

Wildlife conservation and sustainable plantations call for innovative planting designs

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Rationale

- o Reforestation experiments and rehabilitation of riparian areas are key in retaining wildlife and improving local ecosystems in plantations-dominated landscapes.
- o Tree crop plantations are increasingly implementing agro-ecological approaches relying on environmental services thus asking for new planting designs to change and integrate forest species.
- o Poverty eradication and biodiversity conservation are intimately interconnected



Objectives

By mobilizing multidisciplinary research, TRAILS will close targeted knowledge gaps and identify innovative solutions to support agricultural development and integrated resource management at the landscape level.



Method

Mixed-tree forests provide habitat: Pioneer tree species were most efficient in restoring sustainable riparian forest as they were able to rather rapidly stabilize soil erosion and also to provide shelter for wildlife. As soon as the canopy started to be formed, wildlife recolonized this habitat and species such as small mammals, primates or birds started to disseminate seeds from different trees species originating from nearby natural forests.



Biodiversity corridors provide climatic resilience: Agroforestry systems have an important role to play in mitigating climate change, having the ability to sequester atmospheric carbon dioxide in plant parts and soil. Changes in GHG emissions and soil organic carbon stocks can be monitored after land conversion to agroforestry.



Mixed plantations provide livelihood: Efficient conservation initiatives need to be undertaken at the landscape level, incorporating multiple-use habitats where people and wildlife co-habit. It is key to understand changes in the structure and stability of smallholders' income induced by the transition from monoculture plantations towards mixed-planted systems.