



**MEMORANDUM OF UNDERSTANDING
ON THE CONSERVATION AND
MANAGEMENT OF MARINE TURTLES
AND THEIR HABITATS OF THE INDIAN
OCEAN AND SOUTH-EAST ASIA**

CMS/IOSEA/MOS8/Inf.7.1.f

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8TH MEETING OF THE SIGNATORY STATES

Da Nang, Viet Nam, 21-25 October 2019

Agenda Item 9.1

MADAGASCAR – NATIONAL REPORT 2019

(Prepared by Madagascar)

IOSEA MARINE TURTLES MEMORANDUM OF UNDERSTANDING - NATIONAL REPORTING 2019

IOSEA Marine Turtles MoU - National Reports

The purpose of completing the national report is to provide information on your country's implementation of the IOSEA Marine Turtle MoU including, as far as possible, contributions of cooperating non-governmental partners. Implementation will be assessed in terms of the six objectives of the Conservation and Management Plan (CMP). The online questionnaire is divided into these six main objectives, and asks specific questions in relation to the activities that need to be carried out to fulfil those objectives.

Please answer all questions as fully and as accurately as possible. It may seem time-consuming, but once you have completed the first report, the next time will be much easier because you can simply revise your existing report online. Comprehensive responses to the questions posed in Section 1.4 should satisfy many of the reporting requirements of the 2004 FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations, thereby avoiding duplication of effort.

Description text is provided below some of the questions to explain what information needs to be provided. Text boxes can be expanded to accommodate longer answers or to explain and provide additional information, beyond what is requested. Details of future plans are especially encouraged. Wherever possible, please try to indicate the source of information used to answer a particular question, if a published reference is available. Remember that you are sharing information with other countries about your progress, so that it may be of benefit to them. At the same time, you may find it useful to look at other countries' reports to get ideas for marine turtle conservation that might be adapted to your context.

When working on the online questionnaire, save your information by clicking on the "Save all" button inside each section. An auto-save feature also saves any changed responses every 30 seconds, and whenever you move between sections. Feel free to attach additional material (published reports, maps etc) to this questionnaire.

Throughout the questionnaire, alongside each question you will find one or more 3-letter abbreviations within square brackets. These are used to indicate the purpose for which the information provided will be used in the subsequent analysis of all of the national reports, as shown in the following table.

To some extent, the order in which these different types of information are listed below is a reflection of their importance - ranging from critical indicators of performance to factual details that are merely informative.

Abbreviation

Type

Treatment / Purpose

IND

Indicator

The information provided serves, in and of itself, as a key indicator of successful implementation or of pre-requisites for same (eg. of core actions undertaken, resource availability, capacity etc.)

PRI

Priorities

The collective data will be synthesized to give an indication of what has been done already (helping to avoid duplication of effort); what is generally not being done (gaps that need to be addressed); and what interventions or specific assistance may be required.

TSH

Trouble-shooting

Particular implementation problems and issues (possibly of special interest to a small group of countries) are identified/highlighted with a view to stimulating remedial action in the short-term.

BPR

Best practice

Well-documented examples of best practices / success stories will be compiled and presented as approaches that other Signatory States might consider pursuing (ie adopting or adapting to suit their own circumstances).

SAP

Self-Appraisal

Self-assessment of effectiveness and completeness of actions undertaken - intended to stimulate reflection within a given Signatory State on what more could or should be done in relation to a particular activity.

INF

Information

The information will be collected and compiled, with little or no modification, mainly for purpose of sharing of information that could be of interest or value to other readers and/or other analyses.

GENERAL INFORMATION

Signatory State:

Which agency or institution has been primarily responsible for the preparation of this report?

> Centre National de Recherche sur l'Environnement (CNRE)
Ministère de l'Enseignement Supérieur et de la Recherche Scientifique

List any other agencies, institutions, or NGOs that have provided input:

> WWF-Madagascar & West Indian Ocean Programme Office;
WCS-Madagascar;
Conservation Centrée sur la Communauté (C3) Madagascar;
Blue Ventures Conservation ;
Madagascar National Parks;
University Antsirananana;
Conservation International-Madagascar;
Missouri Botanical Garden Madagascar;
Durrell Wildlife Conservation Trust Madagascar;

Memorandum in effect in Signatory State since (dd/mm/yyyy):

> signed : 22 January 2003
1 April 2003

This report was last modified (dd/mm/yyyy):

> 07/06/2019

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OBJECTIVE I: REDUCE DIRECT AND INDIRECT CAUSES OF MARINE TURTLE MORTALITY

1.1 Introduction to marine turtle populations and habitats, challenges and conservation efforts

Please introduce and summarise, in an abstract of less than a page, the marine turtle populations and their habitats in your country. Comment on their status and highlight the main conservation challenges and achievements to date. It is not necessary to list here by name the individual nesting beaches, feeding areas and developmental habitats that are important for marine turtles in your country, as this information can be generated from the 'Site-Threat' data sheets to be completed in Annex 1. **[INF]**

> Five species of marine turtles frequent the coast of Madagascar, namely the Green (*Chelonia mydas*), Hawksbill

(*Eretmochelys imbricata*), Loggerhead (*Caretta caretta*), Olive Ridley (*Lepidochelys olivacea*), and to a lesser extent the

Leatherback (*Dermochelys coriacea*) turtle

Marine turtle nesting beaches are found in the north-west, south-east and north-east Madagascar.

1.2 Best practice approaches to minimizing threats

Describe any protocol or approaches practiced in your country, which you consider exemplary, for minimising threats to marine turtle populations and their habitats, which may be suitable for adaptation and adoption elsewhere. **[BRP]**

> A good example is the project initiated by the C3, Madagascar (Community Centered conservation)

"Incentivising Malagasy Communities for Marine Ecosystem Stewardship". The overall goal of this project is the effective marine protected area management in Madagascar embracing ongoing community involvement secured in the long-term' and this has certainly been achieved in Nosy Hara Marine Park, which is managed by Madagascar National Parks. The purpose of the project was more specifically to incentivize local communities to sustainably use marine resources and conserve endangered marine species in Nosy Hara Marine Park.

- the installation of TED is an obligation for shrimp trawlers working in the west coast where marine turtles are abundant

1.3 Programmes to correct adverse economic incentives

1.3.1 Describe any socio-economic studies or activities that have been conducted among communities that interact with marine turtles and their habitats. **[BPR, INF]**

Elaborate on the nature of the socio-economic study/ activity undertaken, the results obtained (successful or otherwise) and the desirability/ suitability for replication.

Include references to published reports, where available.

> Blue Ventures is working with the Government of Madagascar to help coastal communities create a locally-managed marine area (LMMA) around the Barren Isles, which is the country's largest marine protected area, as well as the Indian Ocean's largest LMMA.

This ambitious conservation initiative aims to safeguard the marine biodiversity underpinning the archipelago's traditional fisheries by mitigating overfishing, reducing conflicts between resource users, and promoting responsible fisheries management.

5 species of marine turtle are found in the Barren isles. Temporary protected status was awarded to the Barren Isles LMMA in 2014 and the process of gaining definitive protection continues to progress. In early 2018, after a long process of community meetings and consultations which started in 2016, an updated version of the dina (community-based laws) was agreed by all those communities affected, and submitted to the government for validation.

The plan summarised the results of community consultations, and a participatory mapping exercise which saw community members select the temporary and permanent reserve areas they want to implement. The eight reserves that were agreed upon will be integrated as management zones within the LMMA plan.

Community members are playing a key role in the ongoing management of the LMMA. The Vezo Miray Nosy Barren Association (VMNB), a collection of fishers, represented by elected leaders from six coastal villages and seven islands, is now officially recognised as a co-manager of the Barren Isles LMMA. The VMNB comprises a management committee, a dina committee (in charge of applying the community-based laws), and now the 'Akio Kary' (translates to tiger shark), a group of community surveillance agents who will monitor the infractions of the dina within the LMMA.

The Barren Isles LMMA is an innovative partnership that unites fishing communities with WWF Madagascar, the Ministry of Environment and Forests, the Ministry of Fisheries, the Ministry of Health, PSI, Mahefa Miaraka, the Fisheries Surveillance Authority, Melaky regional authorities and Blue Ventures.

1.3.2 Which of these adverse economic incentives are underlying threats to marine turtles in your country?

[TSH]

High prices earned from turtle products relative to other commodities

Lack of affordable alternatives to turtle products

Ease of access to the turtle resource (e.g. by virtue of proximity or ease of land/water access)

1.3.3 Has your country taken any measures to try to correct these adverse economic incentives? **[BPR]**

Yes (If yes, please describe these measures in detail)

> The NGO C3 Madagascar organized a training program on the capacity building of the Actors of Education for Citizenship and Civic Use of the Environmental Education Guide, creation of a Junior Ecoguard Network

1.4 Reduction of incidental capture and mortality

1.4.1 Indicate, and describe in more detail, the main fisheries occurring in the waters of your country, as well as any high seas fisheries in which flag vessels of your country participate and interact with marine turtles.

Tick 'YES' to indicate that a fishery is present and interacting marine turtles or 'NO' to indicate that a fishery is not present or is not interacting with marine turtles. **[INF]**

If a fishery is present, use the text box to indicate, for example, the approximate geographic distribution of the fishery, how long it has been operating, how many vessels are involved, etc.

a) Shrimp trawls:

Yes (Please provide details)

> The shrimp fishing industry is using 41 trawlers, 38 of them working in the west coast and 3 in the east coast

b) Set gill nets:

No (Please provide details)

> no industrial vessels using gill nets, only traditional canoes, but no statistics available

c) Anchored Fish Aggregating Devices (FADs):

No (Please provide details)

> no information available on FADs utilisation

d) Purse seine (with or without FADs):

No (Please provide details)

> no purse seine

e) Longline (shallow or deepset):

No (Please provide details)

> information not available

f) Driftnet:

No (Please provide details)

> no information

1.4.2 Please indicate the relative level of fishing effort and perceived impact of each of the above fisheries on marine turtles (e.g. in terms of by-catch) [TSH]. Select from one of the following descriptions: RELATIVELY HIGH, MODERATE, RELATIVELY LOW, NONE (i.e. not present), UNKNOWN (i.e. unable to answer for whatever reason).

a) Shrimp trawls

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing efforts:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Source of information / clarification

> Centre de Surveillance des Pêches (rapport 2018)

b) Set gill nets

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing effort:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Source of information / clarification
 > no information

c) Anchored Fish Aggregating Devices (FADs)

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing effort:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Source of information / clarification
 > Centre de Surveillance des Pêches

d) Purse seine (with or without FADs)

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing efforts:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) Longline (shallow or deepset)

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing effort:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Source of information / clarification
 > asiatic vessels working on open sea but no information available

f) Driftnet

Please select only one per line

	UNKNOW N	NON E	RELATIVELY LOW	MODERAT E	RELATIVELY HIGH
Fishing effort:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perceived impact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Source of information / clarification
 > Centre de Surveillance des Pêches

1.4.4 Which of the following methods are used by your country to minimise incidental capture/mortality of marine turtles in fishing activities? [IND]

a) **Appropriate handling** of incidentally caught turtles (e.g. resuscitation or release by fishers using equipment such as de-hooking, line cutting tools and scoop nets)

NO (Details/future plans)

> Shrimp trawlers are equipped with TED, but in traditional fishermen dont release any incidental turtle catch

b) **Devices that allow the escape of marine turtles** (e.g. turtle excluder devices (TEDs) or other measures that are comparable in effectiveness)

YES (Details/future plans)

> National legislation requires shipowners to equip all shrimp trawls with a TED

g) **Spatial and temporal control of fishing** (e.g. seasonal closures of fishing activities)

YES (Details/future plans)

> there is closure season for shrimp and lobster fisheries

h) **Effort management control**

YES (Details/future plans)

> For Shrimp Fishery, the number of vessel working in each zone is limited (38 in west coast; 3 in east coast)

1.4.5 Which of the following programmes has your country developed - in consultation with the fishing industry and fisheries management organisations - to promote implementation of measures to minimise incidental capture and mortality of turtles in national waters and in the high seas? [IND]

Please use the corresponding text boxes to explain/clarify each of your responses, including 'NOT APPLICABLE' responses, and indicate future plans in this regard. [IND]

Please describe the collaboration, when/where the programmes were introduced, any difficulties encountered, and general results obtained (i.e. successful and unsuccessful). Provide references to publications, where available.

a) **Onboard observer programmes**

X

YES (Details/future plans)

> Observer program: coverage rate 30% for domestic vessels and 10% for foreign vessels

b) **Vessel monitoring systems**

YES (Details/future plans)

> VMS (vessel monitoring system): mandatory for all domestic and foreign fishing vessels operating in Madagascar's EEZ, except for unbridged national vessels (small vessels)

c) **Inspections** (i.e. at sea, in port, at landing sites)

YES (Details/future plans)

> Port Inspection: The FAO Port State Measures (PSMA) Agreement entered into force on 05 June 2016. Madagascar's accession to this Agreement is effective as of 09 March 2017 As a result, all foreign vessels wishing to enter the port of M / car are monitored and controlled according to the procedures of this Agreement.

d) **Training programmes / workshops** to educate fishers

YES (Details/future plans)

> The NGOs Blue Ventures and Reef Doctor organize awareness sessions for traditional fishermen on the prohibition of capture and sale of marine turtles

1.4.6 Are the mitigation measures described in 1.4.4 and 1.4.5 periodically reviewed and evaluated for their efficiency? **[SAP]**

YES (Please give details)

> In a few localities WWF organized follow-up evaluation of the effectiveness of the measures with the local committees of surveillance, and in Ambohibola 3 fishermen were caught in the act of sale of marine turtles

1.4.7 In your country, what types of data collection, research and development have been undertaken to support the reduction of marine turtle incidental catch (while taking into consideration the impact of various mitigation measures on other species)? **[SAP]**

> Placing Madagascar's marine turtle populations in a regional context using community-based monitoring Frances Humber (a1), Brendan J. Godley (a2), Tanguy Nicolas (a1), Olivier Raynaud (a1) ...

<https://doi.org/10.1017/S0030605315001398>

Publié en ligne le: 05 Avril 2016

1.4.8 Has your country exchanged information and provided technical assistance (formally or informally) to other Signatory States to promote the activities described in 1.4.4, 1.4.5 and 1.4.7 above? **[SAP]**

NO

> no information available

1.5 Addressing harvest of, and trade in, marine turtles; and protecting of habitat

1.5.1 Does your country have legislation to prohibit direct harvest and domestic trade in marine turtles, their eggs, parts and products; and to protect important turtle habitats? **[IND]**

Please provide details (title/date) of the relevant legislation, as well as any exemptions (e.g. for traditional harvest) under that legislation.

YES

> - Décret n° 2006 - 400 portant classement des espèces de faune sauvage, statut d'espèces protégées avec Protection absolue sur tout le territoire national : les 5 espèces de tortues marines existant à Madagascar sont dans la catégorie I, classe I des animaux protégés.

- Décret n°2006-098 du 31 janvier 2006 portant publication des annexes révisées de la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction.

1.5.2 Which, among the following list, are economic uses and cultural values of marine turtles in your country? [INF]

Please rate the relative prevalence / importance of each consumptive or non-consumptive use. Use the text boxes below each rating to explain or clarify your responses.

a1) Meat consumption

YES

> With the exception of the Mahafaly tribe all Malagasy communities eat turtle meat

a2) Meat consumption: relative prevalence/importance

HIGH

> specially in the southwest and west coast

b1) Egg consumption

YES

b2) Egg consumption: relative prevalence/importance

MODERATE

> coastal communities in the southwest coast

c1) Shell products

YES

c2) Shell products: relative prevalence/importance

MODERATE

d2) Fat consumption: relative prevalence/importance

UNKNOWN

e1) Traditional medicine

NO

e2) Traditional medicine: relative prevalence/importance

UNKNOWN

f1) Eco-tourism programmes

YES

f2) Eco-tourism programmes: relative prevalence/importance

MODERATE

> in some islands on Northwest coast (Nosy Iranja and Nosy Sakatia)

g1) Cultural / traditional significance

YES

> Only for the VezoTribe

g2) Cultural/traditional significance: relative prevalence/importance

MODERATE

> new générations do not consider anymore traditional significance

1.5.3 Please indicate the relative level and impact of traditional harvest on marine turtles and their eggs.

[IND, TSH]

	RELATIVELY HIGH	UNKNOWN	NON E	RELATIVELY LOW	MODERATE
Level of harvest:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Impact of harvest:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Source of information / explanation:

> Atelier sur la protection des tortues marines Toliara 2016, Antsiranana 2017

1.5.4 Have any domestic management programmes been established to limit the levels of intentional harvest? **[SAP]**

Use the text box to give details.

NO

1.6 Minimizing mortality through nesting beach programmes

1.6.1 Measures and effectiveness

First, tick one of the YES/NO-boxes to indicate whether or not your country has any of the following measures in place to minimise the mortality of eggs, hatchlings and nesting females. If yes, then **estimate the relative effectiveness** of these measures. **[IND, SAP]**

Use the text boxes below each rating to elaborate on your responses, including any lessons learned that might be of value to other Signatory States, and indicate your plans for the coming year. Please explain any "Not Applicable (N/A)" responses.

a1) Monitoring/protection programmes

YES

> Since december 2016, Community Centered Conservation and Madagascar National Parks conducted nest monitoring in four islets: Nosy Hara, Nosy Fotsy, Nosy Hao and Nosy Vaha. Representatives of the Local Communities of the Park from the nearest coastal villages of the nesting areas assisted the scientific team.

a2) Monitoring/protection programmes: relative effectiveness

GOOD

> events of by-catch in fishing gears were recorded by CLPs (Comité Local de Pilotage) of in the Nosy Hara Marine Park a total of 26 by-catch events of hawksbills and 38 of green turtles were reported in the northern zone; fortunately, given the high level of conservation awareness and buy-in, all of the turtles were released alive in the waters.

b1) Education/awareness programmes

YES

b2) Education/awareness programmes: Relative effectiveness

GOOD

c1) Egg relocation/hatcheries

N/A

c2) Egg relocation/hatcheries: Relative effectiveness

UNKNOWN

d1) Predator control

NO

d2) Predator control: Relative effectiveness

UNKNOWN

e1) Vehicle / access restrictions

NO

e2) Vehicle/access restriction: relative effectiveness

UNKNOWN

f2) Removal of debris /clean-up: relative effectiveness

UNKNOWN

g2) Re-vegetation of frontal dunes: relative effectiveness

UNKNOWN

h1) Building location/design regulations

N/A

h2) Building location/design regulations: relative effectiveness

UNKNOWN

i1) Light pollution reduction

YES

i2) Light pollution reduction: Relative effectiveness

GOOD

> la construction des hôtels et bungalows sont loin des plages de nidification

1.6.2 Has your country undertaken any evaluation of its nest and beach management programmes? **[SAP]**

Use the text box to elaborate on your response, if necessary.

NO

OBJECTIVE II: PROTECT, CONSERVE AND REHABILITATE MARINE TURTLE HABITATS

2.1 Measures to protect and conserve marine turtle habitats

2.1.1 What is being done to protect critical habitats outside of established protected areas? (NB: It is assumed that legislation relating to established protected areas will have been described in Section 1.5.1)

[BPR, SAP]

> NGOs such as Blue Ventures in Baren Island, Reef Doctor in Ifaty beach and coral reefs, sensitize the local population concerned on the importance of preserving the coral reefs for marine turtles as well as for the fisheries production.

2.1.2 Are assessments routinely made of the environmental impact of marine and coastal development on marine turtles and their habitats? **[IND, SAP]**

Use the text box to elaborate on your response.

NO

> only in case of funding obtained

2.1.3 Is marine water quality (including marine debris) monitoring near turtle habitats? If yes, describe the nature of this monitoring and any remedial measures that may have been taken. **[SAP]**

NO

2.1.4 Are measures in place to prohibit the use of poisonous chemicals and explosives? **[SAP]**

Use the text box to elaborate on your response.

YES

> -Selon Article 17 de la loi n 2015-053 portant de la pêche, il est interdit :

- d'utiliser, dans l'exercice de la pêche, des substances ou appâts toxiques ;
- de se servir de matières explosives et de techniques similaires ;
- de faire usage de procédés électriques ;
- d'utiliser tout dispositif de plongée permettant une immersion plus longue que celle autorisée par la seule respiration naturelle ;
- d'utiliser tout engin, méthode et technique de pêche ou dispositif destructif et non sélectif ;
- de détenir tout engin de pêche prohibé et substance explosive à bord d'une embarcation de pêche, sur et/ou à proximité d'un lieu de pêche ;
- d'introduire ou de déverser dans le milieu aquatique de substances causant la pollution ;
- de débarquer, d'immerger et/ou d'incinérer de substances nuisibles aux ressources halieutiques ;
- de détruire les frayères ou les zones de reproduction et de croissance ou d'alimentation des ressources halieutiques et les berges des plans d'eau ;
- de commercialiser des engins de pêche non réglementaires ou prohibés.

-prohibited by local law "DINA" for any region

2.2 Rehabilitation of degraded marine turtle habitats

2.2.1 Are efforts being made to recover degraded coral reefs? If yes, give details (location, duration, effectiveness, lessons learned, future plans etc.). **[IND, SAP]**

Provide sufficient details of the measures taken, especially those measures shown to have been effective in recovering degraded coral reefs. Please indicate future plans in this regard.

YES (Details/future plans)

> -In Ifaty, a village in the south of Madagascar, the NGO Reef Doctor does coral reef transplants

- Dans le cadre de mesure de compensation du projet d'extension du port de Toamasina, des opérations de transplatation des coraux dans le grand recif ont été réalisés.
- Equipe de recherche au sein de l'IHSM a déposé un brevet sur la création de recif artificiel expérimenté dans le grand recif de Toliara

2.2.2 Are efforts being made to recover degraded mangrove habitats that are important for turtles? If yes, give details (location, duration, effectiveness, lessons learned future plans etc.). **[IND, SAP]**

YES (Details/future plans)

> Several NGOs in the island are currently using mangrove restoration. Blue ventures are reforesting

mangroves in the Assassins bay and its surroundings, and also in the North of Madagascar

2.2.3 Are efforts being made to recover degraded sea grass habitats? If yes, give details (location, duration, effectiveness, lessons learned future plans etc.). **[IND, SAP]**

NOT APPLICABLE (No degraded sea grass habitats)

OBJECTIVE III: IMPROVE UNDERSTANDING OF MARINE TURTLE ECOLOGY AND POPULATIONS THROUGH RESEARCH, MONITORING AND INFORMATION EXCHANGE

3.1 Studies on marine turtles and their habitats

3.1.2 Have **long-term** monitoring programmes (i.e. of at least 10 years duration) been initiated or planned for priority marine turtle populations frequenting the territory of your country? **[IND, BPR]**

Please give details of the nature, duration and continuity of these programmes.

UNSURE

3.1.3 Has the genetic identity of marine turtle populations in your country been characterised? **[INF, PRI]**

Please give details (e.g. which species, which populations?).

NO

3.1.4 Which of the following methods have been or are being used to try to identify migration routes of turtles? Use the text boxes to provide additional details [INF, PRI]

a) Tagging

YES (Details/future plans)

> C3, WWF Madagascar and Reef doctor have already practiced this method

b) Satellite tracking

NO (Details/future plans)

3.1.5 Have studies been carried out on marine turtle population dynamics and survival rates (e.g. including studies into the survival rates of incidentally caught and released turtles)? **[INF, PRI]**

YES

> by the NGOs in the Southwest and Northwest of Madagascar

3.1.6 Has research been conducted on the frequency and pathology of diseases in marine turtles? **[INF, PRI]**

UNSURE

3.1.7 Is the use of traditional ecological knowledge in research studies being promoted? **[BPR, PRI]**

YES

OBJECTIVE IV: INCREASE PUBLIC AWARENESS OF THE THREATS TO MARINE TURTLES AND THEIR HABITATS, AND ENHANCE PUBLIC PARTICIPATION IN CONSERVATION ACTIVITIES

4.1 Public education and information programmes

4.1.1 Describe the educational materials, including mass media information programmes that your country has collected, developed and/or disseminated. **[INF, PRI]**

Details/future plans:

> C3 in cooperation with the Ministry of National Education has made Handbook Marine Turtle Training for Students

Photos and posters of marine turtles during the celebration of the day for marine turtles in Antsiranana, North of Madagascar.

Stakeholder meeting

4.1.2 Which of the following groups have been the targets of these focused education and awareness programmes described in above in Section 4.1.1? **[PRI, INF]**

Policy makers

Fishing industry

Local/Fishing communities

Students

Scientists

4.1.3 Have any community learning / information centres been established in your country? **[BPR, SAP]**

Please give details and indicate future plans

NO

4.2 Alternative livelihoods opportunities Describe initiatives already undertaken or planned to identify and facilitate alternative livelihoods (including income-generating activities) for local communities. **[IND, BPR]**

> In terms of livelihoods, there are now duck farms, a ecotourism restaurant and a poultry farm all run by community associations In the North in C3's intervention zone. there are also conservation activities within tourism program like in Nosy Iranja Nord of Madagascar.

4.3 Stakeholder participation

4.3.1 Describe initiatives already undertaken or planned by your country to involve **local communities**, in particular, in the planning and implementation of marine turtle conservation programmes. Please include details of any incentives that have been used to encourage public participation, and indicate their efficacy. **[BPR, IND]**

> The method of involving the local community in the protection and conservation of marine turtles is frequently practiced by NGOs in Madagascar. They sensitize and then lead the local communities in the development of local law DINA. As a result of this approach, the trade in marine turtles in the southwest and northwest of the island is no longer practiced.

4.3.2 Describe initiatives already undertaken or planned to involve and encourage the cooperation of **Government institutions, NGOs** and the **private sector** in marine turtle conservation programmes. **[IND, BPR]**

> The National Centre for Integrated Coastal Zone Management (CNGIZC) organizes workshops on marine turtle conservation planning that have united all stakeholders on the conservation of this species, such as Government institutions (CNRE, IHSM, CSP, Fisheries Administration), NGOs (WWF, WCS, Blue Ventures, C3, SAGE).

OBJECTIVE V: ENHANCE NATIONAL, REGIONAL AND INTERNATIONAL COOPERATION

5.1 Collaboration with, and assistance to, signatory and non-signatory States

5.1.1 Has your country undertaken a national review of its compliance with Convention on International Trade in Endangered Species (CITES) obligations in relation to marine turtles? **[SAP]**

YES (If yes, please elaborate briefly)

> CITES was ratified by Madagascar through Ordinance no. 75-014 of 15 August 1975 and the Convention took effect 18 November 1976

5.1.2 Does your country have, or participate/cooperate in, CITES training programmes for relevant authorities? **[SAP]**

YES (If yes, please provide details of these training programmes)

5.1.3 Does your country have in place mechanisms to identify **international** illegal trade routes (for marine turtle products etc.)? Please use the text box to elaborate on how your country is cooperating with other States to prevent/deter/eliminate illegal trade. **[SAP]**

Please give details of particularly successful interventions and prosecutions; and/or mention any difficulties experienced that impede progress in this area. Please provide references to any published reports (e.g. already prepared for CITES purposes) that give a more ample explanation.

YES

> Customs service at airports and ports

5.1.4 Which international compliance and trade issues related to marine turtles has your country raised for discussion (e.g. through the IOSEA MoU Secretariat, at meetings of Signatory States etc.)? **[INF]**

> at the 7th meeting of signatory states of IOSEA MoU

5.1.5 Describe measures in place to prevent, deter and eliminate domestic illegal trade in marine turtle products, particularly with a view to enforcing the legislation identified in Section 1.5.1. **[INF]**

> -Periodical mission of CSP (Centre de surveillance de Pêche)

-Regular patrol by LMMA survey members

5.2 Prioritisation, development and implementation of national action plans

5.2.1 Has your country already developed a national **action plan** or a set of **key management measures** that could eventually serve as a basis for a more specific action plan at a national level? **[IND]**

Please explain.

NO

5.2.2 From your country's perspective, which **conservation and management activities**, and/or which particular **sites or locations**, ought to be among the highest priorities for action?

(List up to 10 activities from the IOSEA Conservation and Management Plan). **[PRI]**

> - Develop and conduct focused education and awareness programs for target groups (e.g. policy makers, teachers, schools, fishing communities, media)

- Review domestic policies and laws to address gaps or impediments to marine turtle conservation

- Initiate and/or continue long-term monitoring of priority marine turtle populations in order to assess conservation status

- Conduct socio-economic studies among communities that interact with marine turtles and their habitats

5.2.3 Please indicate, from your country's standpoint, the extent to which the following **local** management issues require **international** cooperation in order to achieve progress. **[PRI]**

In other words, how important is **international** cooperation for addressing these issues?

Please select only one per line

	NOT AT ALL	LIMITED	IMPORTANT	ESSENTIAL
Illegal fishing in territorial waters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Incidental capture by foreign fleets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Enforcement/patrolling of territorial waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hunting/harvest by neighboring countries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poaching, illegal trade in turtle products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Development of gear technology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Oil spills, pollution, marine debris	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Training / capacity-building	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternative livelihood development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Identification of turtle populations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identification of migration routes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tagging / satellite tracking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat studies	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Genetics studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5.3 Cooperation and Information exchange

5.3.1 Identify existing frameworks/organisations that are, or could be, useful mechanisms for cooperating in marine turtle conservation at the sub-regional level. Please comment on the strengths of these instruments, their capacity to take on a broader coordinating role, and any efforts your country has made to enhance their role in turtle conservation. **[INF, BPR]**

> Sub-regional workshop, constantly raises awareness among stakeholders in marine turtle conservation. Scientist mobility, exchange of experiences on the species conservations.
Exchange of experiences in local communities, to have a decision-making tool more appropriate for the conservation of the species.

5.3.2 Has your country developed, or is it participating in, any networks for cooperative management of shared turtle populations? **[BPR, INF]**

NO

5.3.3 What steps has your country taken to encourage Regional Fishery Bodies (RFBs) to adopt marine turtle conservation measures within Exclusive Economic Zones (EEZs) and on the high seas? Please describe the interventions made in this regard, referring to specific RFBs. **[SAP]**

> Centre de Surveillance des Peches (CSP) program with on-board observers
Support of industrial experiences on use of TED with shrimp trawlers

5.4 Capacity-building

5.4.1 Describe your country's needs, in terms of human resources, knowledge and facilities, in order to build capacity to strengthen marine turtle conservation measures. **[PRI]**

> Awareness of policy makers, local communities, fishermen
Training of volunteers from project and communities
Training of students and researchers
Facilities for long-term program

5.4.2 Describe any training provided in marine turtle conservation and management techniques (e.g. workshops held, training manuals produced etc.), and indicate your plans for the coming year. **[PRI, INF]**

> Training workshop organized by WWF and C3 on marine turtles and climate change.

5.4.3 Specifically in relation to **capacity-building**, describe any partnerships developed or planned with universities, research institutions, training bodies and other relevant organisations. **[BPR]**

> Universities providing opportunities for students to carry out research

5.5 Enforcement of conservation legislation

5.5.1 National policies and laws concerning the conservation of marine turtles and their habitats will have been described in Section 1.5.1. Please indicate their effectiveness, in terms of their practical application and enforcement. **[SAP, TSH]**

> Décret 2006-097 du 31 janvier 2006 fixant les modalités d'application de la loi sur le commerce international des espèces de faune et de flore sauvage

Décret n°2006-098 du 31 janvier 2006 portant publication des annexes révisées de la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction

You have attached the following documents to this answer.

[textes tortues marines besoin application.doc](#)

5.5.2 Has your country conducted a review of policies and laws to address any gaps, inconsistencies or impediments in relation to marine turtle conservation? If not, indicate any obstacles encountered in this regard and when this review is expected to be done. **[SAP]**

Please give details.

YES

> Office National pour l'Environnement (ONE) developed a proposal to address gaps in laws on marine turtle protection, but no results as yet

5.5.3 From the standpoint of law enforcement, has your country experienced any difficulties achieving cooperation to ensure compatible application of laws across and between jurisdictions? **[TSH]**

Please give details.

UNSURE

OBJECTIVE VI: PROMOTE IMPLEMENTATION OF THE MOU, INCLUDING THE CMP

6.1 IOSEA Marine Turtle MoU membership and activities

6.1.2 Is your country **currently** favourable, in principle, to amending the MoU to make it a legally binding instrument? **[INF]**

NO VIEW

6.1.3 Would your country be favourable, over a **longer time horizon**, to amending the MoU to make it a legally-binding instrument? **[INF]**

NO VIEW (Use the text box to elaborate on your response, if necessary)

> Les organisme nationaux responsables n'ont pas des moyens financiers et materiels pour la mise en oeuvre des textes legislatives. Aussi, il est encore necessaire de mener des campagnes de sensibilisation et d'information aupres des autorites regional et population locale avant de mettre en oeuvre l'application de texte

6.3 Resources to support implementation of the MoU

6.3.2 Has your country tried to solicit funds from, or seek partnerships with, other Governments, major donor organizations, industry, private sector, foundations or NGOs for marine turtle conservation activities? **[IND]**

YES (If yes, give details of the approaches made (both successful and unsuccessful))

> En 2016, CNRE en tant que point focal nation de IOSEA avec la secretariat du IOSEA MoU a prepare un document de projet sur le developpement de capacite des partiprenantes auw plans de gestion et protection de tortues marines, mais n'a pas obtenu de financement.

You have attached the following documents to this answer.

[Madagascar Concept note TSCBP IOSEA Secretariat 060715.docx](#)

6.4 Coordination among government agencies

6.4.1 Has your country designated a lead agency responsible for coordinating national marine turtle conservation and management policy? If not, when is this information expected to be communicated to the IOSEA MoU Secretariat? **[IND]**

Please elaborate, as necessary.

NO

> CNRE has been the national institute of environmental research and coordinate national data on marine turtle activities.

6.4.2 Are the roles and responsibilities of all government agencies related to the conservation and management of marine turtles and their habitats clearly defined? **[IND]**

Use the text box to elaborate.

YES

6.4.3 Has your country ever conducted a review of agency roles and responsibilities? If so, when, and what was the general outcome? If not, is such a review planned and when? **[SAP]**

This question seeks to ascertain whether Signatories have made a serious examination of which agencies have a role to play in marine turtle conservation, either directly or indirectly, and which therefore should be apprised of the IOSEA MoU and its provisions.

If no internal review of interagency roles and responsibilities has been or will be undertaken, please elaborate if only to indicate that the necessary arrangements are already clear and not in need of further review.

NO (Use the text box to elaborate)

> Nous sollicitons l'appui du secretariat de l'IOSEA pour r eliser une telle revue au niveau national

