

# Sea Turtle Conservation Manuals

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Five species of marine turtles are found in Indian coastal waters and at least four have significant nesting beaches and/or feeding areas. All are listed as endangered under Schedule 1 of the Indian Wildlife Act (1972) and in CITES. Many turtle populations in Indian coastal waters are seriously threatened, particularly the olive ridley (*Lepidochelys olivacea*) population in Orissa, where over 100,000 turtles have drowned as incidental catch in the last ten years. Many factors need to come together for the conservation of these species, but none more than cooperation between agencies in different states and sectors within the country.

The Centre for Herpetology/Madras Crocodile Bank Trust (MCBT) has prepared sea turtle conservation manuals under the UNDP – Government of India sea turtle project, for distribution to concerned individuals and agencies, including the state forest and fisheries departments, non government organizations and young researchers. The manuals are in English, but we hope that they will eventually be translated into local languages. The manuals are aimed at an Indian audience, but they are general enough for use elsewhere, particularly in south and south east Asia.

The manuals have been reviewed by a panel of international technical advisors, edited by Kartik Shanker and designed by ECOTONE, Chennai. PDF files of all

manuals are available at <http://www.kachhapa.org>. Hard copies are available from the MCBT, Tamil Nadu.

**Beach Management and hatchery programmes** - Provides information on beach management for the and instructions on hatchery practices. There is a section on the biology and identification of sea turtles.

**Research and management techniques** – Provides information on studying nesting turtles, nests and hatchlings, tracing migratory routes, and studying behaviour and evolution. It details methods such as tagging, genetics and telemetry and provides an account of sea turtle research resources.

**Population Monitoring and Census** - Provides methods for intensive and extensive surveys on nesting beaches and foraging habitats, and secondary information from market surveys and interviews. In this context, it provides details on identification of adults, hatchlings and tracks and a detailed method for counting turtles during arribadas.

**Eco (turtle) Friendly Coastal Development** – This manual deals with threats to coastal habitats such as sand mining, beach armouring, plantations, highways, ports and harbours, and artificial illumination. It also deals with offshore threats including pollution and fisheries, and with tourism. Some potential solutions for some of the problems such as lighting, are provided.

## Announcement of Green Turtle Research Project, Entrecasteaux Reef, New Caledonia

New Caledonia provides various nesting areas for green turtle populations, and the biggest-known nesting population can be found to the extreme north of New Caledonia, 160 miles from the mainland. The region is Entrecasteaux Reef, and the island which is thought to be most active, in terms of nesting, is Ilot Huon (with a peak of *ca.* 80 nesting females per night). For the 2003/2004 nesting period, research will take place on Ilot Huon for 3 months, from October 12 to January 4. We will look at: population size; seasonal variations in nesting behaviour; nest temperatures and associated investigations into metabolic heating; hatchling sex-ratio estimates; hatchling success; post-nesting satellite tracking (also of 2 loggerheads, in collaboration with George Balazs of the National Marine Fisheries Service); genetic analysis (of greens and hawksbills, in collaboration with Scott Baker of the University of Auckland); diet and heavy-metal analysis (in collaboration with the University of Fiji). Such an extensive project has never been carried out on Ilot Huon, or in New Caledonia itself. This is the initial investigative study, with hopes to extend it into a longer-term study in the future.

The project is funded by: Province Sud, Province Nord and Province des Iles Loyautés (the New Caledonian provincial governments), WWF, Falconbridge, Les grands Casino de Nouméa, SPREP, and NOAA; further funding is still required and currently being sourced. Anyone wishing to get involved in should contact: **Vincent Liardet & Nicola Barnfather** ASNNC, 12 Bd Vauban, BP 1772, 98845 Noumea E-mail [vincentliardet@nomade.fr](mailto:vincentliardet@nomade.fr) or [nicbarnfather@ukonline.co.uk](mailto:nicbarnfather@ukonline.co.uk)