

What do we know about THE FUTURE OF GENDER EQUALITY IN RELATION TO FOOD SYSTEMS?

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Key messages

- Foresight research has yet to fully explore gender equality as an outcome and a driver of food systems transformation.
- Foresight analysis can assess which food systems investments and interventions are most effective at reducing gender inequalities and increasing women's empowerment.
- Addressing structural inequalities, promoting inclusivity in decision-making, and challenging patriarchal norms can enhance gender equality, social inclusion, and women's empowerment in food systems transformation. Neglecting gender barriers when designing and disseminating food systems innovations may exacerbate gender inequalities and limit women's empowerment.
- Gender equality, women's empowerment, and social inclusion also drive food systems transformation, leading to improved welfare outcomes for all. Foresight research should examine how closing gender gaps in livelihood opportunities, agricultural productivity, and resilience capacities can impact other food systems outcomes, such as poverty reduction, food security, and nutrition.
- While data on gender inequalities in food systems and women's empowerment have increased over the last 10 years, more sex-disaggregated data and impact evaluation studies are needed for rigorous foresight research on gender equality in agrifood systems.

RECENT TRENDS AND CHALLENGES

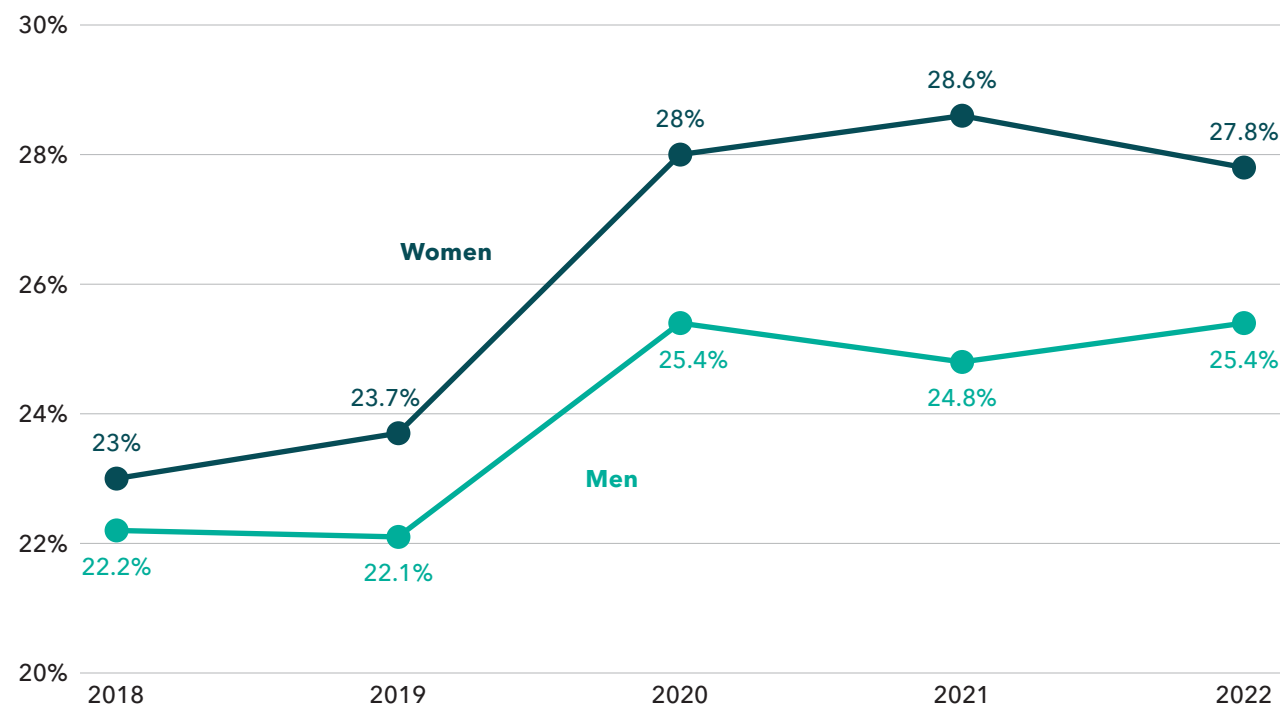
Only marginal progress has been made in addressing underlying gender inequalities in food systems over the last several decades. Significant challenges remain in closing gender gaps in agricultural productivity, livelihood opportunities, access to resources and services, and wellbeing outcomes. Because of these inequalities, women remain marginalized in agrifood systems and lack opportunities to participate in, benefit from, and exercise agency over food systems transformation.

Some progress has been made in expanding access to information and communication technology, with potential for closing gender gaps in access to information and financial services (Demirgüç-Kunt et al. 2022; GSMA 2023). Progress has also been made in collecting sex-disaggregated data and monitoring progress toward increasing women's empowerment over time and the link with other development outcomes, including food security and nutrition. Gender equality has also received greater emphasis in key policy processes and design in recent years at the global and national levels. However,

goals are often not met due to challenges during policy implementation.

The confluence of shocks and stressors over the past few years – including COVID-19, the global food crisis exacerbated by the war in Ukraine, and escalating climate change – have disproportionately affected women and girls, amplifying gender disparities. Women and girls are already more vulnerable to shocks and stressors like climate change, especially in areas where climate impacts are severe and where gender inequalities are greatest (Bryan et al. 2024; Lecoutere et al. 2023; Schipper et al. 2022). Gender gaps in food insecurity, workloads, and specific challenges, such as gender-based violence, are intensified during times of stress (FAO et al. 2023; Kugler et al. 2023; Nico and Azzarri 2022). During the COVID-19 pandemic, the gender gap in food insecurity notably widened to 3.8 percent in 2021 (Figure 1). However, the gap narrowed in 2022 as the pandemic's impact on women's food insecurity eased, both on the global scale and in specific regions including Asia and Latin America. The disproportionate impacts of shocks and stressors on women and girls carry significant implications, impacting their short-term coping abilities and long-term resilience.

FIGURE 1 Moderate or severe food insecurity (%), worldwide, by gender, 2018–2022



Source: Data from FAOSTAT 2023.

LATEST FORESIGHT RESEARCH

Lentz (2021) reviews foresight studies on the links between agrifood systems and outcomes related to gender, poverty, and nutrition and concludes that gender equality is the outcome least covered across foresight research. The review finds that many technology-focused studies ignore gender-related barriers to adoption based on differential access to resources and services, as well as gender differences in preferences for technologies. Foresight studies that do consider gender often point to it as a key factor shaping successful transformation of agrifood systems with respect to the other outcomes (Lentz 2021).

The annual report of the World Economic Forum (WEF) tracks and measures gender gaps across four key dimensions: economic participation and opportunity; educational attainment; health and survival; and political empowerment. The latest report shows some small gains in closing gender gaps across these dimensions in 2023, following several years in which progress was disrupted by COVID-19 and other global shocks. WEF now estimates that it will take 131 years to reach gender parity across all four dimensions, largely driven by wider gender gaps in the economic and political dimensions (WEF 2023).

The Food and Agriculture Organization of the United Nations (FAO) also collects data on gender gaps in food insecurity and reports on these in its annual report on the *State of Food and Agriculture* (SOFA) and more recently with other UN agencies in the report on the *State of Food Security and Nutrition in the World*. FAO also recently produced a report on the *Status of Women in Agrifood Systems*, offering updated insights compared to the 2011 SOFA report, which focused on women in agriculture. The 2011 SOFA report made the case for closing gender gaps in access to agricultural assets, inputs, and services not only to address gender inequality but also for the benefit of the agriculture sector and the broader economy (FAO 2011). The report estimated that if women had the same resources as men, they could increase yields on their farms by 20–30 percent – production gains that would increase total agricultural output in low-income countries by 2.5–4.0 percent, thereby reducing the number of hungry people in the world by 12–17 percent.

Moving beyond agriculture, the new *Status of Women in Agrifood Systems* report emphasizes the importance of tackling structural gender inequalities and investing in women’s empowerment for the transition toward sustainable and resilient agrifood systems (FAO 2023). It estimates that closing the gender gaps in farm productivity and wages in agrifood systems would increase global gross domestic product (GDP) by at least 1 percent (or nearly US\$1 trillion). As a result, global food insecurity would be reduced by at least 2 percentage points, which corresponds to 45 million people coming out of food insecurity (FAO 2023). The report also estimates that “if half of small-scale producers benefited from development interventions which focused on empowering women, it would significantly raise the incomes of an additional 58 million people and increase the resilience of an additional 235 million people.” Multiple country-level studies by UN Women support the link between closing the gender gap in agricultural productivity and welfare benefits, including a substantial reduction in poverty – by around 80,000 people in Tanzania, 238,000 people in Malawi, and 119,000 people in Uganda per year over the last 10-year period (UN Women 2015).

While women earn less than men in the agrifood system and economy due to social norms, discrimination, and limited access to resources (FAO 2023), the quantification and implications of closing these gaps remain underexplored. A collaboration between CGIAR’s Foresight Initiative and the World Bank’s Gender Innovation Lab (GIL) is addressing these issues. Foresight, using IFPRI’s RIAPA (Rural Investment and Policy Analysis) model, is assessing the broader implications of narrowing the gender income gap in Nigeria and Ethiopia, highlighting the potential economic gains of closing it (Thurlow and Levy 2024). Other studies are exploring climate change impacts on women farmers in Colombia, emphasizing the need for gender-responsive policies (Escalante and Pineiro 2024).

Another key publication (Njuki et al. 2022) develops a framework illustrating the pathways through which gender equality and women’s empowerment can drive food systems transformation. These include: addressing women’s differing access to resources; promoting equal and positive gender norms; facilitating women’s empowerment; and promoting more equitable policies, institutions, and governance. Much progress has been made over the last 10 years with respect to measurement and data collection on women’s empowerment, showing

that women’s empowerment and gender equality have not only intrinsic value but other social benefits as well, including better agricultural, health, diet, and nutrition outcomes (Quisumbing et al. 2023). In particular, studies show that higher levels of women’s empowerment in agriculture are associated with better maternal nutrition and women and children’s calorie availability and dietary diversity (Malapit et al. 2015; Sraboni and Quisumbing 2018; Kassie et al. 2020; Bonis-Profumo, Stacey, and Brimblecombe 2021). Projects specifically focused on women’s empowerment leading to women’s greater decision-making power provide greater benefits for both women and men – including higher incomes, food security, household dietary diversity, and ability to recover from shocks – compared to standard development projects (FAO 2023; Quisumbing et al. 2023).

Scenario-guided foresight processes that engage a broad range of stakeholders and integrate a gender and social inclusion lens are important for informing agricultural policy processes (Marty et al. 2023). In practice, however, many challenges remain to integrating gender and social inclusion in scenario-guided, foresight-driven policy processes, such as power asymmetries among stakeholders (Marty et al. 2023). Recent multistakeholder participatory foresight exercises conducted in two states of India (Uttarakhand and Odisha) demonstrate the potential of participatory approaches (Malhotra et al. 2025). These exercises identified several key driving forces of gender equality in agrifood systems, including the level of cooperation within the household, education of women, agricultural knowledge and skills, women’s agency, family support and guidance, women’s workloads, access to labor-saving technology, and collective action of women. Participants highlighted the gradual but slow shifts in constraining norms, but also emphasized that significant efforts are needed for more transformative change.

KEY GAPS AND OPPORTUNITIES FOR FORESIGHT RESEARCH

As noted by Lentz (2021), gender equality has not been adequately explored in foresight research either as a driver of food systems transformation or as an outcome. When projecting outcomes of various scenarios, especially those examining technological interventions and

management techniques, it is crucial to consider gender inequalities related to resource and services access, resilience capacities, and restrictive social norms. These factors can significantly impact women’s livelihood opportunities and their roles within food systems. Several potential data sources could be used to measure the level of gender inequality at the national or subnational level for foresight work, including nationally representative Labor Force Survey data, the Organisation for Economic Co-operation and Development’s Social Institutions and Gender Index, the Global Data Lab’s Subnational Gender Development Index, Demographic and Health Surveys, and the Women’s Empowerment in Agriculture Index data.

At the same time, foresight analysis can explore drivers of change for greater gender equality and women’s empowerment in agrifood systems. In particular, foresight modeling and participatory foresight exercises can help assess which food systems investments and interventions are most effective at reducing gender inequalities and increasing women’s empowerment – for example, closing gender gaps in resources, such as land ownership; reaching more women with extension services and finance; or designing interventions to transform gender norms and relations. Foresight research could also explore how reducing gender inequalities may contribute to other positive food systems outcomes, such as greater resilience to climate change, poverty reduction, and food security and nutrition.

Lastly, while data on gender inequalities in food systems and women’s empowerment have increased over the last 10 years, more sex-disaggregated data and impact evaluation studies are still needed for rigorous foresight research on gender equality in agrifood systems.

For more information on the topic, check out these resources:

- [CGIAR GENDER Impact Platform Resource Hub](#)
- [Data2X | Partnering for Better Gender Data](#)
- [Africa Gender Innovation Lab](#)
- [Launch of the FAO report of “The Status of Women in Agrifood Systems”](#)
- [World Economic Forum Gender Gap Report](#)

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Related chapters on the future of food system drivers and impacts, regional and national perspectives, food commodities, and foresight tools are available in our [Table of Contents](#).

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Photo credit: Narendra Shrestha/UN Women

References

- Bryan, E., M. Alvi, S. Huyer, and C. Ringler. 2024. "Addressing Gender Inequalities and Strengthening Women's Agency to Create More Climate Resilient and Sustainable Food Systems." *Global Food Security* 40: 100731. <https://doi.org/10.1016/j.gfs.2023.100731>
- Bonis-Profumo, G., N. Stacey, and J. Brimblecombe. 2021. "Measuring Women's Empowerment in Agriculture, Food Production, and Child And Maternal Dietary Diversity in Timor-Leste." *Food Policy* 102: 102102. <https://doi.org/10.1016/j.foodpol.2021.102102>
- Demirgüç-Kunt, A., L. Klapper, D. Singer, and S. Ansar. 2022. *Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19*. Washington, DC: World Bank. <http://documents.worldbank.org/curated/en/099818107072234182/IDU06a834fe908933040670a6560f44e3f4d35b7>
- Escalante, L.E., and V. Pineiro. 2024. "Trade-Offs in the Wake of Climate Change: Mitigation Strategies and Their Impact on Poverty, Gender, and Growth." Purdue University, West Lafayette, IN: Global Trade Analysis Project (GTAP). Retrieved from https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=7341
- Thurlow, J., and S. Levy. 2024. "Closing Gender Gaps in Developing Countries: Socioeconomic Implications for Poverty, Diets, and Food Security." Presentation. Presented at the CGIAR GENDER Conference From Research to Impact: Towards Just and Resilient Agri-Food Systems." New Delhi, India, 9-12 October 2023. International Food Policy Research Institute. <https://hdl.handle.net/10568/137096>
- FAO (Food and Agriculture Organization of the United Nations). 2011. *The State of Food and Agriculture 2010-11: Women in Agriculture. Closing the Gender Gap for Development*. Rome.
- FAO. 2023. *The Status of Women in Agrifood Systems*. Rome. <https://doi.org/10.4060/cc5343en>
- FAO. 2023. FAOSTAT statistical database. Accessed September 5, 2023. <https://www.fao.org/faostat/>
- FAO, IFAD, UNICEF, WFP and WHO. 2023. *The State of Food Security and Nutrition in the World 2023: Urbanization, Agrifood Systems Transformation and Healthy Diets across the Rural-Urban Continuum*. Rome: FAO. <https://doi.org/10.4060/cc3017en>
- GSMA. 2023. *The Mobile Gender Gap Report 2023*. London, UK: GSMA.
- Kassie, M., M. Fisher, G. Muricho, and G. Diiro. 2020. "Women's Empowerment Boosts the Gains in Dietary Diversity from Agricultural Technology Adoption in Rural Kenya." *Food Policy* 95: 101957. <https://doi.org/10.1016/j.foodpol.2020.101957>
- Kugler, M., M. Viollaz, D. Duque, I. Gaddis, D. Newhouse, A. Palacios-Lopez, and M. Weber. 2023. "How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?" *World Development* 170: 106331. <https://doi.org/10.1016/j.worlddev.2023.106331>
- Lecoutere, E., A. Mishra, N. Singaraju et al. 2023. "Where Women in Agri-Food Systems Are at Highest Climate Risk: A Methodology for Mapping Climate-Agriculture-Gender Inequality Hotspots." *Frontiers in Sustainable Food Systems* 7 (November). <https://doi.org/10.3389/fsufs.2023.1197809>
- Lentz, E.C. 2021. "Food and Agriculture Systems Foresight Study: Implications for Gender, Poverty, and Nutrition." *Q Open* 1 (1): q0aa003. <https://doi.org/10.1093/qopen/q0aa003>
- Malapit, H.J., S. Kadiyala, A.R. Quisumbing, K. Cunningham, and P. Tyagi. 2015. "Women's Empowerment Mitigates the Negative Effects of Low Production Diversity on Maternal and Child Nutrition in Nepal." *Journal of Development Studies* 51 (8): 1097-1123. <https://doi.org/10.1080/00220388.2015.1018904>
- Malhotra, A., R. Puskur, A. Anbacha, et al. 2025. *Facilitator's Guide: Participatory Foresight on Gender Equality in Agri-Food Systems*. CGIAR GENDER Impact Platform. Nairobi: CGIAR GENDER Impact Platform. <https://hdl.handle.net/10568/175211>
- Marty, E., A.C. Segnon, S.H.K. Tui, S. Trautman, S. Huyer, L. Cramer, and E. Mapedza. 2023. "Enabling Gender and Social Inclusion in Climate and Agriculture Policy and Planning through Foresight Processes: Assessing Challenges and Leverage Points." *Climate Policy* 24 (8): 1034-1049. <https://doi.org/10.1080/14693062.2023.2268042>
- Nico, G., and C. Azzarri. 2022. "Weather Variability and Extreme Shocks in Africa." IFPRI Discussion Paper 2115. Washington, DC: IFPRI. <https://hdl.handle.net/10568/140849>
- Njuki, J., S. Eissler, H. Malapit, R. Meinzen-Dick, E. Bryan, and A. Quisumbing. 2022. "A Review of Evidence on Gender Equality, Women's Empowerment, and Food Systems." *Global Food Security* 33: 100622. <https://doi.org/10.1016/j.gfs.2022.100622>
- Quisumbing, A., S. Cole, M. Elias et al. 2023. "Measuring Women's Empowerment in Agriculture: Innovations and Evidence." *Global Food Security* 38: 100707. <https://doi.org/10.1016/j.gfs.2023.100707>
- Schipper, E.L.F., A. Revi, B.L. Preston et al. 2022. "Climate Resilient Development Pathways." In *IPCC WGII Sixth Assessment Report. Climate Change 2022: Impacts, Adaptation and Vulnerability*, Ch. 18. IPCC. <https://www.ipcc.ch/report/ar6/wg2/>
- Sraboni, E. and A.R. Quisumbing. 2018. "Women's Empowerment in Agriculture and Dietary Quality across the Life Course: Evidence from Bangladesh." *Food Policy* 81: 21-36. <https://doi.org/10.1016/j.foodpol.2018.09.001>
- UN Women, UNDP, UNEP, and World Bank. 2015. *The Cost of the Gender Gap in Agricultural Productivity in Malawi, Tanzania, and Uganda*. <https://africa.unwomen.org/en/digital-library/publications/2015/10/the-cost-of-the-gender-gap-in-agricultural-productivity-in-malawi-tanzania-and-uganda>
- WEF (World Economic Forum). 2023. *Global Gender Gap Report 2023: Insight Report*. June 2023. Geneva. <https://www.weforum.org/publications/global-gender-gap-report-2023/>

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