Final Evaluation Report

Your Details	
Full Name	Jones Sofia
Project Title	Sea turtles in Argentina: interaction between fisheries and good handling practices on board
Application ID	33974-1
Date of this Report	5/8/2022

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Identify and quantify sea turtle bycatch, and its associated mortality, in artisanal and commercial fleets that operate on the Río de La Plata Maritime Front and "El Rincón" area (Buenos Aires Province).			■	A total of 147 fishers were contacted. 60% belonged to commercial fleets (length range 12-30m) which used trawl nets (Figure 1), and the remaining 40% corresponded to artisanal fleets (length range <12m) which used gillnets (Figure 2). All fishers reported having caught sea turtles at some time. The vast majority commented that when they caught animals they were found drowned, and they let them recover on deck before being released (Figure 3, 4 and 5). A total of 136 sea turtles have been reported, 80% of which were alive.
Identify high sea turtle bycatch areas by artisanal fishing activities, and quantitatively corroborate the high-susceptibility areas to bycatch already identified by commercial fishing activities.			■	We have been able to identify areas where sea turtles interact most with artisanal fleets. We have identified the existence of interaction with commercial fleets in areas considered highly susceptible to bycatch, confirming what has been inferred in the literature.
Encourage sea turtle good handling practices on-board along with the participation of the stakeholders.		■		25 educational posters were designed with information on the species of sea turtles present in Argentina (figure 6), which were placed in key locations (ports, headquarters of Prefectura Naval Argentina, National Fishing School, etc.) (Figure 7). 300 sea turtle species identification sheets were designed and laminated to be carried on board of the vessels, which have been distributed in four important fishing sites (Figure 8). At the time of distribution, fishers were trained in the identification of species (Figure 9 and 10). These sheets have also been delivered to fishing inspectors and

				published on the official website of the Ministerio de Agricultura, Ganadería y Pesca de la Nación to facilitate compliance with Resolution SAGYP 92/2021 which consists in reporting incidental catches of marine fauna in fishing reports. Two workshops have been held and attended by 43 fishers where we have started to work on improving good practices with sea turtles on board (Figure 11).

2. Describe the three most important outcomes of your project.

a). For the first time, the number of sea turtles accidentally caught in artisanal and commercial fleets has been estimated, as well as the areas and seasonality of such captures.

b). The participation of the fishing sector and governmental entities in sea turtle conservation has been achieved through the distribution of graphic material and awareness campaigns at key locations.

c). We were able to learn about the actions of fishers with sea turtles on board in the different fleets. This allowed us to identify, prioritise and start working on those practices that need to be modified to increase the number of live turtles released into the sea. The workshops have been a good opportunity to discuss with the fishers and those involved in future decision making.

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

● On board notebooks for registry which were implemented in other countries to collect information on bycatch and fishing effort did not work in Argentina. However, we have achieved a good predisposition on the part of the fishers, and we have been able to get them to send the records of catches and sightings of sea turtles (photographs, videos and GPS positions) via WhatsApp or social networks of the project.

● Weather conditions affected our field work, especially with artisanal fishers whose vessels are small and enter the sea from the beach. While this delayed our activities in some sites, the continuous contact through WhatsApp or social networks of the project, as mentioned above, allowed us to continue recording information despite not being in the field.

● Since 2014 it has been discovered that sea turtles accidentally caught in trawls and gillnets suffer from decompression sickness. Although we are not aware of this occurring in Argentina, recent research in Brazil showed that animals accidentally caught in trawl fleets suffered from this disease, and that it worsened as the animals' time on board increased. From the information collected in the field we were able

to observe that the way of fishing and the species caught in Brazil and Argentina are similar, and perhaps some recommendations that exist worldwide regarding the handling of turtles on board may not be applicable in Argentina. New research is currently underway in Brazil, so we decided to postpone the design of a protocol for handling turtles on board until we know the results, but we did begin to work on considering some practices on board that we have identified together with the fishers and that are necessary to improve sea turtle survival.

4. Describe the involvement of local communities and how they have benefitted from the project.

The fishing community has participated in all the proposed activities, both in interviews and data collection throughout the project. Thanks to the collaborative work, we have been able to gather information that would not have otherwise been possible without their help, since the vessels that overlap with important sea turtle use areas do not have on-board observer programmes. Their good predisposition was fundamental, not only have they cooperated with their knowledge about these animals, but they have also helped to expand awareness in the rest of the community by connecting us with more fishers who could collaborate with our project.

5. Are there any plans to continue this work?

We have observed that the fishing sector is willing to collaborate in the conservation of sea turtles, so we will continue to collect information on this issue in the different fisheries, and we will continue to work together to improve on-board practices with the animals. We also believe that it is important to start working at a regional level together with Uruguay and Brazil to develop a protocol of good practices with turtles on board, applicable to both our vessels and those operating in the Southwest Atlantic.

6. How do you plan to share the results of your work with others?

The results have been presented to the fishing community at the workshops, and a document has been prepared and presented to regional authorities (Dirección Provincial de Pesca del Ministerio de Agroindustria de la Provincia de Buenos Aires, Subsecretaría de Pesca y Acuicultura de la Nación de Argentina, Dirección Nacional de Gestión del Agua y de los Ecosistemas Acuáticos). In turn, we plan to share the results in the doctoral thesis of Sofia Jones B.Sc. and in a scientific article as well. In 2023 they will be shared at the Monitoring Workshop of the National Action Plan for the Conservation of Sea Turtles (PAN-Tortugas) and at the 41st International Sea Turtle Symposium.

Finally, the "*Proyecto Tutka*" was created with the objective of making visible the activities framed in the project, as well as its results, which in turn, serves as a communication tool to encourage the participation of the community in the actions for the conservation of these reptiles. For this purpose, social networks were created, such as a Facebook page (https://www.facebook.com/Proyectotutka) and an Instagram account (https://instagram.com/proyecto.tutka), where information

about sea turtles, photographs of fieldwork, records of animals returned to the sea by the fishers themselves, and all the news about these animals are published daily.

7. Looking ahead, what do you feel are the important next steps?

● **Strengthen fieldwork in sites that were observed with a higher number of sea turtle's bycatch**. It is important to generate a more complete database and to better estimate bycatch in areas considered critical for these species.

● **Continue working on good handling practices with sea turtles on board**. Design a protocol for handling turtles on board, both nationally and regionally, together with Uruguay and Brazil. Begin working on safe release techniques for the animals since we have observed in the field that commercial fishers perform a release manoeuvre that can cause serious damage to the animals, such as the dislocation of their flippers. It is necessary and urgent to develop, together with the fishing sector, a device that facilitates the release of the animals that arrive on deck.

● **Develop an educational program in schools on the biology and conservation of sea turtles in Argentina**. Although fishers have expressed a wide knowledge about sea turtles, a large part of the population is unaware of the existence of these animals on our coast. We believe it is important to start working with children who come from families with a tradition of fishing, so that they learn about the importance of conserving these endangered animals and their ecosystems from an early age.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

We used the RSG logo in graphic material produced in relation to our project, such as the species identification sheet and the informative posters that were distributed in key locations; it was also placed on the PowerPoint used during workshops with fishers. We have made mention of the support we received from the foundation in publications on our social networks, and in the report presented to national authorities with the results of our work.

9. Provide a full list of all the members of your team and their role in the project.

Leonardo Berninsone. He collaborated in the coordination of the activities that took place in The Rio de La Plata Maritime Front, and in the realization of the educational workshop with the fishers.

Martín Sotelo. He collaborated in the coordination of the activities that took place in the "El Rincón" area.

David Vera. He was in charge of most of the data collection at the sampling sites and participated in the educational workshops.

Prof. Jorge Williams and **Dr. Laura Prosdocimi**. They are my academic tutors and have advised me throughout the project in decision making thanks to their experience.

10. Any other comments?

We thank Rufford Foundation for supporting this project in our country where there was no study with a wide spatial and temporal coverage that would allow us to learn about the interaction between these animals and fishing fleets. Thanks to their support, the information gathered helped to better understand this problem and will strengthen the management measures for these species in Argentina.

Fig.1: Commercial vessel of General Lavalle port.

Fig. 2: Artisanal vessel of Partido de la costa.

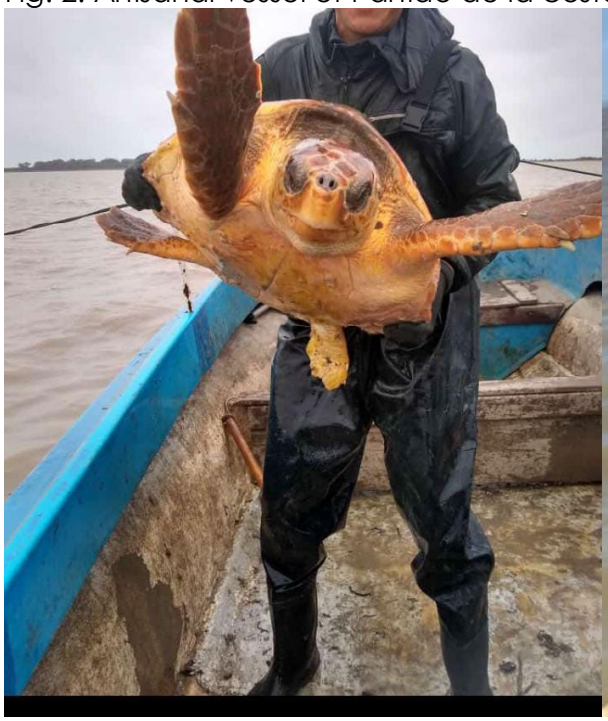

Fig. 3: *Caretta* released by fisher.

Fig. 4: *Chelonia mydas* released by fisher.

Fig. 5: *Caretta caretta* turtle recovering in commercial vessel.

Fig. 6: Educational posters.

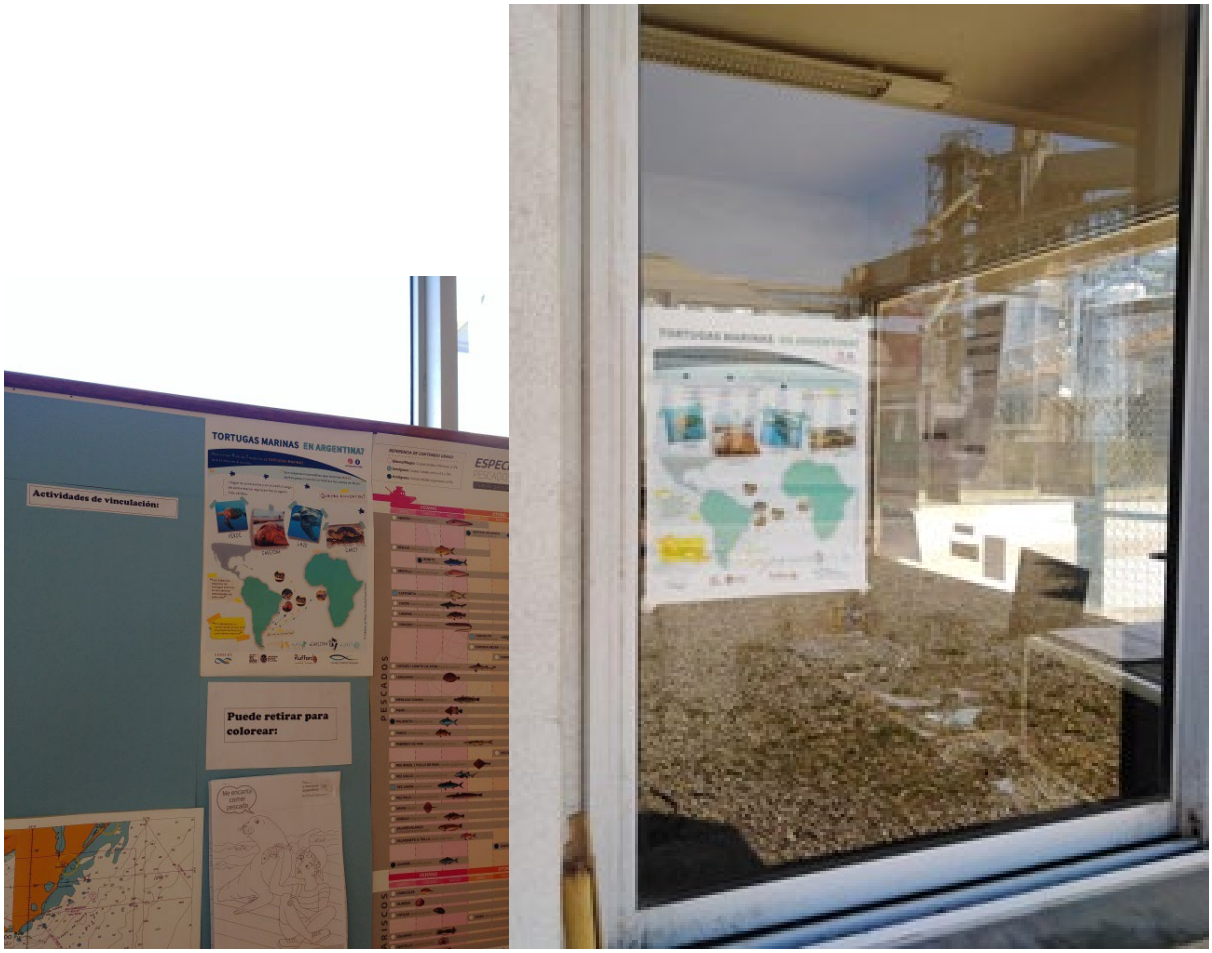

Fig. 7: Educational poster in key locations.

Fig. 8: Sea turtle species identification sheets.

Fig. 9: Identification sheets of species of sea turtle in Argentina delivered to the fishers.


Fig. 10: Identification sheets of species in the cabins of the vessels.

Fig. 11: Workshops with fishers.