

Final Evaluation Report

Your Details	
Full Name	Ghofrane Labyedh
Project Title	Developing Elasmobranch Fishery Assessments and Improving the Conservation Status of Threatened Elasmobranchs in the Northern Coastline of Cameroon.
Application ID	31603-1
Date of this Report	18-04-2022

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
<p>Enhance the existing monitoring programs to collect a baseline scientific data on the elasmobranch fisheries in the northern coastline of Cameroon.</p>				<ul style="list-style-type: none"> • All the necessary documents for the elasmobranch monitoring (questionnaire of fishing sites, sampling data sheet, elasmobranch sampling manual and field board sheet) have been provided by the project leader. • Between July and December 2022, 90 visits have been conducted regularly on the four fish landing sites in the northern coastline of Cameroon. • More than 100 specimens of sharks and rays have been observed. • More than 10 species of sharks and 20 species of rays have been identified. • More than 15 samples have been taken for genetic analysis. • The Siren database has been checked for the elasmobranch observations. • Our partial conclusion at this level of knowledge suggests that the northern coast of Cameroon does not affect the natural stock of elasmobranchs as it is more dominated by artisanal fishing.
<p>Develop awareness methods for the conservation status of threatened elasmobranchs in the northern coastline of Cameroon.</p>				<ul style="list-style-type: none"> • Two awareness events have been conducted where the Ministry of Fisheries, the Ministry of Environment and other stakeholders have been present. • More than 33,000 people are directly or indirectly affected by one or more activities of those two events. • Six ministerial departments (MINFOF, MINEPDED, MINEPIA,

				<p>MINRESI, MINESUP and MINSANTE) have been involved in the organisation of those events.</p> <ul style="list-style-type: none"> • 117 participants have been present from the government, the diplomatic institutions (French Embassy in Cameroon), international and national organisations (FAO, TRAFFIC, JICA, LWC, ZSL, CWCS, and WWF), private sector, academia (ISH, French School), fishermen, etc. • 15 fishermen of the AMMCO network were present. • Report on the statistics of the elasmobranch fisheries is provided to the government of Cameroon.
Map the high fishing areas of sharks and rays.				<ul style="list-style-type: none"> • Using embarked mini-GPS on the boat of voluntary fishers we are currently working on the mapping of the high fishing areas of sharks and rays in the northern coastline of Cameroon. • So far, 20 trips have been recorded.
Evaluate and raise the level of fishermen awareness on the protection status of the threatened sharks and rays				<ul style="list-style-type: none"> • 100 questionnaires have been conducted with fishermen in the northern coastline of Cameroon. • More than 100 fishermen have been sensitised on the importance and the status of sharks and rays during the interviews. • Two meetings have been carried out with the most experienced fishermen to train them on the use of Siren app and the identification of the threatened elasmobranch species.
Elaborate an Atlas on the Elasmobranch Fishery Resources of Cameroon				<p>Drafted an atlas on the Elasmobranch Fishery Resources of Cameroon, incorporating data on their distribution and trends along the landing points in the northern coastline of Cameroon.</p>

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

a). A scientific database on elasmobranch fisheries catch.

One of the important outcomes was the updating and the enhancing of the database on elasmobranch fishery catch in the northern coastline of Cameroon. We were able to create 1 year of detailed data in our elasmobranch fisheries baseline, by determining new information such as the elasmobranch prices in fish landing sites, the type of fishing gears, the type and the size of vessels and the fishing frequency.

b). Identify and mapping the high fishing areas of sharks and rays.

Using embarked mini-GPS on the boat of voluntary fishers we are currently working on the mapping of the high fishing areas of sharks and rays in the northern coastline in Cameroon. So far, 20 trips have been recorded.

By identifying the high fishing area of sharks and rays we can understand the importance of these sites to elasmobranch species, and we can determine the influence of the fishing activities on these zones.

c). Awareness raising and the atlas document.

Another success achieved was measured in terms of behaviour changing among fishermen. At the beginning of our elasmobranch monitoring 30 fishermen were providing observations on the elasmobranch species through the Siren network and by the end of this project we are working with more than 100 fishermen for the elasmobranch collecting data.

Add to that the local communities and the main stakeholders were updated on the results of the present project including the importance and the status of sharks and rays in Cameroon.

The Atlas document will help to implement the necessary laws and legislations for the protection and the conservation of the threatened elasmobranch species in Cameroon.

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

The first difficulty we encountered was the direct contact with the fishermen and how we can use the elasmobranch specimens to take measurements, samples or even photos. Few of them were welcoming and accepting us to take all the information we needed without any feedback. However, most of the fishermen asked for money to allow us to take any type of information, especially for the collection of samples. Sometimes we had to buy the whole specimen, when the species is very rare to see.

The second difficulty was the identification of certain species on the fish landing sites. As we have been taking clear photos for the confusing species and sending them to experts and specialists in elasmobranch taxonomy, such as the specialist of

MANTA TRUST who are currently helping us to validate the presence of a rare manta ray species in Cameroon.

Additionally, the most notable issue we encountered during this project was that we did not find the number of elasmobranch bycatch we expected. As the fish landing sites, we visited to collect information were dominated by artisanal fishing. At this level of knowledge, we suggest that the northern coast of Cameroon does not affect the natural stock of elasmobranchs because it is not dominated by industrial fishing. Thus, we could not fill in all the gaps on the threats of all kinds of elasmobranch fisheries.

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

The local communities were involved in this project by two ways: Research through AMMCO's citizen science programme and outreach.

As citizen scientists, the local fishers were engaged and trained on the use of the Siren app. The app was installed in smartphones and given for free to fishers to empower them on data gathering. As incentive, we provided them with t-shirts with the sensitisation message "Together to Save Sharks and Rays".

The other benefit for the local community was in terms of information that they gained to identify the most observed species and the threatened ones through the outreach programme both in awareness events and in the fish, landing sites during the interviews.

5. Are there any plans to continue this work?

In this work we are mapping the high fishing areas of sharks and rays. It will be great to continue the monitoring of these sites to assess how important they are for elasmobranch species and their use, also to underestimate the effect of the human activities on these sites.

We also plan to develop an outreach programme in schools for environmental education, to raise the awareness of kids on the importance of the sharks and ray's species and how we can protect them.

With data on elasmobranch fisheries, threats, abundance and distribution, we are looking ahead to bring together the stakeholder in the establishment of a community-based Marine Protected Area for a long-term conservation impact.

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

During the implementation of the project, we have been sharing activities and result on the AMMCO's website (<https://ammco.org/>), Facebook page (<https://www.facebook.com/ammco.org>), as well as on the Instagram page (https://www.instagram.com/ammco_siren/). AMMCO has organised a festival called "Street Whale" (<https://ammco.org/index.php?rub=16&id=9>) to bring

together the actors from government (national and international), civil society organisations, non-governmental organisation, private sector and the local communities as well, to share the results of this project and its other conservation project. During this event, stakeholders had discussed the issues of the marine megafauna including sharks and rays' fisheries. During the awareness events we shared the results of the ATLAS draft that will help the scientific community to understand more about the sharks and ray's situation in Cameroon.

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

Looking ahead, we are planning to redo the same activities of the following project in the southern coastline of Cameroon, where the industrial fishing is more intense. Furthermore, the present zone has known recently the creation of a marine protected area, which would be important to conduct elasmobranch surveys there. The southern zone will allow us to identify more threats to the elasmobranch species. Moreover, it will allow us to expand the study area and to maintain data updated for the implementation of strategy plans and sustainable management of sharks and rays. We are also planning to improve the scientific knowledge of the team project by conducting capacity building and training on the elasmobranch identification and monitoring.

The big picture we are wishing to complete is to establish a marine protected area for marine mega fauna's conservation (including sharks and rays) in the northern coast of Cameroon.

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?

The Rufford logo was used in several materials produced in relation to this project. The logo was used on the elasmobranch monitoring documents, t-shirt with sensitisation message, flyers and fact sheet produced. More publicity was done by including the logo on the "street whale" report (The street whale is a fair that joined art and science to raise awareness on marine wildlife in Cameroon and formulate recommendations of the management of the marine and coastal resources). The Foundation is also highlighted on the AMMCO website <http://ammco.org/>

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

Ghofrane Labyedh: Ghofrane was the Principal Investigator and project coordinator. She was in charge of the implementation of project activities. She conducted the entire field and the scientific activities of this project.

Aristide Kamla Takoukam: Aristide was the supervisor of all the project activities. He ensured activities to be implemented smoothly with the best approaches.

Eddy Nnanga: Eddy was in charge of administrative issues and financial management.

Cedrick Fogwan Nguedia: Cedrick was responsible of the Siren Network engagement, bringing fishers to get involved through the outreach programme. He was responsible for collecting and updating the Siren database for the elasmobranch observations.

Sandra Forbah: Forbah conducted the field work on the fish landing sites and assisted in some sensitization and training events.

Guy Mengoue: Guy conducted the field work on the fish landing sites and assisted in some sensitization and training events.

10. Any other comments?

At the end of this project, we realised how it is urgent and necessary to tackle a new threat that is affecting the elasmobranch, other marine megafauna' species and their habitat in Cameroon, this threat is the Illegal, Unreported and Unregulated (IUU) fishing in Cameroon. The revision of the current fishing law and the enhanced law enforcement are the solutions to look ahead.