



Fostering an enabling environment for equality and empowerment in agri-food systems: An assessment at multiple scales

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ABSTRACT

Inequalities by gender and intersecting sources of social differentiation in access to resources, exercise of agency, and desirable outcomes persist in agri-food systems in low- and middle income countries. Despite decades of development and theoretical assessment efforts calling for multiscale approaches to addressing inequalities in agri-food systems, common approaches remain specific to a scale rather than holistic.

In this paper, we make the case that achieving lasting equality and empowerment in agri-food systems requires transformative change. This depends on fostering an enabling environment by relaxing 'deeper' – often inter-related – institutionalized constraints to equality and empowerment across multiple nested scales of the state, markets, communities, household and individuals.

Based on a review of recent literature focused on agri-food systems in low- and middle income countries, we present newly emerging thinking and a status update of key structural constraints to equality at different scales – rooted in policy and discriminatory, formal and informal, social and economic institutions, including norms. We give examples that show how structural constraints to equality at different nested scales are interdependent and mutually reinforcing; demonstrating the need for holistic approaches tackling constraints at multiple scales to foster transformative change in agri-food systems. We recommend designing holistic policy and development programs that combine strategies for relaxing constraints to equality and empowerment at multiple scales using inclusive processes of tailoring and prioritizing. To inform the design of such programs, we present recent evidence of effective or promising strategies for addressing structural constraints to equality that relate to policy, market systems, collectives and norms.

1. Introduction

It is well established that socioeconomic, cultural, and political marginalization cumulatively put women in a disadvantaged position in agri-food systems (hereafter AFS) (Peterman et al., 2010; Beuchelt, 2016; Doss, 2018; Meizen-Dick et al., 2011; Njuki et al., 2022). Closing the gender gaps in AFS and reducing inequalities are intrinsically valuable and essential for achieving Sustainable Development Goal (SDG) 5 “equality between women and men”, and SDG 10 “achieving

equality within and among countries.” They are also needed to avoid societal costs and to build equitable, inclusive and sustainable AFS that feed the global population in the face of current challenges—climate change in particular (Quisumbing et al., 2019b; Rawe et al., 2019).

Addressing the symptoms of gender inequality is necessary but not sufficient (Wong et al., 2019; Quisumbing et al., 2019a; Pyburn and van Eerdewijk, 2021). Lasting gender equality and women's empowerment (hereafter GEWE) in AFS requires transformative change. Empowerment refers to the process of acquiring the ability to make strategic life choices

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(Kabeer, 1999). Gender transformative change is conceptualized as the process of building agency, reversing unequal power relations and making discriminatory social institutions more equitable (DeMerritt-Verrone and Kellum, 2021). How gender transformative change can be triggered, however, is less known.

In this paper, we make the case that lasting transformative change in AFS requires fostering an enabling environment for equality, empowerment and transformation and provide recommendations to do so. We focus on GEWE, while acknowledging similar challenges by other, often intersecting, sources of social differentiation. Our premise is that structural constraints to equality and empowerment are rooted in patriarchy and other systems of power. They are entrenched from within the private domain of households, to communities, and sustained by the state and other key political and economic institutions (Kabeer, 1994). Fostering an enabling environment therefore depends on relaxing the 'deeper' underlying institutionalized constraints that are interrelated and situated across nested scales in a holistic way (McDougall et al., 2021; Pyburn and van Eerdewijk, 2021).

We build on a conceptual framework of structural constraints to GEWE at nested scales and include newly emerging thinking about constraints at the scales of the state, markets, communities, household and individual. Based on a review of recent literature, focused on AFS in low- and middle income countries, we demonstrate how multiple structural constraints to equality at different scales are interdependent and mutually reinforcing; thereby justifying the need for a holistic approach. We provide evidence of what works to address these constraints at each of the different scales; offering an empirical ground for co-designing multi-scale holistic policy and development programs that contribute to gender transformative change in AFS and strengthen women and disadvantaged groups' efforts for such change.

2. Conceptual framework

We adopt the conceptual framework of structural constraints to GEWE at nested scales by McDougall et al. (2023) (Fig. 1). This framework brings together different conceptualizations of gender transformative change developed over the past three decades that have roots in feminist development literature (Kabeer, 1994) and critiques on an increasingly apolitical interpretation of empowerment (Batliwala, 2007; Cornwall and Rivas, 2015; Cornwall, 2016). It resonates with frameworks by Rao et al. (2016) and Njuki et al. (2022).¹

The conceptual framework of nested scales by McDougall et al. (2023) situates formal and informal structural constraints to equality and empowerment as embedded within multiple nested micro (local), meso and macro scales (comprising individual, household, groups, community, markets, state and society) (Fig. 1). Structural barriers to equality at different scales thus intersect and are mutually interdependent. Formal institutions such as policy or laws (systemic), and informal institutions such as social norms (systemic) interact and co-evolve, with mutual feedback effects. The interrelatedness of constraints across the multiple, nested scales implies a need for promoting both individual and systemic change holistically across scales, in formal and informal spheres of life.

In this paper, we distinguish different scales at which structural constraints to equality with various degrees of formality–informality and individual–systemic nature can be found: (i) the scale of the state where we focus on global- and national-level policy, guidelines and legal frameworks; (ii) the scale of markets where we focus on market and value-chain systems and collectives; and (iii) the scales of the

¹ See MacArthur et al. (2022) for an overview of conceptualizations of gender transformative change. See Lecoutere et al. (2023) for a discussion of the relationship between the framework of nested scales by McDougall et al. (2023) and other frameworks.

community, household and individual where we focus on norms.² We continue with a discussion of the emerging thinking about structural constraints to GEWE at those different scales and why we need to address these for creating an enabling environment for GEWE in AFS.

First, over the last decade, policy to target the root causes of gender inequality and emerging institutional strategies increasingly emphasize gender transformative change and the use of intersectional approaches, in response to growing calls for agriculture for development (A4D) to advance GEWE (Acosta et al., 2020). For example, international development actors emphasize the importance of policies that promote equal distribution of the gains of growth, in particular, fiscal policies that fund social infrastructure, social protection and care policies (Esquivel and Rodriguez Enriquez, 2020). SDGs highlight the need for gender-disaggregated and intersectional data analysis (see the central principle of the 2030 SDGs: "Leave No One Behind"). A4D manuals on gender mainstreaming in policy and programming persistently include guidelines to address intersectionality. Nonetheless, there is need to critically examine how global agriculture and food policy cascade effects on national-level policy (Druza et al., 2020; Farhall and Richards, 2021; Andersson et al., 2022). For example, critiques of land-rights policy emphasize a lack of understanding of the complexity of local contexts and the differing impacts on women and men that depend on their situated vulnerabilities. They highlight that policies must critically consider informal practices of land control and their gendered effects (Ali et al., 2021; Kocabicak, 2021; Fischer et al., 2021).

Second, promoting an enabling environment for GEWE at the scale of markets is increasingly recognized as a precondition for sustainably ending poverty. Gender inequality (and its underlying norms and attitudes) is viewed as "one of the most inhibitive barriers to reducing poverty" (Springfield Centre, 2014, 4; Kruijssen et al., 2016).

Over the past ten years, the tenet that markets are embedded in gendered formal rules (laws, policies) and informal rules (norms, relations) has become more prominent. Powerful actors are seen as establishing or perpetuating unfair rules to take advantage of market exchanges. Attention to inclusive value-chain and market-systems development has therefore increased (Markel et al., 2016). Linking household and market scales, women's unpaid care work is increasingly acknowledged as a barrier for their economic empowerment (Thorpe et al., 2016). Gender norms that hinder women's employment outside the home tend to persist (See Section 4.1.). It is increasingly acknowledged that combining the private sector's focus on economic viability and profit with a rights-based gender-transformational agenda could create "tremendous synergies" (Laven and Pyburn, 2015, 25).

Development policy has increasingly turned to collectives to achieve GEWE in AFS through group-based approaches and collective action (Njuki et al., 2022). Rural collectives are seen as important vehicles to address constraints to (individual) access and agency in domains such as credit, information, inputs, natural resource management and common resources, as well as to foster collective action. Women's groups in agriculture have been suggested as solutions for women to access economies of scale, reduced marketing and supply costs, pooling of risks, access to training and other services—and subsequently, economic and social empowerment (Desai and Joshi, 2014; Agarwal, 2020a, 2020b; Sugden et al., 2021). Similarly, youth-related groups are promoted by several governments—particularly in sub-Saharan Africa—to alleviate

² Although in this paper we situate collectives at the scale of markets, they cross over to the scales of groups and the community. Likewise, while we will discuss norms in the section on the scales of community, household and individual, they play a role at the scales of markets and the state. While equally important and interlinked with other constraints, in this paper, we do not address constraints to GEWE that relate, among others, to basic infrastructure (e.g., electricity, water, childcare), women's land and property rights, women's access to productive and complementary agricultural resources and women's agency in detail.

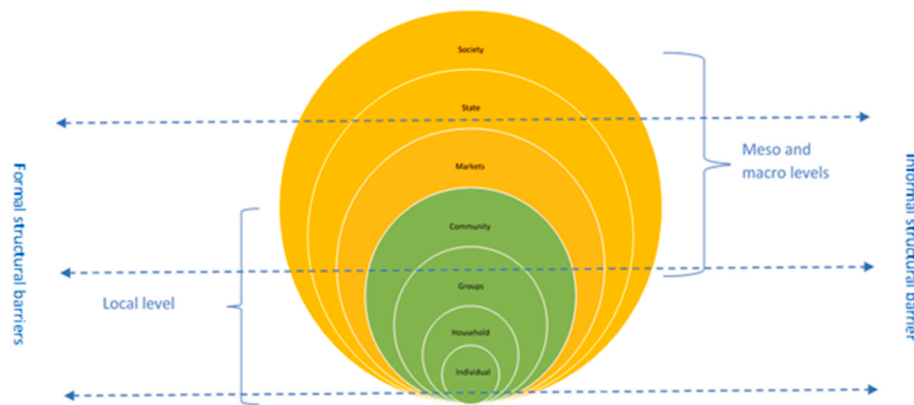


Fig. 1. Formal and informal structural barriers to equality at multiple, nested scales (McDougall et al., 2023).

youth unemployment, improve their access to skills and resources, and encourage their engagement in agricultural value chains (Yami et al., 2019).

Third, the idea that discriminatory social norms and gender norms influence economic processes has gained wide acceptance (Eriksson, 2015; Pearse and Connell, 2016). Norms influence individuals' behavior and interactions through individual (internalized) preferences as well as societal expectations and social sanctions (Pearse and Connell, 2016; Boudet et al., 2013). Gender norms do not only define women's capabilities, but also influence men's behaviors and hold back gender equality in AFS (Hillenbrand and Miruka, 2019). They do so by (i) outlining labor division, roles, responsibilities and farmer identities (Meinzen-Dick et al., 2011; Farnworth et al., 2021); (ii) hindering participation in public and economic life and access to services and support for economic activities (Bergman-Lodin et al., 2019; Farnworth et al., 2020b; Petesch and Badstue, 2020; among others); (iii) sustaining harmful practices like gender based violence (Henry and Adams, 2018; Cislighi et al., 2019); and (iv) defining resource access, control and ownership through informal institutions and by shaping formal institutions (Doss and Meinzen-Dick, 2020).³

3. Method

This a review paper. We reviewed scientific peer-reviewed publications, as well as project and technical reports, working papers, and discussion papers from reputable sources published since 2011 relevant to the theme of fostering an enabling environment for equality and empowerment in AFS, with a focus on policy, market and value chain systems, collectives and norms.⁴ We focused on AFS in low- and middle income countries.

We identified relevant publications through recognized search engines using key search terms and through consulting experts and cross-references in resources (See Annex 7.1. in the Online Supplementary Materials (OSM) for details). Key search terms included (combinations of) agriculture and food systems, gender mainstreaming, gender and inclusion, gender-responsive, policy, institutions, markets (as institution), labor market, governance, market systems approach, value chains (systems/institutions), collectives, community-based, social norms, gender norms, gender-transformative approaches. We also consulted review studies and collections including Gennovate (<https://gennovate.org>) and Align (www.alignplatform.org) on norms and norm change; and Biskupski-Mujanovic and Najjar (2020) on collectives. Review studies of gender-transformative approaches include Wong et al. (2019), FAO IFAD and WFP (2020), McDougall et al. (2021) and McDougall et al. (2023).

³ See Lecoutere et al. (2023) for a more detailed discussion of key normative constraints for women in AFS.

⁴ This study was conducted to develop a background paper for the 2023 FAO report on the Status of Women in Agrifood systems, which envisioned to provide a 10-year update of the FAO State of Food and Agriculture (SOFA) 2010–2011 report (FAO, 2011). Therefore, we restricted the review to publications since 2011.

We reviewed the identified literature to elaborate on the conceptual framework with newly emerging thinking about key structural constraints at the scales of the state, markets, communities, household and individual that are rooted in policy and legal frameworks, social and economic institutions, including market and value chain systems and norms.⁵

We compiled the evidence from the identified literature on recent trends and the current status of structural constraints to GEWE at different scales. We additionally relied on secondary data from large scale representative cross-country surveys available online for evidence related to policy, legal frameworks and norms. These include the Global Gender Gap Index; World Bank *Women, Business, and The Law Data*; Demographic and Health Surveys, Afrobarometer, Latinobarómetro, World Values Surveys.

Based on our review and analysis of the identified literature, we developed examples that show and justify why holistically tackling various constraints to GEWE at multiple nested scales is needed to effectively contribute to transformative change in AFS. We also compiled an overview of recent evidence of effective or promising strategies to overcome structural barriers to equality at each of the different scales, including state, markets, communities, household and individual.

Throughout our review and analysis, we remained sensitive to how experiences and responses manifest with different forms of social difference and exclusion and mention these wherever data availability and the limited space of this paper allow. The data needed to conduct an in-depth intersectional analysis of the implications of these barriers and, consequently, the means to overcome them, however, proved scarce at times.

4. Results

4. Results

We now turn to presenting the results of our review of recent literature and evidence. We first discuss the current status of structural constraints to GEWE in AFS at different scales and how they evolved over the last decade. Thereafter, we provide evidence justifying the need for holistically addressing such constraints across multiple nested scales and recommendations how to do so. Subsequently, we present recent

⁵ The discussion of the conceptual framework includes some key references in the feminist development literature relating to gender transformative change that were published prior to 2011.

evidence of effective or promising strategies for addressing structural constraints at different scales.

4.1. Status update of structural constraints to equality and empowerment in agri-food systems at different scales

First, in the last decade, there has been progress in national legal and policy frameworks important for lifting barriers to women's social, economic, and political opportunities in agri-food systems: (i) New legislation to enhance gender equality and abolish discriminatory laws reflects increasing national political commitment (OECD, 2014; OECD 2019b); (ii) Gender-equality considerations have been integrated into SDG monitoring standards, and international development actors are pushing forward initiatives to improve global data related to GEWE, such as Equal Measures 2030; (iii) In Africa, many countries have ratified the Convention on the Elimination of All Forms of Discrimination against Women, and have enacted legislative reforms to address gender based violence (GBV) and enable women's access to land rights, finances, assets, entrepreneurship and political representation (OECD, 2019a; See also [Women, Business and the Law data](#) in Annex 7.2.1. in OSM).

More work remains to be done. For example, despite political commitment and legal reforms, GBV persists due to social normative structures that reinforce inequalities (Badstue et al., 2021; See Section 4.2.). Also, existing official data related to gender equality still tends to be incomplete (Connell et al., 2020), and available data neither exist in easily accessible formats nor are they put into tools for end-users. Further, gender gaps remain in economic participation and opportunities (World Economic Forum, 2021; See Global Gender Gap data Annex 7.2.2. in OSM) and in understanding and treatment of the structural issues to be addressed (Ampaire et al., 2020; Lawless et al., 2021; Andersson et al., 2022).

Second, regarding the scale of markets, women's share in agriculture has been slowly declining over the past twenty years. However, for women in sub-Saharan Africa and southern Asia agriculture remains the most important source of their livelihood (despite norms restricting their access to resources such as land) (Costa et al., *Forthcoming*). Looking at women's paid work in agriculture, there has been a global shift into services with a stronger change in sub-Saharan Africa as compared to Latin America and the Caribbean (UNHLP on Women's Economic Empowerment, 2016). Data from Africa and Latin America show that men's income from sales of agrifood products tends to be higher than that of women (Own calculations based on FAO, 2022 and country-level reports available at: <https://www.fao.org/nutrition/markets/territorial-marketsinitiative/en/>). Similarly, there is a significant gender gap for agricultural wage employment (Piedrahita et al., *Forthcoming*).

Collectives have played important roles in enabling women's participation in markets and value chains over the last decade (Perry et al., 2019; Elias and Saussey, 2013). However, often limited benefits accrue to these women due to their concentration on low pay activities, dominance of men in their management and weak access to services (Elias and Arora-Jonsson, 2016; Perry et al., 2019; Fischer and Qaim, 2012; Montanari and Bergh, 2019; Najjar and Baruah, 2021). There is emerging evidence of women organizing and mobilizing informally for better wages and working conditions in agriculture (Kim et al., 2016; Najjar et al., 2017, 2018).

Third, we look into the evolution and status of norms, which pertain to the scale of the community, household and individual. We reflect the current status of support for a selection of gender norms of which data is available in large-scale surveys by using the most recent data point. We reflect the evolution by comparing to a data point approximately 10 years earlier (Pereznieto, 2015) (Table 1; Figs. 2–6).⁶ Some of these relate directly to GEWE in AFS (e.g., norms defining women's access to

resources and participation in the economy and markets); others indirectly by constraining individual agency (e.g., beliefs around GBV) or confirming gender stereotypes (e.g. beliefs around leadership capacities) (Hanmer and Klugman, 2016).

Generally, the data shows that norms assigning women the responsibility for childcare (Fig. 4; Annex 7.3. Figure B in OSM) and men priority access to paid work (Fig. 5; Annex 7.3. Figure C in OSM) tend to be widely supported across regions and show little change over time. In sub-Saharan Africa, there is wide support for women to have the same rights as men to own and inherit land (Fig. 6). The status and evolution of support for other norms tend to vary across regions and countries. For example, acceptability of wife-beating receives low to moderate support in Latin America and Asia, yet wide support in sub-Saharan Africa. Across regions there is a declining trend in support of this norm (Fig. 2). The belief that men are better political leaders than women receives moderate to wide support depending on the region (Fig. 3; Annex 7.3. Figure A in OSM).

4.2. Why we need to relax structural constraints to equality holistically and across scales

In this section, we provide evidence of interacting constraints and enablers of GEWE at nested scales. We discuss examples where positive change in one constraint or at one scale is hindered by unchanged constraints at a different scale; acknowledging there are many such cases. Where available, we also provide selected examples of approaches that successfully addressed multiple constraints across multiple scales and, as such, increased GEWE in AFS. The examples are illustrated in Figs. 7–9. The left sides of the figures visualize where constraints (colored red) and enablers (colored green) at different scales conflict. The right sides of the figures visualize some of the successful examples of relaxing interdependent or cross-scale constraints.

A first example relates to paid and unpaid work (Fig. 7). While gender roles may become more accommodating to women's equal participation in productive work, the empowering effect may be limited if norms continue to assign unpaid care work to women (Picchioni et al., 2020). Being confined to the domestic sphere also places limits to women's mobility and options for better pay (Achandi et al., 2023). Evaluating recent research on unpaid care, Folbre (2018) confirms the importance of modifying inequitable norms to redistribute care work together with changes at other scales, such as investments in basic infrastructure (e.g., electricity and water) and the provision of adequate childcare and family-friendly regulations by state and employers. The World Bank Atlas of Sustainable Development Goals (2020) shows synergistic positive effects of addressing gender equality with policies related to workplace, pay and parenthood (different domains but at the same scale) on female labor force participation.⁷

A vegetable seed production cooperative in Nepal provides an example of an initiative that has successfully addressed women's constraints to taking up paid work at two different scales (Ghosh et al., 2017). Realizing the potential repercussions on women's household care responsibilities, time- and labor-saving technology was introduced at the cooperative level. Participants' additional engagement in participatory learning centers resulted in women taking more control of their resources as well as participating in cooperative governance.

A second example relates to the invisibility of women in AFS (Fig. 8). The invisibility of women as farmers and agripreneurs in agricultural policy and development planning (at the scale of the state), perceptions of agriculture being a male domain, and women not being identified and not identifying as farmers or agripreneurs (at the scales of communities,

⁷ Economies that had increased gender equality with respect to three indicators (policies on workplace, pay and parenthood) had a higher female labor force participation (70 percent) than economies that had addressed none (49 percent) or less than three indicators (58–68 percent).

⁶ For data see Annex 7.4. in the Online Supplementary Materials (OSM).

Table 1
Current status and evolution over the last decade of support for a selection of gender norms across regions.

	Sub-Saharan African countries		Latin American countries		South and Southeast Asian countries	
	Evolution	Current status	Evolution	Current status	Evolution	Current status
Acceptability of wife-beating Fig. 2, Women respondents in Demographic and Health Surveys (DHS) 2006–13, 2013–19	Slightly decreasing trend in support	Wide support Very wide support in West (and North) African countries	Slightly decreasing trend in support	Low support	Slightly decreasing trend in support	Moderately wide support Wide support in some countries
Belief that men are better political leaders than women Fig. 3; World Values Survey 2010–14, 2017–20 (See Annex 7.3. Figure A in OSM for details for Sub-Sahara Africa based Afrobarometer data 2011–13, 2016–18)	Substantially decreasing trend in support in some countries	Wide support in some countries	Slightly decreasing trend in support	Moderate support	[Insufficient data]	Wide support
Belief that preschool children suffer if their mothers work Fig. 4, World Values Survey 2017–20 (See Annex 7.3. Figure B in OSM for Afrobarometer, 2016–17 data on the belief that a family is better off when a woman is responsible child and home care)	Support remained stable	Wide support Very wide support in some countries	Support remained stable	Wide support Very wide support in some countries	Support remained stable	Wide support Very wide support in some countries
Belief that men should have more right to a job than women if jobs are scarce Fig. 5, World Values Survey, 2017–20 (See Annex 7.3. Figure C in OSM for Latinobarómetro 2008; 2015 data on the belief that women should work only if the couple does not earn enough)	Variable but minor changes in support over time	Very wide support	Variable but minor changes in support over time	Moderate support	Variable but minor changes in support over time	Very wide support
Belief that women have the same rights as men to own and inherit land (Fig. 6, Afrobarometer, 2016–17)	–	Very wide support (which is in favor of women)	–	–	–	–

Note: As a reference, we label less than 20 percent of the population/respondents’ support for the norm as ‘low’; more than 20 but less than 30 percent ‘moderate’; more than 30 but less than 50 percent ‘wide’; and more than 50 percent ‘very wide’ support.

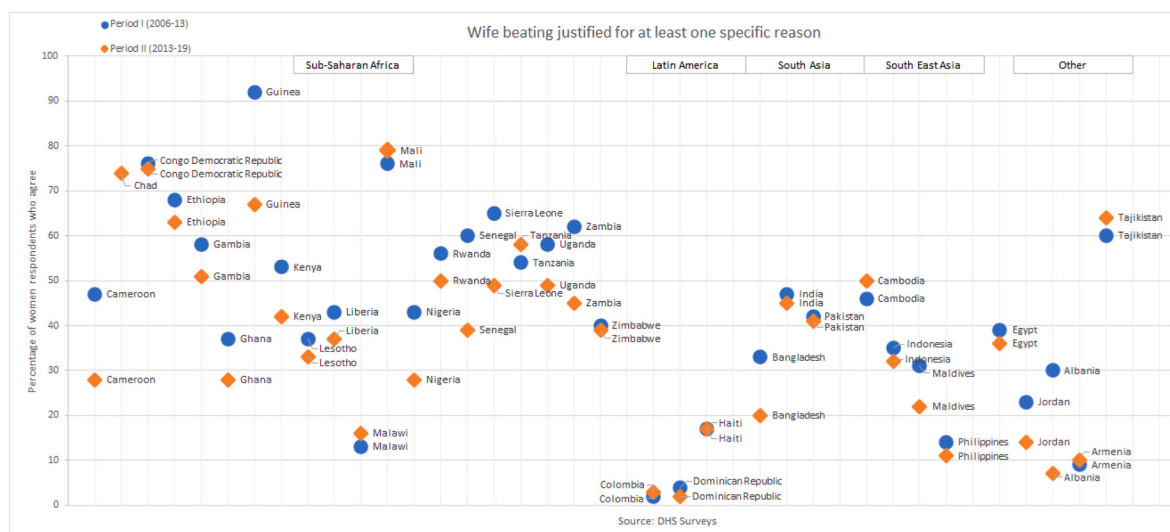


Fig. 2. Percentage of women respondents agreeing wife-beating is justified for at least one specific reason.

household and individual) resonate with and reinforce one another (Rao, 2012; Galiè et al., 2013, 2017; Doss, 2021).

While progress has been made, the scarcity of gender-disaggregated data on agricultural labor force participation, land rights, and asset ownership maintains women’s invisibility. Also, stereotypical perceptions of gendered labor divisions often shape the data collection instruments (Oya, 2013; Kabeer et al., 2019; Doss, 2021). This hinders the design and monitoring of AFS policy and programs aimed to benefit

women (Van De Velde et al., 2020).

Women’s ability to present themselves as farmers and agripreneurs, expand their activities and make these more profitable is also constrained by (i) women’s limited access to land, financial capital, extension, networks and decision-making spaces; (ii) biased beliefs in women’s entrepreneurial and leadership skills in farming and agribusiness (at the scales of markets, communities, and groups); and (iii) women’s domestic and care work responsibilities in their households

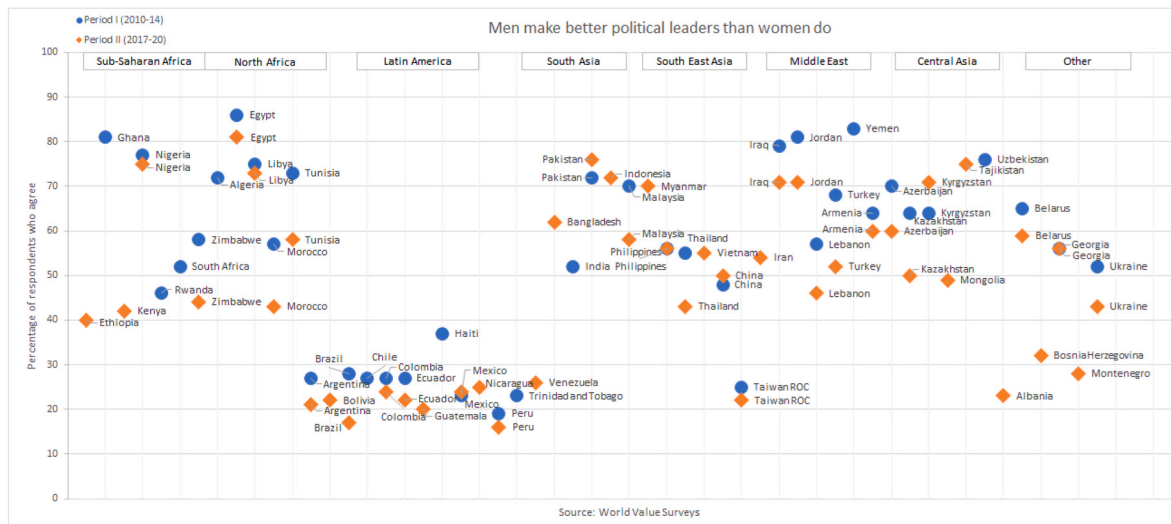


Fig. 3. Percentage of respondents agreeing men make better political leaders than women do (World Values Survey).

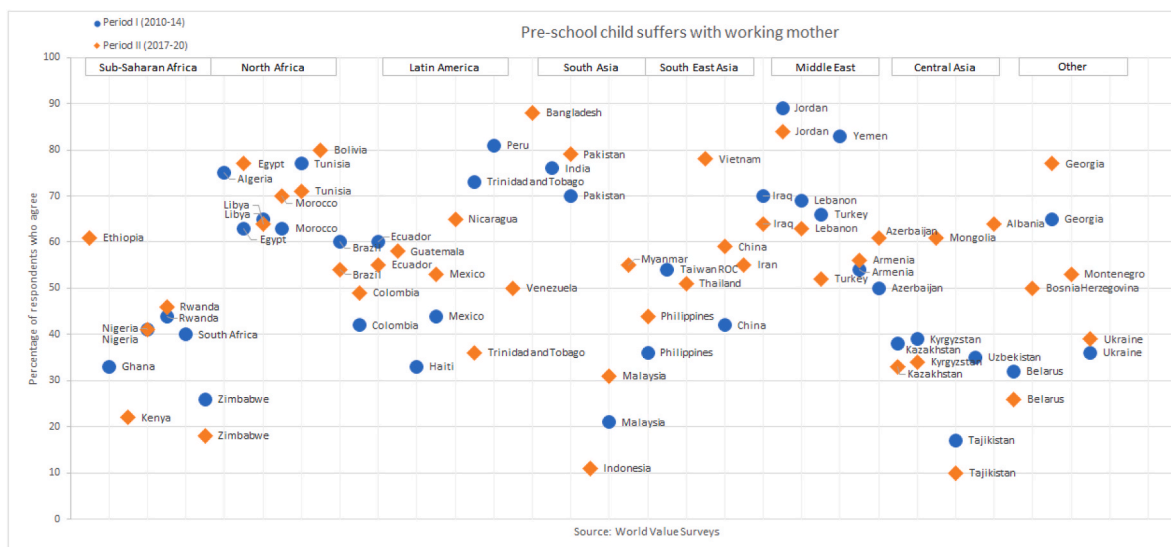


Fig. 4. Percentage of respondents agreeing a preschool child suffers if their mother works.

(Galiè et al., 2013; Adam et al., 2019; Gumucio et al., 2021). While organizing in collectives can address some of these challenges, women often still run into similar barriers, especially if formal registration as a collective is required to access resources and services (Mudege et al., 2015; Biskupski-Mujanovic and Najjar, 2020). Men’s out-migration can expand women’s role as farmers or agri-preneurs but the extent to which this is recognized and a basis for receiving services such as extension support varies; in some cases, in relation to norms tied to intersectional identities (Holmelin, 2019; Kilby et al., 2019; Kawarazuka et al., 2022).

Addressing women’s limited rights to land can make women’s roles in AFS more visible. For instance, women’s involvement in the sugarcane value chain in Uganda was enhanced by the registration of sugarcane block contracts in women’s names. This was less opposed if discriminatory intra-household gender norms had been addressed as well (Ambler et al., 2021). In Syria, women’s participation in a barley breeding program promoted their public recognition as farmers. This happened despite a lack of gender-responsive seed governance regime and traditional gender roles (Galiè et al., 2017). Women seed farmers in Bangladesh and women agritourism entrepreneurs in France now identify as professional agri-preneurs, rather than farm helpers, through

fostering professional networks and negotiating gender roles within their households and communities (Annes and Wright, 2015; Bioversity International, 2018).

GBV forms a third example (Fig. 9). Formal gender-equality and antidiscrimination laws may be of little avail to improve women’s psychological and physical safety and access to work in agricultural value chains if enforcement is low and norms acceptable to GBV prevail (Eissler et al., 2020). Where laws confirm women’s rights to co-ownership of land, norms upholding men as traditional heads of households can expose women to GBV by their husbands (Isimbi and Manzi, 2018). Furthermore, the seasonal and informal nature of much agricultural labor and the lack of unionization may foster sexual harassment (Kim et al., 2016; Henry and Adams, 2018).

Women’s coping strategies with regard to sexual harassment at the individual and community levels, for instance in Morocco and Egypt, include opting to work for farmers who are known to their husbands or opting to work in women-only groups. The first strategy, however, limits opportunities to the vicinity of their communities and the second attracts lower wages than in gender-mixed groups (Najjar et al., 2017, 2018).

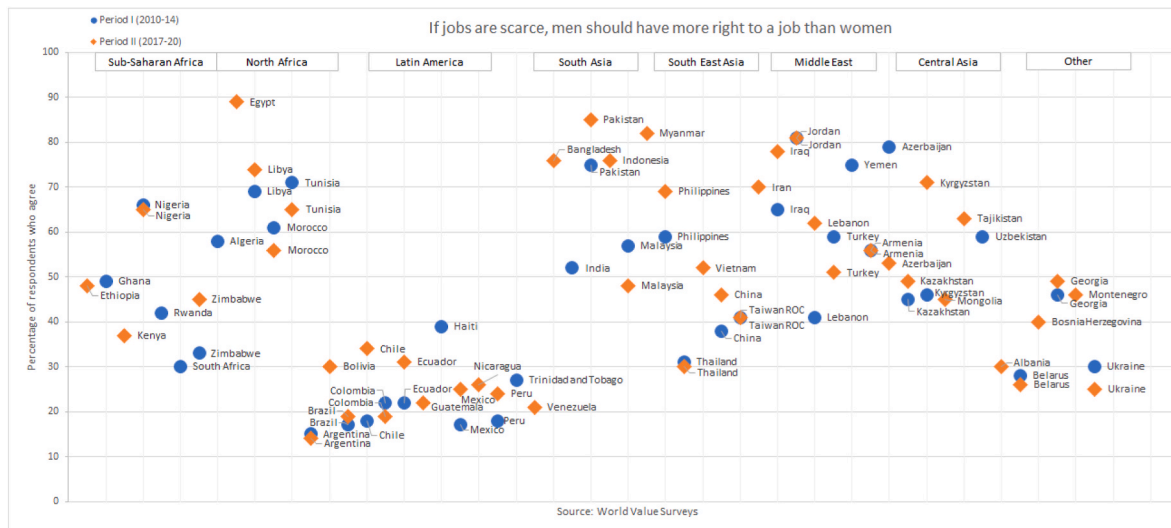


Fig. 5. Percentage of respondents agreeing men should have more right to a job than women if jobs are scarce.

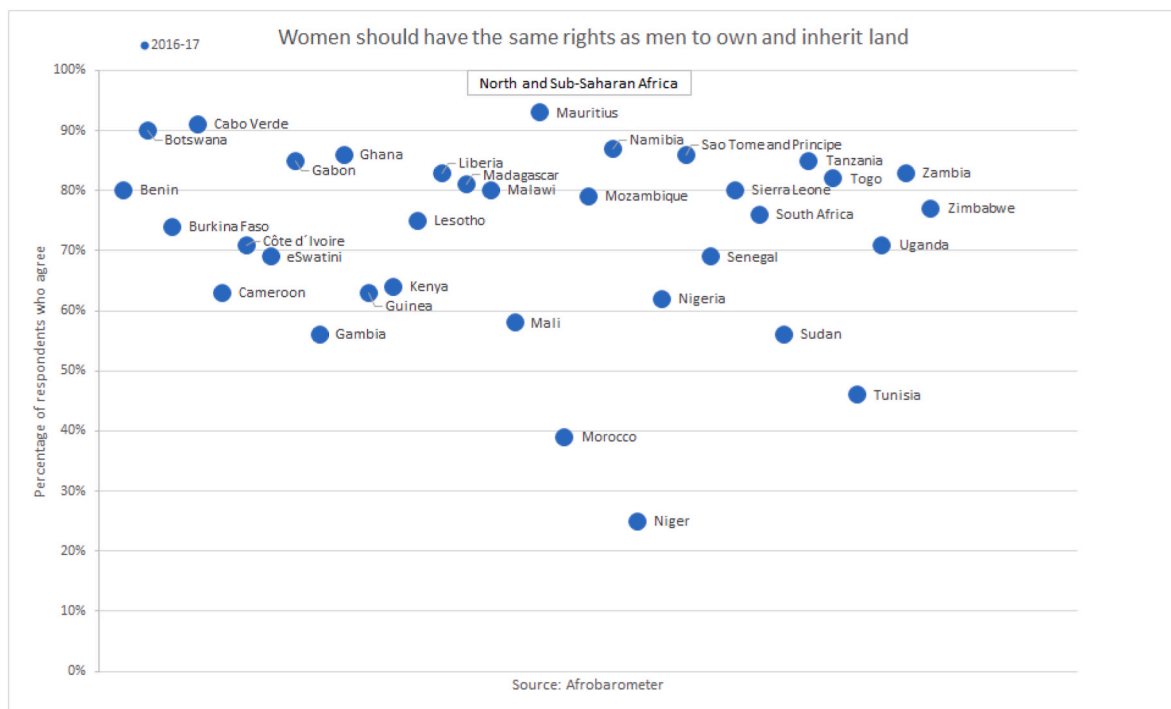


Fig. 6. Percentage of respondents agreeing women should have the same rights as men to own and inherit land.

A last example, which we will only briefly discuss, relates to cross-scale challenges to gender-equal land and property rights. The literature provides ample examples that gender-equal formal land and property rights may lead to little improvement for women’s and daughters’ access to land or prevention of loss of land access upon divorce or widowhood if gender norms and informal institutions around rights to land remain discriminatory (Najjar et al., 2020; Fischer et al., 2021). Comparing data on support for women’s right to own and inherit land in sub-Saharan African countries (Fig. 6) with data on women’s and men’s agricultural land ownership (FAO 2021), illustrates that important gender differences in land ownership are more likely in countries with low support (e.g., Niger, Nigeria); and less likely in countries with wider support (e.g., Malawi, Tanzania). Besides, legal control of land by women does not always guarantee actual control if, for instance, deep-seated cultural norms ensure that brothers control the shares their

sisters inherited (Agarwal, 1994; Najjar et al., 2020).

The above examples illustrate how, in many cases, multiple structural constraints to equality at different scales are interdependent and mutually reinforcing. This justifies the need to address structural constraints to equality and empowerment in AFS across multiple nested scales in a holistic way in order to foster an enabling environment for GEWE.

An important starting point for fostering an enabling environment for GEWE in a particular context is a gender analysis at multiple scales. The Social Relations Approach, based on Kabeer’s institutional analysis framework (1994), is a well suited approach to guide an analysis of structural social relationships and institutional sites (or scales) and how these are interlinked (March et al., 1999). Such gender analysis can help identify what priorities to set, what approach to gender integration to take, and what stakeholders to include and can guide a tailored design of

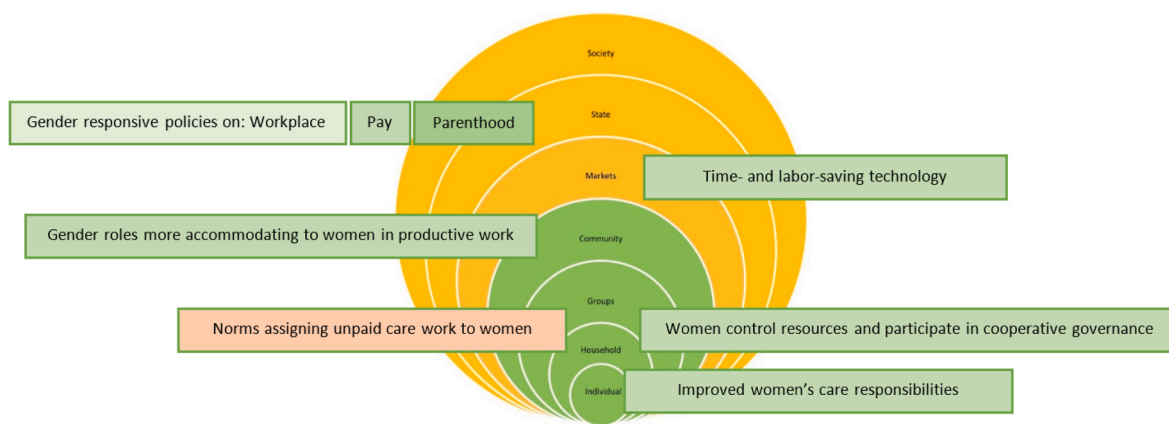


Fig. 7. Unpaid work: Interacting constraints and enablers of GEWE at nested scales.

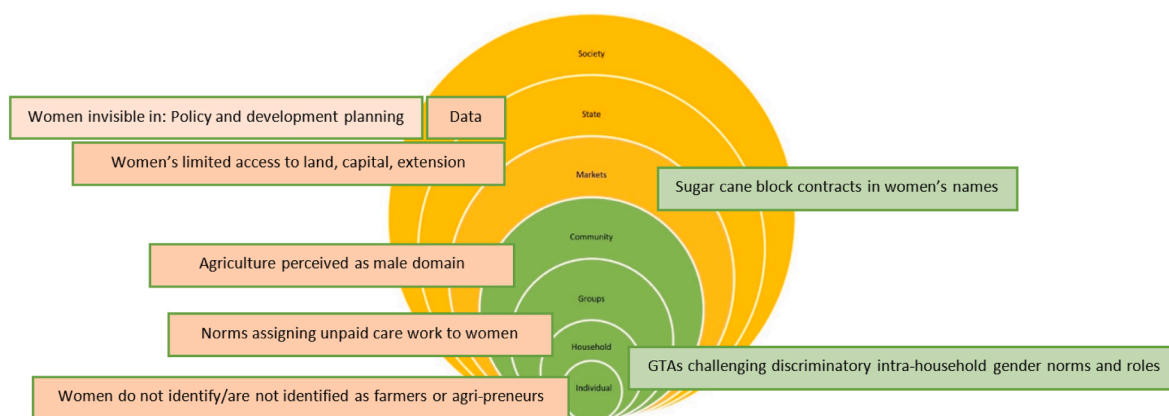


Fig. 8. The invisibility of women in AFS: Interacting constraints and enablers of GEWE at nested scales.

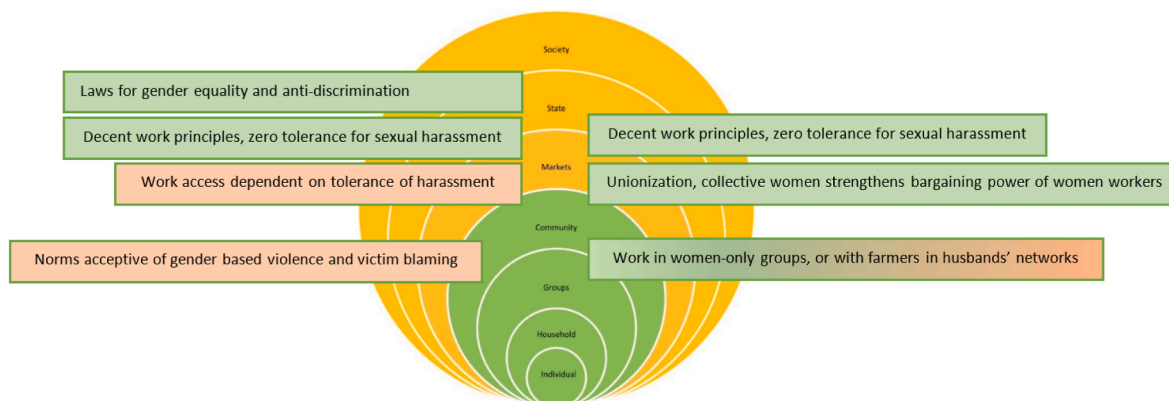


Fig. 9. Gender-based violence: Interacting constraints and enablers of GEWE at nested scales.

policy or programs that create synergistic effects at several scales. Such tailoring processes ought to be participatory to ensure relevance and buy-in, and above all, to include the voice and support of women and disadvantaged groups (Gumucio and Rueda, 2015; Botreau and Cohen, 2020; Druzca et al., 2020). Strategies for addressing structural barriers to GEWE, holistic approaches, call for inclusive multi-stakeholder approaches and collaboration with other actors working in the same context – if needed, across sectors and intervention levels (GIZ, 2019; Evans et al., 2021). It is recommended to reflect on combining interventions or policies that have worked or have the potential to address the identified barriers to GEWE in different domains at different scales.

In the subsequent section, we provide a review of evidence of promising strategies for addressing such barriers at different scales.

4.3. Evidence of promising strategies for relaxing structural constraints to GEWE at different scales

In this section, we present recent evidence of effective or promising strategies to address structural constraints to equality and empowerment at the scales of the state, markets, community, household and individual, respectively, with a sustained focus on their interconnections.

4.3.1. The scale of the state

Even if non-binding, voluntary guidelines that promote GEWE in AFS can be critical for providing policy guidance on gender mainstreaming in national legal and policy frameworks for food security and nutrition (CFS, 2023). For example, gender inclusion in the Voluntary Guidelines for securing sustainable small-scale fisheries and for responsible governance of tenure of land, fisheries and forests, respectively, helped women mollusk collectors in Costa Rica to request formal recognition of their work and recognition of their tenure rights to local resources (FAO, 2020). As a result, women are now able to participate in decision-making processes, obtain social-security rights and access credit. Although awaiting endorsement at the time of writing this paper, Voluntary Guidelines on Gender Equality and Women's and Girls' Empowerment would be critical for providing policy guidance on gender mainstreaming in national legal and policy frameworks for AFS and promoting policy and stakeholder actions aligned with the SDG 2030 goals (de Haan, 2022; CFS, 2023).

Inclusive consultation processes with diverse stakeholders have helped promote effective gender inclusion in policymaking related to climate change, agriculture and food security in Latin American countries (Gumucio and Rueda, 2015). Correspondingly in Ethiopia, the 2017 Gender Equality Strategy for Ethiopia's Agriculture Sector was "the first policy to conduct a country-wide consultation" and has been found to more completely represent women's realities, compared with previous national policies, recognizing women as producers and accept them as paid workers, and not only as carers (Druzca et al., 2020). Ensuring that women participate in decision-making at all levels has been important for the development of policies that promote both food security and gender equality (Botreau and Cohen, 2020).

Lessons learned from initiatives to improve global data for more effective policy advocacy, such as the SDG Gender Index, highlight the importance of: (i) advocates pairing the data from the index with their own detailed contextual analyses, (ii) working the data into tools and products that women's rights organizations can apply to hold their governments accountable (Connell et al., 2020), and (iii) combining both quantitative and qualitative data. Lastly, the 'Inequality, Gender, and Sustainable Development' approach seeks to incorporate intersectionality in measuring progress towards the SDGs and can help to more critically inform global and national policy development on GEWE in AFS (Aczona and Bhatt, 2020). Although still in initial stages, attempts to use existing survey datasets have been able to identify the groups of women and girls with the lowest well-being outcomes related to labor force participation in 84 countries.

4.3.2. The scale of markets

Knowledge on promising strategies to address constraints to GEWE in market and value chain systems is still sketchy. Vossenberget al. (2018) discuss evidence of gender-transformative outcomes of financial inclusion and conclude the results remain fragmented and contradictory. They find the literature siloed by quantitative versus qualitative/participatory research strategies. Links to interactions beyond the household scale are often missing. Case study approaches make it hard to generalize. Similarly, after examining WorldFish's value chain projects' potential for equitable transformation, Kruijssen et al. (2016) conclude that "given the wide range of outcomes and approaches used and their inherently place-based nature, it remains difficult to draw any firm conclusions on the most effective approaches for value chain development". A broad and systematic evaluation of what has proven effective is still due and should include the question of transferability.

A review of first case studies yields the following insights.

1. A combination of scaling agricultural technologies with GTAs leads to more value chain transformation — creating not only more market options for women, but also more equitable gender relations beyond the chain (Kruijssen et al., 2016; Cole et al., 2020).

2. Process upgrading (increased efficiency of production) promotes more equitable value chain participation if women's capacities are developed and restrictive norms (such as those related to mechanization) are addressed. Evidence varies widely about how vertical coordination (e.g., fair trade certification, contract farming schemes) can successfully improve women's empowerment (Ihalainen et al., 2021).
3. Market-system programs are effective where they combine a business-venture approach to working with private-sector partners with a variety of other measures. These include facilitating women's and youth inclusion by building their capacity, and strategically and consistently using data to prove the business case for upgrading their roles (Cassinath and Mercer, 2020).
4. The gender gap in productivity and profitability of micro-entrepreneurs can be reduced if some of the social constraints that women face (such as time constraints and expectations to use their returns for household expenditure) are addressed (Buvinić and Furst-Nichols, 2016).

There are several examples of the potential of collectives, such as agricultural cooperatives and women's farm groups, for relaxing barriers to GEWE in agri-food systems. Agarwal's (2020a, 184) study found that women's farm groups outperformed individual farms: "their annual average value of output was 1.8 times greater, and annual average net returns per farm were five times higher". Sugden et al.'s (2021) study on agriculture collectives in India and Nepal showed that, compared with other groups, women-only groups showed a greater ability to work together with little conflict, and demonstrated stronger bonds of solidarity; which contributed to challenging the local political power of landlords. Another promising example from Uganda is that women's participation in a sunflower oil producer organization increased their decision-making power in households, groups and the wider community (Lecoutere, 2017).

Yet the governance of collectives, the extent to which they are geared to collective action, and their inclusion or exclusion criteria have implications for the benefits reaped by women and ultimately for GEWE in AFS (Biskupski-Mujanovic and Najjar, 2020). For example, self-help groups are more conducive to women's participation compared with other forms of collectives; yet involve the poorest segments in society. Land-dependent groups such as agricultural cooperatives are far less welcoming to women; which impedes their access to information, credit and inputs through these kinds of collectives (Njuki et al., 2022).

To strengthen the potential of collectives in challenging structural barriers to GEWE in AFS, the limitations of collectives and related policies and informal institutions at multiple scales – such as male-biased land and property rights, limited spaces for enforcing one's rights (e.g., unions), role incongruent beliefs in women's leadership, limited recognition of women as farmers as well as the gendered division of labor – need to be addressed (Najjar et al., 2017).

4.3.3. The scales of the community, household and individual

Social and gender norms and the accompanying power dynamics can be relaxed or changed to a new standard even if they are deeply entrenched (Hillenbrand and Miruka, 2019).

On the one hand, gender norms can transform in response to macro-level forces, broad socio-economic change, dynamics of gender relations, social pressure, and choices of individuals (inter)acting on their own beliefs and preferences (Boudet et al., 2013; Pearse and Connell 2016; Heise et al., 2019). There is case study evidence that norms evolve in response to socio-economic change. For instance, in some contexts, women's mobility became more acceptable with their increasing involvement in income-generating activities in AFS (Locke et al., 2017; Petesch and Badstue, 2020). In other cases, conducive dynamics in markets and infrastructure and male outmigration enabled women to innovate in agriculture (Badstue et al., 2020b).

On the other hand, the malleability of norms provides scope for

moving beyond individual self-improvement among women toward transforming the power dynamics and structures that reinforce gender inequalities, for instance, through gender-transformative approaches (GTAs) (Hillenbrand et al., 2015).

Programs and interventions seeking to promote less restrictive or less harmful social and gender norms, including GTAs, incorporate mechanisms of social change. These include, among others, reflexive and participatory methods for individuals and collectives (FAO, IFAD and WFP, 2020; McDougall et al., 2021); engaging with agents of social change, including men; and influencing individuals' attitudes and social expectations with information, reflection, social pressure, incentives or altered symbolic meaning of norms (Eriksson, 2015; Hillenbrand and Miruka, 2019). GTAs often make masculinities more visible and encourage positive norms of manhood (Dworkin et al., 2015; Cole et al., 2015; Farnworth et al., 2020b). Implementing GTAs requires a long-term engagement, conceptual clarity about what change is envisioned and how, and reflection on the ethics of the envisioned normative change (Wong et al., 2019).

We continue with a discussion of examples, mostly from sub-Saharan African and South Asian contexts, that illustrate the potential of GTAs to promote more positive gender norms and more equal gender relations in AFS.

First, technical improvement programs for agriculture, livestock, fishery and aquaculture that integrate GTAs are associated with: (i) women's greater sense of self-worth and improved capacity to negotiate relationships (Galiè and Kantor, 2016), (ii) shifts in beliefs and norms regarding women's knowledge of and engagement in agriculture and livestock management (Cole et al., 2014; Lemma et al., 2021); (iii) increased men's involvement in domestic, productive and high zoonotic-disease risk activities (Mulema et al., 2020) and (iii) women's increased voice in intrahousehold (farm- or livestock-related) decision-making (Farnworth et al., 2013; Mulema et al., 2020). As compared to a gender-accommodative approach, a GTA to a post-harvest fish loss reduction program resulted in larger gains in gender-equal attitudes and women's voice over income use (Cole et al., 2020). Youth economic empowerment programs with GTAs enabled young women to own a business and decide on income use (Leon-Himmelstine et al., 2021).

Second, GTAs integrated in farmer field schools are associated with (i) women's increased uptake of agricultural practices and technology; (ii) women's increased involvement in intrahousehold decision-making about farming, income and assets; and (iii) men and women's awareness of gendered labor distributions (Choudhury and Castellanos, 2020; FAO, IFAD and WFP, 2020). Combined agricultural and nutrition programs with GTA elements induced more gender-equitable attitudes towards gender roles (Kerr et al., 2016; Quisumbing et al., 2021).

Third, GTAs that apply participatory action learning methods with households and/or communities, including, among others, the Gender Action Learning System (GALS), Nurturing Connections, Dimitra Clubs and the Journeys of Transformation program (FAO, IFAD and WFP, 2020), are associated with (i) increased awareness of negative consequences of gender inequality, strict gender roles and gender-unequal division of labor; (ii) more accepting attitudes towards women's involvement in decision-making and access to resources; and (iii) men's engagement in care and domestic activities (Mayoux, 2012; Farnworth et al., 2013; Wong et al., 2019). Multidimensional programs that include such GTAs, such as the "Accelerating Progress towards the Economic Empowerment of Rural Women" (UN JP RWEE) program, show positive effects on women's empowerment and intrahousehold gender parity (Quisumbing et al., 2023).

Fourth, household methodologies that challenge discriminatory intra-household gender relations and norms include, among others, the Gender Household Approach, the Gender Model Family approach, and households mentoring that integrate GALS tools (FAO, IFAD and WFP, 2020). Evidence shows these: (i) increased women's involvement in traditionally male domains such as farm decision-making and access to cash-crop income (Lecoutere and Wuys, 2021; Lecoutere and Chu,

2021), and (ii) are associated with more equitable sharing of resources (FAO, IFAD and WFP, 2020).

More research is needed, however, about the extent, depth and sustainability of changes in norms following from GTAs (Galiè and Kantor, 2016) and the relationship with empowerment (Aregu et al., 2018; Galiè et al., 2022). Backlash and unintended harmful consequences, including GBV, are significant risks when challenging power relations (Winterford et al., 2020). Hence, ways to monitor and address these early on and continuously are necessary complements of GTAs. Including men, boys and gatekeepers, for instance, is not only important to support norm change and women's empowerment but also to reduce backlash (Quisumbing et al., 2019a).

5. Discussion and recommendations

Our key recommendation is to take a holistic approach to fostering an enabling environment for GEWE in AFS by tackling structural barriers across multiple nested scales related to the state, markets, community, groups, household and the individual. Removing some of the barriers at some of the scales does not necessarily lead to (lasting) gender transformative change in AFS. Consciousness-raising initiatives and promotion of norms supporting equality are as crucial as pro-women policy reforms, market systems transformations and collective action. It remains important to concurrently reduce existing inequalities in access to and control over productive resources, decision making power, services and technology, resilience and leadership. This applies not only to GEWE but also to equality and empowerment by other, often intersecting, sources of social differentiation.

Our recommendations have implications for future agricultural research for development (AR4D). As a way of informing policy- and innovation-led pathways towards more (gender) equitable, sustainable, resilient and healthier AFS, AR4D has an important role to play in expanding the evidence base of the potential and impact of innovative holistic approaches aiming for transformative change in AFS. Increased engagement with civil society as well as academia is necessary to target policies to address the root causes of inequality (IFPRI, 2020; Farhall and Richards, 2021). Future forecasting research may benefit from including gender norms and dynamics and projecting effects of holistically addressing structural barriers to equality at different scales (Lentz, 2021).

Our recommendations also have implications for the roles that governments, donors and development actors can play. Holistic approaches enabling GEWE across scales imply longer time frames, iterative processes, a need for appropriate human and financial resources, as well as coordination across sectors, departments and intervention levels. Consultative processes including diverse civil society organizations representing women and disadvantaged groups require sufficient time and funding (IDL, 2017). McDougall et al. (2023) argue that processes of gender transformative change within agencies and actors are necessary complements. Finally, it should be acknowledged that addressing deeply ingrained structural barriers to equality and empowerment in AFS challenges vested interests and power relations, hence is political.

Disclaimer

The opinions expressed herein reflect those of the authors, not necessarily those of the CGIAR GENDER Impact Platform or FAO.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

We relied on secondary data and provide the sources of those data.

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Appendix A. Supplementary data

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