Project Brief

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Global Labs

Food Systems Transformation

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Executive summary

As the 21st century unfolds, the world's food systems stand at a critical juncture. What we eat, how it's grown, and how it reaches our plates have implications beyond personal health—they shape livelihoods, ecosystems, and the planet's future. To make sense of this complexity, 25 authors co-created five radical visions for the future of Food Systems in this Policy Brief.

The basis of their chapters was a workshop that was implemented in March 2025 on the same topic as this Policy Brief. The event and subsequent publication of results are part of foraus' Global Labs series, which aims to connect students from Geneva and beyond with the International Geneva ecosystem, to foster innovative policy ideas. Through an exchange with professionals and by co-writing a policy brief, each *Global Lab* strives to strengthen students' set of hard skills (e.g. policy writing), soft skills (e.g. public speaking), and personal networks, while providing key multilateral fora with youth's inputs.

1. Introduction

Authors: Nazanin Asbaghipour & Leila Marinho

As the 21st century unfolds, the world's food systems stand at a critical juncture. What we eat, how it's grown, and how it reaches our plates have implications beyond personal health—they shape livelihoods, ecosystems, and the planet's future. From farm to grocery shelf, the global food web is under increasing pressure (Raza, 2025) Climate change, inequality, harmful farming methods, and a growing population are some of the key problems putting pressure on today's food systems.

To make sense of this complexity, the analytical framework developed by the High Level Panel of Experts on Food Security and Nutrition (HLPE, 2017) offers a valuable lens. It breaks food systems into three interconnected dimensions (see Fig. 1): drivers, such as urbanisation, technological advances, climate change, and economic development; components, including production, value chains, consumption practices, and food environments; and outcomes, which cover everything from dietary health to environmental

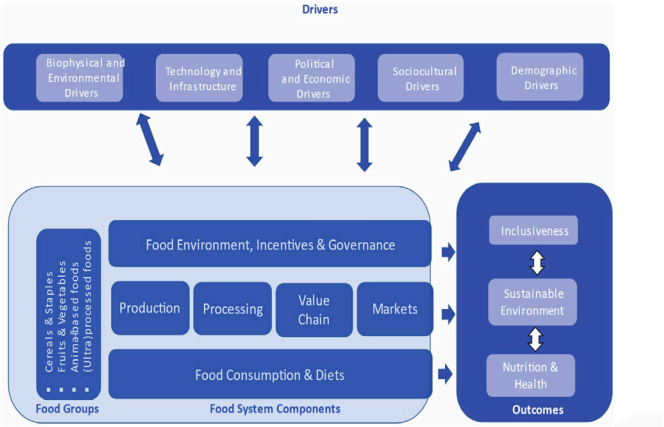

Fig. 1 Food systems analysis framework (Ruben et al., 2021, adapted from HLPE, 2017).

sustainability and social equity (Ruben et al., 2021). This systems-based view reveals a dynamic interplay of forces and feedback loops—making clear that small interventions can lead to far-reaching ripple effects.

Yet, today's food systems remain deeply flawed. Despite producing enough food globally, they continue to generate environmental harm and social inequities. Agriculture and food-related activities contribute up to 29% of global greenhouse gas emissions, while also driving deforestation, biodiversity loss, and pollution of natural resources (FAO, 2024). At the same time, they perpetuate inequality: small-scale farmers and marginalised communities often bear the brunt of these impacts, while over 690 million people remain hungry and 11% of the global population is undernourished (Stefanovic et al., 2020).

The mounting challenges have ignited a growing call for food system transformation—a profound reimagining of how food is produced, processed, transported, and consumed. This concept promotes sustainable production and consumption patterns by harnessing innovation, cultural shifts, social movements, and policy reform across multiple levels (HLPE, 2019). Rather than focusing on isolated measures, a coordinated and long-term approach is considered essential to address the complexities involved.

Policymakers, states and international bodies are beginning to respond. The Swiss government has launched a comprehensive national policy to make its food systems more sustainable, resilient, and health-oriented (SWI swissinfo.ch, 2023a; SWI swissinfo.ch, 2023b; OECD, 2023).

The European Union's Farm-to-Fork Strategy advocates for a fair, healthy, and environmentally-friendly food system, while the 2021 UN Food Systems Summit called for global cooperation to advance food-related Sustainable Development Goals (SDGs), including ending hunger (Goal 2), improving health (Goal 3), ensuring responsible consumption (Goal 12), and taking climate action (Goal 13) (Sonnino, 2023; Elechi, 2016).

However, as Sonnino and others argue, food systems are complex adaptive socio-ecological systems that cannot be changed through isolated technical fixes or linear solutions (Sonnino, 2023). Instead, transformation requires holistic, systemic thinking—drawing on the knowledge and participation of diverse actors, from governments to

grassroots organisations.

In addition, food systems today are not monolithic. They include a blend of contemporary, traditional, and mixed structures. Achieving long-term sustainability requires redesigning these systems through measures like agroecological farming, ecosystem restoration, sustainable diets, and reducing food loss and waste. But beyond technical change, transformation also involves deep socio-political engagement.

This means embracing multilateralism in agriculture, where states, international organisations, civil society, and the private sector work together toward sustainability goals. The UN Food Systems Summit highlighted the need to connect food with climate and development priorities (Canfield et al., 2021). Yet, critics point to ongoing power asymmetries that sideline small-scale producers and civil society actors, and institutional fragmentation that impedes inclusive governance (McKeon, 2015; Margulis, 2013).

One promising pathway is circularity in food systems—a model that closes resource loops, reduces waste, and promotes regenerative practices (de Boer & van Ittersum, 2018). Circular agriculture, as outlined by the United Nations Department of Economic and Social Affairs (2021), leverages innovations like mixed crop-livestock systems, agroforestry, water recycling, and organic farming. This approach is gaining traction in Europe, including Switzerland, as a strategy to balance productivity with sustainability (de Boer & van Ittersum, 2018). Still, effective transformation hinges on coherent national and international cooperation, particularly through forward-looking policies and cross-border innovation (Bovarnick et al., 2024).

Lastly, transformation must centre human rights, including the right to food and the rights of peasants as affirmed in the UN Declaration on the Rights of Peasants (UNDROP), Article 15 (United Nations General Assembly, 2018). These principles remind us that food security is not only a technical or economic issue—it is inherently political. Protecting the rights of smallholders and marginalised communities is essential to building just and sustainable systems (Golay, 2022).

Together, these ideas make one thing clear: transforming food systems is a complex but urgent task. It demands a rights-based, ecologically grounded, and socially inclusive approach—one that

recognises the interwoven challenges of climate change, inequality, health, and governance.

Global Labs project: context and methodology

For this reason, foraus organised the participatory project "Global Lab: Food System Transformation: Exploring the Futures of Food Systems" between March and April 2025 bringing together more than 40 young thinkers and professionals with the aim of generating innovative policy pathways for the future of food systems transformation.

At the heart of this process was a one-day workshop held in Geneva in March 2025 in the form of an interactive exchange between a cohort of students and professionals from the **Food and Agriculture Organization of the United Nations (FAO), the Swiss Federal Office of Agriculture (FOAG), the Young Professionals for Agricultural Development (YPARD), the Geneva Academy of International Humanitarian Law and Human Rights, and the Croatian organisation Green Network of Activist Groups (ZMAG).**

During the workshop, the students were tasked to imagine different versions of the year 2045 using two foresight methodologies (visioning & backcasting). This approach involves defining a preferred vision for the future, starting with long-term goals for 2045, and then working backwards to identify the steps needed from the present (2025) to achieve them. The bold question asked to participants was: How can Switzerland contribute to addressing global food security challenges, the role of innovation in advancing sustainable food systems, and how education and awareness can drive sustainable food consumption? This Project Brief is the fruit of these discussions and presents five visions and how to reach them, written by the participants to introduce a more sustainable food system by proposing better, more ethical, yet inclusive (inter)national trade policies. The focus is put on five main action areas: multilateral frameworks, national decisions, proposals for the private sector, as well as agreements on both regional and supranational levels.

In the first chapter, **Jean-Pierre Desarzens, Antonia Massocco, Margaux Serratore, Ankita Sharma,** and **Yuhui Song** offer their solution for a just and equitable future Food System which finds relevant synergies where they are needed.

Next, Ebrima Barrow, Suban Biixi, Ana Chamon, Rebecca Kübler, and **Kuei-Jr Liao** identify three guiding pillars to achieve sustainable food in Switzerland by 2045.

In the third chapter**, Triana Gil, Romberg Gondim, Anna-Kristiina Pae, Pilar Alejandra Paradiso,** and **Yating Wang** propose a system whereby all coffee in Switzerland is produced and traded in accordance with binding ethical and sustainability standards by 2045.

Subsequently, **Giulia Azzarello, Angelina Pavlenko, Andrea Peroziello,** and **Shilpa Ann Thomas** outline a vision of a fair and just treaty, which recognises that the future of our planet is inseparable from the rights of indigenous communities.

Finally, **Ruth Bandomah, Mariana Hervigo, Mitsuki Ishii,** and **Carolyn Wu** shape a vision of a European Union which, by 2045, has achieved "Organic One Health".

Each chapter summarises their findings in concise policy recommendations for stakeholders and decision-makers, such as multilateral organisations, selected countries, the private sector, academia, and civil society organisations.

2. Five visions for 2045

2.1. Vision 1: From Local to Global: Building an Equitable Food System by 2045

Authors: Ankita Sharma, Antonia Massocco, Jean-Pierre Desarzens, Margaux Serratore, Yuhui Song

Introduction

In 2024, the G20 launched the Global Alliance Against Hunger and Poverty, uniting global actors to support smallholders through the 2030 "Sprint" for sustainable agrifood systems. This effort reflects growing urgency to address rising food insecurity, environmental degradation, and power imbalances in global food systems. Multilateralism – defined as coordinated cooperation among various stakeholders such as governments, international organisations (IOs), civil society, private sector entities, and crucially, local farmers – provides a critical approach to address these issues effectively. To achieve any of the Sustainable Development goals (SDGs), we need these kinds of synergies. Often we are not working in systems; often we work in silos, creating fragmentation of the sectors (United Nations, 2024). Effective governance requires collaborative approaches that transcend national boundaries and sectoral divides.

Organisations such as the FAO Committee on World Food Security (CFS) actively embody this multilateral approach by bringing together civil society and the private sector alongside governments, enhancing legitimacy, fostering inclusive dialogues, and promoting policy convergence. Such efforts challenge traditional top-down governance models and counteract the concentration of power in the hands of large agribusiness corporations. Despite these efforts, significant problems persist. Poor

communication between local farmers and IOs limits meaningful participation, reinforcing power imbalances that favor dominant corporations. Oxfam calls for a shift from industrial agribusiness to sustainable, local food systems, warning that just 1% of farms control 65% of agricultural land and that dependence on global markets heightens vulnerability (Cohen et al., 2022). Additionally, top-down approaches and inadequate stakeholder education contribute to fragmented policy-making and ineffective implementation. A 2022 study from the Food and Agricultural Organisation of the United Nations underscores these challenges, emphasising the need for "better coherence among policies and ministries" to effectively address food insecurity and support small-scale producers (FAO, 2022). Strengthening multilateral cooperation, therefore, is essential not only to overcome siloed decision-making but also to empower marginalised voices and create resilient, inclusive and equitable global food systems.

Vision for 2045

In the year 2045, a fair, just, and sustainable food system built upon the participation of a wide spectrum of actors is established at a global level. With the facilitation of national and international organisations, small-scale farmers are united through networks that amplify their demands. Countries identify the real-life challenges that farmers are facing through a bottom-up approach and develop national strategies reflecting those difficulties. Instead of a one-size-fits-all solution, effective bilateral or multilateral cooperation is formed in accordance with the specific needs and development level of different countries. International institutions are entrusted to monitor and evaluate the policies, ensuring accountability at local, national, and global levels.

Action Planning

To cultivate a fair, just, and sustainable food system, the following strategic objectives, with their 5 year milestones, are designed to drive joint learning, participatory action, and the co-creation of governance by farmers and governments within existing structures. Our backcasting strategy is broken into 5-year (2045-2025) blocks of

achievements:

Enforcement & Cultural Shift (2045)

- Farmer co-governance has been normalised through rotating farmer presidencies and mandates over the COPs for farmers and other forums.
- Accountability and monitoring in Agri-multilateral decision-making is enforced through operational global indicators on participatory food governance structured by UN experts, national governments, and academia. Annual reports on the state of the action plan are released to inform the public.
- Farmer access to political participation is achieved.

Legal & Procedural Reform (2040)

- The global community is committed to codifying farmer participation in food governance through soft law, institutional mandates, and legal toolkits that bring the Right to Food and UNDROP from principle to practice.

Rights-Based Governance (2035)

- Ensuring multilateral institutions adopt procedural reforms that give farmers co-decision and co-reporting powers in key tracks, including rotating Farmer Co-Chairs or Rapporteurs across forums to anchor farmer voices in governance architecture.

Integration & Visibility (2030)

- Establishing formal “Farmer Tracks” within existing global platforms (eg. FAO’s CFS working groups, and regional bodies).
- Funding operationalisation of Farmer Tracks through:
  - Donor coordination (e.g. multi-donor trust fund or facility) by supporting farmer delegation travel, logistics, or digital access, documentation, and communication;
  - Government‘s internal adoption of UNDROP and Right to Food training for agriculture ministries.

Groundwork & Political Learning (2025)

- Partner institutions map local/national/international farmers’ networks to empower and connect them to:

    - Establishing a shared understanding of farmers' priorities and policymaker gaps. Identifying entry points in existing multilateral forums for farmers' engagement (e.g. UN Food System Summit).
- Dual training tracks for farmers and policymakers on UNDROP and Right to Food hosted by national governments and funded by donors.

Policy Recommendations

1. Following international guidelines such as the Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, FAO should conclude and publish guidelines and best practice handbooks on farmer's participation in food governance.
2. Following the example of Eastern Africa Farmers Federation (EAFF) and Accelerating Impacts of CGIAR Climate Research for Africa (AICCRA), FAO should map local farmer's network by specific case studies in each unique locality and directly collaborating with farmers at the grassroots level (Chevallier et al., 2024).
3. Establish and fund "Farmer Participation Mechanisms" within key multilateral forums (e.g., FAO-CFS) for genuine co-decision-making. Learn from La Via Campesina's effective engagement in the CFS, where they advocate for small-scale farmers (Brem-Wilson 2017; Bragdon 2017). Scale this by supporting regional/national farmer networks with resources to participate in multilateral bodies and by encouraging these forums to create formal "Farmer Tracks" ensuring farmer representation and influence in policy processes.

2.2. Vision 2: Toward Sustainable Food in Switzerland by 2045

Authors: Suban Biixi, Ebrima Barrow, Ana Chamon, Kuei-Jr Liao, Rebecca Kübler

Introduction

As climate change accelerates, food systems are increasingly recognised in international policy as both drivers of and solutions to the crisis, as well as being highly vulnerable to its impacts (Durfey, 2021). Agriculture and food consumption play a significant role in greenhouse gas (GHG) emissions. Together, they account for approximately 15 million tonnes of GHG emissions annually in Switzerland (BLW, 2024). Agriculture alone produced 7 million tonnes, making up roughly 16% of the country's total emissions in 2024 (op. cit). The remainder results from imported food and agricultural goods such as animal feed, reflecting the growing environmental impact of globalised supply chains (Burch, 2020).

Although emissions in the agricultural sector decreased by about 10% between 1990 and 2020, meeting Switzerland's long-term climate goal of net-zero emissions by 2050 will require intensified and coordinated efforts (BAFU, 2023; BAFU, 2025). Switzerland's Climate and Agriculture Strategy aims to cut GHG emissions by at least 50% by 2030 while maintaining a food self-sufficiency rate of around 50%. However, achieving this balance amid population growth, climate instability, and limited arable land will demand increased efficiency and resilience in food production systems (Ritzel & von Ow, 2023).

This chapter introduces as a vision for the year 2045 a transformative plan for sustainable agriculture based on three pillars: what we eat, how we produce, and where our food comes from. It presents a detailed roadmap for building a resilient, inclusive, and climate-aligned Swiss food system over the next two decades.

Vision for 2045

By 2045, Switzerland has developed a fully sustainable food system where all food consumed is produced sustainably regarding environmental, social, and cultural values. This transformation is set on three guiding pillars: What are we eating? How are we producing? And where is our food coming from?

What We Eat:
In 2045, diets in Switzerland are more plant-based, seasonal, and nutritionally balanced, aligning with national dietary guidelines. Increased availability and appeal of plant-based food result in a significant reduction in environmental impact, with per capita food-related carbon emissions reduced by at least 50% compared to 1990 levels.

How We Produce:
Food is produced using methods that enhance biodiversity, regenerate soils, lower greenhouse gas emissions, and preserve local agricultural traditions. Farmers are key actors in this vision, they are
supported in applying climate-friendly and culturally considered practices that ensure long-term resilience and food security.

Where Our Food Comes From:
A renewed commitment to "Grow What You Eat, Eat What You Grow" guides land use and production priorities. A bigger share of food is produced domestically, including traditional crops like buckwheat and pulses, strengthening food sovereignty while reducing the carbon footprint of imports. This vision not only takes care of the environment but also preserves the local culture through food, ensuring a thriving, inclusive, and sustainable agri-food system for generations to come.

Action Plan

To achieve this vision, a clear timeline of coordinated steps is needed—working backward from the goal to guide policy, investment, and cultural change.

By 2045, all food consumed in Switzerland are produced sustainably,

respecting biodiversity, climate goals, and nutritional guidelines. Swiss food systems are local and resilient.

By 2040, all arable land is used for human food crops, not feed. CO_2 emissions from the food sector are reduced by at least 50% compared to the 1990 level (10 years after the Swiss climate targets for the Paris agreement, which is to reduce its greenhouse gas emissions by at least 50% by 2030 compared to 1990 levels (BAFU, 2025)). Soil health, biodiversity, and carbon sinks are actively restored and monitored.

By 2035, Switzerland ensures that all food imports meet sustainability standards, including limits on pesticide residues, fair labor conditions, and low carbon footprints. These criteria are embedded into trade agreements, granting preferential access only to products that meet verified environmental and social benchmarks (e.g., the EFTA-India Free Trade Agreement) and requiring imports like fruits and vegetables to comply with Swiss standards on water use, biodiversity, and ethical labor practices. Enforcement is carried out through certification systems, audit frameworks, and border adjustment mechanisms. In parallel, public awareness of local, seasonal, plant-based food becomes mainstream, while urban and regional food hubs strengthen supply chain resilience and reduce dependence on unsustainable imports.

By 2030, Arable land transition and sustainable practices that can lower greenhouse emissions are subsidised by the Swiss government. Monitoring tools are in place to track biodiversity and carbon performance.

Beginning in 2025, the federal government funds research and development for plant-based innovation and subsidies for traditional crops, like buckwheat. Public institutions monitor their cafeteria to comply with sustainable food guidelines. Cantons and cities begin to host vegan events like vegan day or vegan festivals, and fund start-ups and incubators in plant-based food sectors.

Policy Recommendations

This policy brief outlines a vision for agriculture in Switzerland in 2045. The vision focuses on the goal that all food consumed in Switzerland is produced in a sustainable manner. To realise this vision, the policy brief proposes an action plan that outlines milestones from 2025 to 2045 in five-year increments.

Early actions focus on funding research into plant-based diets, local incentives such as an annual vegan day, subsidies for local food production, and awareness-raising. Mid-term goals include redistributing arable land and reducing emissions. Down the line, agriculture in Switzerland should be fully aligned with sustainable food production standards and national nutrition guidelines.

The following policy recommendations identify key actors and actions needed to implement this vision step by step:

Key Actors	Key Actions
Swiss Government	Fund research and innovation in plant-based food; implement a national strategy for sustainable food systems.
Swiss Parliament & Commissions	Redistribute direct payments to incentivise sustainable production, use of all arable land, and traditional crops improvement.
BLW, Agroscope, Innosuisse	Launch a national Action Plan on Plant-Based Foods; support regenerative agriculture and carbon farming.
BLV & SECO	Require transparent labeling and monitor supply chains for CO_2, biodiversity, and fair labor.
EDA	Promote sustainable trade agreements aligned with Swiss environmental standards.

Key Actors	Key Actions
Swiss Farmers' Association (SBV) in cooperation with Cantonal Farmers' Associations	Provide training and financial support to farmers transitioning to sustainable practices and support farmers for traditional crops production and market access (with gastronomy).
Cantonal & City Governments	Support start-ups and incubators in the plant-based and sustainable agri-food sectors through grants, co-working spaces, and business mentoring.
Cantonal Governments	Develop land-use strategies to expand plant-based agriculture; protect biodiversity and carbon sinks.
Cantonal Governments & Local Associations (e.g. «Schweizerische Gesellschaft für Ernährung», SGE)	Organise awareness events like an annual vegan day; embed food sustainability and nutrition education into school programs.
Public Institutions (e.g. Schools, Hospitals, Government Buildings)	Adopt sustainable food procurement standards based on the Swiss Dietary Recommendations.
City Governments	Invest in urban food systems (rooftop farms, local hubs) and promote short supply chains.
City Governments	Enforce food waste tracking and redistribution policies, composting, and zero-waste systems.
Local Cultural & Health Offices	Run campaigns (e.g., "Eat for the Future") and support vegan day/week initiatives.

2.3. Vision 3: Wake (C)up: The future of sustainability and coffee in Switzerland

Authors: Triana Gil, Romberg Gondim, Anna-Kristiina Pae, Pilar Alejandra Paradiso, Yating Wang

Introduction

Switzerland plays a pivotal role in the global coffee industry, acting as a major trading hub and exporter (Legge et al., 2024). Members of the Swiss Coffee Trade Association (STCA) are responsible for over half of all green coffee traded globally. In 2023, Switzerland exported roasted coffee worth more than 3 billion CHF, making it the largest exporter, by value, of roasted coffee beans (Chandrasekhar, 2024; Legge et al., 2024).

In recent years, Switzerland has promoted a sustainability agenda in the coffee industry. With the launch of the Swiss Sustainable Coffee Platform (SSCP), Switzerland aims to bring stakeholders together to drive positive change for sustainable coffee (CI Coffee Switzerland, 2024). Despite these efforts, there are still several challenges in achieving sustainability:

1. **Supply Chain Engagement with Unsustainable Farming Practices:**

There are concerns that Switzerland's trading partners are not practicing sustainable farming nor ensuring fair labor conditions, undermining the sector's ethical commitments. A 2019 report by Public Eye found that Swiss traders, including Glencore, Trafigura, ADM, Bunge, and Cargill, which control significant portions of global grain, sugar, cocoa, and coffee markets, have been linked to various human rights violations in producer countries, including forced and child labor, land grabbing, and environmental degradation (Public Eye, 2019). An estimated 30'000 adults and children endure forced labor conditions in cocoa-growing regions of Côte d'Ivoire and Ghana, the primary sources of Swiss cocoa imports (CDE, 2024).

2. Global Deforestation and Biodiversity Loss:
Unsustainable practices in the coffee industry have devastating effects on forestation and biodiversity, and thus the longevity of coffee production (Petroni & Hoppe, 2024).

3. Issues with Domestic Adoption of Regenerative Agriculture:
The adoption of regenerative agriculture is varied among Swiss coffee companies, which impedes efforts to reduce environmental harm (Charles, 2025).

Switzerland's coffee economy is characterised by significant contributions to global trade and a strong domestic culture of consumption. While work has been made toward sustainability, ongoing efforts are needed to address challenges related to unsustainable farming practices, environmental degradation, and the widespread adoption of regenerative agriculture. By 2045, Switzerland can raise and meet sustainability and ethical standards[1] in the coffee industry for itself and its trading partners. This policy paper outlines steps to achieve these goals through 1. transparent supply chains; 2. standardised due diligence mechanisms among key stakeholders; and 3. legal and institutional frameworks for regulating ethical coffee trade for Swiss companies and its partners.

Vision for 2045

By 2045, all coffee—especially that traded by members of the Swiss Coffee Trade Association (SCTA)—is produced and traded in accordance with binding ethical and sustainability standards. These standards, co-developed through participatory diagnostics and continuously reviewed, are now embedded in enforceable legal frameworks and supported by smart incentives such as fiscal incentives, voluntary standards, and pricing mechanisms.

1 In this policy paper, *ethical standards* are defined as principles guiding corporate behavior to align with societal values, including the United Nations Global Compact, which covers human rights, labor, and the environment; the UN Guiding Principles on Business and Human Rights, outlining corporate responsibility for human rights; environmental sustainability frameworks such as the Paris Agreement; and supply chain responsibility principles in the OECD Guidelines for Multinational Enterprises.

Details of vision

Ethical and sustainable coffee will be co-defined by the main stakeholders, including these core elements:

- Labor rights are respected: workers — with a particular focus of those producer countries— receive a living income, with no child or forced labor involved.
- Environmental practices are regenerative: native agricultural knowledge and biodiversity-preserving techniques are integrated (e.g., agroforestry practices).
- Swiss investment fosters transformation: Swiss stakeholders actively support agri-tech innovation, renewable energy use, and knowledge-sharing throughout their supply chain.

The main tangible outcomes by 2045 would be the following:

1. A transparent supply chain mapping of the coffee industry in which Swiss companies are participating: Switzerland has a clear and traceable map of all coffee supply chains involving its companies, identifying actors, flows, and responsibilities.
2. Well-defined and standardized due diligence mechanisms adopted by key stakeholders: All actors comply with robust, SSCP-led due diligence mechanisms that ensure sustainability criteria are met both in Switzerland and in producing countries.
3. Legal and institutional frameworks put in place, regulating ethical coffee trade for Swiss companies and partners: Ethical coffee trade is backed by institutionalized laws and accountability systems, ensuring long-term compliance and credibility.

Switzerland, by 2045, stands as a global example—proving that ethical trade is not only possible but scalable and economically viable.

Action Planning

By 2045: Global Leadership & Multilateral Impact

- Proposal: Switzerland becomes a global leader in sustainable and ethical coffee, influencing international norms and inspiring multilateral sustainability mechanisms.
- Key actions: The mechanisms developed in previous years are effectively enforced, and companies part of the SCTA influence

multilateral supply chains.

- Key Stakeholders: Swiss Federal Government, multilateral bodies (e.g. FAO, ILO), partner governments, transnational civil society.

By 2040: Legal Framework & Knowledge Exchange

- Proposal: Develop a legal framework and foster knowledge sharing to ensure compliance with ethical and sustainable standards.
- Key Actions: (1) Enact a legal framework mandating compliance with ethical and sustainable coffee standards, supported by: Incentives (e.g. tax reductions, pricing mechanisms)and accountability mechanisms (monitoring, penalties). (2) Develop systems for continuous mapping and archiving of best practices across the supply chain, promoting learning and transparency.
- Key Stakeholders: State Secretariat for Economic Affairs (SECO), Federal Office for Agriculture (FOAG), SCTA, consumers, correspondent institutions and development/regional agencies in key trading partners (e.g. Brazil, Nicaragua, Colombia, Ethiopia).

By 2035: Participatory Responsibility Diagnostics

- Proposal: Understand the real impact of trading companies on producer regions.
- Key Actions: Implement localized participatory diagnostics to assess the social and environmental responsibilities of trading companies and their impact on producer regions.
- Key Stakeholders: Trading companies, local producer communities, development agencies, impact evaluators.

Starting in 2025: Foundation & Awareness

- Proposal: Lay the groundwork for systemic change by evaluating the current landscape, identifying gaps, and engaging a broad and inclusive range of stakeholders.
- Key Actions: (1) Launch a participatory diagnostic to define ethical and sustainable standards in coffee supply chains. Includes legal framework mapping, surveys, participatory observations, etc. Invest in nationwide awareness campaigns. (2) Target both the public and companies to co-create a shared understanding of sustainability and ethics.
- Key Stakeholders: SSCP (Swiss Sustainable Coffee Platform),

SCTA Members (Swiss Coffee Trade Association), Civil Society & NGOs (FarmStrong Foundation, Terre des Hommes, FairTrade Max Havelaar), Academia, Consumers.

Policy Recommendations

Institutionalise Participatory and Inclusive approaches for policy in Coffee Supply Chains

This would entail expanding the SSCP membership, and fostering participatory diagnostics in Switzerland as a standard mechanism to agree on a definition of sustainability and ethical sourcing in coffee production. Following OECD and FAO recommendations on responsible supply chains, these diagnostics should involve diverse stakeholders—including producer communities, consumers, civil society, and trading companies, going beyond Switzerland—to assess risks, responsibilities, and areas for improvement across the supply chain (OECD & FAO, 2022).

Enact Binding Legal Frameworks for Financing Sustainable production, with Incentives and Sanctions

Following the example of national laws of Norway, Germany, and the European Union Corporate Sustainability Due Diligence Directive (CSDDD), Switzerland should implement a legal framework, based on previous participatory diagnoses and definitions, which mandates adherence to defined sustainability and ethical standards in coffee sourcing. Beyond best practices of sanctioning and due diligence, the country could also establish incentive mechanisms, such as fiscal incentives for adhering companies in the initial years.

Strengthen Public Awareness and Consumer Engagement

Sustained investment in public awareness campaigns is essential to foster a shared understanding of what sustainable and ethical coffee means. This would be fundamental for civil society, including from producer countries, to join and engage in the definition of ethical coffee for future plans. In addition, the money resulting from penalties of due diligence from the legal framework recommended above should be destined for raising awareness for the problem. Campaigns should target both consumers and companies, encouraging behavioral

change and supporting voluntary compliance by companies through informed consumer choices.

Create a Transparent and Evolving Knowledge-Sharing Infrastructure

To promote continuous improvement and cross-sector learning, SSCP and the Swiss Government should establish a system for mapping, documenting, and sharing practices in sustainable coffee sourcing. This infrastructure would ensure transparency, support evaluation, and facilitate alignment between domestic companies and global sustainability goals. By expanding the discussion and participation beyond the private sector and Switzerland, a Knowledge Hub could foster the scaling up of such best practices to the international arena.

2.4 Vision 4: Indigenous voices for safeguarding biodiversity

Authors: Giulia Azzarello, Angelina Pavlenko, Andrea Peroziello, Shilpa Ann Thomas

Introduction

The global food system is under increasing pressure from interlinked crises: climate change, biodiversity loss, conflict, and economic inequality. While food is a fundamental human right, nearly **735 million people** faced hunger in 2022, with smallholder farmers, Indigenous peoples, and rural communities disproportionately affected (FAO et al. 2023). Despite producing about **one-third of the world's food** and stewarding **80% of global biodiversity**, these groups often face land insecurity, limited resource access, and exclusion from decision-making (IPES-Food, 2016; Lowder et al., 2021).

National and international policies prioritise industrial agriculture and trade liberalization over food sovereignity and local resilience. The

UN Declaration on the Rights of Peasants (Human Rights Council, 2018) and the **Right to Food**, recognised by over 170 countries, have laid the groundwork for protecting food producers and consumers. However, implementation remains patchy, with few enforcement mechanisms and limited integration into national law (Golay, 2020).

Moreover, conflicts and land grabs, often driven by foreign investment or extractivist projects, displace local communities and undermine food sovereignty, leading to food insecurity. Meanwhile, global collaboration often fails to empower grassroots actors or ensure accountability for agribusinesses and states. As we look toward 2045, addressing these structural issues will require rethinking food governance: centering the rights of peasants and Indigenous peoples, reinforcing democratic control over food systems, and building international frameworks beyond trade to uphold justice and sustainability.

A recent report by the International Panel of Experts on Sustainable Food Systems (IPES-Food) highlights two potential futures for food systems by 2045. One scenario involves continued dominance by agribusiness, while the other envisions a transformative shift towards agroecology and food sovereignty, driven by civil society and social movements. The latter scenario reflects our vision for achieving food security and biodiversity through Indigenous-led initiatives (IPES-Food, 2021).

Vision for 2045

Celebration of Indigenous Traditional Knowledge (ITK)!
By 2045, Indigenous communities and peasants would play a central role in safeguarding landscapes and promoting agroecological practices. However, this requires overcoming current challenges such as restrictive seed laws and intellectual property claims that hinder their ability to manage seeds and traditional knowledge.

For this to come to fruition, in the year 2035, a landmark framework had been signed, and quickly ratified: The Global Treaty on Indigenous Sovereignty, Biodiversity Protection , Economic Empowerment and Land Rights. This treaty recognises that the future of our planet is inseparable from the rights of indigenous communities - the true guardians of biodiversity. Therefore, Indigenous communities have a leading role regarding biodiversity restoration and food sovereignty initiatives on the international level.

Action Planning

By 2045

- Indigenous communities are fully represented in regional, national, and global environmental governance structures. They hold legal ownership and decision-making authority over their lands, resources, and biodiversity.
- Global biodiversity has measurably increased, with Indigenous stewardship recognised as central to planetary health.
- A climate justice fund compensates Indigenous communities for centuries of ecological loss due to colonialism and extractive capitalism.
- A decade of biodiversity resurgence is celebrated globally, marking ten years of treaty-driven ecological restoration and rights recognition.

By 2040

- A second wave of global mobilisation calls for deeper Indigenous representation in decision-making.
- A Global Indigenous Council is established at regional, national, and international levels. The council holds advisory and co-decision-making powers.
- Funding stems from international organisations and national governments, such as the Philippines, committed to institutionalising Indigenous political participation.

By 2035

- The Global Treaty on Indigenous Sovereignty, Biodiversity, and Land Rights is signed. It features:
  - Full legal recognition of Indigenous ancestral lands
  - The integration of Indigenous knowledge in global biodiversity strategies
  - Support for sustainable Indigenous economies (eg. agroecology, ecotourism)
- A Monitoring Mechanism is established at international level, with two key arms:
  - **Community-Led Oversight**: Indigenous communities monitor biodiversity and land governance on the ground.

    - **Independent International Body**: Composed of Indigenous representatives, environmental scientists, and legal experts.
- Annual reports by states and communities track progress, enabling accountability and policy correction.
- Biodiversity restoration becomes visible in formerly degraded territories.
- Civil society pushes for stronger accountability measures and enforcement tools (eg. sanctions, public blacklists for non-compliant actors). NGOs who could play a leading role in this include La Via Campesina and FIAN.

By 2030

- Five years of sustained pressure results in the negotiation of an international treaty on environmental justice and Indigenous sovereignty.
- The Treaty for the Protection of Territories from Extractive Practices is adopted by 30 countries, with Indigenous leaders and civil society actors centrally involved in its drafting.
- The EU enacts an expanded Corporate Sustainability Due Diligence Directive (CSDDD), strengthening mandatory human rights and environmental due diligence. Switzerland and other states follow.
- Leadership shifts toward international organisations and state actors; funding transitions to intergovernmental bodies, such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) .

By 2025

- Civil society mobilises across national and international arenas, demanding indigenous land rights, food sovereignty, and biodiversity protection (mass mobilisations, digital campaigns, academic advocacy, and legal interventions).
- COP29 in Belém, Brazil becomes a landmark moment, allowing for unprecedented participation of frontline communities. It initiates discussions on climate reparations for Indigenous peoples.
- Formal institutional dialogues emerge between Indigenous communities and national governments on biodiversity and agriculture (IPBES, 2019).

- Civil society, especially grassroots Indigenous movements, leads this phase; funding primarily comes from NGOs or individual donors, such as the Tenure Facility, which provides grants and technical assistance directly to Indigenous Peoples.

Policy Recommendations

The **2035 Global Treaty on Indigenous Sovereignty, Biodiversity, and Land Rights** is a groundbreaking agreement aimed at recognising and strengthening the rights of indigenous peoples, ensuring their participation in environmental decision-making, and preserving the world's biodiversity. By granting full legal recognition of ancestral lands, embedding Free, Prior, and Informed Consent (FPIC) into international law, and integrating traditional knowledge into biodiversity strategies, the treaty lays the foundation for long-term sustainability and justice (IHRB, 2022).

In order to realize this treaty, the following policy recommendations are proposed for decision-makers:

Institutionalise Indigenous Co-Governance in Biodiversity and Land Management

National governments should recognize Indigenous governance systems in environmental legislation, ensuring co-management of protected areas and ancestral lands.

Best practice: The Tla-o-qui-aht Tribal Parks in British Columbia demonstrate successful Indigenous-led conservation, integrating traditional governance with ecological stewardship (Dorward et al., 2022).

Ensure Long-Term, Public and Philanthropic Funding

Establish a Global Indigenous Biodiversity Fund with contributions from governments, development agencies, and philanthropic networks to support land restoration, capacity-building, and legal enforcement.

Model: The Tenure Facility has disbursed over $10 million to secure Indigenous land rights in 14 countries (Tenure Facility, 2025).

Mandate Legal Integration of Treaty Commitments at the National Level (2025–2040)
Require signatory states to embed treaty principles especially Free, Prior, and Informed Consent (FPIC) into their national laws, with a 15-year implementation timeline and biannual reviews.

Example: The Philippines' Indigenous Peoples' Rights Act (1997) is one of the earliest national laws embedding FPIC and land rights, offering a legislative model for broader replication (Republic of the Philippines, 1997).

Establish an Independent, Indigenous-Led Monitoring Mechanism
Create a global body comprising Indigenous experts, legal advocates, and environmental scientists to oversee treaty implementation. The mechanism ensures:

- Community-led oversight by Indigenous organization
- An independent international monitoring body,
- Annual reporting and public reviews, and
- Real-time data systems that combine Indigenous and scientific knowledge.

Case study: The Shandia Platform in Ecuador allows Kichwa communities to monitor deforestation using satellite data, combining traditional knowledge with technology for real-time accountability (GATC, 2023).

These recommendations support a long-term shift towards rights-based, regenerative, and inclusive food and environmental systems.

2.5 Vision 5: Achieving "Organic One Health" in the European Union

Authors: Ruth Bandomah, Mariana Hervigo, Mitsuki Ishii, Carolyn M. Wu

Introduction

Agriculture is an important part of the European Union (EU), but its environmental and social sustainability is coming under increasing scrutiny (Streimikis et al., 2022). It is the source of a significant proportion of environmental deterioration such as water pollution, excessive pesticide use, hydrological alterations and greenhouse gas emissions, all of which contribute to a decline in the quality of life (Kalinowska et al., 2022).

To address these pressures, the implementation of the European Green Deal is one of the strategies adopted by the EU. It has also anchored its agricultural transition in strategic frameworks such as the Common Agricultural Policy (CAP), which includes funding to support the transition to organic production (Kalinowska et al., 2022). In the same vein, the European Commission has developed the "Farm to Fork Strategy" initiative, which encourages the adoption of organic practices, with the aim of achieving 25% organic land in the EU by 2030. Organic farming in Europe is governed by Regulation (EU) 2018/848, which sets out the rules for organic production and the labeling of organic products. This environmentally friendly farming method, which avoids the use of synthetic inputs, has established itself as a sustainable food production model for which consumer demand has risen sharply, as evidenced by the 10.9% growth in the organic produce market in 2017 (Pânzaru et al., 2023).

According to Eurostat, in 2022, 16.9 million hectares, or 10.5% of all EU agricultural land, was farmed organically, with wide disparities between member states (Eurostat, 2023).

Vision for 2045

Organic One Health

In the year of 2045, countries in the EU have achieved "Organic One Health" with healthier humans, animals, and the environment.

Organic farming has become the norm where over 50% of the produce is now organic. Sustainable soil health has also been achieved where nutrient-dense foods can be grown again. Antibiotic use in livestock has been banned, and therefore, livestock is now raised without antibiotics. Efforts to promote local agricultural products have not only successfully solved the issue of food deserts in many communities, but also achieved a reduction in CO2 emissions due to agriculture by 50%. Lastly, there have been movements to promote farmers' rights and fair wages, which resulted in better quality of life for farmers.

With the achievements of local organic farming, return of nutrient-dense foods, antibiotic-free livestock for consumption, EU citizens now have access to sustainable nutritious diets. The medical community has thus achieved the objective of health prevention. The burden of non-communicable diseases, including cardiovascular diseases, cancers, diabetes, and even obesity has reduced due to access to healthful diets and promotion of healthy lifestyle. With a sustainable food system thanks to healthy soil, organic nutrient-dense produce, and livestock without antibiotics, countries in the EU have achieved "Organic One Health".

Action Planning

By 2045, Europe has built a resilient food system aligning with One Health principles, building a solid foundation for farmers to achieve financial independence and long-term sustainability.

2040 – Agricultural Results

- Improved soil health, enabling a resilient agriculture system.
- Increased nutrient density in food, leading to improved public health.
- Funding sources: NGOs like Why Hunger, private foundations (Salvia Foundation), international philanthropic foundations such as Fondation Charles Léopold Mayer.

2035 – Full Transition

- New value systems and food production systems are mainstream across the EU, following examples such as the **"Agroecology partnership" which supports the agricultural sector to promote environmental sustainability in its practices** (Agroecology Partnership, 2025).
- Widespread implementation of organic farming.
- Fair wages are secured for farmers through policy and market structures, making farming a more sustainable and economically viable profession.
- Funding sources: EU-level public funding (EU fonds), private institutions like Salvia Foundation, and faith-based development organisations such as Bread for the World.

2030 – Policy and Systemic Change at the EU Level

- Shift in the value system: from profit and productivity-focused to prioritising environmental, human, and animal health, following examples such as food systems transformation by the Global Alliance for the Future of Food.
- Shifting subsidies to environmentally and health-friendly products, supporting sustainable food production.
- True-cost pricing reflects environmental and social externalities.
- Financial support enables farmers' access to land, education, technology, and training.
- Funding sources: Advocacy organisations such as the ETC Group, research institutes (Transnational Institute), and philanthropic foundations like the McKnight Foundation.

2025 – Laying the Groundwork

- Grassroots initiatives and local community engagement start, inspired by past examples such as "Community Supported Agriculture networks" in France, Germany, and others.
- Campaigns and education targeting both producers to review production methods and consumers to shift demands, creating social pressure for systemic change.
- Awareness raising through multi-stakeholder dialogue on food system sustainability.
- Funding sources: International organizations such as La Via

Campesina, foundations like Thousand Currents, and NGOs including Why Hunger.

Policy recommendations

To validate these organic transitions, effective policies must be implemented to support this organic farming in Europe. By 2045, it is expected that the continent has already gone through the various motions of promoting sustainable food systems, thus below are some policies to aid this action.

Mainstreaming Organic Farming

Policy frameworks concerning organic farming must be recognised and integrated into the main policies of member countries. This would ensure that organic farming is widely adopted, leaving no country behind. Existing agricultural policies should complement organic farming. Clear action plans must be outlined with prior assessment of the existing state of the sector within each country. For instance Denmark is known to have the longest history of support and clear action plan for organic farming (Future Policy, 2025). The plan was drafted by the Danish Council for Organic Agriculture in partnership with organic producer organisations, trade union consumer and environmental groups.

Consumer Awareness and Marketing Strategies

To support mainstreaming activities, governments should be at the forefront of sensitising the public and creating awareness on the health and environmental benefits of organic farming. Additionally, measures must be put in place for citizens to consume more organic products in place of non-organic ones.

3. Conclusion

The global food system stands at a critical crossroads. Mounting challenges—ranging from the escalating climate crisis to deepening inequalities and persistent malnutrition—are placing unprecedented strain on how we produce, distribute, and consume food. These pressures are not only urgent but also deeply interconnected, demanding a coordinated and transformative response. In this context, continuing with "business as usual" is no longer an option. To feed a growing global population without breaching planetary boundaries or leaving vulnerable communities behind, a bold and systemic transformation is essential. This transformation is not a singular event, but a long-term process of rethinking how we grow, share, and value food. It means shifting toward systems that are resilient to shocks, regenerative for ecosystems, inclusive of marginalized voices, and nourishing for all. It also requires moving beyond technical fixes and engaging with the broader social, political, and ecological dimensions that shape food systems.

The path forward must be collaborative. Governments, international organisations, civil society, researchers, and the private sector all have roles to play. Equally important are the farmers, consumers, and activists whose lived experiences and innovations are already driving change on the ground. A truly sustainable and equitable food system can only emerge from such collective and inclusive efforts.

In this era of overlapping global challenges, reimagining the food system is not just an opportunity—it is an imperative. By weaving together ecological wisdom, human rights, policy innovation, and scientific progress, we can build food systems that sustain both people and the planet. The time to act is now, and the following recommendations are an excellent starting point.

Participation
The FAO should ensure meaningful farmer participation in food governance through guidelines, local collaboration, and mechanisms in global forums.

Coordination
All levels of Swiss governance must coordinate efforts to promote sustainable agriculture, innovation, and education.

Sustainability
Switzerland should adopt inclusive, binding policies to ensure sustainability in coffee supply chains, from sourcing to consumer awareness.

Sovereignity
States need to adopt a treaty that enshrines legal recognition, funding, and Indigenous-led monitoring to uphold Indigenous sovereignty and biodiversity rights.

Transition
To support the organic transition, the European Union needs national policy integration, public awareness, and action plans that make organic farming mainstream.

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