



Activity analysis of coffee growers in complex agroforestry systems, understanding the farmers' practices

Turrialba, Costa Rica

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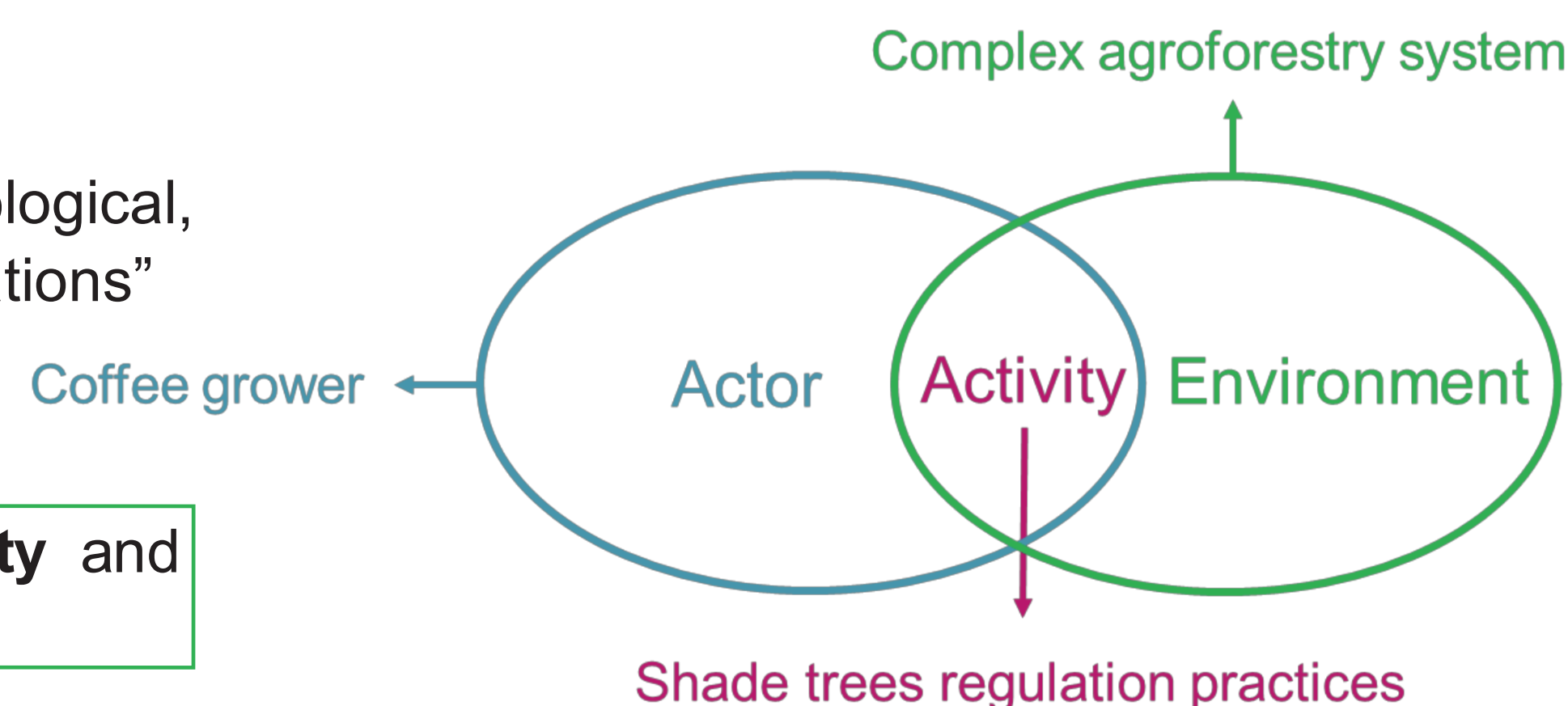
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Study practices to co-design sustainable and innovative cropping systems

Coffee based agroforestry systems (*Coffea arabica*)

“Coffee-based agroforestry systems are more concerned with ecological, social and economic **sustainability** than **monoculture** coffee plantations” (Vaast & Harmand, 2002).

Through their **practices**, how do producers **manage biodiversity** and how can **they manage the provision of ecosystem services**?



The research program “Course of action”

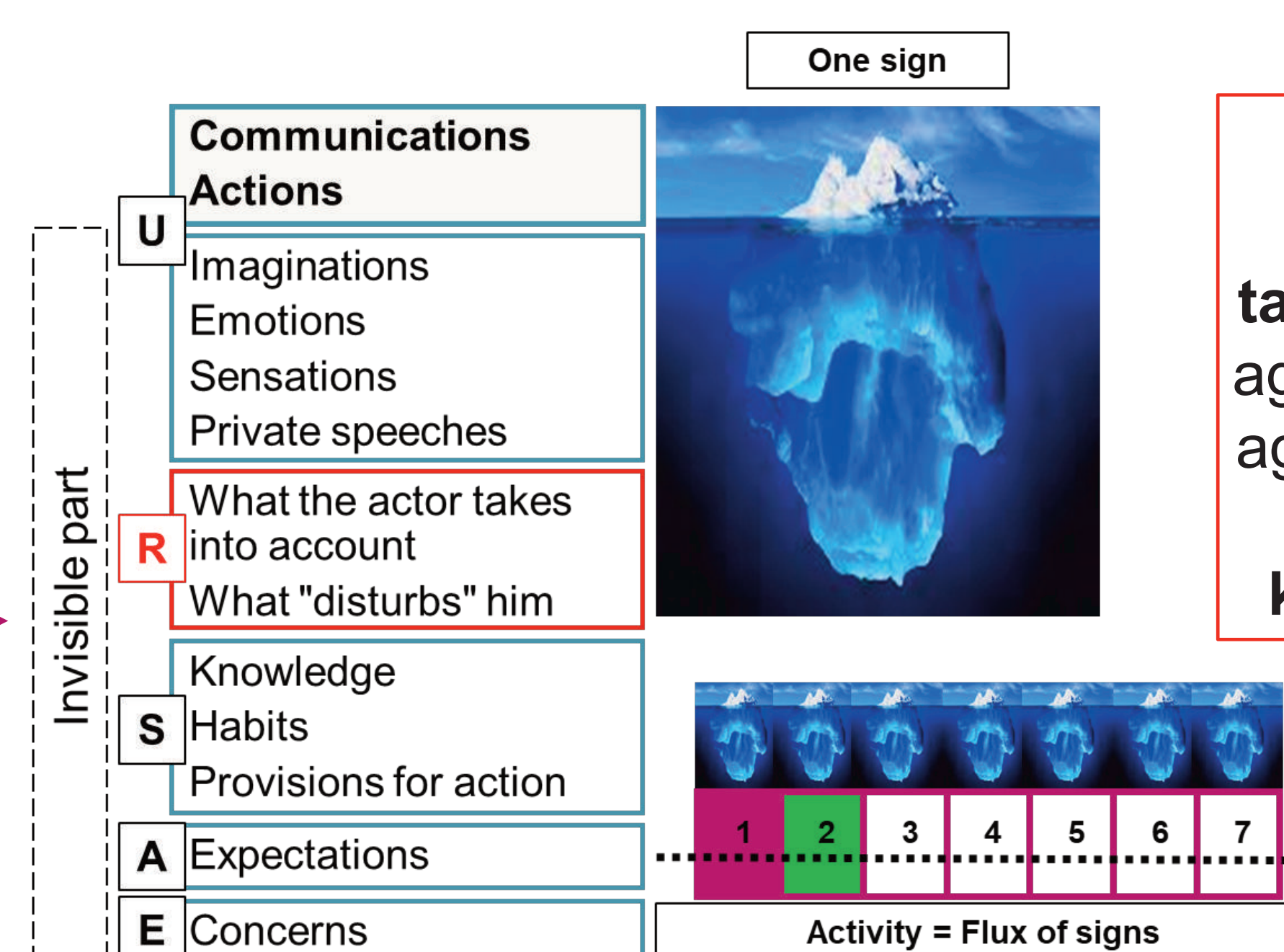
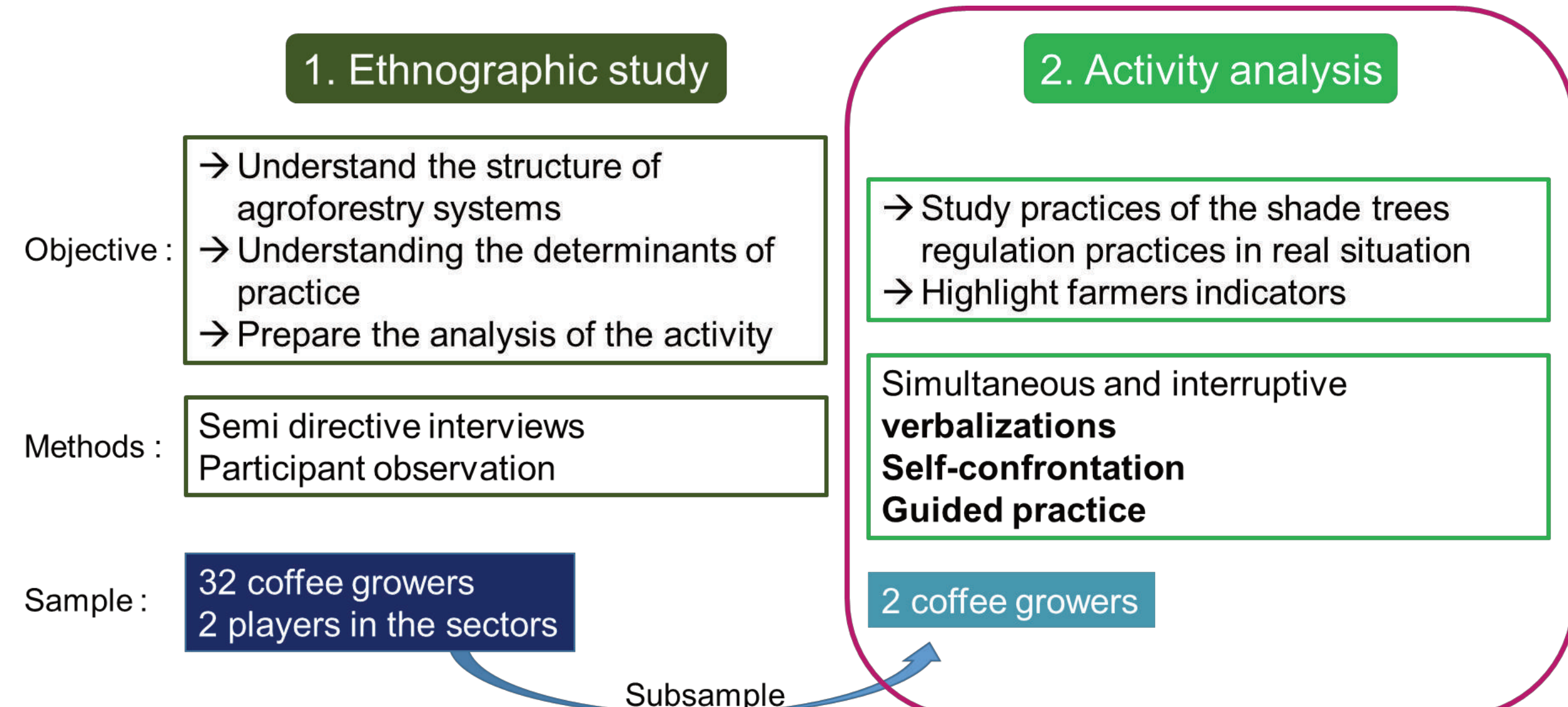
Study of human activity for the transformation and design of work situations

Activity = dynamics of asymmetrical interaction between an actor and his environment

Objective: Study the actual activity of shade tree regulation of small coffee producers in Costa Rica, in order to highlight farmers' indicators* associated with modalities of implementing these practices.

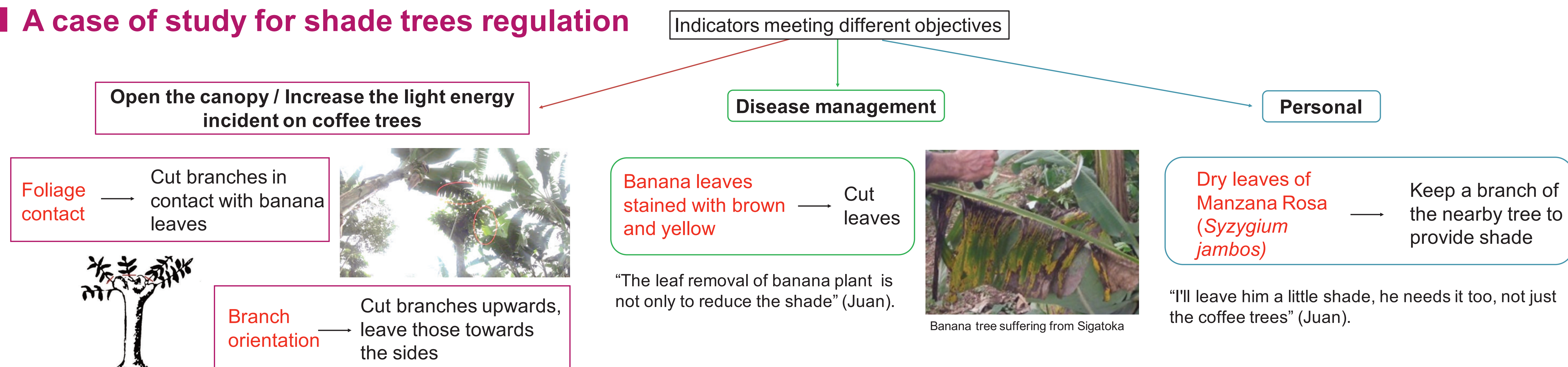
The research program “course of action” to study agricultural practices

A methodology in 2 phases



***Farmers indicators**
= Factors that farmer **take into account** in the agroforestry environment against the **background of his concerns, knowledge or habits.**

A case of study for shade trees regulation



A promising method to support progressive transformation of practices in complex agroforestry systems

What does the “course of action” method and concepts contribute to this practice study?

- Characterization of the practice: **actions, indicators, concerns** and **knowledge mobilized**
- Demonstration of **gaps** between what is expected, what is stated by the farmer and what is done in a real situation
- **Videos** of the commented practice (tool for participatory workshop)

What are the limitations of the methodology implemented?

- **Time scale** and consistency of practice in the **cropping system**
- Accurate and personal data in a particular situation
 - Data that can not be **extrapolated** and **generalized**
- ... Continue to develop this method to suit our needs

The re-design of innovative and sustainable cropping systems has to take into account the interaction between **diversity of human situations** and the **agroforestry system complexity**. How can **practices be transformed**? How can **we support farmers to think about their own practices and initiate changes specific to them**? The activity analysis is an efficient framework to nourish the thinking on current management practices and a promising way to support biodiversity management evolution in complex agroforestry systems.

References

Azéma G., *L'improvisation selon les enseignants entrant dans le métier : une approche en anthropologie cognitive*, 2015
Theureau J., *Revue d'anthropologie des connaissances*, 2010