

## The Impact of Dairy Development on Socio-Economic Transformation



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## KEY TAKEAWAYS:

- A sustainable food system delivers food and nutrition security for all without compromising environmental or socio-economic bases for future generations.
- Dairy development ensures more milk is produced with less, which in addition to protecting the environment, benefits consumers by making dairy nutrition more accessible and affordable.
- As dairy systems modernize and become more efficient, less people are employed on-farm and farm-household income increases, as do wages along the value chain.
- Growth in dairy is linked with positive socio-economic outcomes including greater efficiency and improved food access with less environmental footprint and expanded economic inclusion, greater agricultural value, and an expanded tax base for governments.

According to the Food and Agriculture Organization of the United Nations (FAO), “A **sustainable food system** is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised.”<sup>1</sup> Dairy’s contribution to nutritional security is well recognized. Milk is a nutrient-rich food that promotes health across the lifespan, providing nourishment for **approximately 80% of the world’s population** (around 6 billion people).<sup>2</sup> Milk is a **leading provider** of high-quality protein, calcium, and other essential nutrients in the global diet,<sup>3</sup> the consumption of which is linked with **improved diet quality and reduced risk for malnutrition**, particularly for vulnerable population groups including children and women of reproductive age.<sup>4</sup> This is why dairy is vital to nutritional security.

With world population expected to reach nearly 10 billion by 2050, it is challenging to ensure food and nutrition security for all while protecting the environment for future generations. Fortunately, through programs such as the **Dairy Sustainability Framework** and **Pathways to Dairy Net Zero**, the dairy sector demonstrates continual improvement in environmental metrics. According to the FAO, **global farm-gate emissions intensity of dairy decreased** approximately 24% from 2000 to 2022.<sup>5</sup>

Global discussions around the role of livestock in sustainable food systems often focuses on environmental impact, without adequate consideration for nutritional security and socio-economic gains. That is why the **Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action**, sometimes referred to as the, “Emirates Declaration” that was adopted during the United Nations Climate Change Conference (COP28) in 2023 under the presidency of

the United Arab Emirates was a pivotal moment. The Emirates Declaration spotlighted the necessity of ensuring access to safe, sufficient, affordable, and nutritious food for all and called for food systems to be integrated in climate-action plans with policy orientation toward increasing incomes, productivity, and livelihoods in response to the imperatives of climate change.<sup>6</sup>

A new study published in *World*, “**Dairy’s Development and Socio-Economic Transformation: A Cross-Country Analysis**,” confirms what many in the sector already know, dairy is a catalyst for positive socio-economic transformation.<sup>7</sup> It’s already been demonstrated that dairy contributes to livelihoods - **Dairy is the largest agricultural commodity by value, third by volume.**<sup>8</sup> There are approximately 600 million people living on 133 million dairy farms around the world with 400 million additional people supported by full time jobs related to dairy farming.<sup>8</sup> That means dairy directly and indirectly sustains the livelihoods of 1 billion people worldwide while providing essential nutrition and strengthening rural economies. This latest study, which draws on a comprehensive dataset from 187 countries collated by the Global Agenda for Sustainable Livestock (GASL), FAO, the International Farm Comparison Network (IFCN) - Dairy Research Network, the International Fund for Agricultural Development (IFAD), and Global Dairy Platform (GDP) highlights how dairy development (as measured by milk yield) improves farmer incomes, creates employment opportunities in processing, expands consumer access to nutrition, and can strengthen governments’ revenues.<sup>7</sup> Together, these findings underscore dairy’s central role in helping to build more resilient food systems and societies that ensure sustainable food and nutritional security for all.

## Dairy Development Impacts Livelihoods

The cross-country analysis observed a trend that as dairy development (milk yield measured in kilograms per cow per year) increases, fewer people live on farms and dairy farm income per family member increases. The researchers also observed a significant association - that as dairy development increases, so too does farm labor productivity. According to researchers, as dairy systems become more efficient, fewer workers are needed on farms, but this is balanced by new opportunities across the value chain. Dairy processing, transport, and retail expand in the early phases of sector growth, creating jobs and supporting rural industrialization until growth plateaus and decreases. Importantly, wages in these industries rise alongside productivity, offering workers better prospects and more secure livelihoods.<sup>7</sup>

The shift also creates space for innovation and entrepreneurship, particularly for younger generations who are drawn to technology, business, and value-added services within the dairy economy. With the right policies in place, this transition can be an engine of modern rural development.

## Governments Benefit

Researchers found that dairy growth also strengthens public institutions. As more milk flows through formal channels, governments benefit from increased revenues, better food safety monitoring, and greater transparency in value chains. The sector’s contribution to agricultural GDP expands as it matures, making it a reliable partner for national development goals.<sup>7</sup>

These improvements go hand in hand with stronger consumer confidence, safer products, and greater international competitiveness for dairy industries worldwide.

## Consumers Benefit Most

The greatest gains from dairy development are enjoyed by consumers. Increased milk supply makes dairy more available and accessible, the first step toward food security. Researchers found that the availability and access that come with dairy development drive affordability, the cost of the diet relative to income. These gains are steeper for lower levels of development and tend to plateau in more developed markets.<sup>7</sup>

## A Balanced Food Systems Perspective

Challenges for the dairy sector such as managing labor transitions or ensuring environmentally sustainable practices remain, but they are not insurmountable. Indeed, the sector has already demonstrated its ability to innovate - from improving animal health and feed efficiency to investing in sustainable development practices that lower emissions per liter of milk. These steps show that the dairy sector can continue to make environmental progress while being socially transformative. Further, continued technological advancements in the dairy value chain are expected to help spark more growth in production and yields in the Global South, such as Sub-Saharan Africa, India, and Pakistan.<sup>7</sup>

The evidence from the cross-country analysis of dairy's development and socio-economic transformation aligns with those of agricultural development more broadly, reinforcing its vital role in achieving the **UN Sustainable Development Goals (SDGs)**.<sup>9</sup> Dairy supports poverty reduction (SDG 1), zero hunger (SDG 2), better health (SDG 3), and economic growth and jobs (SDG 8). These findings indicate dairy development should be a global priority for building a more resilient, inclusive and sustainable global food system.

### DAIRY LEADERSHIP: A CALL TO ACTION

- Expand formalization and value chain integration, especially in developing regions, to boost efficiency, improve food access, and expand economic inclusion.
- Continue to invest in sustainable transformation to ensure productivity gains reduce environmental footprint.
- Leverage dairy's nutritional power by embedding dairy development into public health strategies aimed at combating poverty, hunger, and malnutrition.

*For more information on the Global Dairy Platform's Perspective Papers or our Quarterly Webinar Series, please reach out to Dr. Beth Bradley at [Beth.Bradley@GlobalDairyPlatform.com](mailto:Beth.Bradley@GlobalDairyPlatform.com)*

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