



WORKING PAPER

Strengthening gender equity in locally led adaptation processes in Africa

Stefanie Tye, Comfort Hajra Mukasa, Bradley Kratzer, Godliver Businge, Rosemary Atieno, Rose Nyarotso Wamalwa, Ryan O'Connor, Ayushi Trivedi, Tamara Cogger, and Natalie Elwell

CONTENTS

- Executive Summary 1
- Introduction: Gender-transformative, locally led climate adaptation 3
- Methodology..... 5
- Enabling factors for gender-transformative LLA processes 6
- Three illustrative case studies in African agriculture 10
- Conclusions and recommendations 16
- Appendix A..... 18
- Appendix B..... 19
- Appendix C 22
- References..... 23
- Acknowledgments 27

Working Papers contain preliminary research, analysis, findings, and recommendations. They are circulated to stimulate timely discussion and critical feedback, and to influence ongoing debate on emerging issues.

Suggested Citation: Tye, S., C. Hajra Mukasa, B. Kratzer, G. Businge, R. Atieno, R. Nyarotso Wamalwa, R. O'Connor, A. Trivedi, T. Cogger, and N. Elwell. 2023. "Strengthening gender equity in locally led adaptation processes in Africa." Working Paper. Washington, DC: World Resources Institute. Available online at doi.org/10.46830/wriwp.21.00166.

HIGHLIGHTS

- Locally led adaptation (LLA), which is gaining recognition around the world, requires that finance and decision-making processes prioritize the agency of local actors on the front lines of climate change impacts, thereby enabling more effective and inclusive management of climate risks.
- Although the benefits of integrating gender considerations into policies and programs are now well established, efforts have not focused on fostering the long-term transformations needed to attain gender equality.
- As investments in LLA grow, funders, governments, and other institutions must take steps to ensure that programming also addresses gender inequities while promoting local agency, taking advantage of the strong complementarities between gender equality and adaptation goals.
- Using numerous examples from Africa's agricultural sector, this working paper illustrates seven factors that enable gender equity within LLA processes, and how these can work together to benefit groups disproportionately affected by climate change.
- Three featured case studies show these factors at work: fishing communities in Senegal, women-led enterprises in South Africa, and community-based agroecological efforts in Zambia.

EXECUTIVE SUMMARY

Context

Women in Africa and worldwide play a key role in agriculture, household food security, and climate adaptation, but they face significant barriers to accessing adaptation resources and are largely excluded from decision-making processes. The barriers women face include the absence of adequate gender consideration in funder and public policies, program design, and technology selection, as well as restrictive sociocultural perceptions, norms, and structures, including

the gendered division of labor. Locally led, gender-equitable adaptation must confront these barriers, deliberately ensuring decision-making power for women and women-led partner organizations throughout the design and implementation of adaptation measures.

About this paper

Written by World Resources Institute (WRI) and Women's Climate Centers International (WCCI), this working paper draws from literature, case study analysis, and key informant interviews to explore enabling factors that help funders and implementers supporting LLA integrate gender considerations more effectively into their programming and thereby share power with women and other typically marginalized groups. This paper focuses on the agriculture sector in Africa, recognizing that Africa's agricultural systems face many climate risks, including drought, floods, heatwaves, and a higher incidence of pests and disease (Trisos et al. 2022). Agriculture in Africa was also of particular interest to the funder of this research.

This paper builds on prior WRI research on locally led adaptation, which includes understanding the extent of LLA efforts globally (Tye and Suarez 2021) and how to put LLA principles into practice (Coger et al. 2022).

Key findings

- Although gender-related considerations such as including women in project or program activities are frequently cited in the literature, these efforts do not generally meet established criteria for promoting gender transformation. Gender-transformative activities are those that contribute to gender equality as a long-term outcome; for example, going beyond merely inviting women's participation to designing and implementing programs that foster shifts away from harmful social norms and power dynamics.
- The benefits of gender-transformative LLA can include better-informed adaptation planning that reflects women's priorities and realities and enables longer-term climate resilience and gender equity.
- Based on Huyer et al. (2021b) and other literature, the authors identified the following seven enabling factors that help embed gender equity within LLA. These factors have the potential to contribute to long-term gender transformation and climate adaptation:
 - **The presence of gender considerations in funding, national policies, and other frameworks.** This includes strategies to identify and challenge the decision-

making structures that have historically excluded and devalued women.

- **Flexible, adaptable project finance and program design.** For example, accommodating the unique or specific needs of women to effectively engage in and benefit from adaptation projects.
- **Confronting institutions and norms that constrain women.** Understanding how and why women are left out of decisions, services, and activities, and taking deliberate measures to address context-specific sociocultural barriers.
- **Greater exercise of agency.** Creating targeted spaces and platforms to promote women's leadership, including opportunities to assume key leadership positions in their communities and local government, and women's groups and associations, to advance climate resilience.
- **Decreased labor burdens for women and girls.** Reducing the time women dedicate to domestic and productive responsibilities through more equitable division of labor and labor-saving technologies.
- **Gender-equal access to and control over resources, including finance and land.** Structures and models that can make adaptation resources more accessible to women include local revolving fund systems, savings groups, climate insurance programs, and cooperatives.
- **Gender-equal benefits from technology.** Selecting and disseminating innovations that meet women's specific needs and the agricultural activities they engage in.

Recommendations

The authors recommend the following priority actions for funders and implementers seeking to support gender equity within LLA processes:

- Commit to and invest in long-term, equitable relationships with local partners, especially women and women-led organizations.
- Invest in capacity building of staff to conduct gender analyses, implement gender policies, and foster equitable partnerships.
- Enable leadership opportunities and decision-making authority for women within institutions, programs, and projects.
- Ensure that any use of technology or innovation is gender-responsive and appropriate for the local context.
- Ensure alignment with national gender policies, strategies, and international commitments.

- Value the time and expertise of women and local partners.
- Drive locally contextual structural changes required for long-term gender-equitable LLA. This includes working with women, men, and local partners to assess and confront harmful sociocultural norms and societal structures and biases, ensuring adequate safeguards.

Given their position within the global adaptation finance architecture and their influence over the size, length, priorities, and terms of related funding windows, funders should also take these following actions:

- Provide patient and flexible funding—in terms of duration and the time expected to achieve anticipated outcomes—paired with longer timelines of at least five years to accommodate social change and iterative learning processes.
- Ensure that agreements with partners allow adaptive management as social and adaptation needs evolve.
- Promote bottom-up accountability for applying gender policies and fostering equitable partnerships through locally led monitoring, evaluation, and learning, as well as other internal accountability processes.

INTRODUCTION: GENDER-TRANSFORMATIVE, LOCALLY LED CLIMATE ADAPTATION

African countries face serious climate risks in agriculture, such as droughts, floods, extreme heat, and pest infestations (Trisos et al. 2022). Groups experiencing marginalization, particularly women, often lack decision-making power over resources and efforts to adapt to these climate risks (Elias et al. 2015; Habtezion 2013; Masinga et al. 2021; Njuki et al. 2019; UN Women 2020). In many instances, women already bear domestic and productive responsibilities, and the impacts of climate change and resource scarcity add to these burdens, which can also lead to gender-based violence, adding to their vulnerability (Castañeda Camey et al. 2020; Pyburn and Eerdewijk 2021; Molua and Ayuka 2021).

Effective adaptation interventions are informed by local conditions, resources, and social needs, so the perspectives of all community members, including women, are central to their development and implementation (Mfitumukiza 2020; Gibbens and Schoeman 2019; Plan International Australia 2018) (for definitions of terms like *adaptation* as we use them in this working paper, see Box 1). Eriksen et al. (2021) found that failure to include the perspectives of those most vulnerable and exposed

Box 1 | Key definitions

Adaptation is defined for the purposes of this working paper as the process of adjusting to actual or expected climate change and its effects, the process of moderating or avoiding harm, and the ability to exploit beneficial opportunities (IPCC 2014).

Equity, as defined by the Intergovernmental Panel on Climate Change (IPCC 2018), is the principle of fairness in burden sharing, and serves as a basis for understanding how the impacts and responses to climate change (including costs, benefits, and opportunities) are distributed in and by society in ways that fairly reflect individual, group, and institutional capacities and abilities.

Gender equity implies that the interests, needs, and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It means that a person's rights, responsibilities, and opportunities will not depend on whether they are born male or female (adapted from UN Women n.d.a).

Gender-transformative programs and policies, based on the Gender Integration Scale (Appendix B), consider gender norms, roles, and relations for women and men, as well as their different needs; aim to address the causes of gender-based inequities and strategies to foster progressive, long-lasting, and structural changes; and challenge harmful structures hindering women's participation and agency (WHO 2011; Rottach et al. 2009).

Locally led adaptation (LLA) is characterized by local people and their communities having individual and collective agency over their adaptation priorities and how adaptation takes place (Soanes et al. 2020).

Resilience is the ability of a system to cope with great change or disruption (adapted from IPCC 2018).

to climate impacts can cause adaptation interventions to bring unintended harms. They can limit local access to resources and land rights, or even increase climate vulnerability, by implementing ineffective and sometimes harmful “solutions,” such as coerced or forced climate-induced migration. The inequities that women face are diverse and location-specific, because they are rooted in existing cultural norms, socioeconomic dynamics, and political and legal structures. Therefore, women must have the opportunity, for example, to identify their own unique vulnerabilities and inform interventions accordingly (Gibbens and Schoeman 2019; Gressel et al. 2020).

Many institutions are now making greater efforts to ensure that resources reach communities and that actions more meaningfully involve women, recognizing gender-differentiated contributions and needs (Cooper Hall and Rojas 2022). However, funders and implementers have much more work to do if they are to move beyond conventional approaches that adhere to the status quo, continuing to favor men from dominant social groups, to newer approaches that challenge power dynamics and practice alternative and inclusive decision-making. For example, adaptation interventions aimed at improving gender equity often focus narrowly on visible gender gaps, such as agricultural productivity, and ignore the underlying gender norms and power dynamics that drive whatever agency different people may or may not have in decision-making or even over their own lives (Doss et al. 2021; Farnworth et al. 2013). Adaptation efforts that ignore existing gender inequities risk exacerbating them (Pross 2019).

At the request of the Global Commission on Adaptation, a coalition of organizations has developed the Principles for Locally Led Adaptation (WRI n.d.). The principles suggest ways for funders and implementers to address power imbalances

and ensure that local actors and institutions have agency over and access to adequate resources and opportunities to build their adaptive capacity (IIED 2021). As shown in Figure 1, locally led adaptation (LLA) goes beyond traditional community consultation and is characterized by local people having individual and collective agency over their adaptation priorities and how adaptation takes place (Soanes et al. 2020).

The LLA principles state that funders and implementers need to increase the subsidiarity of decision-making. Subsidiarity in LLA is the principle of devolving decision-making to the most local level possible, giving local institutions and communities direct access and agency over the decisions and actions that directly affect them (WRI n.d.). LLA principles point to the need for patient, flexible, and accessible funding and investment in local institutions' capacity to manage projects and finances (WRI n.d.). They also highlight the importance of recognizing and valuing traditional knowledge and expertise and allowing sufficient time for local partners to meaningfully engage in adaptation efforts (Carthy et al. 2022; Soanes et al. 2021; Cogger et al. 2022).

Figure 1 | **Moving from consultation to locally led adaptation**



Source: Tye and Suarez (2021).

The principles emphasize the need to address structural power imbalances faced by women and other marginalized and vulnerable groups at local and other levels, with the aim of targeting the root causes of gender-based, economic, and political inequalities through adaptation planning and action (WRI n.d.). In this way, LLA seeks to address both the disproportionate impacts of climate change on women and the restrictive cultural norms that limit their social, economic, and political agency to support greater community resilience (Bagasao 2016). Given the synergies between LLA and gender equity approaches, intentionally embedding the two could strengthen gender-transformative adaptation outcomes. Pross (2019) defines *gender-transformative climate change adaptation* as a holistic approach that addresses the economic, political, ecological, and cultural causes of marginalized groups' vulnerability to climate change and transforms patriarchal norms and discriminatory practices that result in unequal power relations.

Many organizations worldwide have endorsed the principles, but there remains a need to build on existing models and implement them at scale (Coger et al. 2022). Even though communities have been grappling with and adapting to climate change with varying degrees of support, a meta-analysis of 374 community-based interventions found that only 22 internationally funded interventions adopted a locally led approach, revealing that these elements are still relatively rare and undocumented (Tye and Suarez 2021). Nonetheless, Coger et al. (2022) show that putting these principles into practice is both possible and already happening in different contexts around the world.

Ensuring that adaptation is locally led does not, however, inherently ensure social equity and equitable access to resources among women and other groups facing marginalization—for example, if local leaders are men of the dominant social group (see, e.g., Craney 2020). Participatory processes that are inclusive across sectors and geographies may still ignore the specific conditions needed to ensure women's participation. Barriers to women's inclusion range from consultations being held at inconvenient times and locations to social norms that suppress women's voices in public spaces, especially in front of male participants (Cornwall 2000). While the importance of women's inclusion in environmental projects has been established for decades, their misrepresentation and underrepresentation in participatory processes is still common (Arora-Jonsson 2014).

If LLA fails to transform conventional power structures that constrain women's agency, it risks reinforcing them when it devolves decision-making from external funders and intermediaries to local actors. This is because devolving decision-making can further consolidate authority and resources in the hands

of existing elite groups (“elite capture”) and of one gender over the other (Craney 2020). Done right, LLA can both deliver equitable benefits to women and promote gender equality, while meaningfully promoting women's agency over these efforts and making adaptation and resilience more achievable.

Using examples and findings from the literature and other sources, this working paper explores the enabling conditions needed to meaningfully engage women and embed gender equity within LLA processes, illustrating how these two approaches can work in sync to strengthen each other. The next section details the methodology for collecting data and screening case studies. It is followed by a discussion—with real-world examples—of the seven enabling factors that emerged. The authors then dive into three case studies in Senegal, South Africa, and Zambia to illustrate these factors at work before wrapping up with a list of recommendations.

METHODOLOGY

This working paper uses a mix of qualitative methods, including a comprehensive global and Africa-focused literature review, analysis of published case studies, and key informant interviews to explore the enabling conditions needed to implement gender equity and locally led adaptation. The literature review was conducted using various database repositories, including EBSCO Host and Google Scholar to identify the most relevant texts through keyword combinations (see Appendix A for details). The review, which was iterative throughout the writing process, included both academic and gray literature and incorporates research and expertise from African institutions. Examples drawn from the literature are featured throughout this paper.

The team identified many African agriculture projects and programs with a gender component through the literature review and then screened them using a locally led integration framework (created by the authors) to track the presence of locally led elements as being low, moderate, or high (see Appendix B for this and other frameworks used). This screening yielded 17 interventions (see Appendix A) containing moderate to high elements.

The team then applied a modified version of Huyer et al.'s (2021b) Gender and Socially Inclusive Climate-Resilient Agriculture Framework to identify enabling factors for gender-responsiveness across the 17 examples. Huyer et al. build on an existing framework for scaling climate-resilient agriculture and propose six additional enabling factors to make it gender-responsive (see Appendix B). Since this paper is focused on

locally led adaptation at the household and community levels, the authors excluded the factors from Huyer et al.'s framework that focused on scaling horizontally and vertically.

Huyer et al.'s factors for gender-responsiveness closely aligned with the findings of the literature review and information collected on the various interventions. To streamline the framework, the authors modified the Huyer et al. framework to weave one of their factors (intersectionality) throughout and added two new factors (numbers 1 and 2 below). The seven factors finally used to assess the presence of gender-responsiveness in LLA processes are

1. the presence of gender considerations in funding, national policies, and other frameworks;
2. flexible, adaptable project finance and program design;
3. confronting institutions and norms that constrain women;
4. greater exercise of agency;
5. decreased labor burdens for women and girls;
6. gender-equal access to and control over resources, including finance and land; and
7. gender-equal benefits from technology.

Applying the frameworks to the 17 interventions yielded three case studies that illustrate the presence and application of the seven enabling factors for gender-responsiveness in LLA.

Once a case study was identified, policy documents, articles, and reports were reviewed to understand the related social, legal, and political contexts and how they incorporated all seven enabling factors. Eleven key informants, including project implementers, funders, subject matter experts, and context sources, were interviewed to ground truth the findings and fill in any information gaps. The semistructured interview questionnaire used is in Appendix C. Initial interviews took place in April and May 2022, with additional interviews taking place in October 2022. Interviewees' names were omitted to encourage trust and openness.

Limitations

An important limitation of this paper is the small sample of six interviewees for the three selected exploratory case studies (four informants for GenderCC Southern Africa, one for the Enda Graf Sahel case, and one for Green Living Movement Zambia), due to difficulties identifying contacts and attaining an adequate response rate to requests for interviews.

ENABLING FACTORS FOR GENDER-TRANSFORMATIVE LLA PROCESSES

This section lays out the key enabling factors and corresponding barriers identified in the literature review that can help locally led adaptation processes more effectively engage women and enhance their decision-making power and meaningful participation at multiple levels. The factors are organized around an adapted version of the Gender and Socially Inclusive Climate-Resilient Agriculture Framework (Huyer et al. 2021b).

The presence of gender considerations in funding, national policies, and other frameworks

The presence of gender considerations in national climate policies and related frameworks like National Adaptation Plans is one entry point to increasing the engagement and capacity of women's groups in projects (Burns and Granat 2020). Similarly, when funding institutions have a gender policy and associated accountability mechanisms in place, they can more easily prioritize gender-responsive programming. In Nigeria, for instance, the Global Environmental Facility (GEF) requires projects to integrate gender and evaluates the gender sensitivity of project proposals against an overarching framework (Pers. Comm. 2022a). Funder policies and requirements, however, don't always effectively promote gender equity on the ground because of inadequate project design (Acosta et al. 2019; Pers. Comm. 2022b). Projects tend to still be overly technocratic, despite gender policies, and target visible gender gaps rather than the underlying norms and institutions that constrain women's agency (Pers. Comm. 2022c). Ampaire et al. (2020) highlight the failure of policies and programs to address gender inequalities as a constraint to the effective implementation of climate adaptation measures, since underlying gender-related cultural norms can still limit women's ability to respond to climate events.

Tye and Suarez (2021) found that building the capacity of implementing agencies *and* local partners can strengthen partnerships among different ministries, governments, and other local organizations. These efforts can encourage continuity and long-term sustainability—with regard to management, learning, monitoring, and scaling—of gender-responsive LLA. New or enhanced skills or knowledge acquired through trainings can be reinforced by embedding opportunities for their application into projects (Pers. Comm. 2022b). For instance, the Kenya County Climate Change Funds project, aimed at facilitating the flow of

climate finance to county governments, was designed to include strong community involvement. The initiative promoted equitable gender representation through minimum quotas for women, a sensitization program on the value of including women, trainings for women, and proposal criteria requesting clear evidence that all social groups' views were reflected (Bonaya and Rugano 2018). As a result, female members of ward-level climate change planning committees led meetings alongside men to prioritize investments, ensuring that women's voices were heard in traditional pastoralist communities (Bonaya and Rugano 2018).

Flexible, adaptable project finance and program design

Flexible programming recognizes the nonlinear pathway to achieving transformative change and can facilitate gender-transformative adaptation by allowing for the ongoing identification of and response to opportunities (Pross 2019; Plan International Australia 2018). Broadly, flexible policies enable implementers to establish project and financial management structures according to their needs and adapt timelines and implementation plans based on local contexts (Dodson 2017; Harper et al. 2020) and evolving circumstances.

Decentralizing finance and devolving decision-making power to the local level is essential to projects being locally led. However, the barriers to decentralizing funding are widespread and complex. They include rigid, centralized, and bureaucratic funding processes that limit participatory and flexible approaches (Ingram 2022); onerous procurement policy, application, and reporting requirements (Ingram 2022); power imbalances between local, national, and international actors, as well as pervasive devaluing of and biases against local partners and knowledge as a result of long-standing structural racism and discrimination (Peace Direct 2021; Ingram 2022). These barriers are especially limiting for women's groups and women-led organizations, as they face additional gender-based barriers like access to credit, information, and other resources (Schalatek 2022).

While some capacity barriers, including operational limitations to absorbing funding, are at the local level, local actors are not the only groups with insufficient capacity (Armistead 2022). Capacity barriers also exist among funders, implementers, and governments. For example, decision-makers may not understand how existing processes, as well as the need to account for how money is spent and the impact of that spending, may unintentionally constrain the agency of local partners and reinforce hierarchical power dynamics (Coger et al. 2022).

Flexible or unrestricted funding is necessary to transfer decision-making power from funders to grantees and can support gender-responsive LLA (Pers. Comm. 2022a; Pers. Comm. 2022c). This is especially true for small, community-based organizations that need technical and operational capacity and support, and find it easiest to absorb and manage small, recurring grants (Pers. Comm. 2022a). The Adaptation Fund and the GEF Small Grants Programme, for instance, facilitate grant opportunities for women's organizations by simplifying the process for smaller grants and strengthening prior awardees' capacity through a readiness program (Cooper Hall et al. 2019).

A recent study of 173 bilaterally funded projects across 65 countries self-identified as community-led revealed that funders tend to focus on environmental and financial outcomes of adaptation projects but not social or gender-responsive indicators, such as participation of women and local communities or the social benefits received by women (Veda et al. 2021).

Accountability mechanisms put in place to monitor the integration of gender into project design can ensure that gender integration in projects goes beyond discrete components or solutions that address only visible gender gaps. Funders' joint oversight of proposals with civil society groups is one way to improve projects' accountability to their gender-related goals (Pers. Comm. 2022c). The Green Climate Fund, for example, collaborates with observer groups to apply gender frameworks to project proposals to ensure that their gender-related goals are reflected in their indicators and budgeted activities (Pers. Comm. 2022c).

Confronting institutions and norms that constrain women

Women face numerous sociocultural barriers to effective participation, even in projects where local communities are engaged in decision-making. The general misperception of women as unproductive farmers leads to their exclusion from decision-making processes related to the resources on which their livelihoods depend (Elias et al. 2015; Masinga et al. 2021; Habtezion 2013; Bagasao 2016). Women's disproportionately higher burden of domestic responsibilities (Olumeh et al. 2021; United Nations 2019), lower educational attainment (Opore 2015), and meetings that occur when women are unavailable (Chingarande et al. 2020) are also barriers to their participation in decision-making processes. Women's disproportionate responsibility for domestic chores also limits their access to agricultural extension services (Olumeh et al. 2021), which play a key role in technology dissemination (Elias et al. 2015). Efforts by funders and implementers that see women as project bene-

ficiaries and leverage women's organizations to increase access to services and resources without challenging societal power structures forgo their potential to improve women's agency (McDougall et al. 2021).

Seven of the 17 cases reviewed for this paper leveraged findings from context-specific gender analyses to ensure that interventions addressed the unique barriers that women faced. In the Enda Graf Sahel project, for example, consultations revealed how women's domestic and productive tasks could be reduced, and findings were used to educate men about the effects of gender-differentiated roles (Pers. Comm. 2022e).

Effectively engaging men in challenging underlying social norms and perceptions that limit women's participation can help ensure gender-transformative projects (Farnworth et al. 2013). Framing more equitable gender relations as a collective benefit, rather than benefiting only women, is one effective approach to engaging men as allies or partners in gender-transformative processes (Farnworth et al. 2013; Plan International Australia 2018; Mentz-Lagrange and Gubbels 2018). Men tend to be more willing to challenge discriminatory gender norms when they are more aware of the unique challenges that women face and better understand the shared costs of inequality (Pyburn and Eerdewijk 2021; Viitanen and Colvin 2015). Mentz-Lagrange and Gubbels (2018) found that framing women-targeted programming as having household and community-wide benefits is essential to overcoming men's resistance. The Green Living Movement (GLM) Zambia case shows how men and boys were directly engaged to better understand women's domestic and economic roles, which helped shift their perception of women and girls.

Greater exercise of agency

At least 14 of the 17 interventions reviewed featured deliberate efforts to create platforms, opportunities, and trainings to promote women's leadership and confront gender inequities. These efforts facilitated opportunities for women to assume key leadership positions in their communities and local governments, and thereby exercise their own agency. They also enabled meaningful women's involvement in planning, implementation, and management of projects and programs. Women's groups and associations provided a platform for mutual support and action, for championing of women's choices, and for showcasing their potential to lead resilient development initiatives and economic activities.

The Coalition of Women Leaders for Environment and Sustainable Development (CFLEDD) in the Democratic Republic of the Congo supported women to organize and advocate for

land and forest rights and engage in decision-making processes, including through dialogues with community leaders and participatory mapping (Barre et al. 2020). These advocacy and engagement efforts influenced the passage of new land tenure legislation that included land titles for women. Women landowners were in turn in a position to demonstrate their capabilities in land management strategies that advance adaptation and mitigation goals (Barre et al. 2020).

The Climate Action through Land Management Program in Ethiopia made efforts to enable women's participation in local watershed management institutions, provide joint and individual land titles for married couples and female-headed households, respectively, and ensure women's access to extension services for climate-smart interventions to reduce their labor burdens and increase their income (World Bank 2019). While there is no publicly available impact evaluation, the participation of women in hyperlocal watershed teams, which are responsible for making decisions and setting priorities, enabled their repositioning as decision-makers alongside local government officials (Tye and Suarez 2021).

Decreased labor burdens for women and girls

The alleviation of women's domestic and productive labor burdens is another pathway through which interventions can improve women's agency and encourage more equitable gender relations (Huyer et al. 2021a; Farnworth et al. 2013). The tendency for women to be disproportionately responsible for unpaid care and domestic work limits the time they have available for other activities, including productive and income-generating ones (Samman 2018). Funders and implementers may also inadvertently contribute to women's time and labor burdens by not respecting or compensating the time required to participate in program activities, such as consultations or planning. For adaptation programs to be locally led, funders and implementers must recognize and value the time required for women and local partners to engage (Carthy et al. 2022; Soanes et al. 2021; Cogger et al. 2022). Interventions that fail to address existing inequalities, including the gendered division of labor and unequal value placed on women and local partners' time and expertise, risk exacerbating women's time poverty, as their domestic responsibilities tend to remain constant even when additional time is spent on livelihood activities connected to project interventions (Pyburn and Eerdewijk 2021).

Five of the 17 examples reviewed include efforts to reduce the time women dedicate to domestic and productive responsibilities through a more equitable division of labor between men and

women, and the introduction of time- and labor-saving technologies. Kenya's County Climate Change Funds (CCCF) and the Local Climate Adaptive Living Facility's Performance-Based Climate Resilience Grants, for example, decreased the time women spent collecting water by constructing more boreholes and wells, respectively (Bonaya and Rugano 2018; NDC Partnership 2022). In both instances, women could then reallocate their time, including to livelihood activities (Bonaya and Rugano 2018; NDC Partnership 2022). In the case of Enda Graf Sahel, a participatory analysis of the division of household labor led men to take on more domestic care work (Barre et al. 2020).

Gender-equal access to and control over resources, including finance and land

A key part of enabling women's agency and improving productive capacity is their control over resources (Domingo et al. 2015; Huyer et al. 2021a). Moreover, when women have reliable economic opportunities, they are more resilient to climate shocks and stressors, can build social capital and independence, and can be less reliant on male spouses or family members (Pross 2019; Huyer et al. 2021a). The literature revealed a variety of structures and models that can make monetary resources more easily available to women, based on their needs and local contexts. Examples include the formation of local revolving fund systems (Barre et al. 2020; SMART 2019), savings groups (Tye and Suarez 2021), climate insurance payout programs (Born et al. 2018; Tye and Suarez 2021), cooperatives (Barre et al. 2020), flexible grants (Barre et al. 2020), and cash-for-work programs (NDC Partnership 2022; World Bank 2015).

Access and rights to land, in addition to other productive resources, is also necessary for women to achieve more resilient futures and equitably benefit from agricultural adaptation (Salcedo-La Viña and Giovarelli 2021). Women are better able to manage climate risk when they have access to and control over land (Salcedo-La Viña and Giovarelli 2021; Monterroso et al. 2021; Mitchell and McEvoy 2019). Antwi-Agyei et al. (2015) found that land tenure systems influence the vulnerability of female farmers in Ghana by limiting their available adaptation options. Without secure rights to land, many women lack the collateral to access the credit needed to make long-term investments in adaptation strategies (Antwi-Agyei et al. 2015; Tiruneh et al. 2022; Mitchell and McEvoy 2019).

Funders, governments, and implementers can improve women's land tenure by addressing underlying sociocultural norms and beliefs (Salcedo-La Viña and Giovarelli 2021). In the Democratic Republic of the Congo, CFLEDD worked to improve

women's access to land by helping to establish new land and forest legislation in eight provinces (Barre et al. 2020). CFLEDD trained women in participatory mapping and facilitated dialogues with customary chiefs and local authorities (Barre et al. 2020). As a result, some participating women received official land grant titles and successfully implemented adaptation activities (Barre et al. 2020). Similarly, the African Women's Network for Community Management of Forests network in Cameroon has demonstrated the importance of approaches that tackle a range of structural barriers to gender equity and local agency (IUCN 2015). This network advocates for women's rights, including the right to land tenure, by influencing national policies, strengthening women's networks, and proposing legislation to change how resources are managed and how land is inherited (IUCN 2015). As a result, women increased their share of decision-making positions across village, district, regional, and national levels to between 30 and 40 percent (IUCN 2015).

Gender-equal benefits from technology

Program activities, innovations, and technologies that ignore men and women's differential needs and preferences tend to exacerbate the inequitable status of women. Although gender norms are increasingly recognized as a constraint on women's adoption of and benefit from technological innovations, few innovations have been selected, developed, or disseminated specifically aimed at supporting women and women's agricultural activities (Addison et al. 2020; Elias et al. 2015; World Bank et al. 2015; Huyer et al. 2021a; Doss et al. 2021). Women's ability to use certain technologies and innovations can also be limited by insufficient access to resources, trainings, and information (Muzari 2016; Addison et al. 2020).

In Kenya, where erratic rainfall and prolonged droughts have affected farmers' livelihoods, one of the activities under the Sustainable Mobilization of Agricultural Research Technologies (SMART) involved advocating for appropriate agricultural innovations (SMART 2019). SMART, a community-based organization, trained both men and women to make low-cost hives from local materials, which made beekeeping more accessible to women, since the traditional practice of making hives from mature trees and hanging them from high branches was biased toward men (SMART 2019). This led to the establishment of groups like the Totum Women Group, which subsequently harvested, packed, and sold 1,000 kilograms (kg) of honey and 25 kg of body lotion (SMART 2019).

THREE ILLUSTRATIVE CASE STUDIES IN AFRICAN AGRICULTURE

This section features three case studies that show how the presence and interplay of different enabling factors can meaningfully contribute to integrating gender-responsiveness into LLA processes. The three cases are the fishing communities involved in the Enda Graf Sahel project in Senegal's Saloum Delta, GenderCC Southern Africa's Gender and Climate-Resilient Communities Initiative (GCRCI) in South Africa, and the community agroecological programs of Green Living Movement (GLM) Zambia.

Enda Graf Sahel project in the Saloum Delta, Senegal

Project summary

In Senegal, Environment and Development Action's Groupe de Recherche-Action-Formation (Enda Graf) Sahel, part of the larger Enda Tiers Monde network, has worked since 1977 on more than 100 projects supporting disadvantaged populations (Enda Graf Sahel n.d.). While the organization started as an implementer promoting top-down interventions, it evolved into a nongovernmental organization promoting locally led action in Senegal and other West African countries. A key aspect of this organization is its close relationship with local women's groups and community groups, which lead on project planning and implementation and are trained in fund-raising and project management (Matthews 2006). The organization focuses on supporting women's economic development, entrepreneurship, and sustainable agriculture, while encouraging sociopolitical shifts for gender and climate justice (Brent and Ndoye 2022). The program's local origins and focused mission have enabled it to promote gender-transformative approaches and confront male-dominated institutions to better promote women's agency.

This project aimed to improve the capacities of micro- and small agricultural and fishing enterprises in the Saloum Delta of western Senegal. This region is rich in biodiversity, yet livelihoods are being impacted by the climate crisis; namely, through salinization of land and loss of natural resources, which is forcing farming communities to turn to fishery instead (Dazé and Terton 2021). The fisheries sector in Senegal is traditionally dominated by men (Dazé and Terton 2021). The case study informant remarked that it is very difficult for women to access finance and to represent themselves in local business, and that women are the first to suffer whenever there is insuf-

Enda Graf Sahel case study overview

Location: Senegal

Years active: 2014–present

Key agricultural climate risks: Salinization, sea level rise

Financially supported by Agence Française de Développement (AFD), Fondation Internationale du Banc d'Arguin, Le Monde selon les Femmes, Fondation RAJA

Approximate number of people involved: 4,800 women fishers

Gender-responsive LLA activities: Promoting local leadership by investing in local women's capabilities, involving women collectively in project leadership, forming economic interest groups, encouraging Indigenous local women to share knowledge to ensure economic autonomy and conserve ecosystems

Gender outcomes: Reduced domestic violence, more economic opportunities for women, increased representation of women in municipal leadership, more equitable sharing of domestic work

Adaptation outcomes: Enhanced management of natural resources, more climate-resilient and sustainable livelihoods

Source: Authors; Women & Gender Constituency 2019a; Barre et al. 2020.

ficient food, energy, or water (Pers. Comm. 2022e). Cultural and social norms create obstacles that prevent women from pursuing decision-making and leadership roles in society, accessing information, or having a say in the management of natural resources. It is difficult for them to get access to water or decide which crops to grow and how to grow them. Women are further hampered by gaps in education, which can partly be addressed by communicating with them in local languages. The informant recommended, "Women must play a primary role. . . . [Projects must] emphasize access to financial resources for women and take actions that, above all, support local organizations. [Women] understand the local problems and how to arrive at solutions that directly benefit the [community]" (Pers. Comm. 2022e).

The project applied gender-transformative approaches to support 4,800 women fishers to rehabilitate mangrove systems degraded by climate change and to explore alternative livelihoods to create more stable incomes (Barre et al. 2020). It used participatory research to contextualize women fishers' challenges and address them accordingly, while also engaging men to address issues of masculinity through standardized training modules on gender inequalities and women's leadership (Barre et al. 2020).

Analysis of enabling factors for gender equity and LLA

The project is informed by gender considerations present in the funder's strategies and national policies, such as AFD's (n.d.) gender equality strategy and Senegal's National Strategy for Gender Equality and Equity (UN Women n.d.b). Building on these mandates, Enda conducted a gender analysis to identify the roles of men and women in the household, community, and local fishing economy. This exercise included participatory activities with men and women that helped map societal barriers to women's participation in decision-making roles in the fisheries sector (Dazé and Terton 2021). The project also maintained flexibility to adjust its activities to meet practical needs, beyond adaptation activities, identified by female participants in the project's planning phase. For example, the project initially focused solely on supporting women's livelihoods in the climate-impacted agriculture and fisheries sectors. However, after observing how these project activities disproportionately increased women's work burden compared with men's, Enda project staff identified a new research need: to understand how women's domestic and productive tasks could be reduced (Pers. Comm. 2022e). As a result, the staff adjusted the project to conduct this research and acquire data needed to move forward without imposing undue burdens on women.

The results of these participatory gender analyses informed the design of this project. The project included activities that addressed the gendered distribution of household labor and created economic opportunities for women to promote their traditional knowledge. This was done by facilitating training for men and women to strengthen equity in household chores and decision-making, helping to confront institutions and norms that constrained equal participation (Dazé and Terton 2021). Sensitizing men to these changes brought greater trust; help with domestic chores, which decreased labor burdens; and a reduction in domestic violence (Barre et al. 2020). A follow-up survey analyzing social changes from project trainings found a measurable shift in the distribution of gender roles, especially among younger couples (Pers. Comm. 2022e). Women benefited from the use of new technology for fish processing as well. In 2016, they received solar cookstoves to process their fish in an energy-efficient way, which helped reduce the drudgery of their work and the smoke-related respiratory diseases caused by using firewood as fuel. These technologies also further incentivized local young people to participate in the industry (Brent and Ndoye 2022).

Women received additional training to build up their leadership skills, literacy levels, and technical skills to better participate in the project (AUDA-NEPAD 2017; Dazé and Terton 2021). They then used these to promote traditional and ancestral knowledge (for example, drying fish naturally instead of with wood-based stoves), which helped increase their economic opportunities. Women also felt more confident and empowered when engaging with elected officials to protect fishery resources and restore mangroves (Barre et al. 2020). Additionally, the project supported the election of women to fishery regulation boards and municipal councils, leading to greater exercise of their agency in the sector. In some cases, quotas were established for women's representation in these bodies (Brent and Ndoye 2022). The project also supported the establishment of an inter-ministerial framework to recognize women's business trades and skills (Pers. Comm. 2022g; AUDA-NEPAD 2017). Key project outcomes promoted gender-equal access to and control over resources and benefits from technology, resulting in 180 women generating new income and 200 benefiting from the establishment of a revolving fund system that accelerated an energy transition (Barre et al. 2020). Enda's work also demonstrates climate adaptation benefits, including protection of natural resources vulnerable to climate risks, reforestation of mangroves, and promotion of climate-resilient sources of income.

Enda Graf Sahel's locally informed and gender-responsive approach has reported positive, long-term impacts in addressing cultural norms, advocating for women's political participation, and promoting women's economic opportunities (Pers. Comm. 2022f). Across multiple dimensions, this project's activities reflect all the enabling factors for gender equity and LLA identified by the authors.

GenderCC project, South Africa

Project summary

GenderCC Southern Africa (SA) is an independent unit of the GenderCC International network, based in Berlin, Germany. It was formed after COP9 in 2003 by several gender justice groups and formally set up as a nonprofit organization in 2008 (GenderCC n.d.). GenderCC SA was founded in South Africa in 2010 with the aim of addressing fundamental systemic inequalities to promote gender and climate justice in the region (GenderCC n.d.). The organization works with local leaders to access flexible funding to support community-level social enterprises (Pers. Comm. 2022i).

Many regions in South Africa suffer from climate impacts—such as prolonged droughts and increasingly erratic weather conditions—which decrease agricultural yields and disproportionately affect low-income agricultural communities. GenderCC SA's Gender and Climate-Resilient Communities Initiative (GCRCI) in South Africa aimed to increase the adaptive capacity of women smallholder farmer enterprises, particularly those cultivating mango, and seeking more diversified income sources, to respond to these risks (GenderCC n.d.). Barriers the project confronted included limited access to property ownership among women, which aggravates their vulnerability to climate change impacts (Women for Climate Justice 2022), and limited access to financing. Additionally, as one interviewee noted, women's ability to access funding is often hampered by their lack of well-documented financial histories: "Having a funder understand your story when you have nothing to show is not easy. There are many women out there that have good ideas but don't have funders' buy-in because of lack of previous track records" (Pers. Comm. 2022g).

The driving objective behind GCRCI was to create and enhance a conducive environment for climate-smart enterprises with a focus on women-led enterprises in the vulnerable communities of Hebron, Madibeng Municipality, North West, and Mutale, in the Vhembe District of Limpopo Province. This was done by shifting to drought-resilient green mango and other crop varieties, and promoting the use of resilient technologies in water harvesting, irrigation, waste management, energy access, and food security. This project, funded by the Government of Flanders, was an attempt to scale up previously implemented projects funded by the European Union and Oxfam (Pers. Comm. 2022i).

The program aimed to achieve its objectives through capacity building of female entrepreneurs and supporting their involvement and decision-making in the local economy. The program

GenderCC's GCRCI case study overview

Location: South Africa

Years active: 2019–May 2022

Key agricultural climate risks: Drought, erratic weather, and decreasing natural resources

Financially supported by Government of Flanders

Approximate number of people involved: 2,000 women and men farmers

Gender-responsive LLA activities: Women-led cooperatives, women codesigning community climate actions and climate-smart enterprises, collaborative decision-making that includes women and other vulnerable groups, flexible programming, adaptive project management

Gender outcomes: Increased women's involvement in leadership roles and influence in decision-making process, reduced workload for women through increased availability of sustainable water and energy resources

Adaptation outcomes: Increased climate resilience, reduced climate vulnerability of grassroots communities

Sources: Authors; Barre et al. 2020; GenderCC n.d..

applied participatory methodologies to ensure that women in the communities could determine viable, culturally appropriate, and marketable additions to their food enterprises (Barre et al. 2020). The project also used a hands-on learning method that equipped the marginalized groups to address community climate challenges with gender-responsive skills and tools (Barre et al. 2020), leaving them with technological know-how for replicability and scalability (Women & Gender Constituency 2019b).

Analysis of enabling factors for gender equity and LLA

In this case example, gender considerations were present at the outset—in the project's funding frameworks as well as in national policies. At the national level, the Ministry of Environment's Governance Adaptation Strategy includes a strong reference to gender-responsive adaptation strategies and inclusion of vulnerable groups in adaptation projects. The government agency directed the project to focus on job creation and improved food security for vulnerable groups. The Ministry of Environment tasked GenderCC SA with ensuring that its work adhered to ministry requirements. The government engaged with GenderCC SA regularly to monitor the project. On the funder side, the Government of Flanders' country strat-

egy paper, which outlines development cooperation with South Africa through such projects, includes a gender component, and the funder also completed a gender action plan for project recommendations. In its call for proposals, the funder included a requirement for gender integration in all project proposals, and once it accepted GenderCC SA's proposal, the funder held itself accountable by engaging external experts to determine the gender-responsiveness of the project and allocated flexible funding for potential project changes, alleviating capacity constraints on implementers. It also ensured that a budget was provided to conduct a gender analysis and trainings for women farmers and cooperatives (Pers. Comm. 2022h).

GenderCC SA conducted gender analyses and vulnerability assessments as a part of its proposal design process. It gained insights into the unique circumstances of men and women, the ways they could work together, and how to best include women in project design, planning, and implementation (Pers. Comm. 2022i). Findings showed that women and girls were most impacted by climate change because of social norms around their roles and responsibilities, especially the burden of completing household chores in addition to their economic roles as entrepreneurs, because women are more dependent on (and have less access to) natural resources than men, and have less resources to adapt (GenderCC n.d.). Another key finding of this analysis was the persistent bias against women in decisions of how to allocate funds, even when the vetting team included women. This hampered women who applied for loans from microfinance institutions and small grants from foundations to start up or boost their enterprises. Women also faced limited access to information on markets and networks. Upon receiving the funding, GenderCC SA carried out a more in-depth gender analysis to bring greater nuance to these findings and design project activities collaboratively with local women. The women advocated diversification of climate smart enterprises and the creation of more small and medium enterprises that they can lead (Pers. Comm. 2022i).

GenderCC SA staff adapted their project to better respond to the barriers identified. To reduce women's domestic labor burdens, they provided technologies such as rainwater harvesting and improved local weather-monitoring systems that reduced drudgery and freed up women's time to engage in other activities identified together with them, including beading, counseling, and developing innovative entrepreneurial approaches for how best to package and sell produce (Women & Gender Constituency 2019b). As one interviewee stated, "Once water and energy are available through green technology, more small and medium enterprises take off since community members have more time to invest in other endeavors" (Pers. Comm. 2022i).

The project's learning approach included awareness training on the integration of gender into climate adaptation, water and waste management, energy, and sustainable farming methodologies, alongside adaptable design and flexibility to local contexts and circumstances (Barre et al. 2020). Where the project engaged men, women, and girls to better inform their approach with vulnerability assessments, it also maintained awareness of the local cultural context to ensure that their work toward women's empowerment did not increase gender-based violence (Pers. Comm. 2022i).

To address the bias against women entrepreneurs applying for loans, GenderCC SA did not allow the vetting committee to view any demographic information in the funding applications, thus helping to confront institutions that constrain women to better promote gender-equal access to finance. GenderCC SA's prioritization of small, flexible grants also provided women entrepreneurs with the necessary capital to establish their own businesses and social enterprises, promoting more gender-equal access to and control over resources (Pers. Comm. 2022i). Mitigating this bias led to more women receiving GenderCC awards to start social enterprises and form local cooperatives. Smaller businesses that receive financial support through this project have since proved to have a better loan repayment rate—a fact that can help fight the perception that women's enterprises are high-risk investments (Pers. Comm. 2022j).

The project also gave women opportunities to build their technical, leadership, and project management skills (Barre et al. 2020). Recognizing that women's voices are generally silenced, even when they offer solutions, the project aimed to amplify their voices and increase their agency through these and other activities (Pers. Comm. 2022i).

GenderCC's approach to project design suggests a strong focus on flexibility and promoting equitable processes to better the lives of local women entrepreneurs and encourage female leadership. The project showcases the importance of rights-based locally led approaches that—when applied strategically with enabling factors—produced constructive LLA processes.

Green Living Movement project, Zambia

Project summary

Green Living Movement (GLM) Zambia is a community-owned organization in Zambia that uses gender-responsive and justice-focused approaches to support resilient and sustainable agroecological systems and economic opportunity for local communities. GLM was started in 2000 by Zambian environmental and social activists, and has since expanded its operations to help rural farmers reduce and adapt to climate impacts (Pers. Comm. 2022d).

The Ministry of Foreign Affairs of Finland provided GLM Zambia with funding through GLM Finland, which was founded in 2007 by Finnish former volunteers of GLM Zambia aiming to further support its mission. The local agency and leadership of GLM Zambia has enabled the organization to foster a constructive relationship with its funders and supported highly adaptable and flexible project models. GLM Zambia works closely with rural communities, aiming to strengthen their capacity and knowledge so they can manage their own projects. In many farmer groups that GLM works with, women form the majority (GLM n.d.). The organization uses a variety of strategies across its initiatives—including storytelling campaigns and income diversification through the introduction of small livestock—to promote gender-transformative climate resilience in rural areas, which are becoming increasingly dry due to the climate crisis. GLM seeks to address barriers to women's access to land and management of natural resources, male-dominated governance structures, technological livelihoods that put men's needs first, and traditional cultural and social norms that prioritize men's voices, decisions, and knowledge over women's. One interviewee noted that if they could start GLM again, they would place more emphasis on changing government policies, given the influence of policy on women's status and agency (Pers. Comm. 2022d).

This case study highlights its work across programs. For instance, GLM Zambia's program with 10 communities in the Mumbwa, Monze, and Luanshya districts worked to codesign gender-responsive measures to help sustainably manage natural resources and provide training to women on livestock breeding, deforestation, leadership, and project management (Women & Gender Constituency 2019c). Outcomes of the project include the creation of marketing cooperatives, cross-sectoral partnerships, and 25 women leaders being elected as treasurers in development committees, a position typically occupied by men (Barre et al. 2020).

Green Living Movement case study overview

Location: Zambia

Years active: 2000–present

Key agricultural climate risks: Increasingly dry landscapes, drought

Financially supported by Ministry of Foreign Affairs of Finland through Green Living Movement Finland

Approximate number of people involved: 6,000 women and men

Gender-responsive LLA activities: Supporting women in decision-making roles, codesigning activities with women, integrating women farmers' needs through a community-owned approach to develop sustainable food systems, elevating local women's traditional knowledge sharing through storytelling

Gender outcomes: Enhanced financial independence of women, participation of women in traditionally male-held community committee roles

Adaptation outcomes: More climate-resilient sources of income and livelihoods

Sources: Authors; Barre et al. 2020.

Analysis of enabling factors for gender equity and LLA

From the outset, GLM's activities aligned both with the Government of Zambia's 2014 National Gender Policy and its 2018 Climate Change Gender Action Plan, and with the mandate of GLM's funder. Finland's Ministry of Foreign Affairs (MFA), the primary funder of GLM Zambia's projects, prioritizes both gender equity and locally led initiatives in its development policy (Pers. Comm. 2022k). MFA Finland promotes gender-equitable, locally led adaptation through its own ministerial capacity, with designated advisers for both gender and climate adaptation teams. Additionally, the funder provides flexible project funds after the initial grant decision, which implementers can alter based on their needs and use to request capacity trainings on gender, climate, and project management (Pers. Comm. 2022k). The context of strong country- and funder-level gender frameworks, in tandem with the flexibility in GLM Zambia's funding obtained through GLM Finland, enables the organization to better promote locally led and gender-equitable adaptation through its projects.

Inclusive community consultation is a key part of program design for GLM Zambia. In some projects, staff noted that some sections of the communities were not participating as much as others. The staff then decided to course-correct and consult with women and men to understand women's needs and barriers to their participation in the programs. Women reported that some of the activities proposed to reduce vulnerability and poverty were too tedious and time-consuming for them, and they proposed new activities based on their comfort level and to decrease their labor burdens. GLM's flexible and adaptable program design allowed for these activities to then be implemented, according to an interviewed program manager. GLM Zambia promotes "asset-based development" planning, wherein women are supported in communicating what resources they have available and what additional resources they need to fill gaps. This strategy has led to noticeable results: participation by women in the GLM project expanded significantly when women were brought into leadership roles (Pers. Comm. 2022d).

GLM Zambia's approach involves deliberate steps that consider gender norms and meaningfully involve women in projects: staff identified accessible times and locations for women and girls to participate in the program's activities and considered women's different needs, roles, and responsibilities (Pers. Comm. 2022d). In GLM Zambia's project in Mumbwa, Monze, and Luanshya districts, for example, women farmers informed decision-making on how to access and manage natural resources, as well as provide rural employment, a safe environment, and food sovereignty (i.e., determining the quantity and quality of their food by controlling how it is produced and distributed) (Women & Gender Constituency 2019c). The project also introduced solar stoves, providing women with benefits from technology, including a reduced labor burden and increased climate resilience through improved water and soil conservation from reduced deforestation (Barre et al. 2020).

Limited access to resources like land and credit was identified as a key barrier to women's engagement in programs. GLM Zambia facilitated women-led cooperatives to tackle some of these barriers, which has helped provide evidence of women's financial responsibility. Many projects rely on a livelihood fund that allows women to do short-term planning based on existing climatic conditions and rainfall patterns, which tend to change annually. Devolving decision-making for programmatic activities to the lowest appropriate level has enabled local women to meaningfully inform project design and produce interventions that work for them (Pers. Comm. 2022d).

One of GLM Zambia's projects helped establish four marketing cooperatives to enhance product sales and safeguard women's income. It offered small grants that improved women's financial independence by providing the means to purchase small livestock (Barre et al. 2020). The project also invested in women's technical and management capabilities, which further promoted gender-equal access to and control over resources, including finance and land. Leading cooperatives allowed women to demonstrate their financial management qualifications when seeking financing, thereby better positioning women-led cooperatives as safer borrowers (Pers. Comm. 2022d). These activities align with multiple LLA outcomes, including leadership of local women and the elevation of traditional and local knowledge.

GLM increased women's agency by conducting public-facing community campaigns, highlighting women's climate leadership, and helping them get elected to development committees. The projects also engage with men to support women and promote gender-transformative norms and relations. The interventions deliberately establish men's groups to discuss the value of women and try to address men's apprehensions about women in leadership roles. This meaningful engagement of men confronts institutions and norms that constrain women while also fostering safe and productive dialogue.

GLM's approach centers on local agency and flexible, adaptable program design—prioritizing community knowledge rather than adopting strategies designed and imposed from outside that can cause apprehension among local partners, according to one key informant. The GLM approach highlights the centrality of local agency to successful gender and adaptation processes. Through devolved decision-making, prioritization of local women's knowledge and leadership, and a flexible, responsive funding structure, GLM's projects serve as a model of good practices for locally led adaptation.

CONCLUSIONS AND RECOMMENDATIONS

Imbalances of power between funders and local partners and between men and women can result in part from long-standing, structural injustices and sociocultural norms that take time to correct. The authors recognize that integrating gender equity into locally led adaptation processes requires a systemic shift away from common funding and decision-making practices, as well as significant changes to existing governance structures and financing systems.

The following recommendations emerge from the literature, key informant interviews, and case study analyses. They are not sufficient on their own to address top-down approaches to adaptation and development programming and the systems of oppression that drive gender inequities. They are, however, important and practical steps that funders and implementers can take in the near term to both test and support the longer-term transformational changes needed to achieve both LLA and gender equity. Although some of these recommendations focus on agriculture, they are applicable to other sectors as well.

Recommendations for funders and implementers

Commit to and invest in long-term, equitable relationships with local partners, especially women and women-led organizations such as women's agricultural cooperatives, self-help groups, or women's collaboratives.

- Ensure that partnerships are built on trust and shared values for inclusive programming.
- Ask partners about their agricultural adaptation capacity-strengthening priorities, rather than making assumptions, and invest in these priorities.

Invest in capacity building of funder and implementer staff to conduct gender analyses, implement gender-responsive approaches, and foster equitable partnerships.

- Assess and build staff capacity to appropriately connect with communities directly or through partners, to understand how implicit biases may hinder equitable partnerships and reinforce conventional power structures, and to deliver gender-responsive programming.
- Budget time and resources for staff training and capacity strengthening.

Enable leadership opportunities and decision-making authority for women to influence project and community governance processes, as well as agricultural processes such as extension services or information dissemination.

- Assess how programmatic decisions are made and identify ways for funders and implementers to engage women and local partners in that decision-making, taking into account the social context. This may involve building women's capacity to make such decisions, reducing their labor burden so they have time to engage, sensitizing current decision-makers to reduce biases against women in decision-making spaces, and shifting the current decision-making processes to make space for new voices.
- Build the capacity of project facilitators to ensure that women's voices, perspectives, opinions, knowledge, and priorities are valued in decision-making spaces. Sensitize current leaders and decision-makers to the value and necessity of their input.

Ensure that any technology or innovation is gender-responsive and appropriate for the local context. This applies to conventional technology such as digital climate advisory services or irrigation technology, as well as innovations like farming techniques or new seeds or breeds.

- Give women and local partners the opportunity to decide which new technologies will be useful to them. Use appropriate channels and methods of providing training and information about these technologies to women.

Ensure alignment with existing national and subnational gender policies, strategies, and international commitments, such as to the gender action plan of the UN Framework Convention on Climate Change, and seek programming opportunities to support these efforts.

Support the structural changes required for long-term gender-equitable LLA.

- Work with women and local partners to determine appropriate ways to understand and confront sociocultural norms; historical legacies of classism, colonialism, racism, and sexist structures; and implicit and explicit biases. Codevelop adaptation and development activities with both women and men (including gender equity dialogues with men and boys) that help to uproot power and social imbalances rather than

unintentionally reinforcing or side-stepping them. At the same time, institute safeguards that prevent gender-based violence and retaliation against women's empowerment at the local level.

- Directly fund local organizations that are confronting systemic challenges. Local partners, especially those that are representative of oppressed groups, bring valuable experiential knowledge and direct understanding of local context to inform intersectional strategies to address structural inequalities.

Value the time and expertise of women and local partners.

- Whenever possible and to avoid extractive practices, provide funding for women and local partners for the time and expertise required to contribute to project design, implementation, and monitoring, evaluation, and learning (MEL). Equally value and elevate local and Indigenous knowledge and expertise to other sources.
- Plan ahead for the time required to coordinate with partners and bring them into planning processes.

Additional recommendations especially relevant to funders

Provide longer-term, patient, and flexible funding timelines that accommodate social change, learning processes, and the dynamic nature of adapting to climate impacts.

- Avoid short funding windows and ensure that funding is predictable. Provide funding over terms of at least five to seven years to support investments in local adaptation measures and capacities that will contribute longer-term climate resilience and equity outcomes than typical shorter windows of five or fewer years (Patel et al. 2020).
- Provide funding that is flexible to allow responsive agility to findings emerging from community dialogues, gender analyses, and climate risk assessments.
- Provide the opportunity to pursue funding replenishments, even before one funding window has elapsed. Provide ample notice of changes to funding windows or new funding opportunities.
- Review procurement and approval processes for opportunities to simplify, reduce restrictions, and allow funding to flow more directly to local partners, especially partner organizations led by or representing historically marginalized groups.

Ensure that agreements with partners allow adaptive management to accommodate changes required as climate adaptation needs evolve, social issues emerge, and social norms shift.

- Work with local partners to codesign deliverables and timelines.
- Promote a culture of learning from “failure,” including by building in regular opportunities for reflection and collaboratively identifying learning questions at the start of a project.
- Allocate funding and resources to develop MEL systems during the project and after its end, to assess what worked and what can be learned.

Promote bottom-up accountability for applying gender policies and fostering equitable partnerships.

- Employ a locally led MEL approach to center learning priorities and preferences of women and local partners and integrate downward accountability, so that funders are accountable to women and local partners. Consider a two-track approach to MEL if needed: a minimum reporting track and a learning and mutual accountability track.
- Ensure an adequate, dedicated budget for inclusive processes.
- Build accountability mechanisms into internal processes to ensure follow-through for gender policies, for example through program concept, transparent budgeting, and partnership agreement reviews.

Achieving the holistic goal of gender-responsive, locally led, climate-resilient agriculture requires intersectional approaches that confront systemic issues at the root of gender and social inequities and climate change. More research and work will be needed to strengthen our understanding of how to effectively design and implement gender-responsive, locally led adaptation initiatives, and to demonstrate the ability of such initiatives to promote climate resilience.

APPENDIX A. ADDITIONAL DETAILS ON LITERATURE REVIEW METHODOLOGY

Key terms and phrases were selected to construct different search formulas with varying scopes related to the working paper's research question: What are the enabling factors or conditions needed for locally led adaptation (LLA) to effectively and equitably engage women and groups that have been marginalized in their stakeholder engagement, decision-making, and implementation processes so that these processes may foster and facilitate more equitable, effective, and lasting adaptation outcomes? The review was limited to publications from the last 10 years and the following search formulas were used:

- "Gender equity" AND ("community-led" OR "locally led") AND ("development" OR "agriculture" OR "adaptation")
- "Gender equity" AND ("community-led" OR "locally led") AND ("development" OR "agriculture" OR "adaptation") AND "Africa"
- "Enabling" AND ("factors" OR "conditions") AND "gender equity" AND ("community-led" OR "locally led") AND ("adaptation" OR "development" OR "agriculture")
- "Enabling" AND ("factors" OR "conditions") AND "power" AND ("shift" OR "redistribution") AND ("community-led" OR "locally led") AND ("agriculture" OR "adaptation") AND "Africa"
- ("Strategies" OR "approaches") AND ("gender equity" OR "power shift" OR "power redistribution") AND ("community-led" OR "locally led") AND ("agriculture" OR "adaptation" OR "development")
- ("locally led" OR "community-led") AND ("adaptation" OR "development" OR "agriculture") AND ("women" OR "marginalized")
- "Gender equity" AND ("community-led" OR "locally led") AND ("agriculture" OR "adaptation")

Key findings from the resulting literature were subsequently synthesized based on topics identified in the paper's initial outline. These topics included but were not limited to historical gender and social equity issues in African agriculture, the landscape of LLA and community-based approaches in Africa, and enabling conditions supporting gender equity and LLA.

Seventeen projects were initially identified for analysis:

- Climate Action through Landscape Management program, 2019–24, Ethiopia
- Decentralizing Climate Funds, 2013–19, Senegal, Mali, Kenya, and Tanzania
- Horn of Africa Risk Transfer for Adaptation, 2009–12, Ethiopia
- County Climate Change Funds, 2011–14, scaling phase: 2018–22, Kenya
- Sustainable Mobilization of Agricultural Research Technologies (SMART), Kenya
- CGIAR research program on Aquatic Agricultural Systems, various African countries
- CARE's Sustainable and Effective Economic Development (SEED) project, Inhambane Province, Mozambique
- GenderCC SA or Women for Climate Justice, multiple southern African countries
- Coalition of Women Leaders for Environment and Sustainable Development, Democratic Republic of Congo
- UNIVERS-SEL, Guinea-Bissau
- Green Living Movement, Zambia
- Enda Graf Sahel, Senegal
- Local Climate Adaptive Living Facility, Niger
- Third Northern Uganda Social Action Fund Project
- Project for the Restoration of Livelihoods in the Northern Region supervision report, Uganda
- African Women's Network for Community Management of Forests: Empowering African Women to Influence REDD+, Cameroon
- Integrated rainwater harvesting and management in pastoral communities, Rift Valley, Kenya

APPENDIX B. FRAMEWORKS USED TO SCREEN CASE STUDIES

Table B1 | **Locally led adaptation framework based on the Locally Led Adaptation Principles**

LOCALLY LED ADAPTATION INTEGRATION FRAMEWORK		
Level	Elements	LLA Principles
Nonexistent	Community members are invited to learn about the adaptation intervention.	n/a
	Community members are largely viewed as beneficiaries and are consulted in a limited manner.	n/a
	Community members lack agency over who or what is funded or how projects are executed.	n/a
	Funding goes through one or more intermediaries before reaching community members or other local actors.	n/a
Low	Community members and other local actors are invited to help plan and implement the intervention.	1
	Community members are able to direct some of the funding or elect priorities.	1, 3
Moderate	Local knowledge is present and valued.	5
	Patient, predictable, and easily accessible funding is provided to community members.	3
	Transparency and accountability in finance, design, and delivery processes create accountability to local actors.	7
High	Local actors are meaningfully included in project design and decide what is implemented, how, and by whom.	1
	Local capacities are supported to design, implement, monitor, and maintain measures.	4, 5
	Local knowledge and project ownership are highly present.	5
	Funding is managed by local actors and used to support long-term outcomes and institutional capacities.	3, 4, 1
	Funding is more easily accessible by vulnerable and marginalized local actors.	3, 2
	Root causes of vulnerability are integrated into the intervention, including gender-based, economic, and political inequalities, and marginalized individuals are meaningfully included in decision-making processes.	2, 4
	Programming and learning is flexible and enables adaptive management to address uncertainty, especially through robust monitoring and learning systems, flexible finance, and flexible programming.	6
	Relationships are nurtured between local actors and other grassroots organizations, government institutions, the private sector and/or international funders to further enable local agency and capacities.	8

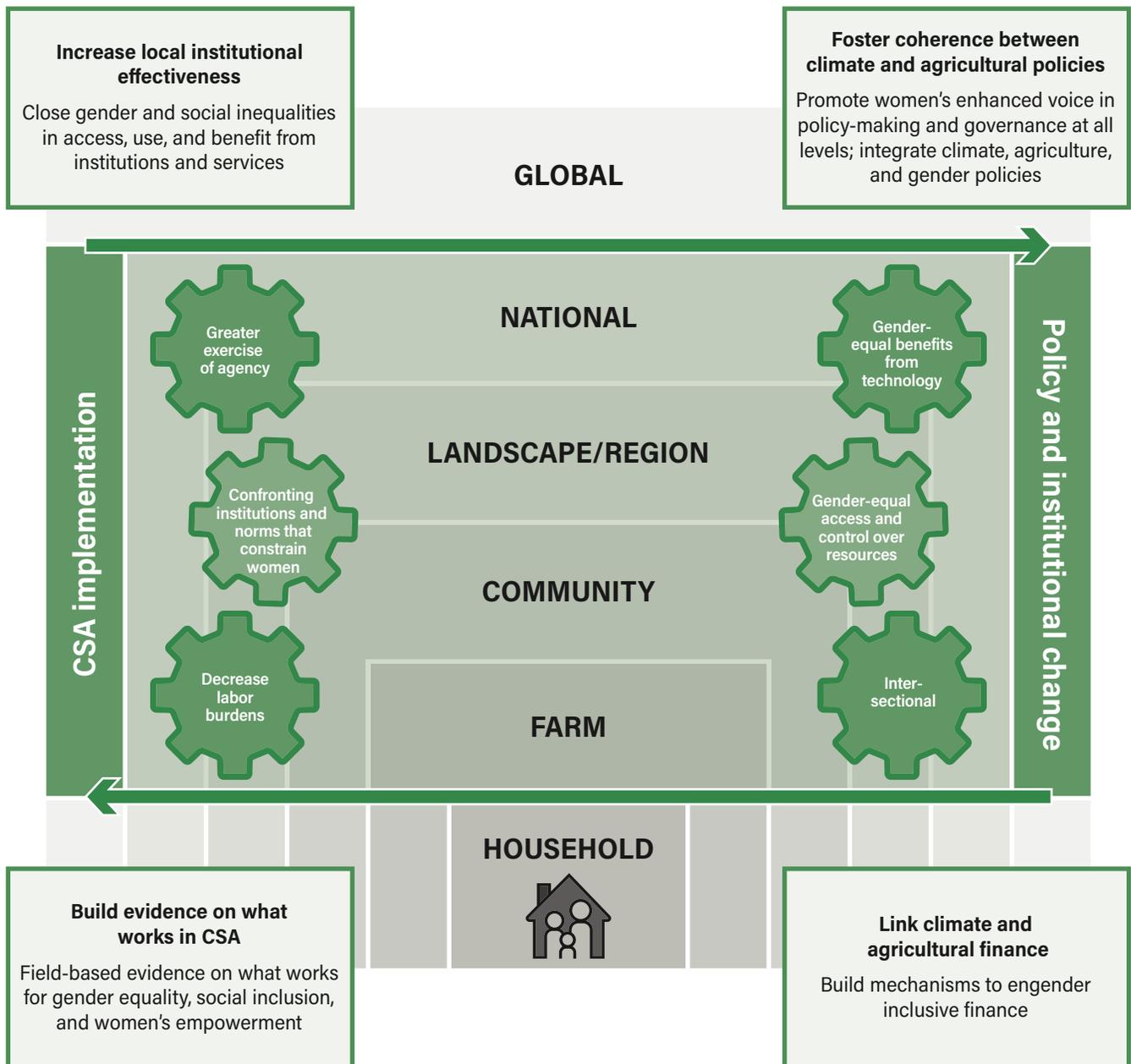
Source: Authors.

Table B2 | **Gender integration scale**

	LEVEL	ELEMENTS
Not gender responsive	1. Gender Unequal or Exploitative	<ul style="list-style-type: none"> • Acknowledges and intentionally takes advantage of gender disparities, social norms, and stereotypes (for example, exploiting women's unpaid labor to participate in program activities and thereby deepening their economic vulnerability) • Reinforces gender-based discrimination and perpetuates gender disparities and unequal power dynamics by exacerbating unbalanced norms, roles and relations
	2. Gender Absent or Neutral	<ul style="list-style-type: none"> • Ignores gender norms, roles, and relations • Ignores differences in opportunities and resource allocation between women and men • Often constructed based on the principle of being "fair" by treating everyone the same • Often leads to one gender identity enjoying more rights or opportunities than others
	3. Gender Insensitive	<ul style="list-style-type: none"> • Acknowledges the existence of gender norms, roles, and dynamics yet takes no action • Interventions address practical needs of vulnerable groups but not the underlying root causes of disparities (such as unequal norms, roles, or relations)
Gender responsive	4. Gender Specific or Accommodating	<ul style="list-style-type: none"> • Considers existing gender norms, roles, and relations and how they affect access to and control over resources • Considers women's and men's specific needs • Intentionally targets and benefits a specific group of women or men to achieve certain policy or program goals or meet certain needs but misses the opportunity to tackle systemic norms underlying gender disparities • Makes it easier for women and men to fulfill duties that are ascribed to them based on their gender roles
	5. Gender Transformative	<ul style="list-style-type: none"> • Understands gender norms, roles, and relations for women and men and how they affect access to and control over resources • Takes women's and men's specific needs fully into account • Addresses the causes of gender-based disparities and includes ways to transform harmful gender norms, roles, structures and relations • Includes strategies to foster progressive, long-term, structural changes in power relationships between women and men • The objective is often to promote equitable systems that lead to gender equality as a long-term outcome

Source: Adapted by WRI from WHO 2011 and World Vision 2021 gender assessment frameworks.

Figure B1 | Framework for gender and socially inclusive climate-resilient agriculture



Note: CSA = climate-smart agriculture.

Source: Huyer et al. 2021b. Redesigned from the original to match WRI's formatting style.

APPENDIX C. SEMISTRUCTURED INTERVIEW QUESTIONS

Key informants interviewed for the exploratory case studies featured in this paper were asked questions from the list below. Interviews lasted between one and one-half hours, and took place during the period of April to October 2022.

1. Please tell us your name and explain how you were involved with project/program X.
2. We've learned that your project/program has considered and integrated gender. What strategies, tools, or approaches did you use to ensure that gender is effectively considered and addressed? (Examples of such considerations could include special arrangements to meaningfully include women in decision-making, and governance structures in which women are direct managers of resources and funding and cocreate or lead implementation processes.)
3. Is finance used to support women's priority activities and support the participation of women? What helped? Which barriers remain?
4. What cultural factors in [country X] affect whether local partners and community members of different genders (especially women and girls) are able to influence climate adaptation processes (i.e., cultural factors related to time commitments, responsibilities, or expectations) [If applicable for interviewee]? What is the role of funders to help address this? How should funders approach their work differently based on these cultural factors?
5. How do you see power affecting the work and ability of local partners and community members (especially women) to meaningfully participate (i.e., access funding, influence decisions)?
6. What is needed to address these power imbalances (between funders or implementers and local partners; among community members, etc.)?
7. We would now like to ask about the outcomes of the project.
 - a. Did improved integration of gender dimensions change the outcomes or lead to longer-term results? If so, how?
 - b. Which groups and interests were particularly impacted and how?
 - c. What climate adaptation benefits have resulted from this approach? Can you provide specific examples?
 - d. Is any monitoring, evaluation, and learning under way?
8. What examples and lessons learned about gender-equitable locally led adaptation initiatives exist from smallholder agriculture in Africa and what can the rest of the world learn from these cases?
9. Whom else do you recommend we speak with to learn more about this program/project?

REFERENCES

- Acosta, M., S. van Bommel, M. van Wessel, E.L. Ampaire, L. Jassogne, and P.H. Feindt. 2019. "Discursive Translations of Gender Mainstreaming Norms: The Case of Agricultural and Climate Change Policies in Uganda." *Women's Studies International Forum* 74: 9–19. <https://doi.org/10.1016/j.wsif.2019.02.010>.
- Addison, M., G. Mujawamariya, and R. Bam. 2020. "Gender Considerations in Development and Utilisation of Technological Innovations: Evidence from Ghana." *Development in Practice* 30, no. 1: 15–26. <https://www.tandfonline.com/doi/abs/10.1080/09614524.2019.1632263?journalCode=cdip20>.
- AFD (Agence Française de Développement). n.d. "Gender Equality." <https://www.afd.fr/en/page-thematique-axe/gender-equality#:~:text=The%20reduction%20of%20gender%20inequality,our%20100%25%20social%20link%20strategy>. Accessed December 21, 2022.
- Ampaire, E.L., M. Acosta, S. Huyer, R. Kigonya, P. Muchunguzi, R. Muna, and L. Jassogne. 2020. "Gender in Climate Change, Agriculture, and Natural Resource Policies: Insights from East Africa." *Climatic Change* 158, no. 1: 43–60. <https://doi.org/10.1007/s10584-019-02447-0>.
- Antwi-Agyei, P., A.J. Dougill, and L.C. Stringer. 2015. "Impacts of Land Tenure Arrangements on the Adaptive Capacity of Marginalized Groups: The Case of Ghana's Ejura Sekyedumase and Bongo Districts." *Land Use Policy* 49: 203–12. <https://doi.org/10.1016/j.landusepol.2015.08.007>.
- Armistead, M. 2022. "Subsidiarity Works: Locally Led Development and Humanitarian Response Is Possible, and Is a Better, More Sustainable Approach to Effective Foreign Assistance." In *Locally Driven Development: Overcoming the Obstacles*, by George Ingram, 22–23. Washington, DC: Brookings Institution. <https://www.brookings.edu/wp-content/uploads/2022/05/Locally-Driven-Development.pdf>.
- Arora-Jonsson, S. 2014. "Forty Years of Gender Research and Environmental Policy: Where Do We Stand?" *Women's Studies International Forum*. <https://doi.org/10.1016/j.wsif.2014.02.009>.
- AUDA-NEPAD (African Union Development Agency—New Partnership for Africa's Development). 2017. "ENDA Graf Sahel." <https://www.nepad.org/who-we-are>.
- Bagasao, M.F. 2016. "Why Organized Grassroots Women Matter in the Sustainable Development of Rural Communities." United Nations. <https://www.un.org/en/chronicle/article/why-organized-grassroots-women-matter-sustainable-development-rural-communities>.
- Barre, A., G. Cortes Valderrama, V. Demmelbauer, and M. Louvet. 2020. "Gender Just Climate Solutions." Women Engage for a Common Future. https://www.wecf.org/wp-content/uploads/2021/02/GJCS_English_Final-1.pdf.
- Bonaya, M., and P. Rugano. 2018. "Gender Inclusion and the CCCF Mechanism: Increasing the Voice and the Benefits for Women." ADA Consortium, policy brief. https://www.adaconsortium.org/index.php/component/k2/item/download/99_a2a89c5b42253e83f3fdaa7b07fecafa.
- Born, L., C. Spillane, and U. Murray. 2018. "Integrating Gender into Index-Based Agricultural Insurance: A Focus on South Africa." *Development in Practice* 29, no. 4: 409–23. <https://doi.org/10.1080/09614524.2018.1556608>.
- Brent, Z., and F. Ndoye. 2022. "The Fisherwomen of the Saloum Delta." Transnational Institute and Women Engage for a Common Future. <https://energy-democracy.net/the-fisherwomen-of-the-saloum-delta-building-gender-and-climate-justice-one-energy-efficient-oven-at-a-time/>.
- Burns, B., and M. Granat. 2020. "Engagement of Women and Gender-Related Groups in the Climate Investment Funds: An Assessment." Women's Environment and Development Organization. https://www.cif.org/sites/cif_enc/files/knowledge-documents/wedo_final_report_7april2020.pdf.
- Carthy, A., C. Gallagher, and M. Soanes. 2022. *Scaling Up Locally Led Adaptation*. London: International Institute for Environment and Development. <https://pubs.iied.org/20816iied>.
- Castañeda Camey, I., L. Sabater, C. Owren, and A.E. Boyer. 2020. "Gender-Based Violence and Environment Linkages: The Violence of Inequality." International Union for Conservation of Nature. <https://portals.iucn.org/library/sites/library/files/documents/2020-002-En.pdf>.
- Chingarande, D., S. Huyer, S. Lanzarini, J.N. Makokha, W. Masiko, C. Mungai, J. Njuki, et al. 2020. "Mainstreaming Gender into National Adaption Planning and Implementation in Sub-Saharan Africa." CCAFS Working Paper no. 323. Wageningen, the Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security.
- Coger, T., A. Dinshaw, S. Tye, B. Kratzer, M.T. Aung, E. Cunningham, C. Ramkissoon, et al. 2022. "Locally Led Adaptation: From Principles to Practice." World Resources Institute. Working paper. <https://www.wri.org/research/locally-led-adaptation-principles-practice>.
- Cooper Hall, L., and A. Rojas. 2022. "Climate Change Gender Action Plans: A Method for Moving from Commitment to Action." International Union for Conservation of Nature (blog), June 30. <https://www.iucn.org/blog/202206/climate-change-gender-action-plans-method-moving-commitment-action>.
- Cooper Hall, L., et al. 2019. "Women's Organizations and Climate Finance: Engaging in Processes and Accessing Resources." https://wedo.org/wp-content/uploads/2019/06/WomensOrgsClimateFinance_EngaginginProcesses.pdf.
- Cornwall, A. 2000. "Making a Difference? Gender and Participatory Development." Institute of Development Studies. Discussion Paper 378. <https://www.participatorymethods.org/sites/participatorymethods.org/files/Dp378.pdf>.
- Craney, A. 2020. "Local Participation or Elite Capture in Sheep's Clothing? A Conundrum of Locally Led Development." *Politics and Governance* 8, no. 4. <https://doi.org/10.17645/pag.v8i4.3343>.

- Dazé, A., and A. Terton. 2021. *Toward Gender-Responsive Ecosystem-Based Adaptation: Why It's Needed and How to Get There*. Bonn, Germany: Deutsche Gesellschaft für Internationale Zusammenarbeit. <https://www.iisd.org/publications/toward-gender-responsive-EbA>.
- Dodson, J. 2017. *Building Partnerships of Equals: The Role of Funders in Equitable and Effective International Development Collaborations*. UK Collaborative on Development Sciences. https://www.ukcdr.org.uk/wp-content/uploads/2017/11/Building-Partnerships-of-Equals_-REPORT-2.pdf.
- Domingo, P., R. Holmes, T. O'Neil, N. Jones, K. Bird, A. Larson, E. Presler-Marshall, and C. Valters. 2015. *Women's Voice and Leadership in Decision-Making: Assessing the Evidence*. London: Overseas Development Institute.
- Doss, C., A. Qaisrani, K. Kosec, V. Slavchevska, A. Galiè, and N. Kawarazuka. 2021. "From the 'Feminization of Agriculture' to Gender Equality." In *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present, and Future*, ed. R. Pyburn and A. Eerdewijk, 316–27. Washington, DC: International Food Policy Research Institute. <https://doi.org/10.2499/9780896293915>.
- Elias, A., K. Yasunobu, and A. Ishida. 2015. "Does Gender Division of Labour Matter for the Differences in Access to Agricultural Extension Services? A Case Study in North West Ethiopia." *Journal of Agricultural Science* 7. <https://ebrary.ifpri.org/digital/api/collection/p15738coll2/id/127328/download>.
- Enda Graf Sahel. n.d. "Enda Graf Sahel." <https://endagrafsahel.org/enda-graf-sahel/>.
- Eriksen, S., E.L.F. Schipper, M. Scoville-Simonds, K. Vincent, H.N. Adam, N. Brooks, B. Harding, et al. 2021. "Adaptation Interventions and Their Effect on Vulnerability in Developing Countries: Help, Hindrance or Irrelevance?" *World Development* 141. <https://doi.org/10.1016/j.worlddev.2020.105383>.
- Farnworth, C., M.F. Sundell, A. Nzioki, V. Shivutse, and M. Davis. 2013. *Transforming Gender Relations in Agriculture in Sub-Saharan Africa*. Swedish International Agricultural Network Initiative. <https://www.siani.se/wp-content/uploads/2013/09/siani-2013-transforming-gender-relations-agriculture-africa.pdf>.
- GenderCC. n.d. "Who We Are." <https://gendercc.org.za/about-us/>.
- Gibbens, M., and C. Schoeman. 2019. "Gender Considerations in Sustainable Rural Livelihood Planning: Engendering Rural Development Planning in a South African Context." *WIT Transactions on Ecology and the Environment* 238: 543–52. <https://doi.org/10.2495/SC190471>.
- GLM (Green Living Movement). n.d. "Organization." <http://www.glmglobal.org/organisation/>.
- Gressel, C.M., T. Rashed, L.A. Maciuika, S. Sheshadri, C. Coley, S. Kongeseri, and R.R. Bhavani. 2020. "Vulnerability Mapping: A Conceptual Framework towards a Context-Based Approach to Women's Empowerment." *World Development Perspectives* 20: 100245. <https://doi.org/10.1016/j.wdp.2020.100245>.
- Habtezion, S. 2013. "Overview of Linkages between Gender and Climate Change." UNDP. Policy brief. <https://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB1-AP-Overview-Gender-and-climate-change.pdf>.
- Harper, D., W. Singini, M. Chimlaza, and C. Matundu. 2020. *Mid-term Evaluation: World Connect Project "Investing in Locally-Led Development in Malawi"*. Linking Individuals, Knowledge and Culture (LINC). https://pdf.usaid.gov/pdf_docs/PA00WQR6.pdf.
- Huyer, S., T. Gumucio, K. Tavenner, M. Acosta, N. Chanana, A. Khatri-Chhetri, C. Mungai, et al. 2021a. "From Vulnerability to Agency in Climate Adaptation and Mitigation." In *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present, and Future*, ed. R. Pyburn and A. Eerdewijk, 280–313. Washington, DC: International Food Policy Research Institute. <https://doi.org/10.2499/9780896293915>.
- Huyer, S., E. Simelton, N. Chanana, A. Abenakyo Mulema, and E. Marty. 2021b. "Expanding Opportunities: A Framework for Gender and Socially-Inclusive Climate Resilient Agriculture." *Frontiers Climate*, December 10. <https://doi.org/10.3389/fclim.2021.718240>.
- IIED (International Institute for Environment and Development). 2021. *Principles for Locally Led Adaptation: A Call to Action*. London: IIED. <https://pubs.iied.org/sites/default/files/pdfs/2021-01/10211IIED.pdf>.
- Ingram, G. 2022. "Locally Driven Development: Overcoming the Obstacles." Brookings Institution. <https://www.brookings.edu/wp-content/uploads/2022/05/Locally-Driven-Development.pdf>.
- IPCC (Intergovernmental Panel on Climate Change). 2014. *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. R.K. Pachauri and L.A. Meyer. Geneva: IPCC.
- IPCC. 2018. "Annex I: Glossary," ed. J.B.R. Matthews. In *Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty*, ed. V. Masson-Delmotte, P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, et al. Geneva: IPCC.
- IPCC. 2022. "Summary for Policymakers," ed. H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, et al. In *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, et al. Cambridge: Cambridge University Press. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.
- IUCN (International Union for Conservation of Nature). 2015. *The African Women's Network for Community Management of Forests (REFACOF): Empowering African Women to Influence REDD+*. Washington, DC: IUCN and USAID. <https://genderandenvironment.org/the-african-womens-network-for-community-management-of-forests-refacof-empowering-african-women-to-influence-redd/>.

- Masinga, F.N., P. Maharaj, and D. Nzima. 2021. "Adapting to Changing Climatic Conditions: Perspectives and Experiences of Women in Rural KwaZulu-Natal, South Africa." *Development in Practice* 31, no. 8: 1002–13. <https://doi.org/10.1080/09614524.2021.1937542>.
- Matthews, S. 2006. "Responding to Poverty in the Light of the Post-development Debate: Some Insights from the NGO Enda Graf Sahel 1." Council for the Development of Social Science Research in Africa. *Africa Development* 31, no. 4: 52–57. https://www.researchgate.net/publication/265677350_Responding_to_Poverty_in_the_Light_of_the_Post-Development_Debate_Some_insights_from_the_NGO_Enda_Graf_Sahel_1.
- McDougall, C., L. Badstue, A. Mulema, G. Fischer, D. Najjar, R. Pyburn, M. Elias, et al. 2021. "Toward Structural Change: Gender Transformative Approaches." In *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present, and Future*, ed. R. Pyburn and A. Eerdewijk, 384–401. Washington, DC: International Food Policy Research Institute. <https://doi.org/10.2499/9780896293915>.
- Mentz-Lagrange, S., and P. Gubbels. 2018. "Empowering Women in Agroecology: An Essential Component for the Resilience of Rural Communities in the Sahel." Groundswell International. <https://www.groundswellinternational.org/wp-content/uploads/2020/03/case-study-women-4-web.pdf>.
- Mfitumukiza, D., A.S. Roy, B. Simane, A. Hammill, M.F. Rahman, and S. Huq. 2020. "Scaling Local and Community-Based Adaptation." Global Commission on Adaptation background paper. https://files.wri.org/s3fs-public/uploads/Local_Adaptation_Paper_-_Global_Commission_on_Adaptation.pdf.
- Mitchell, D., and D. McEvoy. 2019. "Land Tenure and Climate Vulnerability." UN Human Settlements Programme (UN-Habitat). <https://unhabitat.org/sites/default/files/documents/2019-06/un-habitat-gltn-land-and-climate-vulnerability-19-00693-web.pdf>.
- Molua, E.L., and J.E. Ayuka. 2021. "Male-Female Sensitivity in Climate-Induced Income Insecurity: Some Empirical Evidence from Farming Households in Northern Cameroon." *Development in Practice* 31, no. 8: 1014–39. <https://doi.org/10.1080/09614524.2021.1937528>.
- Monterroso, I., A.M. Paez-Valencia, E. Gallagher, S. Chesterman, R. Meinzen-Dick, O. Enokenwa Baa, and M. Elias. 2021. "Enhancing Women's Resource Rights for Improving Resilience to Climate Change." Women Resource's Initiative project brief. Center for International Forestry Research, International Center for Research in Agroforestry, and International Fund for Agricultural Development. https://www.cifor.org/publications/pdf_files/brief/8268-Socio-legal_Analysis_Brief.pdf.
- Muzari, W. 2016. "Gender Disparities and the Role of Women in Smallholder Agriculture in Sub-Saharan Africa." *International Journal of Science and Research* 5, no. 1. https://www.researchgate.net/publication/318273235_Gender_Disparities_and_the_Role_of_Women_in_Smallholder_Agriculture.
- NDC Partnership. 2022. "Nationwide Climate Response Calls for Localized Community-Driven Solutions in Niger." <https://ndcpartnership.org/news/nationwide-climate-response-calls-localised-community-driven-solutions-niger>.
- Njuki, J., C.R. Doss, and S. Boote. 2019. "Women's Control over Income: Implications for Women's Empowerment and the Agricultural Sector." In *Annual Trends and Outlook Report: Gender Equality in Rural Africa*, ed. A.R. Quisumbing, R.S. Meinzen-Dick, and J. Njuki, 149–75. Washington, DC: International Food Policy Research Institute. <https://ebrary.ifpri.org/digital/collection/p15738coll2/id/133462>.
- Olumeh, D.E., D.J. Otieno, and W. Oluoch-Kosura. 2021. "Effects of Gender and Institutional Support Services on Commercialisation of Maize in Western Kenya." *Development in Practice* 31, no. 8: 977–87. <https://doi.org/10.1080/09614524.2021.1937532>.
- Opare, S. 2015. "Transforming Gender Imbalances in Decision Making in Ghana: Voices from Rural Dwellers." *Current Politics and Economics of Africa* 8, no. 3. <https://www.proquest.com/docview/1770385602>.
- Patel, S., M. Soanes, F. Rahman, B. Smith, D. Steinbach, and S. Barrett. 2020. "Good Climate Finance Guide: Lessons for Strengthening Devolved Climate Finance." International Institute for Environment and Development. Working paper.
- Peace Direct. 2021. *Time to Decolonise Aid: Insights and Lessons from a Global Consultation*. Peace Direct, Adeso, the Alliance for Peacebuilding, and Women of Color Advancing Peace and Security. <https://www.peacedirect.org/wp-content/uploads/2021/05/PD-Decolonising-Aid-Report.pdf>.
- Personal communication between the authors and national coordinator for GEF's Small Grants Programmes in Nigeria, November 2, 2022a.
- Personal communication between the authors and a senior researcher at International Institute for Environment and Development (IIED), November 2, 2022b.
- Personal communication between the authors and a senior research at International Institute for Environment and Development (IIED), November 2, 2022c.
- Personal communication between authors and a program manager at Green Living Movement in Zambia, May 9, 2022d.
- Personal communication between authors and a program manager at ENDA Graf Sahel, May 6, 2022e.
- Personal communication between authors and a gender and climate policy coordinator at Women Engage for a Common Future, May 17, 2022f.
- Personal communication between authors and founder at Foodmasters South Africa, May 17, 2022g.
- Personal communication between the authors and a development cooperation attaché in the Government of Flanders, October 13, 2022h.

Personal communication between the authors and a project coordinator at GenderCC SA, May 5, 2022i.

Personal communication between the authors and a business mentor and trainer at University of Johannesburg, May 24, 2022j.

Personal communication between the authors and a project officer in the Ministry of Foreign Affairs of Finland, September 30, 2022k.

Plan International Australia. 2018. "Gender Transformative Climate Change Action in the Pacific: Framework and Guidance Tool." https://www.preventionweb.net/files/73972_gendertransformativeclimatechangeac.pdf.

Pross, C. 2019. "Five Principles for Gender-Transformative Climate Adaptation." Stockholm Environment Institute. <https://www.sei.org/perspectives/5-principles-for-gender-transformative-climate-adaptation/>.

Pyburn, R., and A. Eerdewijk, eds. 2021. *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present, and Future*. Washington, DC: International Food Policy Research Institute. <https://doi.org/10.2499/9780896293915>.

Rottach, E., S.R. Schuler, and K. Hardee. 2009. "Gender Perspectives Improve Reproductive Health Outcomes: New Evidence." Prepared with support from the Interagency Gender Working Group, US Agency for International Development, and Population Action International. Population Reference Bureau. <https://www.igwg.org/wp-content/uploads/2017/06/genderperspectives.pdf>.

Salcedo-La Viña, C., and R. Giovarelli. 2021. *On Equal Ground: Promising Practices for Realizing Women's Rights in Collectively Held Lands*. Washington, DC: World Resources Institute. <https://www.wri.org/research/equal-ground-promising-practices-realizing-womens-rights-collectively-held-lands>.

Samman, E. 2018. "Understanding Norms around the Gendered Division of Labour: Results from Focus Group Discussions in Zimbabwe." Oxfam International. <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620460/rr-zimbabwe-social-norms-gendered-division-labour-120618-en.pdf?sequence=1&isAllowed=y>.

Schalatek, L. 2022. "A Climate Finance Rethink Can Help Those Most Impacted by Climate Change." *New Security Beat*, June 14. <https://www.newsecuritybeat.org/2022/06/climate-finance-rethink-impacted-climate-change/>.

SMART (Sustainable Mobilization of Agricultural Resource Technologies) Initiative. 2019. *SMART Initiative Annual Field Report for the Year 2019*.

Soanes, M., S. Addison, and C. Shakya. 2020. *Calling for Business Unusual: Why Local Leadership Matters*. London: International Institute for Environment and Development. <https://pubs.iied.org/17767iied>.

Soanes, M., A. Bahadur, C. Shakya, B. Smith, S. Patel, T. Coger, A. Dinshaw, et al. 2021. "Principles for Locally Led Adaptation: A Call to Action." International Institute for Environment and Development. Issue paper. <https://pubs.iied.org/sites/default/files/pdfs/2021-01/10211IIED.pdf>.

Tiruneh, Y.S., N.R. Hughes, and K. Kandula. 2022. "Supporting Ethiopian Women Farmers in Adapting to a Changing Climate." World Bank (blog), April 15. <https://blogs.worldbank.org/nasikiliza/supporting-ethiopian-women-farmers-adapting-changing-climate>.

Trisos, C.H., I.O. Adelekan, E. Totin, A. Ayanlade, J. Efitre, A. Gemed, K. Kalaba, et al. 2022. "Africa." In *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, et al., 1285–455. Cambridge: Cambridge University Press. doi:10.1017/9781009325844.011.

Tye, S., and I. Suarez. 2021. "Locally Led Climate Adaptation: What Is Needed to Accelerate Action and Support?" World Resources Institute. Working paper. https://files.wri.org/d8/s3fs-public/locally-led-adaptation-accelerating-action-and-support_0.pdf.

United Nations. 2019. *Analytical Study on Gender-Responsive Climate Action for the Full and Effective Enjoyment of the Rights of Women: Report of the Office of the United Nations High Commissioner for Human Rights*. <https://digitallibrary.un.org/record/3807177?ln=en#record-files-collapse-header>.

UN Women. 2020. "Gender Equality: Women's Rights in Review 25 Years after Beijing." <https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/Library/Publications/2020/Gender-equality-Womens-rights-in-review-en.pdf>.

UN Women. n.d.a. "Concepts and Definitions." Accessed December 6, 2022. <https://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>.

UN Women. n.d.b. "Senegal." https://africa.unwomen.org/en/where-we-are/west-and-central-africa/senegal_africa#:~:text=SNEEG%20aims%20to%20eliminate%20inequalities,to%20development%20resources%20and%20benefits. Accessed December 7, 2022.

Veda, G., H. Trandafil, M. Cruz Zuniga, J. Edmond, N. Mecklenburg, E. Cloete, D. Delgadillo, and R. Lyness. 2021. *Unpacking Community-Led Development*. New York: Movement for Community-Led Development. https://mcldev.org/wp-content/uploads/2021/04/Unpacking-CLD_Report-1.pdf.

Viitanen, A.P., and C.J. Colvin. 2015. "Lessons Learned: Program Messaging in Gender-Transformative Work with Men and Boys in South Africa." *Global Health Action* 8, no. 1: 1.

WHO (World Health Organization). 2011. *Gender Mainstreaming for Health Managers: A Practical Approach*. Facilitators' guide. <https://www.who.int/publications/i/item/9789241501057>.

Women & Gender Constituency. 2019a. "Strengthening Women's Ancestral and Artisanal Fishery to Preserve Mangrove Natural Resources in the Saloum Delta." Women Engage for a Common Future. <https://www.wecf.org/wp-content/uploads/2019/08/2016-Enda-Graf-Sahel.pdf>.

Women & Gender Constituency. 2019b. "Raising Awareness on Gender Integration in Climate Change Adaptation and Building Community Resilience." Women Engage for a Common Future. <https://www.wecf.org/wp-content/uploads/2019/08/2015-Gender-CC-South-Africa.pdf>.

Women & Gender Constituency. 2019c. "Community Strategies for Climate-Resilient Livelihoods." Women Engage for a Common Future. <https://www.wecf.org/wp-content/uploads/2019/08/2018-Green-Living-Movement.pdf>.

Women for Climate Justice. 2022. "Gender and Climate Resilient Communities Initiative (GCRCI)." <https://gendercc.org.za/wp-content/uploads/2022/02/GENDER-AND-CLIMATE-RESILIENT-COMMUNITIES-INITIATIVE-GCRCI.docx.pdf>.

World Bank. 2009. *Gender in Agriculture*. <https://documents1.worldbank.org/curated/en/799571468340869508/pdf/461620PUB0Box3101OFFICIAL0USE0ONLY1.pdf>.

World Bank. 2015. "International Development Association Project Appraisal Document on a Proposed Credit in the Amount of SDR 94.3 Million to the Republic of Uganda for a Third Northern Uganda Social Action Fund Project (NUSAF 3)." <https://documents1.worldbank.org/curated/en/584381553014128394/pdf/PAD1188-P149965-IDA-R2015-0115-1-Box391433B-OUO-9.pdf>.

World Bank. 2019. "Ethiopia Climate Action through Landscape Management (CALM): Technical Assessment." <https://documents1.worldbank.org/curated/en/154531558461396734/pdf/Final-Technical-Assessment-ETHIOPIA-CLIMATE-ACTION-THROUGH-LANDSCAPE-MANAGEMENT-PROGRAM-FOR-RESULTS-P170384.pdf>.

World Bank, Food and Agriculture Organization of the United Nations, and International Fund for Agricultural Development. 2015. *Gender in Climate-Smart Agriculture: Module 18 for the Gender in Agriculture Sourcebook*. <https://documents1.worldbank.org/curated/en/654451468190785156/pdf/99505-REVISED-Box393228B-PUBLIC-Gender-and-Climate-Smart-AG-WEB-3.pdf>.

World Vision. 2021. *How to Integrate Gender Equality and Social Inclusion in Design, Monitoring and Evaluation: Manual for Trainers and Facilitators*. <https://www.worldvision.org/wp-content/uploads/2021/10/GESI-DME-Training-Manual.pdf>.

WRI (World Resources Institute). n.d. "Principles for Locally Led Adaptation." <https://www.wri.org/initiatives/locally-led-adaptation/principles-locally-led-adaptation>. Accessed January 23, 2022.

ACKNOWLEDGMENTS

The authors extend their gratitude to the Bill & Melinda Gates Foundation for generously funding this research and to members of its Agricultural Development team for their valuable partnership and advice in the development of this work.

We also thank our key informants for their time and candid responses, especially to shape and bring to life the three case studies featured in this working paper.

We would further like to thank Bernadette Arakwiye, Anamika Dutt, Phoebe Girouard Spencer, Sophia Huyer, Nisha Krishnan, Shehnaaz Moosa, Daniel Morchain, Maurice Owiti, and John-Rob Pool for their thoughtful feedback and comments during the peer review process. Rebecca Carter and Cosmas Ochieng's perspectives likewise provided important subject matter expertise, which we deeply appreciated and which strengthened the publication.

Appreciation is also due to WRI's Kathy Schalch for her generous support preparing this draft for peer review, and WRI's Emilia Suarez, Renee Pineda, Shannon Collins, and Romain Warnault for shepherding the editorial and layout process.

We are pleased to acknowledge our institutional strategic partners that provide core funding to WRI: the Netherlands Ministry of Foreign Affairs, the Royal Danish Ministry of Foreign Affairs, and the Swedish International Development Cooperation Agency.

ABOUT THE PROJECT

This working paper is part of a series of four research papers commissioned by the Bill & Melinda Gates Foundation that investigate barriers and enablers of gender-responsive approaches within different aspects of agricultural adaptation—climate smart agriculture, nature-based solutions, financing, and locally-led processes.

ABOUT THE AUTHORS

Stefanie Tye is a Research Associate with WRI's Climate Resilience Practice.
Contact: stye@wri.org

Comfort Hajra Mukasa is the country director for WCCI.
Contact: chajra@climatecenters.org

Bradley Kratzer is an Adaptation Finance Research Analyst with WRI's Climate Resilience Practice.
Contact: bradley.kratzer@wri.org

Godliver Businge is the Director of Operation for WCCI in Uganda.
Contact: gbusinge@climatecenters.org

Rosemary Atieno is the Director of Operation for WCCI in Kenya.
Contact: ratieno@climatecenters.org

Rose Nyarotso Wamalwa is the Business Development Manager for WCCI.
Contact: rwamalwa@climatecenters.org

Ryan O'Connor was a Research Assistant with the Climate Resilience Practice at WRI.
Contact: ryan.oconnor@ndcpartnership.org

Ayushi Trivedi is a Research Associate with the Gender Equity Practice within WRI's Center for Equitable Development.
Contact: ayushi.trivedi@wri.org

Tamara Coger is a Senior Associate at WRI.
Contact: tamara.coger@wri.org

Natalie Elwell is the Director of Gender Equity Practice at WRI.
Contact: natalie.elwell@wri.org

ABOUT WRI

World Resources Institute is a global research organization that turns big ideas into action at the nexus of environment, economic opportunity, and human well-being.

Our challenge

Natural resources are at the foundation of economic opportunity and human well-being. But today, we are depleting Earth's resources at rates that are not sustainable, endangering economies and people's lives. People depend on clean water, fertile land, healthy forests, and a stable climate. Livable cities and clean energy are essential for a sustainable planet. We must address these urgent, global challenges this decade.

Our vision

We envision an equitable and prosperous planet driven by the wise management of natural resources. We aspire to create a world where the actions of government, business, and communities combine to eliminate poverty and sustain the natural environment for all people.

Our approach

COUNT IT

We start with data. We conduct independent research and draw on the latest technology to develop new insights and recommendations. Our rigorous analysis identifies risks, unveils opportunities, and informs smart strategies. We focus our efforts on influential and emerging economies where the future of sustainability will be determined.

CHANGE IT

We use our research to influence government policies, business strategies, and civil society action. We test projects with communities, companies, and government agencies to build a strong evidence base. Then, we work with partners to deliver change on the ground that alleviates poverty and strengthens society. We hold ourselves accountable to ensure our outcomes will be bold and enduring.

SCALE IT

We don't think small. Once tested, we work with partners to adopt and expand our efforts regionally and globally. We engage with decision-makers to carry out our ideas and elevate our impact. We measure success through government and business actions that improve people's lives and sustain a healthy environment.



Copyright 2023 World Resources Institute. This work is licensed under the Creative Commons Attribution 4.0 International License.
To view a copy of the license, visit <http://creativecommons.org/licenses/by/4.0/>