Project Update: October 2019

Our project started in August 2019 with the site visit to have discussions with Niaouli forest managers and some local authorities. The objectives of our project have been presented to them to make sure of their participation in the achievement of our goals. It has been a successful meeting and we got the authorisations to conduct the forest inventory and the participation of some leaders of the region to some of the project activities. For the long term monitoring of this project, we got the implication of NGO SOS Biodiversity in the execution of the project.

Forest inventory

According to the collected data from the Niaouli natural forest inventory, the following parameters have been determined :

- *Ecological parameters* : tree species richness (S), Shannon's diversity index (H, in bits) and the Pielou's evenness (Eq)
- Dendrometric parameters: tree density of the stands (N, in trees.ha-1), (the average number of trees per plot expressed in trees/ha); quadratic mean diameter (Dg, in cm), basal area of the stands (G, in m^2.ha-1), and Lorey's mean height (HL, in m)

Table 1: Structural parameters of Niaouli Forest

PARAMETERS	Niaouli Natural Forest
Density (N, stems.ha-1)	283.47
Mean diameter (Dg, cm)	25.81
Basal area (G, m2.ha-1)	17.96
Height (HL, m)	18.63
Regeneration density (Nr, plants/ha)	778.49
Tree Species richness (S, species)	40
Shannon Index (H, bits)	4.27
Pielou's evenness (Eq)	0.8

The tree species richness (dbh ≥ 10 cm) in the Niaouli forest is 40 species. The most abundant species in descending order are: *Cassia sieberiana* DC., *Albizia zygia* (DC) JF Macbr., *Pavetta corymbosa* FN Williams, *Cola millenii* K. Schum., *Celtis mildbraedii* Engl., *Antiaris toxicaria* Lesch., *Dialium guineense* Wild.

Pielou evenness (Eq) is 0.8 which means that all species are well represented within the stand.

We also established the size class distribution (SCD) of tree diameter to characterise the state of Niaouli natural forest species population

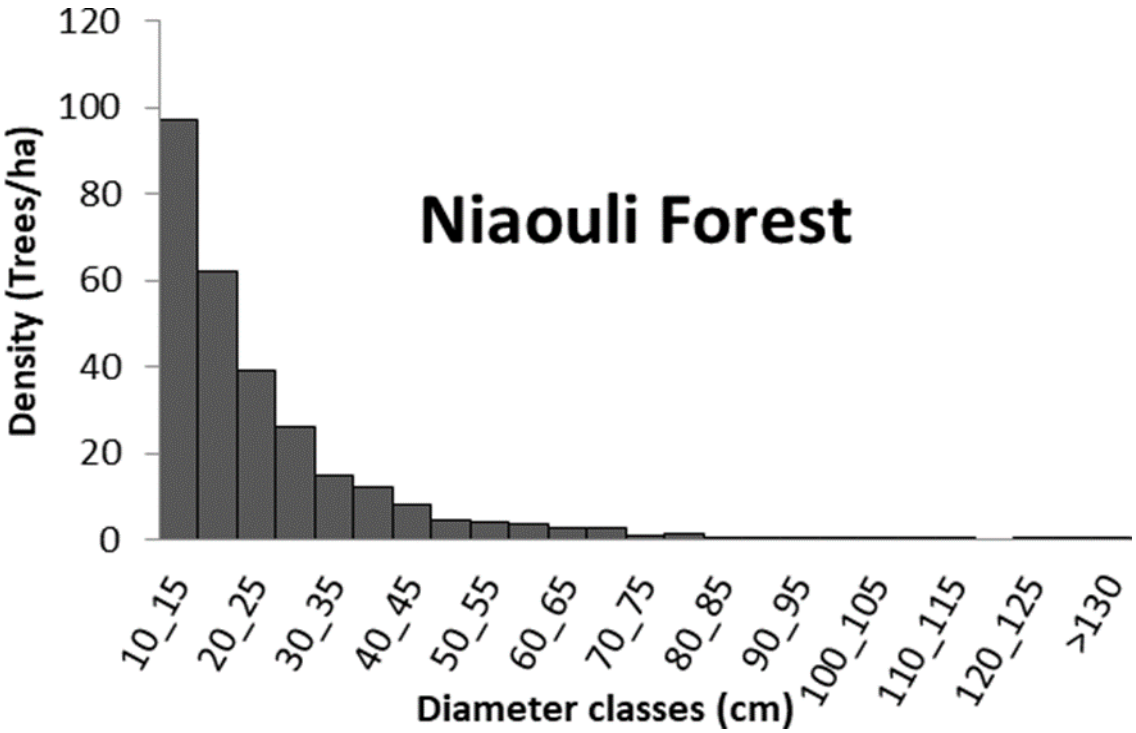
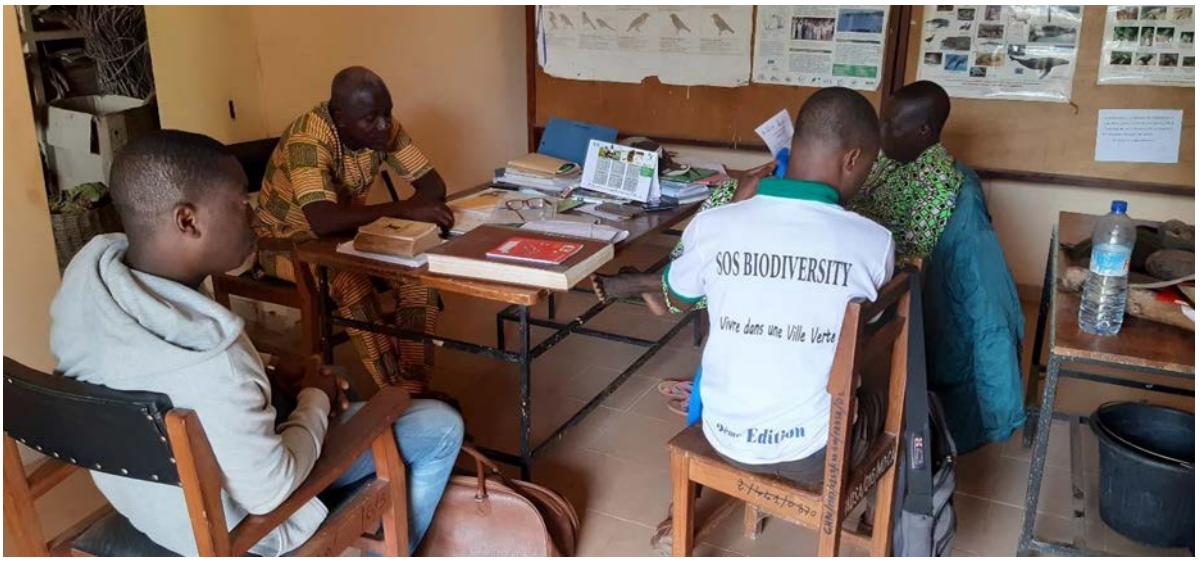


Figure 1: Diameter size class distribution

The diameter size class distribution of this forest shows that it has inverse J-shaped distribution characteristics of natural multi-aged un-degraded forest. The 10–40 cm dbh classes were the best represented with the majority of trees in the first diameter class. However, we counted some individuals with dbh superior to 130 cm. Most of them are individuals of *Antiaris toxicaria, Triplochiton scleroxylon, Terminalia superba, Ceiba pentandra*, *Cola gigantean...* This forest presents a good regeneration rate that can help it to renew its population in absence of anthropogenic pressure.

Currently, in the field, we are proceeding to the ethnobotanical survey before starting the training in beekeeping and tree nurseries.



Picture 1 : Project grantee and SOS Biodiversiy NGO responsible in discussion with the forest guide and responsible to present the project objectives and to assure their involvements.