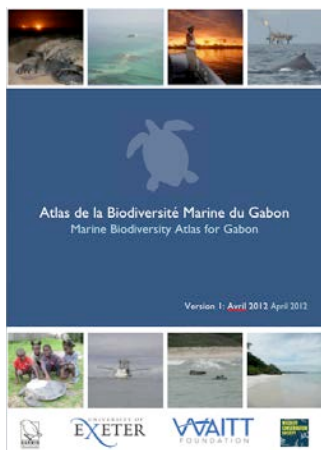




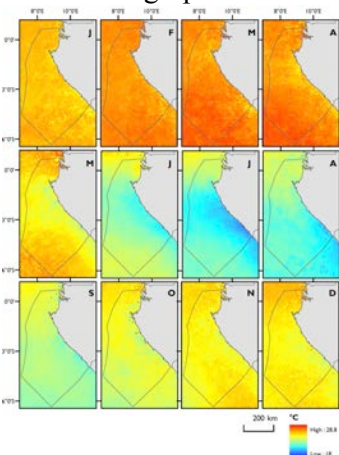
Putting Gabon on the Map: A Marine Biodiversity Atlas

The Darwin Biodiversity Atlas draws together the many geospatial data layers that have been created by, or made available to, the Darwin Project. A wide range of Gabonese stakeholders (both governmental and non-governmental) have worked closely with Darwin staff at the University of Exeter and the Wildlife Conservation Society's Congo Basin Coast Programme (supported by the Waitt Foundation) to create the atlas, which now represents a baseline reference into the future.



The gathered data are hosted both digitally (within a format suitable for Geographic Information System software) and in physical hardcopy format. Data providers include the DG Peche, the Gabon Sea Turtle Partnership, the National Parks Agency of Gabon, the University of Exeter and the Wildlife Conservation Society. In addition, many gigabytes of oceanographic data made available by CLS

France, NASA, NOAA and Oregon State University have been digested and summarised to create data layers utilisable for Gabon.



Average monthly sea surface temperatures across Gabon's Exclusive Economic Zone.

The atlas contains data regarding the annual and seasonal progression of the physical environment, such as sea surface temperature and ocean surface productivity. Along with these data

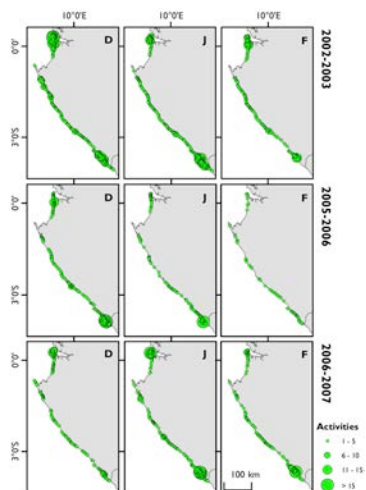
the atlas presents information on the distribution of marine species, including marine turtles (leatherback, olive ridley, hawksbill and green turtles) and marine mammals (humpback whales and humpback dolphins), gathered over a decade by beach patrols, aerial surveys, boat surveys and satellite tracking technologies.

The atlas also includes information on anthropogenic influences in the sea, such as from light from hydrocarbons activities and other sources, industrial fisheries operating in coastal and offshore habitats and the density of logs along the coast of Gabon that pose a risk to nesting sea turtles.

The utility of the atlas is fully realised within an example of how data layers can be integrated to help identify where threats might overlap with species' spatio-temporal distributions and so provides an excellent example of how marine planners might go about promoting sustainable practices in coastal and offshore habitats.

As this project is completed, the full atlas (digital and physical) will become a formal tool of the governmental and scientific institutions of Gabon. It is hoped that this transfer of information will greatly facilitate informed decision-making that will benefit biodiversity, sustainable economic development and people of Gabon and its regional neighbours into the future.

To download a copy of the atlas please visit: www.seaturtle.org/mtrg/projects/gabon/MarineAtlas.pdf



Leatherback sea turtle nesting activity along Gabon's coastline

All Aboard: Darwin Fisheries Observer Programme Launched

The Darwin Project organised a landmark fisheries observer training course for Central Africa. This was carried out in collaboration with Gabon's Department of Fisheries (Direction Generale des Peches et de l'Aquaculture; DG Peche), the Gabon Sea Turtle Partnership, the Wildlife Conservation Society (WCS), the World Wide Fund for Nature (WWF), the National Oceanic and Atmospheric Administration of the USA (NOAA) and the University of Exeter.



Olive ridley turtle bycaught in trawl fishery
(Photo: P. Mengue M'Adzaba)

Gaining a greater understanding of commercial fishing is essential to ensure long-term sustainability of fish stocks while protecting marine habitats and species of conservation concern. Fisheries observer programmes operate throughout the world collecting information on the amount and species of fish caught, as well as interactions with key species bycaught such as marine mammals, sea turtles and sea birds.



Pool based safety training
(Photo: M Witt)

The intensive two-week long training event was attended by 35 participants from three central African countries (33 from Gabon and one each from Republic of Congo and Equatorial Guinea). Participants were selected from over 1000 applicants after formal testing for mathematical skills and interviews carried out by a panel of representatives of DG Peche and Darwin Project Staff. Trainers were assembled from DG

Peche, Institute for Agronomy and Forestry, NOAA, University of Exeter and the WCS.

The course taught fisheries sampling techniques, target species and bycatch identification, as well as health and

safety. Training included sessions in the classroom as well as identification classes in the laboratory, safety sessions in a swimming pool and practical sessions at sea on a Gabonese registered coastal trawler. As of publication of this Newsletter, the first missions have been undertaken co-funded by the Darwin Project, WWF and also the Fisheries Department. An observer co-ordinating unit has been established in the DG Peche (Coordinator: Jean-Noel Bibang Bi Nguema; Logistics Officer: Pulcherie Mengue M'Adzaba; Database Manager: Davy Angueko).



Practical instruction aboard the trawler *Mykonos* (Photo: M Witt)

Alongside this training, the project partners have also been implementing a programme of training in the use of Vessel Monitoring System (VMS) data with DG Peche. In addition, a parallel initiative has been ongoing to promote the testing and installation of Turtle Excluder Devices (TEDs) across Gabon's shrimp fishing fleet. These devices are fitted to existing fishing gear and provide a means of escape for sea turtles caught in fishing nets. Dr Angela Formia of the WCS Ocean Giants Program and the Sea Turtle Partnership said that "The deployment of on-board observers on Gabon's shrimp trawlers will help to monitor the effectiveness of TEDs and to strengthen our understanding of the impact of fisheries on sea turtles".

NOAA's International Observer Programme provides observer training throughout the Atlantic coast of Africa, focusing on robust scientific data collection designed to strengthen international cooperation in fisheries management. This is mandated by the US Magnuson-Stevens Fishery Conservation and Management Act requiring enhanced international cooperation in fishery management. Ms. Teresa Turk, coordinator of NOAA's National Marine Fisheries Service Observer Training team, commented "This is a great chance for NOAA to work with other countries to help improve fisheries management. We are pleased to help build collaborations and share experiences from more than three decades of operating fishery observer programmes in the USA".

New Project Launched

WCS is pleased to announce that many of the ongoing biodiversity conservation goals of the



Darwin project will be further advanced by the generous support of the Waitt Foundation.