INTERNATIONAL SYMPOSIUM HOSTED

HTTP://WWW.SANDYBEACH2012.COM/HOME

VIth International Sandy Beach Symposium

ISBS-VI 2012 | Mpekweni, Eastern Cape, South Africa| 23 – 28 June 2012

Doc.1

VIth International
Sandy Beach Symposium

Sandy Beaches 2012:
A new paradigm in the face of global change

Mpekweni, Eastern Cape, South Africa

23 - 28 June 2012

Coastal & Marine Research Unit
Nelson Mandela Metropolitan University for tomorrow

1 | Page

Sponsors:

Coastal and Marine Research

Nelson Mandela Metropolitan University for tomorrow

environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

6TH INTERNATIONAL SANDY BEACH SYMPOSIUM

Theme: *A new paradigm in the face of global change*

- 60 Delegates (including academics, students, managers, government representatives & consultants)
- 13 Countries represented
- 4 Days at Mpekeweni
- 4 Sponsored plenary speakers (USA, Brazil, UK, South Africa)
- 7 NMMU Students (most ever at this symposium)
- 6 Student awards presented

Doc.2

ELSEVIER

Estuarine, Coastal and Shelf Science

Available online 28 May 2013

In Press, Accepted Manuscript — Note to users

Setting Conservation Targets for Sandy Beach Ecosystems

Linda Harris[a], Ronel Nel[a], Stephen Holness[b], Kerry Sink[c], David Schoeman[d, a]

[a] Department of Zoology, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031, South Africa

[b] Centre for African Conservation Ecology, Department of Zoology, PO Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031, South Africa

[c] South African National Biodiversity Institute, Centre for Biodiversity Conservation, Private Bag X7, Claremont, 7735, South Africa

[d] Faculty of Science, Health & Education, University of the Sunshine Coast, Maroochydore, Q-4558, Australia

http://dx.doi.org/10.1016/j.ecss.2013.05.016, How to Cite or Link Using DOI

Permissions & Reprints

Manuscript accepted: ECSS

Doc.3

The power of genetics in demonstrating connectivity: A case study of *Donax* spp.

Karien Bezuidenhout[a], Ronel Nel[a], Lorenz Hauser[b]

[a]Department of Zoology, P.O. Box 77000, Nelson Mandela Metropolitan University, Port Elizabeth, 6031, South Africa.

Email (KB): karien.bezuidenhout1@gmail.com; (RN): Ronel.Nel@nmmu.ac.za;

[b]School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA 98195-5020, USA.

Email: lhauser@uw.edu

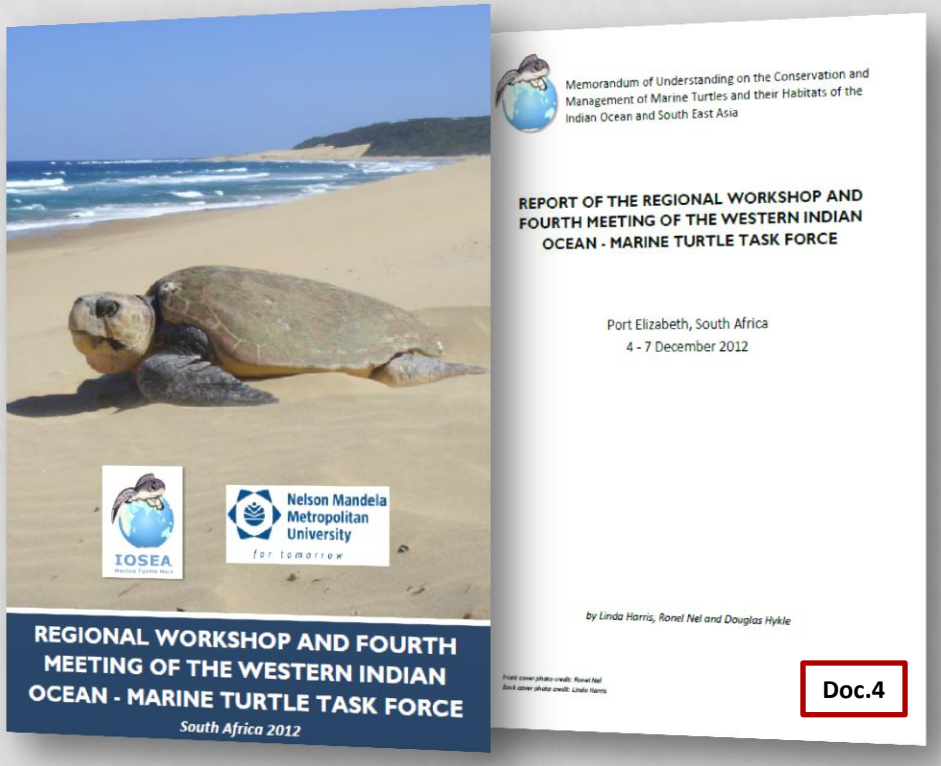
Manuscript in review: ECSS

INTERNATIONAL WORKSHOP HOSTED

4TH MEETING OF THE WESTERN INDIAN OCEAN MARINE TURTLE TASK FORCE & WORKSHOP TO IDENTIFY SITES OF IMPORTANCE FOR SEA TURTLES

4TH MEETING OF WIO MTTF

- 10 Participants from 10 countries in the WIO attended
- 4 Additional International Experts
- 5 Conservation Managers from South Africa
- 5 Students from NMMU
- 2 Reps from IGO's
- Total of 31 participants



- This was under contract from UNEP (United Nations Environment Programme)

http://ioseaturtles.org/UserFiles/File/2012_WIO-MTTF_workshop_report-FINAL-for-Profile(1).pdf

Indian Ocean - South-East Asian Marine Turtle Memorandum of Understanding

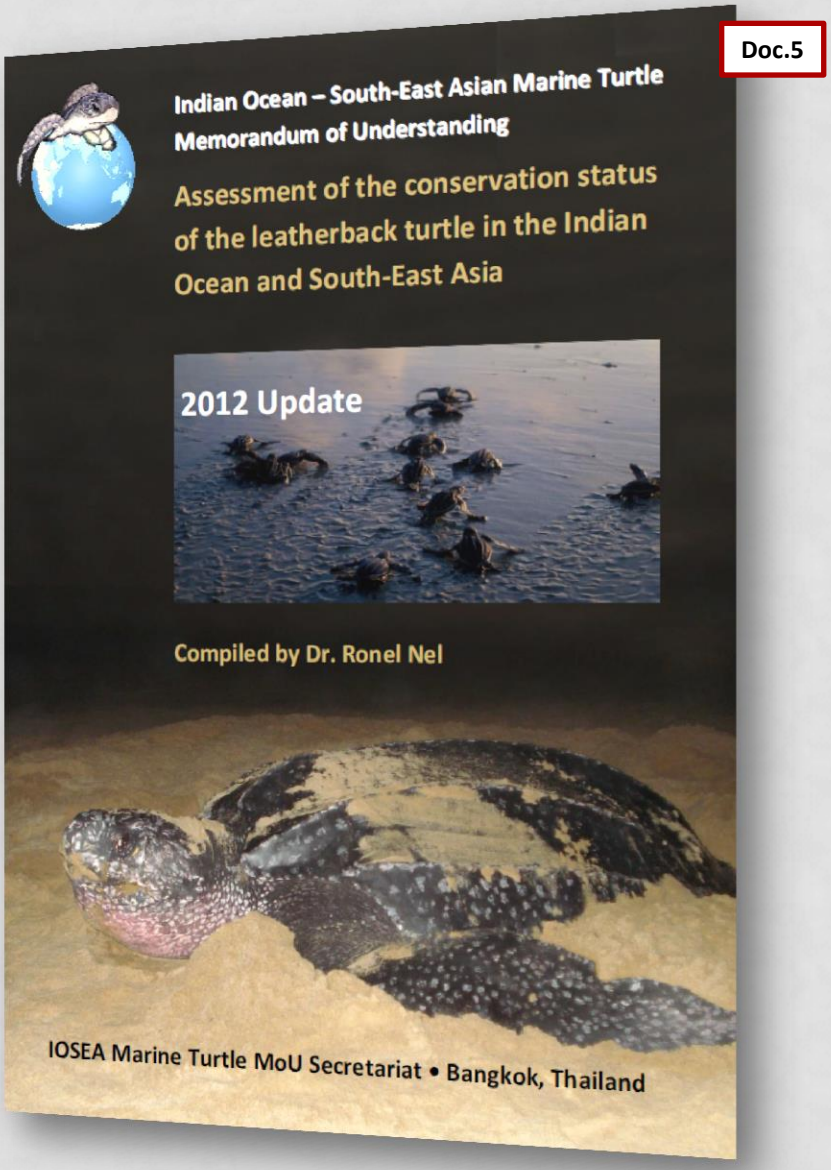
Report of the 4th Meeting of the Western Indian Ocean - Marine Turtle Task Force

REPORTS & WEB ARTICLES PRODUCED

FROM SMALL CONTRACTS, MEETINGS, DECISION SUPPORT AS AN INVITED EXPERT

IOSEA LEATHERBACK SEA TURTLE REVIEW

This was an invited contribution as a regional expert on leatherback turtles (Unpaid)



Can be viewed on:
http://ioseaturtles.org/

Technical Report

INDIAN OCEAN TUNA COMMISSION CONTRACT

Ecological Risk Assessment (ERA) and Productivity - Susceptibility Analysis (PSA) of sea turtles overlapping with fisheries in the IOTC region.

Ronel Nel[1], Ross Wanless[2&3] and Andrea Angel[4], Bernice Mellet[1] & Linda Harris[1]

1. Department of Zoology, Nelson Mandela Metropolitan University, PO Box 7700 Port Elizabeth 6031 South Africa.
2. Seabird Division, BirdLife South Africa, PO Box 515, Randburg 2125, South Africa
3. Percy FitzPatrick Institute, DST/NRF Centre of Excellence, University of Cape Town, Rondebosch 7701, South Africa
4. 65 Putney Rd, Kenilworth 7708

Abstract

Interactions between sea turtles and fisheries activities have been listed as one of the greatest threats to sea turtles. This study aimed to asses which sea turtle species in the Indian Ocean will be at (an ecological) risk due to interactions with tuna-related fisheries. The approach used was a desktop analysis of all available data on sea turtle population demographics and their distributions both nesting and at sea. Combining this information and rating it as low (1), medium (2) and high (3) productivity allowed for a species independent productivity score. The available effort and spatial distribution information for tuna-related fisheries, plus other species-specific attributes (such as distribution) was used to rate the susceptibility of each species to be caught per fisheries gear type (longline, purse seine, gilnet). The likelihood of being caught (as Susceptibility, S) was also rated according to low, medium and high, with an overall Euclidian value of vulnerability to each of the three fisheries. A total of 20 regional management units (RMUs) were identified for the five species of sea turtles across the Indian Ocean. Satellite tracking information indicated that sea turtles occur in high densities in coastal (neritic) waters, particularly the Mozambique Channel. Although these data may be biased towards tagged post-nesting females, they also reflect high 'value' breeding age classes (i.e. sub- and adult sea turtles). Very limited data were obtained from participating countries on fishing activities, with only three data sets and two summaries submitted on longlining activities. The limited data (plus other sources inspected) suggested that longlining is the greatest tuna-related fishery source of capture (and mortality) to sea turtles. It was estimated that 82% of captures were due to longlining (~3500 turtles.y^{-1}), followed by 6% (~250 turtles.y^{-1}) by purse-seining. If the commercial gilnet catches in the Indian Ocean is on par with mid-Atlantic gilnet catches it should equate to ~12% of turtle bycatch mortality (504 turtles.y^{-1}). It should be noted that artisanal fisheries (including gillnetting) have not been included and may have double (to an order of magnitude greater) that the impact of the regulated fisheries. The data paucity both on fishing and sea turtle life history made quantitative analysis difficult. Hence the highest vulnerability ratings were obtained for data deficient species/RMUs. Those with enough substantial information available indicated that leatherback turtles are most vulnerable to longlining followed by olive ridleys and loggerheads. This included all three RMUs (southwest Indian Ocean, Bay of Bengal and South Pacific). The healthiest populations (i.e. green turtles of the south-western Indian Ocean, loggerhead and green turtles from the Arabian Gulf and hawksbills from SWIO and AG) are least susceptible to tuna fishing operations. High priorities for future work include nesting beach demographic information, distribution of non-breeding size classes (juvenile and male sea turtles), detailed turtle demographic information when captured (e.g., size and species), as well as post-release survival rates. It was encouraging to note the large number of sea turtle action plans (and other exemplary practice) developing across the region.

Doc.6

Technical Report

Indian Ocean - South-East Asian Marine Turtle Memorandum of Understanding

Home | Site map | Secretariat | FAQ | Feedback

Search site ... GO

Home» Feature Stories» 20 December 2012

print

Western Indian Ocean - Marine Turtle Task Force meets in South Africa

20 Dec 2012

The IOSEA Western Indian Ocean – Marine Turtle Task Force held its fourth meeting in Port Elizabeth, South Africa, from 4 to 7 December 2012, under the chairmanship of Dr. Ronel Nel. Much of the workshop focused on reviewing species and other site-based information contained in IOSEA national reports in order to identify candidate sites for potential inclusion in the IOSEA Site Network.

Experts attended from ten of the 11 countries that constitute the Western Indian Ocean IOSEA sub-region: Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, United Kingdom and United Republic of Tanzania. A representative from Somalia was unable to attend.

To view the featured article go to:
http://ioseaturtles.org/feature_detail.php?id=384

Web article

Background
Official Texts
Membership
Regional Bodies
Advisory Committee
IOSEA Meetings
Useful Contacts
Archives

Electronic Library

Projects Database

Turtles get attention at the Indian Ocean Tuna Commission's WPEB meeting

Source: Dr Ronel Nel, Nelson Mandela Metropolitan University, and Douglas Hykle, IOSEA Coordinator

Photos: Dr Ronel Nel

The 8th Meeting of the Indian Ocean Tuna Commission's (IOTC) Working Party on Ecosystems and Bycatch (WPEB) took place in Cape Town, South Africa, from 17 - 19 September 2012. The meeting was co-hosted by South Africa's Department of Agriculture, Fisheries and Forestry (DAFF), and participants were welcomed by the Chief Director from Fisheries Research and Development, Dr Johann Augustyn.

The meeting was attended by approximately 50 fisheries scientists and managers from the IOTC region, including representatives from Contracting and Co-operating non-Contracting Parties (CPCs), as well as observers from key NGOs such as BirdLife International. The meeting was chaired by Dr Charles Anderson, with secretariat services provided by Dr David Wilson (Deputy Secretary, IOTC). Dr Ronel Nel (Chair of the Western Indian Ocean - Marine Turtle Task Force) attended the meeting at the request and on behalf of the IOSEA Secretariat.

Click: Species Overview

Online Reporting Facility

Leatherback Assessment 2012 UPDATE

This contribution can be viewed at
http://ioseaturtles.org/pom_detail.php?id=121

Web article

IUCN SPECIES SURVIVAL COMMISSION

MARINE TURTLE SPECIALIST GROUP

MARINE TURTLE SPECIALIST GROUP: OUTPUTS

The IUCN is known as the **World Conservation Union**;
They evaluate the conservation status of species and
the **Marine Turtle Specialist Group** is responsible for marine turtles.

Dr Nel is acting as the **Regional Co Vice-Chair for the Western Indian Ocean Region** along with Jerome Bourjea (IFREMER, Reunion).

The work of the MTSG has resulted in **two definitive papers in 2010-2011** which have now lead to the re-assessment of the conservation status of sea turtles with the first review (for leatherback turtles) starting in 2011. After a **two year review it is ready to be submitted to the Species Survival Commission (IUCN).**

Dr Nel made a unique contribution for the Western Indian Ocean turtle population (one of six in the world, and one of **the most endangered populations**).

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PLoS one

Doc.7

Regional Management Units for Marine Turtles: A Novel Framework for Prioritizing Conservation and Research across Multiple Scales

Bryan P. Wallace[1,2,3]*, Andrew D. DiMatteo[1,4], Brendan J. Hurley[1,2], Elena M. Finkbeiner[1,3], Alan B. Bolten[1,5], Milani Y. Chaloupka[1,6], Brian J. Hutchinson[1,2], F. Alberto Abreu-Grobois[1,7], Diego Amorocho[1,8], Karen A. Bjorndal[1,5], Jerome Bourjea[1,9], Brian W. Bowen[1,10], Raquel Briseño Dueñas[1,11], Paolo Casale[1,12,13], B. C. Choudhury[1,14], Alice Costa[1,15], Peter H. Dutton[1,16], Alejandro Fallabrino[1,17], Alexandre Girard[1,18], Marc Girondot[1,19], Matthew H. Godfrey[1,20], Mark Hamann[1,21], Milagros López-Mendilaharsu[1,22,23], Maria Angela Marcovaldi[1,22], Jeanne A. Mortimer[1,24], John A. Musick[1,25], Ronel Nel[1,26], Nicolas J. Pilcher[1,27], Jeffrey A. Seminoff[1,28], Sebastian Troëng[1,2,29,30], Blair Witherington[1,31], Roderic B. Mast[1,2]

1 International Union for Conservation of Nature (IUCN)/SSC Marine Turtle Specialist Group – Burning Issues Working Group, Arlington, Virginia, United States of America, **2** Global Marine Division, Conservation International, Arlington, Virginia, United States of America, **3** Center for Marine Conservation, Duke University, Beaufort, North Carolina, United States of America, **4** Marine Geospatial Ecology Laboratory, Duke University, Durham, North Carolina, United States of America, **5** Department of Biology, Archie Carr Center for Sea Turtle Research, University of Florida, Gainesville, Florida, United States of America, **6** Ecological Modelling Services, Pty Ltd, University of Queensland, Brisbane, Australia, **7** Unidad Académica Mazatlán, Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México, Mazatlán, Sinaloa, México, **8** Centro de Investigación para el Medio Ambiente y Desarrollo, Cali, Colombia, **9** Laboratoire Ressources Halieutiques, IFREMER, Ile Reunion, France, **10** Hawaii Institute of Marine Biology, Kaneohe, Hawaii, United States of America, **11** Banco de Información sobre Tortugas Marinas (BITMAR), Unidad Mazatlán, Instituto de Ciencias del Mar y Limnología, Universidad Nacional Autónoma de México, Mazatlán, Sinaloa, México, **12** Department of Biology and Biotechnology "Charles Darwin," University of Rome "La Sapienza," Rome, Italy, **13** World Wildlife Fund (WWF) Mediterranean Turtle Programme, World Wildlife Fund-Italy, Rome, Italy, **14** Department of Endangered Species Management, Wildlife Institute of India, Dehradun, Uttarakhand, India, **15** World Wildlife Fund-Mozambique, Maputo, Mozambique, **16** Southwest Fisheries Science Center, National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA), La Jolla, California, United States of America, **17** Karumbé, Montevideo, Uruguay, **18** Association RENATURA, Albens, France, and Pointe-Noire, Congo, **19** Laboratoire d'Ecologie, Systématique et Evolution, Université Paris-Sud, Orsay, France, **20** North Carolina Wildlife Resources Commission, Beaufort, North Carolina, United States of America, **21** School of Earth and Environmental Sciences, James Cook University, Townsville, Australia, **22** Projeto Tamar-ICMBio/Fundação Pro Tamar, Salvador, Bahía, Brazil, **23** Department of Ecology, Institute of Biology, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil, **24** Department of Biology, University of Florida, Gainesville, Florida, United States of America, **25** Virginia Institute of Marine Sciences, College of William and Mary, Gloucester Point, Virginia, United States of America, **26** School of Environmental Sciences, Nelson Mandela Metropolitan University, Summerstrand Campus, South Africa, **27** Marine Research Foundation, Sabah, Malaysia, **28** Marine Turtle Ecology and Assessment Program, Southwest Fisheries Science Center, NOAA-National Marine Fisheries Service, La Jolla, California, United States of America, **29** Department of Animal Ecology, Lund University, Lund, Sweden, **30** Scientific Advisory Committee, Sea Turtle Conservancy, Gainesville, Florida, United States of America, **31** Florida Fish and Wildlife Conservation Commission,

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PLoS one

Global Conservation Priorities for Marine Turtles

Doc.8

Bryan P. Wallace[1,2,3]*, Andrew D. DiMatteo[1,4], Alan B. Bolten[1,5], Milani Y. Chaloupka[1,6], Brian J. Hutchinson[1,2], F. Alberto Abreu-Grobois[1,7], Jeanne A. Mortimer[1,8,9], Jeffrey A. Seminoff[1,10], Diego Amorocho[1,11], Karen A. Bjorndal[1,5], Jérôme Bourjea[1,12], Brian W. Bowen[1,13], Raquel Briseño Dueñas[1,14], Paolo Casale[1,15,16], B. C. Choudhury[1,17], Alice Costa[1,18], Peter H. Dutton[1,19], Alejandro Fallabrino[1,20], Elena M. Finkbeiner[1,3], Alexandre Girard[1,21], Marc Girondot[1,22], Mark Hamann[1,23], Brendan J. Hurley[1,2], Milagros López-Mendilaharsu[1,24,25], Maria Angela Marcovaldi[1,24], John A. Musick[1,26], Ronel Nel[1,27], Nicolas J. Pilcher[1,28], Sebastian Troëng[1,2,29,30], Blair Witherington[1,31], Roderic B. Mast[1,2]

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INTERNATIONAL MEETINGS ATTENDED

FOUR INTERNATIONAL MEETINGS

Indian Ocean - South-East Asian Marine Turtle Memorandum of Understanding

1. SIX MEETING OF IOSEA SIGNATORY STATES

INVITED EXPERTS

Dr. Petronella (Ronel) Nel
The Nelson Mandela Metropolitan University (NMMU),
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PORT ELIZABETH 6031
South Africa

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Fax: (+27 41) 504 2317
Email: Ronel.Nel@nmmu.ac.za

Dr. Peter Richardson
Species Policy Officer
Marine Conservation Society
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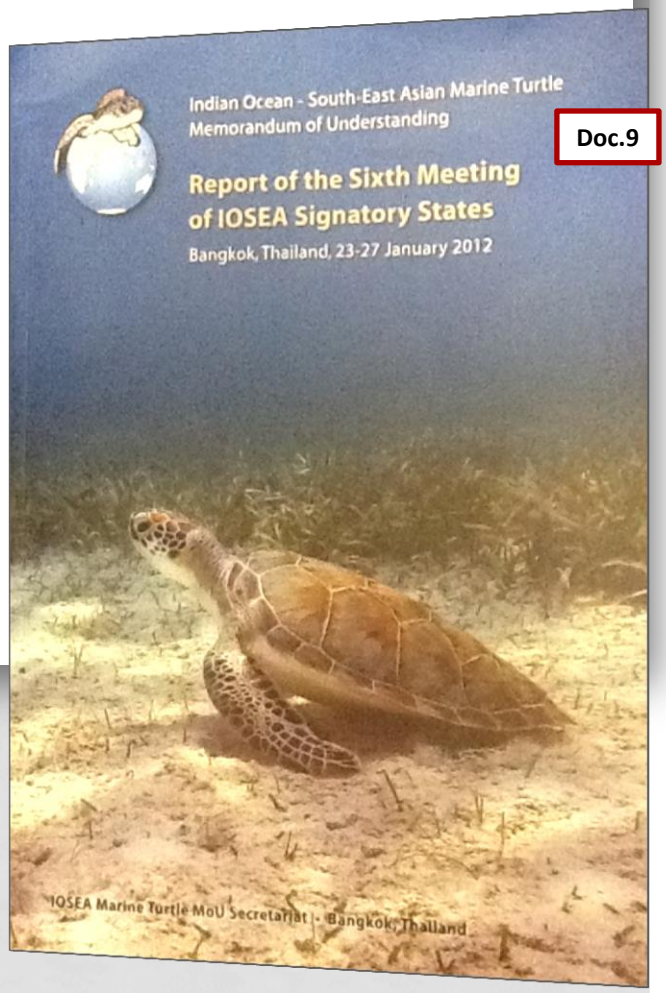
HEREFORDSHIRE HR9 5NB
United Kingdom

Tel: (+44 198) 956 6017
Fax: (+44 198) 956 7815
Email: peter.richardson@mcsuk.org



Doc.9

CMS

2. 3RD MEETING OF IBSA OCEANS

IBSA Ocean Meeting: Rio De Janeiro, Brazil 5 – 5 March 2012; Attended as invited expert as part of the South African Delegation

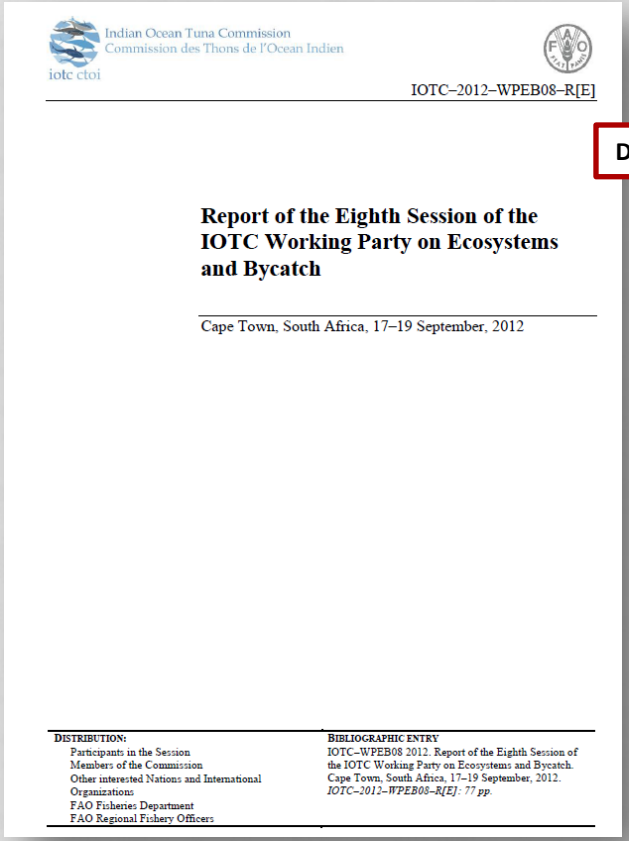
IBSA-OCEANS, COASTS, CLIMATE AND ANTARCTICA

STRATEGIC IMPLEMENTATION AND ACTION PLAN ARISING FROM SCIENTIFIC WORKSHOPS HELD IN CAPE TOWN, GOA AND RIO DE JANEIRO, 2008 – 2012

Doc.10

3. 8TH MEETING WPEB IOTC

8th Meeting of the Working Party on Ecosystems and Bycatch, 17 – 19 September 2012 Attended as Western Indian Ocean Marine Turtle Task Force Chair & on behalf of the IOSEA Secretariat.



Indian Ocean Tuna Commission
Commission des Thons de l'Ocean Indien
iotc ctoi

IOTC–2012–WPEB08–R[E]

Doc.11

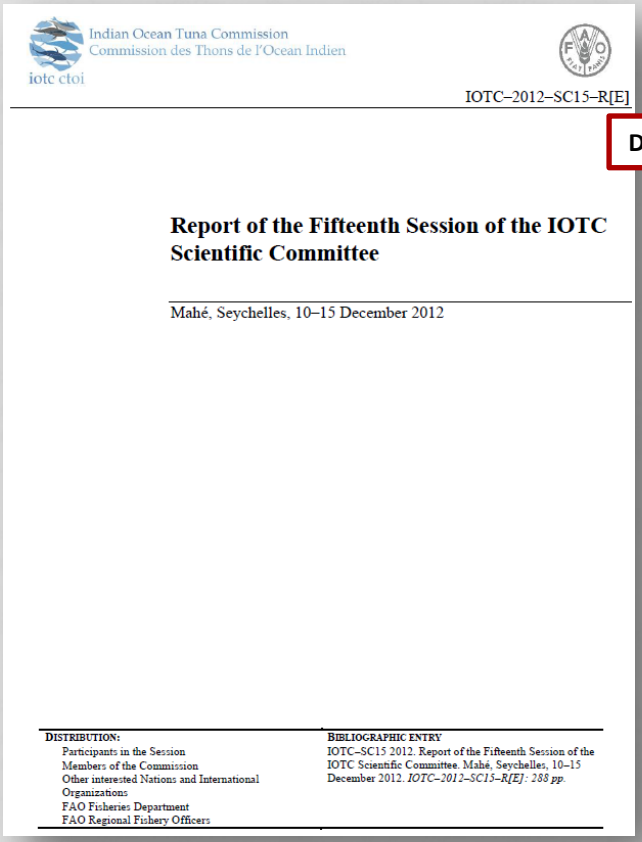
Report of the Eighth Session of the IOTC Working Party on Ecosystems and Bycatch

Cape Town, South Africa, 17–19 September, 2012

DISTRIBUTION:
Participants in the Session
Members of the Commission
Other interested Nations and International Organizations
FAO Fisheries Department
FAO Regional Fishery Officers

BIBLIOGRAPHIC ENTRY
IOTC–WPEB08 2012. Report of the Eighth Session of the IOTC Working Party on Ecosystems and Bycatch. Cape Town, South Africa, 17–19 September, 2012. *IOTC–2012–WPEB08–R[E]: 77 pp.*

15th Session of the Scientific Committee, 10 – 15 December 2012 Mahé Seychelles Invited Expert (*Presented an Ecological Risk Assessment for Sea Turtles*)



Indian Ocean Tuna Commission
Commission des Thons de l'Ocean Indien
iotc ctoi

IOTC–2012–SC15–R[E]

Doc.12

Report of the Fifteenth Session of the IOTC Scientific Committee

Mahé, Seychelles, 10–15 December 2012

DISTRIBUTION:
Participants in the Session
Members of the Commission
Other interested Nations and International Organizations
FAO Fisheries Department
FAO Regional Fishery Officers

BIBLIOGRAPHIC ENTRY
IOTC–SC15 2012. Report of the Fifteenth Session of the IOTC Scientific Committee. Mahé, Seychelles, 10–15 December 2012. *IOTC–2012–SC15–R[E]: 288 pp.*

INTERNATIONAL COLLABORATIONS

UNIVERSITY OF WASHINGTON, SEATTLE &
PURDUE, FORT WAYNE

INVITED GUEST PRESENTATIONS

- 5th April 2012 – Departmental Seminar to School of Aquatic and Fisheries Science, ***University of Washington, Seattle Washington USA***.
- 10th October 2012 – Department of Biological Sciences, ***Purdue, Fort Wayne, Indiana USA***.

Doc.14

DEPARTMENT OF BIOLOGY

Phone: 260-481-6305 Fax: 260-481-6087

Dr. Graham Kerley, Head
Department of Zoology
Nelson Mandela Metropolitan University
Port Elizabeth, South Africa

12 June 2012

Dear Professor Kerley:

I am writing to you to pass along my praise and thanks for all the wonderful help and collaboration we have received from one of your faculty in the School of Science and specifically in the School of Environmental Sciences, Program in Zoology. Dr. Ronel Nel and I are collaborating on a marine turtle project at iSimangaliso Wetland Park, Bhanga Nek Research Station in KwaZulu-Natal. This project would not have been possible if not for the hard work and insights of Dr. Nel and the assistance of her Ph. D. student Jenny Tucek who is in your department of Zoology and a student of Dr. Nel. This mutual collaboration has also led to the purchase of a Rhino (4 wheel drive ATV) in South Africa which will be a permanent part of your equipment as well as the support of my Ph. D. Student, Nathan Robinson, from Purdue University who has worked at the Bhanga Nek Station on the satellite tracking of Leatherback turtles nesting in the protected areas (see attached figures of tracking). Dr. Nel and her long term data set and knowledge of leatherbacks and other marine turtles in South Africa have been instrumental in the development of this collaboration and the spectacular preliminary results we are already receiving from the first field season. I just wanted to write to you and provide you with some positive input on the excellent exposure Dr. Nel is providing NMMU to the international sea turtle community and the benefit that such an international collaboration has had on your university.

Sincerely,

Frank V. Paladino

Frank V. Paladino Ph. D., FAAAS
Jack W. Schrey Distinguished Professor
Chairman of Biology

Publication that resulted from the international visits and local partnerships (prepared in 2012 and published 2013)

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PLOS ONE

Doc.14

Are Coastal Protected Areas Always Effective in Achieving Population Recovery for Nesting Sea Turtles?

Ronel Nel[1]*, André E. Punt[2], George R. Hughes[3]

1 Department of Zoology, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa, 2 School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington, United States of America, 3 Retired Conservator, Howick, South Africa

Abstract

Sea turtles are highly migratory and usually dispersed, but aggregate off beaches during the nesting season, rendering them vulnerable to coastal threats. Consequently, coastal Marine Protection Areas (MPAs) have been used to facilitate the recovery of turtle populations, but the effectiveness of these programs is uncertain as most have been operating for less than a single turtle generation (or<20 yr). South Africa, however, hosts one of the longest running conservation programs, protecting nesting loggerhead (*Caretta caretta*) and leatherback (*Dermochelys coriacea*) turtles since 1963 in a series of coastal MPAs. This provides a unique opportunity to evaluate the long-term effect of spatial protection on the abundance of two highly migratory turtle species with different life history characteristics. Population responses were assessed by modeling the number of nests over time in an index area (13 km) and an expanded monitoring area (53 km) with varying survey effort. Loggerhead abundance increased dramatically from~250 to>1700 nests pa (index area) especially over the last decade, while leatherback abundance increased initially~10 to 70 nests pa (index area), but then stabilized. Although leatherbacks have higher reproductive output per female and comparable remigration periods and hatching success to loggerheads, the leatherback population failed to expand. Our results suggest that coastal MPAs can work but do not guarantee the recovery of sea turtle populations as pressures change over time. Causes considered for the lack of population growth include factors in the MPA (expansion into unmonitored areas or incubation environment) of outside of the MPA (including carrying capacity and fishing mortality). Conservation areas for migratory species thus require careful design to account for species-specific needs, and need to be monitored to keep track of changing pressures.

VC'S THINK TANK ON MARINE SCIENCE

E.G. VISIT TO JAPAN

STRATEGIC COMMITTEE: MARINE SCIENCE

Delegation met with several marine science institutes in Tokyo Japan;
28 Jul – 5 Aug 2012; Committee has met three times since to develop strategic direction.

SLP: MARINE BIOLOGY IN SOUTH AFRICA

A DEDICATED SLP TO ST BENEDICTS AND ST JOHNS (USA) OVER 15 WEEKS EVERY YEAR

BIO373: MARINE BIOLOGY

- This is a dedicated SLP to the study-abroad students from St Benedict and St Johns, with 10 – 17 science students.
- It has taken place every year since 2007 under the leadership of Dr Nel