

## Final Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF format**. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

**Please DO NOT fill in and submit this form until the project has been completed.**

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to [jane@rufford.org](mailto:jane@rufford.org).

Your Details	
<b>Full Name</b>	SIDI IMOROU Rachad
<b>Project Title</b>	Assessment of demographics, threats and conservation interventions to the most threatened marine fish from artisanal fishing practices in Benin, West Africa
<b>Application ID</b>	39412-1
<b>Date of this Report</b>	15/03/2024

**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
Assess the stakeholders' knowledge levels and the menaces on threatened species				
Raise local population (marine fishermen, schoolchildren...) awareness through environmental education				
Train fishermen on alternative livelihood like fish farming				
Develop local management and conservation measures				
Determine demographic parameters of target species				
Determine exploitation rate of target species				

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

**a). Inform the fishing community and administrative authorities about the existence of a nature conservation red list and about the fishes which have a significant threat status.**

During our survey, we noticed that more than 80% of respondents (mainly fishermen with a secondary education level) were not aware of the existence of a red list. Furthermore, even though they recognised that the quantity of fish exploited is in

constant decline, they (87.35% of respondents) do not know the status of the most exploited fish species. Only certain agents of the fisheries production department were aware of the existing red list of fish at the local and global level but did not really know the fish species with threatened status.

**b). Highlighting the use of devastating and prohibited fishing gear and poor fishing practices and Mobilization around the conservation of marine fishery resources**

After several interview sessions with the fishermen to establish confidence, the majority of them (60.78%) admitted to using very tight mesh nets in order to increase catches. This study also proved, based on the results of surveys, that the fishing effort on the Beninese coasts in recent years has increased fourfold and the distances traveled are increasingly long.

During the restitution of the results of the surveys, all the actors present admitted the need to be more responsible in the face of the need to protect and conserve our fishery resources, especially those with a worrying status on the IUCN red list. Among the solution approaches recommended by the different actors we can cite:

- Establishment and training of a committee of fishermen within their association which will be responsible for bio-monitoring of resources and monitoring of catches.
- Implementation of existing texts and laws relating to the management of aquatic habitats and their resources.

**c). Data on demography and exploitation of target species**

During this project, for 4 months total length (TL), standard length (SL) and weight (W) were taken on the specimens of the target species landed at the different sampling sites. These collected data made it possible to establish the population structure, demographic parameters and the level of exploitation of said species. These results are compiled and the article is currently being written.

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

At the beginning of this project, fishermen were reluctant to welcome my team and I because they thought we were part of the repression service of the fisheries department. With the awareness sessions and with the help of M. Edo, we were able to explain them the objectives of the current project. This made it easier for us to access information and fisheries captures.

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

The local communities, especially those of marine fishermen, have welcomed this project. In fact, for several years they have been faced with a decline in catches and the rarity of certain species. This situation led to a drop in income. It was therefore important for this fishing community to find an alternative source of income in order to be able to guarantee the basic needs of families. This project was therefore important for these populations because not only were they trained in sustainable aquaculture (production of maggots and formulation of fish food)

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

Yes, it is planned to continue the conservation actions of threatened fish species within marine fishing communities in Benin. We will plan to conduct more biological and ecological studies on these populations inhabiting Benin coastal waters. We also plan to establish the genetic map of threatened fish species on the Beninese coasts in order to carry out ecological monitoring later by the method of e-DNA.

There is also a need to undertake assessment study on the stocks of some other species like sharks and rays classified as vulnerable species in the IUCN Red List and that were reported by fishermen to be over-exploited. Other aspects of the use of these fish species such as endogenous uses must be documented.

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

The results of these projects have been already shared in fishing communities as all the awareness creation toolkits and key sensitisation messages have been developed from these results.

The results from this project, noting demographic parameters and the level of exploitation of target species, will be valued and shared with the national and international scientific community through scientific articles and participation in conferences and scientific meetings.

After validation of this report by The Rufford Foundation, a copy will be submitted to the fisheries production department in order to report on the results obtained.

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

In line with our aim to contribute to rational management of marine resources, the most important steps are: (a) Continue educating the local communities on the threats on the aquatics resources to and their effects on the ecosystem services

provided; (b) Train local populations on the biomonitoring of resources with the aim of making them active players on issues of resources management and protection; and (c) constitute an AND reference base for threatened species so that on this basis and thanks to e-DNA we can trace the migration circuits of these species. This will allow appropriate management measures to be taken.

**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?**

Rufford Foundation being the structure which financed the project, it received publicity from the different actors involved. Indeed, the Rufford Foundation logo was used on the key rings and t-shirts made and shared with participants during the project activities. In addition, the logo was also used on awareness tools such as posters to show the source of funding.

During the various meetings with the heads of the fisheries production department and those in charge of maritime fishing and fishing statistics, it was recalled that this project is entirely financed by The Rufford foundation.

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

Name of members	Role
SIDI IMOROU Rachad	Main investigator and project manager. Define and plan the different activities to be carried out Supervises and centralizes the collection and entry of survey and field data conducts awareness and training sessions
MUSSCHOOT Tobias	he is involved in the design and creation of statistical models for data analysis and the correction of the draft of the article before its submission
SOSSOUKPE Edmond	Specialist in marine biology, he was involved in the writing of manuals to raise awareness among fishermen and the biomonitoring of aquatic resources. he is also involved in the design and creation of statistical models for data analysis and the correction of the draft of the article before its submission.

HOTO Gerad	With his years of experience in conducting surveys on marine resources, he supervised the surveys, notably in managing the digitization of questionnaires in the Kobotoolbox project. He was also involved in activities related to the design of the compendium of measures and guidance notes supporting the conservation of target species.
SONON Stanislas	He participated and co-facilitated training sessions related to sustainable aquaculture. He helped facilitate environmental education sessions and food formulation sessions.
AMOUSSOUGA Illary	Collecting data in the field. To contribute to the collection of morphometric data of fish as well as field surveys
AHISSOU Thomas	Responsible for collecting data in the field. To contribute to the collection of morphometric data of fish as well as field surveys
BADAROU Edo	

**10. Any other comments?**

I would like to extend my gratitude to The Rufford Foundation for funding this conservation project. This project helped me to collect for the first time large amounts of data on the most threatened marine fish from artisanal fishing in Benin. The foundation has also helped me reinforce my capacities and knowledge in biological conservation.