

# **REPORT OF THE 7<sup>th</sup> MEETING OF THE WESTERN INDIAN OCEAN MARINE TURTLE TASK FORCE**

**Dar es Salaam, Tanzania  
2 November 2017**



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

## **7<sup>th</sup> Meeting of the Northern Indian Ocean Marine Turtle Task Force Report**

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### **1. Opening**

Vice-Chair Lindsey West welcomed all present to the meeting, and introduced the recently appointed Coordinator for the IOSEA Marine Turtle MOU Secretariat, Heidrun Frisch-Nwakanma, to the participants. Even though only part of the membership of the Task Force was able to be present, both expressed their satisfaction that it had been possible to arrange this meeting in the margins of the 10<sup>th</sup> Western Indian Ocean Marine Science Association (WIOMSA) Symposium.

Members from Comoros, Kenya, France (Reunion), South Africa and Tanzania attended the 7<sup>th</sup> WIO-MTTF meeting.

The WIO-MTTF meeting was preceded by an open session on turtle research and conservation in the region that had taken place in the morning. A brief report and summaries of country presentations that were submitted can be found in Annex 4.

### **2. Review of Progress of the WIO-MTTF Work Programme**

The Task Force Members reviewed the WIO-MTTF Work Programme for the previous three-year period and each country provided updates on progress within their country. Follow-up actions were agreed (see Annex 3).

Members agreed that the work plan needed an in-depth revision so that it captured emerging issues in the region.

### **3. Task Force Structure and Leadership**

Members discussed the structure of the WIO MTTF in view of its mandate as a technical committee spanning both scientific and management expertise. Members recognized the importance of maintaining the WIO MTTF as a technical body in order to support Signatory States to implement the Conservation and Management Plan of the IOSEA Marine Turtle MoU. They agreed that the current membership structure served this purpose well, but that it might be beneficial for countries to nominate alternates that could support the MTTF members.

Members also discussed the process for electing a new Chair and Vice Chair. In view of the financial challenges of bringing all members together for regular meetings, members agreed that the election process could be done via email, facilitated by the IOSEA Secretariat. Nominations were being sought for the next three-year period.

#### **4. Wrap-Up**

Countries not present at this meeting would be given opportunity to provide feedback on and input to the outcomes in writing.

## **List of Participants**

### **Comoros**

Mr Msoili ANFANI  
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### **IOSEA Marine Turtle MOU Secretariat**

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IOSEA Turtle MOU Coordinator & CMS  
Aquatic Species Team  
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### **Agenda**

<b>Agenda Item</b>	<b>Description</b>	<b>Presenter / Lead</b>
1. Opening	Welcome and adoption of the agenda	Vice Chair
2. Review of Progress of the WIO-MTTF Work Plan	Update from countries, guidance on next steps	TF Members
3. Task Force Structure and Leadership	Review of membership structure, election of Chair and Vice-Chair, voting procedures	IOSEA Secretariat
4. Wrap-Up		

**Work Programme of the Western Indian Ocean – Marine Turtle Task Force:**  
**Work Plan 2017-2019**

*Revised by the 7<sup>th</sup> Meeting of the Task Force (Dar es Salaam, 2 November 2017)*

<b>IMPLEMENTATION PREREQUISITES</b>				
<b>Recommendation</b>	<b>Lead/Responsible*</b>	<b>Progress (% Implemented)**</b>	<b>Renew</b>	<b>New Actions</b>
<b>1a.</b> Task Force members should establish working relationships with their respective IOSEA Focal Points.	TF Members	COM: 100% FRA: 10% (keeping him informed) KEN: 100% TZA: 100% ZAF: 0% FP, 100% Proxy	Y	
<b>1b.</b> Provide suggestions to, and assist their respective national Focal Points on strengthening national committees, networks, working groups or other national arrangements, as appropriate.	TF Members	COM: 100% FRA: 100% (group for Action Plan) TZA: 80% (no national committee meetings in last two years) ZAF: 100%	Y	
<b>1c.</b> Assist respective Focal Points with the updating of IOSEA national reports, including identification of specific resource needs.	TF Members	n/a Opportunity in next cycle, preparing for MOS8	Y	

UNIQUE SOCIAL CUSTOMS AND PRACTICES (Social Aspects)				
Recommendation	Lead/Responsible *	Progress (% Implemented)**	Renew	New Actions
2. Develop a proposal for a compilation of available, relevant information on <u>social aspects of marine turtle conservation</u> in the region, including a literature review as a form of policy brief (guidelines), perhaps to be funded and made available by WWF or WIOMSA, in preparation for a symposium/ workshop (i.e. studies to understand <u>relevance of turtles to people, and their impacts or value</u> ).	TF Chair	0% (?)	Y	<ul style="list-style-type: none"> <li>• Check if the Secretariat prepared a report some years ago</li> <li>• If a priority, submit workshop proposal to WIOMSA in February 2018 to identify best way to address this action</li> <li>• Ronel Nel to provide feedback on Community Voice Method (CVM) as potentially suitable approach following training workshop in Port Elizabeth in April 2018</li> <li>• Investigate if it is suitable issue for a WIOMSA MASMA grant application.</li> </ul>

<u>ECONOMIC USES</u>				
Recommendation	Lead/Responsible*	Progress (% Implemented)**	Renew	New Actions
3. Request the support of WIOMSA and other regional funding bodies to conduct a regional workshop to assess the <u>social-economic values of marine turtles and compatibility of conservation approaches</u> , including both exploitation (consumptive use) and sustainable ecotourism (live turtles, non-consumptive use).	TF Chair; IOSEA; Nairobi; Jack Frazier	0% (despite efforts and preparation of a concept note for the workshop, no success)	Y	
4. From the workshop, produce an annotated bibliography, economic study guidelines and analysis of conservation approaches from the region.	(To be decided at the workshop)	n/a		

<u>FISHERIES-INTERACTIONS</u>				
Recommendation	Lead/Responsible*	Progress (% Implemented)**	Renew	New Actions
5. Task Force members are encouraged to work directly with IOSEA Focal Points and relevant stakeholders to complete and improve the quality of data in national reports in relation to fisheries and fisheries interactions, in particular.	TF Members	n/a Opportunity in next cycle, preparing for MOS8	Y	
6. Engage RFMOs and other bodies not yet participating in the Task Force, including IOTC, ASCLME, IOC, SWIOFP, etc.	IOSEA; Nairobi	20%	Y	<ul style="list-style-type: none"> <li>Invite, disseminate information</li> </ul>



<b>7.</b> Liaise with the Indian Ocean Tuna Commission (IOTC) and SWIOFC for data on marine turtle bycatch in purse seining and long lining, including the impact of the use of FADs, and other non-tuna fisheries.	IOSEA; Nairobi	20% ERA done in 2015 together with FAO, presented to IOTC, still needs to be presented to Signatories	Y	<ul style="list-style-type: none"> <li>Determine whether SWIOFP is still relevant</li> <li>Contact ASCLME and as highest priority IOTC</li> <li>Countries to submit effort and bycatch data</li> <li>Re-circulate recommendations of ERA to Task Force Members and FPs</li> </ul>
<b>8.</b> Compile information on the status of on-board observer programmes and the status of marine turtle bycatch recording within those observer programmes in Western Indian Ocean region.	TF Members	COM: 50% FRA: 50% (has access to information, but not compiled) KEN: 50% TZA: 0% (need to access info from Fisheries Institute) ZAF: 0%	Y	<ul style="list-style-type: none"> <li>Conservation Departments should request national information (Is there an observer programme? For what percentage of the fleet?) What is the bycatch rate?) from Fisheries side – FP to communicate through higher level (e.g. Director)</li> <li>Data collection for small-scale fisheries should be standardized</li> </ul>
<b>9.</b> Explore opportunities for applying market incentives (eco-labelling, certification etc) and role of international bodies and instruments (EU, FAO, CMS, SWIOFC) to enhance compliance in use of bycatch reduction measures.	TF Chair; TF Members; IOSEA	KEN: (started doing stock assessments) TZA: 0% ZAF: (national sustainable seafood programme)	N	

<b>10.</b> Compile information on turtle bycatch and inshore fisheries	TF Members	COM: 0% FRA: (no issue in Réunion, not sure Mayotte) KEN: (on arrests, but not on turtles) TZA: 30% (inshore fisheries, bycatch data from interview surveys, one pilot study using an observer on gill net boat for 9 months) ZAF: (not an issue)	Y	<ul style="list-style-type: none"> <li>Provide information through national reports</li> </ul>
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**MONITORING / MITIGATION / RESEARCH**

<b>Recommendation</b>	<b>Lead/Responsible*</b>	<b>Progress</b>	<b>Renew</b>	<b>New Actions</b>
<b>11.</b> Maintain a record of genetic studies conducted in the region and submit the information to IOSEA for posting on the IOSEA website.	TF Vice-Chair; TF Members; IOSEA	COM: (done by France) TZA: (not conducting a study but collects tissue samples opportunistically) ZAF: (not up to date)	Y	<ul style="list-style-type: none"> <li>Secretariat should send a reminder; submissions should contain information on: available samples, location, contact information, ongoing study, researcher, results/papers</li> </ul>
<b>12.</b> Provide up-to-date lists of flipper tag series used in the countries for inclusion in the existing IOSEA online database of tag series.	TF Members; IOSEA	FRA: 100% KEN: (not up to date) TZA: 100%	Y	<ul style="list-style-type: none"> <li>Secretariat should send a reminder; information on where tag returns should be sent to needs to be updated</li> </ul>
<b>13.</b> Submit information on satellite tracking studies in WIO countries to the IOSEA Secretariat for inclusion in the Satellite Tracking Meta-database.	TF Members; TF Chair; IOSEA	TZA: 60% (tags from 2017 to be added)	Y	<ul style="list-style-type: none"> <li>Secretariat should send a reminder</li> </ul>

PROGRESS EVALUATION				
Recommendation	Lead/Responsible*	Progress	Renew	New Actions
14. Review the status of implementation of recommendations made at the 4 <sup>th</sup> , 5 <sup>th</sup> , 6 <sup>th</sup> and 7 <sup>th</sup> WIO-MTTF meetings.	TF Members; TF Chair; IOSEA		Y	<ul style="list-style-type: none"> <li>The work plan needs to be re-worked completely, as it no longer provides up-to-date advice to the region (e.g. spatial analysis, habitat modelling)</li> </ul>

**\*Explanation of abbreviations used in the text:**

TF Members: Members of the WIO-MTTF  
 TF Chair: Chair of the WIO-MTTF  
 TF Vice-Chair: Vice-Chair of the WIO-MTTF  
 IOSEA: Secretariat, IOSEA Marine Turtle Memorandum of Understanding  
 Nairobi: Secretariat, Nairobi Convention

**\*\*Explanation of abbreviations used in the text:**

COM: Comoros      SEY: Seychelles  
 FRA: France      TZA: Tanzania  
 KEN: Kenya      UK: United Kingdom  
 MAD: Madagascar      ZAF: South Africa  
 MUS: Mauritius      FP: Focal Point  
 MOZ: Mozambique      n/a: not applicable

## Open Session

Established in 2007, the Western Indian Ocean Marine Turtle Task Force (MTTF) serves to develop a well-coordinated network of interested stakeholders, delivering a comprehensive programme of necessary interventions, and providing an inclusive forum for regular review of implementation progress under the Indian Ocean South-East Asian Marine Turtle Memorandum of Understanding. The 7th Meeting of the Task Force took place on 2 November 2017 in Dar es Salaam, as a Special Session of the 10<sup>th</sup> WIOMSA Symposium.

The morning session was an open session to share information on current sea turtle research, conservation and management initiatives in the WIO region.

The opening presentation was given by the Secretariat of the *UNEP/CMS Indian Ocean South East Asia (IOSEA) Marine Turtle Memorandum of Understanding* and provided an overview of the establishment of the MOU, its objectives, and the roles of Signatory States, the Advisory Committee and the Secretariat. The Conservation and Management Plan (CMP) was explained including its six key objectives: research and monitoring; awareness and participation; reducing sea turtle mortality; protecting habitats; promoting national, regional and international cooperation; and facilitating implementation of the CMP through comprehensive species assessments, online tools and databases, and a national reporting system to evaluate the level of implementation in each Signatory State.

Country presentations were given by Comoros, France, Kenya, Mozambique, South Africa and Tanzania (see following pages). Egg poaching was highlighted as a persistent threat in Moheli (Comoros) and Kenya. Plastic pollution was also a cause for concern on nesting beaches in Kenya, Mayotte (France) and Tanzania while South Africa reported that hatchlings were consuming large amounts of micro-plastics. Engagement of coastal communities in sea turtle monitoring and conservation efforts was a priority in all six countries, although Reunion (France) had also made use of drone technology and facial recognition software to monitor foraging populations. South Africa highlighted their loggerhead monitoring programme which is one the longest running monitoring programmes globally as well as two new initiatives: use of the 'Community Voice Method' to support integration of social and economic data in conservation planning, and the development of a Biodiversity Management Plan for sea turtles.


Following the presentations there was a plenary session which incorporated discussions on the importance of engaging in planning processes, particularly in view of the large infrastructure developments underway in the region which threaten nesting beaches e.g. ports, oil terminals and an LNG plant. In this context, Marine Spatial Planning was highlighted as an important tool for informing planning decisions. South Africa emphasised the importance of feeding sea turtle data into regional and global initiatives e.g. Ecologically or Biologically Sensitive Marine Areas (EBSAs) under the Convention on Biological Diversity.

UN environment CMS

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IOSEA

## Introduction and Update from the IOSEA MOU



**Heidrun (Heidi)  
Frisch-Nwakanma  
MOU Coordinator**

**WIOMSA  
Special Session  
Marine Turtles**  
2 November 2017  
Dar es Salaam, Tanzania

7th Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)


UN environment CMS

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IOSEA

## What is the IOSEA Marine Turtle MOU?

- A contract (non-binding) signed by 35 governments in the region
- In effect since 2001
- Objective: to work together to conserve and manage marine turtles and their habitats
- Concluded under and supported by the Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- Secretariat based in Bonn, Germany (since January 2017)



7th Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)

UN environment CMS

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IOSEA

## What is the IOSEA Marine Turtle MOU?

- Covers 6 of the 7 species of marine turtles



Loggerhead



Leatherback



Hawksbill



Green



Olive ridley



Flatback

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)

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IOSEA

## What is the IOSEA Marine Turtle MOU?


- Meeting of Signatories**
  - the decision-making body of the MOU, reviews progress made and difficulties encountered and lay down the priorities for the next years
- Advisory Committee**
  - established to provide scientific, technical and legal advice to the Signatories, individually and collectively, on the conservation and management of marine turtles and their habitats
- Secretariat**
  - coordinating body of the MOU

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)






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




## What is the IOSEA Marine Turtle MOU?


- Conservation and Management Plan (CMP)
  - 6 Objectives




Reduce mortality




Protect habitats




Research & monitoring



Awareness & participation




Cooperation (national, regional, international)



Promote implementation

- 24 Programmes
- ~ 80 Activities

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)

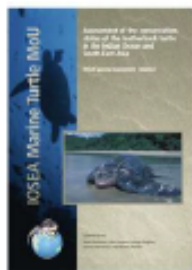


Memorandum of Understanding on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South-East Asia




## Facilitating Implementation

- Gathering and distribution of information
  - National Reports help evaluate level of implementation  
<http://www.cms.int/iosea-turtles/en/documents/national-reports>
  - IOSEA Leatherback & Loggerhead Turtle Comprehensive Species Assessments
  - Website
    - old (still online): [www.ioseaturtles.org](http://www.ioseaturtles.org)
    - new (not complete): [www.cms.int/iosea-turtles](http://www.cms.int/iosea-turtles)
  - Online applications such as Flipper tag database (currently only accessible through old website, not all functional at present)



Updated 2012



Published 2013

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)

UN environment CMS

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

IOSEA

## Facilitating Implementation

- Four sub-regions

- WIO
- NWIO
- NIO
- SEA+

- Two sub-regions have Marine Turtle Task Forces:

WIO since 2007/08

NIO since 2015

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)

UN environment CMS

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

IOSEA

## Facilitating Implementation

- IOSEA Marine Turtle Site Network

- Goal: To promote the long-term conservation of sites of regional value for the benefit of marine turtles and the habitats on which they depend
- Rationale: To formally recognize the ecological & socio-economic values and importance of particular sites (and ensure that these values are taken into account in decision-making)

**Nomination Process:**

```

graph TD
    A[PREPARATION OF SITE INFORMATION SHEET] --> B[SUBMISSION TO IOSEA SECRETARIAT]
    B --> C[REVIEW BY IOSEA ADVISORY COMMITTEE]
    C --> D[DECISION BY MEETING OF SIGNATORY STATES]
    D --> E[SITE LAUNCH]
    E -- FEEDBACK --> B
    
```

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)





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

## | Facilitating Implementation

- IOSEA Marine Turtle Site Network
  - 7<sup>th</sup> Meeting of Signatory States (2014) approved the first 10 Sites
  - 5 Sites in WIO region
    - Aldabra Atoll (Seychelles)
    - Europa Island (France)
    - iSimangaliso Wetland Park (South Africa)
    - Itsamia, Mohéli (Comoros)
    - Rufiji-Mafia Seascape (United Rep. of Tanzania)
  - More information at: <http://www.cms.int/iosea-turtles/en/activities/site-network>

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)



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

## | To learn more:



Visit:  
[www.cms.int/iosea-turtles](http://www.cms.int/iosea-turtles) (new website)  
[www.ioseaturtles.org](http://www.ioseaturtles.org) (old website with online applications)

and/or write to:  
[heidrun.frisch@cms.int](mailto:heidrun.frisch@cms.int)

7<sup>th</sup> Meeting of the Western Indian Ocean Marine Turtle Task Force (WIO-MTTF)



**Special Session – 2<sup>nd</sup> November 2017  
WIO Sea Turtle Network**

**Sea turtle research & conservation programs in French territories of the SWIO  
Update presented by Claire Jean & Katia Ballorain**

The talk started by a short reminder of the location of the territories where French turtle teams are directly involved in scientific or conservation programs : inhabited islands : La Reunion, Mayotte ; Uninhabited islands-Marines reserves-sanctuaries : Tromelin, Glorieuses, Juan de Nova, Europa

5 species occur in these territories: Green, Hawksbill, Loggerhead, Olive Ridley, Leatherback (named by descending order of occurrence frequency)

Then organizations working on the programs and their location were presented:

Reunion:

- Kelonia, private company
- CEDTM, association
- IFREMER, French research organisation
- TAAF, state manager

Mayotte:

- Departmental Council
- Oulanga Na Nyamba, association
- Mayotte marine nature park / French Biodiversity Agency, governmental agency
- Escalé, association
- CARA ecology, private company
- REMMAT, stranding network

All the scientific and conservation programs are undertaken under the National Action Plan for Marine Turtles in French Southwest Indian Ocean Territories (2015-2020).

**Population Monitoring**

- Nesting turtles

Objective: Monitor population size and trends, and Seasonality and dynamic

Methods and protocols: Continuous surveys (track counts daily or weekly) and Demographic parameters every 5 years (CMR, nest monitoring)

- Foraging turtles

Objective: Assess Population status (size, density, structure) and Population distribution

Methods and protocols: Underwater censuses (photo-ID through citizen science programs, CMR during scientific missions); Aerial censuses (ultra-light aircraft and drone surveys – SEMMADRONE project)

**Foraging ecology**

- Juvenile green turtles:

Objective: Study habitat use and behaviour, and Explore diet, body condition and growth

Methods and protocols:



- Individual identification: CMR, Photo ID, S/CCL measurements
- Fastloc GPS/Argos tracking (up to 16 months)
- Turtle-borne video cameras coupled with satellite tags
- Remote underwater video cameras (with mini-cameras and 360° cameras)
- Stable isotopes ( $\delta^{15}\text{N}$  and  $\delta^{13}\text{C}$ )

#### **Habitat monitoring**

- Foraging grounds

Objectives: Highlight local initiatives; Facilitate regional cooperation; Standardize monitoring protocols

Methods and protocols: Seagrass workshop in next November in Reunion

#### **Threats**

- Mortality, distress and bycatch

Objective: Quantification and trends under an objective of developing mitigation measures

Methods and protocols: Stranding and rescue networks, Plastic ingestion analysis, Poaching survey

#### **Data storage and management**

- TORSOOI database

Objectives: Secure data, develop collaborations & facilitate exchange

Methods and protocol: Unique database / Online Access / Multi-users / Private space /

Ownership and confidentiality maintained / Data control and quality / Automated reports – exports.

#### **Conservation actions**

Objective: Threats mitigation

Actions:

- Rehabilitation (rescue centre)
- Awareness & education
- Habitat restoration
- Guidelines (bycatch, observation...)
- Handbook & guidelines for municipalities

#### **Regional collaborations**

Comoros (Moheli) / Madagascar (Nosy Iranja, Fort dauphin-Anosy, Nosy Hara, Nosy Ankao, Ankarea-Ankivonjy MPA) / Mauritius / Seychelles / Chagos / Oman / Mozambique / South Africa

#### **Perspectives**

- Focus on juvenile ecology
- Develop actions and programs to improve knowledge on Hawksbill in French territories in relation with other countries of the region
- Undertake research on Loggerheads in the South Indian Ocean



## LOCAL OCEAN CONSERVATION

Watamu, Kenya

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The Local Ocean Conservation (LOC) is a private not-for-profit organization committed to the conservation and protection of special marine areas and endangered species. LOC encourages the sustainable use and management of marine resources for future generations and Kenya's marine heritage, through empowerment, education and campaigning.

The name Local Ocean was chosen because our goal is to encourage people to look after their own 'local ocean', creating a chain of properly managed and conserved areas of ocean. To this end we work alongside coastal communities because without their help we would not have achieved as much as we have.

### Programme work:

- Watamu Turtle Watch:** aims to protect endangered species of sea turtle. It involves monitoring and protecting sea turtles, their nests and hatchlings; rescuing and releasing sea turtles accidentally caught by local fishermen; and the operation of East Africa's only sea turtle rehabilitation centre.
- Environmental Education:** aims to increase understanding of the importance and value of the local marine life and environment. We work with 30 local schools, have an information centre and run a Marine Scout programme for students who show a particular interest in marine conservation. We also take on interns from national and international universities.
- Community Support & Capacity Building:** dedicated Community Liaison Officers work closely with local fishing communities to educate them about sustainable marine resource management, organisational skills, provide technical advice and to explore possibilities for Alternative Income Generating activities. LOC has been instrumental in the formation of most of the fishing and conservation groups. Through long term commitment to these groups, we have made a real difference in their communities.

### Some points of interest:

- we have conducted over 16,200 sea turtle rescues, which would otherwise have been slaughtered for their meat and oil
- we have protected over 820 sea turtle nests, from which more than 68,000 hatchlings emerged
- we have treated over 450 patients in our turtle rehabilitation centre
- we work with 30 local schools
- our education programme reaches over 2,500 students each year
- we are currently engaged with 15 community groups and work closely with more than 450 fishermen

# Country Update - Mozambique 2016/2017

WIO SEA Turtle Network  
Special Session – 2nd November 2017

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## MONITORING, TAGGING AND CONSERVATION OF MARINE TURTLES IN MOZAMBIQUE:

ANNUAL REPORT 2016/17

Compiled and Edited by:

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Lara Muaves, Cristina M. M. Louro & Marcos A. M. Pereira



Maputo, September 2017



Area	Method	Number of monitors & rangers	Distance (km)	Period (Number of days)	Number of days patrolled
Ponta do Ouro – Ponta Malongane	Patrol on foot	3	8	01 Sept 16 – 31 Mar 17 (212)	212
Ponta Malongane – Monte Mutondo	Patrol by car		32	01 Dec 16 – 1 Jan 17 (32)	32
Monte Mutondo – Ponta Mucombo	Patrol on foot	9	30	01 Sept 16 – 31 Mar 17 (212)	212
Ponta Mucombo – Cabo de Santa Maria	Patrol on foot	14	20	01 Sept 16 – 31 Mar 17 (212)	212
Závora – Praia Manhame	Patrol on foot	20	10*	01 Oct 16 – 30 Apr 17 (212)	*
Tofo – Palindane	Patrol on foot	1	*	01 Oct 16 – 30 Apr 17 (212)	*
Massinga Beach	Patrol on foot	1	*	01 Feb 17 – 30 June 17 (150)	*
Pomene National Reserve	Patrol on foot	2	16	Jan 17 – April 17	12
Cabo São Sebastião S.	Patrol on foot	6	25	01 Nov 16 – 28 Feb 17 (120)	120
Bazaruto ANP	Patrol on foot	37	≈50	01 Oct 16 – 31 Mar 17 (182)	**
Quirimbas NP	Patrol on foot and by bicycles	22	≈85	23 May 2016 – 30 June 17 (404)	**
Vamizi Island	Patrol on foot	4	12	01 June 16 – 31 May 17 (364)	364

288 km  
~10.4% of the coastline  
Previous seasons ~4.6%

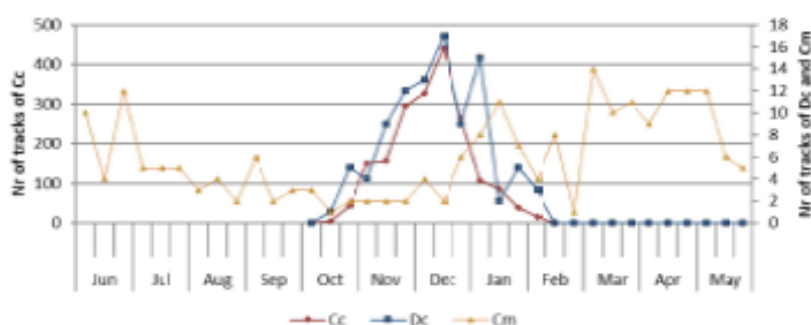


### Tracks

### Nesting

### Nests

Area	Cc	Cm	Dc	Ei	Lo	Ni	Total	Cc	Cm	Dc	Ei	Lo	Ni	Total
Ponta do Ouro – Ponta Malongane	55	-	3	-	-	-	58	11	-	-	-	-	-	11
Ponta Malongane – Ponta Dobela	1199	-	54	-	-	-	1253	582	-	34	-	-	-	616
Ponta Dobela – Ponta Mucombo	371	-	14	-	-	-	385	163	-	3	-	-	-	166
Ponta Mucombo – Santa Závora	308	-	24	-	-	-	332	139	-	24	-	-	-	163
Závora – Praia Manhame*	4	-	-	-	-	-	4	2	-	-	-	-	-	2
Tofo – Palindane*	3	-	-	-	-	-	3	-	-	-	-	-	-	0
Pomene National Reserve	-	-	-	-	-	-	0	-	-	-	-	-	-	0
Cabo São Sebastião S.	14	-	-	1	-	-	15	-	-	-	-	-	-	0
Bazaruto NP	17	4	3	-	-	-	24	14	-	-	1	-	-	15
Matemo Island	-	-	-	-	-	24	24	17	4	3	-	-	-	24
Ibo Island	-	-	-	-	-	2	2	3	-	-	-	-	-	3
Quirimba Island	-	-	-	-	-	38	38	-	139	-	-	-	-	139
Vamizi Island	-	164	-	-	-	-	164	-	-	-	-	-	-	-
Total	1971	168	98	1	0	70	2308	931	143	64	1	0	21	1160



Area	Species	Natural causes	Anthropogenic causes
Ponta do Ouro Partial Marine Reserve	Cc Dc	Natural predation by bush pigs, honey badgers and uncontrolled dogs on turtle nests. A total of 170 nests were raided by bushpigs and honey badgers, between 21 and 25 km north of Malongane.	-
Závora-Praia Manhame	Cc  Cc	In Závora one nest were laid below the tide line without constructing proper nest chamber and eggs washed away.  Praia Manhame: 2 nests unconfirmed hatching due to heavy rains and cyclone.	  1 nest eggs stolen in first 12 hours at Praia do Manhame
Tofo-Paindane	Cc	-	Tofo: 1 nesting female slaughtered whilst she was digging a bodypit.  Paindane/Guinjata: 2 reports of illegal take of nesting females. Unknown if this occurred pre or post oviposition.
Vamizi	Cm	6 nests flooded; 1 covered by dune erosion;	-
Quirimbas NP	Ni	8 nests flooded 3 nests unconfirmed	-
<b>Total</b>		<b>190</b>	<b>4</b>

## Tagging

### New tags

Area	<i>C. caretta</i>	<i>D. coriacea</i>
Ponta do Ouro – Ponta Malongane	3	0
Ponta Malongane – Ponta Dobela	150	9
Ponta Dobela – Ponta Mucombo	36	0
Ponta Mucombo - Santa Maria	12	3
<b>Total</b>	<b>201</b>	<b>12</b>

### Recaptures

Area	<i>C. caretta</i>	<i>D. coriacea</i>
Ponta do Ouro – Ponta Malongane	3	0
Ponta Malongane – Ponta Dobela	86	7
Ponta Dobela – Ponta Mucombo	11	0
Ponta Mucombo - Santa Maria	7	0
<b>Total</b>	<b>107</b>	<b>7</b>



### Strandings, threats and Mortality

Area	Description	Total
Ponta do Ouro PMR	Cc slaughtered while nesting at Machangulo (12.11.2016) 2 Cm found dead at beach by natural causes (07.2016 and 04.2017) 2 Cc found dead at beach by natural causes (12.2016 and 03.2016)	5
Macaneta	Cm captured by artisanal fishers	1
Tofo - Massinga	Cc slaughtered while nesting at northern Tofo beach (16.11.2016) Cm adult stranded, had buoyancy control issues and extensive tumors and infections over both eyes. Animal released offshore (12/05/2016) Adult Dc carapace found Backdoor beach, Tofinho. Washed ashore on high tide, suspected bycatch from artisanal fishers and opportunistically seized for illegal take (16/05/2017) 7 Cm carapaces found in sand dunes, 3 mature size and 4 partial remains (older mortality events; 04/09/2016) Cm carapace found at access point to dragons beach, Tofinho. Subadult size (16/06/2017) 4 Cm and 4 Cc carapaces partially degraded from sun exposure. Mix of sizes and states of decomposition. found together in old fishing camp on top of steep dune, under vegetation (25/3/2017)	18
Inhassoro	Cm found dead between praia de Inhassoro and Bartolomeu Dias by Solidariedade Internacional de Moçambique fellows	1
Cabo São Sebastião	Cm male turtle. Visitors found a green turtle washed up on the beach entangled in a net and, with the help of some local fishers, released it	0
Vamizi	Ei found dead at at Comisete Beach, in front of Vila Papilio with an injured on the head, probably caused by a fisherman gun (21.01.2017). Cm copulating washed ashore at Comisete Beach, in front of Dive Center (3.01.2017)	1
Quirimbas NP	1 Ei carapace found burnt with meat remains at the Matemo Island beach 1 Ei dead by artisanal fishers 12 Cm found dead at Matemo Island (3), Ibo Island (7), channel between Mefunvo Island and Arimba (2). In Ibo Island carapaces were found in Paloco mangrove forest 35 Ni turtles found dead at Matemo Island (5), Ibo Island (11), Quirimbas Island (15) and Quissanga (4)	49

#### RESEARCH AND MONITORING UPDATE

##### Recent Publications relevant to Mozambique

- Anastácio, R., C. Lopes, Ferrão J. & M. J. Pereira (2017). *Eretmochelys imbricata*: Lessons to Learn from a Monitoring Program in the North of Mozambique. *Natural Resources* 8(05): 382.
- Julien, V. C. d. M., A. T. Guissamulo, A. F. d. Silva, Afonso A. & M. Júnior (2016). Nest Site Selection of Loggerhead and Leatherback Sea Turtles at the Eastern Coast of Inhaca Island, Mozambique. *Journal of Life Sciences* 10: 260-268.
- Moto, A., Gobo E. & L. Muaves (2016). Relatório sobre morte de tartarugas marinhas registadas no Parque Nacional das Quirimbas pelos agentes comunitários do SMOG (Sistema de Monitoria Orientada para a Gestão) período de 08-12 de Agosto de 2016. WWF.
- Louro, C. M. M., C. Litulo, Pereira, M. A. M. & T. I. F. C. Pereira (2017). Investigação e monitoria de espécies e ecossistemas nas áreas de conservação marinhas em Moçambique: Parque Nacional das Quirimbas 2016, 43 pp. Maputo, Centro Terra Viva.
- Pereira, M. A. M. & C. M. M. Louro (2017). A review of recent marine turtle strandings at the Quirimbas National Park, northern Mozambique, and a call for action. *African Sea Turtle Newsletter*, 7: 29-33.
- Robinson, N. J., S. J. Morreale, Nel R. & F. V. Paladino (2016). Coastal leatherback turtles reveal conservation hotspot. *Scientific Reports* 6.
- Williams, J. L. (2017) Illegal take and consumption of leatherback sea turtles (*Dermochelys coriacea*) in Madagascar and Mozambique. *African Sea Turtle Newsletter* 7: 25 – 28.
- Williams J. L. (2017) Multidisciplinary insights into the conservation and biology of sea turtles in Mozambique. Doctoral thesis, College of Marine and Environmental Sciences, James Cook University, QLD, Australia. 358 pp.
- Williams J. L., Pierce S.J., Hamann M. & M. M. P. B. Fuentes (in review) Using Expert Opinion to Identify and Determine the Relative Impact of Threats to Sea Turtles: A case study in Mozambique. *Aquatic Conservation: Marine and Freshwater Ecosystems*.

##### Priority future research

- Analysis of female emergences at POPMR (from Ponta do Ouro to Santa Maria) from 1994 to the current nesting season. This analysis will include extrapolation of tracks based on historic data from the index site (Malongane) for the period between 1994/95 and 2007/08 nesting season.
- The impacts of environmental changes and seasonal variation are not yet understood and need to be addressed.
- The identification and quantifying of the extent of anthropogenic impacts (particularly fisheries-related mortality) to marine turtles in Mozambique is needed.



## CAPACITY BUILDING, ENVIRONMENTAL EDUCATION AND AWARENESS



Mefunvo and Ibo – meat being sold and  
boneyards  
Memba - boneyard  
Pomene – one dead



**KANIMAMBO**

**OBRIGADO**

**THANK YOU**

**MERCI BEAUCOUP**

**ASANTE SANA**





- Tanga Region: Mkinga and Muheza Districts and Tanga City.
- Green turtle nesting activity and high levels of turtle meat consumption.
- Recruitment of 5 community Conservation Officers in five priority villages.
- Training from Sea Sense in species identification, nest relocation protocols, post hatching excavations, data collection from stranded turtles and data recording.
- Study tour to Pangani District





**STUDY TOUR**



## Population assessments at Tanzania's two largest green turtle nesting sites

- Mafia District – mean annual nest count of 191 (range 136 – 252).
- Kigamboni District - mean annual nest count of 100 (range 68 – 147).
- Intensive nightly patrols during two month nesting peak in April and May.
- Flipper tags applied to each female encountered.
- Data from six seasons in Mafia (2012 – 2017).
- Data from five seasons in Kigamboni (2013 – 2017).
- Remigration patterns starting to emerge.

## Mafia District

	2012	2013	2014	2015	2016	2017
No emergences	53	78	69	99	73	35
No. nesting females	17	28	21	32	33	13
No. re-migrants	3	3	4	7	12	4
% re-migrants	18	11	19	22	36	31

## Kigamboni District

	2012	2013	2014	2015	2016	2017
No emergences	-	28	25	46	26	33
No. nesting females	-	18	14	22	14	16
No. re-migrants	-	2	0	5	4	4
% re-migrants	-	11	0	23	29	25



## Green Turtle Status Assessment in Lindi Region

- Historically important nesting site.
- Beaches at 20 villages surveyed for evidence of nesting activity.
- 15 locations had evidence of recent nesting activity though very low density.
- Egg poaching occurred at all sites with evidence of nesting.
- Turtle meat consumption common in all 20 villages.
- Targeted green turtle fishery in all 20 villages.



## Green turtle foraging habitat in Lindi District

- Large numbers of discarded carapaces were juveniles and sub-adults indicating that Lindi is an important foraging area.
- International flipper tag returns (Comoros, Mayotte, Mozambique, Seychelles, Kenya): foraging / migrating adult greens .
- 4 satellite tags deployed on juvenile foraging green turtles.

## Education and Outreach



# THANK YOU

