Final Evaluation Report

Your Details	
Full Name	Sydney Thony Ndolo Ebika
Project Title	A comparative study on natural resources management by local communities in two main edible mushroom harvesting localities in the Republic of Congo
Application ID	37196-2
Date of this Report	3rd July 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
Understanding how the two management systems work in Lekoumou Department and Ile Mbamou				In Kitengue (one of the 20 villages of Ile Mbamou district), access to natural resources is free to all inhabitants. During the mycological season, any member of the locality (from the children to elderly), will go foraging for fungi and sell the harvested products to the wholesalers coming from Brazzaville. Local populations set fire in the savannah 2-3 months before the harvesting period in order to clear up the vegetation and made collecting easier. Termite nests are not destroyed. In Sibiti areas (Ingolo 1 and Tala), forests are owned by families. Members of these families retain the right on those areas and any other member of other family who would like to go harvesting natural product in those places has to ask for permission from the owner. In the case rhizomorphs of the genus Termitomyces that we studied, a fee of 5,000 XAF (£6.68) has to be paid by any foreigner wanting to access the harvesting site. At the local level, there are two ethnic groups: Bantu (mainly Téké) and hunter-gatherers (Bongo). The Bantu are owner of the forests but harvesting activities are carried out by the Bongo. Unlike Kitengue where anybody volunteer to collect can go and pick up fungi, in Ingolo 1, it is the Bongo's family who goes to the forest to collect fungi. First, one to two people go to check if the rhizomorphs in the subterranean termite nest have reached the size to be harvested. If so, the entire family can then make the trip to the forest to harvest the rhizomorphs and came back to sell them in the

				village to the wholesalers coming from Sibiti.
Estimating how much benefit do local community can get from the managing system used in their area				We found that the trade of wild edible mushrooms in both localities in an important source of income for the actors. Some actors have been carrying out such an activity for more than 40 years and get up to 300.000 XAF of benefit. Outputs of the money obtained depend on culture of the actors (Bantu or hunter-gatherers). In Kitengue where actors (collectors, wholesalers and retailers) are Bantu, we found that some of them have built houses with money resulting from the sale of fungi, others (single mothers, for example) are monthly paying for accommodation and tacking care of their kids (food and education) thanks to this activity. In Ingolo 1 where the actors (collectors) are Hunter-gatherers, the money is spent on a daily basis with no plan for saving or affording for long lasting materials.

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

a). Documentation of the managing system in Ile Mbamou.

b). Documentation of the managing system in Sibiti area.

c). Defense of MSc students.

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

The training activity was carried out with six people among them Mr Destin Dieuveil NGANGA MATONDO and Taime MOUZEMBO (see training costs sheet). Unfortunately, these two colleagues were unavailable when it was time to go to the field. The former has been replaced by Mr Tibeau Siège IKANGO and the latter by Mr Gaïnov BEALONGA NGAKALA.

In June 2022, when the accountant and I travelled to Kitengue in order to meet local authorities, we realised that we did not plan for accommodation for the team who will be carrying out the work in Kitengue. To meet such unforeseen costs, we reduced the number of local guides and reduced the per diem for guides, students and researchers.

During the fieldwork, it was not possible to make any direct observation between rhizomorphs and the putative species with fruiting bodies as planed in the activity 4. In order to be fully fixed on which species the rhizomorphs belong to, we sent pieces of the collected rhizomorphs and parts of the cap of *Termitomyces fuliginosus* for molecular analyses abroad via DHL (see the two receipts). We first sent the samples to a laboratory in Kunming (China) where I did some of my lab work as part of my PhD research. Unfortunately, the parcel was return to Congo because China does not allow any plant and fungal specimens entering the country after the Covid-19. Then I contacted a colleague at Meise Botanic Garden in Belgium who accepted to carry out the lab work. Currently, the specimens are in Meise for analyses, and we are waiting for results from DNA analyses to find out about the species to which the rhizomorphs belong to.

5. Are there any plans to continue this work?

After conducting the first and second Rufford Projects, we are expecting to product a bilingual small identification manual of edible mushrooms of the Republic of Congo. Unlike scientific papers which are more specific and have a targeted audience because written in a very formal style, an identification manual will be in written in a format that can be used by a wide range of audience. We aim at including: (1) key characters for recognition of the main families, (2) diversity of edible species, (3) local names and languages, (4) habitats where the species occurs and (5) note on the threats facing fungi in their habitats. Publication expertise of the Royal Botanic Garden Edinburgh (UK) will be required for publishing such a manual.

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

Results of this project have been shared at the university level in Congo as two MSc theses (see attachment). With the international audience, we are planning to produce three scientific papers: one based on the first MSc thesis from Kitengue (Ile Mbamou), another on the second MSc from Sibiti and the last to comparison of management system between the two sites.

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

The next step which will be important will be to produce a bilingual small identification manual of edible mushrooms of the Republic of Congo. Such a document will help in putting together data we gathered during previous fieldworks in the country and make them available to local authorities, universities and conservation organisations in the Republic of Congo.

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 Foundation logo abroad and locally. In Belgium, the logo was used on a poster that I presented during the AMPEE6/COBECORE meeting in September 2022. In the Republic of Congo, the logo was used the first pages of two

MSc theses of which one was defended in December 2022 and the other will be defended in July 2023.

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

Full name	Role
WAWA Juvey Maveric	Leader of the team in Kitengue
ATIKANI Gallion Berdol	Assistant in Kitengue; Leader of the team in Sibiti
MOUNGOUYA MOUKASSA Célie Léoda	MSc student in Kitengue
BEALONGA NGAKALA Heinz Gaïnov	MSc Student in Sibiti
IKANGO Tibeau Slège	Research Assistant in Kitengue
DZOULOU Freddy	Research Assistant in Sibiti

10. Any other comments?