

Healthy Sustainable Food Systems

Addressing society's most complex issues requires a systems-based approach that maximizes partnerships and innovation. The United Nations Sustainable Development Goals (SDGs) offer a framework for tackling these challenges by fostering cross-sector collaboration and guiding policy decisions. The dairy sector is helping catalyze progress towards achieving the SDGs, improving quality of life, reducing global disparities, and ensuring a sustainable future for all.

13 CLIMATE ACTION



The Situation

- The modern global food system was shaped by the Green Revolution, which dramatically increased food production through high-yield crop varieties, chemical fertilizers, mechanization, and irrigation. While this transformation helped prevent famine and reduce extreme hunger, it also led to over-reliance on a few staple crops, environmental degradation, and rising diet-related health issues.
- As the world's population increases, the global food system will be expected to provide more food more efficiently. To feed the projected 10 billion people in 2050, production would have to increase nearly 50%.¹ Already, 2.8 billion people cannot afford a healthy diet, and 2.3 billion people are food insecure.²
- Agriculture is the largest source of greenhouse gas (GHG) emissions, with emission intensity from food production 5-10x the global average in some regions. As the world strives to limit global warming to 1.5°C, food system transformation is imperative, particularly in low- and middle-income countries,³ where vulnerabilities to climate change are greatest.

The Path Forward

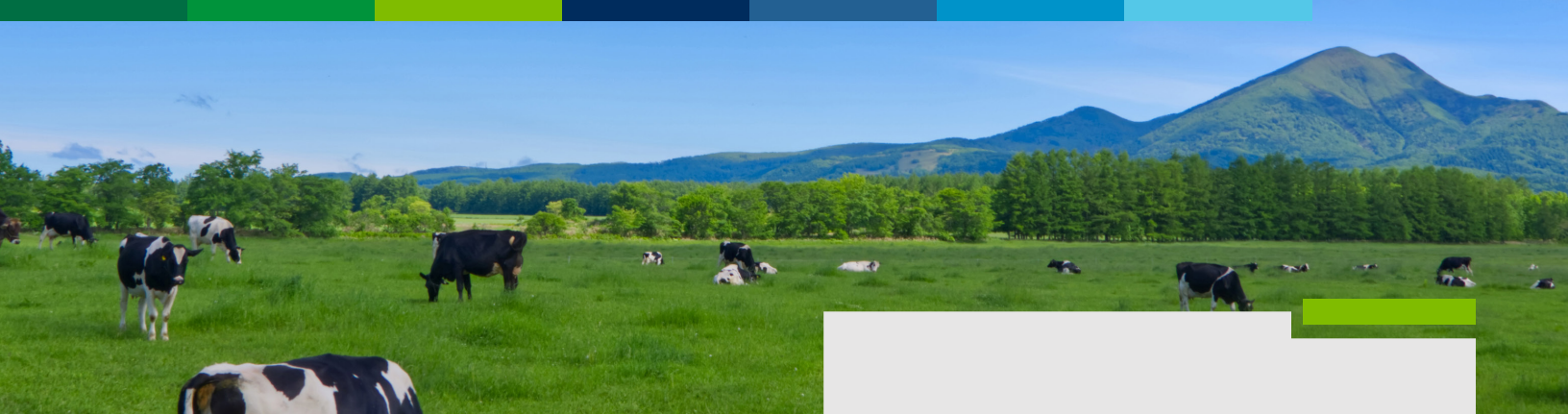
To feed a growing population while mitigating the effects of climate change, today's food system must shift from simply producing more food and calories, to ensuring sustainable nutrition – providing nutrient-rich, diverse diets that promote human and planetary health. A truly sustainable food system should strengthen food and nutrition security and align with climate goals by addressing mitigation, adaptation and resilience. Breaking down sectoral silos and fostering regionalized collaborative efforts will be essential in securing a sustainable food future for all. This requires leveraging nature-positive agricultural



practices, improving efficiency, reducing emissions, and enhancing the livelihoods of farmers and rural communities.

How Dairy Can Help

- **Delivers resource-efficient nutrition:** The global dairy herd converts 2.5 billion tons of dry matter feed that are inedible to humans - such as feed grass, straw, and crop byproducts - into high quality protein and other essential nutrients. Dairy products provide calcium, vitamins A and B12, and other vital micronutrients making them a key component of healthy and accessible diets worldwide.⁴
- **Enhances agricultural value and ecosystem services:** When managed sustainably, livestock contribute to critical ecosystem functions such as nutrient cycling, soil carbon sequestration, and biodiversity support.⁵ Using cow manure as a natural fertilizer enhances soil fertility, reduces reliance on synthetic fertilizer and improves crop yields, strengthening local food systems and supporting economic growth, particularly in developing communities.⁶
- **Advances climate smart dairy production:** Milk production contributes less than 3% of total anthropogenic GHG emissions globally, with continuous improvements in efficiency reducing the sector's carbon footprint.⁷ Between 2000 and 2022, global farm-gate emissions intensity for dairy decreased by approximately 24%, demonstrating the industry's ongoing commitment to sustainability.⁸



Partnering with Dairy

- **Promote cooperative efforts to support inclusion of nutrient-rich dairy in healthy sustainable diets:** Animal sourced foods, such as dairy, are vital for combatting malnutrition by providing affordable and accessible essential nutrients. Consumption should be considered within the nutrition needs locally, while facilitating practices that grow local economies and mitigate environmental impacts to ensure sustainable production.⁴
- **Collaborate to build a stronger, more resilient food system:** The dairy sector plays a critical role in sustainable food systems. There is a link between increased dairy production, better access to nutrient-rich food, and improved local economies.⁶ Dairy enhances dietary diversity in plant-based eating patterns while contributing more bioavailable nutrients than plants alone. Additionally, when managed responsibly, dairy farming supports agricultural ecosystems and contributes to climate solutions.
- **Invest in technology to lower climate impact:** Innovations on the farm and throughout the dairy value chain are lowering the environmental impact of dairy production. Farmers in multiple countries are using DNA and data to select more productive cows and repurpose crop waste, leading to at least 6-10x more milk production and reduced on-farm emission intensity. Others are working toward breeding low-emission cows, developing feed additives that will cut methane production, and more.



Scan for references
and more information

Impact Story

Pathways to Dairy Net Zero (P2DNZ)

OVERVIEW

Launched September 2021, this growing movement is dedicated to reducing dairy's greenhouse gas (GHG) emissions over the next 30 years. It underscores the dairy sector's commitment to climate action, bringing together more than 200 dairy companies and organizations throughout the dairy supply chain to address challenges across both developed and emerging markets.

COLLABORATORS

Global Dairy Platform, International Dairy Federation, Sustainable Agriculture Initiative Platform, International Livestock Research Institute, Dairy Sustainability Framework, and IFCN Dairy Research Network

KEY OUTCOMES⁹

- Generating pre-competitive collaboration in developed dairy markets through carbon accounting, dairy processing, methane reduction, and animal nutrition workstreams
- Partnered with the Global Methane Pledge and FAO to reduce dairy emissions in nine dairy countries in emerging markets
- Co-financing \$400 million USD to support the transition of dairy systems in Kenya, Rwanda, Tanzania, and Uganda to lower emissions and climate-resilient pathways
- Collaborated with the Global Research Alliance and FAO to model the warming effect of different mixes of GHG and mitigations as well as examine barriers to uptake of mitigation strategies in different countries and systems