



Micro, meso and large scale movements of the Galician bottlenose dolphin populations based on the FotoID technique



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INTRODUCTION

Photo identification studies of bottlenose dolphins have been carried out in Galicia (NW Spain) since the 90s. The photographs collected for photo-ID catalogue have been obtained with ship surveys and land-based monitoring from 2000 to 2019 by CEMMA along the Galician coast.

MATERIAL & METHODS

The photographs are classified with criteria of quality and distinction, as well as by the number of recognizable marks¹. For the micro and mesoscale geographic analysis, six areas are identified along the Galician coast. The fins detected within each estuary and between adjacent estuaries ("RÍAS") (microscale), and along the Galician coast (mesoscale) are analyzed. The photographs are also compared compared with those existing in the north of Spain and the Bay of Biscay (Asturias, Cantabria, Euskadi) and with opportunistic sightings in the Bank of Galicia sea mountain and the coast of Portugal (all of them large scale).

RESULTS

Between 2003-2022, 395 dedicated censuses were carried out, where 754 sightings of 1,998 animals were recorded, in which more than a hundred thousand photographs were taken. More than 700 identifiable different dorsal fins were obtained thanks to the good quality of the photographs. The encounter rate is 0.47 sightings per hour of navigation.

A total of the 86 individuals are considered the stable group of dolphins that remains on the coast of Galicia over the years, and some individuals have been recorded for at least 20 years.



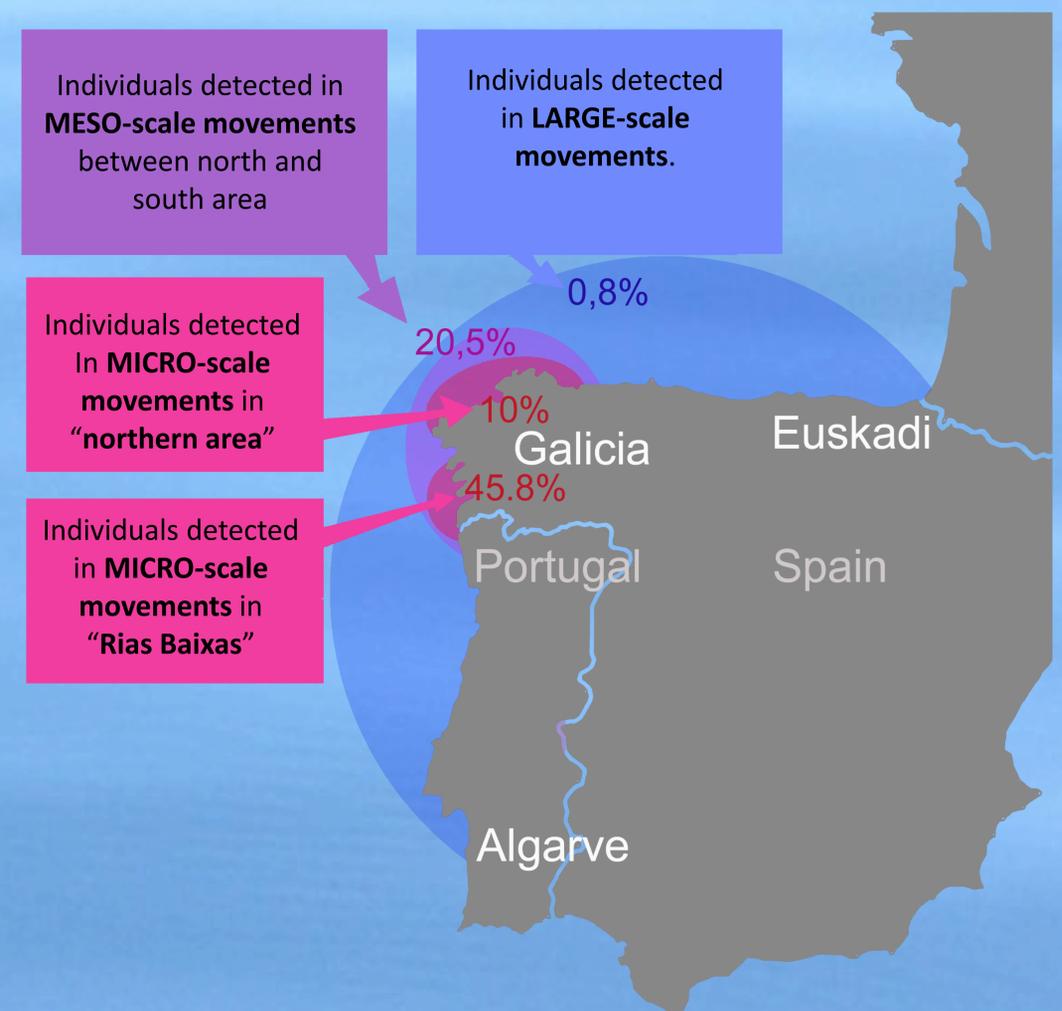
REFERENCES

¹ López, A.; Martínez-Cedeira, J., Mariscal, P. (2019). Catálogo TurGaSur de fotoidentificación dos arroaces (*Tursiops truncatus*) de Galicia Sur e manual de boas prácticas de navegación. CEMMA. Fundación Biodiversidad-Ministerio para la Transición Ecológica.



OBJECTIVE

The objective is to find out the proportion of individuals that move in a small space of less than 100 km, between Rías (Micro-scale), between the north and south of Galicia (100-200 km, Meso-scale) and over long distances of more than 200 km (Large-scale).



CONCLUSIONS

FotoID allows us to catalogue the residency patterns of the bottlenose dolphins of southern Galicia, as well as their capacity to move towards the coasts of northern Galicia (20.5%) and long-distance movements (0.8%).

These movements indicate some gene flow between populations in nearby areas.

Highlights the importance of maintaining long-term photoID tracking programs in meso- and large areas.