



# Sustainable agriculture and equitable food systems transformation

Policy recommendations | June 2026

## Background

Agriculture, forestry and other land use (AFOLU) are central to the climate crisis, and rapid mitigation across food systems is essential to achieving the 1.5°C goal. AFOLU contributed an estimated 13–21% of global greenhouse gas (GHG) emissions between 2010 and 2019<sup>1</sup>, while food systems as a whole accounted for approximately 34% of total global emissions in 2015<sup>2</sup>. Agriculture is a leading source of potent short-lived climate pollutants, responsible for around 40% of global methane emissions<sup>3</sup>, primarily from livestock, and the majority of nitrous oxides emissions from fertiliser use, a gas approximately 270 times more potent than CO<sub>2</sub> over a 100-year period<sup>4</sup>. These emissions are rising, and evidence shows that even with the rapid elimination of fossil fuel emissions, emissions from the current global food system alone would make it impossible to limit warming to 1.5°C<sup>5</sup>. Addressing emissions from high-emitting agricultural activities, while safeguarding food security and livelihoods, is therefore indispensable to any credible climate strategy.

At the same time, food systems remain critically underfunded and increasingly exposed to cross-sectoral risks. Despite the scale of the challenge, only a small fraction of climate

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<sup>1</sup> IPCC, Sixth Assessment Report, Working Group III: Mitigation of Climate Change, Chapter 7: Agriculture, Forestry, and Other Land Uses (AFOLU), available at: <https://www.ipcc.ch/report/ar6/wg3/chapter/chapter-7/>

<sup>2</sup> Crippa, M., Solazzo, E., Guizzardi, D., Monforti-Ferrario, F., Tubiello, F.N. and Leip, A.J.N.F., 2021. Food systems are responsible for a third of global anthropogenic GHG emissions. *Nature food*, 2(3), pp.198-209.

<sup>3</sup> Climate and Clean Air Coalition, 2021, Global Methane Assessment, available at: [https://www.ccacoalition.org/sites/default/files/resources/2021\\_Global\\_Methane\\_Assessment\\_full\\_0.pdf](https://www.ccacoalition.org/sites/default/files/resources/2021_Global_Methane_Assessment_full_0.pdf)

<sup>4</sup> Global Carbon Project, 2024, Global Nitrous Oxide Budget, available at: <https://www.globalcarbonproject.org/nitrousoxidebudget/index.htm>

<sup>5</sup> Clark, M.A., Domingo, N.G., Colgan, K., Thakrar, S.K., Tilman, D., Lynch, J., Azevedo, I.L. and Hill, J.D., 2020. Global food system emissions could preclude achieving the 1.5 and 2 C climate change targets. *Science*, 370(6517), pp.705-708, available at: <https://www.science.org/doi/10.1126/science.aba7357>

finance is directed towards agriculture and food systems, far below the estimated \$430–500 billion USD<sup>6</sup> required annually for a sustainable transition. This gap is compounded by growing pressures at the food–energy–transport nexus. Global food miles already account for nearly 20%<sup>7</sup> of food system emissions, and mitigation choices in sectors such as shipping and aviation, particularly the expansion of crop-based biofuels, risk exacerbating land competition, food price volatility and ecosystem degradation. Projections indicate that up to 27% of global cereal production could be diverted to biofuels and industrial uses by 2034<sup>8</sup>, with significant implications for food security. These risks fall disproportionately on climate-vulnerable countries, including Small Island Developing States and Least Developed Countries, which are highly dependent on food imports and exposed to rising transport costs. Without deliberate policy coherence and equitable financing, current pathways risk locking in high-emission systems, deepening inequalities, and undermining the resilience of global food systems.

## Key policy positions and priorities

### 1. Rapid decarbonisation in line with 1.5°C pathways

Agriculture and food systems must be fully integrated into implementation of the Paris Agreement and reflect States' international legal obligations to act on climate change in high-emitting sectors. Reducing short-lived climate pollutants (SLCPs) from agriculture and food systems is one of the fastest opportunities to slow near-term warming while delivering co-benefits for air quality, health and food security.

- Implement targeted regulatory frameworks addressing potent GHG emissions including methane, nitrous oxides, ammonia, black carbon, and other short-lived climate pollutants from agriculture.
- Prioritise mitigation efforts in the highest-emitting activities, including industrial livestock systems and synthetic fertiliser use, supported by regulatory and financial frameworks enabling low emission fertiliser inputs, such as green hydrogen-based alternatives.

### 2. Ensure a just and equitable transition

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<sup>6</sup> Global Alliance for the Future of Food, 2024, Public Climate Finance for Food Systems Transformation, available at: [https://futureoffood.org/wp-content/uploads/2025/05/ga\\_climatefinancereport\\_2024.pdf](https://futureoffood.org/wp-content/uploads/2025/05/ga_climatefinancereport_2024.pdf)

<sup>7</sup> Li, M., Jia, N., Lenzen, M., Malik, A., Wei, L., Jin, Y. and Raubenheimer, D., 2022. Global food-miles account for nearly 20% of total food-systems emissions. *Nature food*, 3(6), pp.445-453.

<sup>8</sup> OECD and FAO, 2025, OECD-FAO Agricultural Outlook 2025-2034, available at: [https://www.oecd.org/en/publications/oecd-fao-agricultural-outlook-2025-2034\\_601276cd-en/full-report/cereals\\_251d1ece.html](https://www.oecd.org/en/publications/oecd-fao-agricultural-outlook-2025-2034_601276cd-en/full-report/cereals_251d1ece.html)

Climate action must safeguard food security as well as the livelihoods and the rights of vulnerable groups (including the right to a healthy environment and rights on displacement).

- Inclusive participation of climate vulnerable countries, including Small-Island Developing States and Least Developed Countries in global food systems governance and decision-making processes.
- Ensure States properly regulate companies perpetuating harm in their jurisdictions.
- Operationalise just transition principles in agriculture and food systems policies to ensure that small-scale and vulnerable producers, workers, and communities are protected through robust safeguards, social protection measures, and targeted support throughout the transition.

### **3. Prevent harmful biofuel expansion**

Decarbonisation of international transport must not include crop-based biofuels that threaten food security, biodiversity, and land rights.

- Safeguard against the diversion of food crops and land towards fuel production, which shift mitigation burdens onto the agriculture sector, through greater coordination and accountability across sectors.

### **4. Scale-up equitable climate finance and phase out harmful subsidies**

Food systems remain critically underfunded despite their central role in climate mitigation and adaptation.

- Drastically increase international climate finance to align with the \$430-500bn per year needed for a sustainable and agroecological food systems<sup>9</sup> by:
  - Rapidly phasing out subsidies and financial flows supporting fossil fuels, synthetic fertilisers, industrial livestock production, and other emissions-intensive practices, and redirecting these resources towards 1.5C-aligned mitigation and adaptation activities, particularly in climate vulnerable developing countries.
- Improve access to climate finance for climate vulnerable developing countries and small-scale producers by reducing administrative barriers and using redirected public finance to strengthen national capacities.

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<sup>9</sup> Global Alliance for the Future of Food, 2024, Public Climate Finance for Food Systems Transformation, available at: [https://futureoffood.org/wp-content/uploads/2025/05/ga\\_climatefinancereport\\_2024.pdf](https://futureoffood.org/wp-content/uploads/2025/05/ga_climatefinancereport_2024.pdf)