

Project Update: June 2020

In view of the result of the last field trip during the 2019 smooth hammerhead shark (*Sphyrna zygaena*) season, it was decided to make a greater fishing effort starting to do field trips from the beginning of the season, connecting the period when female sharks return to the coast and juveniles begin to emerge into more open waters.

Therefore, research field trips during 2020 season for the smooth hammerhead shark research consisted of carrying out a series of expeditions at various points along the coast of Ecuador and at different periods of time within the season. Moreover, the team decided to move further north within the study area compared to the field trips made in 2019.

For the first expeditions, the team went on a 3-day excursion to Manta (-0.9496, -80.7102), boarding in San Lorenzo from February 19th to 21st 2020. The excursions started in the afternoon and returned to port at night. We went with an artisanal fisherman and his assistant and this time we also had the support of the WWF-Ecuador team.

We use the frozen frigate tuna bait (*Auxis thazard*) attached to a 50-hook shallow longline. The fishing gear was launched twice for about an hour and a half each. The longline was constantly reviewed to avoid stress of the shark in case of capture and thus carry out the complete handling the shark in the shortest possible time.



Fig.1. (Left) Fisherman preparing the longline. (Right) Fisherman setting the longline with the bait.

This time we captured two bycatch species, one common dolphinfish (*Coryphaena hippurus*) and two Pacific barracuda (*Sphyraena argentea*). However, and unfortunately, we did not manage to capture smooth hammerhead shark.

Despite not being able to capture any *Sphyrna zygaena*, the field trip was very productive because we start a Project of training with the personal from the Refugio Pachoche Natural Park.



Fig.2. Staff of the Refugio Pachoche Natural Park performing the external tagging

The following day training was carried out with two biologists from the Refugio Pachoche Natural Park on Tarqui beach (Manta), to teach how to perform the external tagging. The training was carried out on bycatch shark species landed on the beach.

In addition, we held some meetings with the administration of the Refugio Pachoche Natural Park with the idea of improving future exploratory trips with the park staff and establishing local support for the study in the area. For future expeditions we will have the support of the park rangers and we will be able to take advantage of the natural park facilities within the marine protected area.

However, the next expeditions of 2020 season were cancelled due to the COVID-19 pandemic, and the team decided close the season to avoid public health problems. Mainly because carrying out the project in this situation following a protocol is more difficult due to the number of trips, personnel on board and work methodology.

It was agreed that due to the difficulties that have arisen during the development of the project, it is best to have a researcher in the study area with 100% availability throughout the next season to carry out the objectives. Therefore, we agreed to change the strategy starting with organising exploratory fishing trips and working with local fishermen to report on catches of smooth hammerhead sharks and later organise fishing trips in the natural park boat for tagging.