

Rather than promoting global sustainability and the achievement of development goals, each dollar invested in factory farming undermines communities and exacerbates the problems caused by an unsustainable system.

Both public and private institutions have the power to redirect their investments to help mitigate the negative social and environmental impacts of industrial animal agriculture and fishing and create a more equitable, humane and sustainable food system.

Part III – Roadmap to an equitable, humane and sustainable food system

3.1 Our vision for an equitable, humane, and sustainable food system

In an equitable, humane and sustainable food system, nutritious foods are supplied through agroecology production systems that promote human rights — particularly the rights of traditionally marginalised populations including women and girls, Indigenous populations, people of colour and people with disabilities — and protect the environment and animals, while ensuring food sovereignty meets food security needs and guaranteeing that people working across the food system live in dignity and receive a liveable income.

Consumption of animal products in high-consuming countries is significantly decreased in favour of diversified, plant-rich diets, and remaining animal sourced foods are produced in worker-driven, cooperative production models using agroecological practices and high-welfare standards. Corporations are held accountable for the social and environmental damage they cause and the power that the multinational meat, dairy and seafood corporations currently hold over the system is shifted towards communities, worker-led programmes, smallholders, cooperatives and Micro, Small & Medium Enterprises to scale up local and regional economies.. At the same time, policies and subsidies support food production that embraces just transition principles and agroecological approaches without undermining the basis of food sovereignty.

In an equitable, humane and sustainable food system, there is no place for false solutions. Concepts such as ‘carbon farming’, ‘sustainable intensification’ and ‘regenerative agriculture’ have significant trade-offs or limitations,¹⁷⁹ are poorly defined¹⁸⁰ or are not feasible at scale.¹⁸¹ Carbon markets and other offset programmes allow industrial agriculture facilities to continue business as usual and keep producing greenhouse gas emissions and releasing air, water and soil pollution instead of reducing these harms.

Animal-based foods can be part of an equitable, humane and sustainable food system with Indigenous and traditional practices, knowledge and consumption patterns, which are vastly different from industrialised, high-meat diets in many Global North countries. This just transition primarily applies to industrialised animal production and agribusinesses. It recognises the role of culturally-appropriate meat consumption and the economic, social, nutritional and cultural significance of traditional livestock and pastoralist systems in certain contexts and communities, particularly for women, providing them with income, capital, fertiliser, fuel, draught power, fibres and hides¹⁸². It also acknowledges the essential role of smallholders, pastoralists, small-scale fishers, women, Indigenous peoples and peasants in providing healthy and nutritious food for all.

This roadmap demonstrates pathways to shift to a climate-resilient food system that is equitable, humane and sustainable, as well as locally and democratically-governed, while mitigating greenhouse gas emissions, biodiversity loss and food insecurity — a global framework to guide the development of context-specific roadmaps.

It outlines **three key levers** of change to transform our food system that must be tailored to local and regional contexts, including current legislation, cultural sensitivities, community-based solutions, levels of consumption and production of animal-sourced foods, and how entrenched industrial animal agriculture is in the region:

1. **Strengthen food system governance:** We must challenge the dominance of multinational corporations over the food system and put policies in place to foster transparency and hold them accountable for their social and environmental impacts. At the same time, we should support environmentally and socially responsible companies and protect and elevate traditional and local food systems.
2. **Promote agroecological practices:** A just transition necessitates the embracing of agroecology to promote human rights, the environment and animals,

ensuring food sovereignty meets food security needs while providing dignified and sustainable livelihoods.

3. **Shift towards diets within planetary and social boundaries:** Countries with high per capita consumption of animal products must transition to plant-rich diets with reduced meat and dairy to stay within planetary and social boundaries. This shift not only benefits public health and the environment but also frees up land and resources to support diversified agroecological production systems.

3.2 Principles of a just transition in food and agriculture

According to experts, global emissions from animal production must decline by 50% by 2030 to meet the targets of the Paris Agreement¹⁸³. This effort will have to be led by high meat and dairy consuming and producing countries through a decrease in the consumption of animal products and the number of farmed animals in industrial production systems.

A just transition from industrial animal agriculture can only be achieved in partnership with smallholders, pastoralists, small-scale fishers and food workers to ensure it is developed in ways that address inequality, end exploitation, and achieve food sovereignty that meets food security needs. It must centre social, racial and gender equity and address the multiple intersecting forms of discrimination such as sexism, racism, and ableism. Gender-based solutions and racial equity strategies that acknowledge the specific impacts experienced by women and people of colour and their crucial role in agriculture are essential. The transition must take into account regional and cultural differences and requires a strong commitment and inclusive process from government at all levels. These processes must use a human rights-based approach based on multilateralism with a clear definition of roles and responsibilities.

The just transition must be guided by climate justice and the UNFCCC's 'common but differentiated responsibilities' principle. It must address and improve the conditions of marginalised groups and regions while recognising the role of the Global South, smallholders, pastoralists, small-scale fishers, women, Indigenous peoples and peasants in providing healthy and nutritious food for all. Those who are most impacted must be included in policy discussions and commitments from the beginning.

There must be policy coherence that aligns food and agriculture with social, environmental, health and labour goals and commitments. Policymakers need to transform food system governance to break up market concentration and hold corporations accountable, alongside promoting environmentally and socially responsible companies and supporting a transition to food production based on agroecology and food sovereignty.

Although each region will have its own unique dynamics and needs during this transition, the following principles can serve as a guide for policymakers and communities:

- **Protect livelihoods and the dignity of farmers and farm workers:** The independent livelihoods of those working in the food system, particularly smallholders, pastoralists, small-scale fishers, Indigenous people, people of colour and marginalised workers, must be protected through economic and policy support. This can range from job training and financial aid to mental health support and access to healthcare. Strong community support is essential, as is addressing the cultural impacts on communities from changes in livelihoods and diet.
- **Advance human and labour rights and gender and racial equity:** Every person has the right to safe working conditions free of exploitation, to liveable wages, access to healthcare and to gender and racial justice. Food and agriculture policy must be aligned with trade policy to avoid human rights violations caused by the displacement of industrial animal agriculture impacts via increased imports or exports constrained by few regulations. Additionally, food and trade policies should protect Indigenous communities from land-grabbing by ensuring the application of the right of Free, Prior and Informed Consent¹⁸⁴.
- **Ensure food sovereignty that fulfils food security :** Food and agriculture policy must value the fundamental right to food as nourishment rather than as a commodity, and empower smallholders to decide what to grow and how to grow it. Additionally, it must support local food systems and ecosystem improvement through democratic decision-making by affected communities and through the application of the knowledge and skills of Indigenous peoples, pastoralists, peasant communities, young people and women.
- **Prioritise agroecology and diets within planetary and social boundaries :** Food and agriculture policies and practices should follow the polluter pays and precautionary principles. They must be inclusive and enhance social justice and climate stability, ensure that there is healthy air and water, pollution mitigation, land restoration, animal welfare and wildlife conservation, and also ensure equitable access to land and to nutritious, sustainably-produced food.
- **Enhance public health:** The public health threats caused by industrial animal agriculture – including AMR, zoonotic disease risk, environmental pollution, pesticide exposure and chronic, diet-related diseases – must be addressed and

reversed through policy shifts, corporate accountability, and healthcare while transitioning to a food system focused on advancing individual and community health.

- **Improve animal welfare standards:** In areas where pastoralists depend on livestock for food and livelihoods it will be critical to adopt agroecological practices including high welfare standards in line with the Five Domains¹⁸⁵. In other parts of the world, as industrial animal agriculture systems are being phased out, welfare standards for animals remaining in those systems must be aligned with the Farm Animal Responsible Minimum Standards (FARMS) to redress animal welfare, environmental and public health impacts¹⁸⁶.

Engaging Stakeholders

A key principle of a just transition in food and agriculture is ensuring an inclusive process that engages those who are most impacted by the transition. These stakeholders representing the food system from farm to fork must be meaningfully involved early in the process, ahead of implementing any new policies. It is critical that this participatory process centres the voices of marginalised populations, including smallholders, pastoralists, small-scale fishers, peasants, women, Indigenous peoples and people of colour, and does not allow corporations to dominate the discussion.

Mechanisms to achieve a just transition in food and agriculture

- Ensure early involvement and consultation with key stakeholders and marginalised groups.
- Use existing mechanisms to engage Indigenous and tribal groups such as the Civil Society and Indigenous Peoples' Mechanism for Relations with the United Nations Committee on World Food Security.
- Create locally relevant resources highlighting the local benefits of transitioning away from industrial animal agriculture and showing how the just transition will protect the different groups impacted.
- Work with key stakeholders to set clear priorities.
- Collaboratively implement and assess changes.

Who does the just transition impact?	Key stakeholders
Smallholder producers and their support systems	Smallholder farmers, small-scale fishers and aquaculture farmers, veganic farmers, organic livestock farmers, subsistence farmers, silvopastoralists/agroforestry

	farmers, organisations that represent the interests of non-corporate farmers (e.g. Via Campesina, IFOAM), farm advisory services, women's organisations (e.g. Paraguay's National Organization of Rural and Indigenous Women Workers (Conamuri), Brazil's National Commission of Rural Women Workers (CNMTR), Rural Women Workers Movement of the Northeast (MMTR-NE), the National Articulation of Women Warriors of Ancestry (ANMIGA))
Industrial producers and related industries	Multinational corporations across the supply chain (agrochemical and commercial seeds, synthetics fertilisers, livestock genetics, agriculture, animal pharmaceutical and health industry, agricultural commodity traders, manufactured equipment, meat/seafood/aquaculture and protein, food and beverage processors, transporters, slaughter/rendering byproduct users, farm insurance providers, meat and dairy industry associations)
Workers throughout the supply chain	Farmworkers in industrial producers e.g. marginalised workers, smallholders, pastoralists, peasants, small-scale fishers, women, Indigenous peoples and people of colour, in industrial fishing fleets, slaughterhouse workers, unions, migrant workers
Communities affected by agricultural production	Rural communities, autonomous communities, Indigenous Peoples, frontline and fence line communities, nomadic/pastoralists
Innovators	Alt protein companies, innovators working to improve agroecology
Researchers and advocates	Universities, research centres, think tanks, policy advocacy organisations, conservation organisations, Consultative Group on International Agriculture Research (CGIAR),

	government agricultural research and development departments, government agricultural extension departments
Regulators	Governments, FAO, UNEP, certification schemes, UNFCCC, CDB
Investors and funders	Development agencies and banks, private investors and shareholders, debtors, insurers, economists, foundations
Consumers	Low-income/low-access urban populations, people whose meat consumption has increased with rising income, chefs, retailers and grocery stores
Animals	Farmed animals, wildlife, fish and crustaceans

3.3 Just transition policy recommendations

Lever 1: Policies to strengthen food system governance

Financial justice

- **Hold corporations accountable for paying taxes and financial responsibility for the harms they caused.** Governments must end tax breaks and loopholes for corporations, and increase corporate tax rates for just and equitable transition. Rather than externalising the costs of corporate pollution and other harms caused by industrial food production, those responsible must fund fixing the harms they caused, with additional financial penalties benefiting impacted communities and/or smallholders.
- **Repurpose direct and indirect government subsidies for multinational meat, dairy and seafood corporations.** Subsidies in the form of direct payments, grants, preferential loans, surplus purchases, tax breaks and other financial benefits should shift away from funding multinational corporations, feed crops, crop insurance, and genetically-modified organisms and redirected towards increasing agroecological and conservation practices; helping farmers create carbon sequestering, biodiverse natural habitats; and supporting smallholders, small-scale fishers, women, historically marginalised producers farmer cooperatives and Micro

and Small Enterprises. This would include preventing multinational corporations from receiving specialised funding such as bailout programmes.

- **Prohibit multilateral development bank investments in the expansion of industrial meat, dairy and seafood operations.** It is crucial that MDBs implement environmental and social supply chain due diligence to all existing and future investments in order to achieve equitable, humane and sustainable food systems.

- **Defund false solutions including biodigesters, carbon offsets and carbon removal or ‘carbon farming’ schemes.** Funding should not be granted to any schemes or practices that further entrench industrial animal agriculture models, increase harm to marginalised communities, or grant licence to large corporations to continue polluting the environment.

- **Mandate public development bank alignment with global agreements.** Public and Multilateral development banks should add all elements of industrial livestock production, including feed manufacturing, to the list of activities considered universally non-aligned with the goals of the Paris Agreement. Industrial animal production must be excluded from financing due to its economic liabilities from climate risks and the ways in which it threatens to keep the goals of the Paris Agreement, Kunming-Montreal Global Biodiversity Framework, the Sustainable Development Goals (SDGs) and other global agreements out of reach. Banks should also report on progress, gaps and strategies related to meeting their targets.

- **Prevent private investments in the food system.** Private investment lacks effective accountability, encourages deregulation, deepens debt inequalities and threatens local and Indigenous food sovereignty. Safeguard food systems and protect the related “commons” from the investments, management, or ownership of private actors, such as transnational corporations, investment banks, private equity firms, and such profit-driven entities. These actors have been repeatedly documented for exposing food systems to exploitation, extraction, and destruction with minimum accountability. Instead, encourage local cooperatives, tribal collectives, community-centred initiatives, and democratically-governed public institutions to steward food systems with strong regulatory infrastructure for duty of care, access to justice, and reparation mechanisms.

- **Create a task force at the regional (e.g. EU)/national (government)/state level to enforce regulations for investment-related misconduct.** The task force should be empowered to pursue concerns such as corporations misleading investors about environmental commitments and advisors failing to follow environmental, social and corporate governance (ESG) policies. The US Securities and Exchange Commission established a Climate and ESG Task Force that proactively identifies and pursues such violations¹⁸⁷.

- **Strengthen trade and investment agreements to prevent corporate influence and support food sovereignty.** Rules that govern financial markets should prioritise public interest and the right to food while ensuring that regulatory bodies such as the UN are not subject to corporate influence.
- **Fully fund agencies and programmes that enforce environmental and animal welfare protection laws and protections for farmworkers and food chain workers.** Government agencies tasked with enforcing environmental, animal welfare and worker protection laws are often understaffed and under-resourced, making it impossible to hold corporations accountable for violations. In addition to investing in agency-level enforcement, funding should also be directed to private, worker-driven enforcement programmes.

Accountability and governance

- **Strengthen and enforce environmental and animal welfare regulations for industrial animal production.** Corporations (including all of their domestic and international subsidiaries, lobbying groups, trade associations, and other related entities) must be held responsible for pollution, animal welfare infringements and other environmental harms caused throughout their supply chains, including those due to monoculture feed crops, animal production facilities, slaughterhouses and industrial fishing operations. Enforcement should include fines, permit revocation, suspension of market access and other appropriate sanctions. Their responsibility cannot be expressed as carbon or biodiversity offsets, net zero, gene editing, breed selection or other false solutions that would not tackle the root cause of the damage.
- **Strengthen and enforce corporate accountability rules, including duty of care mechanisms and a ‘do no harm principle’ with mandatory disclosures.** Corporations should be required to report on human rights and environmental impacts (including GHGs) along their entire supply chain, including subsidiaries, and compelled to perform duty of care throughout their business operations with appropriate enforcement and punishment for failure to do so. The European Commission’s directive on corporate sustainability due diligence requires companies to identify, end, prevent, mitigate and account for negative human rights and environmental impacts as well as requiring certain large companies to have a plan for aligning their business strategy with the Paris Agreement¹⁸⁸.
- **Strengthen and expand worker protection laws to guarantee basic human rights, health care, and collective bargaining.** Corporations should be required to move from contractor relationships to employer relationships to increase protections and benefits for workers, while workers should have the right to collective bargaining. Farmworker and food chain workers must have the same

rights as other workers, including but not limited to access to proper medical care; access to legal representation; ability to attend parent-teacher conferences; protections from heat, smoke, and other climate-related impacts; paid leave and days off; health insurance; housing at a safe distance from pesticide spraying; and immigrant rights.

- **Require companies to meet strong worker-protection standards and participate in worker-driven agreements to qualify for government funding, contracts, and incentives.** End government funding and contracts, including procurement, for companies that engage in bad labour practices. Require companies to ensure specific improvements in employer policies and mechanisms for worker-driven agreements, monitoring and enforcement to qualify for funding initiatives. In 2023, the U.S. Department of Agriculture launched a guestworker expansion pilot programme that requires employers to improve working conditions, such as paid sick leave and worker housing maintenance, and to participate in a worker-driven social responsibility programme, have a collective bargaining agreement in place, or commit to neutrality, access, and voluntary recognition to receive a platinum-level financial award.¹⁸⁹

- **Ban zero-hour contracts for workers across the food and agriculture supply chain.** Contracts that don't require employers to provide a minimum or guaranteed number of working hours are often used to exploit workers by denying them reliable hours, fixed income and benefits. Banning these contracts would improve equity, dignity and wages for workers.

- **Ratify and enforce the UN treaty on business and human rights.** An intergovernmental working group is developing an international legally binding treaty to regulate transnational corporations and other business enterprises in regards to human rights. A strong treaty aligned with the UN Guiding Principles on Business and Human Rights would provide an instrument to align accountability and liability to protect people from human rights abuses.¹⁹⁰

- **Adopt a corporate accountability framework across UN proceedings.** UN proceedings, including UNFCCC and United Nations Food Systems Summit (UNFSS), should be free from corporate influence and hold corporations accountable for human rights and environmental harm, while uplifting the voices of those most impacted by the food system¹⁹¹.

- **Strengthen processes to assess and address conflicts of interest.** Governments need to establish mechanisms to identify, disclose, monitor and mitigate conflicts of interest in food system spaces and processes, including preventing industry influence over regulatory guidance (e.g. advisory committees), public education narratives and research at government and public institutions. These mechanisms should utilise independent, third-party reporting and evaluation rather than relying on self-reporting.

- **Stop the revolving door between government agencies and multinational corporations and industry lobby groups.** Restrict the eligibility of representatives of multinational corporations and lobby groups to serve in government roles that have any oversight or regulatory influence over their former industry, and vice versa.
- **Strengthen rules to prevent corporate interference in government policy.** Lobbying and corporate spending should be restricted and transparent. Reporting should be improved to prevent corporate influence over policy and elections.
- **Strengthen and enforce antitrust rules.** Antitrust rules should address the full range of social and environmental impacts related to market consolidation in the animal agriculture industry. This includes accountability for direct and indirect harms to smallholders and local communities caused by corporate consolidation, restrictions on corporations moving abroad to avoid regulation, and ending monopoly control of slaughterhouses.
- **Establish regulatory frameworks for alternative protein investments.** Any investments in alternative proteins should be paired with regulatory and safety approvals to ensure that this growing sector is subject to the same level of accountability as animal production, that it respects the guidelines contained in global agreements such as the Paris Agreement, the SDGs and the Kunming-Montreal Global Biodiversity Framework and that companies are prevented from locating commercial-scale facilities abroad. Investments should also prioritise domestic production and require open-source, communal properties.
- **Strengthen reporting requirements for industrial animal agriculture facilities and other public health responses to zoonotic diseases and pandemics.** Government agencies must require widespread testing of animals, reporting, on-farm biosecurity measures, and personal protective equipment, sick days, and health care for workers to stop zoonotic diseases emerging from or spreading through industrial animal agriculture facilities. Agency enforcement must be sufficiently funded along with technical assistance and other support needed to meet these requirements, facilitate the adoption of the highest animal welfare standards to prevent disease spread, and ensure a rapid public health response to zoonotic disease threats.
- **Strengthen reporting requirements for all greenhouse emissions associated with industrial animal production.** Corporations should be required to regularly report all greenhouse gas emissions, including Scope 3 emissions, for their entire value chain — including methane from enteric fermentation and manure management and nitrous oxide from feed production — using standardised, science-based methodology. Corporate targets and GHG reporting

and monitoring schemes should be consistent with the IPCC's scenarios to limit warming to 1.5°C.

- **Establish national and regional councils with the status to influence policy.** Governments should form councils including representatives from civil society and community-led organisations, smallholders, small-scale fishers, women's organisations, economists, youth, and other stakeholders, and empower them with adequate resources, decision-making capabilities, and influence over policy to help democratise food system governance, reduce corporate control, and improve accountability.

Trade

- **Adopt trade policies that prioritise domestic production, support local food systems and disincentivise multinational corporations.** Trade policies that establish agroecological production requirements, prohibit fast food businesses with negative social and environmental impacts, and require businesses to source from local suppliers can help break up market concentration and stop the expansion of multinationals in the Global South.

- **Establish policy coherence between trade and global agreements.** Reform and enforce trade policies to align with the Paris Agreement, SDGs, Kunming-Montreal Global Biodiversity Framework, human rights treaties and other global agreements.

- **Strengthen liability and accountability in trade agreements.** Corporations receiving investments, incentives and access to import/export markets must be held accountable for environmental and social harms in their supply chains.

- **Restrict trade in food and agricultural products associated with deforestation.** Corporations should have to prove that food and agricultural products were produced without harming forest ecosystems. The EU's regulation on deforestation-free supply chains mandates companies to show that products were produced on land where no deforestation or forest degradation took place, in addition to verifying compliance with human rights laws and respecting the rights of Indigenous peoples¹⁹².

- **Allow context-specific trade standards for healthy and sustainable food and agricultural products.** Communities should have the ability to set standards based on local and regional contexts to minimise trade impacts on their environment, public health and local economies.

- **Reject carbon or biodiversity offsetting schemes in domestic and international policy.** Offset schemes, including carbon markets, shift the harm caused by industry to marginalised communities — particularly smallholders, pastoralists, peasants, small-scale fishers, women, Indigenous peoples and people

of colour — while destroying irreplaceable ecosystems and accelerating climate change.

- **Reject enslavement, child labour, and other human rights abuses in food supply chains in domestic and international policy.** Trade policies must hold companies responsible for exploitation and abuse in their supply chains.
- **Strengthen the application of Free Prior and Informed Consent when multinationals set up in the Global South.** The UN declaration on the Rights of Indigenous Peoples recognises the right of Indigenous groups to provide, withhold or withdraw consent regarding investment projects that affect their territories, in addition to engaging in negotiations around the design, implementation, monitoring and evaluation of projects¹⁹³. This right must be universally applied with legal remediations for violations.
- **Protect smallholders, peasants, small-scale fishers and pastoralists from cheap food imports.** Prioritising cheap food and international markets impedes the ability of smaller, local and marginalised producers to find market opportunities.
- **Use mirror analysis to improve accountability in food and agriculture trade flows.** Reconciling import and export data for meat, dairy and seafood can help identify fraud and other trade violations perpetrated by multinational corporations.

Local Food Systems

- **Engage stakeholders in an inclusive process to identify and implement policies to protect food sovereignty.** Marginalised and underrepresented producers and communities — smallholders, pastoralists, peasants, small-scale fishers, women, youth, Indigenous peoples and people of colour — must be involved in the creation and implementation of local food policies and programmes.
- **Tackle gender and racial inequalities in the agrifood systems in a comprehensive way.** This includes production, distribution and consumption. Reducing inequalities in access to land, resources and assets experienced by women and people of colour is mandatory for more just and sustainable agrifood systems. Examples may include addressing the lack of reliable data disaggregated by gender; changing discriminatory norms; securing land tenure; bridging language, digital and literacy divides; and improving social protection programmes such as education and childcare.
- **Adopt policies that prioritise local economic growth across the food system.** Such policies can include promoting local innovation, localised certification standards, directing subsidies to local producers, creating new supply chains and markets, and supporting local control of value chain infrastructure.

- **Reform purchasing policies to break up procurement monopolies.** Government procurement policies can require purchasing from local and regional producers and can incentivise purchasing from those using agroecological practices. Brazil's Food Procurement Programme exclusively purchases produce from family farmers for communities in need. This creates a guaranteed institutional market for family farmers and the ability to invest in and diversify their crops, while increasing access to healthy regional foods¹⁹⁴.
- **Address intentionally food-deprived areas by increasing access to fresh food.** Governments can remove barriers to grocery stores operating in low-income, low-access neighborhoods and offer tax incentives to build grocery stores in communities where they are needed most. Increasing support for farmers markets, community-supported agriculture programmes, community and school gardens and other urban agriculture initiatives can increase food sovereignty and availability and access to fresh food.
- **Prevent the expansion of fast food establishments.** Ending public subsidies for fast food companies and implementing zoning regulations that limit or ban fast food establishments, restrict the number or density of fast food outlets, or regulate the proximity of fast food to sites such as schools or hospitals can help protect local markets for healthy, nutritious food in the Global North and safeguard local food systems in the Global South.
- **Increase support for regional production and protection of local food systems.** Providing financial, regulatory and technical support for regional food hubs along with public outreach campaigns in support of local producers can help increase both the availability and markets for local food.
- **Improve regulation of private procurement practices to ensure fair payment to local food producers.** Stronger regulatory frameworks for purchasing by grocery stores, food service companies, restaurants and other businesses can ensure that smallholders, small-scale fishers and pastoralists have more opportunities and receive fair payment in these sectors.

Lever 2: Policies to shift towards agroecological practices

Financial justice

- **Increase funding for land access and ownership for marginalised farmers including women, Indigenous peoples, ethnic minorities and people of colour.** Land acquisition and retention is a significant barrier to shifting to agroecology. Government funding should include technical assistance for applying for funding, returning stolen land to Indigenous peoples and tribes and establishing land co-ops and land trusts led by people of colour.

- **Improve access to funding for smallholders, small-scale fishers, pastoralists, rural women and people of colour.** Those who want to transition and small-scale producers using agroecological practices have often been marginalised and face barriers to receiving financial assistance. Governments can improve access to fair credit, loans, grants and other financial aid. Governments can also provide support to facilitate investments by increasing staff support for the application process, reducing paperwork and scheduling application periods during down seasons.
- **Implement inclusive processes for access to and distribution of financial assistance.** Language, literacy, age discrimination, disabilities and the digital divide can create additional barriers to small-scale farmers accessing government funding that would otherwise be available to them. Government agencies should invest in improving their understanding of community needs and the accessibility and inclusivity of their processes and programmes.
- **Redirect subsidies and other financial incentives towards producers transitioning to agroecological practices.** Financial assistance can help remove the barriers associated with the costs of transitioning production practices and diversifying crops. Subsidies can also be used to increase the market for agroecological and organic products to support widespread adoption of these practices.
- **Increase resilience of smallholders, pastoralists and small producers against extreme weather events by increasing access to farming insurance.** Farming insurance is an emerging tool providing smallholders with the security to replant in the next season despite current crop failures, or helping them replace animals lost during extreme weather events.
- **Establish strategic grain reserves and other supply management programmes to ensure fair prices for smallholder farmers.** In addition to eliminating feed subsidies, supply management makes larger producers pay market costs, supports fair prices for smaller producers, improves job security and increases resilience.
- **Provide incentives and technical support to help meat, dairy and seafood producers to shift to plant-based production.** Governments and technical agencies can support companies, investors, and farm workers transitioning from animal production to plant-based production. In Denmark, where 70% of agricultural land is used to grow animal feed, the government allocated 580 million kroner to pay bonuses to Danish farmers who grow plant-based protein for human consumption¹⁹⁵.
- **Link climate and development funding to the guiding principles of agroecology.** Agroecological principles should be mainstreamed into

environmental and development agreements to ensure equity and sustainability are integrated into related funding and policies.

- **Invest in local infrastructures based on community needs.** Local and regional infrastructure needs to support agroecological production, land ownership, distribution and markets will vary at different levels and in different locations and must be identified in consultation with local communities, including marginalised stakeholders.

- **Provide financial support for entrepreneurs and small businesses in rural areas.** Fostering thriving rural communities improves access to information, services and markets for smallholders, pastoralists and farmers transitioning to agroecological practices. Investing in rural communities can also aid the transition from industrial animal production facilities to a more resilient, diversified and just local economy.

- **Implement participatory budgeting and planning for food and agriculture programmes.** Participatory budgeting engages community stakeholders in deciding how to spend part of the public budget, including evaluation of the process. More than 7,000 cities around the world use participatory budgeting to decide municipal, agency and institutional budgets¹⁹⁶.

- **Provide financial resources to maximise restoration opportunities for former agricultural land.** Funds should be allocated for pollution mitigation and land restoration, including rewilding projects, in addition to exploring alternative uses for former agricultural land and ensuring equitable management of changes in land availability.

- **Fund research and academic courses to institutionalise agroecology in science and education.** Research and extension funding at public institutions should be shifted away from industrial animal production to identifying research gaps and increasing knowledge of and resources for scaling up agroecological production and farm transitions. This includes shifting the priorities of land-grant colleges and universities and those of the CGIAR centres to agroecology and prioritising farmer-led research that is co-created and co-implemented with community stakeholders.

- **Implement the true cost accounting for food and agriculture.** Working with economists to identify and quantify the environmental, social, public health and animal welfare costs of food systems would better inform agricultural and economic policy interventions and improve public understanding of the true costs of food production.

Accountability and governance

- **Recognise and support land tenure for Indigenous peoples, women, and people of colour.** Support Indigenous and other ethnic minority claims to

land, including the recognition of land-based farming and livelihood practices to establish tenure rights and legal recognition of women's tenure over household land.

- **Implement policy coherence across agencies and agreements that have direct or indirect impacts on food systems.** Food and agriculture policies and programmes should be aligned with environmental, human rights and development commitments and processes, including economic recovery and growth plans, and coordinated across agencies such as agriculture, health and environment.

- **Ensure and enforce labour rights and living wages for all food and agriculture workers.** Equalise labour laws to make sure farmworkers and other food chain workers are covered by all worker protection and fair wage laws. Implement policies in accordance with the Worker-Driven Social Responsibility Model to ensure legally-binding signed agreements with a code of protection, employer accountability, worker-to-worker education, third party audits, and a living wage paid to each worker.

- **Strengthen animal welfare standards in agroecology assessment tools including the FAO's Tool for Agroecology Performance Evaluation (TAPE) framework.** The animal welfare standards in TAPE should be aligned with FARMS¹⁹⁷.

- **Establish clear biodiversity metrics for food and agriculture policies and programmes.** In addition to emissions-reduction and deforestation-free targets, food and agriculture policies and programmes should include measurable science-based goals for protecting and promoting native plants and animals and ecosystem health.

- **Implement initiatives to reduce food loss and waste that include environmental metrics.** Food loss and waste policies and programmes must measure environmental outcomes with an emphasis on tracking and measuring waste from animal products.

- **Recognise food as a human right and explore the development of programmes that reject the commodification of food.** Governments can officially acknowledge food as nourishment and as a universal human right. Alongside this recognition, they can explore the development and expansion of community-driven, non-monetary values within the food system, such as mutual aid programmes.

Producer Support

- **Improve access to and control over land and other resources for smallholders, peasants and pastoralists, particularly Indigenous, women, people of colour and other marginalised farmers.** Enact measures to empower

smallholders to access and control land, water, seeds and other productive resources. This includes prioritising smallholder access to land by capping land acquisitions, removing speculative capital and financial actors from land markets, and rejecting land-based carbon offset schemes while supporting alternative forms of land ownership and access such as the commons, cooperatives and other group ownership and financing models. Governments should also build integrated land, environmental, and food systems governance to stop land- and resource-grabbing, defend Indigenous territories, and construct secure, equitable and long-term access to land by communities.

- **Expand employment support, technical assistance and funded training for transitioning to agroecology.** Increase job opportunities and training for equally well-paying jobs for people across the food system, including farmers, smallholders, slaughterhouse workers, agricultural communities and seasonal workers, and cover transition costs and income losses. Government agencies can remove barriers for women, Indigenous, people of colour and other marginalised farmers with additional technical assistance including subsidising soil and water testing, getting certifications, and making government-support programmes and tools more accessible. Training can also include building skills and knowledge in animal welfare and sustainability practices.

- **Increase access to healthcare services for people employed across the food system.** Many farm workers and slaughterhouse workers currently lack access to any healthcare, while many workers and farmers struggle with mental health. Policies and programmes are needed to expand access to comprehensive healthcare and mental health support across the sector.

- **Establish women-led participatory processes in food and agriculture spaces.** The unique experiences of women in agriculture need to be considered as part of advancing agroecology. These processes can include gathering data, knowledge sharing, improving access to resources for producers and creating ways to address gender inequity in agriculture.

- **Establish preferential trading conditions for smallholders, small-scale fishers and pastoralists.** As trade policies can hold multinational corporations accountable, they can also be used to increase equity and support for local and regional food systems.

- **Increase market support for food produced using agroecological practices.** Initiatives that help promote products and educate consumers, such as certification, labelling and procurement policies, can help open up markets for farmers using agroecological practices, particularly women, Indigenous people, people of colour and other marginalised producers.

- **Invest in agroecology case studies from the ground in the Global South.** More research is needed into how agroecology can feed countries in

different regions. The FAO TAPE framework can be used to measure the performance of agroecological systems and create a baseline for monitoring and evaluation¹⁹⁸.

- **Increase support for urban agriculture.** Policies that specifically support urban agriculture can increase food sovereignty and availability and access to healthy and nutritious food. Governments can end regulations that restrict people's ability to grow food, enact policies that support gardens instead of lawns, increase access to land for community gardens, and fund Black, Indigenous and people of colour-led urban agriculture programmes. Cuba has been a leader in urban agriculture with an estimated 383,000 urban farms supplying 40–60% or more of all the fresh vegetables in cities using agroecological methods¹⁹⁹.

- **Provide support for peer-to-peer learning and capacity building, such as farmer-to-farmer networks and platforms.** Governments can provide financial and administrative support and institutional and political recognition of farmer-led organisations that promote best practices and innovation in agroecology, while respecting their autonomy. Farmer-led democratic organisations with open, voluntary membership help increase inclusion, knowledge sharing, capacity building and cooperation among farmers, researchers and policymakers.

- **Increase support for community-driven and farmer-led economic models such as food and land co-ops.** Cooperative models operate for the benefit of their members instead of outside investors or corporate interests, creating shared resources and prosperity. This also includes bringing land from private back to public ownership and protecting the commons. The commons involves cooperatively managed land supporting small-scale or subsistence farming that benefits food sovereignty and the shared interests of the community; in contrast, when agribusiness land grabbing expansions target the commons, the land use shifts towards industrial production with negative social, economic, and environmental consequences.

Public Education

- **Create public education initiatives to build support for agroecology.** Government agencies should work with healthcare professionals and institutions to develop education and outreach programmes to increase knowledge about the health benefits of agroecologically-produced products for people, animals and the planet. Elevating traditional regional foods can strengthen community buy-in for dietary shifts while improving public health. Public education should also emphasise the benefits of agroecology as a tool for increasing farmer and climate resilience

- **Engage veterinarian and animal professionals in promoting animal welfare to support food security.** Although they are often relied upon for health advice, veterinarian doctors²⁰⁰ often lack training in animal welfare, while livestock technicians are rarely trained in the overlap between health, welfare and sustainable production. Closing these education gaps will increase public understanding of the benefits of animal welfare in ensuring food security and safety.²⁰¹
- **Add agroecology labels to food.** Mandating food labels to reveal agroecological principles in production would enhance public understanding of food impacts. Studies have shown that informing consumers by using on-package labels influence their purchasing decisions²⁰².

Lever 3: Policies enabling a shift towards diets within planetary and social boundaries

Financial justice

- **Reform agricultural subsidies.** Direct and indirect government subsidies for industrial animal production should be repurposed and shifted towards making ecologically produced whole plant and plant-based foods produced by smallholders, small producers and Micro, Small & Medium Enterprises and cooperatives and marginalised farmers more widely available, accessible and affordable, particularly in high-consuming countries, and supporting humane, sustainable, and agroecological livestock production in the Global South.
- **Incentivise plant protein agriculture.** Funding such as tax breaks and direct investments can be used to incentivise increased production and availability of agroecological, local, and plant-based protein as well as transitional farms to support producers moving from industrial systems towards agroecological production. In 2021 Canada announced an investment of more than \$4.3 million in the expansion of markets for pulses, to meet growing consumer demand and promote healthy soil management²⁰³.
- **Incentivise agroecological, integrated livestock systems.** Funding such as loans and direct investments can be used to incentivise the transition to agroecological, high-welfare, integrated livestock systems with reduced herd sizes in high-consuming countries that meet specific, science-based metrics and standards for minimising greenhouse gas emissions and promoting biodiversity, and to support pastoralists in the Global South.
- **Pay producers to retire and rewild land previously used for industrial meat and dairy production.** Government funding programmes can support

farmers with long-term funding and technical assistance to convert land used for pasture and feed crops into native habitats that can store carbon and restore nature.

- **Invest in programmes to bring back ancient crops, increase access to seeds, and support seed banks.** Just four companies control more than two-thirds of global seed sales, threatening crop diversity, the existence of ancient crops, and the resilience of our food system²⁰⁴. Breaking up corporate concentration and increasing access to a diversity of seeds is necessary for equitable livelihoods, food system resilience, and food sovereignty²⁰⁵.

- **Incentivise farmers markets to increase availability of fresh food and food sovereignty.** Governments can support the establishment of farmers markets, particularly in low-access areas, to increase the availability of fresh food and incentivise the participation of marginalised farmers to increase their access to markets and their ability to sell in their own communities. In addition, programmes that double the value of nutrition assistance benefits at farmers markets increase the affordability of fresh food in low-income, low-access areas.

- **Incentivise healthy diets within planetary and social boundaries.** Governments can encourage purchases of fresh fruit and vegetables and plant-based proteins through programmes that increase the price parity and affordability of plant-based foods, increase available funds for these foods in assistance programmes, and provide grants for innovative programmes such as produce prescriptions. Governments can also use their own purchasing power through procurement programmes that focus on plant-based foods. In 2022, Brazil changed the classification of domestically produced plant-based milks, zeroing their tax rate and closing the price gap between it and dairy milk²⁰⁶.

Accountability and governance

- **Align trade policies with food and agriculture policies and goals.** As domestic consumption shifts towards diets within planetary and social boundaries, governments must ensure that corresponding production shifts are not offset by increased exports; if production shifts faster than consumer demand, similar measures must be taken to ensure it is not offset by increased imports of industrial meat, dairy and seafood. Trade policies must also be brought into line with the principles above.

- **Integrate food and nutrition security in development goals and outcomes.** Diets within planetary and social boundaries advance food and nutrition security while improving public health, mitigating pollution and increasing community resilience, making them a critical part of meeting several SDGs.

- **End government-supported promotions of industrial animal proteins.** The public resources used to provide financial, administrative help and advertising

or other support for promoting animal proteins, such as the US commodity checkoff programmes that provide research and marketing for sectors such as beef and dairy, should be eliminated or shifted to plant-based foods and food produced using agroecological practices.

- **Track and report consumption-based emissions for food and agriculture using a comprehensive lifecycle analysis.** The Coolfood Pledge, an initiative of the World Resources Institute, works with institutions to set a target of reducing food-related emissions by 25% by 2030, using a peer-reviewed methodology that accounts for both agricultural supply chain emissions and carbon opportunity costs (e.g. land-use change)²⁰⁷.

- **Hold corporations accountable for overproduction and food waste.** The FAO estimates that more than one-third of food produced for human consumption is lost or wasted at an annual cost of over \$1 trillion US, with an additional \$700 billion US in environmental costs and \$900 billion US in social costs.²⁰⁸ Agricultural policies that distort the market incentivise overproduction and shift the environmental and social burden of food waste onto individuals and communities. Instead, corporations should be held accountable for the externalised costs of overproduction and improving supply management and distribution.

- **Regulate marketing of meat and dairy.** In 2015, the WHO's International Agency for Research on Cancer classified consumption of processed meat and red meat as 'carcinogenic' and 'probably carcinogenic' respectively²⁰⁹. More recently, the WHO issued a guideline in 2023 recommending mandatory regulations for marketing food high in saturated fatty acids to children under the age of 18²¹⁰; the HEART UK Association states that foods high in saturated fat include beef, lamb, pork, oily fish and dairy²¹¹.

- **Advance regulatory frameworks to ensure accountability and transparency in the alternative protein sector.** Proactively addressing regulatory issues for the growing alternative protein sector can help protect workers, encourage open sourcing, and ensure accountability for potential environmental and social impacts related to scaling up the industry. Additionally, strengthened regulatory and antitrust rules should be put in place to prevent market consolidation or anti-competitive behaviour.

Dietary Guidance and Procurement

- **Align FBDGs with the Paris Agreement and other sustainability priorities.** Integrating environmental goals with dietary recommendations can play a significant role in improving public health and food security. The Danish Government recently updated its FBDGs to reduce its climate footprint by 70% by 2030, reducing the suggested intake of meat from 500g to 350g per week and

recommending at least 100g of plant-based protein come from legumes (e.g. chickpeas, lentils and beans) each day²¹².

- **Update national/federal, state and municipal government procurement policies to emphasise diets within planetary and social boundaries, food waste reduction and purchasing culturally-appropriate and regional and seasonal foods.** In France, the current French school catering regulations require meals without meat or fish to be served at least once a week (i.e. four to five meals out of 20) in all nurseries and primary schools²¹³. Several major cities including Copenhagen, Lima, Paris and Seoul have joined the C40 Good Food Cities Accelerator, making a commitment to align procurement with the Planetary Health Diet, with an emphasis on organic foods, a reduction of food loss and waste by 50%, and support for an increase of healthy plant-based food consumption ²¹⁴.
- **Update policies governing procurement programmes to support the prioritisation of sourcing from producers with strong worker protection agreements and high environmental protection and animal welfare standards.** Government procurement programmes should be allowed and encouraged to prioritise working with producers that ensure safe workplaces, livable wages, and other worker protections, including the ability to sign agreements with Worker-driven Social Responsibility programmes. Procurement programmes should also prioritise producers that uphold strong, science-based environmental protection commitments and practices as well as high animal welfare standards throughout their supply chain.
- **Increase availability of culturally appropriate, plant-centred meals in all public and private institutions' food policies and programmes (e.g. schools, hospitals, prisons).** Provide financial and technical support to help embed plant-centred menus into school food programmes and procurement policies, including the development of traditional and culturally-diverse meals to ensure inclusivity. The Healthy Future Students and Earth Pilot Program Act introduced in the US would create a voluntary grant programme to help schools purchase more plant-based foods, train food service staff, and market healthier, climate-friendly, and culturally appropriate plant-based options to students²¹⁵.
- **Promote consumption of local foods produced using agroecological practices.** School meal programmes and other procurement policies should prioritise and incentivise sourcing foods from producers using agroecological practices while reducing the proportion of industrially-produced foods.
- **Provide government funding and technical assistance to help institutions shift towards culturally-appropriate, plant-centred food service.** Incentivise and provide support for institutions to update procurement policies to emphasise inclusive, plant-centred menus and better plant-based options.

Public Education

- **Create public education initiatives to build support for diets within planetary and social boundaries and reconnect with traditional foodways.**

Government agencies, community groups, schools, and the media all play an important role in educating the public. Policymakers should help facilitate collaboration between agencies, educators, experts, grassroots groups and community-led initiatives. Programmes to raise awareness about the health benefits of diets within planetary and social boundaries and the importance of shifting away from meat- and dairy-heavy diets in high-consuming countries can help improve public health, build skills around plant-rich cooking for families and chefs, reclaim ancestral food systems, increase familiarity with traditional and regional foods, and strengthen community buy-in for dietary shifts.

- **Engage health and nutrition professionals in promoting healthy diets within planetary and social boundaries.** Although they are often relied upon for dietary advice, doctors often lack training in nutrition and dietitians are rarely trained in the overlap between health and diets within planetary and social boundaries. Closing these education gaps will increase public understanding of the benefits of dietary shifts and how to achieve them.

- **Expand environmental and nutrition education programmes in schools.** There is a close relationship between childhood nutrition and academic performance²¹⁶. In addition to providing universal healthy, sustainable meals, schools can educate children on healthy eating, local food systems, traditional foodways, and the environmental impact of food to help instill lifelong habits and dispel industry-driven misperceptions about food and nutrition. Educational programmes can include classroom lessons and hands-on learning through school gardens and building cooking skills.

- **Develop gender-sensitive training programmes to improve access to plant-based agriculture for women farmers.** Address the gender gap in agriculture to increase plant-based production by supporting women farmers in accessing resources, technical assistance, and markets for plant-based production with training programmes that address gender-specific experiences.

- **Add environmental-impact labels to food.** Requiring food labels to disclose environmental metrics such as the greenhouse gas emissions associated with production would increase public awareness about the impacts of different foods. Researchers found that climate information on menus had a positive influence on both customers and restaurants²¹⁷.