



SUPPORTING ENVIRONMENTAL SUSTAINABILITY IN LATIN AMERICA

Small-scale farmers around the world are facing the direct impacts of agriculture-induced environmental degradation and climate change, including changing rainfall patterns, drought, flooding and the geographical redistribution of pests and diseases. The resulting crop failures, soil infertility and erosion and contaminated and declining sources of water are causing continual economic losses and undermining food security across rural communities globally. In Latin America, Lutheran World Relief promotes agricultural practices and technologies that allow rural communities to improve their environmental conditions while building their resilience to climate change and increasing their incomes.



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AGROFORESTRY PRODUCTION SYSTEMS

In agroforestry production systems, trees are grown around or among crops or pastureland.¹ These systems are designed to increase production while reducing the ecological harm extractive agriculture can cause. The environmental benefits of these systems can include increased biodiversity, improved soil health, and reduced vulnerability to soil erosion and landslides.

Lutheran World Relief promotes the adoption of agroforestry production systems to build resilient and sustainable livelihoods for cocoa and coffee farmers in Latin America. In El Salvador, the second-most deforested country in the Western hemisphere, we have supported more than 180,000 cocoa farmers in establishing productive and profitable cocoa agroforestry systems.

¹ "Agroforestry," FAO (2017), <http://www.fao.org/forestry/agroforestry/en/>.

Since 1945, Lutheran World Relief has been successfully tackling poverty in some of the world's hardest-to-reach places. We provide relief in emergencies and help families restore their lives. We partner with communities to build and grow rural economies that are beneficial to the poorest farmer. By investing in people, their skills, and strengthening their ability to adapt, we help them build the resilience they need to thrive.

WATER AND LAND MANAGEMENT

Agricultural production both contributes to and is impacted by environmental degradation. To address both sides, Lutheran World Relief strives to promote environmental conservation, restoration and resilience through Integrated Water Resource Management (IWRM) and Sustainable Land Management (SLM).

In promoting IWRM, Lutheran World Relief helps rural communities effectively manage and protect their water resources through the formation of water management committees, implementation of new technologies, such as reservoirs, irrigation canals, and solar pumps, and usage of improved agriculture practices and tools that minimize water withdrawals and contamination. These efforts are especially important in our work with coffee farmers in Latin America because the traditional processing of coffee cherries can use a significant amount of water and can contaminate waterways with acidic runoff. In Colombia, we introduced efficient coffee processing equipment, successfully reducing the amount of water needed by nearly 50 percent and reducing by 25 percent the total suspended solids (SST) water pollution released into the nearby river. These organic pollutants are redirected into biodigesters we provided, which break down the organic matter into cooking gas and fertilizer.



Coffee farmer Oscar Morales Ospina stands beside his new coffee washing tub. These washing tubs reduce the amount of water needed to wash coffee and help to treat the water so runoff does not contaminate the watershed

Lutheran World Relief also helps farmers improve the health and productivity of their soil and minimize erosion through SLM practices, such as crop diversification and rotation, conservation tillage, use of organic fertilizers and soil amendments, and agroforestry. In Nicaragua, we partnered with Asociación de Cooperativas de Pequeños Productores de Café de Nicaragua (CAFENICA) to assist certified organic, small-scale coffee farmers to apply and evaluate the use of mineral amendments and organic fertilizers for their soil and coffee trees over the course of three harvest cycles. As a result of these practices, farmers increased their productivity by 126 percent when compared to farms not using these methods due to their recovered soil fertility and plant health.

MAXIMIZING COLLABORATIONS

In our more than four decades of experience working with small-scale farmers in Latin America, Lutheran World Relief has cultivated an extensive and diverse network of collaborative partnerships. We harness the knowledge and resources of our partners to more holistically meet the environmental conservation needs of rural communities. For example, our long-term relationships with research institutions, such as The Tropical Agricultural Research and Higher Education Center (CATIE), The International Center for Tropical Agriculture (CIAT), The World Agroforestry Centre (ICRAF), The Honduras Foundation for Agricultural Research (FHIA), and Bioversity International have helped us extend farmer access to research findings, expert knowledge and best practices in environmental conservation agriculture practices. Additionally, in partnership with certifiers such as Biolatina, FLO and Rainforest Alliance/UTZ, we provide training and technical assistance to farmers organizations so they can achieve certifications related to environmental conservation in agriculture.

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