

Indian Ocean Commission report of activities (January 2007 – May 2008)

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Abstract:

The Indian Ocean Commission, inter-governmental organisation for regional cooperation, supports the sustainable development of the IOC countries (Comoros, France/Reunion, Madagascar, Mauritius and Seychelles) in various fields such as fisheries, tourism, education, including coastal and marine resources management. In July 2005, a decision was taken at the IOC Head of States Summit at Antananarivo (Madagascar) for the secretariat to give due consideration to the protection and conservation of cetaceans in the region. The decision was followed by a workshop organised on the 1st -4th July 2007 in Sainte-Marie, Madagascar. The workshop has provided several recommendations for action and proposal of several activities for the study and conservation of cetaceans (and dugong) in the South-West Indian Ocean. Amongst the actions undertaken to date are the preparation of a regional project for a study of cetacean in the region and the creation of a network of partners and institutions among the IOC countries. The aim of the network is for the exchange of information and expertise on cetacean. In order to further develop the capacity of the scientists in the region, the 24th Council of Ministers of the IOC granted approval for a team of scientists from its member states to participate in the scientific committee of the International Whaling Commission, with the status of observers. At national level, activities are being undertaken notably by NGOs. GLOBICE in Reunion Island is conducting cetacean studies and develop educational programs since 2001, and since 2006 is in charge of the local stranding networking. In Madagascar efforts have been deployed to develop research programs in many coastal areas for increasing information on cetacean population. Where as in Maurice, the activities have been focused around dolphin watching and in Seychelles activities are oriented mostly in the relation to the depredation of tuna by cetaceans.

1. THE INDIAN OCEAN COMMISSION.

The Indian Ocean Commission (IOC) is an inter-governmental organisation established in 1984 for regional cooperation, which aims to support the sustainable development of IOC countries. The Members States are: Comoros, France/Reunion, Madagascar, Mauritius and Seychelles.

The main mission of the IOC is to safeguard the interest of its island States in the following domain:

- Diplomatic and political co-operation,
- Economic and trade co-operation,
- Social and human development, AND
- Sustainable development with focus on environment and natural resources

2. CONTEXT.

The Whale Indian Ocean Sanctuary has been established in 1979 following an initiative of the Government of Seychelles. The Exclusive Economic Zones (EEZ) or the 5 Indian Ocean Commission's (IOC) countries (Comoros, France / Reunion Island, Madagascar, Mauritius and Seychelles) belong to that Sanctuary. Since the creation of the Sanctuary, only a few actions with respect to research, monitoring, conservation and the development of a sustainable ecotourism have been implemented in the 5 countries. These activities have been mostly undertaken by the civil society and private operators.

At the last Indian Ocean Commission Heads of States Summit at Antananarivo (Madagascar) in July 2005, decision has been taken to strengthen the protection of whales throughout the sanctuary in the IOC countries (*«promote through the International Whaling Commission (IWC) concrete conservation measures in the Whales Sanctuary»*).

The Indian Ocean Commission is currently implementing various projects and programmes in environment and management of natural resources, amongst which is the regional project for the setting up of a regional

network for MPAs funded by COI/FFEM/WWF/CI. During the first steering committee meeting of the project in June 2006, some recommendations have been taken to enhance the actions toward that protection of the whales within the Sanctuary as most, if not all the MPAs of the region form part of the Sanctuary.

The background in the South West Indian Ocean concerning marine mammals can be summarized as followed:

- A **rich biodiversity**: various species of whales and dolphins, some of them resident (sperm whales) and some others, migratory (humpback whales). The presence of dugongs in East Africa, Seychelles (outer islands), Comoros and Madagascar, but the populations are poorly known but suspected that the species is becoming extinct.
- A **lack of scientific knowledge**, especially concerning the size and repartition of the population.
- A **high potential to develop a sustainable eco-tourism** (whale and dolphin watching) with the local population.
- **Many threats**: hunting, by catch, acoustic disturbances, harassment.
- An important **human / cetacean's interaction** with adverse impacts for the economy of fisheries (depredation).

3. REGIONAL WORKSHOP IN SAINTE-MARIE

The IOC organized a workshop in Sainte-Marie (Madagascar) from the 1st to the 4th of July 2007, to promote **Research and conservation of cetaceans (and the dugong) in the IOC countries.**

About 50 people participated to the workshop amongst were scientists from scientific institutions of the IOC countries, the Natural History Museums of Paris and New York and representatives of governments, the civil society and the private sector, mainly from the fisheries and tourism.

The main results of the workshop were:

- An assessment of the initiatives at national and regional level regarding the conservation of cetacean in the Western Indian Ocean,
- A consensus was reached for the creation of a cetacean network, in order to exchange information, experiences and to develop common projects,
- The preparation of a regional project for the IOC member states in order to finance concrete activities for the study and conservation of cetacean and dugongs throughout the region.

Based on these results, the IOC is now working on two main action areas:

1. The preparation of a regional project and the search for funds in order to implement concrete activities identified during the Sainte Marie workshop.
2. The implementation of a network of partners.

4. RESEARCH AND CONSERVATION PROJECT FOR CETACEANS AND DUGONG IN THE IOC COUNTRIES

A concept paper has been prepared based on the outputs and recommendations of the Sainte-Marie workshop. Several funding agencies and foundations were contacted among them the Global Environmental Fund (GEF), the French Global Environmental Fund (FFEM) and the TOTAL Foundation.

The global objective of the project is to protect cetaceans and the dugong, improve scientific knowledge and promote a sustainable eco-tourism, by actions of conservation, research and education, through an efficient network of stakeholders from the IOC countries, in the Indian Ocean Whales Sanctuary.

The main areas of intervention of the project would be:

1. Creation of a regional network and institutional guidance
2. Research and capacity building
3. Education and awareness
4. Development of a sustainable ecotourism
5. Cetaceans-fisheries interactions (depredation and hunting)
6. Research and conservation on dugong in Madagascar, Comoros and Seychelles

The project is being designed in such a way that it would involve the participation of various stakeholders from government institutions, mainly the Ministry responsible for fisheries, environment and tourism, local communities, NGOs and international organisations, conventions and initiatives such as SMM, ECS, Nairobi Convention, CMS, IUCN and CBI. To ensure that there is a combine effort and ownership of the project, it is

of importance that synergy is built in coordination with the other regional projects and programmes initiatives (SWIOFP, ReCoMaP) as well as the local activities funded through other agencies such as UNDP Small Grant Program, etc.

5. STUDY FOR THE CREATION OF A CETACEAN NETWORK IN THE SOUTH WEST INDIAN OCEAN.

The ultimate goal is to develop an efficient and self-sustainable network which involves all the stakeholders and allows sharing of resources, experiences and expertises. Among the stakeholders identified are local population, government, civil society, private sector (tourism, fishing), and scientists.

A study is actually being conducted with the financial support from the Regional Coastal Zone Management Program (ReCoMaP). The latter is a programme financed by the European Union through the 9th EDF and being supervised by the IOC. Questionnaires were sent to the various stakeholders and several workshops are being organized in the IOC countries.

The study will address the following issues:

- Following up from Sainte-Marie's workshop: existing projects & partnerships,
- Defining the Network's characteristics (membership, functioning, funding, program),
- Identifying priority collaboration areas and actions,
- Specifying purpose and contents of Network's website.

6. NATIONAL AND REGIONAL INITIATIVES

5.1. Comoros

In Comoros, the French NGO Megaptera is supporting the development of whale-watching (humpback whales observed in winter) in collaboration with the local communities (mainly in the region of Chindini, Grande Comore with the NGO N'Duju).

5.2. France / Réunion

In Réunion, GLOBICE (Groupe Local d'Observation et d'Identification des Cétacés), a local NGO, is conducting cetacean studies and develop educational programs since 2001, and since 2006 is in charge of the local stranding network.

Scientific studies.

On-going boat based surveys are conducted all year round off the West and South coasts of Reunion. Studies are dedicated to cetacean species diversity and distribution and photo-identification of the main species observed (Indo-Pacific bottlenose dolphin, common bottlenose dolphin, melon headed whales and humpback whales) A total of 10 species were observed within 5NM from the coast. The most frequent delphinid species were the indo-pacific bottlenose, the spinner and the common bottlenose dolphins, which were observed year-round. Photo-identification data showed a high recapture rate of *indo-pacific bottlenose dolphin*, strongly suggesting a resident population. The humpback whale uses the coastal waters of La Réunion seasonally, during winter. The high proportion of mother-calf pairs indicated that La Réunion might represent a breeding area for this species. To date no photo-ID recapture have been observed between years. Pantropical spotted dolphin, melon-headed whale and Fraser's dolphin were sighted at a medium frequency, in deeper waters, and tended to favour the southern part of the island. Three coastal species (humpback whale, indo-pacific bottlenose and spinner dolphins) were frequently using the newly created marine protected area.

Iles Eparses, are also surveyed. In August 2005, Globice conducted a boat based around Glorieuses, focussing on humpback whale photo-ID. During winter 2007-2008 land based surveys are conducted from Tromelin Island, mainly dedicated to humpback whale.

A sperm whale survey was initiated in May 2008 around Reunion and Mauritius islands, using photo-identification and acoustic methodology.

Awareness and education.

GLOBICE is conducting education programs towards scholars and local population to raise awareness on cetacean conservation issues.

Conservation issues.

Whale and dolphin watching is constantly increasing in la Réunion, and no specific legislation is in place. GLOBICE and the National Museum of Natural History have edited guidelines.

5.3. Madagascar

The biodiversity richness and the highest rates of endemism in Madagascar's terrestrial and marine environments make the Island unique in the world. Moreover, this natural environment has been constantly facing major anthropogenic and natural threats. Therefore, the Malagasy Government has expressed their engagement to "cherish the environment" (7th Engagement in the Madagascar Action Plan") when developing a common vision "Madagascar Naturally". The promotion of research and development of industries around environment such as ecotourism are among the government programs for protecting this unique environment. The present report summarizes the conservation programs on cetacean species by different NGOs and associations for achieving the Government vision "Madagascar Naturally".

Research programs.

Efforts have been deployed to develop research programs in many coastal areas of Madagascar for increasing information on cetacean population. This information will contribute to the conservation actions of cetacean in Madagascar's waters. Research programs on humpback whales were conducted in three breeding sites along the eastern and western coast of Madagascar. Research program focused on humpback dolphin population was conducted in the north-western coast. The following points summarize the major findings from the period of June 2007 – June 2008:

- Humpback whales were noticed to arrive earlier in the coastal waters of Madagascar during 2007 than the previous breeding seasons. Additional data on whales (photos, genetic and songs samples) were collected during 2007 breeding season that contributes to consolidate the knowledge of the species and to ensure their protection. The will to protect humpback whales in Madagascar waters may be illustrated by the rescue of one humpback whale entangled in nets by Megaptera team in Sainte Marie. The detailed analysis on the population migrating in the northeastern coast that will be reported by Cetacean Conservation and Research Program (CCRP) of the Wildlife Conservation Society to IWC during this coming meeting. These reports will contribute to the conservation of humpback whale population migrating in Madagascar's waters.
- Confirmation of the occurrence of species that was suspected to occur in Madagascar waters was made during the research program, e.g pygmy killer whale (*Feresa attenuata*), pilot whales (*Globicephala melas*). The most northern observation of right whales in Madagascar was made by Rosenbaum et al. (2001). The second observation of right whales was made 10 years later in Antongil Bay by the French Association Megaptera.
- Identification of larger population of humpback dolphins (compared to the southwestern population) was made in the northwestern waters during the preliminary investigation

The different projects conducted in the coastal waters of Madagascar are summarized below:

Isle of Sainte Marie (16°53.89'S, 49°54.38E) – Eastern coast

Two main projects on humpback whales were conducted in Sainte Marie between July and September 2007.

Project 1: "Monitoring of the population of migrating humpback whales in Sainte Marie Channel".

Responsible: French Association Megaptera

Project 2: "Acoustical study of migrating humpback whales in the coastal waters of Sainte Marie".

Responsible: French Association Megaptera and University of Paris XII

Taolagnaro (25°01.9'S, 46°52.62'E) – Southeastern coast

A humpback whale project has been conducting in this area since 2005 to monitor the impacts of the construction of Ehoala harbor to the migrating humpback whales in the northern region of Madagascar.

Project: « Monitoring of the impacts of construction of the harbour on migrating humpback whales ».

Responsible: Biodiversité et Conservation/QMM Taolagnaro

Anakao region (23°41.0'S, 43°39.8'E) – Southwestern coast

A research project to study the population of humpback whales during the beginning of the breeding season was conducted by Cetacean Conservation and Research Program (CCRP) in the southwestern coast. Abundance assessment of coastal cetacean species inhabiting the waters of the region was simultaneously conducted to assess the impact of direct hunting on the dolphin population.

Project: "Monitoring humpback whale population and other cetacean species using the southwestern waters".

Responsible: CCRP of the WCS

Nosy be (13°22.83'S, 48.22.83'E) – Northwestern coast

A preliminary investigation on humpback dolphin population was conducted in the north-western coast to gather baseline information for implementing conservation action on this species in Madagascar's waters.

Project: "preliminary study of humpback dolphin population in the coastal waters of Nosy Be". Responsible: CCRP of the WCS

Promotion of whale and dolphin watching.

The vision "Madagascar Naturally" of the Malagasy Government stipulates that the development of industries around environment such as ecotourism will help to minimize biodiversity loss and maximize benefits for the nation and the people. In addition, active involvement of the local communities is crucial for the conservation of the environment. Therefore, different NGOs and association working on cetacean conservation programs has developed educative programs and capacity building on ecotourism for local communities for their future involvement.

Antongil Bay (16°00'S, 49°55'E) - Northeastern coast

Project 1: Promotion of eco-volunteering program for raising awareness of observers in conservation oriented whale watching industry. Responsible: French Association Megaptera. Period: July- September 2007

Project 2: Capacity building on whale watching ecotourism through training of pilots and guides. Responsible: CCRP of the WCS. Period: September 2007.

Isle Sainte Marie – Eastern coast

Project 1: Raising awareness of whale watchers and local community in migrating humpback whale conservation through eco-volunteering program. Responsible: French Association Megaptera. Period: July-September 2007.

Project 2: "development of craft's trade for a sustainable community-based whale watching industry". Responsible: French Association Megaptera and the local community. Period: July-September 2007.

Anakao – Southwestern coast

Series of workshops were prepared in 2007 and 2008 for finding solutions to mitigate the main pressure of dolphin population in the south-western coast which is dolphin hunting.

Project: "Implementation of a community based whale and dolphin watching". Responsible: collaboration between NGOs, national and local associations and administrative authorities: ANGAP, SAGE, WCS, WWF, Tourism office of Toliara, Fisheries department, fishermen, guides, hotel owner associations

5.4. Mauritius

In June 2006, to address the increase in the activity of "Dolphin Watching" on the west coast, the Mauritius Marine Conservation Society (MMCS) began a 2-year monitoring program entitled "Sustainable Management of Dolphin Watching through training and public awareness ". The project receives financial support from the UNDP through its Small Grants Program of the Global Environment Facility (GEF SGP).

In May 2007, it was the turn of the Fondation TOTAL for Biodiversity and Sea to be listening to the MMCS. Thanks to them, the project will continue until 2010 with the focus of scientific research on dolphins and coral reefs in the western region of Mauritius. The title of the project has evolved into "Sustainable Management of Marine Resources, Cetaceans-reefs, in Mauritius."

To achieve this objective, the MMCS began a monitoring programme towards the long-term protective programme of coastal marine resources. The project promotes several themes and specific actions including:

- **Train operators and educate the general public** on the observation and respect of marine mammals in Mauritius. The differences between the species that are commonly seen and some basic biology, and the reasons for the guidelines of Dolphin Watching.
- **Contribute to scientific knowledge** about residing dolphin species, through behavioural and population studies. This includes looking at the number of each species in the area, rates of reproduction and how the animals are affected by the Dolphin Watching activities in order to ensure we can make this operation sustainable.
- **Assist authorities to set up appropriate legislation** for sustainable management of the "Dolphin Watching" activity. Research into worldwide dolphin watching activities and how they are regulated has been used, along with the input of local operators, to create our own legislation here for our conditions.

5.5. Seychelles

The main activity conducted in Seychelles is in relation with the depredation of tuna (caught by long-liners) by cetaceans in Seychelles waters. The objectives of the project are 1) to determine what are the cetaceans interacting with tuna long line activity, 2) to design and test in real condition the performance of a device to mitigate interactions between cetacean and long line. Five species of cetacean were identified (Dauphin de Risso, *Grampus griseus*; Dauphin a long Bec *Stenella longirostris*; Steno, *Steno bredanensis*; Orque naine, *Feresa attenuata*; Cachalot, *Physeter macrocephalus*) during the first campaign at sea, in November 2007, and a new device was experimented.

The participating agencies are: SFA, French Embassy, private fishing companies, Ministry of the Environment and Natural Resources (MENR), Marine Conservation Society of Seychelles (MCCS). The project is financed by the French Embassy in Seychelles, the Seychelles Fishing Authority (SFA) and some private fishing companies, and will be implemented between November 2006 and November 2010.

5.6. Participation to the 17th biennial conference on the biology of marine mammals

The IOC has financed the participation of 6 delegates from the IOC countries at the 17th biennial conference on the biology of marine mammals, in Cape Town from the 29th of November to the 3rd of December 2007.

A paper was presented at the Marine Mammal Research and Conservation in Africa Workshop entitled "Regional network and project for the research and conservation of Cetaceans and Dugong in the Indian Ocean Commission Countries (Comoros, France/Reunion, Madagascar, Mauritius and Seychelles)". **Denis Etienne et al.**, Indian Ocean Commission, Mauritius