OBJECTIFS

The ambition of the project is to contribute to the adaptation to climate change of Indonesian rubber smallholders. In that respect, the project aims at developing a participatory breeding process in Indonesia to design resilient rubber cropping systems for smallholders with planting material adapted to fast-changing socioeconomic and environmental conditions. An existing scientific consortium on plant genetics and breeding will be strengthened by integrating socio-economics and experts on agroecology to survey and model the evolution of agro-systems as well as to breed for rubber-based agroforestry systems. A participatory approach with all stakeholders will guarantee the co-construction of solutions and will facilitate the future support of national and local authorities by funding replanting programme with climate-smart packages for smallholders.

Responsable :

Date de démarrage : 01/01/2021
Date de clôture : 28/02/2024
Montant :

ACTIONS

The project supports a long-term programme aiming at Initiative in the participatory breeding scheme for resilient rubber cultivation systems for smallholders in a context of global change. This programme should include a process of reiteration of scientific questions and agriculture-based solutions to respond to fast-changing socio-economic and environmental constraints. The capitalisation of the multidisciplinary and participatory studies will be beneficial to the implementation of in-farm evaluation trials. Ultimately, the feedback from in-farm evaluation trials should lead to adjustment for a better resilience of the system.

the project is structured in 4 Workpages :

WP 1 : Co-construction of varietal and cropping system ideotypes adapted to smallholders.
This first action aims designing solutions with stakeholders by integrating socio-economic data to design a new rubber breeding strategy for innovative agro-ecological systems. This WP will be implemented for 1.5 years.

WP2: Understanding and modelling the performances of rubber-based agroforestry systems in contrasting environments.
Rubber agroforestry systems (RAS) are usually presented as more resilient than monospecific plantation to climate change due to improved ecosystem functions (water circulation, nutrient availability, biological control of pests etc…). However, the resilience of RAS depends on the sharing of resources (light, water, nutrient) between the rubber trees and the associated species. In particular, water can become a major limiting factor. This WP aims at 1/ characterizing the abiotic and biotic constraints on the performances of RAS in terms of productivity and provision of regulating ecosystem services, 2/ identifying the ecophysiological traits to be targeted by breeding programs

WP3: Determination of the predictive value of Hevea genetic resources in Indonesia