

Final Evaluation Report

Your Details	
Full Name	Zanvo Stanislas
Project Title	Ecology and conservation of the white-bellied pangolin in the swap forest of Lokoli in Benin (West Africa)
Application ID	37370-2
Date of this Report	11/11/2023

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
Assess distribution, habitat use, activity patterns, population density of the white-bellied pangolin				We deployed camera traps across 10 sites for 10 months rather than 6 due the scarce detection event of the white-bellied pangolin at ground-level. After 6 months we placed camera traps at various height to increase the detection of the focal species
Assess local people's perceptions and attitudes towards pangolins				None
Conduct behaviour change campaign				This activity has been delayed due to the extension of the field works

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

a). Camera trap surveys revealed that only arboreal (height) cameras are most effective for detecting the white-bellied pangolin in the Lokoli forest. The study recommends arboreal camera trap survey to study the spatial and behavioural ecology of the white-bellied pangolin in their wild habitats.

b). The study showed that areas of dense forest with trees that have cavities and are overgrown with lianas are a favourable habitat for the white-bellied pangolin. *Azelia africana*, *Diospyros mespiliformis* and *Dialium guineensis* were most used trees.

c). Semi-structured interviews with 120 local people in three villages (Koussoupka, Lokoli and Dèmè) surrounding the Lokili forest reserve, revealed that local people perceived pangolins as game, a source of protein, an income source and not a priority for conservation, even if they recognise that their population is declining in the Lokoli Forest.

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

Due to some problems related the customs in Benin, we finally received our camera traps on September 11th, 2022, and started camera trap-based surveys on November 7th, 2022. After the first checking of camera traps, we did not detect our focal species (white-bellied pangolin), but we were able to detect antelope (*Tragelaphus spekii*), small carnivores (*Genetta genetta*) and rodent (*Xerus*

erythropus). After several unsuccessful placements at ground-level we deployed the cameras at various heights to the top of the tree. We conducted for additional in the field for camera trap survey.

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

We actively included local community in the implementation of the project. Our guides for camera trap survey, interviews, forest inventory were selected among local people that we paid according to the modalities of the project. We conduct behaviour change campaigns with local communities including men and women, farmers and hunters, and local authorities.

5. Are there any plans to continue this work?

The findings show that local people hunted pangolins and traded them in the bushmeat and traditional medicine markets of Tègon and Avogbannan respectively. Our plan is to create a centre and build a team for rescue and rehabilitation of pangolins in the district between the two last refuges of the white-bellied pangolin in the Benin (Dahomey Gap). This will help save pangolins from local extinction.

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

The project is working to publish the project results in an international peer-review journal (Global Ecology and Conservation) in early 2024. We plan to participate in the national conference/workshop on biodiversity in Benin.

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

The most important next steps are rescue and rehabilitation that will target both Lokoli and Lama forests and surrounding wildlife markets, and large public behaviour campaigns.

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?

We thank The Rufford Foundation in our last publication:

Zanvo S*, Djagoun C.A.M.S., Gaubert P., Azihou A.F., Jézéquel C., Djossa B., Sinsin B., & Hugueny B. (2023). Modeling population extirpation rates of white-bellied and giant pangolins in Benin using validated local ecological knowledge. *Conservation Science and Practice*, 5(8), e12986. <https://doi.org/10.1111/csp2.12986>

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

Zanvo Stanislas: Study design, Questionnaire design, camera surveys, forest inventory, data analysis.

Akpovi E. A. Françoise: Questionnaire design, interview with local people, behaviour change campaign, data transcription.

Ales Nazif: camera surveys, forest inventory, behaviour change campaign.

Houkanrin Gildas: local Guide for camera trap surveys and forest inventory.

Assohoto Julien: local Guide for camera trap surveys and forest inventory.

10. Any other comments?



Camera trap survey team: Stanislas Zanvo (black t-shirt) with his two local guides.



Left: A white-bellied pangolin on the ground. Right: A smoked white-bellied for consumption recorded with an interviewee in the village of Koussoukpa.



Tragelaphus spekii.



Genetta genetta.



Evidence of nocturnal poaching activities in the Lokoli forest.



Behaviour change campaign.