

# Participatory process, Citizen Science and Traditional Ecological Knowledge for the development of a consensual code of good conduct, that strengthens the conservation of the smalltooth sand tiger shark (*Odontaspis ferox*) on the island of El Hierro.

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## INTRODUCTION

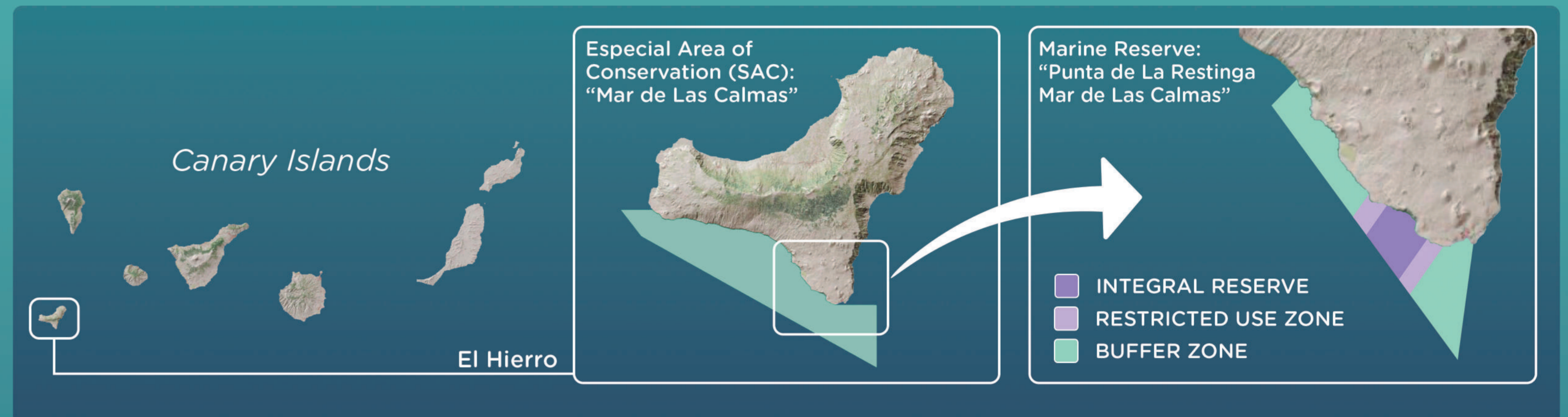
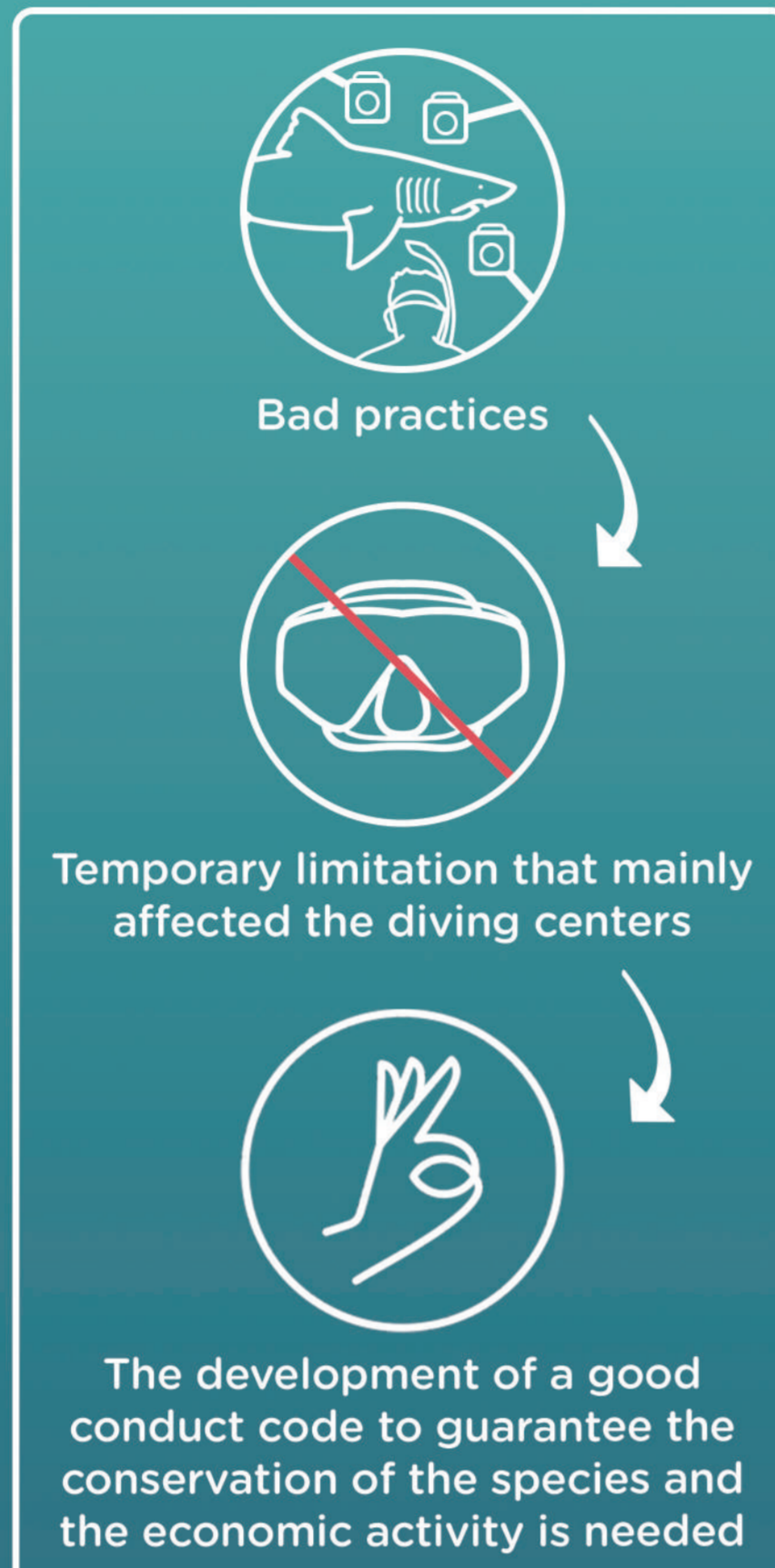
*Odontaspis ferox* is a worldwide fairly unknown species and it is believed to have a low population density, for which the little information available comes, mostly, from fishing records. In the Canary Islands, this species seems to show philopatry towards the "Mar de Las Calmas" region, on the island of El Hierro, where several pregnant females have been observed in successive years, in shallow waters and very close to the coast, for a significant length of time.

This had led, in the summer of 2019, to an unusual flow of divers and curious people from different parts of the world, which resulted in the temporary limitation of the practice of aquatic and underwater activities in the waters of the Marine Reserve.



Photo 1. Example of bad practices observed in the area of *Odontaspis ferox*.

Photo: Felipe Ravina



## Objectives

- To develop a consensual code of good conduct that demonstrates the possibility to combine economic activity, conservation and management.
- To increase the existing knowledge about this species through the identification of seasonality and sighting sites, the recovery of traditional ecological knowledge about this species on the island, and, the development of a photo-identification catalog.
- To generate training and outreach workshops, contributing to the change of perception and monitoring of the local community related with this species.

## METHODOLOGY

To achieve these objectives, three simultaneous lines of work were developed.

To begin with, a Traditional Ecological Knowledge methodology was followed in order to gather and increase the knowledge of the species.

In addition, from a citizen science approach, training workshops and publications in social media were developed to raise awareness.

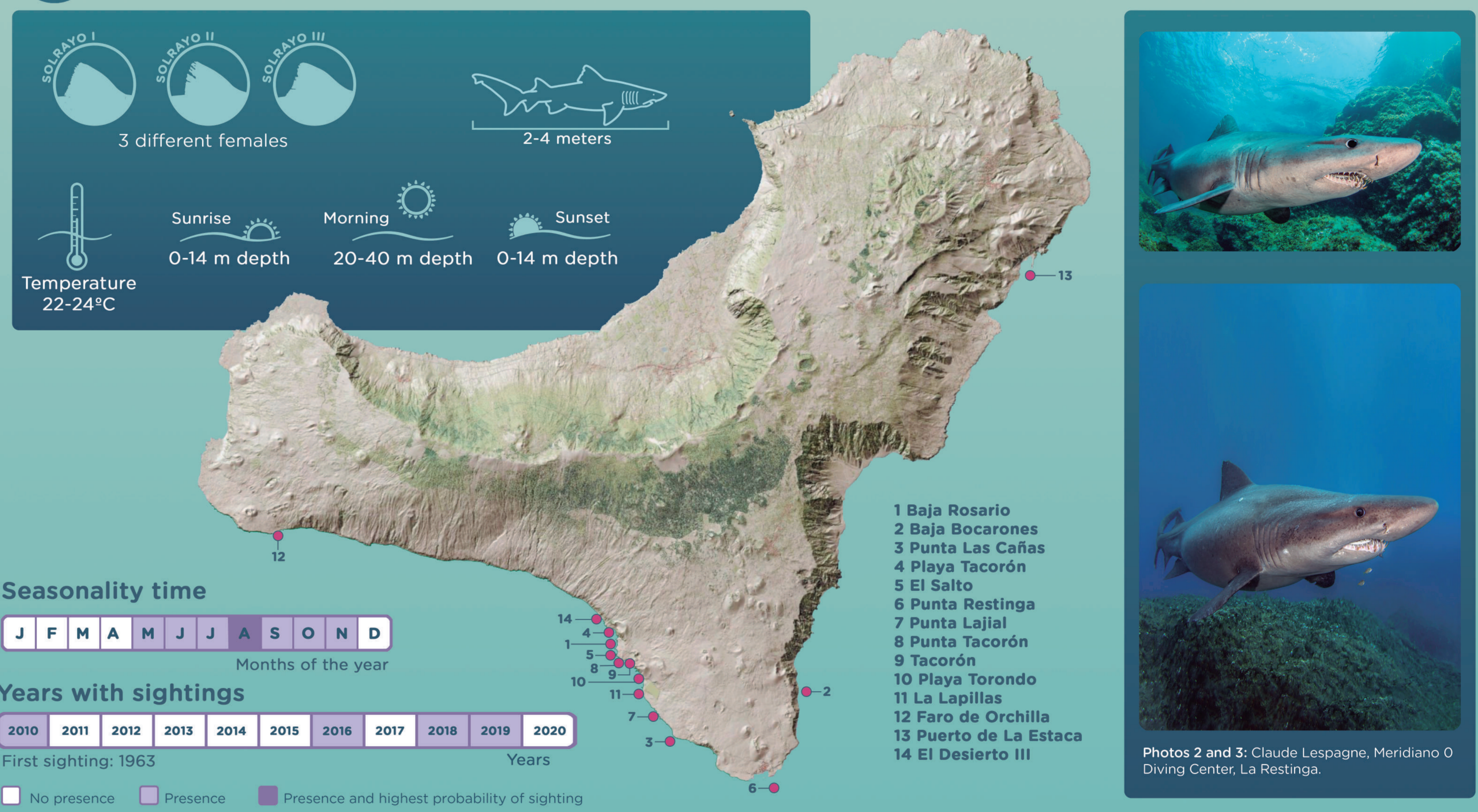
Furthermore, a social participatory process was followed in order to develop a code of good conduct for divers in the area.

### Project in numbers

Between August 2020 and December 2020

- 55 people from different entities participated in this process
- 23 listening and proposal meetings were held
- 19 interviews were developed following the TEK methodology
- 4 participatory sessions with all the stakeholders to reach agreements were developed
- 16 publications in social networks
- 2 training workshops were held for local dive centers

## Historical characterization of the presence of *Odontaspis ferox* on the island of El Hierro



## Developed documents

- Consensued Code of Conduct for the observation of the smalltooth sand tiger shark on the island of El Hierro.
- Photo-Identification Catalog.
- Interpretative Panel placed at the entrance to the "La Restinga" pier, to provide quality briefings before the diving activity.

## CONCLUSIONS

- This code of conduct, which has been developed by the citizenship and achieved consensus after discussion with different administrations, lays the basis for good practices during scuba and free diving in the presence of smalltooth sand tiger shark. This can be extended to other species of elasmobranchs present in the area.
- This first photo-identification catalog establishes the basis for future studies. This will make it possible to identify specimens, reproductive scars, sex ratio, understand seasonality, philopatry, etc.
- Although since 2019 Smalltooth sandtiger shark has not been observed again in the island of El Hierro. From the perspective of Citizen Science, RedPROMAR maintains an early warning network with the different stakeholders of the island, this will allow to promote the consensual code of conduct, which will ensure the continuity of the scuba diving activity in time and respectful with the species.



## How to participate

- Join to our workshops. Take a look at the RedPROMAR social networks, where we will propose new free and accessible workshops.
- Go Dive, enjoy and take pictures. In which the organism can be properly appreciated.
- Record your observations. Upload the information of your dives to the RedPROMAR APP, indicating date, location and photograph.
- Become a Citizen Scientist. Contribute and learn about the marine biodiversity of the Canary Islands.

## ACKNOWLEDGEMENTS

We extend our gratitude to all users who have actively reported and/or are currently reporting on the RedPROMAR platform, thereby promoting knowledge and conservation of our marine ecosystems. Special thanks are also due to the various entities and individuals who collaborated in this process, as well as to the residents of the municipality of La Restinga for their invaluable support during the development of this project. This project was co-financed by the European Union under the Canary Islands FEDER Program 2014-2020.

