



CETACEA CENTRAL

Ecology and conservation of cetaceans in central mainland Portugal

2011 REPORT

BACKGROUND

Cetaceans (whales and dolphins) are umbrella-species in their ecosystems and important standards for the conservation of marine habitats and species, as their protection will allow the protection of all organisms directly or indirectly related to them. In fact, information on the diversity, occurrence, distribution, feeding ecology and behavior of whales and dolphins is extremely important as most of these animals represent the top of the food chain and disturbances in the structure of their populations can lead to disequilibrium of some marine ecosystems.

In mainland Portugal, the information available about the occurrence of cetaceans is still very sparse and the absence of continuous data on their distribution, abundance and residence patterns prevents the implementation of correct and consistent conservation measures. That is the case of interactions with fisheries and possible impacts due to the implementation of marine infrastructures. When cetaceans monitoring is temporally and geographically sparsely studied, research should be based on a multidisciplinary approach, since it aims to maximize all sources of information on the subject.

In recent years, studies of the *Escola de Mar/APCM* (www.escolademar.pt) in the area of Sesimbra, Nazaré and Póvoa de Varzim indicate the constant presence of common dolphins



(*Delphinus delphis*) in the Portuguese mainland coast. Besides this, other cetacean's species occur regularly in these areas, such as bottlenose dolphins (*Tursiops truncatus*), striped dolphins (*Stenella coeruleoalba*) and minke whales (*Balaenoptera acutorostrata*).

The aims of the project **CETACEA CENTRAL**, a three year research and education initiative (2011-2013), is to obtain an improvement of knowledge on cetacean species that occur in the center of Portugal (e.g. Sesimbra, Peniche, Nazaré) and to use this information to contribute to a more sustainable management of marine protected areas, as well as raising awareness on environmental issues and conservation of marine ecosystem.

During the year 2011, the project **CETACEA CENTRAL** was funded by THE BODY SHOP (National and International). This fund was crucial for the development of several activities related to data acquisition in the field (boat based surveys only with the research team) and the dissemination of marine environmental concerns (boat surveys with the public participation and open lectures).

ACTIVITIES DEVELOPED

- **SCIENTIFIC RESEARCH**

During the Summer/Fall of 2011, 10 scientific surveys were conducted in central coast of Portugal, more specifically in Nazaré (one survey), Peniche (one survey) and Sesimbra (7 surveys) (Fig. 1a – map with study areas). During the boat surveys, for each sighting, species identification, GPS position, time, group size, predominant behavior, sea state and other details were recorded. The observations were made through a non-invasive approach, with no manipulation, diving or direct contact with animals. The whole process methodology applied by *Escola de Mar/APCM* is based on a constant concern with animal welfare, giving particular attention to agonistic behaviors made by the animals towards the boat, the presence of calves and injured animals. During this period, we registered 12 sightings of four different species (common dolphin; bottlenose dolphin, striped dolphin and fin whale) (Fig. 1b – sightings by area). The common dolphin was the most common species with 5 sightings, followed by bottlenose dolphins (4 sightings). Striped dolphin and fin whale were only sighted once.

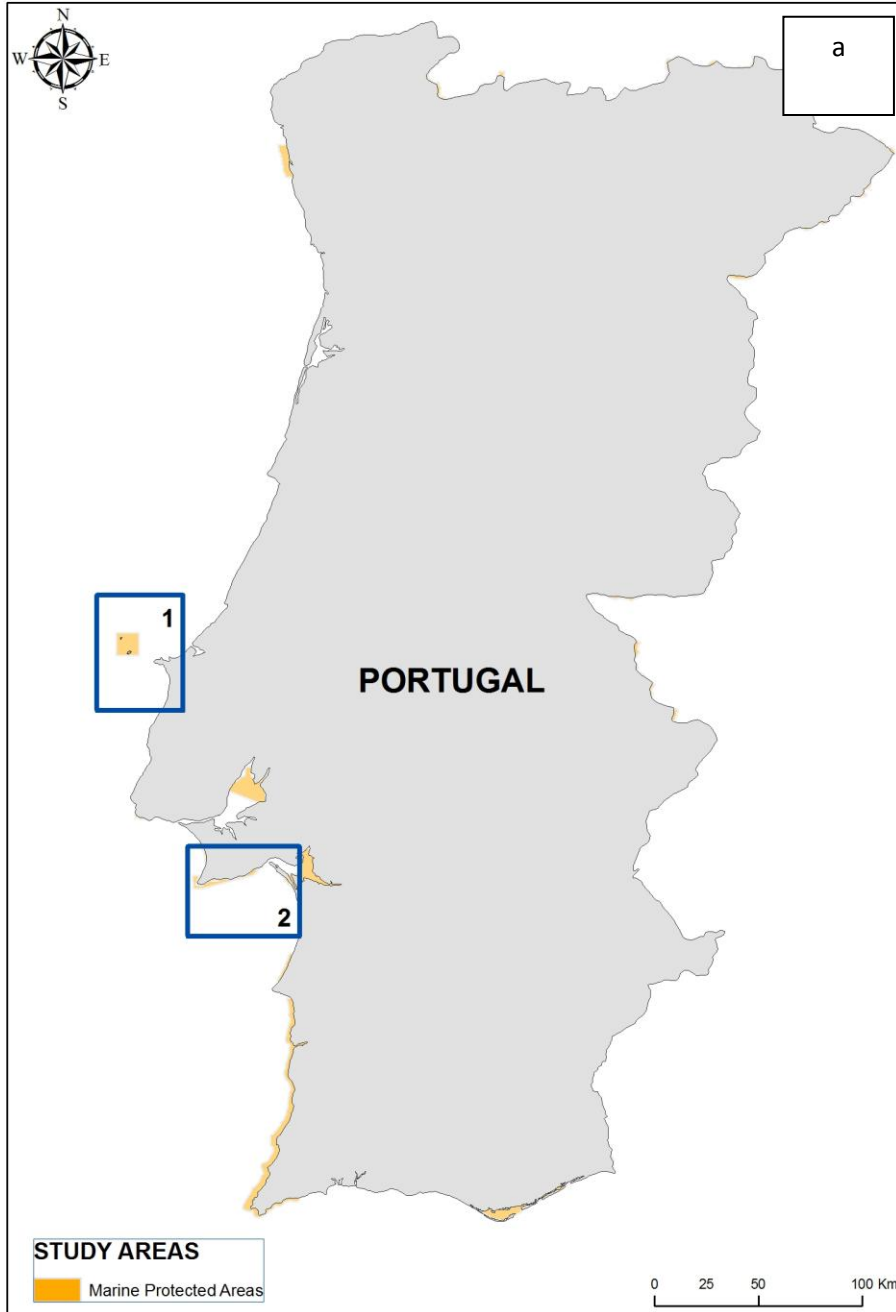


Figure 1a -Study Areas: 1 – Nazaré and Peniche; 2 – Sesimbra.

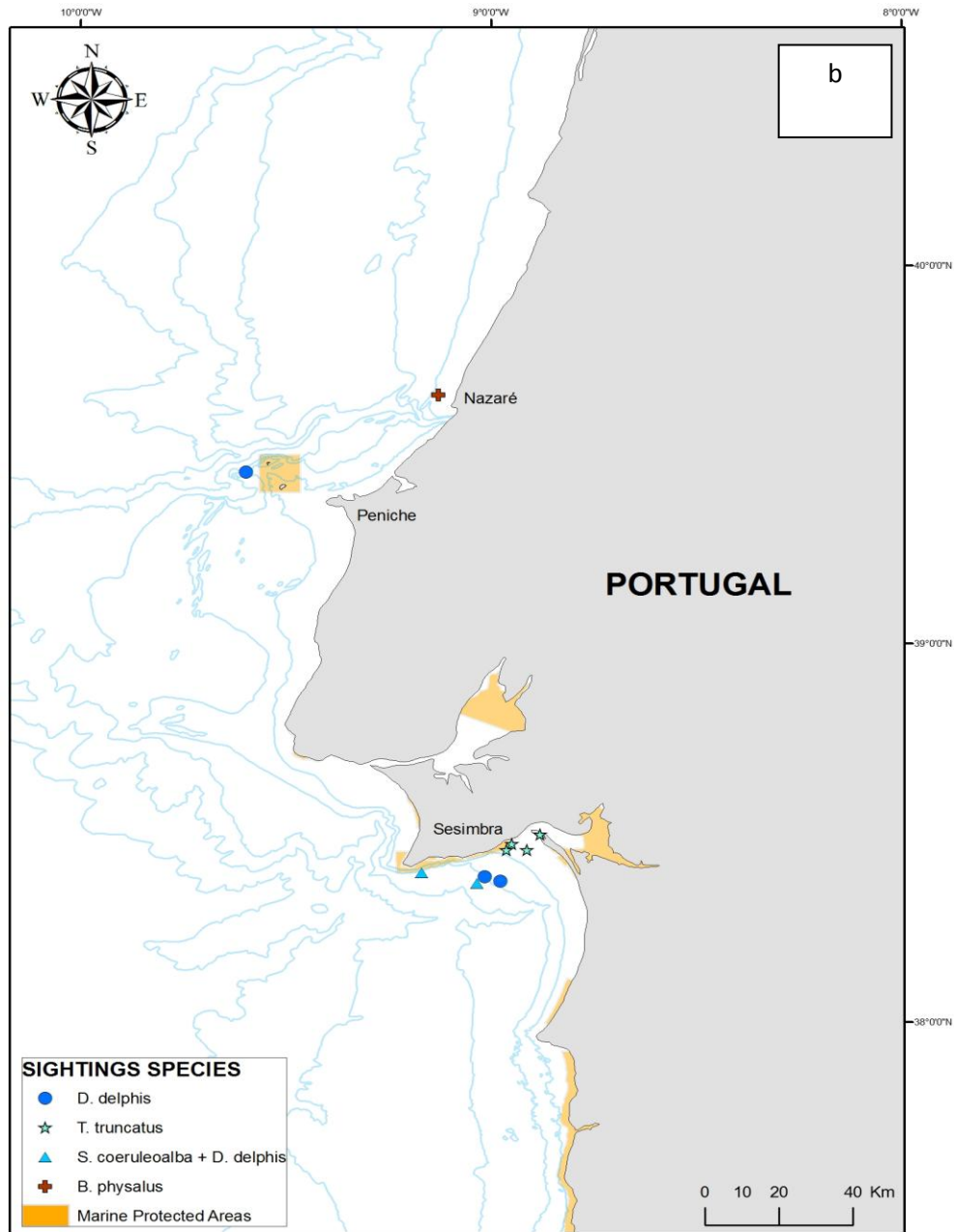


Figure 1b – Sightings species by area.



SPECIES SIGHTED DURING THE PROJECT

- **Common dolphin (*Delphinus delphis*)**



Figure 2 – Sighting of common dolphin at Peniche.



Figure 3 – Sighting of common dolphins at Sesimbra.



- **Bottlenose dolphin (*Tursiops truncatus*)**



Figure 4 – Sighting of coastal bottlenose dolphins at Sesimbra.



Figure 5 – Sighting of resident bottlenose dolphins at Sado estuary (near Sesimbra).



- Striped dolphin (*Stenella coeruleoalba*)



Figure 6– Sighting of striped dolphin at Sesimbra.

- Fin whale (*Balaenoptera physalus*)



Figure 7 – Sighting of a fin whale at Nazaré.



- **PUBLIC PARTICIPATION AND ENVIRONMENTAL AWARENESS**

A direct contact with the oceans and their animals, resulting in emotional connection with marine environment, is decisive in building concern for their protection. Since environmental awareness is extremely valuable for the implementation of effective conservation measures, the project **CETACEA CENTRAL** aims to create long-term, measurable, public awareness regarding the importance, intrinsic value, and environmental sensitivity of the marine environment. To achieve this goal some activities were implemented during 2011:

1 - Volunteers and graduate students participated in some of the scientific boat surveys; scientific dissemination to participants was engaged in research activities and they learnt how to be a biologist for a day;

2 – A boat survey in Sado estuary for observation of the endangered resident population of bottlenose dolphin, directed to the general public (including the presence of both adults and children) was conducted (Fig. 8);

3 – Implementation of a public participation programme - “*Avisa qu’ é golfinho*” (Fig. 9), where the ocean users are encouraged to register and take information of cetaceans occurrence in boat daily activities (like recreational fishing, scuba diving, surf, nature photography, etc);

4 – Open lectures with a general approach to the biology, behavior and conservation of cetaceans were also conducted (Fig. 10).



Figure 8 – Boat survey in Sado estuary.



Avisa qu' é golfinho!

Vai para o mar? Se vir golfinhos ou baleias...
toca a fotografar!

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Envie as suas fotos para escolademar@gmail.com

Indique:

- O local do avistamento
- se possível a posição GPS
- Data e hora da sua observação
- O seu contacto

Golfinho-comum

Golfinho-roaz

Baleia-anã

A Escola de Mar, em parceria com a Associação para as Ciências do Mar, dedica-se ao estudo da ecologia e conservação dos cetáceos na Costa Continental Portuguesa. Todas as observações de animais no mar são importantes para compreendermos de que forma estas espécies utilizam as nossas águas.
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Figure 9 – Information about the programme “Avisa qu’ é golfinho”.



Figure 10 – Lectures conducted by Escola de Mar/APCM technicians.



For 2012 and 2013, we expect to keep up with our main objectives for the research, conservation and scientific dissemination of marine environment and marine megafauna, most especially cetaceans in Portuguese coastal waters. Marine mammals' biology and history, scuba diving projects and educational activities will be under course and we hope for the collaboration of our partners helping to achieve our goals and working together with us for the **Science and Conscience on the Oceans**.

