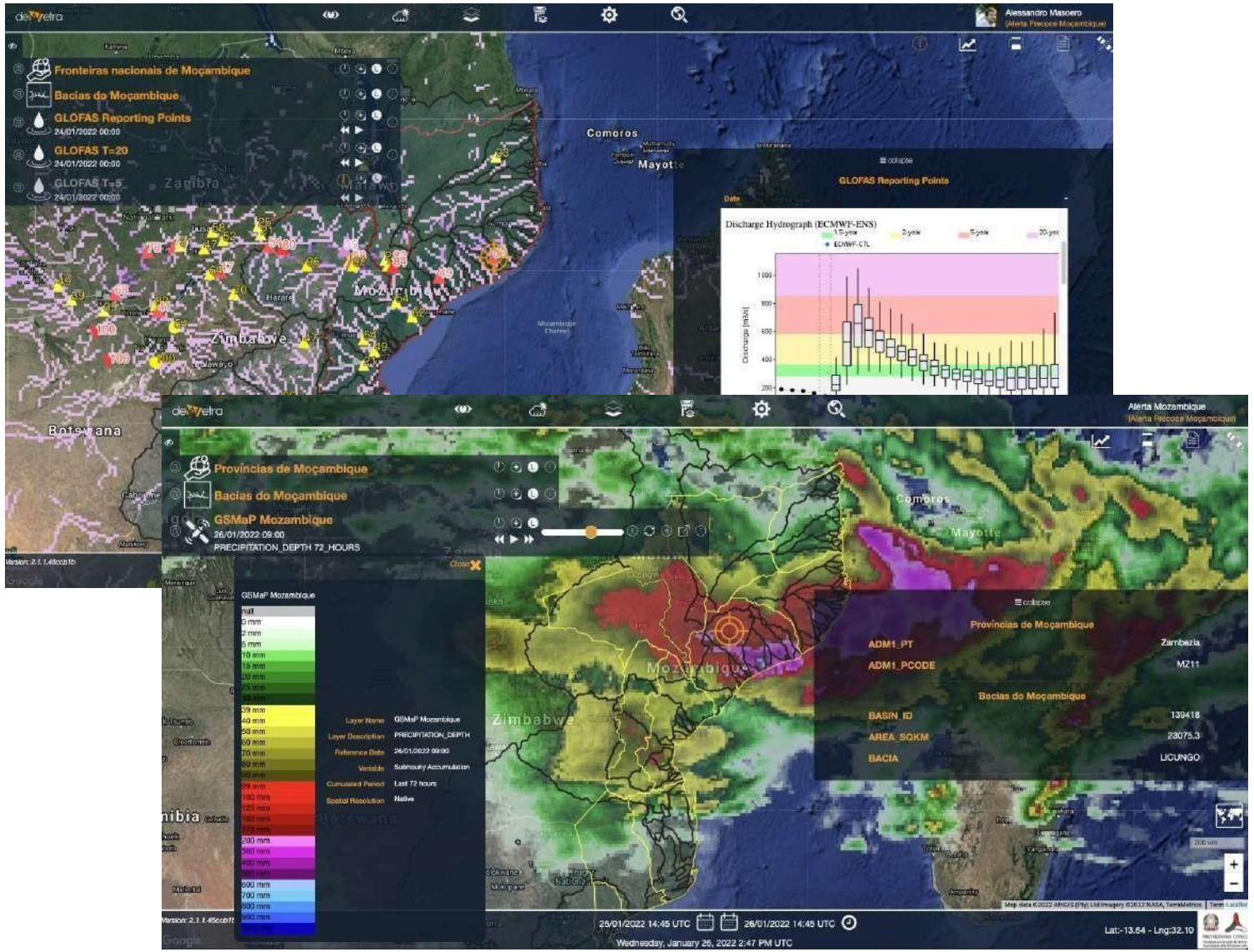


V. INFORMATION MANAGEMENT FOR DRM: myDEWETRA Platform

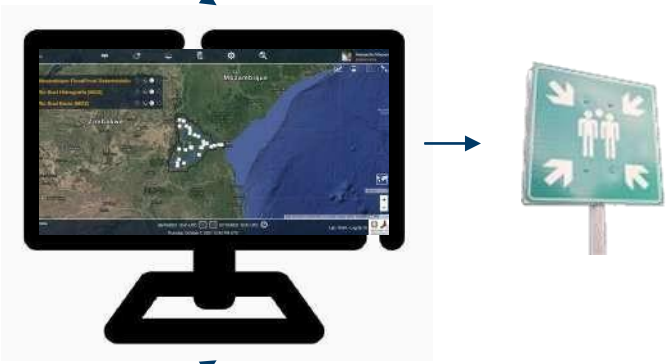
myDewetra is a platform for creating risk scenarios in real time, which allows preventive measures to be taken and reduces the impacts of the predicted event.



V. INFORMATION MANAGEMENT FOR DRM: myDEWETRA Platform



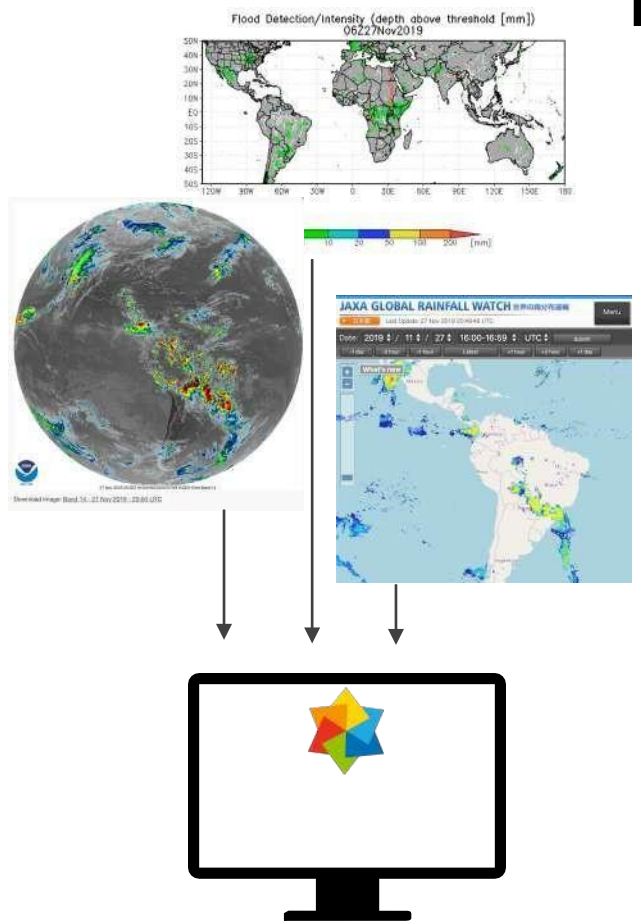
MODELS



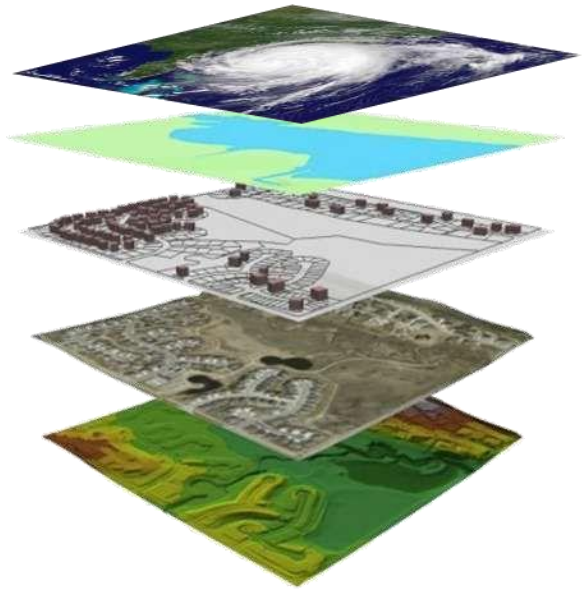
HAZARD DATA

V. INFORMATION MANAGEMENT FOR DRM: myDEWETRA Platform

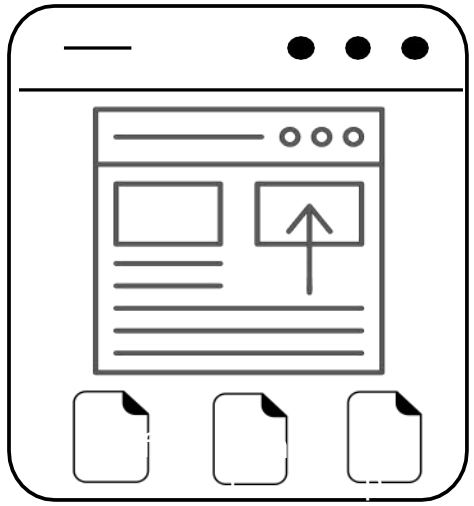
RAPID AND ACCURATE INFORMATION

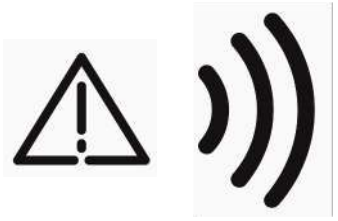


AGGREGATE MULTIPLE SOURCE



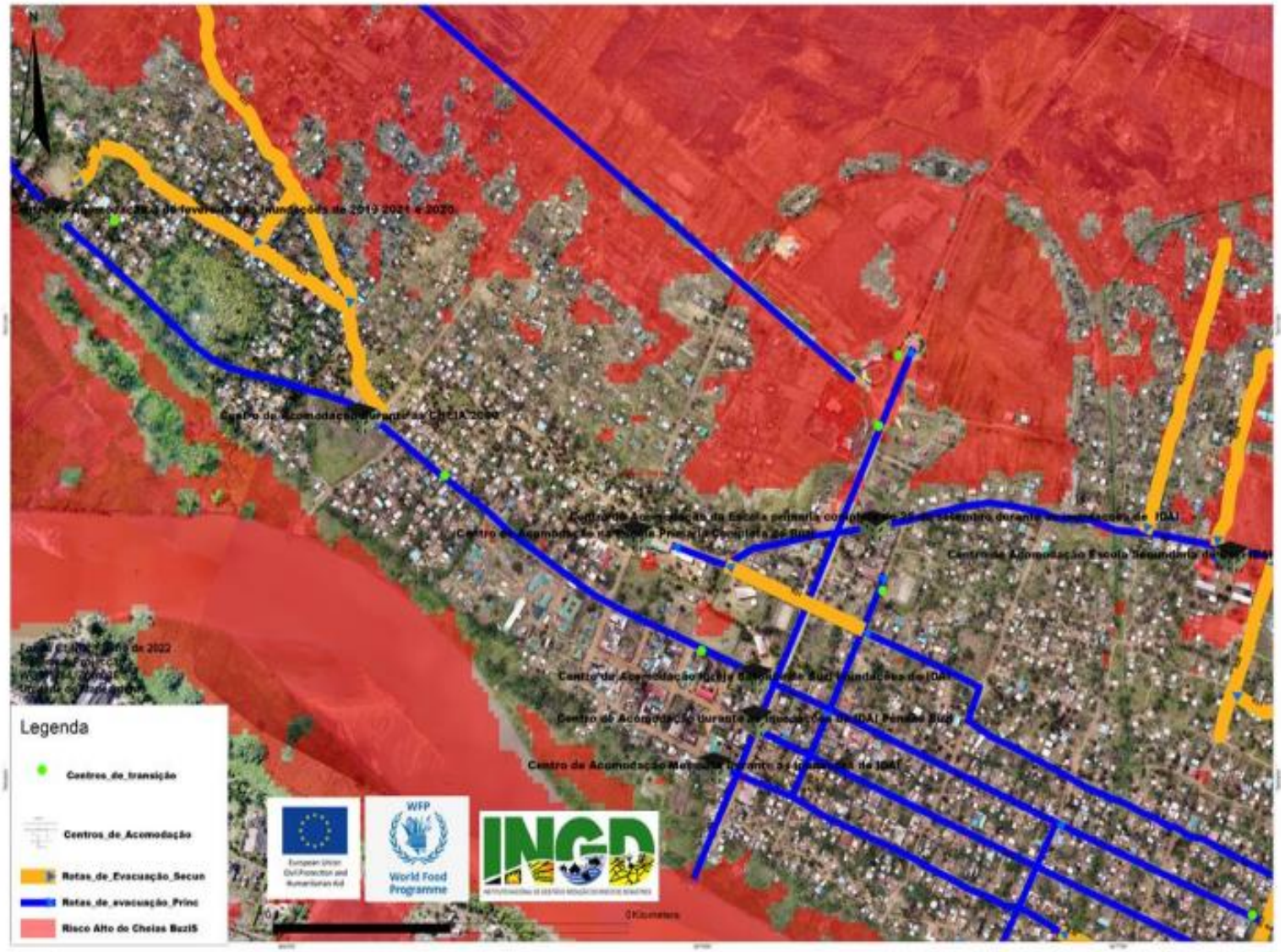
OVERLAP





COMMUNICATING

V. INFORMATION MANAGEMENT FOR DRM: Use of Drones



Hazard map of Buzi Village, showing areas at risk of flooding (red areas) produced by CENOE using drone images

VII. CHALLANGES

- Lack of data on saline intrusion;
- Lack of information on actual trend of Sea level rise;
- Limited funding for DRR interventions and Emergency response;
- Human resources capacity at local level on information management system and others;
- Access to realtime information on tide associate to extreme weather events.

Thank you for your attention!

“MAIS VALE PREVENIR QUE REMEDIAR”