

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	Bernard Eshun
<b>Project Title</b>	Conservation of the Critically Endangered Blackchin Guitarfish ( <i>Glaucostegus cemiculus</i> ) in Ghana.
<b>Application ID</b>	31316-1
<b>Date of this Report</b>	May 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
1. Assess the population and distribution of the Blackchin Guitarfish.				The project team undertook landing and market surveys to assess the population and distribution status of the species along the coastline of the Songor Ramsar site (Dangme coastline). The surveys successfully yielded data to infer the population status and establish the distribution of the species. Consequently, the surveys provided data on other threatened guitarfishes and rays, which occur within the study area.
2. Assess the harvest and trade dynamics of the species.				The project effectively assessed the socioeconomic significance of the species trade to the communities located along the coastline. Through questionnaire administration, interviews, and focal group discussions, data on the harvest regimes, types of gear, fish pricing, and capture zones were generated.
3. Educate coastal communities and fishers on the plight and conservation of the species.				Educational activities conducted resulted in a positive attitudinal change of fishers, traders, and youth of the engaged communities towards the conservation of the blackchin guitarfish. Activities raised awareness on the species' plight and solicited the support of the coastal communities to aid in the conservation of the species and other guitarfishes within the range.
4. Identify areas where viable population of the species occur.				Landing surveys and interviews aided in the discovery of three areas where viable populations of the species may persist. Additionally, areas with viable populations of other guitarfishes and rays were identified.

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

**a).** Socio-economic significance of species trade: Interviews and discussions with fishers and traders were conducted to understand the motivations and significance of guitarfish capture to livelihoods. Respondent data showed that most fishers capture guitarfishes as part of their normal fishing, either as targeted or incidental captures, and consider blackchins to be a valuable part of their business. The fins are detached from the bodies immediately after arriving from the sea and sun-dried before sales. The fins are sold separately to the middlemen per kg and the entire carcass sold to the fishmongers. The fins are exported to unknown destinations and the meat sold on the local market is either smoked or salted. The meat also serves as a fish protein source to the local community due to its delicious nature. Guitarfishes are economically more profitable compared to other pelagic fishes caught along the coastline. The fins are graded and priced according to type and size in the study areas. The price range for shark fins per kg varies between GH¢100-300. Additionally, the average price range for whole, gutted and finned adult sharks reportedly ranged from GH¢100-600. Both targeted and by-catch elasmobranch fisheries provide a means of income for artisanal fishermen to replace the perceived decrease in bony fish catch along the coastline.

**b).** Increase Conservation Awareness: Awareness was created on the conservation needs of the blackchin guitarfish along the Dangme coastline. The project team employed focus group discussions, community forums, and doorstep advocacy approaches to raise awareness. The activities increased awareness on the species plight, ecological significance, and conservation. Two hundred and fifty artisanal fishers were educated during education activities. In addition, more than 200 students, 50 traders and 100 community members were engaged.

Furthermore, awareness creation, increased grassroots support for the conservation of the blackchin guitarfish and other elasmobranchs. Group discussions increased receptivity of locals to the notion of conserving the species and yielded local interventions to protect its habitat. 25% of locals engaged pledged to support conservation actions to ensure the persistence of the species within the Dangme catchment.

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

The project was designed to conduct landing and market surveys at four fishing communities, two at the Songor Ramsar Site and two at the Keta Ramsar Site. However, information from the Fisheries Commission and Fisheries Department of the Faculty of Natural Resources, revealed that coastal communities along the Songor coastline (hereby Dangme coastline), were the major landing sites of guitarfishes and sharks, including the blackchin guitarfish. Therefore, the surveys were reassigned to coastal communities along the Dangme coastline. As a result, eight major landing sites were identified. The landing sites were Azizanya, Lolonya, Pampram, Ningo, Ahwiam, Pute, Totope, and Ada Foah. With an increased number of landing sites and markets, the project period was extended to allow for the execution of the project activities in all communities. Additionally, an increase in the number of sites

led to an increase in the costs of transportation, daily sustenance, and accommodation. This also increased the number of people interviewed and thus the cost of printing questionnaires and identification guides. To address these challenges, the project team raised additional funds through personal contributions to support accommodation and daily sustenance (food and water). Additionally, the project team shared rooms to reduce accommodation costs. INEC-Ghana also provided in-kind support by printing of some questionnaires and identification guides, and funds to supplement transportation costs.

The locations of some fishing communities were not accessible by a vehicle. Thus, two motorcycles were hired to assess these communities. Though not included in the budget, part of funds allocated to vehicle rental and radio broadcast, was used to pay for the hiring and fuelling of motorcycles.

The project team experienced hostilities from some fishers during landing and market surveys. They feared the team was a government agency sent to investigate and report illegal fishing activities. To resolve these adverse confrontations, the project team resorted to the traditional leaders within the communities. These traditional leaders included chiefs and heads of fishing groups. Together with the traditional leaders, we organised meetings with fishers and explained the purpose of our project and its positive impacts to the species and communities. As a result, fishers became welcoming, supportive, and allowed the team access to captured fishes at landing sites.

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

Heads of fishing associations were involved in all activities of the project. Permission was sought from them to conduct landings surveys and socio-economic assessments within their respective locations. They assisted with the organisation of focus group discussions on the conservation of the species. These individuals were educated on the ecological significance of the species to the marine ecosystem and their livelihoods. As local authorities within the catchment, they were encouraged to take leading roles in releasing guitarfishes caught during their fishing activities. This when done will encourage other fishers to stop exploitation of guitarfishes.

Fishers and fishmongers involved in the species trade were educated on the conservation of guitarfishes. They received education on safe by-catch release protocols and elasmobranch fisheries regulations. Additionally, they were involved in the solicitation of local conservation interventions to safeguard the species. Moreover, they formed part of the 25% of locals, who have pledged to support conservation efforts for guitarfishes and rays along the Dangme coastline.

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

We aim to conduct extensive conservation education within the project area and collect additional landings data on the blackchin guitarfish and other threatened rays which occur within the range. In addition, we will conduct ecological studies on the breeding, feeding, and movement patterns of the species. Provision of these

data will be used in the development of an action plan to protect the species, other rays, and their habitats along the Dangme coastline.

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

The project's results are being collated for analysis and will be published in the Marine Biodiversity Records and Endangered Species Records. A report of the research findings will be shared with the Institute of Nature and Environmental Conservation (INEC Ghana), Department of Fisheries and Watershed and the Fisheries Commission chapter at the Dangme coastline. Community forums will be organized to inform fishers and communities' members on the project's findings.

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

The important next steps include an extensive education on the conservation of the blackchin guitarfish within communities of the Dangme coastline. In addition, fishers should be trained in safe bycatch release protocols of the species.

Furthermore, there is lacking data on the species' ecology and thus ecological studies on the breeding, feeding, and interactions of the species with its environment is required for conservation actions.

Workshops must be conducted with all stakeholders including personnels from the fisheries commission, lecturers from universities, traditional authorities, fishermen and traders to devise a conservation action plan for the species within the Dangme coastline and initiate the implementation of a national action plan for the species, rays and other guitarfishes.

#### **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, the logo of The Rufford foundation was used in the design of t-shirts, educational materials, awareness campaign, identification guides, and PowerPoint slides. In upcoming months, the logo of The Rufford Foundation will also be used in social media publications, scientific articles.

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

##### **Tabitha Adinorkwor Alimo.**

Miss Tabitha is an astute conservationist with a keen focus on marine fisheries conservation. She has a Bachelor in Natural Resource Management (Fisheries and Watershed Management option) from the Kwame Nkrumah University of Science and Technology (KNUST). She assisted in data collection to determine the population, distribution, and socio-economic significance of the Blackchin Guitarfish. She also assisted with data analysis of survey results and educate coastal communities and fishers on the plight and conservation of the species.

**Albert Kwabena Duah**

Albert is a graduate from Kwame Nkrumah University of Science and Technology (KNUST) with a bachelor's degree in Natural Resource Management (Agroforestry option). He is a young conservationist with skillsets in conservation storytelling and photography. He assisted in interview and taking coverage of the project activities. He also interviewed the fishers and traders engaged in the blackchin guitarfish fisheries activities.

**Samuel Lomotey**

Mr. Lomotey is a graduate from the University of Education with a bachelor's in Agric Science. Lomotey is native of the traditional clan within the Songor Ramsar landscape. He assisted with the data collection and awareness creation. In addition, he also helped the team in performing all community entry rites in the local fishing communities and had Focused Group Discussions with traders and fishers.

**10. Any other comments?**

The project team is immensely grateful to The Rufford Foundation for fiscal support towards the conservation of the blackchin guitarfish and other rays along the Dangme coastline. In addition, we extend our gratitude to the Institute of Nature and Environmental Conservation (INEC Ghana) and the Department of Fisheries and Watershed for their financial and technical support.

Chief fishermen, fisher folk, and students within the study area, were much helpful in aiding with the successful implementation of the project.

Though to be scaled-up, a 25% local support, will drive conservation efforts to ensure to the long-term persistence of guitarfishes and other rays within the project area.





