Final Evaluation Report

Your Details	
Full Name	Lameck Joash Menya Otieno
Project Title	Distribution, abundance and conservation status of Elasmobranchs within Malindi-Ungwana Bay in coastal Kenya
Application ID	30160-1
Date of this Report	11th March 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
Determine the species of elasmobranchs and size structure landed by prawn trawlers in the Malindi-Ungwana Bay, Kenya.				A manuscript wass prepared and submitted to the Journal of Applied Ichthyology for publication. I got an opportunity to present the findings from this paper at the WIOMSA 12th Symposium in Port Elizabeth, South Africa, 10th - 15th August 2022.
Determine the seasonal catch rates (Kg/hr) of elasmobranch species landed as by-catch by prawn trawlers in the Malindi-Ungwana Bay, Kenya.				A manuscript is drafted and still undergoing review by the supervisor. Upon completion, the manuscript shall be submitted the Western Indian Ocean Journal of Marine Sciences for consideration of publication.
Spatially demarcate the areas of high catch rates of elasmobranch species within the bay and hence determine the conservation hot spots in the bay.				Data analysis is underway with the help of GIS expert.

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

a) The fishing crew have learned the importance of elasmobranch species to the marine ecosystem hence more shark and rays bycatch species are returned to the water when caught.

b) Through the project, the local artisanal fish farmers are now, also reporting on the elasmobranch species they catch to the Beach Management Units (BMUs) upon landings as opposed to the earlier reporting on fish alone.

c) Fishing activities within the bay in the critical conservation hot spots such as breeding grounds for sharks and rays are avoided by both the artisanal and commercial fishing groups.

Data availability – The project boasts of obtaining the pioneer findings exclusively on elasmobranch species within the bay. The data obtained from the research gives useful information on the species diversity, distribution and abundance within the fishery.

Also, information about the conservation status of each species is obtained. This information provides a framework for further research works and for scientific-based management decisions on the resource users.

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

a) The frequent nationwide restriction of movements due to the COVID-19 pandemic necessitated delays in carrying out data collection. This was tackled by readjusting the work-plan and embark on the sampling immediately the government lifted the restrictions.

b) The sampling prawn trawler was sometime off the duty at a time when sampling was to be done. This necessitated rescheduling of sampling by the project team.

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

Some local community members were hired as field assistants to assist in the data collection at landing sites. The persons involved are thus advantaged to learn about elasmobranch identification data collection through the training they received prior to the actual data collection. In the short run, the group involved received some pay (as was allocated in the budget) for their service offered throughout the data collection, and with this they were able to cater for their subsistence needs.

5. Are there any plans to continue this work?

Yes, I would like to further this research within the Malindi-Ungwana Bay and the East African Coast, to produce a more robust data on elasmobranchs in the data scarce productive fishing grounds of the region.

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

a) I look forward to publishing at least two scientific papers from this project in credible peer-reviewed journals, which shall be made available for the relevant group, including local and regional conservation agencies, relevant government authority on conservation and both the artisanal and commercial fishing community.

b) Presentation at local and international scientific conferences, for example the WIOMSA 12th Symposium in Port Elizabeth, South Africa, 10th - 15th August 2022.

c) Presentation, in form of MSc thesis before the university board of examiners.

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

The findings of the project, through the yet to be published papers should be incorporated in the National Plan of Action for Sharks for Kenya (NPOA-Kenya).

Further research on elasmobranchs within the relatively less reported bay is also recommended to have robust scientific information that is necessary for the management of the fisheries by the relevant governing authority, such as the Kenya Fisheries Services KeFS.

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?

No, we did not use the Rufford Foundation logo. However, yes, we have mentioned the foundation as the main financier for our project in our first research paper, still under review in the Journal of Applied Ichthyology.

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

Lameck Joash Menya Otieno – Principal investigator

Professor Kaunda-Arara Boaz – Official project supervisor assigned by the University

Mr. Boaz Okeyo Orembo – Technical expert in species identification.

10. Any other comments?

The project team is highly indebted to the Rufford Foundation for the overwhelming support through the funding that made this project a success. We look forward to working more with the foundation in order to ensure the elasmobranch biodiversity is conserved effectively.

Top: Fishing vessel, semi-industrial prawn trawl. © MV Roberto.

Middle: Collecting morphometrics data from sampled specimen.

Bottom: Sampling of sawsharks.