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Cetacean research network in the south of Portugal: establishing a low-cost and long-term monitoring programme



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INTRODUCTION

The only available information on cetaceans in the south of Portugal comes from stranding records (Sequeira *et al.*, 1992, Sequeira *et al.*, 1996), localised surveys restricted in space (Castro, 2010) or occasional sightings. The high cost of boat rental and the current world's economic situation makes it very difficult to start research programs on cetaceans.

The main goal of this project is to collect more consistent data on the occurrence and distribution of cetaceans along the entire south coast of Portugal, i.e., from Tavira to Sagres, in order to fill the existent information gaps.



Figure 1. Minke whale (*Balaenoptera acutorostrata*)

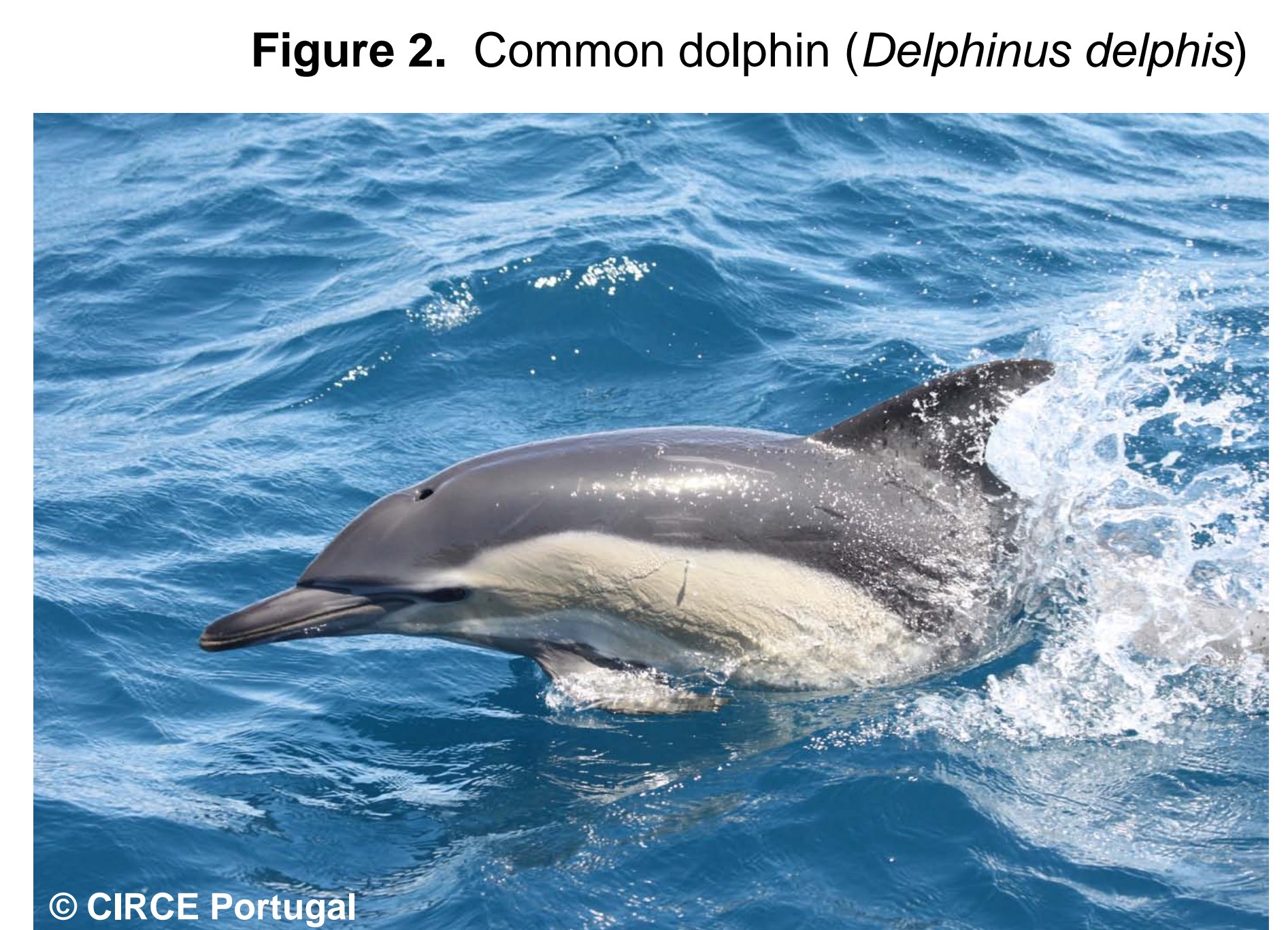


Figure 2. Common dolphin (*Delphinus delphis*)

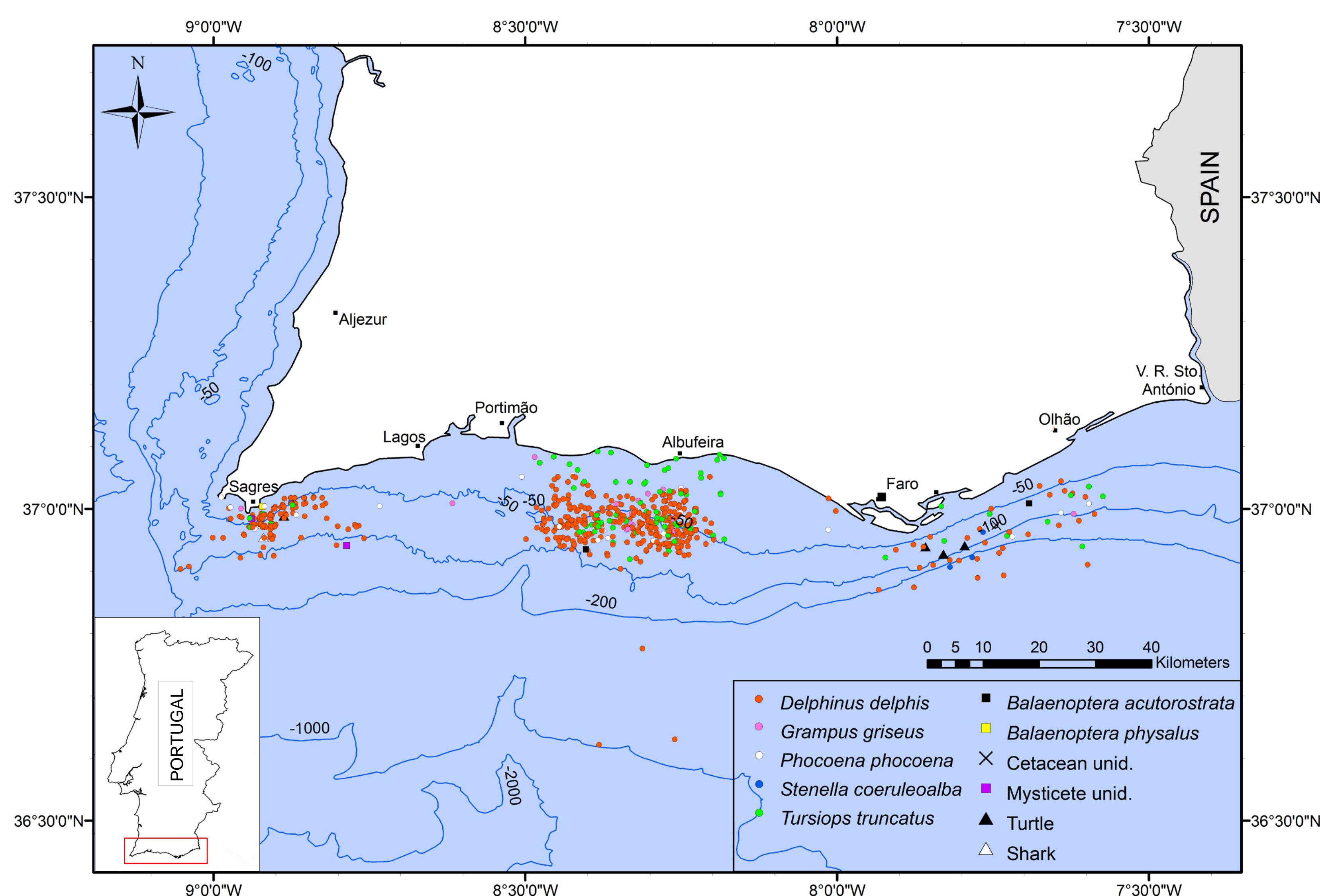


Figure 3. Spatial distribution of sightings

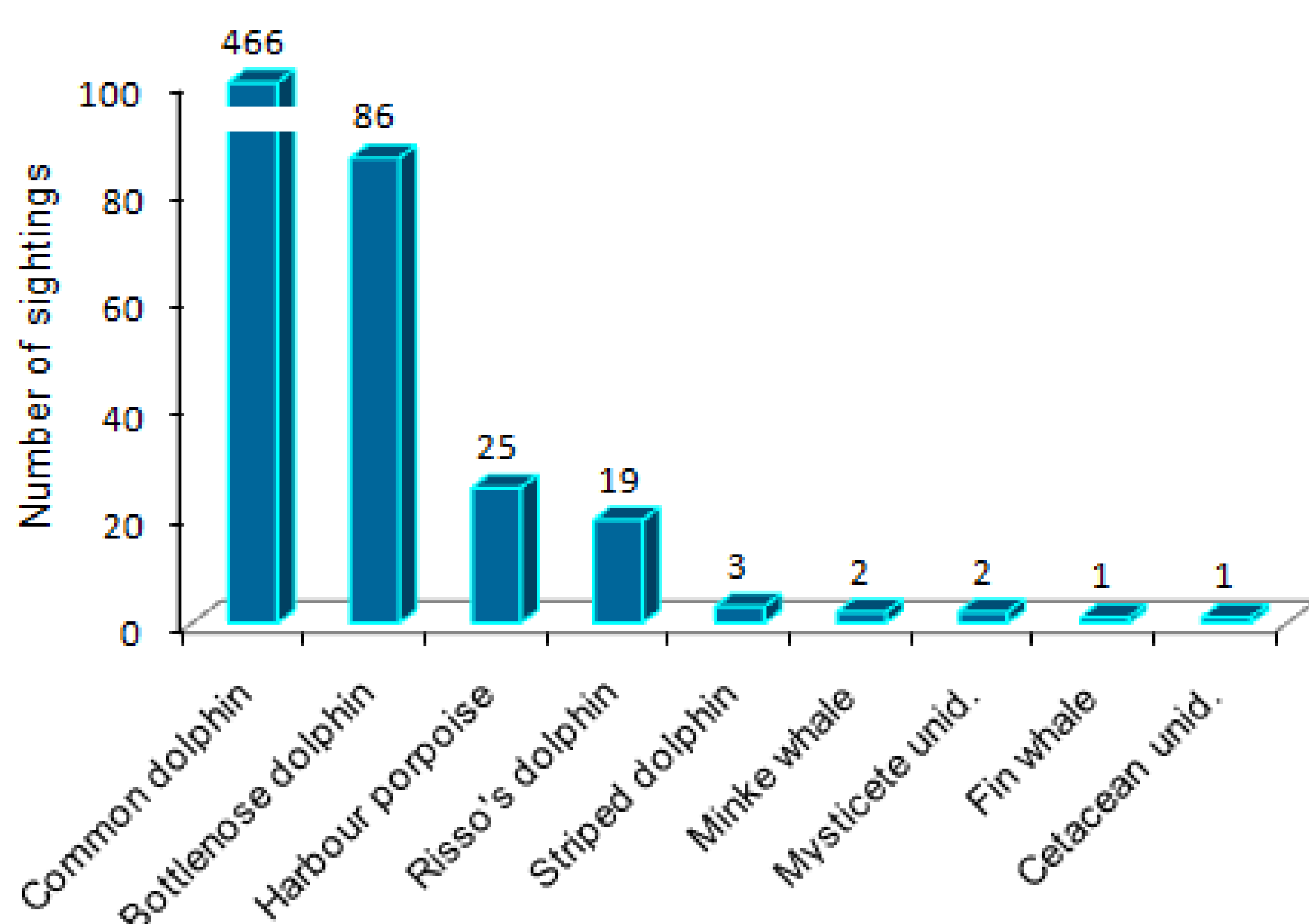


Figure 4. Number of sightings per species

MATERIALS & METHODS

A whale watching network was created using six whale watching companies spread along the coast and nine of their boats. Between June and October 2010 an effort of 2339 hours was done in these whale watching platforms. The number of trips per day varied between 1 and 5, and each one took 90 minutes on average. All the boats, except one, could not navigate beyond 5 nautical miles from the coast.

RESULTS

Seven species of cetaceans were identified of which five were odontocetes and two mysticetes – minke whale (*Balaenoptera acutorostrata*) (Fig. 1) and fin whale (*Balaenoptera physalus*). An average of 0.27 sightings per hour of effort was registered. In total, 605 sightings were recorded (Fig. 3 & 4), being the most observed species the short-beaked common dolphin (*Delphinus delphis*) (Fig. 2) that accounted for approximately 77% of the sightings. In spite of the occurrence of two species of mysticetes, the odontocetes accounted for 99.2% of the sightings, and only five sightings of baleen whales were registered.

DISCUSSION AND CONCLUSION

These results demonstrate how a low cost network can be set up to build long-term monitoring projects. They also suggest that the area has an important potential from a socioeconomic point of view. Finally, this knowledge is of utter importance in a moment where efforts are being made to establish marine protected areas to comply with the Marine Strategy Framework Directive.

Acknowledgments

These results could not have been possible without the collaboration of all the whale watching companies in the Algarve. Thanks to all the CIRCE volunteers that helped in data collection.

References

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