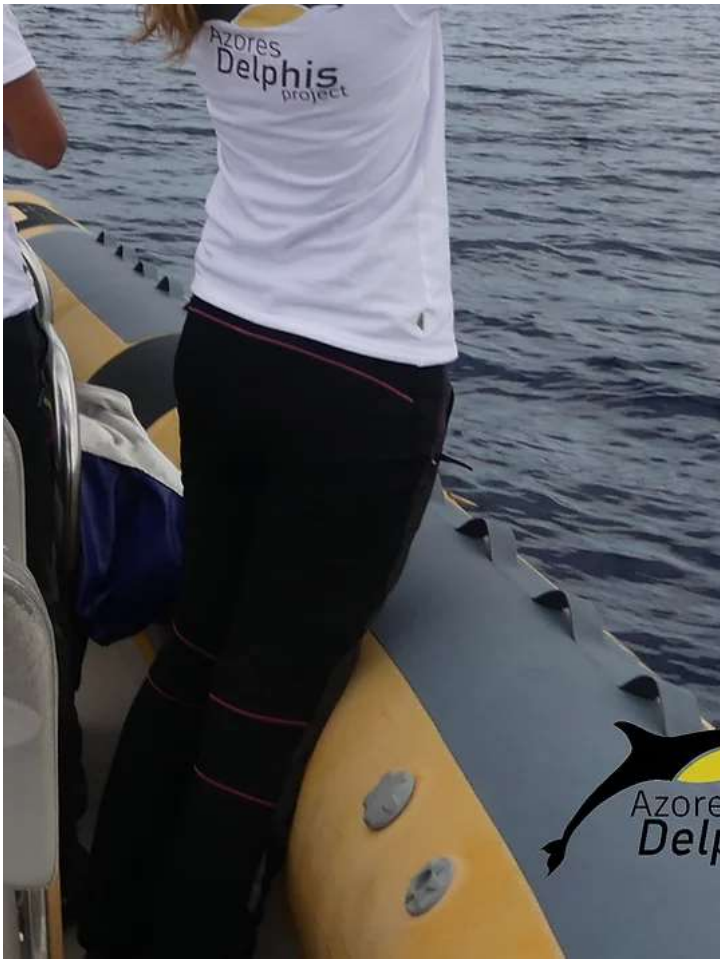
The project

Azores delphis project was started in July 2020 with the overarching PhD of Fadia Al Abbar who is looking at "Social mitigation strategies of common dolphins" off the coast of Sao Miguel, Azores. Besides this PhD project we aim to understand more about the local population, site fidelity, and their interaction with whale-watching activities. We are using a drone, photo ID, acoustics, and land observations.



PhD Fadia Al Abbar 2020-Current

Common dolphins' (Delphinus delphis) social mitigation of tourism-induced disturbance

On the Azores, swimming with dolphins (SWD) in the wild is most often done with short-beaked common dolphins (Delphinus delphis). Swimming with common dolphins is unusual anywhere else in the world, because their high-activity state makes it a challenge. Therefore, the SWD effect on these larger gregarious groups remains understudied.

Additionally, the Azores may be a potential nursing ground, which makes them particularly vulnerable to disturbance. It is therefore important to study their population and age-class structure to identify the peak season of

Msc. Luana Clementino 2021

Tourism-induced communication changes in common dolphins of the Azores

The short beaked Common dolphin (Delphinus delphis) is amongst the most sighted species in the Azores and is highly targeted by whale watching companies, as well as for swimming with dolphins. These activities have the potential to impact the behaviour of the animals.

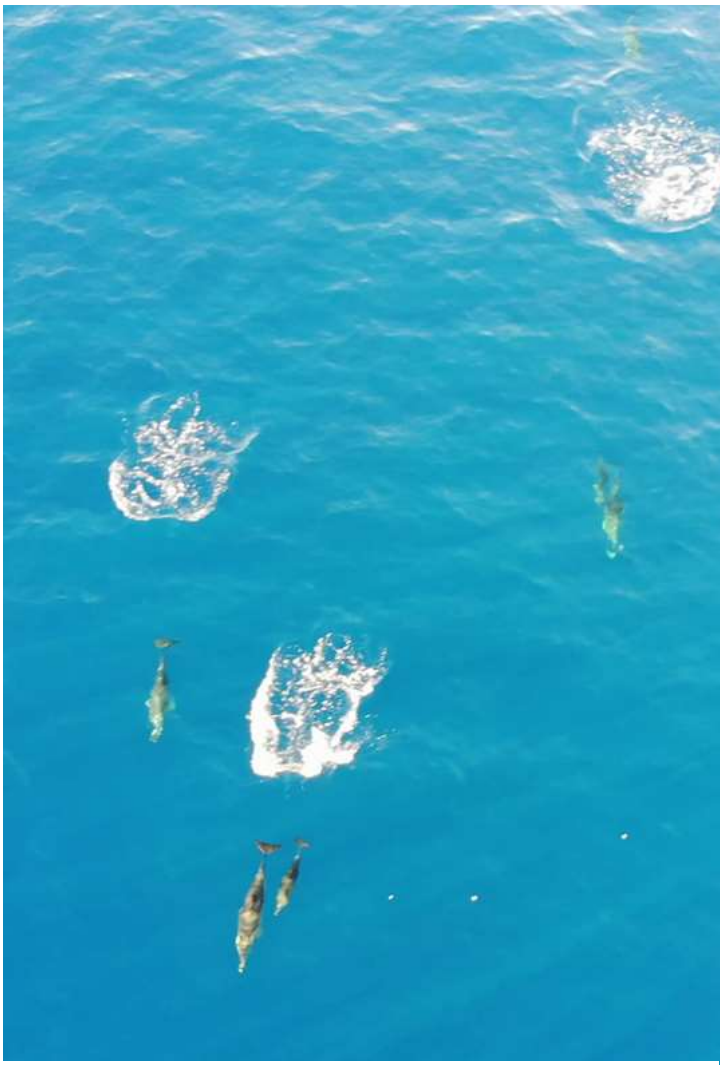
However, there is limited information on the communication of common dolphins and their vocal responses to these activities. Using a towed hydrophone aboard a research vessel, the acoustic behaviour of common dolphins was monitored in a baseline setting and during simulated approaches as would be undertaken by swimming with dolphin operators.

long-term exposure to SWD activities may have found creative tactics to cope with disturbance.

What we currently know about the common dolphins in the Azores is that there is a behavioural effect of whale watching and swimming with dolphin activities done by Arianna Cecchetti. To read her PhD thesis click here.

However, the knowledge of the behaviour of common dolphins is still in its early stages, hence the start of this project, to learn and understand more.

Msc. Anne Grundlehner 2021



Using photogrammetry to investigate the spatial organization of common dolphin pods and the position of calves

Common dolphins (Delphinus delphis) are commonly known to form social groups (pods), which show high variation in size and composition. Grouping behaviour is observed in a wide variety of mammals, and groups are generally shaped by both social and ecological factors.

Previous research has indicated that dolphins adjust their group size and spatial cohesion in response to risk-associated variables, such as predator and boat presence. In this study, we assess the social organization of common dolphin pods from an aerial perspective.

Preliminary study 2019

Distribution of common dolphins off São Miguel Island, Azores: Using Photo ID to determine a potential residency pattern

Prior to this project, Laura Gonzalez and Fadia Al Abbar set up a common dolphin photo ID catalog at Futurismo Azores Whale Watching.

Photo ID of common dolphins is quite a challenging task and a public catalog has not been created for the Azores archipelago yet. Dolphins aggregate in large numbers, some of them do not present any mark on their fin to be distinguished from each other, and such marks can be hard to detect, especially from a picture of fast swimming dolphin taken from a moving vessel! However, several studies (e.g Hupman 2016, Pawley et al., 2018) have proven photo-ID of common dolphins using markings and pigmentation to be successful.

Due to the use of an opportunistic platform (whale-watching boats), we chose to focus on collecting data on individuals with obvious markings that we called "highly identifiable individuals". These have been defined as a category of "highly distinctive nicks/notches" and/or "high pigmentation" of the left side of the dorsal fin. The photos have been collected between 2018 and 2019.

Preliminary results show a presence of common dolphins year-round, with larger groups in summer months. Several "highly identifiable individuals" have been re-sighted in the months of July and August 2018. These results may indicate a return-rate of certain common dolphins within the same season around São Miguel. This method of analyzing only the "highly identifiable individuals" aims to improve the data collection of the common dolphins by concentrating the effort on obvious individuals from an opportunistic platform, as there is limited time spent with the species.

We will continue to collect and analyze the photo ID of common dolphins in the next years, see the link below to read our preliminary results of the published poster at the World Marine Mammal Conference in Barcelona, Spain.

Poster