Issue 33
December 30, 2025

NEWSLETTER

Smart & Net-Zero Project

The Smart Net-Zero (SNZ) project team under the Food and Fertilizer Technology Center (FFTC) for the Asian and Pacific Region regularly collects and shares information related to sustainable agri-food systems and climate-smart agriculture, including research, news, policy, data and event updates around the world on the project website.

Overview

Aligning Climate Ambition with Food Systems Transformation after COP30

Recent **Policy** evidence points to a widening gap between climate risks facing agrifood systems and the effectiveness of current responses. FAO assessments show that agrifood systems contribute an average 1/3 of global emissions, while climate finance remains insufficient and unevenly aligned with mitigation and adaptation needs. Escalating risks such as extreme heat are already undermining production, labor capacity, and rural livelihoods, underscoring that climate action must address emissions, resilience, and equity together. Against this backdrop, the latest **News** from COP30 delivered mixed but meaningful signals, advancing discussions on land use, forests, finance, carbon farming, nutrient management, and MRV, yet food systems remain unevenly reflected within formal UNFCCC documents.

The **Research** featured in this issue engages directly with these challenges by focusing on how agrifood systems can be transformed in practice. The main review frames food systems transformation as essential to meeting the Paris Agreement, arguing that incremental efficiency gains are insufficient and that governance must explicitly address trade-offs across climate, food security, and equity objectives. Supporting studies build on this foundation by examining mitigation pathways, climate and carbon policy design, and the conditions under which technological and institutional innovations can translate ambition into implementation. Together, they move the discussion from diagnosing the need for change to examining how transformation can be governed and delivered under real-world constraints.

Open Data highlights international platforms and project-based tools that support evidence-based planning, monitoring, and learning for climate-smart and net-zero agri-food system transitions.

Content

RESEARCH

01 THEME: Policy Incentives, Financing, Pricing; GHG Emission Reduction

Climate change and the urgency to transform food systems

June 23, 2022 | Science |

Introduction: Without rapid changes to agriculture and food systems, the goals of the 2015 Paris Agreement will not be met. In this review, researchers led by the University of Oxford (UK), Erasmus University Rotterdam (Netherlands), and Stellenbosch University (South Africa) argue that transformation is urgent not only because food systems generate about one-third of anthropogenic GHG emissions, but also because they fail to deliver equitable food and nutrition security and drive broader environmental harms. The review highlights the central challenge of designing governance arrangements capable of navigating trade-offs between mitigation options and food security implications across the entire food supply chain.

Key findings: The review concludes that current food system trajectories are incompatible with achieving the goals of the Paris Agreement. Even substantial improvements in production efficiency are insufficient, as mitigation measures confined to the farm level cannot deliver the required emissions reductions without concurrent changes in consumption patterns, land use, and post–farm gate activities. The authors identify persistent systemic barriers that have limited progress to date, including fragmented governance across climate and food policy domains, entrenched interests, and power asymmetries that constrain transformative action. A central challenge for implementation lies in managing trade-offs among mitigation options and other food system outcomes. While many interventions generate potential synergies, they can also create conflicts with food and nutrition security, farmer livelihoods, or local environmental conditions depending on context. The review emphasizes that these trade-offs are often insufficiently recognized at the design stage, leading to resistance and policy failure during implementation. To address this, the authors call for new governance arrangements capable of coordinating actors across the entire food supply chain, making trade-offs explicit from the outset, and guiding integrated packages of mitigation and adaptation measures rather than isolated or sector-specific interventions.

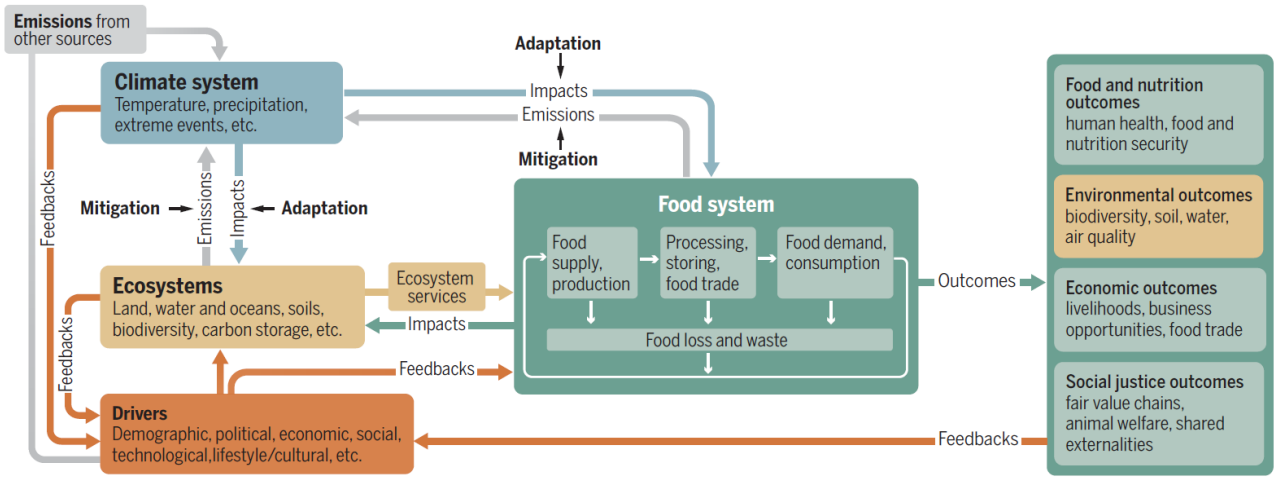


Figure | How climate change, ecosystems, and food system drivers interact to affect food security.

02 THEME: GHG Emission Reduction; Policy Incentives, Financing, Pricing

Challenges and prospects for agricultural greenhouse gas mitigation pathways consistent with the Paris Agreement

May 22, 2020 | Frontiers in Sustainable Food Systems |

Introduction: Global pathways consistent with the Paris Agreement rely on substantial reductions in agricultural methane (CH_4) and N_2O alongside net-zero fossil CO_2. The authors argue that failure to reduce agricultural emissions would make limiting warming to 1.5°C by mid-century all but impossible and would further constrain the remaining carbon budget, increasing reliance on large-scale carbon dioxide removal with associated food-security risks. Led by the New Zealand Agricultural Greenhouse Gas Research Centre (New Zealand), this study reviews why modeled mitigation pathways, often achieved through high carbon prices on agricultural emissions, diverge sharply from real-world policy feasibility.

Key findings: The review highlights a persistent gap between modelled mitigation pathways and policy reality. Most scenarios achieving the required agricultural reductions depend on mandatory emission pricing that reaches high levels over time, yet no country has implemented a compulsory carbon price for agricultural emissions, reflecting concerns about competitiveness, leakage, and impacts on food security and livelihoods. Beyond government policy, the authors identify entry points where non-governmental actors may influence mitigation, including large international food companies setting supply-chain emissions targets and requiring suppliers to meet climate goals, as well as consumer-facing mechanisms such as carbon footprint labelling and shifts in dietary demand. However, the scalability and effectiveness of these pathways remain uncertain, particularly for smallholder and subsistence systems. The review also evaluates productivity and emissions-intensity improvements as a pragmatic starting point because they can align with food security objectives, but it cautions that climate benefits are conditional. Without coordinated changes in food demand, dietary choices, and land-use policies, productivity gains can increase total production and ultimately raise absolute emissions or induce indirect land-use change. Overall, the authors call for integrated supply- and demand-side strategies that bridge the gap between technically plausible mitigation and politically feasible implementation.

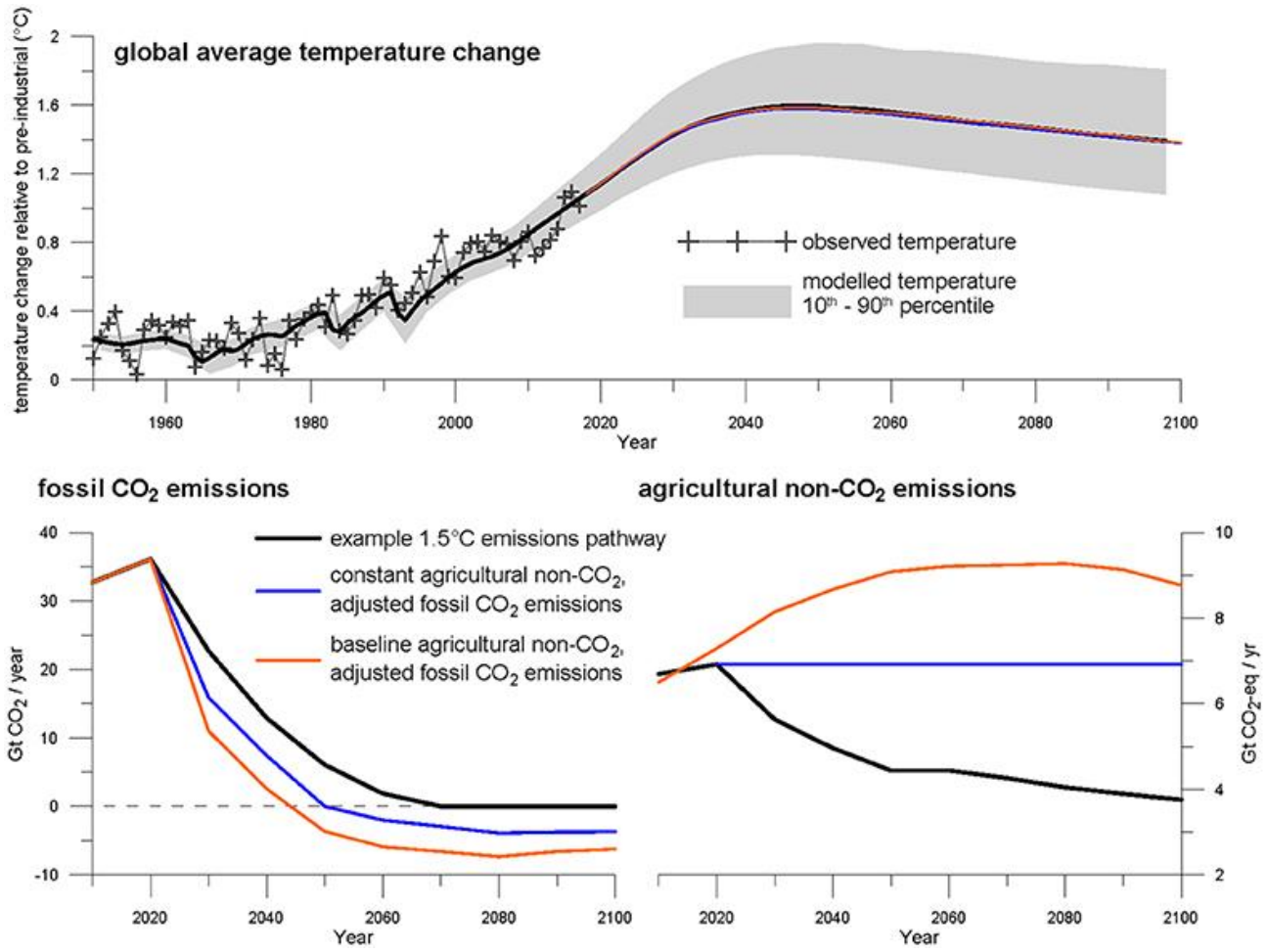


Figure | Three alternative global pathways of fossil CO_2 and agricultural non-CO_2 (CH_4 and N_2O) emissions consistent with global warming of 1.5°C. The lower panels show fossil CO_2 (left panel) and agricultural non-CO_2 (right panel) emissions.

03 THEME: Policy Incentives, Financing, Pricing

Climate and carbon policy pathways for sustainable food systems

September, 2025 | Environmental and Sustainability Indicators |

Introduction: Carbon pricing and related climate policies are increasingly positioned as core levers for decarbonizing food systems, yet their downstream effects on food affordability, supply stability, and distributional equity remain uncertain. In this review, researchers from United Arab Emirates University (UAE), Vellore Institute of Technology (India), and the University of Swabi (Pakistan) synthesize evidence from 122 studies to examine how climate and carbon policy instruments interact with the food system as an integrated sociotechnical system, spanning agricultural production, food retail and consumption, and end-of-chain waste management.

Key findings: The review finds that poorly designed carbon policies can increase food price volatility and disproportionately affect low-income consumers and smallholder producers when applied in isolation. By contrast, integrated policy packages that combine carbon pricing with targeted subsidies, dietary guidance, and support for sustainable practices can reduce emissions while maintaining food security. From a whole food-system perspective, the authors emphasize that mitigation outcomes depend on policy coherence across production, consumption, and waste management, rather than farm-level interventions alone. The review further highlights that managing distributional impacts, cultural food practices, and urban–rural linkages require reflexive governance approaches that allow policy objectives and pathways to be periodically reassessed as conditions and trade-offs evolve. Persistent research gaps remain, particularly in localized dietary emissions data, real-time decision-support tools, and equity-focused policy evaluation. The study provides actionable policy pathways by shifting the debate from whether carbon pricing should be applied to how climate and food policies can be jointly designed and governed.

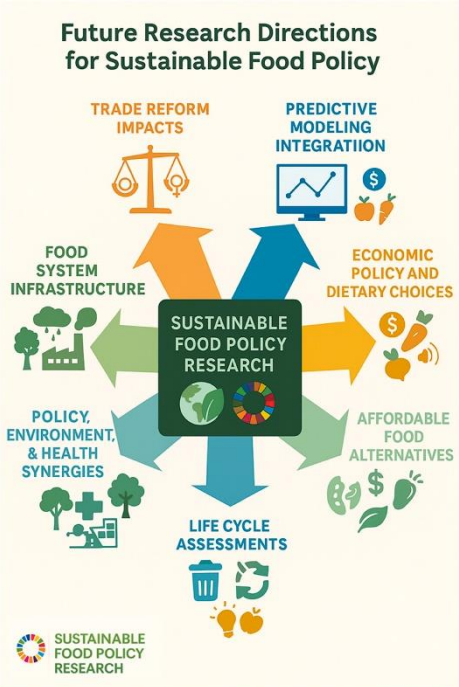


Figure | Future research directions for sustainable food policy.

04 THEME: ICT in Agrifood Sustainability

Recent climate-smart innovations in agrifood to enhance producer incomes through sustainable solutions

March, 2024 | Journal of Agriculture and Food Research |

Introduction: Climate change is undermining agrifood productivity and producer incomes, with small-scale farmers facing heightened exposure due to limited resources and infrastructure. In this review, a research team from the Université Nationale d'Agriculture and the Université d'Abomey-Calavi from Benin synthesizes recent climate-smart innovations that aim to raise producer incomes while safeguarding food security. The paper frames the evidence using the 3 core principles of climate-smart agriculture (CSA) and then links innovations and real-world examples to these objectives, ending with emerging technology directions.

Key findings: The review structures CSA around 3 core principles: **sustainable intensification, adaptation, and mitigation**, and uses this framework to assess income-enhancing innovations across the agrifood system. Beyond these pillars, the authors emphasize enabling conditions, including social equity, notably gender equality through equal access for women to resources, decision-making, and climate-adaptive practices. Evidence across technologies and practices suggests that precision agriculture, resilient varieties, agroforestry, and regenerative approaches can improve resource-use efficiency, resilience, and profitability, but adoption is constrained by finance, technical capacity, and knowledge gaps. Importantly, the review highlights digital innovations as both near-term enablers and future frontiers. It describes how AI and data analytics can support data-driven decisions from field management to supply-chain efficiency, while blockchain can strengthen traceability and trust, potentially improving access to premium markets. The authors also spotlight emerging directions such as biological computing for intelligent sensing and data storage, and digital twins for proactive scenario planning and resource optimization, while noting that costs, accessibility, expertise, and resistance to change remain central implementation barriers.

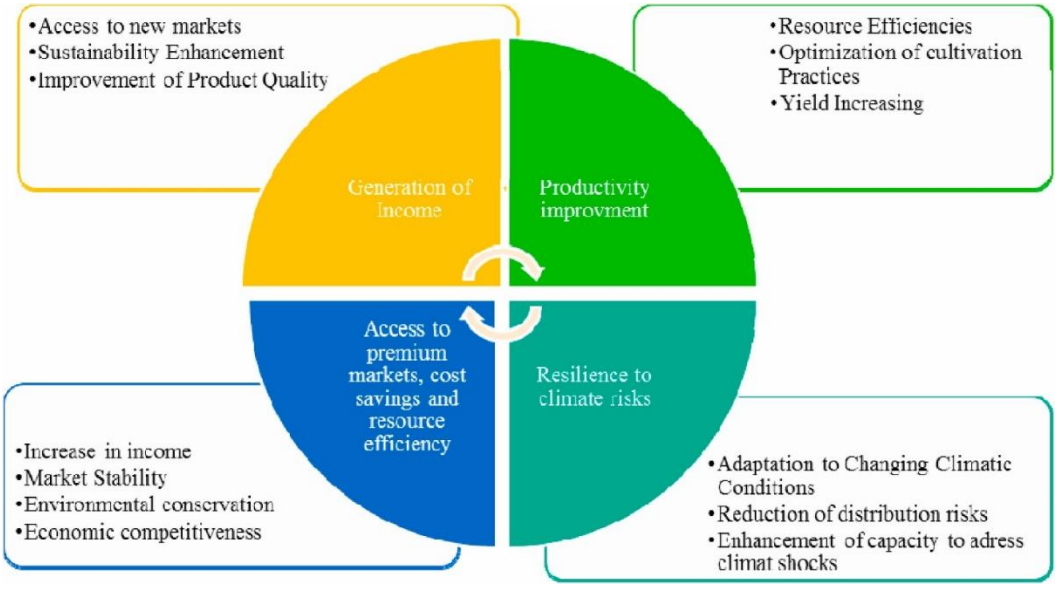


Figure | Climate-smart innovations and their impact on productivity, resilience, income generation, access to premium markets, cost savings, and resource efficiency.

05 THEME: ICT in Agrifood Sustainability

Digital transformation and precision farming as catalysts of rural development

July 14, 2025 | Land |

Introduction: Digital and precision agriculture are widely recognized for improving farm efficiency, yet less is known about their broader social and institutional effects on territorial cohesion, community revitalisation, and youth employment. Addressing this gap, researchers led by the St. Petersburg Federal Research Center of the Russian Academy of Sciences (SPC RAS, Russia) analyse how smart technologies shape rural development pathways across the European Union (EU). The study situates technology diffusion within major EU policy drivers, including the Common Agricultural Policy (CAP) Strategic Plans, SmartAgriHubs, and AgData-related initiatives.

Key findings: The study finds that digital agriculture can reduce input use, raise productivity, and ease labour constraints, while also contributing to rural revitalisation through new employment profiles in digital agronomy, IoT, and geoinformatics. Quantitative indicators suggest rapid uptake of geospatial tools: the share of farms using NDVI (Normalised Difference Vegetation Index)/SAVI (Soil-Adjusted Vegetation Index) for vegetation monitoring rose from 15% (2015) to 75% (2024), with further increases projected. The paper uses Cyprus to demonstrate how targeted EU investments can enable smaller, resource-constrained countries to advance digital transformation, including reported gains in forecast accuracy and accelerated uptake of geoinformation applications. It also reports measurable demographic and labour-market signals in digitalised areas, including a 14% decline in youth emigration in selected regions and growth in digitally oriented agricultural jobs linked to EU-supported pilots. Looking ahead, the authors argue that the next stage is a shift from partially digitalised farms toward highly autonomous production systems that integrate robotics, sensor networks, and real-time analytics, while warning that uneven infrastructure, skills, and institutional capacity can widen rural digital divides without inclusive support.

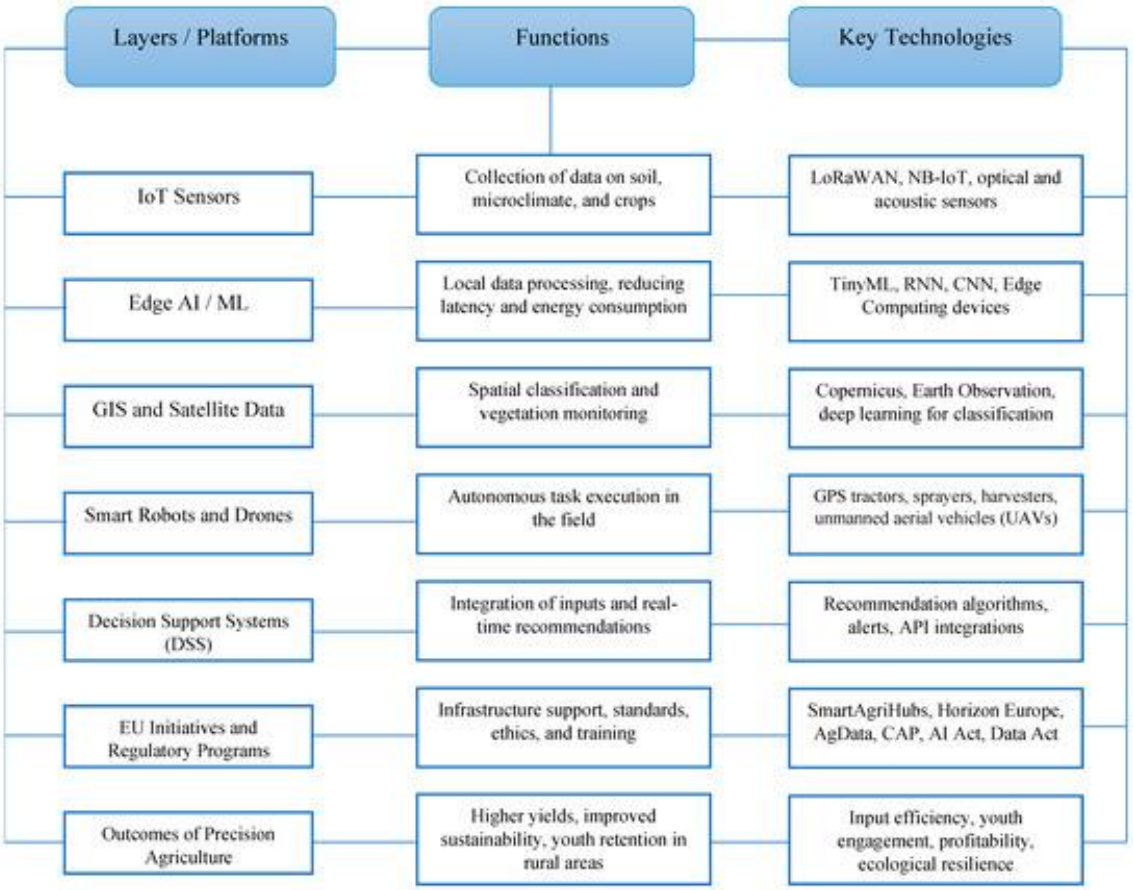


Figure | Smart agriculture platform layers.

NEWS

01 **THEME:** Policy Incentives, Financing, Pricing

COP30: Key outcomes for food, forests, land and nature at the UN climate talks in Belém

November 26, 2025 | Carbon Brief |

COP30 in Belém delivered mixed outcomes for food systems, forests, land, and nature. While negotiators advanced several initiatives under the Brazilian presidency's *"Global Mutirão"* agenda, formal outcomes on agriculture remained limited. A major highlight was the launch of the Tropical Forest Fund, which secured USD 6.6 billion in pledges to support forest protection and land restoration. Indigenous participation and land-rights financing also reached new highs. While the core "Global Mutirão" decision text referenced biodiversity, land rights, and deforestation, it did not explicitly address food systems. At the same time, parties agreed on 5 indicators under the Global Goal on Adaptation (GGA) that track progress on climate resilience and sustainable food systems. Overall, COP30 reaffirmed forests and land use as priority entry points for climate finance, while highlighting ongoing political sensitivity around integrating food systems more directly into UNFCCC decision texts.

02 **THEME:** Policy Incentives, Financing, Pricing

COP30: FAO brings agrifood systems to the forefront of climate action

November 21, 2025 | Food and Agriculture Organization (FAO) |

At COP30, FAO positioned agrifood systems as a central pillar of climate mitigation, adaptation, and resilience strategies. FAO emphasized that agrifood systems—including crops, livestock, fisheries, aquaculture, and forestry—can deliver substantial emissions reductions while restoring ecosystems and strengthening food security. The organization highlighted a persistent finance gap: despite their mitigation potential, agrifood systems currently receive only about 4% of total climate-related development finance. In response, FAO supported several COP30 Action Agenda initiatives, including RAIZ, TERRA (to accelerate resilient and regenerative agrifood and agroecological solutions), and the Bioeconomy Challenge, a global multi-stakeholder platform. The message reinforced the need to align climate finance, agricultural policy, and food system transformation, with implications for donors, development banks, and national governments seeking scalable climate-smart investments.

03 **THEME:** Policy Incentives, Financing, Pricing

Statement: Brazil and UK announce declaration to improve fertilizers for food security, nature and climate

November 19, 2025 | World Resources Institute (WRI) |

Brazil and the United Kingdom (UK) jointly announced a non-binding declaration at COP30 to improve fertilizer use efficiency in support of food security, environmental protection, and climate goals. The initiative aims to reduce emissions and nutrient pollution while maintaining agricultural productivity, particularly in emerging economies. WRI highlighted that fertilizer production and mismanagement are a critical mitigation lever, as they contribute significantly to GHG emissions and water pollution. The declaration encourages collaboration on policy reform, innovation, and investment to support improved nutrient management practices. While it signals growing recognition of fertilizers as a strategic nexus linking climate mitigation, food systems, and nature protection, its impact will depend on follow-through through national policies, financing mechanisms, and implementation at the farmer level.

04 **THEME:** Policy Incentives, Financing, Pricing

COP30: Eight countries support RAIZ, Brazil's finance accelerator to scale farmland restoration

November 19, 2025 | CGIAR |

8 countries—Australia, Canada, Japan, New Zealand, Norway, Peru, Saudi Arabia, and the United Kingdom (UK)—announced support for RAIZ *(The Resilient Agriculture Investment for net-Zero land degradation)*, a Brazil-led finance accelerator designed to scale farmland restoration and climate-resilient agrifood systems. Launched under the COP30 Presidency's Action Agenda, RAIZ aims to help address an estimated USD 105 billion financing gap for land restoration by mobilizing public and private capital. CGIAR highlighted RAIZ as a platform that links research, policy, and investment, using scientific evidence and strengthened monitoring frameworks to reduce investment risks. The initiative reflects growing interest in blended finance approaches for agriculture and land restoration, though translating political support into measurable outcomes will depend on governance arrangements, project pipelines, and alignment with national development strategies.

05 **THEME:** Policy Incentives, Financing, Pricing

EU eases green rules, redefining the future of farm subsidies

November 11, 2025 | ESG News |

The European Union (EU) announced adjustments to environmental requirements under the Common Agricultural Policy (CAP), easing certain green rules for farmers. The reform exempts small farmers from parts of environmental conditionality, with EU estimates suggesting the changes could save farmers up to EUR 1.6 billion per year in administrative costs. EU officials framed the move as a response to concerns over competitiveness and regulatory burden, while maintaining overall sustainability objectives. Environmental groups, however, warned that relaxing standards could lock in unsustainable practices and potentially increase farmers' vulnerability to climate-related losses. The policy shift highlights ongoing tensions between environmental ambition and political feasibility in agricultural policy design, with implications for the future role of subsidies as climate policy instruments.

06 **THEME:** Policy Incentives, Financing, Pricing

Commission adopts rules and launches initiatives to boost carbon removals and carbon farming in the EU

December 1, 2025 | European Commission |

The European Commission adopted new rules and initiatives to expand carbon removals and carbon farming across the EU, aiming to standardize monitoring, reporting, and verification (MRV) and strengthen market credibility. Complementary measures include the creation of an EU Buyers' Club to aggregate voluntary demand and generate income streams for farmers and foresters, and the launch of an EU Carbon Farming Database to improve MRV efficiency and reduce costs. The framework also allows for group auditing and third-party verification, easing administrative burdens for smallholders. Together, these measures seek to attract private investment and integrate land-based removals into broader climate strategies, while raising questions around permanence, additionality, and farmer participation.

07 **THEME:** Carbon Sequestration; MRV (Measurement, Reporting, Verification)

How can we tell if climate-smart agriculture stores carbon?

December 1, 2025 | Eos |

This Eos analysis examines the scientific and methodological challenges of verifying carbon sequestration from climate-smart agriculture (CSA). While practices such as cover cropping, reduced tillage, and agroforestry are widely promoted, the authors argue that causal empirical studies—similar to methods used in medical trials—should be treated as the gold standard for assessing CSA impacts. Most existing evidence relies on small plot experiments or model projections, rather than measurements at commercial farm scale. The article highlights advances in remote sensing, modeling, and field measurements, while stressing that robust MRV systems are essential to ensure credibility in carbon markets and climate reporting.

08 **THEME:** Policy Incentives, Financing, Pricing

Taiwan approves NDC 3.0 ahead of COP30, signaling commitment to global collective action

November 7, 2025 | CSR@天下 (In Chinese) |

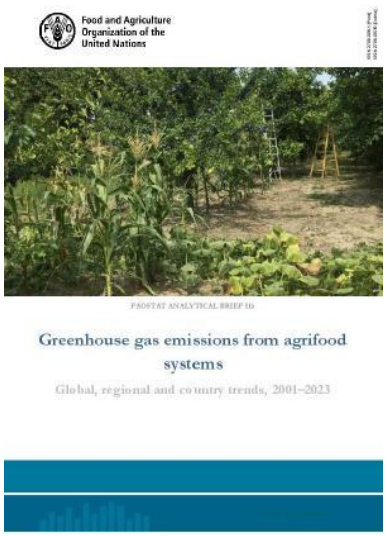
Taiwan approved its updated NDC 3.0 ahead of COP30, setting a target to reduce net GHG emissions by 38% ± 2% by 2035 compared to 2005 levels. Taiwan's environment minister described the target as a highly challenging "moonshot" goal. The plan covers key areas including green finance and carbon pricing, climate adaptation, energy transition and smart green energy strategies, agriculture and land use, and international cooperation. Despite Taiwan's non-party status under the UNFCCC, officials framed the update as a concrete contribution to "global collective action," signaling intent to align domestic climate policy with international norms and regional climate collaboration.

POLICY

01 THEME: Climate Smart Agriculture

Greenhouse Gas Emissions from Agrifood Systems – Global, Regional and Country Trends, 2001–2023

Food and Agriculture Organization (FAO) | Source | Report |

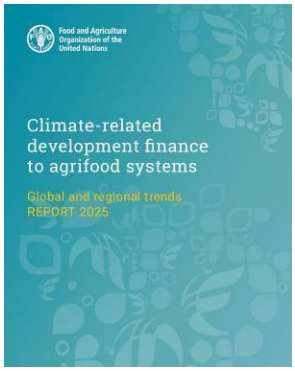


This FAO report provides the most comprehensive global inventory of GHG emissions from agrifood systems, covering production, land use change, supply chains, and consumption-related activities from 2001 to 2023. It estimates total agrifood emissions at 16.5 Gt CO_2eq in 2023, representing roughly one-third (about 32%) of global anthropogenic emissions and a 21% increase since 2001. Methane (CH_4) from livestock—particularly enteric fermentation and manure management—remains the largest single emissions source, followed by deforestation, while emissions from pre- and post-production supply chains have grown by 33% since 2001 and now account for around 32% of total agrifood emissions. The report highlights strong regional contrasts, with rapid growth in parts of Asia and Africa alongside stabilization or decline in some high-income regions. By providing country-level time series, it supports evidence-based climate-smart agriculture (CSA) planning and offers a robust data foundation for integrating agrifood mitigation into NDCs, long-term strategies, and national MRV systems.

02 THEME: Net-Zero Strategy

Climate-related Development Finance to Agrifood Systems – Global and Regional Trends

Food and Agriculture Organization (FAO) | Source | Report |

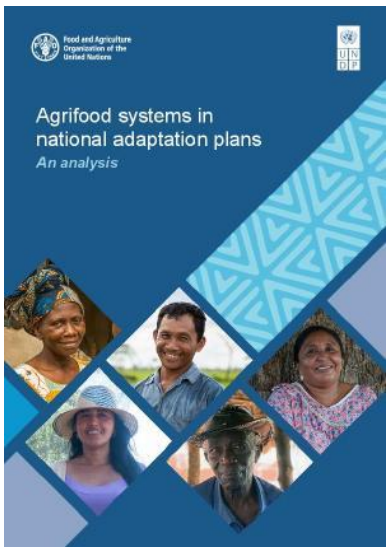


This FAO report analyses global and regional trends in climate-related development finance directed to agrifood systems between 2014 and 2023. Despite the sector's central role in mitigation and adaptation, agrifood systems received only USD 27.6 billion in 2023, equivalent to about 4% of total climate-related development finance, even as overall climate finance reached a record USD 145 billion. Funding increased by just 1% from the previous year and remains heavily skewed toward adaptation (45%), with more limited investment in mitigation (34%), including methane (CH4) reduction and systemic transformation. The report also highlights uneven regional distribution, with Africa receiving a large share of flows, alongside growing reliance on debt instruments that raise concerns about finance quality and debt sustainability. It underscores the need to better align climate finance with NDCs and long-term low-emissions pathways, strengthen concessional financing, and mobilize higher-quality investment to support net-zero transitions in agrifood systems.

03 THEME: Climate Smart Agriculture

Agrifood Systems in National Adaptation Plans: An Analysis

Food and Agriculture Organization (FAO) | Source | Report |



This FAO assessment reviews how agrifood systems are addressed in countries' National Adaptation Plans (NAPs) and finds a persistent gap between recognition and implementation. While most countries identify agriculture as highly climate-vulnerable, agrifood priorities remain underfunded and weakly operationalized. The report shows that agrifood systems account for around 54% of total adaptation finance needs identified in costed NAPs, yet receive only 20% of global adaptation finance, or roughly 1% of total climate finance. Many NAPs lack clear investment plans, costed actions, and links to financing mechanisms, and only about one-third are supported by climate risk and vulnerability assessments. In addition, relatively few adaptation measures explicitly target reported climate hazards or vulnerable groups such as smallholders and women. By highlighting these misalignments, the report calls for stronger integration of climate-smart agriculture into NAPs, improved cross-ministerial coordination, and clearer, finance-ready pathways to translate adaptation ambitions into action.

04 THEME: Climate Smart Agriculture

Extreme Heat and Agriculture Report

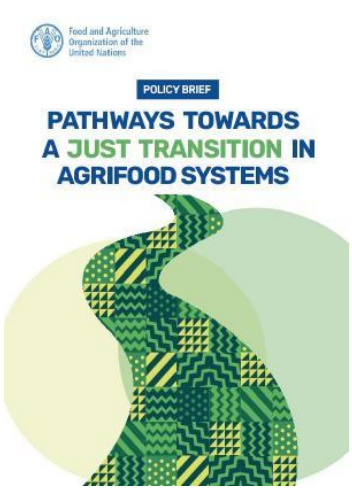
World Meteorological Organization (WMO) and Food and Agriculture Organization (FAO) | Source | Report

This joint FAO–WMO report identifies extreme heat as a rapidly escalating risk multiplier for global agrifood systems. It documents how heat stress reduces crop yields, livestock productivity, fisheries biomass, and agricultural labour capacity, with disproportionate impacts on smallholders, women, and rural workers. The report projects yield losses of 4–10% per additional 1 °C of warming for major staple crops such as maize and wheat, and highlights severe labour impacts, noting that agricultural workers face a far higher risk of heat-related mortality and that 470 billion working hours were lost globally in 2021 due to extreme heat. By linking meteorological data with agrifood outcomes, the report emphasizes the urgency of integrating heat-risk management into climate-smart agriculture (CSA) strategies, early warning systems, and national adaptation planning. It also stresses that adaptation alone will be insufficient under high-emissions scenarios, reinforcing the need for ambitious mitigation.

05 THEME: Net-Zero Strategy

Pathways towards a Just Transition in Agrifood Systems: Policy Brief

Food and Agriculture Organization (FAO) | Source | Report |



This FAO policy brief argues that global climate goals cannot be achieved without a just transition in agrifood systems. It highlights that mitigation and adaptation measures risk exacerbating inequality if social equity, livelihoods, and rights are not explicitly addressed. The brief calls for a people-centred transition that prioritizes Indigenous Peoples, family farmers, small-scale producers, agricultural workers, women, and youth, and is grounded in a "do no harm" principle to prevent climate action from undermining land and resource rights or leading to "green grabbing." It urges Parties, including in the context of COP30, to embed agrifood systems within just transition frameworks under the UNFCCC and to mobilize climate finance for inclusive, resilience-building transformation. By linking net-zero objectives with social justice and rural development, the brief provides concrete guidance for aligning climate ambition with equitable agrifood transitions.

OPEN DATA

01 THEME: Environment and Climate; Climate Action Plans and Programs

UN Food Systems Coordination Hub

UN Food Systems Coordination Hub |

This Hub is a global coordination and knowledge-sharing platform established following the 2021 UN Food Systems Summit and hosted by FAO with support from IFAD, UNDP, UNEP, WFP and WHO. Rather than serving as a standalone open data repository, the Hub supports countries in implementing and tracking national food systems pathways aligned with the SDGs and the Paris Agreement. Within net-zero and climate-smart agrifood discussions, the Hub provides structured access to country pathways, policy stocktakes, and solution initiatives developed under the UN Food Systems Summit process, notably through its Database of Practices. While the platform does not host primary quantitative datasets, it offers open access to metadata, summaries, and links to partner tools and data sources that contextualize national food systems transitions.

02 THEME: Environment and Climate; Climate Smart and Net Zero Toolkit

Climate KIC

Climate KIC |

Climate KIC is a European climate innovation community initiated by the European Institute of Innovation and Technology (EIT) that supports place-based climate action and net-zero transitions through innovation programmes, partnerships, and digital tools. Climate-KIC supports data-enabled climate action by developing, hosting, and linking to digital tools and resources relevant to climate mitigation and adaptation, including applications for agrifood systems and land use. These include geoFootprint, which combines spatial data and environmental metrics to explore crop-related climate and sustainability risks, and an open-access database mapping climate-tech start-ups and scale-ups. For climate-smart agriculture and net-zero strategies, the platform provides access to methodologies, case examples, and data-driven tools that support decision-making across production systems, supply chains, and territorial transition planning, while directing users to partner platforms for detailed datasets and analysis.

03 THEME: Agrifood system; Climate Action Plans and Programs

ClieNFarms Project

Climate Neutral Farms |

ClieNFarms Project is an EU-funded Horizon Europe initiative that supports the transition toward climate-neutral farming through applied experimentation and knowledge exchange across multiple European countries. The project platform provides open access to public deliverables, practice abstracts, and a Catalogue of Climate Solutions describing farm-level mitigation options, alongside a Scaling Toolbox that organizes tools and pathways for different user groups, including policymakers, advisors, investors, and farmers. The platform provides structured summaries and curated links to tools, with quantitative evidence and methodological details primarily presented within project deliverables rather than as standalone, machine-readable datasets. Some project deliverables include data tables and monitoring or practice templates that may be relevant for MRV-related work or extension activities, making the platform a reference point for applied climate-smart and low-emission farming transitions.

EVENT

01

The 3rd European Carbon Farming Summit

March 17-19, 2026 | In-person | Padua, Italy |

Organised by Credible, SAE Innova, and EIT Climate-KIC, and co-hosted by EIT Food (LILAS4SOILS) and Confagricoltura Veneto, the summit brings together researchers, policymakers, farmers, businesses, and project developers to advance credible carbon farming across Europe. Discussions focus on identifying suitable practices for European soils, strengthening standards and certification mechanisms, and improving the monitoring of carbon fluxes, alongside related themes such as finance and investment, MRV approaches, ownership and claims, and co-benefits beyond carbon. Building on outcomes from previous editions, the summit aims to support the development of robust frameworks that link farm-level practices with climate policy, carbon markets, and soil health strategies.

02

The 16th International Conference of the International Farming Systems Association (IFSA 2026)

June 29 – July 3, 2026 | In-person | Montpellier, France |

IFSA 2026 focuses on *"Farming and Agri-Food Systems Dynamics: Facing Crises and Trade-Offs in Transition Pathways."* The conference brings together researchers, practitioners, and policymakers to examine how farming and agri-food systems can respond to climate change, biodiversity loss, resource constraints, and socio-economic pressures. The programme is structured around 4 thematic areas covering transformative change, landscape and community dynamics, capacity development, and food systems linkages across the water–energy–food–ecosystems nexus. Through paper sessions, special sessions, and field-based activities, IFSA 2026 provides a forum for discussing trade-offs, synergies, and governance challenges in transition pathways, with relevance for climate-smart agriculture, low-emission farming systems, and inclusive agri-food policy design. Registration opens with the early bird registration is available until 15 March 2026.

03

The World Congress of Environmental and Resource Economists (WCERE 2026)

June 29 – July 3, 2026 | In-person | Carcavelos – Cascais | Portugal |

Organised under the auspices of the World Council of Environmental and Resource Economists Associations (WCEREA) and hosted by NOVA School of Business and Economics (NOVA SBE), WCERE 2026 convenes the major regional associations in environmental and resource economics, including AAERE, AERE, AFAERE, EAERE, and LAERE. The congress programme spans themes such as climate change, energy, ecosystem services and natural resources, environmental regulation, and the water–energy–food nexus, and includes dedicated science–policy–business sessions linking research with decision-making and practice. Paper and session submissions close on 16 January 2026, and general registration opens on 30 March 2026.

04

2026 International Conference on Resource Sustainability (icRS 2026)

June 15-17, 2026 | In-person | Cebu, Philippines |

Sponsored by Resources, Conservation & Recycling and Resources, Conservation & Recycling Advances, icRS 2026 convenes researchers and practitioners from natural sciences, social sciences, and engineering to discuss interdisciplinary approaches to resource sustainability in the context of climate change, resource depletion, and environmental protection. The conference defines "resources" broadly, spanning physical resources such as energy and water, biological resources including food, forestry, land and ecosystems, as well as "misplaced" resources such as air emissions, water pollutants, and solid waste, with strong relevance to climate-smart agriculture, circular economy approaches, and low-emission agrifood systems. Key submission and registration milestones are summarised in the figure below.

05

Annual Meeting of the Ecological Society of America (ESA 2026)

26–31 July, 2026 | In-person | Salt Lake City, Utah, United States |

Organized by the Ecological Society of America (ESA), ESA 2026 is themed *"Ecology in an Era of Uncertainty"* and focuses on advancing ecological science and its applications under conditions of environmental, climatic, and societal change. The meeting combines conventional scientific sessions with interactive formats such as workshops, short courses, field trips, Career Central activities, and special sessions that emphasise skills development, dialogue, and collaboration. These formats provide opportunities to examine ecosystem responses to climate variability, land-use change, and disturbance, with relevance for climate-smart agriculture, nature-based solutions, and net-zero transitions in agri-food systems. By prioritising interdisciplinary exchange and place-based learning, the meeting supports linkages between ecological research, policy processes, and applied practice.

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The 12th European Conference on Precision Livestock Farming (ECPLF 2026)

September 14-17, 2026 | In-person | Valencia, Spain |

Organized in collaboration with the European Association of Precision Livestock Farming (EA-PLF), ECPLF 2026 is themed "Improving animal life" and provides a multidisciplinary forum on precision livestock farming, bringing together animal scientists, engineers, veterinarians, and technology developers. The programme focuses on how sensors, sensing techniques, and other digital technologies can generate real-time information on animals and their environment to support data-driven decision tools for farmers and other livestock-sector stakeholders, with applications across animal production systems and species. The conference format includes oral communications, poster sessions, round tables, and technical workshops, enabling exchange on research advances and practical deployment of digital monitoring and management approaches relevant to sustainable and welfare-oriented livestock systems.