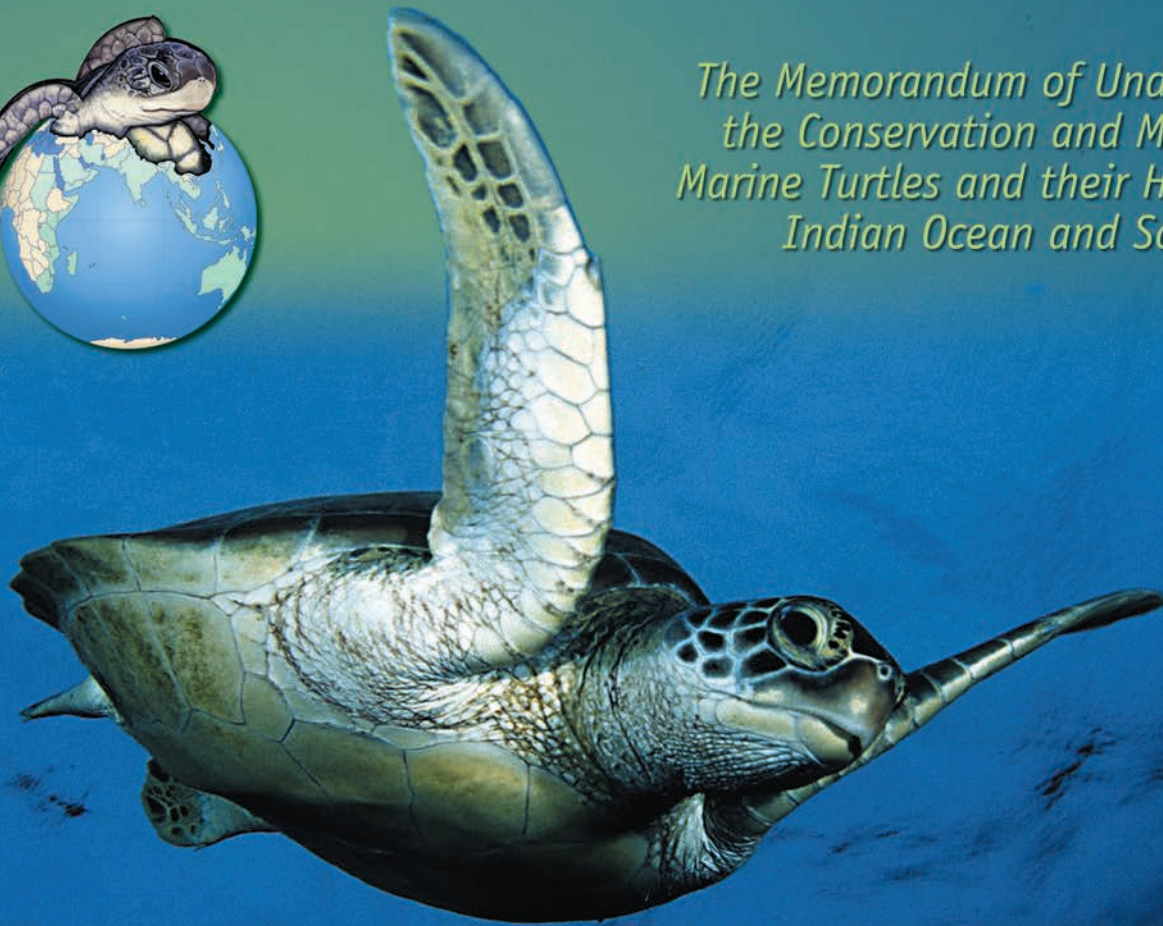




*The Memorandum of Understanding on
the Conservation and Management of
Marine Turtles and their Habitats of the
Indian Ocean and South-East Asia*



IOSEA Marine Turtle Memorandum of Understanding



INHABITING THE EARTH since the era of the dinosaurs, marine turtles are flagships for conserving the ecosystems they occupy. Despite their important role in the underwater web of life and their value to coastal communities, these creatures are fast disappearing from our oceans.

Turtles are sometimes caught accidentally and drowned in fishing operations. Coastal development is degrading their inshore habitats and nesting sites. And their eggs, meat and shell are often consumed or traded beyond sustainable levels.

Conserving marine turtles poses formidable challenges. Some species take decades until they are old enough to reproduce. The effects of over-exploitation today will not be seen for many years, when fewer and fewer turtles are left to breed.

As turtles spend decades traversing the world's oceans, their survival depends on sustained, long-term cooperation among all the countries across their vast migratory range.



MAIN PHOTO: Kartik Shanker
INSET: Sergio Ortiz, for Santa Monica College, California



MAIN PHOTO: Scubazoo/Jason Isley
INSET: Nattavut Tanprasert

IN 2001, STATES CONCERNED ABOUT CONSERVING MARINE TURTLES in the Indian Ocean and South-East Asia concluded a Memorandum of Understanding under the *Convention on the Conservation of Migratory Species of Wild Animals*. The agreement has come to be known as the IOSEA Marine Turtle MoU.

Working with other partner organisations, the participating governments pledge to protect, conserve, replenish and recover marine turtles and their habitats of the IOSEA region.

The agreement is open to membership not only to countries of the region whose waters host marine turtles, but also those whose fishing fleets interact with these turtles, as well as other interested States.

To date, over half the countries within the IOSEA region, covering most of its coastline, have signed the agreement. Each year brings new members committed to conserve this important part of their shared natural heritage.



A **COMPREHENSIVE CONSERVATION AND MANAGEMENT PLAN** is in place to coordinate, support and promote the activities of the participating countries.

The Plan focuses on six priority areas where active collaboration and exchange of information is needed. The IOSEA MoU has a state-of-the-art Online Reporting Facility that helps governments and other interested partners to track progress.

Though huge challenges remain, some success stories are emerging in a number of countries, particularly at local levels. Advances in scientific research and monitoring, improved awareness and community involvement, development of responsible turtle tourism, and mitigation of key threats to turtles are among the positive developments.

Most importantly, in some countries – still far too few – certain populations of turtles appear to be stabilising or even increasing in number. Long-term trends are difficult to discern, but some conservation programmes seem to be on the way to achieving their desired effect.



▼ The IOSEA MoU is working to conserve six of the world's seven species of marine turtles inhabiting the IOSEA region



GREEN TURTLES (*Chelonia mydas*) live throughout the region, preferring tropical and sub-tropical waters. Named after the green colour of their body fat, they digest algae and sea grass very efficiently. PHOTO: Nicolas Pilcher



HAWKSBILL TURTLES (*Eretmochelys imbricata*) are abundant in the tropics, where they eat poisonous sponges and help to keep coral reefs healthy. Their numbers have fallen due to hunting for their distinctive 'tortoise shell', leading to a strict international trade ban. PHOTO: Asghar Mobaraki



LEATHERBACK TURTLES (*Dermochelys coriacea*) are among the largest living reptiles on Earth, growing up to a tonne. Exceptionally, they have tough, rubbery skin rather than a hard shell like other turtles. Though this species was once common, Indonesia, Sri Lanka, India and South Africa are now among its last refuges in the Indian Ocean.

PHOTO: Kartik Shanker

MAIN PHOTO: Kartik Shanker/Meera Anna Oommen



OLIVE RIDLEY TURTLES (*Lepidochelys olivacea*) are famous for their regular nesting on Indian beaches in huge groups called 'arribadas'. Many tens of thousands of these small turtles may nest on a single beach in just a few days, though large numbers also perish in fishing nets every year.

PHOTO: Kartik Shanker



LOGGERHEAD TURTLES (*Caretta caretta*) can crush enormous mollusks with their powerful jaws. Preferring temperate waters, loggerheads can travel impressive distances. Individual turtles are known to have crossed the 12,000-km wide Pacific Ocean – from Japan to feeding grounds in Mexico – returning years later to breed and nest.

PHOTO: Colin Limpus



FLATBACK TURTLES (*Natator depressus*) are found only on the Australian continental shelf, Irian Jaya and the Gulf of Papua. Unlike other marine turtles, they do not undertake lengthy migrations. This narrow distribution places them at risk of habitat change and over-exploitation.

PHOTO: Chloe Schauble

Conserving critical habitats – in the water and on land

DEVELOPMENT OF COASTAL AREAS, if not done sensitively, may destroy critical nesting beaches. Human disturbance and obstacles may prevent turtles from accessing these areas to nest, increase the risk of eggs being eaten, and interrupt the journey of hatchlings to the sea.

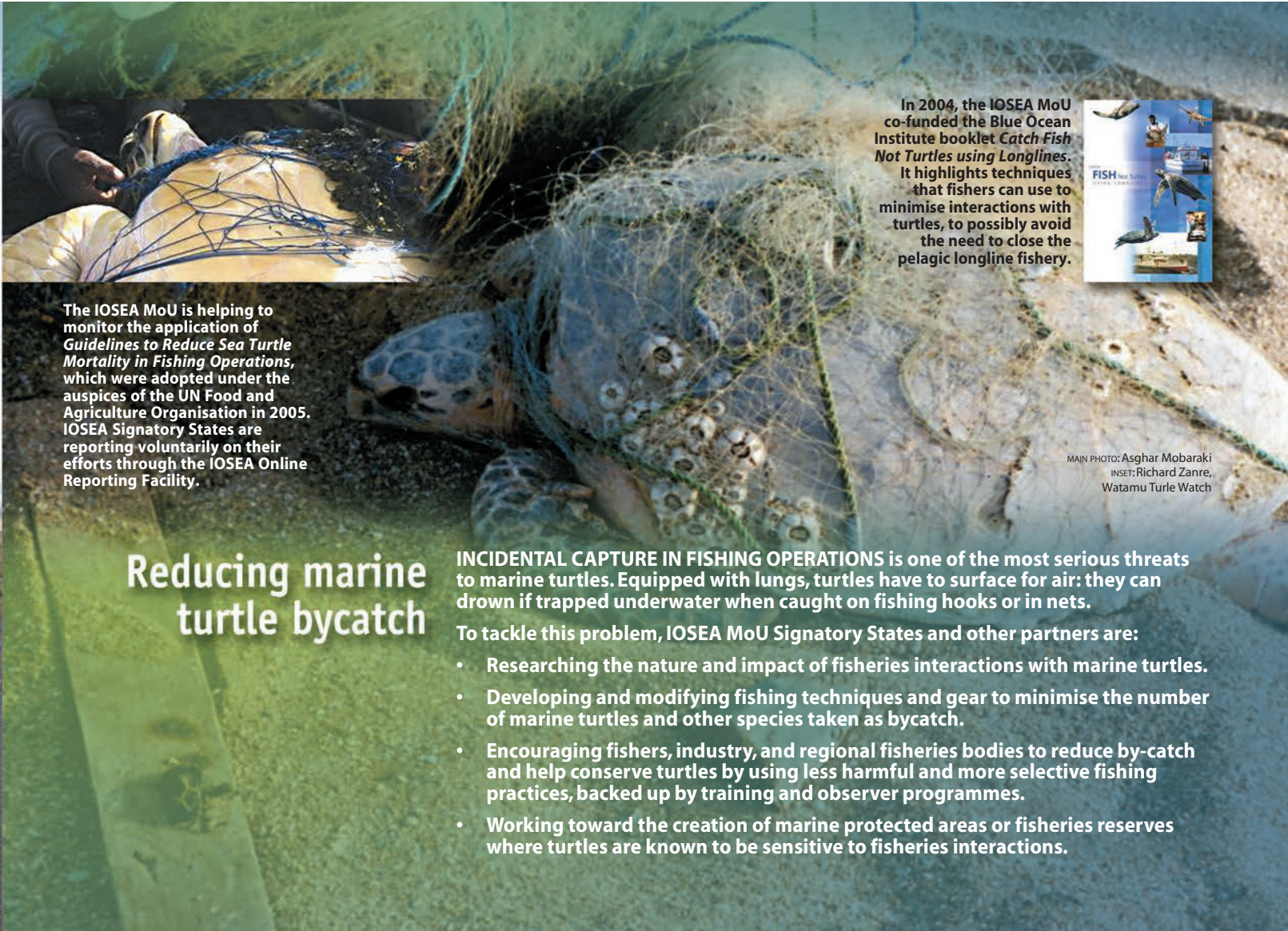
It's also becoming harder for turtles to find undisturbed feeding areas such as coral reefs, mangroves and seagrass beds. These vital habitats are being damaged as a result of human activities, including overfishing, destructive fishing, pollution, sand-mining, and insensitive coastal aquaculture and tourism.

Conserving turtle habitat through careful planning can, at the same time, safeguard essential ecological processes and protect coastal communities from natural hazards. To that end, IOSEA MoU Signatory States and partners are:

- Working towards the establishment of a regional network of important nesting, feeding, and developmental sites for marine turtles.
- Recovering habitat, for example, by re-vegetating dunes at nesting beaches, removing debris, and recovering degraded mangroves.
- Assessing marine and coastal development to reduce its impact on marine turtles, whilst protecting the ecological value of these areas.



MAIN PHOTO: Bivash Pandav
INSET LEFT: Douglas Hykle
INSET RIGHT: Kartik Shanker



The IOSEA MoU is helping to monitor the application of *Guidelines to Reduce Sea Turtle Mortality in Fishing Operations*, which were adopted under the auspices of the UN Food and Agriculture Organisation in 2005. IOSEA Signatory States are reporting voluntarily on their efforts through the IOSEA Online Reporting Facility.

In 2004, the IOSEA MoU co-funded the Blue Ocean Institute booklet *Catch Fish Not Turtles using Longlines*. It highlights techniques that fishers can use to minimise interactions with turtles, to possibly avoid the need to close the pelagic longline fishery.



MAIN PHOTO: Asghar Mobaraki
INSET: Richard Zanre, Watamu Turle Watch

Reducing marine turtle bycatch

INCIDENTAL CAPTURE IN FISHING OPERATIONS is one of the most serious threats to marine turtles. Equipped with lungs, turtles have to surface for air: they can drown if trapped underwater when caught on fishing hooks or in nets.

To tackle this problem, IOSEA MoU Signatory States and other partners are:

- Researching the nature and impact of fisheries interactions with marine turtles.
- Developing and modifying fishing techniques and gear to minimise the number of marine turtles and other species taken as bycatch.
- Encouraging fishers, industry, and regional fisheries bodies to reduce by-catch and help conserve turtles by using less harmful and more selective fishing practices, backed up by training and observer programmes.
- Working toward the creation of marine protected areas or fisheries reserves where turtles are known to be sensitive to fisheries interactions.

Encouraging sustainable use

OVER-HUNTING AND EXCESSIVE EGG COLLECTION are another major cause of turtle decline. Turtles are caught, especially during the nesting season, for their meat, eggs, shell or skin, and oil. While these practices may be culturally or nutritionally important, in many places the level of exploitation is beyond what turtle populations can sustain, and numbers have plummeted.

IOSEA MoU Signatory States and other partners are:

- Working to reduce or eliminate turtle harvest and trade through appropriate legal measures, while promoting alternative livelihoods and community development, to assure wiser use of the turtle resource.
- Investigating the traditional and socio-economic values that influence marine turtle exploitation, to provide clues on how this could be conducted sustainably.
- Monitoring marine turtle populations and migration routes by tagging and satellite tracking, to gather biological data and identify areas where conflict with human activities is likely.
- Stressing the importance of protecting nests where they are found, wherever possible – resorting to artificial hatcheries *only* when protection in nature isn't an option.



MAIN PHOTO AND INSET TOP: Kartik Shanker
INSET MIDDLE: Nicolas Pilcher
INSET BOTTOM: Fehmida Firdous





MAIN PHOTO: c/o Ing Try,
Department of Fisheries,
Cambodia

Creating awareness, building capacity and changing behaviour

HUMAN ACTIONS, RATHER THAN NATURAL PHENOMENA, pose the most serious threat to marine turtles – whether it be collecting every egg from a nest so that none is left to hatch, using fishing gear that catches turtles by accident, or destroying places that turtles need to live. Creating awareness and, in so doing, changing human behaviour – especially among communities who live with turtles (fishers, tourists, and others) – is key to reducing these threats.

IOSEA MoU Signatory States and other partners are:

- **Conducting education and awareness programmes for policy makers, teachers, schoolchildren, fishing communities, tourists and the media.**
- **Training fishers in ways to avoid catching turtles and how best to release them alive when they are caught.**
- **Working with communities to understand their needs and to introduce programmes that reduce the pressures on turtle populations and their habitats, while benefiting people over the longer-term.**

Working together in the IOSEA region

THE IOSEA MARINE TURTLE MOU HELPS COUNTRIES of the IOSEA region to conserve their shared marine turtle resource by:

- Bringing stakeholders together in an annual meeting of the participating countries (Signatory States), along with other partners, to exchange information, share valuable experience, and discuss priorities for collective action.
- Ensuring that decision-makers have access to sound scientific, technical and legal advice on turtle conservation, through the MoU's Advisory Committee.
- Monitoring implementation strengths and weaknesses, promoting conservation activities, and exchanging knowledge through an informative website.
- Providing support for strategic projects that require matching funds or seed-money to get started.
- Improving coordination and creating synergies among governments, NGOs and intergovernmental bodies, by sharing information and encouraging the creation of national committees to work collaboratively at country level.



PHOTO TOP LEFT: Colin Limpus
LEFT: c/o Mohammad Al-Zibdeh
MIDDLE: Nattavut Tanprasert
RIGHT: Douglas Hykle



Monthly website updates are available through a subscription service. Suggestions and contributions of new information are always welcomed.

To learn more ...



THE IOSEA MOU WEBSITE has been developed as a hub for information about marine turtle conservation across the Indian Ocean – South-East Asia region.

At www.ioseaturtles.org visitors can:

- Browse profiles of innovative marine turtle programmes, media headlines, publications, events, and feature articles on turtle conservation.
- Find details of more than 50 marine turtle projects around the region.
- Create and view unique maps of nesting areas and other important turtle habitats, using the interactive IOSEA Interactive Mapping System (IMaPS).
- Query reports from each country participating in the MoU, which explain the activities being carried out to conserve and manage marine turtles.
- Access other useful reference materials, summaries of PowerPoint presentations, educational resources, and versatile links to related organisations.

MAIN PHOTO: Kartik Shanker

Contacts

The IOSEA Marine Turtle MoU is funded through generous voluntary contributions of the Signatory States and other organisations. Details of the national Focal Point for each Signatory State, and answers to 'Frequently Asked Questions' can be found on the IOSEA website: www.ioseaturtles.org

For more information please contact the MoU Secretariat:

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Designed by Peter Creed, Naturebureau, United Kingdom FRONT AND BACK COVER PHOTOS: Scubazoo/Jason Isley

Year of the Turtle

A 'Year of the Turtle' campaign has been declared for the Indian Ocean and South-East Asia (IOSEA) region in 2006. The campaign is raising awareness of the diversity of social, cultural, ecological and economic values of marine turtles. It encourages governments, organisations, communities and individuals to take steps, collectively or on their own, to help to conserve and manage these threatened animals, as well as the habitats they depend on for their survival.

Please visit the IOSEA MoU Website for more information:
www.ioseaturtles.org/yot2006/

