AGRI-TE

Evidence-based synthesis of the impacts of agro-ecological transition at the global scale to support integrated modelling and decision-making

PRINCIPAL INVESTIGATOR:
Damien BEILLOUIN, CIRAD, HORTYS (FR)

POSTDOC:
Jonathan BONFANTI, CIRAD, HORTYS (FR)

START AND FINISH:
2021-2022

CO-FUNDING ORGANIZATION:

agropolis fondation
Pour la Recherche Agronomique
et le Développement Durable

Monoculture de giroflier à Madagascar (photo. P. Danthu)

7 PARTICIPANTS:
DAVID MAKOWSKI - INRAE, UMR AGRONOMIE (FR) / SARAH JONES - THE ALLIANCE OF BIOVERSITY AND CIAT-CGIAR) (FR) / GAËLLE DAMOUR - CIRAD, UPR GECO (FR) / CLAUDINE BAS-SET- MENS, CIRAD, UPR HORTSYS (FR) / ABISHEK CHAUDHARY - INSTITUTE OF TECHNOLOGY (IN) / MATTHEW MITCHELL - UNIVERSITY OF BRITISH COLUMBIA (CA)

Agriculture is the largest managed biome, with large potential for agro-ecological transition to play a crucial role in sustaining biodiversity, mitigating climate change and ensuring food security. Comprehensive evidence-based information on the multi-dimensional impacts of various agricultural practices can support decision-makers select effective transition pathways. Yet, currently no such global synthesis exists despite the abundant literature on agro-ecological systems.

The project AGRI-TE proposes to systematically synthetize quantitative evidence of the effect of main agro-ecological systems (e.g. agroforestry, organic agriculture, conservation agriculture) on the performance across multiple criteria such as biodiversity, agronomic, nutritional and economic outcomes. The synthesis of agro-ecological system performance metrics will be performed through a novel and state-of-the-art methodological approach with approx. 500 meta-analyses.

Based on these results, a systematic map will emerge to guide future research. **The quantification of the performance, considering the quality of the studies, will allow to precisely informing decision makers of the performance of such systems using the largest multi-criteria evaluation ever produced.**

Le Cesab
CESAB (CEntre for the Synthesis and Analysis of Biodiversity) is FRB's flagship program and an internationally renowned research center whose objective is to implement innovative work to synthesize and analyze existing data sets in biodiversity research.