



Memorandum of Understanding on the
Conservation and Management of Marine Turtles and
their Habitats of the Indian Ocean and South-East Asia

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FURTHER DEVELOPMENT OF THE IOSEA TECHNICAL SUPPORT /
CAPACITY-BUILDING PROGRAMME

Background

1. The IOSEA Technical Support/ Capacity Building Programme was launched in late 2009, in recognition of the growing need for technical support to IOSEA Signatory States as they work towards implementation of the IOSEA Conservation and Management Plan (CMP). The IOSEA Advisory Committee was considered to be the ideal body to provide this technical support, given the collective expertise of its members in many aspects of marine turtle conservation, particularly in the Indian Ocean – South-East Asia region. Resources were secured from the United States' Marine Turtle Conservation Fund to enable members of the Advisory Committee and/or Secretariat to travel to Signatory States, upon request, in order to offer technical advice and guidance, to serve as resource persons at national training sessions, and to support other initiatives in capacity building. A full description of the programme is given in Annex 1.
2. When the programme was launched, Bangladesh, Cambodia, Comoros, Eritrea, Madagascar, Mauritius, Mozambique, and Myanmar were prioritised for possible assistance, if they chose to submit an application. Later, after joining the Memorandum of Understanding, Maldives and Papua New Guinea were added to the list the countries encouraged to apply for support.
3. From the initial offering and subsequent reminders and follow-up, the Secretariat received about a half-dozen applications for support, of which five had good potential. One of the Signatory State applicants did not follow up on its submission; and another application has not yet been pursued on account of insufficient funding. Two initiatives were supported during the reporting period; and arrangements for third have been actively followed up to enable the support to commence in early 2012.
4. Mozambique was the first IOSEA Signatory to take advantage of the assistance on offer. A successful training seminar was organised in southern Mozambique in November 2010, facilitated by Dr. Mark Hamann. It comprised a theoretical session held in Maputo, followed by a practical field session in Ponta do Ouro. The theory session dealt with three main issues – in-water surveys, sea turtles and climate change, and research and monitoring – while the practical session comprised three night patrols and covered two main components: nesting females and track monitoring.
5. Training was delivered to 27 participants, of which 13 were field coordinators from the different areas along the Mozambique coast where monitoring and conservation activities occur. It provided participants an opportunity to strengthen their basic track and nesting female monitoring skills. New techniques, especially the use of GPS, temperature loggers as well as in-water surveys, were discussed as priorities to complement and improve the current monitoring that is being done in Mozambique. A fuller account of the training seminar is given in Annex 2.
6. In February 2011, with support from IOSEA, a first-ever national workshop on marine turtle conservation and management was organised in Madagascar's capital city, Antananarivo. The meeting attracted about 40 representatives of most of the key government agencies responsible for various aspects of marine turtle policy implementation, as well as NGOs working actively in parts of the country with important turtle populations. The meeting was hosted by the Ministry of Higher Education and Scientific

Research, whose *Centre National de Recherches sur l'Environnement* – CNRE (National Centre for Environmental Research) provides Madagascar's National IOSEA Focal Point. The workshop benefitted from a fruitful partnership with Blue Ventures, an NGO active in Madagascar, and support from Dr. George Hughes (retired Advisory Committee member) and Stéphane Ciccione (Vice-Chair, IOSEA Western Indian Ocean – Marine Turtle Task Force). The three-day workshop fostered a very stimulating and productive exchange of information, as well as recommendations for follow-up actions. A more complete description of the workshop is given in Annex 3.

7. The third activity, which is expected to materialise in early 2012, stems from a lengthy correspondence the Secretariat has had with the Department of Fisheries of Myanmar over the last two years. An assessment mission to Yangon, immediately following the SS6 meeting, is expected to finalise arrangements for a training course for DoF staff, to be delivered by Dr. Colin Limpus. Myanmar's relatively important marine turtle population and need for expert training make it an ideal candidate to benefit from this kind of support.

Assessment of the programme

8. Notwithstanding the modest successes described above, it has to be said that much more effort was needed to operationalise the Technical Support / Capacity-building programme than was originally anticipated, despite an attempt to keep the bureaucracy as simple as possible. Securing applications from Signatory States was challenging and, after some initial success, the correspondence needed to bring proposals to fruition was often long and drawn out. In some disappointing cases, the investment of time did not lead to timely follow-up by the countries concerned.

9. One can only speculate on the reasons for the less than enthusiastic take-up of the programme. Perhaps it is an indication of the pre-occupation with other more pressing concerns in any given country (on account of very limited staff resources), a lesser priority accorded marine turtle conservation relative to other species/issues, and/or the relatively modest assistance being offered (compared to much larger funding offered by other 'competing' projects).

10. The Secretariat seeks feedback and guidance from the Signatory States, especially those that stand to benefit from any such programme, as to whether it is worthwhile to try to continue it in the future in some form, subject to availability of funding.

Other alternatives

11. Over the past year, the Secretariat has engaged a number of Advisory Committee members and IOSEA Focal Points in a dialogue about other complementary or alternative approaches for delivering training/technical support to Signatory States. The idea is based on the premise that there is a tremendous wealth of knowledge and technical expertise within the current Advisory Committee roster, which could be channelled into the production of a variety of training materials. The discussions have so far not progressed much beyond the identification of potential contributors, and the development of a draft 'road map' of how the work might be progressed (Annex 4). Nevertheless, it may be helpful even at this early stage to share the preliminary ideas with the IOSEA membership, with a view to encouraging a more substantial discussion at the forthcoming Signatory State meeting. In the meanwhile, it is expected that the Advisory Committee will discuss and hopefully flesh out the 'road map' during its meeting on 21-22 January. In such case, an update of Annex 4 may be provided to SS6 meeting participants early on in the meeting.

Action requested:

Signatory States are invited to consider whether, and in what form, they would like to receive further technical support in marine turtle conservation -- taking advantage, in particular, of expertise available within the Advisory Committee. If member States would like the current programme to continue, as part of that "package", they should express their views during the meeting, in order to lend support to efforts that the Secretariat will need to make to secure additional funding over the coming year.



IOSEA Technical Support and Capacity-Building Programme

Full Programme Description v. 07/09/09

Introduction

The *Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia* (IOSEA Marine Turtle MoU) is a non-binding framework through which States of the Indian Ocean and South-East Asia, as well as other concerned States and partners, can collaborate to protect, conserve, replenish and recover marine turtles and their habitats.

The IOSEA Marine Turtle MoU now has 30 member States, including almost all countries with significant coastlines in the Indian Ocean – South-East Asia region. Guided by an eight-member Advisory Committee comprised of eminent marine turtle scientists and other specialists, and complemented by the efforts of numerous nongovernmental and intergovernmental organisations, the Signatory States are working towards the collective implementation of an ambitious Conservation and Management Plan (CMP). The plan consists of 24 programmes and more than 100 separate activities.

For operational purposes, the IOSEA Signatory States have been grouped into four sub-regions, in which technical advisory bodies / coordination mechanisms are being created or already exist. The four sub-regions are: South-East Asia+, Northern Indian Ocean, Northwestern Indian Ocean, and Western Indian Ocean.

In order to enhance technical and organisational competence and efficiency at a national level, each Signatory State is encouraged to establish and maintain a national committee, comprising the various government agencies with responsibilities related to the objectives of the IOSEA MoU and the activities of the CMP. Ideally, technical and research institutions, non-governmental organisations, user groups and other interested parties would be invited to participate on the national committee.

Goals and objectives

There is a growing need for technical support to IOSEA Signatory States as they work towards implementation of the Conservation and Management Plan. The objective of the IOSEA TS/CBP is to strengthen technical and institutional capacity of various Signatory States of the IOSEA region so that they can better implement the CMP. It aims to build greater self-sufficiency nationally and sub-regionally; to promote the integration of various key components of the IOSEA in national conservation strategies; to encourage the active involvement of key stakeholders throughout the region; and to foster more collaboration among Signatory States.

The IOSEA Advisory Committee is the ideal body to provide this technical support, given the collective expertise of its members in many aspects of marine turtle conservation, particularly in the Indian Ocean – South-East Asia region. Each of the members of the Advisory Committee serves on a completely voluntary basis, often donating not only their professional time but also travel expenses through their host organisations. For the Advisory Committee to realise its full potential to provide effective technical support and capacity-building for turtle conservation in the IOSEA Signatory States, it has been recognised that a more systematic approach and greater direct engagement are required, together with commensurate funding.

To reach the objectives outlined above, basic resources have been secured from the United States' Marine Turtle Conservation Fund to enable members of the Advisory Committee and/or Secretariat to travel to Signatory States, upon request, in order to offer technical advice and guidance, to serve as resource persons at national training sessions, and to support other initiatives in capacity building.

Examples of the types of activities to be supported

- Short technical support/capacity-building missions to developing country Signatory States, upon request, to be conducted by IOSEA Advisory Committee members – for example, to evaluate and provide technical guidance on national marine turtle conservation programmes.

NB: It should be understood that the support requested/offered should involve minimal advance preparation and follow-up on the part of the Advisory Committee member, since this work is not remunerated.

- Responding to requests from within the IOSEA region to serve as resource persons at training seminars/workshops, planning meetings (e.g., of national turtle committees). These may be addressed by members of the Advisory Committee and/or Secretariat.
- Matching funds for the organisation of 1-2 sub-regional technical workshops, where an identified need has yet to be fulfilled for lack of funding. This could take the form of a stand-alone workshop or piggy-backing on other planned initiatives. Part of this training would include a tutorial on the use of the IOSEA Online Reporting Facility.
- Top-up funds, as necessary, to facilitate participation of Advisory Committee members in an IOSEA strategic planning meeting linked to the International Sea Turtle Symposium to be organised in Goa, India, in April 2010.

Anticipated benefits and outputs

The expected outcomes of the IOSEA Technical Support and Capacity Building Programme include:

- Improved implementation of the IOSEA Conservation and Management Plan, and thus improved compliance with the MoU, as well as improved reporting on activities undertaken;
- Review and identification of priorities at the national, sub-regional, and regional levels;
- Strengthened technical capacity and self-sufficiency within Signatory States;
- Enhanced cooperation among States at a sub-regional level;
- Strengthened national committees, with greater integration of key players and enhanced efficiency;
- Better integration of key components of the IOSEA MoU: National Focal Points, National Committees, Advisory Committee members, Secretariat and other key stakeholders;
- Multiplier-effect in creating greater awareness and research and management capacity in-country.

Many of these substantive outputs for the programme are qualitative benefits that cannot be easily measured, but nonetheless are extremely important in terms of building capacity among developing country participants and institutions to develop, manage and implement their own marine turtle conservation programmes.

Eligibility

The table below indicates those Signatory States of the IOSEA region that may request support from the IOSEA Technical Support and Capacity Building Programme. Countries in this list represent those meeting the criteria of falling at 0.15 or below in the “United Nations scale of assessment”. Signatory States above this benchmark would be expected to cover the costs of any technical support they might request.

List of Signatory States eligible to be assisted with externally supported technical support and capacity building, based on proposed criteria	
1) Bahrain 2) Bangladesh 3) Cambodia 4) Comoros 5) Eritrea 6) Jordan 7) Kenya 8) Madagascar 9) Mauritius 10) Mozambique	11) Myanmar 12) Oman 13) Pakistan 14) Philippines 15) Seychelles 16) Sri Lanka 17) United Republic of Tanzania 18) Viet Nam 19) Yemen
<p>Other Signatory States that are expected to provide their own financial resources if they wish to take advantage of this programme include: Australia, France, India, Indonesia, Islamic Republic of Iran, [Malaysia = non-Signatory], Saudi Arabia, South Africa, Thailand, United Arab Emirates, United Kingdom, and United States of America.</p> <p>The following countries would also be eligible for support under the programme if they were to become signatories to the IOSEA MoU: Brunei Darussalam, Djibouti, Egypt, Maldives, Papua New Guinea, Qatar, Somalia, and Timor Leste.</p>	

Based on a preliminary assessment of priority needs conducted by the Advisory Committee, the following eight countries (representing a geographically balanced contribution within the IOSEA region) would be prime candidates to receive technical support should they apply for assistance: **Bangladesh, Cambodia, Comoros, Eritrea, Madagascar, Mauritius, Mozambique, and Myanmar.**

This initial assessment takes account of the importance of their nesting populations / habitats, known limitations in technical capacity, limited possibility for alternative support, etc. Without prejudice to worthy applications from other countries that may be forthcoming, priority will be given to accommodating reasonable requests for assistance from these eight named Signatory States.

Methodology

To keep the selection process as transparent as possible, a list of national and sub-regional needs will be solicited by the Secretariat, in consultation with Focal Points and the Advisory Committee. A standard form has been developed for this purpose (Annex 1). The list will be prioritised by the Secretariat and Advisory Committee, and circulated for final review by the Signatory States. The Secretariat will then consult with the Advisory Committee to work out the modalities of responding as far as possible to the requests received.

Depending on the national and sub-regional priorities identified, specific members of the Advisory Committee will be contacted about their availability and interest in travelling to the identified country and coordinating the advisory activity needed. The roster of Advisory Committee members who are participating in the programme, together with an indication of their respective areas of expertise, is given in Annex 2.

The location and timing of any training sessions and other support initiatives will be determined as a function of the priorities identified by the Secretariat, in consultation with the Signatory State and Advisory Committee, and taking into account financial and logistic support available. Every effort will be made to coordinate with and strengthen other related initiatives in the IOSEA region, such as WIOMSA (Western Indian Ocean Marine Science Association) symposia, SEAFDEC (Southeast Asian Fisheries Development Center) workshops and training sessions, and other events of other organisations with activities related to the IOSEA objectives.

Responsibility for the planning and coordination of the technical visits by Advisory Committee specialists will be born jointly by the IOSEA Secretariat and the host country/countries. The

Secretariat will work in partnership with the host to support the organisation of any training activity, sharing the knowledge and experience gained in working with in-country organisations and individuals.

Participating members of the Advisory Committee will be expected to prepare a mission report documenting the activities undertaken and including recommendations for follow-up action. Each report will include an executive summary suitable for publication on the IOSEA website.

Indicative plan for first year of the programme

- Specialised technical support/capacity building missions to eligible Signatory States that request assistance (up to 4 missions of approximately 5-7 days each)
- Responding to *ad hoc* Signatory State requests to serve as resource persons at training seminars/ workshops, planning meetings etc.
- Support (matching funds) for organisation of 1-2 sub-regional technical workshops (it is proposed that priority be given to South Asia and Western Indian Ocean)
- Equipment purchase, in exceptional cases, to support field projects without access to basic materials (eg. tags, applicators, flashlights, meter tapes, GPS, notebooks etc). No satellite transmitters will be purchased through the programme, however assistance may be given for deployment of transmitters already available.
- Supplementary funding, as necessary, to facilitate attendance of Advisory Committee members at IOSEA strategic planning meeting, Goa, April 2010

Source of funding

The IOSEA Technical Support and Capacity Building Programme has received a grant from the United States' Marine Turtle Conservation Fund (MTCF) to cover its first year of operation. Most of the funds secured will, by necessity, be used to finance the displacement of the specialists asked to respond to requests from Signatory States. As the Advisory Committee members involved will not be remunerated for their services (partly to simplify the bureaucracy associated with their engagement), their donated professional time should be considered as a very significant matching contribution to the MTCF grant.



IOSEA Technical Support / Capacity-building Programme Application Form for IOSEA Focal Points

PLEASE READ THE PROGRAMME DESCRIPTION BEFORE COMPLETING THIS FORM

APPLICANT DETAILS

Institution:

Address:

E-mail / Telephone / Fax:

Primary contact person (name):

DESCRIPTION OF TECHNICAL SUPPORT REQUIRED

Please use the following tick boxes to describe the nature of the in-country assistance or other support requested, bearing in mind the limited amount of time available for each intervention:

- 1 - Technical advice / guidance in one or more of the following areas:
- a - Marine turtle biology
 - b - Research design, data collection, data management
 - c - Tagging, genetic sampling, satellite transmitter deployment
 - d - Beach management
 - e - Field surveys
 - f - Veterinary care, disease, necropsy
 - g - Fisheries technology, mitigation of fisheries interactions
 - h - Social studies / surveys, community participation
 - i - Review of legislation, law enforcement
 - j - Institution strengthening (national committees etc.)
 - k - Other 1:
 - l - Other 2:
 - m - Other 3:
- 2 - Resource person / facilitator at a national training workshop, national committee meeting etc
- 3 - Matching funds for organisation of a sub-regional technical workshop to be hosted by the applicant institution
- 4 - Other (briefly describe):

Please use the space below to elaborate further on the nature of the assistance required. Please be as thorough as possible so that the merits your request can be properly evaluated.

Expected duration of in-country assistance (number of days): days

Preferred time frame (approximate month/year):

If you already have in mind an Advisory Committee member who would be suitable to provide the assistance required (see Annex 2), please indicate a first and second choice here:

The limited funds available for in-country assistance will go further if some in-country logistical support (eg accommodation, local transport, visa facilitation) can be offered. Please indicate what in-kind support your country/institution can provide in order to defray costs and maximise the time that can be spent in-country.



Feature

Mozambique Marine Turtle Capacity-Building Programme

(31 December 2010)

The IOSEA Technical Support and Capacity-Building Programme aims to strengthen the technical capacity of Signatory States, so that they can better implement parts of the IOSEA Conservation and Management Plan. By way of example, funding is available for Advisory Committee members to undertake short missions to countries that ask for specialised assistance; to respond to requests for resource persons at training seminars/ workshops etc., and to provide small grants for the organisation of national or sub-regional technical workshops. The programme is made possible by a grant from the United States' Marine Turtle Conservation Fund. Mozambique is the first IOSEA Signatory to take advantage of the assistance on offer. A successful field training seminar facilitated by Dr. Mark Hamann was organised in southern Mozambique in November 2010. A report on the conduct of the training session follows.



1. Introduction

Along the Mozambique coastline are known to occur and nest five species of marine turtles. However, marine turtles face a range of impacts that threaten their survival, being the most notorious, the incidental captures and mortality by different fisheries, turtle meat and egg consumption by humans, nest destruction by coastal erosion and habitat loss. But due to the lack of long-term monitoring data, the impact at the species and population level is totally unknown. Although in Mozambique, marine turtles have been protected by law since 1965 the implementation and efficiency of the legislation is practically non-existent. Thus, the current conservation status of the marine turtle populations in this region is of profound concern, especially because it is believed that these populations have been undergoing a steady and significant decline.

Within the last years, and through great efforts made by a few national and international NGOs, such as CTV, AICM and WWF and in collaboration with the Government, private sector and through the Mozambique Marine Turtle Working Group (GTT), monitoring and conservation measures have been put in place along the Maputo, Gaza, Inhambane, Nampula and Cabo Delgado Provinces. Although considered to be fundamental to extend activities to new nesting grounds, it is also strongly agreed that it is important to guarantee the continuity, improvement and consolidation of the work that is already underway. As a result, it is believed that with adequate training, the monitoring programmes currently underway will, in a near future provide a better understanding of ecological trends and application of appropriate mitigation measures, but it will also, if well documented, allow local communities to better understand the positive impact of their involvement towards the protection of these marine turtle species.

2. Objectives

The training programme aimed to contribute to the effective conservation and monitoring of nesting females and hatchlings throughout the different monitoring and conservation initiatives currently underway. More precisely, the training aims to provide further technical advice on monitoring techniques, data collection and management on the following aspects: (1) Crawls monitoring; (2) Nesting female's monitoring and tagging; (3) Nest monitoring and site mapping; and (4) Climate change monitoring.

3. Methodology

3.1 Training Site Description

The training site is located in southern Mozambique, a stretch of coastline that reaches from Ponta do Ouro up to Ponta Dobela in Maputo Province (Figure 1) characterized by extensive sandy beaches and high parabolic dunes, reaching heights of more than 100 meters (Hatton 1995). In this section of the coastline are known to nest two species of marine turtles: the loggerhead (*Caretta caretta*) and the leatherback (*Dermochelys coriacea*; Hughes et al 1971). According to the same author, the adjacent waters are also known as possible feeding grounds for green (*Chelonia mydas*) and hawksbill (*Eretmochelys imbricata*) turtles.

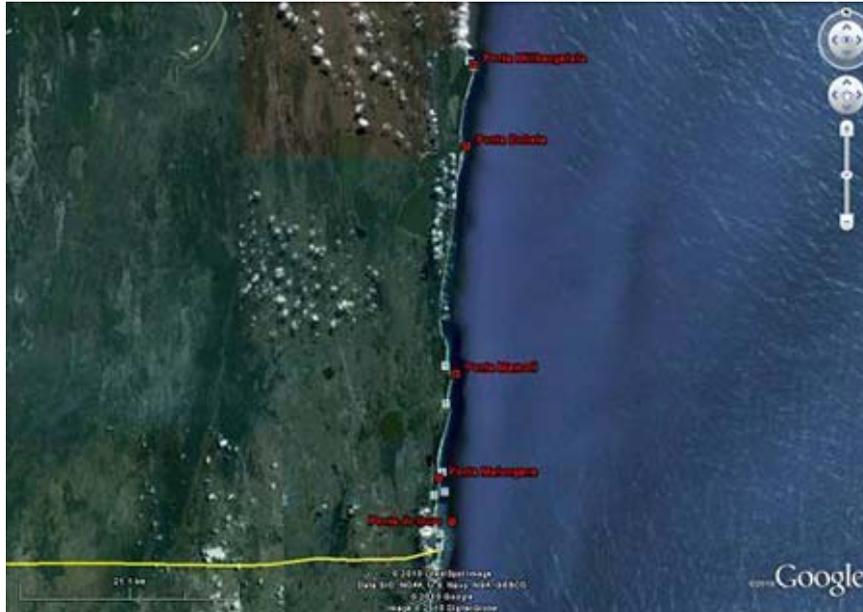


Figure 1: Section of the coastline patrolled during the training. The separation of Mozambique and South Africa is represented by the yellow line. Adapted from Google Earth.

As in other regions of the country, marine turtle monitoring and conservation programmes are quite recent. Currently, in the training site and under the coordination of the Ponta-do-Ouro Marine Partial Reserve, AICM and GTT, there are two marine monitoring programmes being developed: (1) From Ponta-do-Ouro to Ponta Malongane, began in the 2007/08 nesting season and is under direct coordination by Dolphin Care Africa; (2) From Ponta Malongane to Ponta Dobela, began in the 1994/95 nesting season and is under direct coordination of Mr. Pierre Lombard (Figure 1). 3.3.

3.2 Training Sessions

The training sessions were given by Dr. Mark Hamman and were divided into two sessions: (1) Theory Session, held at the National History Museum in Maputo, on the 24th of November and (2) Practical Session, at Ponta do Ouro, from the 24th-25th of November.

The Theory Session involved three main issues:

1. **In-Water Surveys:** its importance, and especially on the importance to design a survey with clear objectives and good data management, different techniques (e.g. tag and release, photo identification and fisheries bycatch data);
2. **Sea Turtles and Climate Change:** background on climate change and its impact on marine turtles, and the methods used to detect and monitor changes on marine turtles (e.g. sand temperature loggers);
3. **Research and Monitoring:** the differences between the two, the need to establish clear objectives, types of data, types of tools (e.g. tags, PIT, GPS), the value of GPS and types of data collected and used by a GPS.

The Practical Session involved two main components:

a) Nesting Females and Track Monitoring involved three night patrols:

- First Patrol: on the 24th of November was made by car and an almost 10 km walk, from 10:00 pm to 01:00 am, along the Ponta Malongane – Ponta Dobela coastline section (Figure 2).



Figure 2: IOSEA Training Participants on one of the patrol cars and on the last stretch of the 10 km patrol. Photographs c/o Raquel Fernandes

During the first on foot patrol only a loggerhead track was identified but no nest was laid. With this track it gave the opportunity to explain to participants how to clearly identify a loggerhead turtle track and the differences found between species. On the way back to camp, a nesting loggerhead was identified and Dr. Mark Hamman explained the basic nesting female biology and ecology while Mr. Pierre Lombard showed the basic monitoring procedures (Figure 3).



Figure 3: *Caretta caretta* nesting. Photographs c/o Eduardo Videira and Raquel Fernandes

- Second Patrol: on the 25th of November was made by foot, from around 06:00 to 08:00 pm, along the Ponta do Ouro – Ponta Malongane coastline section towards the border with South Africa. On the way back, a loggerhead was found nesting and participants learned a bit more from nesting (Figure 4).



Figure 4: Measuring the curved carapace length of a *Caretta caretta* while it laid its eggs at the Ponta do Ouro – Ponta Malongane coastline section. Photographs c/o Raquel Fernandes

- Third Patrol: on the 25th of November, a car patrol was made along the Ponta Malongane – Ponta Dabela coastline section. The number of loggerhead tracks was relatively higher than the day before and it is believed that it was due to the weather conditions. A leatherback track and a nesting loggerhead were found (Figure 5).



Figure 5: Dermochelys coriacea track and a tagged Caretta caretta (MZ245). Photographs c/o Raquel Fernandes

b) GPS Practical

Involved the basic description and use of a GPS Garmin, and it was really important to mention that if anyone can use a cell phone to send sms's, they can also use a GPS as a few of the participants were using the GPS for the first time. A booklet was provided to participants, and shall be translated into Portuguese. The practical also involved the collection of waypoints and tracks throughout the Ponta do Ouro town by three separate groups, followed by the insertion of the data collected in the computer software Mapsource.

4. Conclusions and Recommendations

Overall in the training were involved 27 participants, of which 13 were field coordinators from the different areas along the coastline where monitoring and conservation activities are taking place. The training provided new knowledge on aspects that Mozambique must start to focus, especially with regards to detecting and monitoring the impacts of climate change. Although, the training was for a short period of time, field monitors had the opportunity to learn how to use a GPS and to understand its importance. The training also provided participants to strengthen their basic track and nesting females monitoring techniques. New techniques, especially the use of GPS, temperature loggers as well as the in-water surveys, were discussed as priorities to complement and improve the current monitoring that is being developed in Mozambique.

Acknowledgments

Centro Terra Viva – Estudos e Advocacia Ambiental (CTV) in collaboration with Associação para a Investigação Costeira e Marinha (AICM) and Centro de Desenvolvimento Sustentável para as Zonas Costeiras from the Ministério para a Coordenação da Acção Ambiental (MICOA) would like to acknowledge first and foremost all the participants that showed a great interest to be part of this training programme and to learn from these incredible marine species by walking almost 10 km of beach in only one night!!!!

A Thank You goes to Mr. Douglas Hykle from *IOSEA Marine Turtle Memorandum of Understanding for the Conservation and Management of Marine Turtles and Their Habitats of the Indian Ocean and South-East Asia* – IOSEA Marine Turtle MoU for all the support and insight provided to make this marine turtle capacity building programme possible.

Dr. Mark Hamman from James Cook University (JCU) who came all the way from Australia to provide us with more up to date information and technologies to monitor marine turtles.

Mr. Pierre Lombard and Mrs. Yvone Lombard for showing us in practice the excellent work that they have been doing all these years to monitor and protect marine turtles in Ponta Malongane.

Mr. Miguel Gonçalves from the Ponta do Ouro Partial Marine Reserve for all the support, especially by pooling the car “Chapinha” several times on the way to Ponta and by being part of the group and driving us along the beach to observe nesting marine turtles.

Mrs. Angie Gullan from Dolphin Encounters that provided us with contacts for free accommodation at Ponta do Ouro. Thank you! And a big Thank you to Lawrence Dale from Select Africa Safaris for the warm hospitality !!!!



First-ever national marine turtle workshop held in Madagascar

Over 40 participants from governmental institutions and nongovernmental organisations gathered in Antananarivo from 7 to 9 February 2011 for an animated discussion about marine turtle conservation and management in Madagascar. The meeting attracted representatives of most of the key government agencies responsible for various aspects of marine turtle policy implementation, as well as NGOs working actively in parts of the country with important turtle populations..



The meeting was hosted by the *Ministère de l'Enseignement Supérieur et de la Recherche Scientifique* (Ministry of Higher Education and Scientific Research), whose *Centre National de Recherches sur l'Environnement – CNRE* (National Centre for Environmental Research) provides Madagascar's National IOSEA Focal Point. Following welcoming remarks by the Director of CNRE, Dr Pierre Ravelonandro, and IOSEA Coordinator Douglas Hykle, the meeting was formally opened by Christian Ralijaona, Secretary General

of MESUPRES.

The gathering was the first opportunity for so many interested actors from different parts of the country to come together to exchange information and views on fundamental turtle conservation issues. A useful table has been compiled describing a wide range of stakeholders active in Madagascar, including organisation name and acronym, functional responsibility and geographic area of work.



Berthin Rakotonirina (IHSM) gave an overview of the five principal turtle species occurring in Madagascar waters, describing them in their most commonly used local names: *Fano zaty* (Green), *Fano apombo* (Loggerhead), *Fano hara* (Hawksbill), *Fano valozoro* (Leatherback), and *Fano tsakoy* (Olive ridely). It was noted that while several species were reported to nest in Madagascar, to varying extent, the country's coastal waters were especially important foraging areas for loggerhead turtles that probably nest in South Africa and Mozambique.

Traditional turtle research activities appear to have been limited in scope, so far. Some tagging activities, conducted mostly in the west and northwest, have not generated international tag returns; but it is known that green turtles from Mayotte frequent northern Madagascar. Some genetic samples have been collected, but are awaiting analysis as part of other projects. No satellite tracking studies are known to have been conducted from Madagascar, however many tracks of individuals released elsewhere have been observed in waters around the country.

A presentation by Rijaso Fanazava, *Centre de Surveillance des Pêches* (Fisheries Monitoring Centre), shed light on some of the threats to marine turtles in Madagascar, the efficacy of management practices intended to deal with them, and a host of legislation and regulations -- some nearly a century old -- that underpin current management regimes. Large numbers of turtles were reported to have been caught accidentally in shrimp trawls over the last two decades, until the introduction of mandatory turtle excluder devices around 2005. It was noted that while the CSP carries out inspections in port, those at sea were not as



systematic or regular, and observer coverage of the fleet was only 30%. Thus the potential for non-compliance by any fishermen reluctant to use TEDs was a real possibility.

The practice of traditional hunting of turtles by the Vezo population also featured prominently in the discussions. A study by Blue Ventures estimated that in the region surrounding the village of Andavadoaka in the southwest of the country, the annual turtle catch was in the order of 10,000 to 16,000 animals. More generally, a dramatic increase in fishing effort had occurred over the past two years, with a significant influx of migrant fishers from south to north towards the region surrounding the Iles Barrens. It was reported that the fishing took place on a seasonal basis and that when one area was depleted, they would move on to another. Foreign exploitation of Malagasy waters for marine life such as sea cucumbers was also reported to be significant – with East Asian vessels engaging local people to do the fishing.

An animated discussion about the efficacy and enforcement of various legal instruments led to the conclusion that an exercise to consolidate them would help to bring clarity and improve the application of necessary measures. It was suggested that a new act might enable the delegation of powers to local communities for application through the local, traditional laws known as 'dina', which would give communities greater responsibility for marine turtle conservation and research.

Several non-governmental organisations reported on their research and conservation programmes around the country, among them Blue Ventures, ReefDoctor, and World Wide Fund for Nature (WWF). Ambitious plans under the Southwest Indian Ocean Fisheries Project (SWIOFP) for work with a bearing on turtle conservation were also presented.

A multi-year, foreign-led turtle conservation project on Iles Barrens ended in October 2010. Concern was expressed about the non-availability of some important project reports. Efforts were continuing to secure funding for the creation of a marine protected area – evidently a matter of some urgency as exploitation of the islands for their finite phosphate resources threatened their ecology. A relatively high incidence of fibropapilloma disease was reported in the area, without an obvious explanation of the possible cause.

One of the useful, tangible outputs from the workshop was the completion of about 30 data sheets on sites of importance for marine turtles in Madagascar, achieved with the enthusiastic collective input from many of the meeting participants. Formerly, the IOSEA Online Reporting Facility contained only names of some Madagascar sites, with little information on species occurrence, threats or site-based mitigation measures. The system now has more detailed descriptions of previously known sites, as well as several new ones.

To view the current data sheets and to query their contents, please visit the Sites / Threats and Species / Habitats modules of the online IOSEA reporting system.

By way of example, one can use the system to identify sites: where loggerhead and green turtles have been reported to nest in Madagascar; where egg collection is reported to be significant; and where elevated levels of harvest of animals at sea are occurring. While the extent and accuracy of information could still be improved for many sites, the fact that such an overview is now available for critical review, analysis and improvement is a positive outcome of the workshop.

An existing draft of a national conservation and management plan for implementing the IOSEA MoU was circulated to meeting participants. The document represents a good first step towards identifying responsible lead actors and collaborators, time frames for implementation, and relative priorities. Time did not allow for the plan to be thoroughly reviewed and revised, but participants met in working groups and in plenary to exchange ideas about some of the most important issues that need to be tackled. These useful discussions will be captured in more detail in a separate meeting report.

The meeting concluded with a summary of the most important information gaps and problems facing marine turtle conservation and research in Madagascar, which can be summarized as follows:

1. Scientific data: there is a lack of scientific and empirical knowledge relating to marine turtles in Madagascar, and no centralised database to document previous work.
2. Regulations: current laws are not clearly understood and accepted by all stakeholders, and their elaboration gave insufficient consideration to traditional and cultural turtle consumption.

3. Involvement of local communities: the importance of involving local communities in future marine turtle conservation efforts was highlighted, including the potential use of the *Dina* as an useful tool in future management efforts.
4. Regional Cooperation: this emphasizes the importance of drawing upon existing local, national and regional expertise and frameworks and providing a means through which all actors can communicate and share information with one another.
5. Political considerations: it was recognized that the current political situation in Madagascar has not favoured efforts to clarify legislative shortcomings and to bring about long-term organizational stability.

Options were discussed for coordinating immediate and longer-term follow-up actions, one of them being the existing *Comité National pour la Gestion intégrée des zones côtières* – GIZC (National Committee for the Integrated Management of Coastal Zone). This group meets regularly and includes membership from many of the institutions present, including CNRE which serves as the national focal point for IOSEA.

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The national workshop was made possible by a grant from the IOSEA Technical Support / Capacity Building Programme and the organisational support of CNRE and Blue Ventures, a nongovernmental organisation working in Madagascar on a range of social and environmental issues.



The IOSEA team at the meeting comprised Coordinator Douglas Hykle, Stéphane Ciccione (Vice-Chair of the Western Indian Ocean – Marine Turtle Task Force), and Dr. George Hughes (ex-Advisory Committee member. In addition to imparting knowledge gained from several decades of experience conserving marine turtles in South Africa, George doubled as the official meeting photographer; while Stephane's skills as a meeting facilitator were put to very good use in a number of key sessions.



The IOSEA Secretariat would like to extend its appreciation to the United States Fish and Wildlife Service (USFWS), which has provided the funding for the ongoing IOSEA Technical Support / Capacity Building Programme; and to express special thanks to Marguerite Rasolofo (CNRE) - *pictured right* - and Frances Humber (Blue Ventures) - *pictured left*, in particular, for all of their hard work that went into the organisation of the workshop.



DRAFT Road Map for the further development of the IOSEA Marine Turtle Training Course / Capacity-Building Programme (version 5/1/2012)

<p>1. Step One: Prepare / present the concept :</p> <p>Ideally, have a near-final concept to discuss and refine (at a workshop?) during SS6</p>	
a. Agree on / describe on paper the general concept	e.g. Is the idea to develop a stand-alone training course, including a range of modules, and make it/them available to whomever is interested; or is more active involvement in the delivery of training, using the completed modules, also contemplated?
b. Compile a list of existing manuals, courses	Solicit input from IOSEA SS, AC members and IOSEA region sea turtle experts. Try to obtain hard/soft copies of existing manuals in various IOSEA languages, as far as possible.
c. Complete the outline of content developed by Jeff Miller	Several people agreed at ISTS in San Diego to assist (see report for details)
d. Explore/describe the various options available for the eventual format(s)	e.g. portal on the IOSEA website, Powerpoint, video series, hard-copy manual, workshop
<p>2. Circulate the concept more widely with a view to identifying potential "partners"</p>	
- to contribute further ideas/propose additional content	Solicit input from IOSEA SS, AC members and IOSEA region sea turtle experts.
- to consider using the training modules, once completed	Identify current and future training programs where a sea turtle component could be useful
- to fund the development work	
<p>3. Develop the training modules / capacity-building programme</p> <p>Dependent on outcome from 1-2</p>	
	Individual advisory Committee members, supported by design company? Hire consultant to coordinate the activity?

4. Roll-out of the programme

Notify SS and other partners of the available resources; and solicit for actual training needs

Option: Work with existing training programs to include marine turtle training modules

Option: Offer training to those SS who request it