

## Final Evaluation Report

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Your Details	
Full Name	Michael Farid Zavala Armenta
Project Title	Enhancing a community-based Hawksbill turtle conservation program in Mayto-Tehuamixtle, Jalisco
Application ID	34524-1
Date of this Report	01 October 2023

**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
Data and sample collection				There were fewer captures than we had estimated, considering the increase in fisher participation. We attribute this to rough ocean conditions and bad visibility during the peak months of fishing activity, which meant that fishers couldn't go out as often, couldn't spot turtles or simply focused their time on fishing to get their income considering conditions could suddenly change.
Workshops/meetings with fishers				We had the participation of the 36 members of the fishing cooperative, as well as 10-15 other locals between the ages of 16-30, who are either children to the cooperative fishers or working towards becoming members.
Monthly diurnal and nocturnal dives in study site				Nocturnal dives would require boat rental, so we decided to stick with captures done by fishers and only carry out daily surveys which could be done by kayak and shore swimming and using that money for scouting dives.
Scouting dives in other sites for project expansion				
Fisherman's manual for proper sea turtle handling techniques				

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

**a).** We were able to formalise our work in mayto-tehuamixtle, we also strengthened the relationship and compromise with the community, we held three workshop/meetings during the study period, where we handed out uniforms to the fishers, as well as project logo stickers, which will be placed in their boats to distinguish them as collaborators. We also gave participation awards as well as a special award to the top three fishers with most captures and the fisher who had captured the biggest turtle.

These interactions with the community rapidly showed benefits, as there was high motivation and the weeks after these events, there were usually more reports of captures or sights of hawksbill turtles. Trust between the fishers and team also increased, as reports of drowned or stranded were more common than before.

To improve communication, we created a WhatsApp group chat, this way reports of captured turtles were done faster, turtles were held for less time, and if recently captured (less than 6 months), instructions were given to immediately be released.

More importantly, turtle handling techniques improved much more thanks to the workshops, with the help of team member Luis Ramón, who is the president of the fishing cooperative, we set a tub for safe keeping the turtles captured, before being turned over to the team, this avoided that turtles were kept turned over in the sand, on the boat, or even tied to the dock.

**b).** Recapture of individuals after 3+ years of their initial capture, which gives us a hint of their behaviour as residents, capturing more individuals of sizes not common (55+cm LCC), as well as the first register of a hawksbill turtle in our study, previously tagged in a beach 70+ km south of our project area, which could be an indicator of connectivity between sites and highlights the need of expanding our work to communities south of the study site.

**c).** After 11 years of work in the site, previous to this grant, we had only done a few dives in other sites, north and south of the study area, with a few turtles being captured and tagged. However, with this grant it was possible to expand the scouting area and even hire a boat. We were able to find potential sites and collaborators for future grant stages. Specially after finding a turtle previously tagged in other sites, we can only wonder how many recaptures we could have had, if our work in other sites had started earlier.

Most significant achievement is most definitely formalising the project with the community, and I dare say, completely gaining their trust and making sure they feel they are the most important actors in this project, which is only because of them that the project has been successful. This has helped us to start and change their mentality from previously being poachers/consumers to being conservationist and seeing the value of live turtles.

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

The host institute Campamento Tortuguero Mayto, suffered facilities lost, due to beach erosion during the 2022 hurricane season, this affected the project directly, as the team used the facilities for accommodation, workshops, environmental education talks with students, volunteers and tourists as well as for the keeping turtles before measurement and tagging.

To tackle the problem, we helped fundraise money by selling t-shirts and promoting turtle adoptions, as well as adjusting the budget and re-directing funds to help rebuild facilities.

The storms also affected the timescale, this however was just tackled by expanding it.

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

As I mentioned previously, fishers and local divers have been the main actors since the project started, they have captured 94% (144/153) of the registered turtles, without them, this project simply wouldn't exist. They have benefited by receiving a compensation for their time and effort for every turtle they have captured. We are working toward having a sort of voucher which they can exchange in local stores for groceries or gasoline, this way also helping other community members and promoting local economy.

Fishers also benefit by being hired by host institute Campamento Tortuguero Mayto, during open water monitoring with students, which can sometimes be up to six boats, openly active fishers are given the opportunity to generate extra income by participating in turtle conservation.

**5. Are there any plans to continue this work?**

Yes, we plan to replicate the work in communities north and south of our study site, in which we did scouting. After capturing a turtle tagged 70 km south, we can only wonder how many more that could be. We wish to create a multi-community network for sea turtle conservation in the south of Jalisco.

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

We have shared our results in regional, national and international meetings and symposia, as well as through reports in our social networks, however, we would also like to publish our results in peer reviewed journals.

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

Creating a multi-community network to elucidate how the turtles move regionally, this way we can work on strategies to reduce mortality during their migration, improving fishing techniques, reducing bycatch, poaching, etc. As well as educating old and new generations about the importance and value of sea turtles.

**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 used it in our presentation in March 2022, as in our presentation in the Eastern Pacific Hawksbill Initiative's Workshop, during the 40th international sea turtle symposium, as well as in our presentation at the Grupo Tortuguero de las California's (GTC) regional meeting. The logo was also used in social network posts, printed into

uniforms for fishers and team members, and in reports to collaborators and host institute's donators.

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

Israel Llamas Gonzales:

As the director of Campamento Tortuguero Mayto, the host institute, Israel provided accommodation and food for the team during the study period, as well as a space for work and lots of guidance. His experience in scientific diving and collaboration in other projects were key in the organization of scouting dives. He is one of the most experienced scientific free divers I know, and his ability to spot and capture sea turtles was of utter importance to the project.

Sebastian Ramírez Dominguez Tagle:

Sebastian was in charge of any outreach material, such as reports, posters, adoption certificates and social media posts, his creativity was key for the project. He also participated in scouting dives, turtle measuring and tagging, as well as collecting stomach content samples for his future master's studies.

Mitzi Nuñez Solano

Mitzi, currently a PhD candidate, participated by collecting blood and tissue samples for future chemical contaminants and population health status analysis.

Ángel Herrera Jiménez "Tachi":

As a member of the local community, Ángel's participation was mainly focused on assisting during local dives, outreach with the local fishers and other community members. He has been one of the project's greatest success stories, and we can only hope he keeps on the path to becoming a great conservationist in the future.

Luis Ramón Rodríguez "Choris"

Luis Ramon, or "Choris" as he is locally known is the actual president of the Tehuamixtle fishing cooperative, besides being one of the most active divers in the project, he also helped coordinate fishers for workshops and meetings, and was also in charge of safe-keeping captured turtles, whenever team members could not do it right away.

Luis Ángel Tello Sahagun:

Luis Ángel has been a collaborator for more than 10 years, he mostly participated during scouting dives and will be an important part of the project in future stages.

Catherine E. Hart:

Dr. Catherine Hart has also been a collaborator for more than 10 years, she participated during scouting dives and has provided material and equipment for the project, as well as satellite tagged adult turtles captured. She is currently a WWF-Telmex-Telcel foundation grantee and has invited us to collaborate with her on several occasions. She is currently processing photo-identification and skeletochronology data we collect.

**10. Any other comments?**

We are very grateful for this opportunity, it is our first grant received, and although we know we could have done a lot of things better, it was a good learning opportunity and are sure we will not make the same mistakes if future opportunities are given. We look forward to applying for next stages and making this project reach more communities, changing mindsets from poaching to conservation. I am personally excited to see how far we can get and all we can discover of this wonderful species, from their origin in the nesting beaches, all the way to their feeding grounds, and what we can do to protect them during the process.