



Advancing Sustainable Livestock To Benefit Smallholder Farmers

Livestock are integral to food systems throughout most of the world. For smallholder farming communities in low- and middle-income countries (LMICs), livestock play a key role in providing nutritional, economic, social and environmental benefits. For instance, the importance of livestock in soil regeneration is huge in the current context where soils are being more and more degraded.

An estimated 600 million of the world's low-income smallholder farming households earn their livelihoods primarily from raising livestock, while the livestock sector employs more than 1.3 billion people worldwide. Even so, global policy and donor support for the livestock sector is relatively minor, accounting for less than one percent of overseas development assistance.

In recent years, particular focus on the contribution of livestock and consumption of animal proteins to the current climate crisis has further challenged proponents of constructive livestock development. This comes at a time when regenerative and innovative climate-friendly practices show great potential for scaling.

Meanwhile, pastoralist herders and other livestock-dependent communities in LMICs are themselves experiencing serious negative impacts from climate change through increased frequency and intensity of droughts, heat waves, floods and storms. This heightens the urgency of targeted interventions that allow these communities to adapt and thrive to maintain their livelihood.

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Our Approach to Sustainable Livestock

Heifer International advances Sustainable Livestock as part of our integrated, market-based model for strengthening smallholder households' economic and climate resilience. We help these households develop and adopt practices which, when properly implemented, can address nutritional deficiencies, boost local incomes, reduce greenhouse gas emissions, regenerate degraded landscapes and improve animal health and well-being. Heifer contributes to a livestock sector that benefits everyone involved, fostering profitability and environmental responsibility.



One Health and Animal Well-being:

We prioritize the well-being of animals and promote sustainable production systems.



Social Inclusion and Justice:

We strive for equitable participation and benefits for all stakeholders in the livestock value chain, emphasizing the inclusion of women and youth.



Economic Viability:

Our aim is to generate sustainable incomes for all involved, ensuring the sector's long-term viability.



Climate & Environmental Care:

We are committed to reducing the carbon footprint of livestock and promoting its regenerative benefits to soils, biodiversity, ecosystems and the planet.

Our Sustainable Livestock Strategies:

- **Integrated Livestock Standards:** We advocate for holistic and safe livestock production standards that benefit both producers and consumers.
- **Social Capital Development:** We help facilitate collective action within farming communities, fostering locally-led development.
- **Inclusive Participation:** We work to involve women and youth in livestock activities, empowering them throughout the value chain.
- **Market-Led and Collaborative Value Chains:** We enhance market-driven value chain development and cooperate with all value chain actors to ensure participation, benefits and integration into existing systems.
- **Ecosystem Health:** We encourage regenerative livestock practices, such as rotational grazing and developing forage resource centers (and more), to create healthy ecosystems.
- **Carbon Accounting:** We develop and apply farm-level carbon and greenhouse gas emission accounting systems, along with carbon credit systems for producers.



Africa: Supporting Sustainable Dairy Value Chains

Heifer International has been helping smallholder farmers adopt climate-resilient practices including fodder production, conservation and utilization with feed supplementation and utilization of crop residues in support of climate change adaptation while increasing milk productivity. Along with climate-smart dairy production, Heifer's interventions enhanced community based and privately-led last-mile extension delivery, access to market and innovative financing services, strengthened institutional and business capacity for farmer producer organizations (FPOs).

Through the *Accelerating Dairy Production and Productivity* project in Uganda, Heifer helped 36,000 dairy farmers adopt climate-resilient practices while doubling their milk productivity and increased capacity utilization of 22 percent by an associated private processor.

In the *Kenya Market-Led Dairy Value Chain Supply* project, Heifer catalyzed sustainable market system livestock interventions for 30,000 smallholder dairy farming households.

Through *Tanzania Milk Processing Project* (TMPP), a market-led project, Heifer has helped 54,072 smallholder dairy farmers, 40 percent of which are women, increase their monthly household income 35 percent; improved cow productivity by 26 percent and daily milk collection through FPOs (cooperatives) from 56,000 to 129,000 litres per day while ensuring milk rejections are an infrequent anomaly.



Americas: Reducing Carbon Footprints in Honduras



In Honduras, Heifer's USAID-supported *Sustainable Livestock Signature Program (2020-2030)* generates systemic change in the dairy sector through promotion of competitive, resilient and inclusive market systems while directly benefiting 90,000 livestock farmers. With funding from the Global Environment Facility and in partnership with the UN Food and Agriculture Organization (FAO), the program also advances environmental sustainability by protecting biodiversity and recovering degraded ecosystems while monitoring reductions in carbon footprints of demonstration farms. The program indicates a 37 percent reduction in these farms' carbon footprints through improved pasture management, natural regeneration of native species to feed livestock, incorporation of live (vegetative) fencing and improvement of the physical and chemical conditions of the soil.

So far, 2,250 hectares within the cattle farms' properties have been reforested and biodigesters have been installed as a renewable energy source. To ensure technical sustainability, the program trained 480 community para-technicians (of which 95 percent are youth and 26 percent women) in animal health, nutrition, pasture management and artificial insemination, generating services for farmers and improved livelihoods for the para-technicians. The program leveraged alliances among donors, government and private companies to improve competitiveness and sustainability in the livestock sector.

United States: Environmental Regeneration with Improved Poultry Practices

In the U.S., Heifer promotes animal well-being, ecosystem health, economic viability, farmer quality of life and community advancement. A current priority focus area is pastured poultry, wherein chickens live on pasture, providing positive inputs for soil health, forage diversity and soil aeration that leads to increased water holding capacity and soil organic matter. Pastured poultry also are boosting jobs and incomes at processing plants in rural areas.



In 2023, thanks to collaboration between **Heifer Ranch Center for Regenerative Agriculture** and our smallholder farmer, livestock processing and market development partners, 230,000 regeneratively raised broiler chickens were produced, processed and sold. The robust sales of these birds nurtured both the land and the livelihoods of those involved.

Asia: The Impact of Smallholder-led Sustainable Livestock in Nepal

Heifer has supported the implementation of sustainable production practices by goat farming cooperatives in Nepal since 2012, reaching some 300,000 smallholder farmers (nearly all women). Thanks to Heifer's programs, farmers shifted to sustainable livestock production methods such as investing in better performing breed stock, cultivating forage, using crop residues or locally available feeds as an alternative to open grazing, and investing in better sheds and animal housing. These animal management improvements have increased productivity by 40 percent while reducing farm labor required per animal and environmental impacts.

Through climate-smart interventions, farmers have reduced their land use intensity by 80 percent, water use intensity by more than 90 percent and greenhouse gas (GHG) emissions intensity by 78 percent. These program impact measurements have been conducted in partnership with The Alliance of Bioversity International and CIAT.

Fodder plantations are increasing soil quality, keeping continuous roots/plants in the ground, capturing carbon, reducing soil erosion, improving soil water capture, infiltration and holding capacity, and thus reducing downstream flooding. The extent of fodder/forage cultivation covering 16,000 hectares of land has contributed to achieving the Nepal governments' Nationally Determined Contribution (NDC) target for reducing GHG emissions.



Better animal management methods increased productivity by **40 percent**

About Heifer International

Since 1944, Heifer International has worked with more than 46 million smallholder farming households — 3.6 million in 2023 alone — to help them address hunger and poverty in their communities. Heifer's experts in agricultural production, processing, marketing and market development currently work with farming communities, value chain actors and development stakeholders in 19 countries across Africa, Asia and the Americas.

Our locally led strategy focuses on supporting farming households to generate lasting systemic change while caring for the Earth and reducing climate impacts. We emphasize the power of community mobilization and collective enterprise; targeted technical training, with an emphasis on women, youth and indigenous populations; facilitation of market linkages in agricultural value chain; and access to innovative sources of finance and technologies.

Taking Collective Action

Heifer International focuses on partnerships with farming organizations, governments, donors, businesses, researchers and other food systems stakeholders to:

- Collaborate with technical actors to define innovative and efficient approaches to sustainable livestock development and transformation.
- Increase resources and boost investment to scale up sustainable livestock models.
- Support sustainable locally led development for the benefit of smallholder livestock farmers.

Contact us to learn more about partnering with Heifer International: heifer-dc@heifer.org

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