

# SoLDivA

Social learning networks and plant diversity management in agroforestry landscapes



Tropical agroforestry landscapes face the challenge of sustaining cash crop production while maintaining the functioning of ecosystems on which local populations rely for their livelihood. Rural populations develop local plant diversity management practices to overcome this challenge. The multi-actor relational networks in which farmers are embedded are expected to p

## OBJECTIFS

This project SoLDivA aims to improve understanding of the actor networks involved the generation and circulation of agroecological knowledge concerning plant diversity management in rural societies practicing diversified agroforestry (AF).

It will test the relationship between :

i) farmers' connectivity profile in the network of agroecological knowledge circulation, ii) their knowledge concerning plant species management in AF, and iii) the plant species assemblages and their spatial distribution in the landscape.



## ACTIONS

The project will i) analyze the heterogeneity of farmers' diversification practices in AF landscapes and highlight its drivers, ii) document farmers' knowledge on plant species and their management in AF and iii) characterize the relational networks conveying this knowledge. The joint analysis of data from the three WP ambitions to improve the understanding of the actor networks involved in the diversification of AF landscapes.

Data will be collected in two villages M, based on plant species inventory in plots and farmers survey. SoLDivA will apply innovative methods for diversity analysis based on Latent Block Models, and for social networks analysis based on Stochastic Block Models.

## RESULTATS

We expect to observe a large heterogeneity of AF practices at the village scale, explained by the biophysical heterogeneity, farms' economic characteristics and organization, and also by the knowledge networks they are embedded in. Hence, we expect to find a relationship between : i) farm's agroforestry practices (e.g diversity level, species assemblages and their spatial distribution), ii) their knowledge on plant species management in AF , and iii) the characteristics of their knowledge networks (type of actors and connectivity patterns).

## PERSPECTIVES

SoLDivA results will open perspectives to develop transdisciplinary approaches for fostering exchanges between farmers, research and extension, as well as decision makers for supporting biodiversity-based agricultural transitions.

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**Pays concernés:** Madagascar

**Date de démarrage :** 01/09/2018  
**Date de clôture :** 31/12/2019  
**Montant :** 20 000

