

**Republic of Benin**

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**University of Parakou**

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**Laboratory of Ecology, Botany and Plant Biology**

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**Tropical Mycology and Plant Soil Fungi Interactions**

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**Circle of Action for the Protection of the Environment and Biodiversity**



**Diversity, conservation status and promotion of the genus  
*Cantharellus* in Benin (West Africa)**

**Midterm-Report II**

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## **Introduction**

Non-Timber Forest Products (NTFPs) especially fungi play an important role for local population in tropical Africa as source of food, medicine and income (Kamou et al., 2015 ; Koné et al., 2013 ; Pérez-Moreno et al., 2021 ; Yorou et al., 2014 ; Guissou et al., 2008). Better still, among these fungi, a fixation is made on chanterelles because of their nutritional contribution (Eyssartier, 2003). Thus, they are today one of the best-selling mushroom groups on the local markets generating significant income for the actors (Tibuhwa et al., 2012). However, the ratio of known diversity and number of species of the genus *Cantharellus* on the red list of mcromycetes in Benin indicates that chanterelles are one of the most endangered groups of fungi in Benin.

In addition, the first step of the project '*Diversity, conservation status and promotion of the genus Cantharellus in Benin (West Africa)*', revealed an affinity of these species to gallery forests which are classified as an endangered ecosystem in Benin (Natta et al., 2002). Fungi, which still remain at the bottom of the conservation priority, therefore require an awakening of the consciousness of the populations who are in direct contact with these resources and an alert to the competent authorities in charge of biodiversity conservation. Faced with this situation, the second phase of this project consisted mainly of promoting the conservation of the genus *Cantharellus in Benin*. Three main actions have been carried out to this end:

- Feedback of the results to the neighbouring populations who took part in this project.
- Sensitization of these populations on the direct and indirect threats to the species of the genus *Cantharellus* and the conservation priorities in relation to the classification of the red list of macromycetes in Benin and the conservation priority index generated by field data;
- Production of seedlings of the two probable symbiotic woody species of chanterelles (*Berlinia grandiflora* and *Isoberlinia doka*) and reforestation of degraded habitats.

## **Methodology**

For the promotion of conservation, we produced plants of *Berlinia grandiflora* and *Isoberlinia doka* identified as symbiotic partners of chanterelles in Benin. The seeds used come from the gallery forests of Kota and that of Bassila for *Berlinia Grandiflora* and from Mont Kuffé forest reserve for *Isoberlinia doka*. Together with the populations of Adjiro and Kota Monongou with the support of two forestry agronomist technicians, we led the production of these plants

through potting, and maintenance in the nursery for six months (December 2020 to May 2021). The restitution of the results and the sensitization were carried out during the months of May and June 2021 using posters and picture boxes in the nine villages chosen around the reserve forests of Bassila, Monts Kouffé and Kota. To be efficient, awareness raising was carried out in these three forests because it is only there that the chanterelles were found. A total of 202 people (Table 1) took part in this awareness-raising activity.

Forest	Type of plant formation and woody species EcM dominant	Villages investigated	Number of participants
Bassila	Gallery Forest of <i>Berlinia grandiflora</i>	Bassila	25
		Adjiro	28
		Bakabaka	23
Mont kouffé	Clear forest with <i>Isoberlinia doka</i> and <i>Isoberlinia tomentosa</i>	Igbèrè	15
		Manigri	22
		Mondogui	27
Kota	Forest gallery with <i>Berlinia grandiflora</i> and <i>Uapaca guineensis</i>	Koutoubaroukou	15
		Monongou	18
		Westate	29
Total			202

The plants of *Berlinia grandiflora* were divided in two and planted in the gallery forest of Bassila and gallery forest of kota where this species was found. The plants of *Isoberlinia doka* were planted in the reserve forest of Monts Kouffé. The gap method was adopted to plant these plants in order to reinforce the restoration the habitat of chanterelles.

## Results

For 3000 pots initially planned, 2511 plants were produced, i.e., 1853 plants of *Berlinia grandiflora* and 658 plants of *Isoberlinia doka* due to parasitic attacks.



Potting



Nursery maintenance



From these plants produced, 927 plants of *Berlinia grandiflora* were planted in the reserve forest of Bassila and 926 plants of *Berlinia grandiflora* in the gallery forest of Kota. The 658 plants of *Isoberlinia doka* were planted in the reserve forest of Monts kuffé.



***Berlinia grandiflora***



***Isoberlinia doka***

The following images illustrate the project outputs restitution and sensitization activities of the local populations on the threats and conservation needs of chanterelles. These images also illustrate the reforestation done in the targeted forests.







**A, B, C, D: Sensitization**



**Seedling**







**E, F, G, H: Reforestation**

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