



Submission on workshop: “Systemic and holistic approaches to climate action on agriculture, food systems, and food security” under the Sharm El-Sheikh joint work on implementation of climate action on agriculture and food security as referred to in FCCC/SB/2024/L.2.

Submitted by World Animal Protection and endorsed by Asian Peoples’ Movement on Debt and Development (APMDD), Youth in Agroecology and Restoration Network (YARN), Jeunes Volontaires pour l’environnement (JVE), Biodiversity and Biosafety Association (BIBA) Kenya, and Center for Energy Ecology and Development (CEED)

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Introduction

- The Intergovernmental Panel on Climate Change (IPCC) estimates that agriculture, forestry and land use account for 22% of global greenhouse gas emissions,¹ rising to over a third when the entire food system is considered.² At the same time, climate change exacerbates food insecurity, with 733 million people facing hunger in 2023, particularly in Africa, while 2.33 billion experienced food insecurity (State of Food Security and Nutrition in the World Report).³ Droughts, floods and shifting weather patterns disrupt agricultural productivity and worsen rural poverty, threatening progress towards the Sustainable Development Goals (SDGs).⁴
- Addressing these challenges requires a fundamental shift in both agriculture and energy sectors—one transformation cannot be tackled without the other. Agriculture and food production accounts for at least 15% of all fossil fuel used annually,⁵ with industrial agriculture reliant on petrochemicals for pesticides and fertilisers, further deepening dependence on high-carbon energy.
- Our global food system, especially industrial animal agriculture, not only accelerate biodiversity loss, deplete water resources, and contribute to rural poverty and public health crises but also compromise animal welfare on a massive scale. The expansion of industrial animal agriculture has led to poor living conditions for billions of animals, increased risk of zoonotic disease outbreaks and the overuse of antibiotics, contributing to antimicrobial resistance. Additionally, the destruction of natural habitats for agricultural expansion for animal feed and production threatens wild animal populations, driving species to the brink of extinction and further destabilising ecosystems.
- Urgent transformation is needed. Shifting to agroecological practices, transitioning away from industrial animal agriculture, protecting and restoring ecosystems, and promoting equitable, humane, and sustainable food systems can build climate resilience. Climate action in agriculture must address both environmental and socioeconomic challenges. Mitigation efforts should not come at the expense of biodiversity, animal welfare, public health or livelihoods. Integrated adaptation and mitigation strategies can safeguard food security and justice, nature and communities.

¹ IPCC. Climate Change 2022: Mitigation of Climate Change. [Link](#)

² Crippa, M., Solazzo, E., Guizzardi, D. et al. Food systems are responsible for a third of global anthropogenic GHG emissions. Nat Food 2, 198–209 (2021). [Link](#)

³ [The state of food security and nutrition in the world 2024](#)

⁴ The climate-agriculture nexus impacts multiple Sustainable Development Goals (SDGs). Agricultural expansion and deforestation, particularly from industrial animal agriculture, accelerate biodiversity loss (SDG 15), depletes water resources (SDG 6) and exacerbates rural poverty (SDG 1, SDG 10). It also strains public health (SDG 3), economic stability (SDG 8) and responsible consumption (SDG 12).

⁵ Global Alliance for the Future of Food. Toward Fossil Fuel-free Food: Why Collaboration Between Food & Energy Systems Players Is Key. n.p.: Global Alliance for the Future of Food, 2023.

Part 1: Views on systemic and holistic approaches to climate action in agriculture, food systems and food security

1) Adopting a Six-Dimensional Framework for Food Security

In 2020, the Committee on World Food Security's (CFS) High-Level Panel of Experts on Food Security and Nutrition (HLPE) proposed a six-dimensional framework for food security, **adding agency and sustainability** to the widely agreed four-pillars framework focusing on availability, access, utilisation and stability.⁶ The HLPE argued that the traditional four dimensions agreed at the 1996 Rome Declaration do not fully capture the complexities of current food systems, especially in the context of environmental degradation and social inequities.

Including agency and sustainability will address gaps and barriers in implementing systemic and holistic approaches to agriculture.

Agency refers to the capacity of individuals or groups to make their own decisions about what foods they eat, what foods they produce, how that food is produced, processed and distributed within food systems and their ability to engage in processes that shape food system policies and governance. It is key to addressing inequities and power imbalances within food systems.

Sustainability refers to "food system practices that contribute to long-term regeneration of natural, social and economic systems, ensuring the food needs of the present generations are met without compromising food needs of future generations" (HLPE, 2020).

2) Embedding "Just Transition" Principles in Climate Action

A just transition must be at the heart of transforming agriculture for climate action, ensuring that the costs and benefits of change are fairly distributed whilst protecting the most vulnerable.

The global system of industrial animal agriculture, including industrial fishing and aquaculture, is a major cause of deforestation, habitat destruction, pollution, biodiversity loss, animal suffering and the spread of zoonotic diseases. It fuels climate change, antimicrobial resistance and public health crises, pushing our planet to the brink. Disruptions to the balance between human and planetary health threaten both biodiversity and livelihoods, reinforcing the urgent need for a One Health Approach—which recognises the deep interconnection between people, animals, plants and ecosystems.

Vast areas of forests—particularly in the Amazon, Congo Basin and Southeast Asia—are being cleared to grow soy and other monoculture crops used as animal feed, worsening carbon emissions and depleting ecosystems. This large-scale feed production intensifies the competition between food and feed, limiting the availability of traditional local plant-based proteins for direct human consumption. Without urgent action, food system emissions alone could make it impossible to stay within the 1.5°C climate target, even if fossil fuels are phased out. To meet the Paris Agreement, global emissions from animal production must decline by 50% by 2030, requiring high-consuming and high-producing countries to lead by reducing meat and dairy consumption and scaling down industrial farming.⁷

A just transition towards systemic and holistic approaches to agriculture, food systems and food security can be achieved through the following three key levers of change:⁸

⁶ HLPE, 2020. Food Security and Nutrition: Building a Global Narrative Towards 2030. <http://www.fao.org/3/ca9731en/ca9731en.pdf>

⁷ Harwatt, H. Hayek, M.N. Behrens, P. and Ripple, W.J. (2024) Options for a Paris compliant livestock sector. Timeframes, targets and trajectories for livestock sector emissions from a survey of climate scientists. Research report, Brooks McCormick Jr. Animal Law & Policy Program, Harvard Law School. March 2024. [Link](#)

⁸ The Just Transition from industrial animal production to equitable humane and sustainable food systems (2024) <https://justfoodtransitionroadmap.com/>



A just transition must prioritise agroecology, high-welfare diversified farms and strong worker protections, ensuring that food production aligns with social and planetary boundaries.

Agroecology represents a holistic and systemic solution for adaptation, mitigation, food and nutrition security, whilst supporting a gender-responsive approach to strengthening and protecting small-scale food producers' rights and livelihoods.

Countries with low meat consumption have a unique opportunity to leapfrog the industrial model of the Global North by strengthening agroecology and expanding access to traditional, local, whole plant and minimally processed plant-based proteins⁹. Prioritising plant proteins for direct human consumption rather than diverting crops to animal feed can significantly improve food security and resilience, particularly in regions vulnerable to climate change and resource constraints.

Governments have a pivotal role in transforming food systems by redirecting harmful subsidies and financial incentives away from environmentally harmful practices, such as industrial animal agriculture, and towards sustainable farming models like agroecology and plant-based food production. Through subsidy reform, targeted policies that encourage healthier and climate-friendly diets, and aligning private finance with the Paris Agreement, governments can drive a just transition towards equitable, humane and sustainable food systems.

3) Scaling Equitable, Humane and Sustainable Food Systems

Scaling equitable, humane and sustainable food systems means prioritising approaches that not only reduce emissions but also protect and restore ecosystems, improve livelihoods, ensure the right to adequate food for all and uphold the well-being of all living beings. This means that:

- Resource use is primarily circular, eliminating the need for chemical fertilisers and pesticides, reducing pollution, water, antibiotics and land use and increasing non-human edible feed in farmed animal diets.
- Natural forests are conserved and integrated through agroforestry (agricultural systems that incorporate trees) and silvopastoral (combining livestock with tree cultivation) farms.
- Local, less polluting and agroecological farms are incentivised and provide environmental and economic benefits for local communities.
- Farmers focus on short supply chains that strengthen local connections between producers and consumers, enabling fresh, locally-sourced goods. They engage in diversified production, incorporating

⁹ Refers to protein derived from plants. Plant-based proteins include protein-rich whole plant foods such as pulses, nuts and seeds, and minimally processed plant-based foods such as tofu, tempeh and seitan

both crop and livestock farming with mixed animal species, which supports ecosystem balance and resilience.

- Indigenous and ancestral approaches to adapt to climate change are utilised and supported.
- Farmers participate in platforms for co-creating knowledge, allowing them to exchange expertise and innovation.
- Diets are predominantly local, seasonal, plant-based, nutritious, affordable and accessible.
- Farmed animals are in high-welfare systems where their physical, environmental and behavioural needs are met, prioritising the Five Domains of Animal Welfare¹⁰ with good nutrition, environment, health and behavioural interactions leading to positive mental states.
- Subsidies supporting carbon and resource-intensive production are eliminated and replaced with taxes that reflect the social and environmental damage they cause.

Part 2: Recommendations for the conduct of the workshop, including guidelines and modalities, proposed format, key subtopics and technical content and suggested speakers

1) Participation and Conflict of Interest

- This SJWA workshop must ensure balanced and inclusive representation, actively engaging diverse stakeholders, including grassroots and farmers' movements, civil society and observers, Indigenous Peoples and rights-based constituencies. The process should integrate both scientific and traditional knowledge and amplify underrepresented voices from those with lived experiences in climate impacts.
- All participants must disclose potential conflicts of interest, particularly those with ties to corporate entities with vested interests in climate policies. Independent oversight should ensure transparency and prevent undue influence, ensuring that the decision-making process remains fair and prioritises the interests of vulnerable communities and environmental sustainability.

2) Format

- **Moderated panel sessions:** Building on the success of the Koronivia Joint Work on Agriculture, the SJWA should continue to bring diverse voices, particularly from smallholder farmers who are on the frontlines of the crisis and rights-based constituencies as resource persons. Moderated panel sessions should draw upon submissions and scientific literature to frame a systemic and holistic approach to food security, agriculture and food systems for climate action. Discussions will provide a structured overview of the key issues and highlight the interconnectedness of agricultural transformation with energy systems, biodiversity protection and social justice, ensuring a comprehensive and equitable pathway forward.
- **Solutions Showcase – Grounded, Inclusive Innovations:** Following the World Café, the **Solutions Showcase** will highlight real-world examples of transformative approaches to food and agriculture. This session will prioritise solutions that are locally adaptable, socially inclusive and economically feasible. Participants, including grassroots practitioners, farmers, and advocates, will present short case studies on successful approaches such as agroecology, cooperative models, land tenure reforms, etc. These presentations will be visually mapped to illustrate the diversity of solutions across different regions, scales and impact areas. By centering on practical, equity-driven strategies, this session will provide inspiration and tangible models for systemic change.
- **Policy Lab – Identifying Leverage Points for Change:** The final session will employ a **Policy Lab** approach to identify necessary shifts in policy that can enable a just and sustainable transition. This session will begin by framing the key challenges identified in the earlier discussions and asking: *What policies currently block food system transformation? What changes are needed to shift power dynamics*

¹⁰ Mellor D. J. (2017). Operational details of the five domains model and its key applications to assessment and management of animal welfare. *Animals* 7 (8), 60. doi: 10.3390/ani7080060

and promote equitable, humane and sustainable practices? Participants will work in groups to ideate and propose actionable policy interventions at different levels—local, national and international.

By the end of the session, the workshop will produce a draft **policy roadmap and a market framework**, outlining priority areas for action. The Policy Lab will ensure that policy recommendations are not just theoretical but grounded in practical, inclusive and politically feasible solutions. This includes a discussion on policy incentives e.g., subsidies, certification programs, tailored regulation; creating market demand for agroecological and high-welfare products; and collaboration between governments, businesses/farmers and consumers.

The success of this format will rely on a skilled facilitator. Therefore, facilitators should be clear of vested interests, ideally from the UNFCCC secretariat, with experience to facilitate the participation of the quieter voices to engage. Translations/interpretation should be available to increase inclusivity.

4) Key Subtopics

- Discussions on **governance and policy integration** would focus on embedding food systems into NDCs and National Adaptation Plans, aligning policies with biodiversity and climate commitments and strengthening multi-level governance.
- The concept of **just transition and equity in climate action** would address how to support smallholder farmers, food workers and Indigenous communities while ensuring food justice, land rights and gender equity.
- Transforming agricultural practices for climate resilience, including **agroecological, nature-positive approaches, sustainable high-welfare livestock and fisheries management** and demand side measures, such as **shifting to sustainable healthy diets**.

5) Speakers

- Representatives from agroecological networks, Indigenous communities, and landless workers' movements working on equitable, humane and sustainable food systems that can provide insights on just transition approaches such as peasant and farmer leaders from Asian Peoples' Movement on Debt and Development; Anne Maina, National Coordinator of the Biodiversity and Biosafety Association of Kenya (BIBA-Kenya); Opeyemi Elujulo, Executive Director of Youth in Agroecology and Restoration Network (YARN) from Nigeria; Wanun Permpibul, Executive Director of Climate Watch Thailand and Luttah Aluora, young agroecology entrepreneur, Jeunes Volontaires pour l'environnement (JVE) from Togo.
- Voices from unions, farmworker and meat-processing worker organisations, smallholder farmers, small-scale fishers, pastoralists, Indigenous peoples, and peasant communities should be included to highlight on-the-ground realities and challenges.
- Dr. Million Belay, Coordinator, Alliance for Food Sovereignty in Africa
- Dr. Agnese Balzani, World Animal Protection's Global Animal Welfare Adviser, can present findings from the Protein Business Case, illustrating what equitable, humane and sustainable food systems look like in different regions.
- Speakers from agroecological movements, the High-Level Panel of Experts (HLPE) of the Committee on World Food Security (CFS), and National Food Systems Coordinators can provide evidence-based perspectives on scaling sustainable solutions.
- Representatives from the IPCC, Chatham House, New Climate Institute, NDC Partnership, Climate Policy Initiative and other relevant institutions should be invited to offer science-driven recommendations on integrating food systems into climate policy.