

Final Evaluation Report

Your Details	
Full Name	Ohene Boakye Adomako
Project Title	Empowering Indigenous People to Protect the Two Endangered Hingebacked Tortoises (<i>Kinixys homeana</i> and <i>K. erosa</i>) in South-western Ghana
Application ID	28034-B
Date of this Report	3/10/2022

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
(1). Train tortoise-hunting families to farm mushrooms as alternative livelihood				We organised courses for 30 tortoise hunting families from the Tano Offin region. However, we could only support 11 participants to start pilot productions in their communities
(2). Improve the skills of local people to monitor hunting activities				We worked with Tortoise Guardians (local volunteers that we have trained in previous project) throughout the project to undertake patrols within their communities and the forest. For the first time, we also investigated the trade of <i>Kinixys</i> tortoises in a famous fetish market in Ghana.
(3). Intensify educational campaigns to reconnect local people with tortoises and their habitats				We developed activities to educate three basic schools and churches in the project region. Schoolchildren were engaged for 4 hours during each educational session in conservation fun activities such as creative arts, taking a stand, running dictations, and memorising fun facts about tortoises. We also engaged community members in religious centres about the importance of conserving tortoises, their role in preserving plant diversity, clean water, and forest ecosystem balance. Our engagement module was created with "caring for God's creation" in mind.

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

a). There was high acceptance of our mushroom farming programme among local people. Beneficiaries from our first pilot training programme were happy and shared some of this feedback:

- *"I am grateful for this opportunity, especially since I did not have to pay anything to participate in this training. I am aware that mushroom production training is quite costly".*

- “As a result of this training, I now consider myself a mushroom production expert and look forward to passing on my knowledge to young people”.

Beneficiaries also pledged to become tortoise guardians, working closely with the projects' already recruited community patrol volunteers to sustain efforts in getting community members to stop hunting tortoises.

b). This project uncovered the true extent of *Kinixys* tortoise trade in a well known fetish market in Ghana which is believed to be 70-100 years old. We estimated that more than 4000 tortoises are sold on the Kumasi fetish market on average in a year. The IUCN Critically Endangered Home's hinge-back tortoise (*Kinixys homeana*) was the most traded species on the market in numbers documented (we estimated 140 individuals are sold monthly and more than 1600 individuals are sold in a year). The serrated hinge-back (*Kinixys erosa*) was scarce on the market; most traders reported their specimen for this species were finished. This survey was supported by the Zoological Society for Species and Population Protection Herpetology Grant (ZGAP-DGHT). We also recorded one *Kinixys erosa* and two *Kinixys homeana* during surveys in the forest. Altogether, this project documented 19 live individuals of *Kinixys homeana* and one *Kinixys erosa*. We also documented two individuals of the African helmeted turtle (*Pelomedusa subrufa*). Unfortunately, only three individuals documented (two *K. homeana* and one *K. erosa*) of these individuals are in the wild surviving. The rest were documented on the fetish market.

c). The principal investigator, had the rare opportunity to be interviewed on the JoyNews Food Chain programme (https://www.youtube.com/results?search_query=food+chain+joynews), a popular national television programme that reaches thousands of Ghanaians, to talk about bushmeat consumption in Ghana, where he highlighted about the need for a collective effort to protect endangered species from hunting and consumption and at the same time find sustainable strategies to protect the livelihoods of traders whose subsistence have been dependant on bushmeat trade for centuries in Ghana (<https://www.youtube.com/watch?v=1sub8gRE71k&t=54s>). Also, following our post-evaluation feedback from pupils and community members including workshop participants, we discovered that most of them now understand the value of protecting tortoises and are eager to serve as tortoise guardians in their communities.

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

The novel Covid-19 pandemic slowed the implementation and timeline of this project. As we had little control on this situation, we had to halt project activities due to the pandemic restrictions and resumed at the appropriate time.

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

The project empowered local people in mushroom production by acquiring sustainable farming skills local people can now farm mushrooms and sell for income

and have a source of protein, thereby disengaging in risky activities such as hunting. We worked with local people (we have trained on our previous project as Tortoise Guardians) to assist with field surveys; local people earned their livelihoods on this project. We also engaged local communities in educational activities that have improved their knowledge and attitude to protect endangered species and appreciate nature for their overall wellbeing.

5. Are there any plans to continue this work?

Yes, we need to sustain our alternative livelihood programme, scale up education programmes and develop new interventions to tackle illegal hunting and trade of tortoises.

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

We will share our findings through publications in both peer reviewed and non-peer reviewed journals. We will share our technical report to relevant stakeholders such as other conservation scientist, NGOs, the biodiversity conservation unit of Resource Management and Support Center (RMSC)-technical wing of the Ghana forestry commission and KNUST wildlife Department (for academic purposes and inform research).

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

Our next steps are categorised as follows:

- A. Mushroom farming as alternative livelihood option to hunting tortoises: We believe that, developing mushroom farming for local people is a surest means to curb hunting of *Kinixys homeana* and *K. erosa*. Our future project will target trainees by forming them into co-operatives and resourcing them to start production in their communities.
- B. Monitoring and tracking illegal hunting: We now know that the trade of these tortoises on fetish markets in Ghana is widespread and enormous and may be having negative impacts on wild populations especially on *K. erosa* which was scarce on the fetish market, we investigated. Our future programmes will therefore undertake the following steps:
 - Engage relevant stakeholders including traders and the Ghana Wildlife Division to review the Wildlife Conservation Regulation for *Kinixys homeana* and *K. erosa* and develop tortoise trade monitoring systems, to curb hunting of these species.
 - Investigate other localities in Ghana where tortoises are traded for African traditional medicine.
 - Sustain monitoring activities to assess and track illegal hunting and accumulate more data on the field ecology of tortoises; to inform species and habitat management plans and possible IUCN classifications.

- C. Awareness campaigns: Our future project will focus on the following educational strategies:
- Establish nature-based clubs in basic schools.
 - Organise visits or excursions for students to the habitats of *Kinixys homeana* and *K. erosa* since majority of pupils and their teachers have yet to visit such places for educational purposes.
 - Increase awareness among the general public about the plight of tortoises and their conservation needs.
 - Design appropriate conservation messages and dissemination strategies to target stakeholders in the tortoise commodity chain

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 RF logo on printed materials. We also mentioned RF support during community gatherings and surveys. We will acknowledge RF in all our publications.

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

Principal Investigator: **Ohene Boakye Adomako** (eden.boakye@gmail.com); As the project leader, Ohene supervised the planning, execution and reporting of this project.

Co-Principal Investigators: **Evans Amoah Amoako** (evansamoah55@gmail.com) & **Victor Agyei** (nanaantwi15@gmail.com); they assisted and contributed their various expertise in biodiversity conservation in the planning and implementation of the project.

Volunteers:

Esther Odi Tieku (oditiekku@gmail.com); She assisted with organizing mushroom farming training workshops and education activities in schools and churches (MSc candidate, Planning, Monitoring and Evaluation, KNUST/BSc. Natural Resources Management, KNUST).

Kwaku Afrifa-Dwumah (dkafrifa@gmail.com); He assisted with field and market surveys (MPhil candidate, Silviculture and Forest Management, KNUST)

Nancy Karikari (karikarinancy8@gmail.com); She also assisted with organizing mushroom farming workshops and education activities in schools and churches (BSc. Natural Resources. Nancy is also research volunteer with the Forest Research Institute of Ghana working on the Greenhouse Determination Project (GRRENGADE). This was her first exposure working on a wildlife conservation project.

10. Any other comments?

We are very thankful to The Rufford Foundation for supporting our project over the years. In fact, the RF support continue to give hope to tortoises and local communities fringing their habitats.



Home's hinge-back tortoise (*Kinixys homeana*) encountered during field surveys in the forest. © Ohene Adomako.