Final Evaluation Report

Your Details	
Full Name	Segun Olayinka Oladipo
Project Title	Developing community-based conservation strategies for improved management of stingrays in Nigeria
Application ID	43410-B
Date of this Report	20th June, 2025

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
Create a citizen science monitoring group to collect data on stingray populations			✓	Citizen science monitoring group including local students and community members trained to assist in data collection. This includes 10-15 students and 50 locals in each area collecting data on the purpose of stingray fishing, stingray catching populations over a decade period, socio-economic data and possible causes of its decline. This was done over a period of six months using questionnaires and observation organized local meetings.
Conduct scientific studies to identify key conservation areas for stingrays			✓	A social survey and tissue collections on dead individuals that cannot be returned to the ecosystem was done for genetic study towards the characterization of the individuals. This genetic study aims toward the DNA barcoding of the stingrays occurring in Nigeria. Approximately 80 questionnaires were distributed in each location in Jebba, Lokoja, Badagry and Epe where historically, this stingray has been sighted by us. This survey target fishers and mongers in the locations to collect information on fishing pressure, purpose of stingray fishing, socio-economic

				data, stingray catch populations over decade period, and possible cause of its decline. This data helps to prioritize locations where the conservation education was prioritized, and content of the materials used for the conservation education.
Engage local schools in science education programs focused on conservation			✓	Conservation education programs in different local schools with the creation of conservation clubs. Four schools with about 300 students each in Jebba (freshwater region) and Lagos (Coastal region) were visited for the conservation education programmes to ensure continuity and positive attitude toward stingray conservation. Customized educational materials such as colouring and artistic books that featured stingrays, their conservation challenges and practical ways students can contribute to protecting them. These resources served as age appropriate teaching guides during classroom sessions. In addition, we established conservation clubs in the schools where students participated in interactive sessions and debates on themes such as "The Continued Overexploitation of Stingrays" and "Safeguarding Our Heritage: What Matters Most?". These activities helped in engagement and advocacy for stingray biodiversity protection.
Develop conservation-related stories and cultural narratives to			✓	Using interviews in documenting traditional stories with scientific data to incorporate conservation messages. Approximately 5-10

promote awareness				elders were interviewed in each location for stories and knowledge of the stingray which able to give information about the stingray-human conflicts due to the stings, the use of the species by the local pregnant women for easy birth and domestic use due to nutritional value. These stories aid the conservation message used to develop stories for the conservation education and attract school children due to the importance and need for conservation of stingrays.

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

a) Educational outreach in schools as conservation programs were implemented in multiple schools, where students engaged in interactive learning, joined conservation clubs, and used artistic materials to understand the importance of stingray protection

b) Documentation of cultural knowledge as local elders shared traditional stories and conservation practices, which were recorded and integrated into conservation narratives. This bridged the gap between science and culture and strengthened conservation messages through music and storytelling shared

c) Continuing use of the established citizen science monitoring groups that empowered local people and students to gather ecological data on stingrays, ensuring sense of ownership and participation in conservation efforts. The citizen science group has been instrumental to further evaluate conservation efforts in the study areas where the stingrays known to occur in Badary, Epe coastal areas as well as Lokoja and Jebba where freshwater stingray known to exist. They continued monitoring the perspectives and attitude of fishers and communities on stingray catch and exploitation.

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

Lack of active participation by villagers in community-based conservation programs in new locations. Many feels excluded from decision making and they don't see the immediate benefit of conservation. To overcome this, we prioritized inclusive stakeholder engagement in various stages of every intervention.

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

Local communities were involved in the project through the citizen science monitoring group, which included local students and indigenous people in each focal area. Community leaders were engaged through meetings that helped

secure their support and facilitated smooth implementation. Additionally, local elders contributed traditional stories and knowledge that enriched the cultural and educational aspects of the project. As a result, communities benefited from conservation education, increased environmental awareness and capacity-building through direct involvement in data collection and storytelling

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

6. How do you plan to share the results of your work with others?
As a conservation geneticist, I disseminate the findings of this project through different channels such as academic publications by publishing the results in peer-reviewed journals focused on marine biology and conservation genetics including:

> DNA barcoding and morphological characterization of marine stingrays (genus *Fontitrygon*) from the African Gulf of Guinea in Journal of Aquatic Conservation: Marine and Freshwater Ecosystems; Morphology, DNA Barcoding and Range Extension of a Poorly Known Freshwater Stingray *Fontitrygon garouaensis* Stauch & Blanc, 1962 from Nigerian Inland Water" in journal of Integrative and Comparative Biology (ICB); Socio-Ecological Survey of Ray and Skate in the Badagry and Epe Coastal System, Lagos, Nigeria in Journal of *Forestry Research and Management*.

Also in stakeholder engagement, community outreach using storytelling in local language to reach coastal communities, schools and fisher groups.

7. Looking ahead, what do you feel are the important next steps?
The outcome of this project informs next step towards broader stingray conservation and policy in Nigeria through development of genetic monitoring program and train early-career researchers, students and wildlife officers in genetic tools and conservation techniques to ensure stingray conservation in Nigeria

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. Foundation logo was use in all educational and awareness materials used during the project. Similarly, the foundation receives media publicity and a national newsletter, social media and scientific article publication.

9. Provide a full list of all the members of your team and their role in the project.
1. Dr. Kehinde M. Adelakun: He assist in leading ecological field study community-based conservation programmes and in co-ordination of the local team members.
2. Tolulope Balikis AJAYI: Assist in conservation education materials used in the project using art to depict field encounter and the stories and assist in community conservation education to the children.
3. Roseline Adeshike Oladipo: Lead the storytelling and content development for both school and community.
4. Irene Oluwafunmilayo Aderinto: She develop media content and jingles for media.

10. Any other comments?

This project illustrates a sustainable, grassroots approach to species conservation. By integrating science, education and culture, it not only highlighted critical stingray conservation areas but also laid a foundation for long-term community stewardship. The model can be adapted for other regions and species, showing how conservation efforts thrive when local knowledge and participation are prioritized.