GOOD PRACTICE CASE STUDY

PANORAMA PROJECT

Agroforestry systems for sustainable cocoa farming in the Lachuá Ecoregion

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LOCATION

Lachuá Ecoregion, Municipalities of Ixcán, Quiché and Chisec, Guatemala

BENEFICIERIES

Q'eqchi' Maya ethnic group, 898 producers and technicians

CHALLENGE

Mono-cropping of cardamom, low quality cocoa, and maize in Guatemala are common, but are often cultivated in a way that leads to land degradation, loss of soil health and negative impacts on biodiversity. Such monocultures are also associated with increased social inequality and poverty. In the case of the Lachuá Ecoregion, local government and community members sought to address these linked social and environmental challenges through cocoa agroforestry. The practice was identified through a participatory assessment of livelihood options and chosen because of its cultural value for Q'eqchi' Mayans.

APPROACH

As a native species typical of the region and high in yields and quality, cocoa had high potential to advance the economic and social development of producers and communities, particularly women and youth of the Q'eqchi' ethnic group. The innovative cocoa agroforestry model agreed with local communities focuses on high quality trees, good agricultural practices (shade, pruning, harvesting, fertilization, new planting densities), and good processing, fermentation and drying practices.

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INTEGRATED IMPACT: ADAPTATION, BIODIVERSITY, MITIGATION

The main positive impacts of the introduction of agroforestry systems for sustainable cocoa farming include the improvement of ecosystem services in previously degraded areas. This had particular significance in the buffer zones of the Laguna Lachuá National Park, a Ramsar site.

Through the Nature-based Solution intervention, 303 hectares of monocrop areas were changed to cocoa agroforestry systems in zones of high value for conservation. Changes of land use to agroforestry systems contributed to GHG emissions reductions of 9,320 tonnes of CO_2e (1,864 tonnes of CO_2e per year; 80% increase in CO_2e storage in terrestrial biomass, such as trees and roots, and 20% in soils), erosion reduction between 33.8 and 107.7 tonnes per hectare depending on land use prior to cocoa agroforestry systems, and sedimentation reduction between 0.03 and 4.6 tonnes per hectare depending on land use prior to cocoa agroforestry systems.

KEY SUCCESSES

Robust business model considering the full value chain: While the NbS intervention focused on changing land uses towards good agricultural and manufacturing practices for cocoa agroforestry systems in the Lachuá Ecoregion, the project placed emphasis on developing strategies that cover the full cocoa value chain.

Long-term engagement and local knowledge to maximise biodiversity impact: A good understanding of the environmental, social and economic challenges was ensured through over 20 years of work in the region. This was supplemented with a set of assessments using the Restoration Opportunities Assessment Methodology (ROAM) and the InVEST tool to provide evidence of direct and co-benefits.

Ensuring social inclusion and involvement of indigenous women and youth: Throughout the project, consultations and participatory approaches and free, prior and informed consent (FPIC) were applied. Local community associations were created and strengthened in close coordination with formal organisational structures (community councils for development).

KEY PUBLICATIONS AND RESOURCES

- Iseman, T. and Miralles-Wilhelm, F. 2021. Nature-based solutions in agriculture – The case and pathway for adoption. Virginia. FAO and The Nature Conservancy.
- Miralles-Wilhelm, F. 2021. Nature-based solutions in agriculture – Sustainable management and conservation of land, water, and biodiversity. Virginia. FAO and The Nature Conservancy.
- Hallstein, E., and Iseman, T. 2021. Nature-based solutions in agriculture – Project design for securing investment. Virginia. FAO and The Nature Conservancy.