Final Evaluation Report

Your Details	
Full Name	Clement Sullibie Saagulo Naabeh
Project Title	Developing Community-Based Threat Management Approaches for Protecting the Vulnerable West African Dwarf Crocodile in Ghana.
Application ID	39847-B
Date of this Report	15 December 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
Riparian buffer creation and restoration through tree planting and boundary establishment			■	Completing a series of meetings with the University Council (Kwame Nkrumah University of Science and Technology), traditional authorities, and farmers, we reached a consensus to establish a 30-meter buffer on each side of the total river stretch of 4.5 Km within the University campus. Beyond this buffer, we conducted field demonstrations to test our new agroforestry model to all the farmers (30) previously encroaching the habitat. Interestingly all the 30 farmers expressed their interest and willingness to participate in the implementation of the new agroforestry model in the next phase of this project. Implementing this agroforestry system in the completion phase of this project will serve as a catalyst to ensuring the sustainability of our restoration activities and the established riparian buffer zone. It is also pleasing to report that the University (KNUST) Council has agreed to facilitate the sustainable relocation of these farmers and regulate their activities to keep them away from further encroaching the core zone of the habitat. For the tree planting exercise, 5,000 seedlings of five different tree species (Mahogany – *Khaya Ivorensis*, Emire – *Terminalia Ivorensis*, Ofram – *Terminalia*

				Superba, Cedella Odorata, and Eucalyptus) were raised and planted in the degraded portions of the habitat. The seedlings are being maintained by the community volunteers. Although the project year was challenged with extreme weather conditions such as flooding and drought, we recorded a seedling survival rate of 80%. In the coming season in the completion phase, a beating-up exercise will be completed to replant all dead seedlings to achieved a near 100% (not less than 95%) survival rate.
Awareness creation and capacity building				Compared to earlier surveys of the earlier phases of this project, the current surveys indicated a 60% increase in local awareness regarding the species and the need for conserving its habitat. A total of three awareness and education programs were conducted in schools and community settings. Through these campaigns, we upscaled our awareness creation to cover an additional direct audience of 5000 people and over 20000 people of indirect audience. In this phase of the project no evidence of hunting of the species was recorded and no accidental killing on motorable roads passing through the habitat, all serving as proxies for increased awareness of the presence of the specie in the habitat and its conservation importance. We also continuously engaged our community volunteer group, strengthening their knowledge in habitat restoration, community engagement, and crocodile management techniques.

Stakeholder Engagement				We conducted a series of successful stakeholder engagements bringing together culturally, academically, politically, economically, and socially diverse groups fostering gender inclusivity, collaborations and local support for all our project activities. Farmers, hunters, schools, communities, and the University have all been successfully engaged with maximum respect for the needs, values, and norms of all stakeholders.

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

a) Established and maintained the Riparian buffer surrounding the habitat. This buffer serves as a barrier between the habitat and the anthropogenic activities that are rapidly happening near the habitat. By so doing, there will be a prevention of habitat encroachment by farmers and estate developers. Farmers and fringe communities are now aware of the buffer boundaries and abide strongly by our established local laws which prohibit hunting and habitat conversion.

b) Restored degraded portions of the designated habitat by planting 5000 seedlings of different tree species through an enrichment planting strategy. With a survival rate of over 80% of the planted seedlings serving as a good foundation for a successful recovery of the vegetation cover of the habitat and associated ecosystem functions.

c) Expanded awareness creation covering additional direct audience of 5000 people and over 20000 people of indirect audience. We engaged in a massive public awareness campaign in radio stations, markets, schools, churches, and community centres which supported the upscaling of our awareness coverage as well as the number of individuals impacted. Peoples' knowledge of the species and the relevance of protecting its population against threats such as hunting and habitat loss has equally improved.

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

The project was faced with three major unforeseen difficulties which the team managed to address as follows.

Academic strikes at Ghanaian universities slowed the process of engaging with the University Council, impacting project timelines. However, acknowledging the relevance and urgency of this project to the species and the general ecosystem and biodiversity value of the habitat on the University campus, upon constant efforts, the University setup a special committee which fast-tracked the administrative processes supporting the execution of the project.

The habitat experienced significant flooding during the planned riparian buffer establishment and tree planting periods, complicating restoration efforts. Because the habitat is within an urban setting where many water ways are converted to built-environments, flooding is usually common as was the case during the year of our project. This was addressed by halting restoration activities until water levels were stabilized followed by intensive restoration activities.

Challenges in sourcing preferred seedlings led us to collect seeds from certified sources and establish our own nursery. Although we could not source quality seedlings as originally planned, we adjusted by collecting certified seeds and established a nursery which provided us with quality seedlings of which we recorded a minimum of 80% survival rate.

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

We prioritized local in all aspects of the project making them fully represented in the project, because we strongly believe that conservation work will hardly succeed without the full support and participation of the relevant communities and local actors.
We extensively involved the community authorities in all meetings and in the development of the current customary laws and the development and implementation of the riparian buffer zone concept to protect the species together with an accepted proposed agroforestry system to be implemented in the subsequent phase of this project. We have also built the capacity of the local communities, making them custodians of the project and making them capable of sustainably managing their own resources and the project with little demand for technical and logistics support in the long-term. About 30 farmers who fringe the habitat of the species were also involved in all consultations and need-based assessments. These farmers directly benefited from the technical training on improved tree and vegetable-based agroforestry production for enhanced productivity and profit maximization. These farmers also stand to benefit directly from the proceeds of the agroforestry system that was proposed and accepted by the farmers for implementation in the completion phase of this project.
Two community volunteer groups were formed, and the volunteers' capacity was built in habitat restoration, local stakeholder engagement skills, and awareness creation. These members were given allowances whenever they were engaged in project activities, and this supported their finances. Also, during project activities, we abided by our local economic development policy where all project items available in the local communities were purchased from the respective communities. Three BSc students were also involved in all our project activities. They were specifically offered training and skills in sampling techniques, interviews, and data analyses and

interpretation. Finally, the habitat, now being protected, the locals, particularly the fringe communities are benefiting from the ecosystem services (such as pollination, water supply, and fish) provided by the habitat.

5. Are there any plans to continue this work?

It is the long-term goal of this project to fully protect the species in the project sites by eradicating threats, improving livelihoods, sustain our restoration efforts and improving the overall habitat quality with the full support of the local communities. Through the phases 1, 2 and 3 of the Rufford Small Grant, we established spiritual customary laws at the local level to manage the species. We also established a riparian buffer in accordance with the riparian buffer zone policy of Ghana. And finally, we have restored the degraded portions of the habitat. To sustain these relevant aspects of collaborative management, we will continue this project by maintaining the restored areas. We will also implement the proposed agroforestry system as preferred by the 30 farmers who were move away from the riparian buffer zone to designated fields beyond the buffer. We will also continue engaging the local people, efficiently and significantly building their capacity to self-manage the species and its habitat. Also, the long-term public support for conserving this species relies on how positively they change their behaviour and attitudes towards the species and such behavioural change stands upon constant and continuous public awareness creation and education; hence we will continue all our awareness creation programs in the next phase of the project. Students and pupils serve as indispensable ambassadors of nature conservation: hence, we will continue engaging schools, particularly our conservation clubs in schools. All the project related equipment/logistics procured through this project are well kept awaiting use during subsequent project activities in this project site.

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

Part of the results from this project are published at the IUCN Crocodile Specialist Group's (CSG) website as part of the 2024 newsletters, reports and proceedings of the 27th working meeting of the CSG held in Darwin, Australia, 2024. Also, a manuscript is being prepared and under review for publication in a peer review journal. We will further develop news articles and publish them in local high-impact news agencies in Ghana to benefit the public and the larger scientific community. We will also serve the Rufford Foundation with a final project evaluation report which will be published on the Rufford website to benefit other conservationists who intend to conduct similar projects. We will share this final report with all the stakeholders and their affiliates who were involved in all our stakeholder consultations. We will continue to use other social media handles to share our findings with the rest of the world.

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

a) Continue the project and seek funding from Rufford to implement the completion phase.
b) Seek additional funding and other forms of support to upscale our project activities to ensure a long-term sustainability of the project.

c) Continuously engage all stakeholders to maintain and sustain the customary laws and the riparian buffer zone that we established.
d) Continue the maintenance of all our restoration efforts until the habitat is fully restored.
e) Continue local capacity building and awareness creation towards a long-term awareness and human behavioural change in favour of the species.
f) Continue habitat threat and population monitoring, reporting and implement corrective measures to the project's master plan.
g) Implement our proposed agroforestry system for the 30 farmers who were relocated to set aside the land we used to create the riparian buffer and the restoration activities that we executed.
h) Strengthen and encourage locals and relevant stakeholder to act as custodians of the project and ensure its long-term sustainability

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, we used the Rufford logo to print our project T-shirts. We also acknowledged Rufford as our donor in all our public engagements and project-related writeups and presentation of our results at the IUCN Crocodile Specialist Group conferences/workshops and meetings.

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

Name	**Role**
Clement Sullibie Saagulo Naabeh	Principal Investigator (PI): Supervised all project activities and handled all the administrative processes in support of the project.
Daniel Yakubu Haruna	Daniel led the design and implementation of the conservation awareness and education programs, and stakeholder workshops. He also supported in the coordination of the restoration activities and the buffer zone boundary maintenance. He also led all the procurements and ensured the safety and long-term usability of the project equipment.
Claudius Ansongna	Claudius facilitated and coordinated all our monitoring and evaluation of project activities, data analyses, data visualisation, and report writing. He also played a lead role in the execution of the restoration activities. He was also responsible for the design and implementation of project visibility materials.
John Fuhensi	Driver

10. Any other comments?

We are very grateful to the Rufford Foundation for providing financial support for this work. Without the collective efforts of our team, this project will have come nowhere near completion, and I say thank you to Daniel Yakubu Haruna, Claudius Ansongna and the rest of the team who variedly played crucial roles during all the project

activities. We extend our gratitude to all the stakeholders (Ghana Wildlife Division, Kumasi Metropolitan Assembly, Nature Society Ghana, the University Council (KNUST), and all the traditional authorities), farmers, households, hunters, media, and all the people who were involved in this project for their massive support and ideas. God bless you all and let us continue to work together with one conservation voice and goal.