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25 YEARS OF RESEARCH ON KILLER WHALES IN THE STRAIT OF GIBRALTAR. A REVIEW

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INTRODUCTION

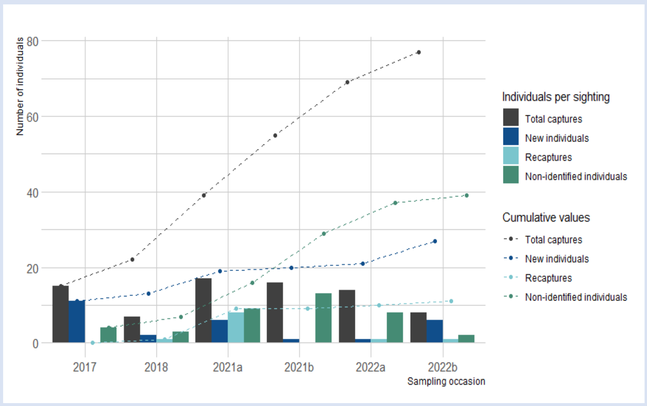
- The Iberian Peninsula is home to a unique population of killer whales, which has suffered a significant decline in their population along the years reaching the critically endangered status by the IUCN.
- Added to the recently increasing complains about the killer whales' interactions with different kinds of vessels and the increasing whale watching pressure raises the need to develop new management and conservation programs for the species.
- In this poster, we will explore the importance of studying the Iberian killer whales (*Orcinus orca)*, and how long-term research like this can help us better understand and protect this iconic species, as well as the marine ecosystems they inhabit.

METHODS

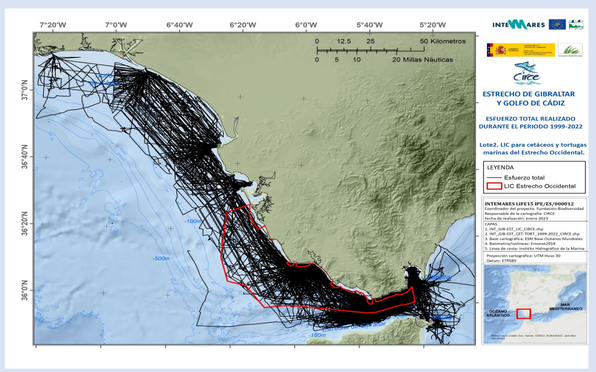
- Photo-identification monitoring program since 1996-2022.
- Capture-Recapture Models to study population dynamics.
- Generalised Additive Models to predict the spatial distribution.
- Social structure and behavioural studies.
- Collection of standardised anthropogenic activities data in the area.

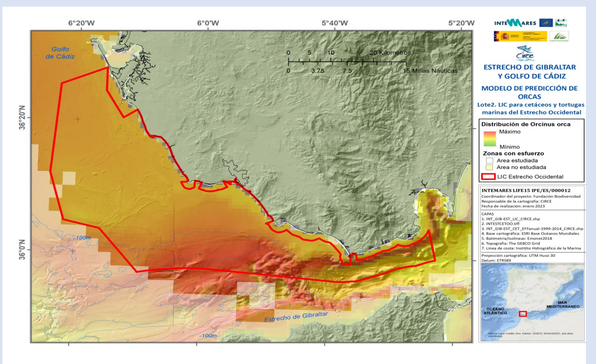
RESULTS

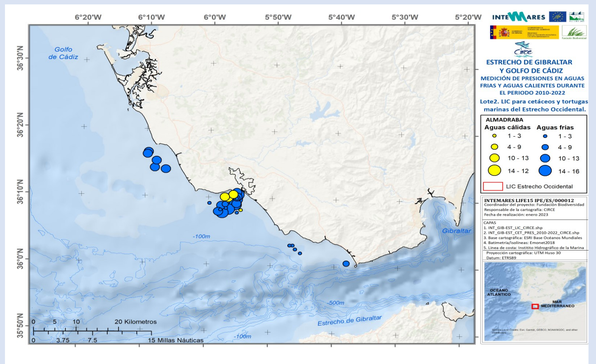
- For more than 25 years, a total of 65923 photos have been taken, and a total of 45239 km sampled.
- Using photo-identification different individuals and pods have been identified.
- Catalogues:
  - 1st one for the period 1999-2016: 47 individuals identified.
  - 2nd one for the period 2017-2022: 31 individuals identified.

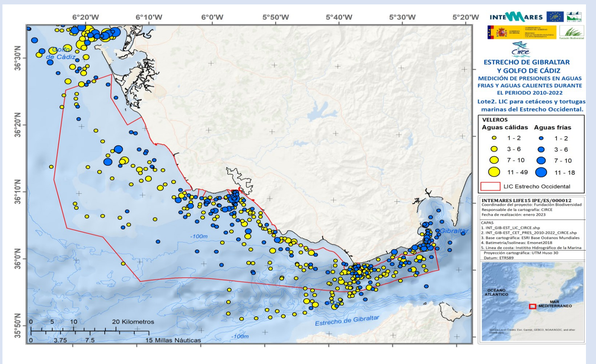


Sum up of the photo-identification data gathered between 2017 and 2022 (left). Photo of killer whales taken during a sighting (right).









Spatial distribution of the effort made during 1999-2022 (top left), map of the *Orcinus orca* prediction model (top right), presence of "almadrabas" (bottom left), and presence of sailing vessels (bottom right) in the waters of the Strait of Gibraltar and adjacent Gulf of Cadiz.

DISCUSSIONS & CONCLUSIONS

- The Iberian orcas are a unique population with distinct biological and behavioral characteristics that set them apart from other killer whale populations around the world. By studying them, scientists can learn more about the diversity and complexity of these animals and gain insights into their evolution and adaptation to different environments.
- The Iberian orcas play a critical ecological role in their marine ecosystem, as top predators that regulate the populations of their prey species. Understanding their behavior and interactions with other marine animals can help us better understand the dynamics of these ecosystems and how to manage them sustainably.
- The Iberian orcas face a range of threats, which puts them at risk of extinction. The knowledge gathered within these studies is essential to establish new conservation measures to protect them and to implement more accurate management plans in the short term.
- The study of Iberian orcas is not only important for the conservation of this population but also has wider implications for the management and conservation of marine ecosystems globally. By learning from these animals, we can develop more effective and sustainable management strategies for other marine species and ecosystems.

In summary, studying the Iberian orca population is essential for understanding their biology, ecology, and conservation needs, as well as for developing effective management strategies for the specie and marine ecosystems.