




**SATELLITE TRACKING TURTLES
IN THE IOSEA REGION**
Where do we go from here?

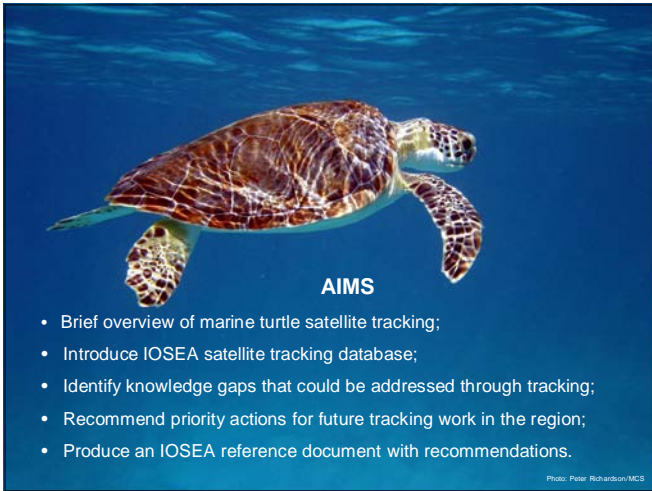
Dr. Peter Richardson
 Biodiversity Programme Manager
 Marine Conservation Society

Photo: Peter Richardson/MCS



NOT A TECHNICAL WORKSHOP!
 See www.seaturtle.org/tagging/workshop2010.shtml
Talk to regional practitioners.

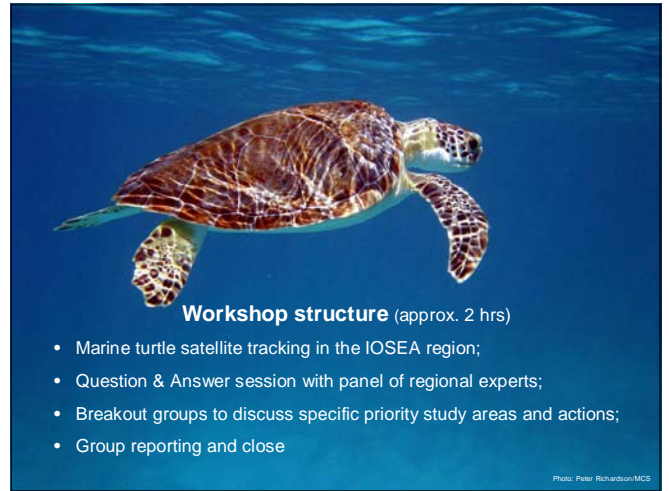
Photo: Peter Richardson/MCS



AIMS

- Brief overview of marine turtle satellite tracking;
- Introduce IOSEA satellite tracking database;
- Identify knowledge gaps that could be addressed through tracking;
- Recommend priority actions for future tracking work in the region;
- Produce an IOSEA reference document with recommendations.

Photo: Peter Richardson/MCS



Workshop structure (approx. 2 hrs)

- Marine turtle satellite tracking in the IOSEA region;
- Question & Answer session with panel of regional experts;
- Breakout groups to discuss specific priority study areas and actions;
- Group reporting and close

Photo: Peter Richardson/MCS



Convention on Migratory Species

Article II Fundamental principles

3. In particular, the Parties:

- a) **should promote, co-operate in and support research relating to migratory species;**
- b) shall endeavour to provide immediate protection for migratory species included in Appendix I; and
- c) shall endeavour to conclude Agreements covering the conservation and management of migratory species included in Appendix II.

Photo: Peter Richardson/MCS

Vol. 19, No. 26, 2010 doi:10.1016/j.seares.2010.05.001	ENDANGERED SPECIES RESEARCH Endangered Species Res.	Published online May 26
		
Global research priorities for sea turtles: informing management and conservation in the 21st century		
<small>M. Hamann¹, M. H. Godfrey², J. A. Seminoff³, K. Arthur⁴, P. C. R. Barata⁵, K. A. Bjorndal⁶, A. B. Bolten⁷, A. C. Broderick⁸, L. M. Campbell⁹, C. Carreras¹⁰, P. Casale¹¹, M. Chaloupka¹², S. K. F. Chan¹³, M. S. Coyne¹⁴, L. E. Crowder¹⁵, C. E. Diez¹⁶, P. H. Dutton¹⁷, S. P. Epperly¹⁸, N. N. FitzSimmons¹⁹, A. Formisano²⁰, M. Girondot²¹, G. C. Hays²², L. J. Cheng²³, Y. Kaska²⁴, R. Lewison²⁵, J. A. Mortimer²⁶, W. J. Nichols²⁷, R. D. Reina²⁸, K. Shanker²⁹, J. R. Spotila³⁰, J. Tomás³¹, B. P. Wallace^{32,33}, T. M. Work³⁴, J. Zbinden³⁵, B. J. Godley³⁶</small>		
¹ School of Earth and Environmental Sciences, James Cook University, Townsville, Queensland 4811, Australia ² Marine Turtle Research Group, Centre for Ecology and Conservation, School of Biosciences, University of Exeter, Truroagh Campus, Truroer Road, Penryn, Cornwall TR10 9EZ, UK		
<p>ABSTRACT: Over the past 3 decades, the status of sea turtles and the need for their protection to aid population recovery have increasingly captured the interest of government agencies, non-governmental organisations (NGOs) and the general public worldwide. This interest has been matched by increased research attention, focusing on a wide variety of topics relating to sea turtle biology and ecology, together with the interrelations of sea turtles with the physical and natural environments. Although sea turtles have been better studied than most other marine fauna, management actions and their evaluation are often hindered by the lack of data on turtle biology, lifespan, turtle interactions, turtle population status and trends. In an effort to define effective sea turtle conservation a list of priority research questions was assembled based on the opinions of 35 sea turtle researchers from 13 nations working in fields related to turtle biology and/or conservation. The combined experience of the contributing researchers spanned the globe as well as many relevant disciplines involved in conservation research. An initial list of more than 200 questions gathered from respondents was condensed into 20 sub-questions and classified under 5 categories: reproductive biology, biogeography, population ecology, threats and conservation strategies.</p> <p>KEY WORDS: Sea turtles • Global priorities • Research • Conservation</p> <p style="text-align: center; font-size: x-small;">* Available in open access and provided without charges to the publisher</p>		
Photo: Peter Richardson/MCS		

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



Priority research categories comprising 20 meta-questions

1. Reproductive biology
2. Biogeography
3. Population ecology
4. Threats
5. Conservation strategies

Photo: Peter Richardson/MCS

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



1 Reproductive biology

- 1.1. What are the factors that underpin nest site selection and behaviour of nesting turtles?

Photo: Peter Richardson/MCS

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



2 Biogeography

- 2.1. What are the population boundaries and connections that exist among rookeries and foraging grounds?
- 2.2. What parameters influence the biogeography of sea turtles in the oceanic realm?
- 2.3. Where are key foraging habitats?

Photo: Peter Richardson/MCS

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



3 Population ecology

- 3.3. How can we develop an understanding of sea turtle metapopulation dynamics and conservation biogeography?
- 3.4. What are the past and present roles of sea turtles in the ecosystem?
- 3.5. What constitutes a healthy turtle?

Photo: Peter Richardson/MCS

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



4 Threats

- 4.1. What will be the impacts from climate change on sea turtles and how can these be mitigated?
- 4.2. What are the major sources of fisheries bycatch and how can these be mitigated in ways that are ecologically, economically and socially practicable?
- 4.3. How can we evaluate the effects of anthropogenic factors on sea turtle habitats?
- 4.4. What are the impacts of pollution on sea turtles and their habitats?

Photo: Peter Richardson/MCS

Hamann M et al. (2010). Global research priorities for sea turtles: informing management and conservation in the 21st century. *Endangered Species Research* 11: 245-269.



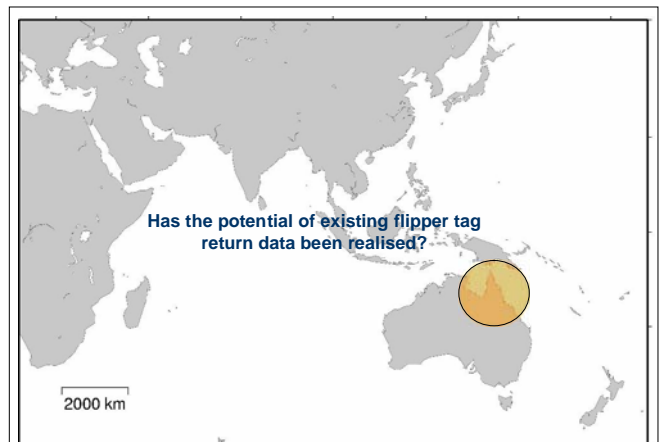
5 Conservation strategies

- 5.1. How can we effectively determine the conservation status of sea turtle populations?
- 5.3. Which conservation strategies are working (have worked) and which have failed?
- 5.4. Under what conditions (ecological, environmental, social and political) can consumptive use of sea turtles be sustained?

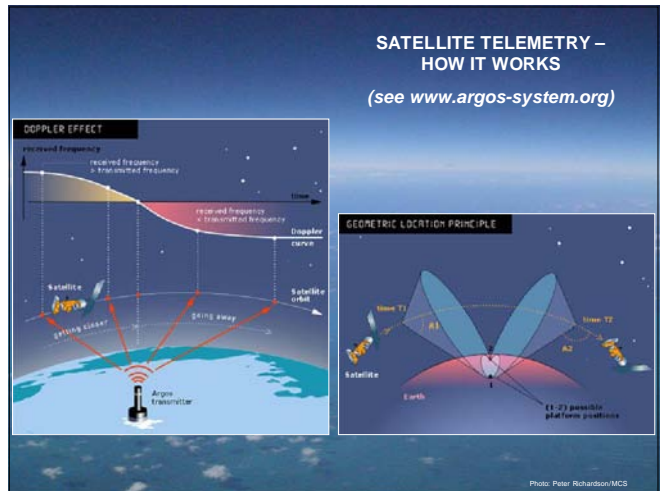
Photo: Peter Richardson/MCS



Turtle Conservation Project (TCP) long-distance tag returns from female green turtles tagged on Sri Lanka nesting beaches since 1996.



Limpus CJ, Miller JD, Parmenter CJ, Reimer D, McLachlan N, Webb R (1992). Migration of green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) turtles to and from eastern Australian rookeries. *Wildlife Research* 19(3): 347-358.

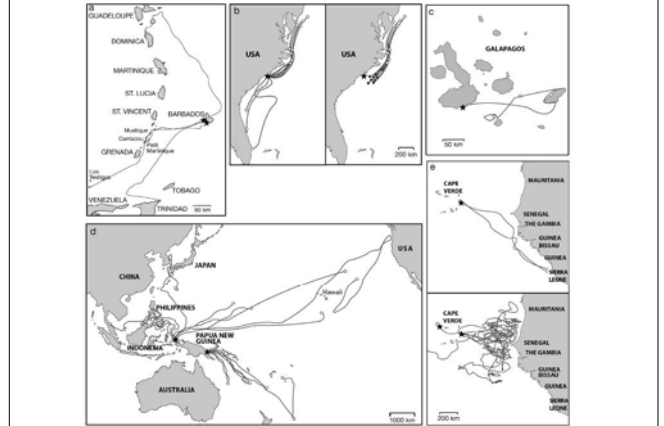


Satellite tracking – what can it tell us?



Photo: Peter Richardson/MCS

Godley BJ, Blumenthal JM, Broderick AC, Coyne MS, Godfrey MH, Hawkes LA, Witt MJ (2008). Satellite tracking of sea turtles: Where have we been and where do we go next? *Endangered Species Research* 4: 3-22.



Benson SR, Eguchi T, Foley DG,orney KA, Bailey H, Hildepew C, Samber BP, Tapilatu RF, Rei V, Ramohia P, Pita J, Dutton PH (2011). Large-scale movements and high-use areas of western Pacific leatherback turtles, *Dermochelys coriacea*. *Ecosphere* 2.

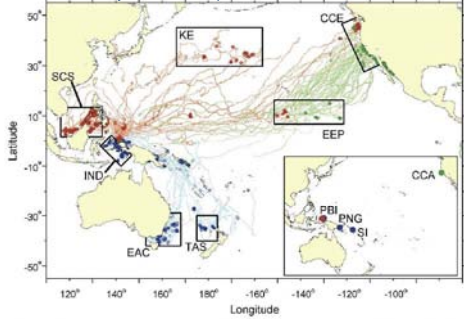


Fig. 1. All IDs deployments presented as probability of transit. Large, darker circles indicate Areas Restricted South (ARS) behavior; smaller, lighter circles indicate transiting behavior. Color of track indicates deployment source: red = summer nesting, blue = winter nesting, green = deployments at central California foraging grounds. Inset shows deployment locations: PBI = Papua Barat, Indonesia; PNG = Papua New Guinea; SI = Solomon Islands; CCA = central California. Black boxes represent regions for which habitat associations were quantitatively examined (see text): SCS = South China Sea and Sulu and Sulawesi Seas; IND = Indian Ocean Seas; EAC = East Australia Current Extension; TAS = Tasman Front; PNG = Kororua Extension; KEF = equatorial eastern Pacific; and CCE = California Current Extension.

Luschi P, Lutjeharm JRE, Lambardi R, Mencacci R, Hughes GR, Hays GC (2006). A review of migratory behaviour of sea turtles off Southeastern Africa. *South African Journal of Science* 102, 51-58.

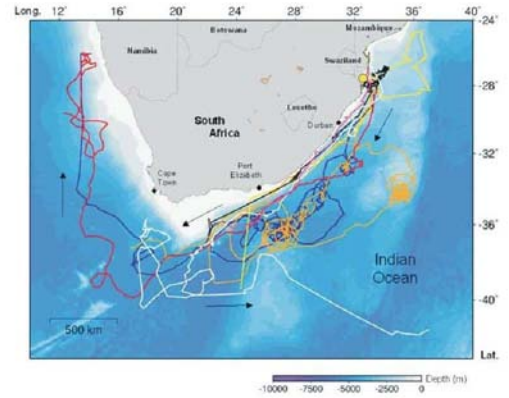


Fig. 5. Post-nesting journeys of six leatherbacks tracked by satellite in years 1996–2003, showing movements towards the oceanic areas south and west of the continent. Yellow dot shows the nesting beach.

Luschi P, Lutjeharm JRE, Lambardi R, Mencacci R, Hughes GR, Hays GC (2006). A review of migratory behaviour of sea turtles off Southeastern Africa. *South African Journal of Science* 102, 51-58.

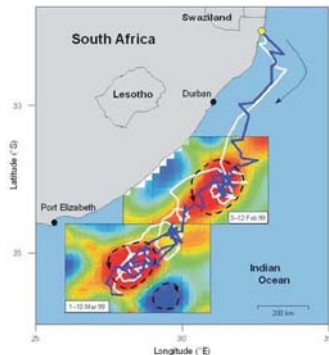


Fig. 7. Initial parts of the routes (31 January – 12 March 1999) of two leatherback turtles moving off the east coast of southern Africa superimposed on maps of sea surface height anomalies referring to period shown. The presence of eddies (areas of rotation indicated by arrows) is shown by the large blue and red anomalies in correspondence with turtles' looping movements. Yellow dot shows the nesting beach.

Luschi P, Lutjeharm JRE, Lambardi R, Mencacci R, Hughes GR, Hays GC (2006). A review of migratory behaviour of sea turtles off Southeastern Africa. *South African Journal of Science* 102, 51-58.

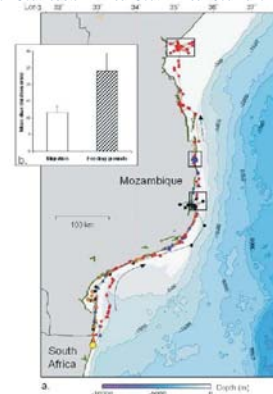
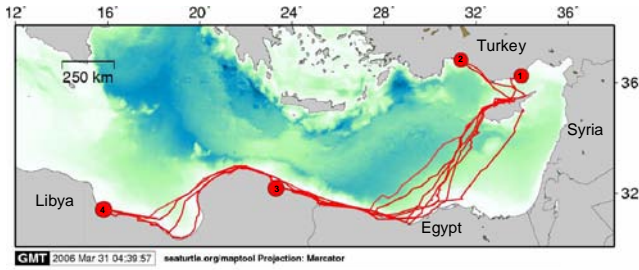


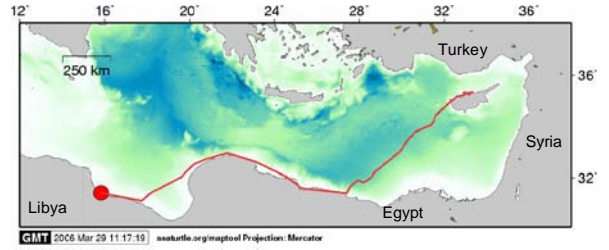
Fig. 3. Migratory routes of 10 leatherback turtles tracked by satellite. The inset shows the number of turtles tracked in Mozambique and South Africa. The bar chart shows the number of turtles tracked in Mozambique and South Africa. The depth scale is in meters.

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



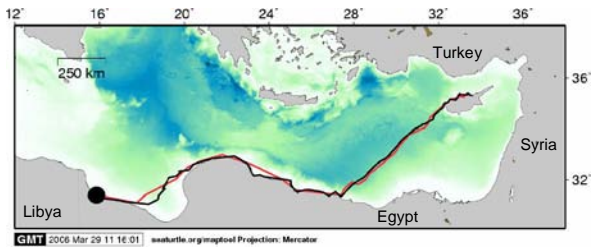
Adult female green turtles tracked from Northern Cyprus nesting beaches to foraging and over-wintering grounds.

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



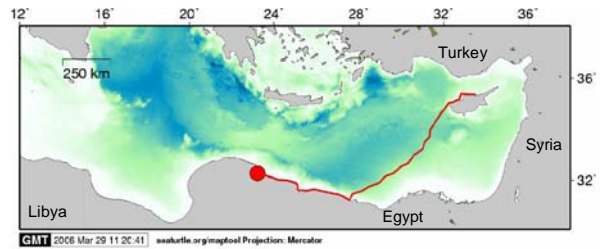
Green turtle A tagged in 1999

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



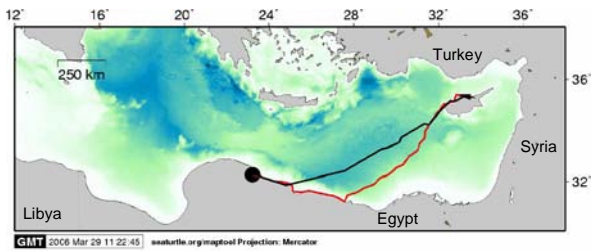
Green turtle 4 tagged in 1999 and again in 2004

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



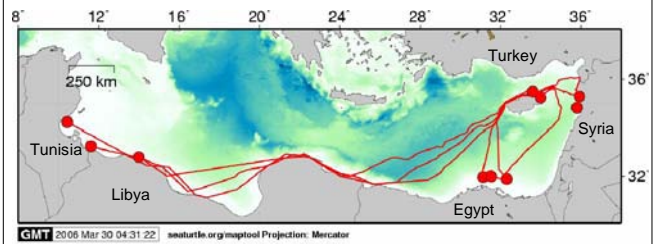
Green turtle B tagged in 1998

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



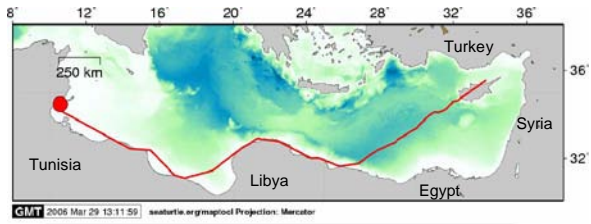
Green turtle B tagged in 1998 and again in 2002

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



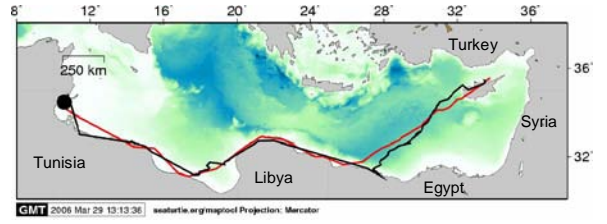
Adult female loggerhead turtles tracked from Northern Cyprus nesting beaches to foraging and over-wintering grounds

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



Loggerhead turtle D tagged in 2002

Broderick AC, Coyne MS, Fuller WJ, Glen F, Godley BJ (2007). Fidelity and over-wintering of sea turtles. *Proceedings of the Royal Society of London B* 274: 1533-1538.



Loggerhead turtle D tagged in 2002 and again in 2005

See also - Limpus CJ & Limpus DJ (2001). The loggerhead turtle, *Caretta caretta*, in Queensland: breeding migrations and fidelity to a warm temperate feeding area. *Chelonian Conservation and Biology*, 4(1), 142-153.

Polovina J, Uchida I, Balazs G, Howell E A, Parker D, Dutton P (2006). The Kuroshio Extension Bifurcation Region: A pelagic hotspot for juvenile loggerhead sea turtles. *Deep Sea Research Part II: Topical Studies in Oceanography*, 53(3-4), 326-339.

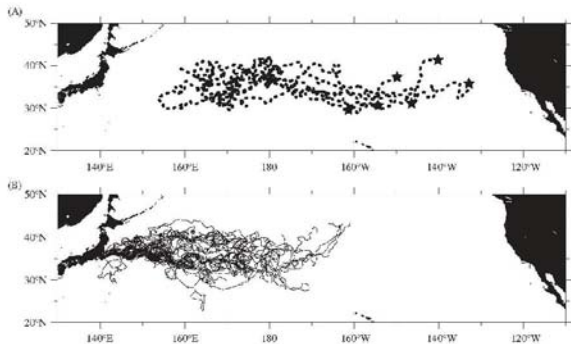


Fig. 1. Track lines of (A) six juvenile loggerhead turtles caught and released at sea in 2000, 2002, and 2003. Stars indicate release positions. (B) Thirty-seven juvenile turtles raised in captivity and released off the Japanese coast. Track lines based on the best available daily Argos reported positions.

J. Polovina et al. / *Deep-Sea Research II* 53 (2006) 326-339

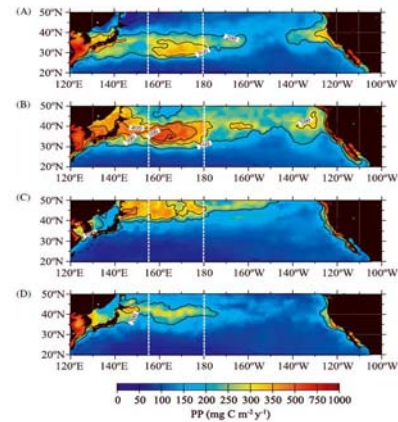
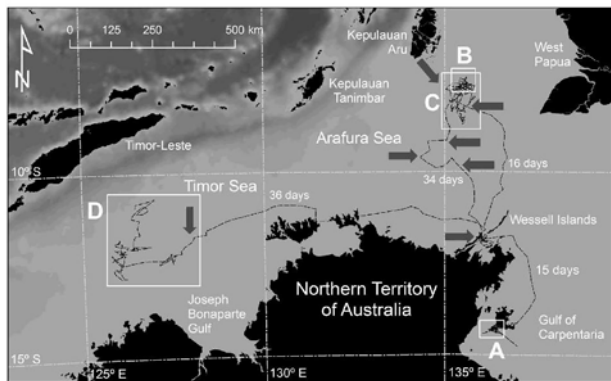


Fig. 4. MODIS depth-integrated primary production for (A) January-March, 2003; (B) April-June, 2003; (C) July-September, 2003; and (D) October-December, 2003. The white dashed lines at 155°E and 180°W longitudes mark the KEBR.

McMahon CR, Bradshaw CJA, Hays GC (2007). Satellite tracking reveals unusual diving characteristics for a marine reptile, the olive ridley turtle (*Lepidochelys olivacea*). *Marine Ecology Progress Series* 329, 239-252.



McMahon CR, Bradshaw CJA, Hays GC (2007). Satellite tracking reveals unusual diving characteristics for a marine reptile, the olive ridley turtle (*Lepidochelys olivacea*). *Marine Ecology Progress Series* 329, 239-252.

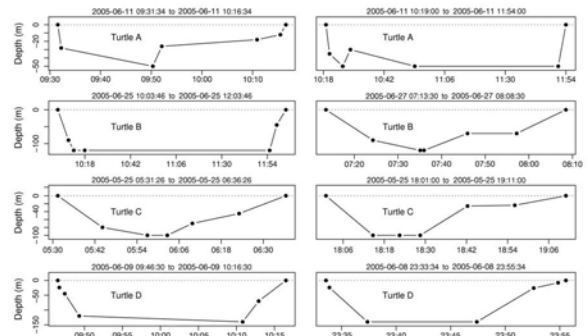


Fig. 2. *Lepidochelys olivacea*. Examples of 2-hour form dive profiles each from Turtles A-D with maximum depths vs. dates and times

Witt MJ, Broderick AC, Coyne MS, Forna A, Nguesso S, Parnell RJ, Soungte GP, Godley BJ (2008). Satellite tracking highlights difficulties in the design of effective protected areas for leatherback turtles during the interesting period. *Oryx* 42: 296-300.

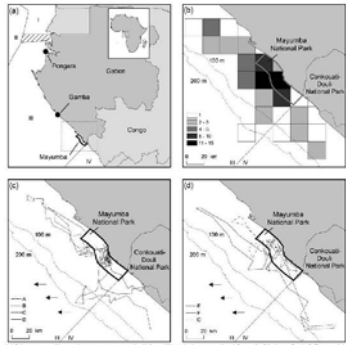


Fig. 1. (a) Study area in the Gulf of Carpentaria, Northern Territory, Australia. (b) Grid of 200 m x 200 m cells used to track turtles. (c) Movement tracks of 20 post-nesting green turtles (Chelonia mydas) tracked from Dylupen beach in north-east Arnhem Land to foraging grounds in the southern Gulf of Carpentaria. (d) Movement tracks of 20 post-nesting green turtles tracked from Dylupen beach in north-east Arnhem Land to foraging grounds in the southern Gulf of Carpentaria. The vertical lines indicate the number of turtles in each cell. The grid cells are shaded according to the number of turtles tracked in each cell. The grid cells are shaded according to the number of turtles tracked in each cell. The grid cells are shaded according to the number of turtles tracked in each cell.

Kennett R, Munungurrij N, Yunupingu D (2004). Migration patterns of marine turtles in the Gulf of Carpentaria, northern Australia: implications for Aboriginal management. *Wildlife Research* 31: 241–248.

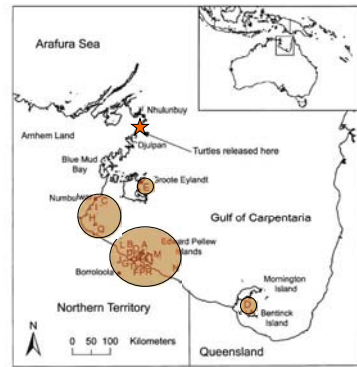


Fig. 1. Release point and final locations of 20 post-nesting green turtles (*Chelonia mydas*) satellite tracked from Dylupen beach in north-east Arnhem Land to foraging grounds (approximate location indicated by a capital letter) in the southern Gulf of Carpentaria in November 1998 and 1999. Turtle 'E' was recovered by hunters on Groote Eylandt in early December 1998 and it could not be confirmed that it had reached its home foraging ground.

Dugong and Marine Turtle Project

Project leader: Rod Kennett

Traditional Owners from the Kimberley, The Top of the Northern Territory, southern Gulf of Carpentaria, Cape York and the Torres Strait have joined forces to develop community-driven approaches to the sustainable management of dugong and marine turtles in northern Australia.

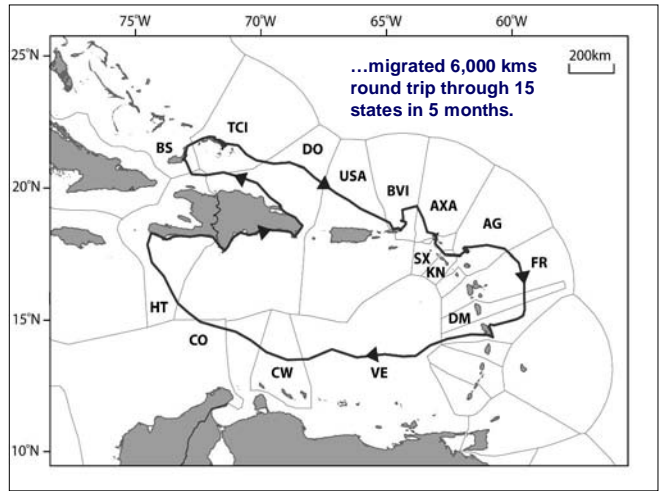
Coordinated by the North Australian Indigenous Land and Sea Management Alliance (NAILSMA) and the CRC for Tropical Seascapes, the Dugong and Marine Turtle Project takes a holistic approach to ensuring that Traditional Owners and Indigenous communities are doing research and management activities.

The project partners of the Dugong and Marine Turtle Project are:

- Kimberley Land Council
- Northern Land Council
- Cape York Land Council
- Torres Strait Regional Authority

The partner organisations oversee the delivery of the project through Regional Action Plans in selected 'hull' communities. The Regional Action Plans, developed through community consultation, identify Traditional Owners' needs and aspirations, the issues and benefits facing dugong and marine turtle





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

Home | Site map | Secretariat | FAQ | Feedback

Home » Satellite Tracking Metadatabase

Database was last updated	Number of records	Number of animals (966)						Sex	Age Class	
20 Dec 2011	174	Green	Hawksbill	Loggernosed	Leatherback	Olive Ridley	Flatback	Female	Male	Juvenile
		326	110	171	62	79	118	704	36	714

SEARCH

ALL COUNTRIES: Australia, Bangladesh, Brunei Darussalam, China, Egypt, France, India, Indonesia

Species: All Species | Age Class: All | Sex: Any

Year of deployment: Active | RESET

Any | Any | Any | SUBMIT

Show/Hide Advanced Search

RESULTS

Project Title	Country	Tracking period	Species	No.	Longest signal	Active?	Link
Tag Recovery Supports Satellite Tracking of a Green Turtle	Australia	1990 - 1990	Green	1	103	X	
Migration patterns of marine turtles in the Gulf of Carpentaria, northern Australia: Implications for Aboriginal management	Australia	1998 - 1999	Green	20	330	X	

Global Conservation Priorities for Marine Turtles

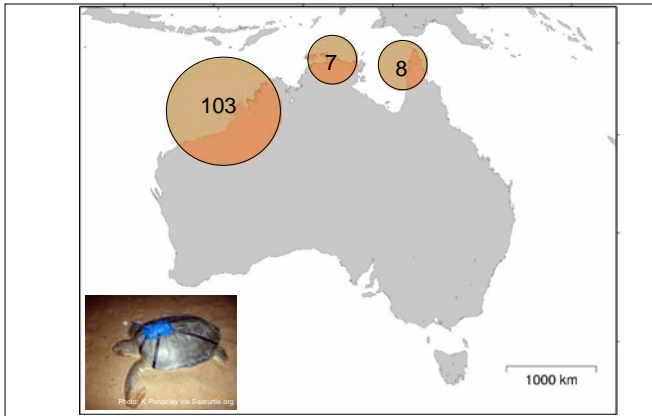
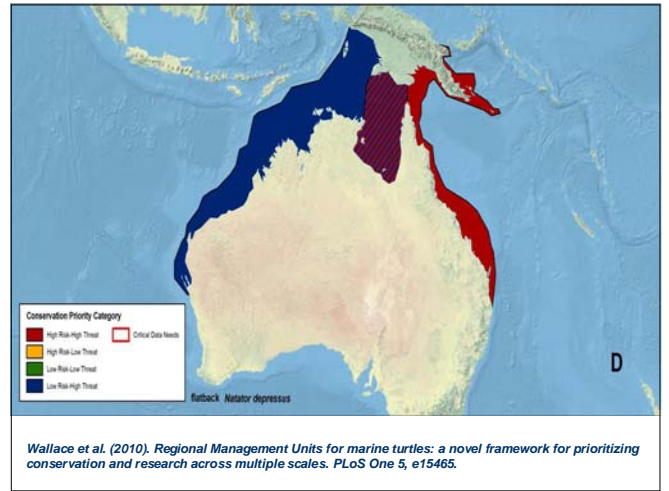
Open Access | Peer Review | Free Full Text | PDF Full Text | HTML Full Text

Byron P. Wallace^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000}

Abstract

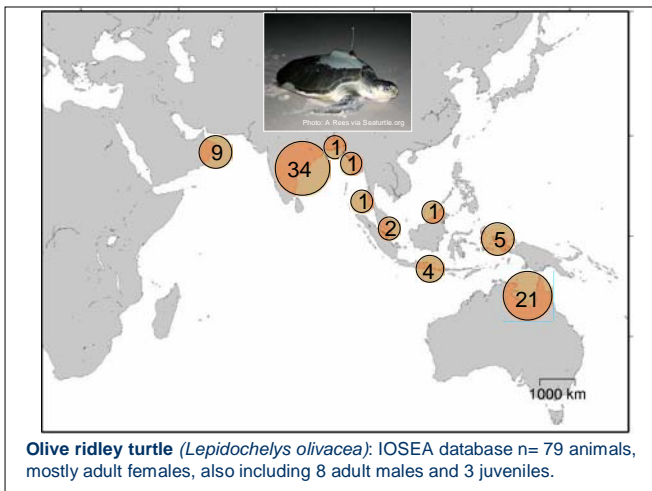
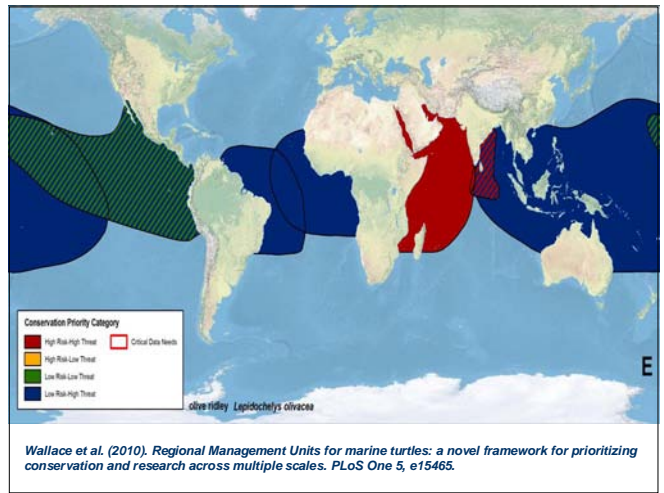
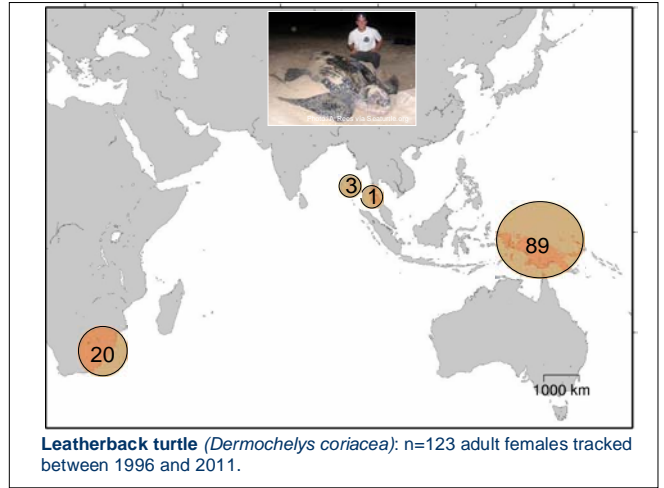
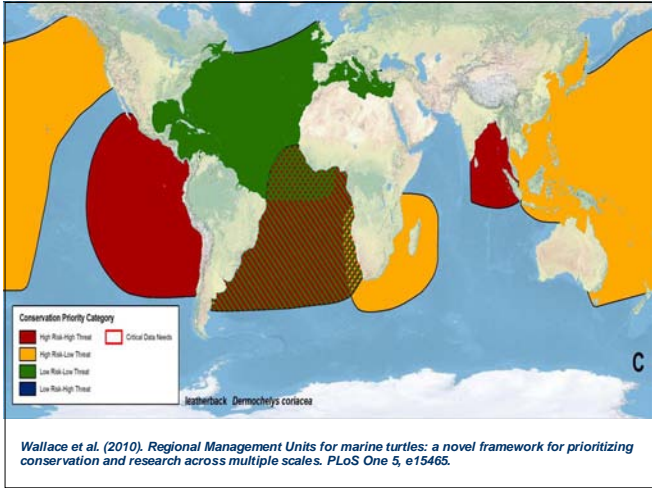
Where conservation resources are limited and conservation targets are diverse, robust yet flexible priority-setting frameworks are vital. Priority setting is especially important for geographically widespread species with diverse populations subject to multiple threats that operate at different spatial and temporal scales. Marine turtles are widely distributed and exhibit inter-specific variation in population sizes and trends, as well as reproduction and morphological features, necessitating conservation frameworks that address the unique conservation needs of spatially and biologically distinct marine turtle Regional Management Units (RMUs), and thus do not capture variation in population trends, trends of threats, or recovery potential within across individual populations. To address this issue, we developed a novel prioritization framework that allowed us to evaluate, compare and integrate marine turtle RMUs according to status and threat criteria. Because conservation priorities can vary widely (i.e. from avoiding immediate extinction to supporting long-term sustainability efforts), we developed a conservation priority-setting system using categories of paired risk and threat scores for all RMUs (n=10). We performed these assessments and priority setting by species, by ocean basin, and by management approach to identify patterns in risk, threats and data gaps at different scales. This process resulted in characterization of risk and threats to all marine turtle RMUs, including identification of the world's 13 most endangered marine turtle RMUs based on highest risk and threat scores. The system also highlighted important gaps in available information that is useful for accurate conservation assessments. Overall, this prioritization framework can provide guidance for research and conservation planning at multiple relevant scales and should serve as a model for conservation status assessments and priority-setting for widespread, long-lived taxa.

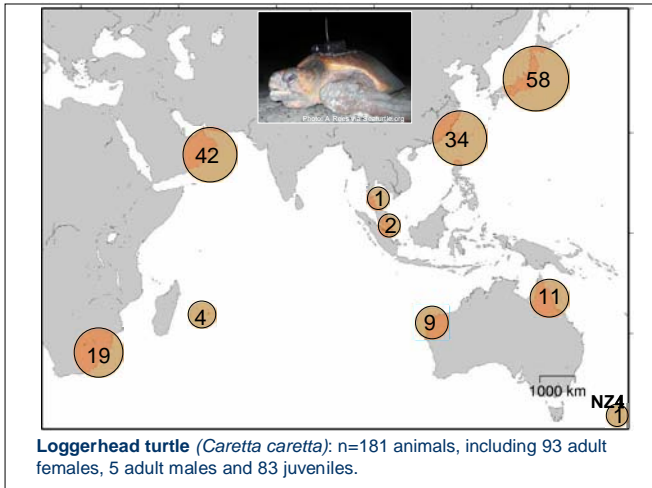
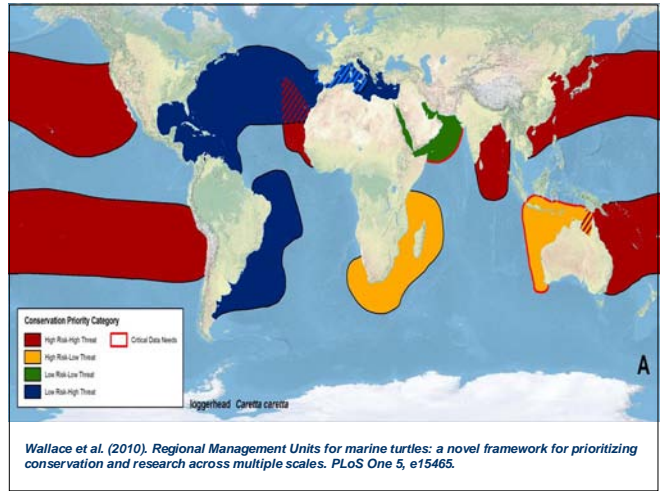
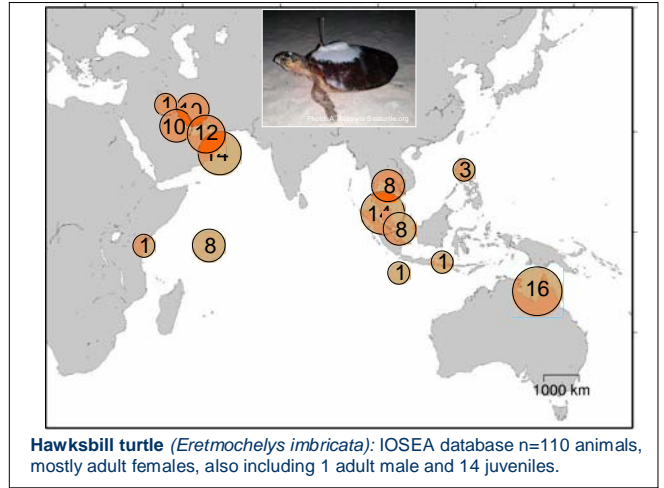
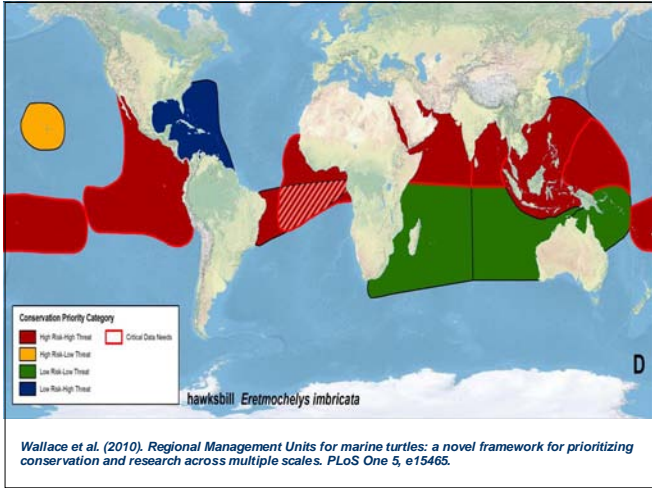
Photo: Peter Richardson/MCS

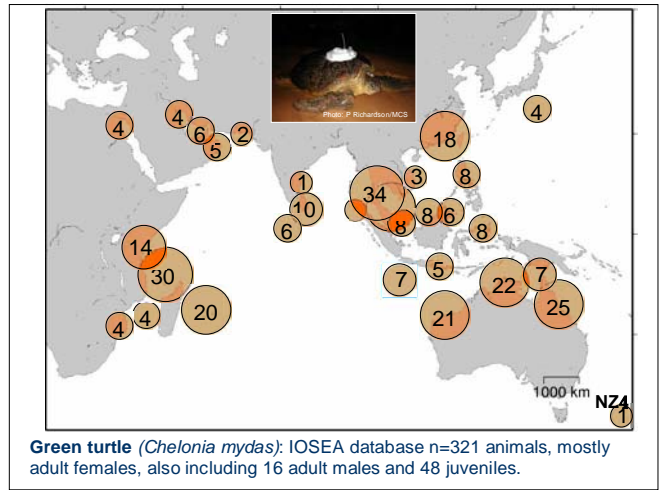
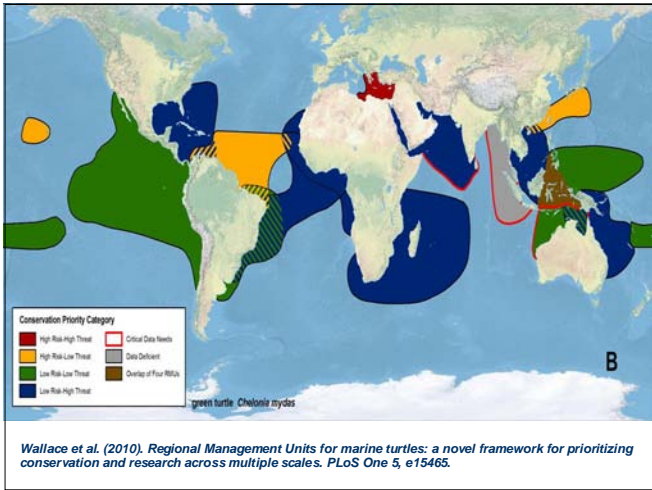


Flatback turtle (*Natator depressus*): IOSEA database n=118 adult females tracked between 2004 and 2011. Seaturtle.org now lists 153 tracked flatbacks!









IOSEA MoU Conservation and Management Plan Objectives

- 1.1 Identify and document the threats to marine turtle populations and their habitats;
- 2.1 Establish necessary measures to protect and conserve marine turtle habitats;
- 3.1 Conduct studies on marine turtles and their habitats targeted to their conservation and management;
- 3.2 Conduct collaborative research and monitoring;
- 3.3 Analyse data to support mitigation of threats and to assess and improve conservation practices;
- 4.1 Establish public education, awareness and information programmes;
- 4.3 Promote public participation.

Photo: Peter Richardson/MCS





WILDLIFE EXTRA
Sign up for our free email newsletter and get all the latest wildlife news!
Check weekly monthly
Your email address: Subscribe

STRESSDISCOVERY
Discover wildlife habitats in small groups or large teams in real time.

101 critically endangered hawksbill turtles found dead on Vietnamese fishing boat
23 August. The pair of Philippine Navy quiboats from escaped nothing more than a quiet and uneventful voyage through Linapacan, Northern Palawan, but by the end of the day they had seized one of the largest illegal wildlife hauls of the year.

SAFARI OF THE WEEK
NATURETREK
WOLF WATCHING IN SPAIN
A 3-day tour in search of the elusive Iberian wolf. A 100% success rate to date.

SAFARI OF THE WEEK
SOUTH AUSTRALIA
southaustralia.com

garden news
Tell us about the birds that visit your garden. Help us build the bigger picture.
Request your FREE pack now! *Must be 18 or over.

RSPB

On the boat were:

- 296 Hawksbill Turtles (Critically Endangered), treated with formalin, size of carapace: 20 – 90 cm
- 90 Green Turtles (Endangered), treated with formalin, size of carapace: 20 – 90 cm
- 1 Olive Ridley Turtle (Endangered)

satellite of flapping ears!

- Schipperdij on Teal coal for seabird
- Noah Schöttman on "Ocean Warning" 7. Lowly...
- Mark on A FALL FROM FREEDOM

How many free SIMs would you like?

No. of SIMs
 1 SIM
 2 SIMs

First name
 Last name
 Email

2007/05/10 23:47

Conservation funding is limited – satellite tracking is expensive... so which priority conservation issues should tracking studies address?



Photo: Doug Penner/SeaSpecs.com

Can analysis, publication and sharing of your flipper tag return data answer questions and help define questions to be addressed through satellite tracking?



Photo: Peter Richardson/MCS



Does your turtle population need more tracking studies?
 Would the money be better spent on other conservation actions?

Which populations should be prioritised in the region and why?

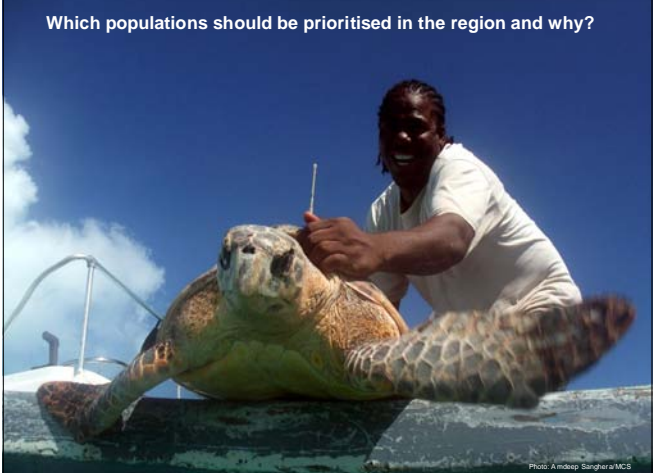
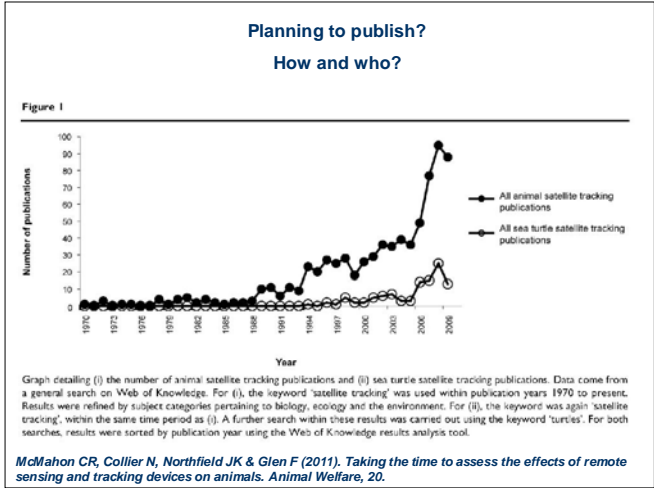
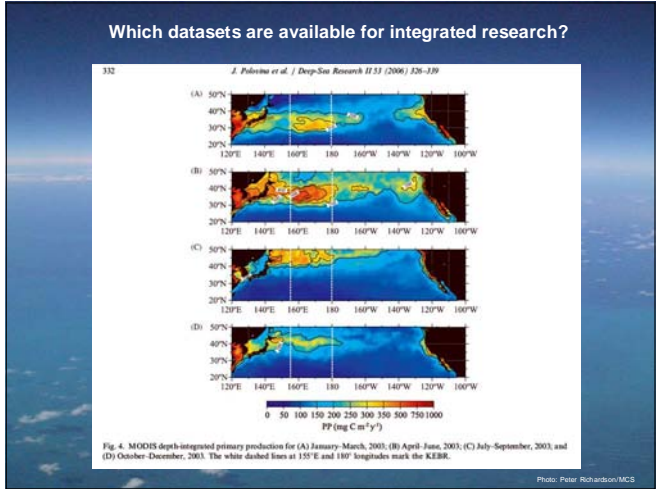
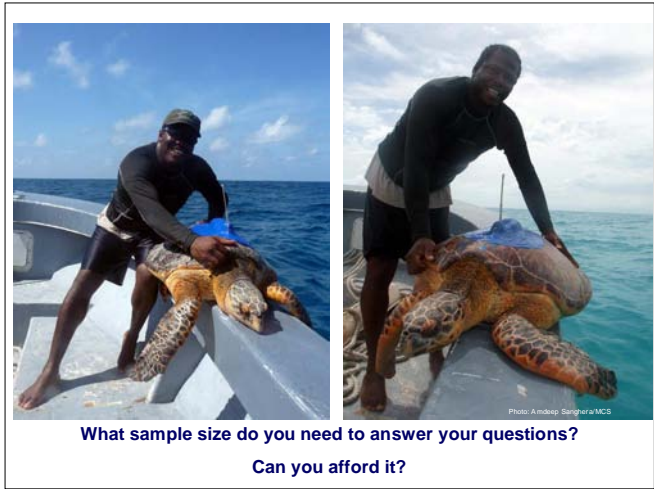
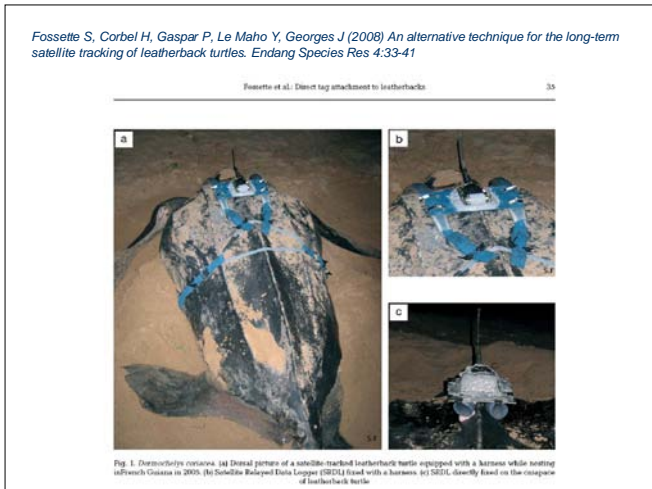


Photo: Anoop Sanghera/MCS

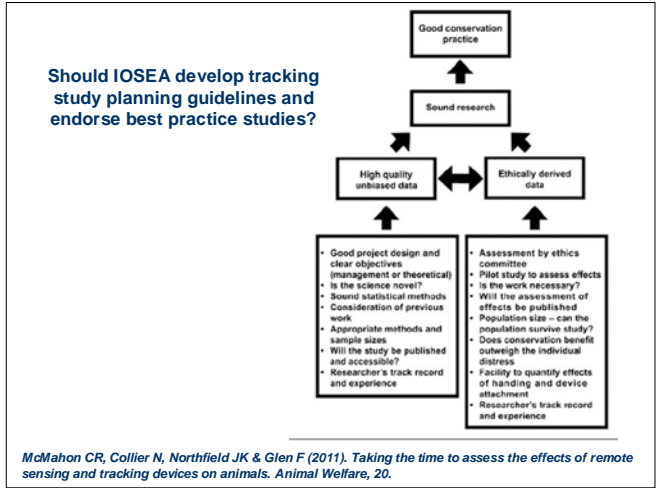






Have all the ethical questions been considered and methods assessed?

Photo: Tommy Philips



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

Home » Satellite Tracking Metadatabase

Database was last updated	Number of records	Number of animals (866)						Sex		Age Class	
		Green	Hawksbill	Loggerhead	Leatherback	Olive Ridley	Flatback	Female	Male	Adult	Juvenile
20 Dec 2011	174	326	110	171	62	79	118	704	36	714	148

SEARCH: ALL COUNTRIES: Australia, Bangladesh, Brunei Darussalam, China, Egypt, France, India, Indonesia

RESULTS: Tag Recovery Supports Satellite Tracking, Australia, 1990 - 1990, Green, 1, 103

How else can IOSEA help with satellite tracking in the region? Invest in online database? Regional technical workshops?

