

Final Evaluation Report

Your Details	
Full Name	Hugo Sanchez Gomez
Project Title	Biological and Socio-Economic Assessment of Elasmobranch Fisheries in Costa Grande Gerrero, Mexico
Application ID	38814-1
Date of this Report	22-09-2024

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
To establish a baseline of elasmobranch fisheries in Papanoa Bay			x	We successfully identified elasmobranch fisheries assembly among seasons. The catch is dominated by scalloped hammerhead (<i>Sphyrna lewini</i>), sharpnose shark (<i>Rhizoprionodon longurio</i>) and longtail ray (<i>Hypanus longus</i>). Blacktip sharks (<i>Carcharhinus limbatus</i>) catch only occurred during summer, when the ban season is over. A bachelor thesis from a student and its respective manuscript are in preparation
To understand the socio-economic needs and concerns of Puerto Vicente Guerrero fishermen regarding elasmobranch fisheries and their conservation		x		We successfully interview 15 fishermen from Puerto Vicente Guerrero. Although we managed to interview most of the fishermen that usually target elasmobranchs, we still have 3 persons which we were not able to contact. We are considering applying the same questionnaire to other communities along the Mexican Pacific Coast to increase our understanding of fishermen's concerns in the region
To increase the awareness of elasmobranchs in the zone, by improving the communication between scientist			x	We realized two workshops with fishermen and local people. Fishermen and their families seem interested in the project since the beginning. Although we identified differences in strategies for elasmobranch conservation,

and fishermen				all fishermen agree that it is necessary to preserve sharks in the oceans. Many of them are interested to know what is going next.
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2. Describe the three most important outcomes of your project.

a). Papanoa Bay as a nursery area: We identified three species that may use Papanoa Bay as a nursery area: The scalloped hammerhead (*Sphyrna lewini*), the blacktip shark (*Carcharhinus limbatus*) and the Pacific sharp nose shark (*Rhizoprionodon longurio*). The fact that *S. lewini* is considered a critically endangered species, and that this bay could be the first nursery ground identified for *C. limbatus* in the Mexican Pacific gives significant importance to Papanoa Bay for preserving the population for both species in the region

b). Conservation measures in Ppapanoa Bay and Puerto Vicente Guerrero Community: In contrast to common thinking, Puerto Vicente Guerrero community exhibits strong local conservation measures. For example, the use of fishing nets and surface longlines was prohibited, and only lines with hook and bottom longlines are allowed. In addition, they have agreements with other fisheries communities respecting fishery zones, being the reason why Papanoa Bay is exclusive for the use of Puerto Vicente Guerrero community. In addition, they often release some batoid species (Cownose rays and guitar fishes) alive as they are not valuable in the local markets

c). Elasmobranch fishery and other commercial activities: Although fishermen consider elasmobranch fisheries important for their economic income, they often prefer other species such as snappers. In addition, many fishermen change the species target according to the season and some of them even perform tourist activities, which may significantly reduce the impact on elasmobranch populations

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

- 1. Climate conditions:** As climate conditions often suddenly change, there were some days on the field when we could not monitor landings or assist fishing trips (fishermen do not usually work during these days). For this reason, we have changed our itinerary to carry out the interviews during these days and avoid wasting time on the field
- 2. Security in the region:** Puerto Vicente Guerrero belongs to the Guerrero state, one of the most insecure states in Mexico. As violence sometimes rises in nearby communities, we decided to move the last field trip a couple of weeks after a violent incident that occurred in the region. In addition, we used to inform fishermen and the sheriff of Puerto Vicente Guerrero of our arrival and leaving. As prevention, we did not leave Puerto Vicente Guerrero until the field trips were over.

3. Change in the foreign exchange: Since we sent the proposal until we received the funds, the sterling pound suffered a depreciation against the Mexican peso (from 24 pesos for each sterling pound to 21.5), which reduced by approximately 11,000-12,000 Mexican pesos the disposable amount. We had to make reductions in the number of days on the field

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

Puerto Vicente Guerrero was the main community involved in this project.

Fishermen of Puerto Vicente Guerrero were directly involved during the whole realization of this project. We used to sail during their fishing trips and we were constantly in touch. They have even started to send us pictures and images of other catches when we are not on the field. Workshops and interviews were specifically designed to involve them.

We consider this project to have a positive impact on increasing the awareness of fishermen. Most of them appreciated the interviews and workshops as they said their voices could be heard and considered our support for future concerns or problems that may occur. In addition, during our stay, we also rent a room from one of the fishermen and use to eat in the restaurant of another so we can leave an economic input form them

5. Are there any plans to continue this work?

Of course, this was just the beginning. We have detected some interesting aspects on which we would like to focus, such as the conservation of nursery grounds for elasmobranchs and the possible diversification of activities for fishermen. We have constructed a good relation with fishermen and it should be a shame not continuing this project .

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

We already took part in one symposium and we are participating in another during October. In addition, one of the students who participated actively in the project will use data from fisheries for his thesis, which will be defended by the end of October or the beginning of November. After the thesis is published, we expect to publish the information in a scientific journal. We also plan to realize an infographic and talk about this project in future meetings that I will impart during the next year. If possible, we would like one of the fishermen will share his experience during one of these meetings.

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

Although we recognize the local conservation measures in Puerto Vicente Guerrero, we also detected some aspects we could improve. One of these aspects implies

that fishermen often use newborn scalloped hammerhead sharks for fishing snappers as they said this is the main bait for catching this species. In addition, we consider it important to validate Papanoa Bay as a nursery area for blacktip and hammerhead sharks by utilizing other techniques such as stable isotopes, genetics, or interviews specifically designed for these species. Also, it could be interesting to estimate the mortality of juvenile blacktip and hammerhead sharks to find out if current conservation actions are working as desired or need to be improved. Concerning fishermen, it is important to keep empowering them, giving them information and proposing strategies for conservation that may be reflected during next years. Collaboration over years is the clue for the local preservation of environments and populations on time.

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?

Yes, we submitted a poster during one conference, which is already loaded on Rufford webpage, also we are presenting the results at another conference in October. The student's thesis will also have the acknowledgments in their manuscript and presentation. In addition, some partners have asked me how I was able to obtain funds for the project, so I introduced them to the Rufford web page and told them about my experience when writing the proposal and the process in general

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

M.sc Hugo Sanchez Gomez. Project leader, field trip work, interviews

Alejandro Esquivel Vieyra. Student, and field assistant, he participated during all field trips and supported me in teaching new students the protocols and methodologies

M.sc Adriana Lechuga. She was the person in charge of the workshops with fishermen and organize the talks

Ph.D Galvan Magaña. He was in charge of reviewing protocols and is helping us with data analyses

10. Any other comments?

Manuscripts and thesis will be sent to Rufford Foundation once published

Also, we attach a collage of the activities realized in this project



Finally, we would like to thank Rufford Foundation for all its support in making this possible. Local conservation is crucial as small pieces will soon converge into something bigger. We would love to continue our project during the next years working with these people and this place.

Thank You!