Ad hoc support : EFISA

Indigenous Forest Species in Agroforestry Systems

ABSTRACT

The project aims to strengthen the economic potential of agroforestry sectors in Côte d'Ivoire through the identification, promotion and propagation of productive and resilient material. More specifically, it focuses on the development of three priority species due to their high economic development potential (Parkia biglobosa, Pterocarpus erinaceus, Khaya senegalensis). Parkia biglobosa is a food species, P. erinaceus and K. senegalensis produce very high quality timber. Due to unsustainable exploitation, P. erinaceus was listed in CITES Appendix II in 2016.

The co-supervision of a thesis will allow the development of a multi-disciplinary approach (human and social sciences, botany, genetics, bioinformatics) to address the following specific objectives:
(i) to understand the management methods of priority species practised by local populations, to identify the traits of economic interest for the populations and the constraints to the planting of species at pilot sites and to promote their use;
(ii) characterise the distribution of genetic diversity of one of the three priority species as well as the variability of traits of interest in Côte d'Ivoire
(iii) identify productive and diverse plant material and plant it in pilot sites, silvicultural trials and provenance trials to analyse the adaptive potential of the species
(iv) to make recommendations and establish guidelines for the extension of these plantations to the whole of Côte d'Ivoire.
Objectives (i) to (iii) aim at acquiring new knowledge essential for the implementation of conservation, management and sustainable use strategies for the three priority species identified.

Support from AF : The project had been submitted to PRESED (IRD-Cote d'Ivoire call) but was put on the complementary list. On the other hand, a thesis subject (submitted to a parallel window) is supported. The doctoral student therefore finds himself without a functioning programme. In order to face this emergency situation, Agropolis Fondation supports the first stay in France of this PhD student during February-April 2019.

The thesis work consists in studying and modelling the architecture of the target species. This is a necessary step for the optimisation of agroforestry plantations. The acquisition of data on the architecture of the three priority species will allow a better understanding of their phenotypic plasticity and their capacity to adapt in a context of climate change. These measurements will be acquired within the pilot sites and within the provenance trials set up as part of this project. Field measurements will be carried out between partners from the South and the North. In addition, it will test nuclear microsatellites on P. erinaceus to further characterise the genetic diversity of the populations studied.

Keywords : 1. Exclu de la photothèque

Year : 2018
Project number : 1800-003
Type of funding : SP
Project type : PC
Research units in the network :
Start date : 2019-01-01
End date : 2019-06-30
Flagship project : no

Project leader : Jérome Duminil
Project leader's institution : IRD
Project leader's RU : DIADE

Budget allocated : 5000 €
Total budget allocated (including co-financing) : 5000 €
Funding : Labex