



# METEOROLOGICAL SERVICE DELIVERY – Mozambique Model



## MOZAMBIQUE INSTITUTE OF METEOROLOGY (INAM)

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**Workshop: “Achieving Benefits of Enhanced Service Delivery by  
NMS in Eastern and Southern Africa  
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# Country Profile



**Location:** Southeastern part of Africa

Latitudes: 10.27' and 26.52' South;

Longitude: 30.12' and 40.51'

Area: 799.380 square km

– Population: 20 millions

**Major climate related hazards:** Droughts, Floods, tropical storms/cyclones and bush fires.

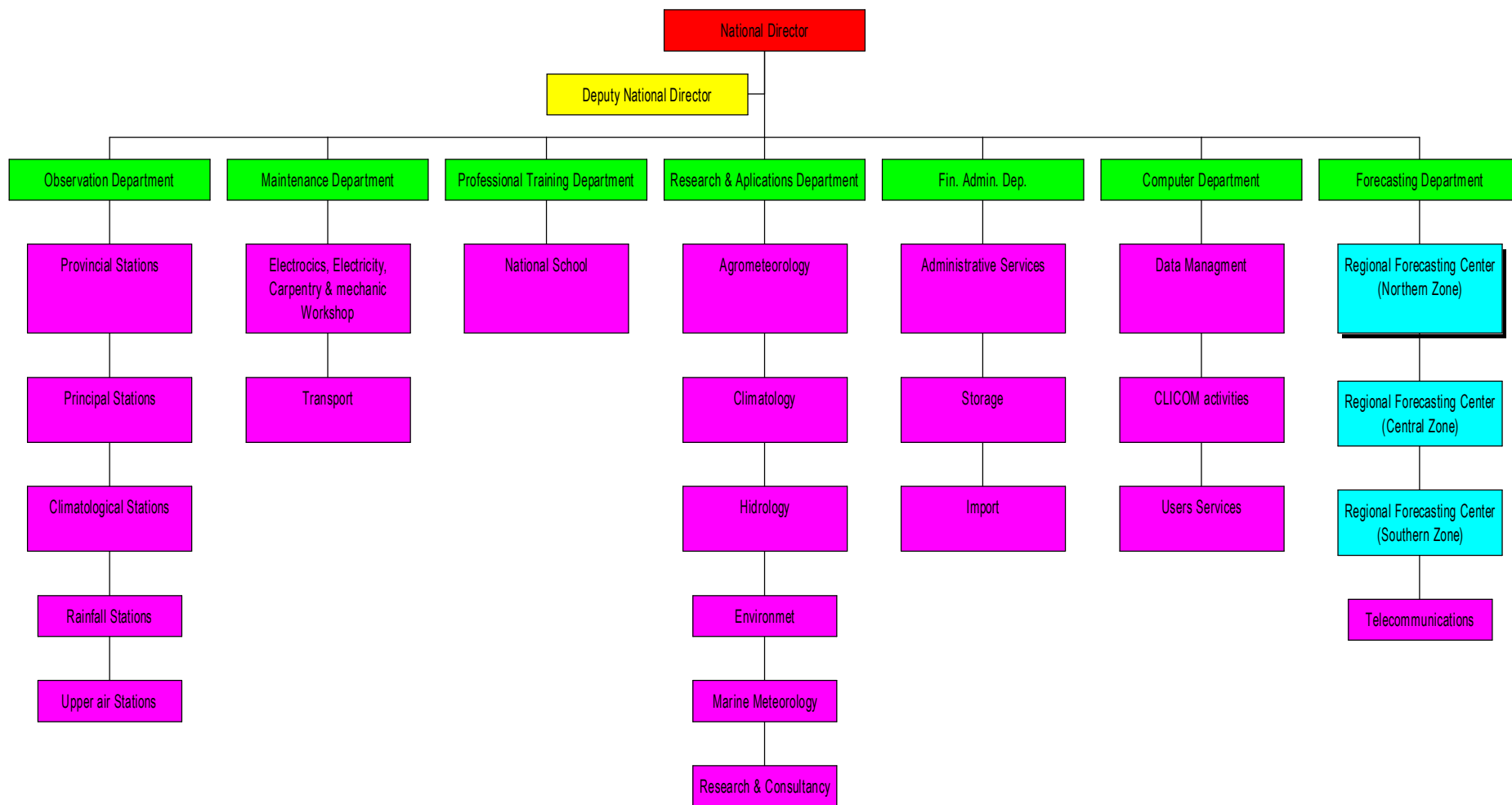


# Brief History

- 1883 Beginning of Meteorological Observations in Mozambique
- 1908 Mozambique Meteorological Service was established (SMM)
- 1989 National Institute of Meteorology (INAM) to replace SMM
  - ✓ Autonomous Institutions administrative but not financial
  - ✓ Subordinate to the Ministry of Transport and Communications



# INAM STRUCTURE





# INAM Main Activities

- Weather and Climate Observations;
- **Air Quality Monitoring;**
- Public Weather Forecast;
- Marine Weather Forecast;
- Aviation Weather Forecast;
- Seasonal Forecast;
- Research;



# INAM products and main users

Main Products	Main Users
Aeronautical met. obs. and forecasts	Aviation
Marine met. observations and forecasts	Marine sectors
Public weather forecast and warnings	Public, Disaster Management Institute, Health Sector, etc.
Synoptic, climate and agromet. observations	NMS, WMO, Ministry of Agriculture, etc.
Seasonal Forecast	Disaster Management Institute, Ministry of Agriculture, public, Private Sector, etc.



# THE VALUES OF THE ORGANIZATION

- Belief in the ability to improve the service production and services to be more useful for the users;
- Belief in continuous improvement;
- None tolerance negligence and production of low quality services;
- Belief that individual responsibility and creativity come first;
- Belief in the highest customer satisfaction;
- Belief in the capacity to generate a variety of products.



# Finance

INAM is financially fully supported by the government through annual state budget;

- ✓ At Central level the budget is directly allocated to INAM (this budget can only be used for the headquarters activities);
- ✓ At Provincial level the budget is allocated to the Provincial Directorates of Transport and Communications and these in turn allocate funds to INAM Provincial Delegations





# Constraints associated with current INAM funding scheme

- Very low budget allocated
  - ✓ *State budget is still significantly dependent on foreign aid*
  - ✓ *Meteorology not seen as priority in country development policies;*
- High dependence to foreign assistance for investment;
- Lack of capacity for equipment maintenance;
- Low salaries;
- INAM not attractive to skilled professionals;
- Poor quality of services;
- Low capacity to generate income;



# Cost Recovery policy

INAM is in a process of introducing **cost recovery** policy as this is seen as an opportunity to:

1. Generate revenue;
2. Create capacity for equipment maintenance;
3. Improve human capacity (capacity building and attraction of skilled personnel);
4. Improve service delivery;
5. Attract new customers.



# Cost Recovery: Enabling environment

- WMO encouragement and policies;
- Regional successful experiences;
- Government approval;
- Users need of improved service delivery;
- Imposition of certification of Aeronautical Meteorology Services with ISO standards;
- QMS in process at INAM since 2008.



## Cost Recovery: Constrains

- Low human capacity;
- Lack of funding for investment (e.g. certification of Aeronautical Meteorological Services is dependent on calibration of equipment, reposition of instruments, etc., for which INAM has no financial capacity);
- Low pace of implementation of QMS;
- Government not well informed and clear on the advantages of a Cost Recovery Policy.



## Cost Recovery: INAM Steps

- Identification of potential sectors and products of interest;
- evaluation of potential contribution of these sectors;
- Identification of mechanisms to persuade the sectors to contribute for the services delivered;



## Cost Recovery: Progress

- Legislation to create Meteorological Taxes prepared and submitted to the Ministers Council for approval (already scheduled);
- Legislation to fix Aeronautical Meteorology Taxes submitted to the Ministry of Transports and Communications for Approval (has to wait for approval of the legislation that create Meteorological Taxes);
- Currently working with mechanisms to fix taxes for marine sector (INAM expects to have inputs from the project named *“Evaluation of Socio-economic benefits of using weather and climate information in the Marine and Port Services sector”*, funded by WMO).



## Cost Recovery: Progress

- QMS under implementation ;
- Working to certify the Aeronautical Met. Services in 2011
- Number of projects designed to improve the quality of services delivery;



*Obrigado  
Assante  
Thank you  
For your attention*