



ADVANCING REGENERATIVE AGRICULTURE FOR THRIVING ECOSYSTEMS AND COMMUNITIES

Since 1944, Heifer International has worked to sustainably address hunger and poverty through agriculture, supporting more than 46 million farmers. Operating in 19 countries across Africa, Asia and the Americas, we equip smallholder farmers with the tools and knowledge needed to transform their communities.

Heifer's mission is to create lasting change by supporting farmers — especially women — to increase their livelihoods through innovative sustainable and regenerative practices.

We are pioneering a new dimension of regenerative agriculture by seamlessly integrating sustainable agriculture and livestock practices into diverse farming systems. Our locally-led approach enables smallholder farmers — especially women — across the globe to enhance soil health, boost biodiversity, and strengthen community resilience.

By combining traditional knowledge with innovative techniques, we are transforming farms, restoring ecosystems and creating the conditions of sustainable livelihoods for the rural communities in the counties where we work.

The impact of our regenerative agriculture initiatives is exemplified in case studies spanning from Nepal to Malawi and beyond, where there are measurable improvements in agricultural productivity, environmental sustainability and farmers' incomes.



HEIFER'S REGENERATIVE APPROACH

Focusing on the following key principles, Heifer promotes regenerative agriculture and livestock value chains that are ecologically beneficial and transform food systems:

1. Integrating the Farm with its Ecosystem

- **Healthy Soil Practice:** composting, cover cropping and minimal tillage improve soil health, increase water retention, and enhance nutrient availability.
- **Biodiversity:** integrating diverse crops and livestock, native hedge rows, integrated pest management and elimination, reduction, replacement of non-organic inputs creates balanced and resilient ecosystems, breaking pest cycles and enriching soil to use biodiversity to create a more dynamic and sustainable farm environment.
- **Water Conservation:** rainwater harvesting, drip irrigation and small water storage systems optimize water use and sustain crops during dry periods.
- **Agroforestry:** incorporating trees and shrubs in farms offers shade, reduces erosion, improves soil health, supports biodiversity and contributes to carbon sequestration.



2. Empowering Local Communities

- **Strengthening cooperatives and associations:** for better resource access, market opportunities, and resilience against economic and environmental shocks.
- **Community and Knowledge Sharing:** encouraging the sharing of traditional knowledge and local innovations among farmers to adapt sustainable practices effectively.
- **Inclusive Decision-Making:** ensuring participation from women, youth and marginalized groups in decision-making for equitable development.

3. Building inclusive food systems

- **Economic Viability and Livelihoods:** supporting diversified income streams, local market development, value-added products, fair pricing and access to financing for sustainable livelihoods.
- **Food & Nutrition Security for All:** growing nutrient-dense crops to provide a stable and diverse food supply, improving nutritional outcomes and reducing dependency on single crops contributing to overall health and well-being.



CASE STUDY

SMALLHOLDER-LED SUSTAINABLE LIVESTOCK VALUE CHAIN IN NEPAL

Since 2012, Heifer International has supported sustainable livestock practices among goat farming cooperatives in Nepal, reaching 300,000 smallholder farmers, with 95% being women. The program improves productivity, environmental impact and community resilience by encouraging farmers to shift from traditional extensive grazing to sustainable livestock production.

KEY INITIATIVES AND ACHIEVEMENTS:

- Transitioned from natural grazing to cultivated fodder covering 16,000 hectares reducing environmental pressure and supporting the national GHG reduction targets.
- Adoption of improved livestock sheds for better manure management, reducing GHG emissions and enhancing animal health.
- Practices such as using improved breeds, forage and feed additives have increased productivity by 40% for goat farmers, with offtake rates doubling and leading to a 14% rise in income.



Environmental Benefits:

- Practices have significantly reduced land and water use intensity (water use down by 87-98% and GHG emissions down by 74-91%).



Training and Knowledge Sharing:

- Implemented a train-the-trainer model ensuring widespread adoption of regenerative practices and enhancing community resilience.



Social Impact and Empowerment:

- Women constitute 99% of participating farmers with 60% of market supply from smallholders, strengthening social capital and market leadership.



CASE STUDY

REGENERATIVE SPICE PRODUCTION IN GUATEMALA

Since 2020, Heifer initiated the *Green Business Belt* program to transform the spice production system in the Alta Verapaz region of Guatemala. The program is increasing the well-being of 6,500 farmer communities by promoting agroforestry and soil improvement practices, particularly among women and youth producers.

KEY INITIATIVES AND ACHIEVEMENTS:



Agroforestry Plantations:

- Supported municipal and community nurseries to produce 226,500 plants for spice plantations.
- Increased natural habitat, carbon sequestration, and improved soil for spice production.



Enhanced Spice Production Management:

- Improved grafting and climate-resistant varieties increased efficiency.
- Introduced mobile spice dryers, reducing drying time by 11% and firewood use by 10%. To date, 215 mobile dryers are in use.
- Income increased from \$1,400/month in 2020 to \$4,700/month in 2023.
- \$343,517 generated from spice sales.
- Developed compost stations producing 130 tons of organic fertilizer.



Environmental Benefits:

- Improved management across 4,750 acres in the Central American highlands.



Training and Sharing Knowledge:

- Strengthened 17 farmer producer organizations with training in entrepreneurship and community organization.
- Supported two FPOs in developing business plans.



Social Impact and Empowerment:

- Women constitute 99% of participating farmers, with 60% of market supply from smallholders, strengthening social capital and market leadership.
- Household solidarity and cooperation increased from 50% to 82%.



CASE STUDY

RENEWABLE ENERGY FOR DAIRY COOPERATIVES IN UGANDA

Since 2023, Heifer l has partnered with the PREO program to implement the *Solar for Sustainable Income in Dairy* (SSID) project in Uganda. This initiative aims to reduce energy costs for dairy cooperatives through solar power, enhancing financial sustainability and environmental impact.

KEY INITIATIVES AND ACHIEVEMENTS:



Solar Energy Installations:

- Solar systems totaling 106.38 kWp were installed across three dairy cooperative sites. This transition from diesel generators has significantly lowered operational costs and reduced reliance on unreliable power grids.



Training and Knowledge Sharing:

- Collaborative efforts with partners, including Aptech Africa Ltd and All In Trade, have ensured the effective implementation and maintenance of solar systems. Training programs have equipped cooperative members with the skills to utilize solar energy effectively, fostering local capacity and knowledge transfer.



Environmental Benefits:

- The shift to solar energy has cut CO2 emissions by 10.95 tons per month and improved milk chilling capacity, reducing spoilage and enhancing milk quality.



Economic Impact:

- At Migina Milk Collection Centre, energy costs were reduced by 42%, with expected savings reaching 95% after loan repayment, contributing to greater income stability for smallholder farmers.



Social Impact:

- The project has improved operational efficiency and income stability, creating new job opportunities for local technicians and engineers. It has also strengthened community resilience by providing sustainable energy solutions.



CASE STUDY

PASTURED PORK PROJECT IN THE UNITED STATES

Heifer USA's *Farmer Outreach & Support* project addresses agricultural inequality while advancing regenerative agriculture practices by supporting historically underserved farmers in the southern states who produce pasture-raised, grass-fed livestock.

The *Mississippi Pastured Pork* project is central to this effort, developing a sustainable pastured pork value chain within the state. The project ensures that all processes, such as accessing feed and markets remain within Mississippi, enabling farmers to increase their earnings, boost local economies and adopt regenerative practices.

KEY INITIATIVES AND ACHIEVEMENTS:



Training and Knowledge Sharing:

- Heifer Center for Regenerative Agriculture, a 2,000-acre learning center in Arkansas, provides hands-on farmer training in swine management of pastured pork and support infrastructure and technical assistance for pork producers.



Social Impact and Empowerment:

- The project tackles the decline of black-owned farms, which have decreased by 98% over the past century. Through this project, historically underserved farmers are accessing infrastructure, training and markets, building a more equitable and resilient agricultural landscape in Mississippi.



Environmental Benefits:

- Heifer USA teaches farmers to manage the complexity of ecosystems, promoting regeneration through livestock management.
- Under a USDA Climate-Smart grant, Heifer USA is providing incentives and technical assistance to farmers for transitioning to climate-smart practices.

PARTNER AND COLLABORATE WITH US:

Heifer International collaborates with key development organizations in the realm of regenerative and sustainable agriculture. Over the last decade, technical and strategic partnerships have been developed with the International Centre for Tropical Agriculture (CIAT - Bioversity Alliance / CGIAR), the International Livestock Research Institute (ILRI / CGIAR), the United Nations Development Program (UNDP), the UN Food & Agriculture Organization (FAO), the Global Environment Fund (GEF), or Conservation International (CI) among others. At country level, Heifer International works with national and local governments to advance regenerative agriculture through projects and technical assistance.

Heifer International has forged strategic business alliances with the private sector, both locally and internationally, facilitating impactful supply chain engagement, advancing ESG goals, enabling access to finance and providing tailored technical assistance.

Our partnerships with companies like Cargill, Walmart, John Deere, Starbucks, ECOM, Danone and many others are fostering mutually beneficial outcomes for communities and businesses alike.

We also facilitate partnerships with local stakeholders, including banking and financial institutions and small and medium-sized enterprises, to reach many smallholder farmers across organized and semi-organized value chains.



Through Heifer Impact Capital, our investment and access-to-finance branch, we connect with impact investors to support sustainable agriculture projects. Using recognized standards like AFOLU, VERA and the Gold Standard, we have self-evaluated our projects, estimating carbon sequestration impacts.

As we strive to create a regenerative, socially inclusive and economically viable model of agriculture value chains, we invite like-minded partners to collaborate and amplify the impact of our work.

Contact us to learn more about partnering with Heifer International:

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