

Project Update: August 2020

Introduction

In the world, more than 84 fungi species are critically threatened as well as their partner tree according to the Red List of the International Union for the Conservation of Nature (IUCN, 2019). However, fungi are significantly neglected in conservation efforts compared to plants and animals despite their ecological, agricultural, forestry, medicinal and food benefits (Allen and Lendemer, 2015).

Therefore, the lack of protection of fungi is particularly serious and nowadays contributing to the conservation of fungi would be a major contribution to the launch of effective conservation of millions of wildlife species. It is then essential to accelerate the conservation of fungi as the actions of destruction of natural habitats are increasing in recent years and leading to the fragmentation of forest habitats and as well as the extinction of fungal species.

It is in this context that, this report aims to: (1) produce symbiotic tree in nursery for reforestation of degraded habitat; and (2) educate local populations in the management of natural resources in Benin.

Methodology

Awareness

For awareness-raising activities, groups of women and children who collect fungi in natural forest, the elderly who have knowledge on fungi, hunters who have good knowledge on forests, forest agents, forest project leaders, officials from environmental NGOs who are making efforts to protect and conserve the forest have been involved.

Fifty people from these groups mentioned above were selected in each village, Bagretamou, Dokonde, Kota-monongou, Kotopounga and Onsikoto (around the gallery forest of Kota) and Berecingou, Kantaborifa, Koussantigou and Ourbouga, (around the forest-gallery of Koussoukouangou). Directly, a total of 450 people have been sensitised on the various issues relating to the conservation of fungi in natural habitat.

Communications on good conservation practices in national languages were also given at local radio.

Nursery and reforestation

The nursery was set up according to the recommendation of Silue et al. (2017). Young plants of *Isoberlinia doka* Craib & Stapf and *Berlinia grandiflora* (Vahl) Hutch are produced to reforest degraded areas. Once the 2000 plants were produced (1000 plants of *Isoberlinia doka* and 1000 plants of *Berlinia grandiflora*), degraded areas were selected and reforested with the help of forest officers in Kota and Koussoukouangou gallery forest.

Results

Tree symbiotic nurseries and reforestation activities

The young plants were maintained in nursery for 6 months before being reforested in the natural forests with the help of the local population (Photo 1-4).

Sensitization of the local population on the benefits of wild mushrooms

A total of 450 people were sensitised as part of this project. The sensitisation took place in Kota and Koussoukouangou villages. Usually, local people do not apply good practices in fungi harvesting and forest management, but have knowledge about the use of wild fungi.

The message of our awareness was therefore focused on the role and usefulness of fungi in the forest and good practices for wild fungi conservation as well as their habitats. Thus, we presented to the population the different ecological groups of fungi namely saprotrophic fungi, ectomycorrhizal fungi and parasitic fungi and we insisted on the fact that the disappearance of the fungi partner tree will also lead to the disappearance of the associated fungi (Photo 5 & 6).

Here are the images showing nursery, resforestation and awareness activities:



Photo 1. Bag stuffing.



Photo 2. EcM Seed germination



Photo 3. Growth of young plants in the nursery. Photo 4. Reforested trees.



Photo 5. Awareness in Kota village



Photo 6. Awareness in Koussoukouangou village

Perspectives

We have collected the field data and the analyses are still under way. The results will be provided in the second report.

Otherwise, we invite the local populations to maintain the conservation knowledge acquired in this project in order to facilitate fungal conservation in Benin.

Acknowledgement

We are grateful The Rufford Foundation for financially supporting of the project, the local population, forest officers and all the people who contributed to the success of the first phase of this project despite the period of COVID-19 pandemic.

References

Allen J. & Lendemer J. 2015. Fungal conservation in the USA. *Endangered Species Research* 28(1): 33–42. <https://doi.org/10.3354/esr00678>.

IUCN, 2019. Table 1b: Numbers of threatened species by major groups of organisms (1996–2019). Available from: <http://www.iucnredlist.org/about/summary-statistics> [Accessed 08 December 2019].

Silue, P.A., Kouassi, K.É., Koffi, K.A.D., Soro, D., 2017. Qualités germinatives des graines et croissance des plantules de *Isoberlinia* spp. en milieu contrôlé (pépinière). *Int. J. Biol. Chem. Sci.* 11, 93. <https://doi.org/10.4314/ijbcs.v11i1.8>

Yorou, N.S., De Kesel, A., 2011 : Champignons superieurs. Larger fungi. In: P. Neuenschwander, B. Sinsin and G. Goergen (eds.). *Protection de la Nature en Afrique de l'Ouest : Une Liste Rouge pour le Benin. Nature Conservation in West Africa: Red list for Benin.* International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria, pp. 47–61.