



# **NATIONAL REPORT**

## **MADAGASCAR**

### **8th SOUTHERN AFRICA AND ISLANDS HYDROGRAPHIC COMMISSION CONFERENCE**

**Walvis Bay Namibia, 6-7 September 2011**

#### **Introduction**

Madagascar is the largest island in the Indian Ocean and the fourth one in the world, with 5603km coast and surrounding sea famous by the exceptional biodiversity, considerable resources for fisheries and offshore industry.

The fragility of such ecosystem is obvious and needs judicious protection and efficient management linked to the safety of navigation, marine environment preservation, territorial protection and resources exploitation. Yet, reliable data and updated charts, basic and essential tools, are deficient for the existing charts are those made by French Hydrographic Service (SHOM), from surveys done more than 40 years earlier. The lack is so evident that Madagascar western sea is classified by IHO as dangerous for navigation.

## **Context**

Face to the stake and the risk caused by the lack in terms of updated maritime and terrestrial cartography in Madagascar, the Malagasy government decided to improve the environment of the sector. The main reform is to strengthen the Foiben-Taosarintanin'i Madagasikara (FTM), the National Geographic and Hydrographic Institute of Madagascar in his role of cartography and geographic data infrastructure authority. The main mission of FTM, as a public organization, is so to regulate the geographic information sector and to equip the territory (terrestrial and maritime) with a unique and precise Geographic and Hydrographic Data Infrastructure.

The vision, early defined for the ten next years is: "Geographic and hydrographic data become a real structuring infrastructure". The age of the basic maps will be reduced and scale will be increased to 1/50.000, at least for high dynamic areas. Effort will be focused, for the three first years, on rebuilding and modernizing the foundation (legal frame, authority, basic infrastructure, access to geographic information, archiving system, human resources development, etc.). A better knowledge of the territory, a good regulation system of the sector and an adapted sustainable founding mechanism are estimated for the fifth year.

### **1 – Hydrographic National Committee (HNC)**

Decree for HNC creation has been adopted in April 2011. HNC is composed by 15 members issued from several sectors concerned by the hydrographic cause in Madagascar. Members' appointment is ongoing and the first meeting of the committee will be held shortly.

### **2 – National Prioritized Survey Plan (NPSP)**

The first activity of the HNC will be to establish and validate the NPSP. However, in the meantime, a technical team, composed by FTM, APMF (the port and maritime agency) and the National Navy, is working on the draft document of NPSP (based on the IHO draft), which will be presented to the HNC.

### **3 – Bathymetric data of Toamasina and Mahajanga ports**

Bathymetric data of Toamasina and Mahajanga ports are now available at FTM. Some problems on data processing have been met. But with the help of SHOM technicians, the problems have been solved. Now, FTM is working on these data to produce inundation maps.

### **4 – Capacity building**

#### **4.1- Equipment**

FTM has also just received, through UNESCO office, the equipments acquired with the COAST MAP-IO project. Equipments include mini-sounder single channel, single frequency transducer, hemisphere GPSR 100 DGPS receiver.

#### **4.2- SAIHC follow-up advisory visits**

From July 11 to 15, 2011, a SAIHC team, comprising experts from SHOM and the World Bank, was in Madagascar for a follow-up advisory visits on development of prioritized national survey plans in the country. Meetings with the Ministry of Country Planning and the Ministry of Defense allow to consider the significance of the use of remote sensing technology to update the existing database with an average scale of 1/150.000. The island of Nosy be, located on the west coast of Madagascar, was selected as the pilot area. Works should be achieved on December 2011. It may be an opportunity to use the new hydrographic equipments. Contribution from partners is welcome.

The SAIHC team has also visited the ENEM (Ecole Nationale d'Enseignement Maritime), the malagasy maritime training center, in Mahajanga. The goal of the visit was to identify the possibility to install an AIS station and to improve the capacity of the training center.

### **5 – Perspective**

#### ***5.1 – Training***

Two engineers from FTM will participate to 2 events:

- With the International Maritime Organization, the regional training course in Basic Electronic Navigational Charting (ENC) and ENC production, which will be held in Durban, South Africa, from October 24 to November 4, 2011;
- With the SAIHC, the workshop on Port and Shallow Water Surveys, which will be held in Simon's Town, South Africa from November 21-25, 2011.

#### ***5.2 – National cooperation***

A convention between FTM and the Malagasy Ministry of defense, in charge of the Navy is going to be signed. The protocol aims to facilitate the access to geographic database by the Ministry of defense for its needs. The Ministry of defense helps FTM for several activities like the safeguard of geographic and hydrographic infrastructure, information updating or allowing vessel for hydrographic works.

### **Conclusions**

FTM has to face to multiple basic problems. Age average of the employees is around 49 years old. It's important to recruit young qualified engineers and technicians or to develop an adapted capacity building program. Only one CatB hydrographer is now available at FTM.

According to the mission statement of FTM, it is also important to modernize the analogical and numerical archive. Policy in terms of chart and database archiving has to be implemented.

Feasibility of technical assistance and in-situ training program has to be analyzed. This is to give opportunity to associate a maximum number of trainees.