



Food and Agriculture Organization  
of the United Nations



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**Submission by the Food and Agriculture Organization of the United Nations (FAO) and the Consultative Group on International Agricultural Research (CGIAR) to the United Nations Framework Convention on Climate Change (UNFCCC) in relation to the topic of the second dialogue under the United Arab Emirates Just Transition Work Programme**

Food and Agriculture Organization of the United Nations (FAO) and the Consultative Group on International Agricultural Research (CGIAR) welcome the opportunity to submit views on opportunities, best practices, actionable solutions, challenges and barriers relevant to the topic of the second dialogue on “*Ensuring support for people-centric and equitable just transition pathways with a focus on the whole-of-society approach and the workforce*”, under the United Arab Emirates Just Transition Work Programme (UAE JTWP) in relation to decision 3/CMA.5, para. 3-4.

**The context of just workforce transition in agrifood systems**

Agriculture is highly vulnerable to and severely impacted by climate change, at the same time as being a major contributor to greenhouse gas emissions, deforestation, and water use globally. Today, 1.23 billion people are employed in agrifood systems, while 3.83 billion people worldwide live in households linked to agrifood systems-based livelihoods<sup>1</sup>. Moreover, over three quarters of the world’s poor live in rural areas and many of them depend on agrifood systems to make a living. Globally, 36 percent of working women are employed in agrifood systems, along with 38 percent of working men as of 2019<sup>2</sup>. This demonstrates that agriculture is an important sector for the global workforce, even though for both women and men, these numbers represent a decline of about 10 percentage points since 2005, driven mainly by a reduction in employment in primary agricultural production. The transition to a greener economy is generally expected to result in a net employment gain. However, it is critical to recognize that achieving a just workforce transition in agrifood systems will require different policy considerations and actions than in other sectors.

**First, work in agrifood systems is often informal, seasonal, and precarious and in the developing world, food production is typically organized at the household level.** It includes high numbers of self-employed people, many working as primary agricultural producers or in small agrifood system enterprises. As a result, agrifood system workers often have limited access to social safety nets or insurance, limited capacity for collective action, limited ability to transform and difficult working conditions in often severe outdoor

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<sup>1</sup>Davis, B., Mane, E., Gurbuzer, L.Y., Caivano, G., Piedrahita, N., Schneider, K., Azhar, N., Benali, M., Chaudhary, N., Rivera, R., Ambikapathi, R. and Winters, P. 2023. Estimating global and country-level employment in agrifood systems. FAO Statistics Working Paper Series, No. 23-34. Rome, FAO. <https://doi.org/10.4060/cc4337en>

<sup>2</sup>FAO. 2023. The Status of women in agrifood systems. <https://openknowledge.fao.org/items/ad0741f-9de2-4d09-ae68-b19cc871601a>



environments, including extreme heat. At the same time, the sector has accumulated valuable experience that could be used for the just transition process; changing consumer preferences, and market pressures are already driving shifts in agricultural practices, sometimes displacing traditional farming communities, reducing jobs, or leading to abandoned farms.

**Second, climate-induced disasters and slow-onset events impact the job market in agrifood systems.**

Climate change is causing both economic and non-economic loss and damage, such as decreased agriculture productivity, water stress, and forced migration and displacement, all of which are undermining the sustainability and resilience of agrifood systems. These impacts are also affecting and shifting the livelihoods of rural communities, especially small-scale producers and other vulnerable groups. Notably, 90% of the world's rural poor live in the low-elevation coastal zones across just 15 countries, and this population continues to grow<sup>3</sup>. Evidence suggests that globally, 1.4 percent of total hours worked were lost in the mid-90s because of high heat levels, equivalent to about 35 million full-time jobs<sup>4</sup>. By 2030, this figure could rise to 2.0 percent, translating to over 72 million lost full-time jobs. Meanwhile, since 2000, 23 million working life years have been lost annually to disasters<sup>5</sup>. Given the precarious nature of agrifood systems and its vulnerability to climate change effects, agricultural workers will be one of the worst affected, accounting for over 60 percent of the projected global hours lost due to heat stress in 2030<sup>6</sup>. Beyond productivity impacts, ensuring the safety, health, and decent work conditions of small-scale producers and other agricultural workers is critical, as they are often the ones working outdoors and directly exposed to extreme heat and other harsh climatic conditions.

**Third, the agricultural workforce is gender-sensitive**, as women play a large economic and social role in agrifood systems, but also face significant economic constraints, and historic injustices emanating from discriminatory norms related to responsibilities for care, as well as those related to property ownership and rights. Furthermore, agrifood systems are a more important source of livelihood for women than for men in many countries. In Sub-Saharan Africa and South Asia, agrifood systems employ 66 and 71 percent respectively, of the female workforce, but globally women working in agrifood systems only earn 82 cents for every dollar a man earns (FAO 2023)<sup>7</sup>. This gender gap is related to women's lower education level, limited access to infrastructure and markets, high unpaid work burden and poor rural employment opportunities outside agriculture, which limit their opportunities for off-farm work. Just transitions in agrifood systems will require addressing discriminatory gender norms that persist in the sector.

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<sup>3</sup> IPCC. 2022. Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

[https://report.ipcc.ch/ar6/wg2/IPCC\\_AR6\\_WGII\\_FullReport.pdf](https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf)

<sup>4</sup> ILO. 2019. Working on a warmer planet. The impact of heat stress on labour productivity and decent work.

[https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms\\_711919.pdf](https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_711919.pdf)

<sup>5</sup> ILO. 2018. The employment impact of climate change adaptation. Input document for the G20 Climate Sustainability Working Group. [https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed\\_emp/documents/publication/wcms\\_645572.pdf](https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/documents/publication/wcms_645572.pdf)

<sup>6</sup> ILO. 2018. The employment impact of climate change adaptation. Input document for the G20 Climate Sustainability Working Group. [https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed\\_emp/documents/publication/wcms\\_645572.pdf](https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/documents/publication/wcms_645572.pdf)

<sup>7</sup> FAO. 2023. The status of women in agrifood systems – Overview. Rome. <https://doi.org/10.4060/cc5060en>



**Fourth, historically, less climate investments have gone into the agrifood sector** compared to other sectors like energy and transport, which have had decades of headway in developing technologies and approaches which are low or zero emissions. This is not the case in the agrifood sector, where many of the low emissions technologies and approaches still have yield and income penalties of varying amounts<sup>8</sup>, and more innovations are needed to make these approaches equally attractive to small-scale producers, where these greener approaches have both short term and long-term positive income and productivity effects. We know that the work in the agrifood system is deeply connected to the biophysical environment, making small-scale producers and other agriculture workers highly vulnerable to climate stresses. To survive and thrive, they must adopt low-emission production and land management practices, which are often costly and risky, given the high concentration of poverty and hunger in the sector, and relatively less investments that have gone into this sector for low emissions technologies. A just transition in agrifood systems must involve equitable actions that empower marginalized communities to shift toward sustainable practices while maintaining or improving productivity, building resilience and maintaining autonomy in farm management.

**Fifth, it is important to note that transition to low emission pathways in agrifood systems often helps to improve ecosystems, improve production and provides benefits in terms of climate adaptation and resilience.** Thus, adaptation and mitigation must go hand in hand in just transitions in agrifood systems. Meanwhile, job loss in agrifood systems will not only be due to the need to transition to low-emission approaches, but also to the hard limits to adaptation of the sector. The latter will require assisting communities to diversify their livelihoods even beyond agriculture.

In summary, achieving a just transition in agrifood systems requires innovation, investments, coherent policies, and integrated multisectoral approaches. These elements are essential to address the complex challenges faced by small-scale producers and agrifood workers, who often lack the resources, knowledge, and institutional support needed for change. It is crucial to ensure that the just transition process does not inadvertently increase the risk of excluding vulnerable groups from climate action.

### **FAO and CGIAR's approaches in promoting decent rural employment and inclusive agrifood systems and rural transformation**

Agrifood systems face a range of unique challenges but also offer tremendous **opportunities** for supporting a just transition, which require specific actions and approaches. Cognizant of the fact that small-scale producers are resources constraint, a just transition in agrifood systems should be clear on the reasons for transitioning (why), the processes through which this transition and its impacts will be managed/guided (how), and what should be done to deal with the benefits/harms resulting from this process (what). A just transition in the agrifood systems should alleviate the currently existing injustices. A just transition is also fundamentally about ensuring an inclusive transformation toward more climate resilient, productive and adaptive agrifood systems. More and better employment opportunities will need

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<sup>8</sup> CGIAR, 2023. Achieving Agricultural Breakthrough: A deep dive into seven technological areas, <https://hdl.handle.net/10568/131852>



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to be created for rural men and women and their active and inclusive participation in this process is essential to the just transition dialogue.

### Examples of relevant work led by FAO and CGIAR

FAO plays a vital role in promoting just workforce transitions in agrifood systems, particularly through its focus on SDG 8 (decent work). It advances decent rural employment by conducting research, offering policy support, and advocating for better job opportunities, especially for vulnerable groups including women, youth, migrants, and Indigenous Peoples. FAO's efforts include supporting governments to develop green wage employment programmes and supporting rural youth enterprise development. The organization is actively involved in green jobs and rural financial inclusion, targeting value chains like cocoa, palm oil, coffee, and innovative sectors such as insect rearing for livestock feed, organic horticulture, and bioeconomy. FAO provides training and access to sustainable technologies and financial support to increase the employability of rural people, particularly youth and women. It partners with national financial institutions to set up grant agreements for green businesses, which include business literacy and mentorship programs. Additionally, FAO assists governments in creating legal and policy frameworks that facilitate the transition to a greener and more circular economy, working across various sectors.

FAO has fostered successful partnerships to support just workforce transitions in various countries through its Green Jobs for Rural Youth Employment project<sup>9</sup>. In Timor Leste, collaborations with private sector companies, such as an organic fertilizer firm, expanded production capacities in exchange for training and hiring more rural youth workers. In Zimbabwe, a partnership with a chemical fertilizer company led to the establishment of a vermicomposting initiative, providing youth with skills in sustainable agriculture and aiding the country's largest synthetical fertilizer company to transition to organic fertilizer production and distribution. Moreover, FAO facilitated policy dialogues among government, civil society, and workers' organizations, contributing to the development of a Just Transition Country Analysis for Zimbabwe and the foundation of an inter-ministerial task force. These efforts aim to establish a just transition roadmap, shaping national policies and supporting the updating process of the Nationally Determined Contributions (NDCs). Similarly, in Sierra Leone, FAO collaborated with academic institutions and public entities to offer skills development and apprenticeships, transforming degraded land into fertile agricultural terrain and creating new job opportunities for young women and men.

Furthermore, the FAO-ILO-UNICEF project on ending child labour in supply chains focuses on preventing child labour in the coffee value chain by collaborating with community-based organizations and local authorities to promote climate-resilient farming practices. This approach aims to reduce farmers' reliance on child labour by mitigating the economic impacts of climate change and environmental degradation. The project also fosters ecological conservation and encourages knowledge sharing between communities and regions. Lessons learned from this initiative can be used to inspire and guide similar efforts in other areas, supporting a just transition.

Another example is from the EU-funded CLEAR Cotton Project (2018 - 2023), where FAO has implemented 36 Farmer Fields Schools in Mali, raising the awareness of cotton producer organizations on the risks of

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<sup>9</sup>FAO. 2022. Green jobs for rural youth. [Green jobs for rural youth \(fao.org\)](https://www.fao.org/green-jobs-for-rural-youth/)



child labour combined with the promotion of safe and environment-friendly practices. For example, producers shifted to plant-based solutions for pests, leading to a reduction in children’s exposure to chemical hazardous pesticides harming them and the environment. Moreover, 700 FAO-ILO visual facilitator guides “Protect children from pesticides!”<sup>10</sup> were disseminated to producer organizations, enabling them to reduce the risk of exposure to pesticides for children on the farm and at home<sup>11</sup>.

Farmer Field School methodologies is an approach developed by FAO to support agriculture producers to identify locally specific agricultural challenges and opportunities and to work collectively and through experimentation to identify appropriate solutions. The approach has proven effective in supporting vulnerable producers to adopt low emissions and climate adaptive practices. However, capacity building alone is often not sufficient for supporting the transition of highly vulnerable and economically marginalized producers. Evidence from FAO shows that the benefits of Farm Field School approaches can be enhanced by providing farmers with social safety nets and other transfers that help to reduce the costs and risks of making these transitions<sup>12</sup>.

The ability to act on climate-related agricultural advice also depends on people’s economic agency and decision-making power. Gender-transformative methodologies, which use social behaviour change methodologies to directly challenge discriminatory gender norms, can tackle entrenched discrimination that often prevents women from exercising full agency over economic decisions that impact their lives. FAO is committed to achieving equality between men and women in sustainable agriculture and rural development for the elimination of hunger and poverty. The Organization plays a key role in coordinating efforts, generating knowledge and promoting innovative solutions to address the gender-based discrimination that still hold back rural women and girls. This implies closing the gender gap in the access to productive resources, services, decent employment and institutions, as well as addressing the root causes and structural barriers to gender equality and women's empowerment, which lie in harmful social norms, attitudes and beliefs that shape the different opportunities for men and women.

CGIAR is the world’s largest global agricultural innovation network with more than 50 years of impactful history of making a difference on the ground for small holder producers from across the Global South. CGIAR provides evidence to policy makers, innovation to partners, and new tools to harness the economic, environmental and nutritional power of agriculture. CGIAR’s work achieves impacts across 5 impact areas: nutrition and health; environment and biodiversity; gender, poverty alleviation and climate change, with most of its work across 15 centers located in over 100 countries across Africa, Asia and Latin America where CGIAR scientists work closely with farmers, pastoralists, fisherfolks, as well as with national policy makers to help foster innovations that will help agri-food systems to transition to a low emission pathway, thereby keeping us still on track for a 1.5 degree world by the end of this century.

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<sup>10</sup> FAO, ILO. 2015. Visual Facilitators’ Guide “Protect children from pesticides!, Rome.

<https://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1260531/>

<sup>11</sup> FAO. 2023. Voices from cotton fields – Fighting child labour in Burkina Faso, Mali and Pakistan. Rome. <https://doi.org/10.4060/cc4071en>

<sup>12</sup> Correa, J. S., Daidone, S., Davis, B., & Sitko, N. J. (2023). Social protection and rural transformation in Africa. *Annual Review of Resource Economics*, 15(1), 305-327.



**FAO and CGIAR propose to consider at the second dialogue the following actionable solutions:**

- **Policy coherence and governance support for transition:** Moving towards a resilient and low-emissions agrifood system where none is left behind will entail policy coherence and governance support at all levels. This will include aligning agricultural, environmental, and social policies to support sustainable practices, strengthening land tenure rights, and promoting participatory approaches to decision-making at all levels. Building coherence across Ministries through climate actions is critical for helping agrifood systems dependent people manage the risks and costs of transitions in production systems and livelihoods, and more broadly to participate in and benefit from climate actions in an inclusive and just way. A multi-sectoral approach, including the development of policies and action plans to support just workforce transitions in agrifood systems, should be integrated into the Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and other national agriculture and rural development policies and strategies. It remains important to ensure mechanisms are put in place where communities, and those typically more marginalized, have their voices heard in policy processes and are part of the decision-making process in community-level programme implementation related to skills development and employment programmes.
- **Forecasting of the quantity and quality of employment in agrifood systems during low-carbon transitions.** Such work could be done through a FAO-led study that should analyze potential impacts and shifts in employment and livelihoods as agrifood systems transition to a green economy, focusing on both the creation of new opportunities—on-farm and off-farm—and the displacement of existing jobs. It should also assess the quality of these jobs, considering factors, such as wages, working conditions, and supporting mechanisms like social protection. The study will provide valuable insights to guide policy development and ensure a just transition that maximizes collective action and decent employment opportunities while safeguarding the livelihoods of the most vulnerable groups, particularly rural small-scale producers and other agrifood system workers.
- **Greater research and development (R&D) in climate technologies to support low emissions innovations** that help enhance agriculture production, increase incomes, create jobs, and better support the livelihoods of smallholder producers and other agrifood systems-dependent populations. Given the nature of the agrifood sector, and particularly how food is currently produced, water is managed, and that significantly less climate investment has happened in this sector means that there are not enough mature technologies that can assist in moving towards low emission pathways without compromising food and livelihood security yet. Hence a just transition in agrifood systems should ensure greater research and development investments to develop technologies and approaches that can be a win-win-for building resilience and lowering emissions while not harming food and nutrition security and the livelihood of those most vulnerable.
- **Transition support for loss of incomes and livelihoods in the interim:** A just transition in agrifood systems must target both on-farm and off-farm dimensions of people's livelihoods, promoting low emissions and climate adaptive farming practices and livelihood diversification to better withstand climate risks. Diversification into low emissions on-farm jobs is critical but will require a range of integrated actions, including market development, and risk management (including social protection). While R&D on innovations continues, small-scale producers who become early adopters of technologies that help reduce emissions must be compensated through credible payment mechanisms or brought under social safety nets through transition support programmes. Protecting





the livelihoods of the most vulnerable small-scale producers while they move on to lower emissions mode of production will be an essential pillar of a just transition. Displaced agricultural workers may migrate to urban areas, facing challenges such as lack of housing, social services, or integration into urban labor markets.

- **Capacity building:** Without the necessary capacities that will be needed for a low-carbon economy, a just transition will be challenging. The point of skills mismatch should be addressed earlier in the process of just transition planning, as workers in agriculture may lack the skills needed for emerging jobs in modern agriculture or other sectors. Programmes should be established to train agrifood systems workers in new skills, re-skilling and training for new skills needed in a just transition. Skills development in negotiations should also be provided to the affected or to-be-affected communities so they can engage meaningfully during the consultation processes. Furthermore, under circumstances where agriculture will no longer be feasible (due to the hard limit to adaptation), communities will need to be capacitated in such a work force transfer, and this will also entail funding for the establishment of other enterprises outside of agriculture.
- **Multi-stakeholder partnerships through international cooperation:** Different countries are at different stages of transition to low-carbon economies. Knowledge should be transferred, and countries must learn from each other. International cooperation mechanisms such as triangular cooperation could be explored as a means of promoting partnership in a just transition. Integrating just workforce transitions into UN-led initiatives, such as the UNSG's Call to Action on Extreme Heat and FAO's Food and Agriculture for Sustainable Transformation Partnership (FAST),<sup>13</sup> can accelerate the implementation of concrete actions for equitable workforce transitions in agrifood systems.

#### Annex: Relevant reports

- FAO's [report on the Status of Women in Agrifood Systems \(2023\)](#)
- FAO's [Unjust climate report](#)
- FAO's [Green Jobs for Rural Youth Employment project](#)
- FAO's [work on land regeneration and decent work for youth \(video\)](#)
- CGIAR Report on [Achieving agricultural breakthrough: A deep dive into seven technological areas](#)
- IEA [Report on Breakthrough Agenda, 2023 \(refer to the Agriculture Chapter\)](#)

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<sup>13</sup> FAO. Official website of the Food and Agriculture for Sustainable Transformation Partnership: <https://www.fao.org/food-agriculture-sustainable-transformation-partnership/en>