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Agricultural supply chains in sub-Saharan Africa:

The role of businesses in responding to the combined pressure of gender inequality and climate change on women

Cover photo:
In Mozambique, women farmers use drought-resistant seeds to protect their crops from climate change and extreme weather.

Acknowledgements

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The authors want to appreciate that this report could not have been written without the insights and inputs of farmers from Igugono, Lukomo and Senene villages in Singida, Tanzania, and without the facilitation and leadership of CARE Tanzania: Adella Ngusa, Christa Chrizostom, Agnes Francis, Alfei Maseke.

Background

Diageo and CARE International UK's strategic partnership focuses on addressing the root causes of gender inequality in Diageo's supply chain and ensuring that all community level interventions are gender sensitive and target at least 50% of women. Within this framework, based on joint project work (Sightsavers, Syngenta, Serengeti Breweries, Kilimo Trust, CARE Tanzania) undertaken in Diageo's sorghum value chain, we undertook a case study in November 2024 in Singida province in Tanzania to delve deeper into the intersection of climate change and gender.

With this case study, we aim to accelerate a meaningful discussion based on the lived reality of smallholder communities in Singida and similar districts,by allowing their experience to be shared through this report and championing local farmers' empowerment. Based on our findings and wider CARE UK work, including our programmes on gender and climate change, we have further identified recommendations for agri-businesses active in Sub Saharan Africa to consider when developing their strategic thinking on gender and climate-change and building community-based programmes.

Commissioned by Diageo. Written June 2025.



Nasoloazy Claudine works on her field the day after the passage of Cyclone Enawo, Madagascar.
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Introduction

As the climate crisis intensifies, communities around the world are experiencing more extreme storms and floods, rising sea levels, intense heatwaves, and longer and more severe droughts. Like many other regions, for Sub-Saharan Africa (SSA), climate change is a threat multiplier affecting its economies, infrastructure, water and food systems, public health, agriculture, and livelihoods, all of which directly impacts agribusinesses sourcing from the region. The number of floods in Africa has jumped five-fold since the 1990s, and many floods are more extreme. Sudan experienced its most severe flood in 60 years in 2020, with more than 500,000 people displaced and 5.5 million hectares of farmland destroyed.[1] Droughts are becoming more intense as well. A 2019 drought lowered water levels behind the Kariba Dam, leading to US $200 million in lost production in Zimbabwe from power shortages.[2] Agricultural yields have been steadily dropping in poorer SSA countries and are projected to drop further under various climate change scenarios.[3]

The role of women smallholders in sub-Saharan Africa is extremely significant. Women on average account for 40-60% of the agricultural labour force[3] and in rural Tanzania where our case study is based, 98% of women engage in agriculture as an economic activity, compared to 73% of men. Barriers to equitable participation remain high: women farmers face discriminatory market structures and inequitable access to agricultural inputs limiting their productivity and resilience.[4] Women find it harder to access formal financial services, making it difficult to access loans and insurance, and without personal land ownership many of them lack the basis upon which to make long-term sustainable investments. Women also receive less access to farming tools, inputs and climate-smart trainings, whilst still shouldering most household responsibilities. It is estimated that women in Africa spend an average of 4.5 hours on domestic work a day, compared with just over two hours for men.[5]



◀ Women and girls are amongst those most affected by climate change. In Tanzania, these firewood sellers have to walk for nearly a day to collect firewood for their business.

At the same time, we know that women are disproportionately affected by climate change: they are more likely to be injured or die during climate disasters, to experience gender-based violence due to tensions arising as a result of climate impacts, have less time to participate in climate resilience training due to unequal distribution of household duties and restrictions on mobility, and are more vulnerable to the physical and mental health effects that arise from climate related events. Climate change therefore exacerbates these already existing gender inequalities both in terms of the impact it has on women's lives and livelihoods generally, as well as the inability of women to access climate adaptation support and interventions that would allow them to equitably participate in supply chains and enhance their resilience to climate change.

Agribusinesses have a vital role to play in addressing gender gap in agriculture, whilst also taking into account the additional impact of climate change on women and girls in their supply chains. Doing so is crucial to strengthen supply chains for companies, improve food security for communities, increase income for women farmers and build climate resilience. Addressing gender inequality and the impacts of climate change together helps ensure marginalised women and girls are supported to adapt to crises, while simultaneously building more resilient agricultural systems. It is estimated that bringing women farmer's yields up to those of men in the global south would increase overall agricultural output by 2.5-4%.[6]



▲ In Kilimanjaro region, Tanzania, women farmers are impacted by drought and sporadic rainfall as a result of climate change.

Many companies have pledged to reduce carbon emissions, including throughout their supply chains, but efforts to support climate adaptation are less visible. Moreover, agricultural training that support farmers and other actors in and along a value chain are often not designed for the needs of women. Drawing upon findings from desk research together with insights from a case study in Singida, Tanzania, this case study provides recommendations and practical actions for agribusinesses thinking about integrating adaptation to climate change and gender equality into their sourcing strategies.

1 State and trends in adaptation report: Africa https://gca.org/reports/sta21

2 https://blogs.worldbank.org/en/voices/helping-worlds-one-billion-unbanked-women

3 GCA State and Trends in Adaptation Report 2021: Africa

4 UN Women, The gender gap in agricultural productivity in sub-Saharan Africa: Causes, costs and solutions. 2019

5 https://businessfightspoverty.org/wp-content/uploads/2024/03/From_risks_to_rewards_overcoming_the_impacts_of_climate_change_on_women_in_agricultural_supply_chains.pdf

6 https://openknowledge.worldbank.org/server/api/core/bitstreams/9cd7105f-e1c2-52ee-ad27-a63d983a2d2f/content

Empowering women and building climate resilience:

The role of businesses in agricultural supply chains. A case study from the sorghum value chain in Tanzania

Background: Pilot inclusion project in Singida, Tanzania

Funded by Diageo, CARE undertook a 10-month pilot to support inclusion efforts as part of a wider project led by a consortium including Sightsavers, Syngenta and Serengeti Breweries and Kilimo Trust in Tanzania. The wider project aimed to improve market access for sorghum smallholder farmers in Singida Mkalama District, including the establishment of farmer-managed demonstration plots for white sorghum and creating a village-based Farmer Hub network to deliver services to smallholders, allowing farmers to improve their farming practices to increase yields and sales. CARE joined the project to support inclusion efforts in three villages—Lukomo, Senene, and Iguguno - from October 2023 – August 2024, with a focus on female farmers and those with disabilities (male and female). The pilot interventions focused on raising awareness on the importance of equitable inclusion of women and people with disabilities in economic activities in these three villages. An evaluation was then conducted after the 10-month project, to assess the outcomes and progress perceived by community members. The work was rolled out in three phases—community engagement and analysis of existing power and gender dynamics, financial and agri-business training and community dialogues on social norms, and feedback collection.

The pilot:

- Provided agribusiness training to 89 farmers (45 women, 9 people with disabilities, 35 men), emphasising inclusion through household sensitisation and home visits.
- Carried out a Gender and Power Analysis as a precursor to then facilitating 20 gender dialogue sessions with 476 participants, including community influencers
- Raised awareness on women's rights and entitlements regarding land ownership and management, which led to the pilot facilitating paralegal support to the farmers through local partners.
- Trained 26 male champions on how to support women's rights initiatives actively, to challenge sexist behaviors within their circles of influence and advocate for systemic change.

In addition, the CARE team carried out a one-week field visit in November 2024 after pilot activities were completed with the specific aim of collecting qualitative data to better understand the lived experiences and impacts of climate change on participating farmers' farming capacities, economic capacities and well-being.

The pilot showed that previously observed attitudes towards gender roles and persons with disability (lack of capability and ability to handle certain tasks and take responsibility, unable or less able to contribute economically to households) had shifted post interventions.



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CARE supports women farmers impacted by climate change in Tanzania through irrigation rehabilitation and training on water management.

It helped raise awareness of women's rights (especially land ownership), as well as fostering support for more equitable distribution of decision-making power and economic roles. Farmers reported better ability to plan and manage their business resources: farmers now engage in thoughtful, pre-investment planning, evaluating factors such as market demand, cost-benefit ratios, and resource requirements. Some respondents shared that the income gained was almost double their income in the past 2 years.

"Initially I did not allow my wife to engage in any entrepreneurial activities, believing that a woman's role was solely to stay at home and serve her husband; however after the training on women's engagement in income generating activities I provided my wife a capital of 50,000/= TZs that she has used as capital to buy vegetables together with cooking snacks like (vitumbua) to sell them. As a result, our household income has increased significantly and dependence on me has decreased."

Ramadhan Mohamed from Iguguno village, programme participant

The final evaluation of the pilot shows that these social shifts, together with linkages to market and agronomic training, resulted in increase of income for both women and men. These findings suggest continued support for income-generating activities and agricultural training, combined with interventions to change social norms, can further elevate community economic resilience and gender parity in income levels.

Additional findings: How climate change and gender inequality intersect

Supplementary data collection carried out in November 2024 allowed CARE to delve deeper into the intersection of gender and climate change within this particular context. CARE carried out a participatory Climate Vulnerability and Capacity Analysis (CVCA)[7] and interviewed women farmers and community members from the pilot villages. As key findings, the following themes emerged:

Access to agricultural assets, skills and knowledge: Findings from interviews show that women carry out most of the agricultural labour and all domestic responsibilities but remain unrecognised as farmers. Men typically

7 CVCA is a tool used to gather and analyse information on community-level vulnerabilities to and capacities for climate change. It is participatory, done with communities and allows for contextual data collection.

control sales and related income, leaving women with little decision-making power. The invisibility of women farmers and the fact that they are not included in supply chains put them at risks of falling even further behind than they already are in their ability to farm sustainably and adapt to climate change. This threatens the quantity and quality of harvests, impacting on security of food, income and supply of raw materials.



▲ Onolina is a farmer and mother of five. She says increased education around farming has helped change attitudes towards women in her village.

Women also expressed that the limited presence and capacity of agricultural extension officers, poor infrastructure (e.g. irrigation systems) and lack of technical training were all elements contributing to hindering women's ability to farm effectively and adapt to climate risks. Finally, discussions about climate change within households are limited, largely due to perceived complexity and uncertainty around the topic, underscoring the need for better tools and support for dialogue.

From an agribusiness company perspective, there is the risk of not including women farmers with productive potential in supply chains, thereby reducing yields. There is a further risk of exacerbating gender inequalities through excluding women. As the pilot activities showed, offering tailored training and capacity building for women farmers to empower them with the assets, skills and knowledge they need to generate income can be very effective. In addition, support especially to women farmers to adapt their farming practices to the impact of climate change and working with local government to ensure all farmers have access to climate information and extension services would further extend the support agribusinesses could provide to communities in a more inclusive manner.

Social and gender-based norms and constraints: The Gender and Power Analysis conducted during the pilot, as well as the supplementary interviews in Singida, revealed that the normative starting point remains for women to be expected to prioritise household and caring duties over economic engagement, arrangements that are typical in patriarchal societies. Women were perceived as incapable of financial decision-making or leadership, and people with disabilities were seen as economically unproductive, exacerbating systemic barriers such as restricted access to inputs, lack of livelihood and income diversification opportunities, limited decision-making power, and no access to land. Furthermore, interviews with women



▲ Nafika has noticed a significant reduction in rains over recent years, which has made her crop yield less predictable and created insecurity in her farming business.

revealed that during a climate-related crisis (for instance drought), women face additional psychological stress as men migrate and leave them behind. In these situations, they often rely on precarious labour or food bartering to support families.

The community dialogue sessions delivered through the 10-month pilot showed that despite entrenched social norms, targeted interventions can achieve positive attitude shifts and improvements in access to opportunities, e.g. women starting to participate actively in decision-making over land use and management. Diageo and CARE's experience shows that investments in actively engaging the communities from which they source – including men and boys - in dialogues on gender and inclusion– not only raises awareness of prevailing and harmful social norms but can also in the longer term contribute to more gender equal households and communities which will also benefit long-term climate resilience. Changing long held beliefs to address these barriers will not happen overnight, but the pilot shows that shifts in thinking will contribute to immediate short-term well-being and relational gains and incremental generational change about gender norms.

Gender-based violence: Interviews with women farmers and data from past project in Singida showed that gender-based violence remains prevalent in these sourcing communities. The impacts of climate change are further predicted to exacerbate violence against women: agriculture loss, water scarcity and housing insecurity are triggering increased violence against women[8]. Gender based violence affects women's physical and mental health, and capacity to participate freely in economic and political activities for fear of violence.

Climate adaptation and natural resource management activities (such as climate smart agriculture training, landscape restoration, tree planting, etc.) help build the resilience of affected communities to address some of the climate induced drivers of gender-based violence. However, as found in the pilot in Singida and explained above, active work and dialogue with community to raise awareness of gender and social norms that perpetuate women's inequality including unequal distribution of unpaid care, domestic work and the normalisation of violence against women and girls is equally key to enable women's participation and leadership. The findings from Singida show that such work can help shift

8 UNFPA, Press Release. Domestic Violence in Sub-Saharan Africa will triple by 2060 due to extreme heat epidemic and stalling development. 05 September 2024.



◀ Happy farms maize, soya and beans. She is a VSLA member and has used funds to buy fertilizers for her crops.

behaviours: 92.4% of respondents reported that they are not experiencing gender-based violence (GBV) as compared to the situation one year before.

Women's economic empowerment: Women farmers (and women in farming households) often lack access to financial services (credit, formal savings), financial capital and the business skills training required to run both on-farm or off-farm enterprises. Supporting women to have financial stability is critical to helping them build self-esteem, have their voices heard and generate income for themselves, their businesses, their families and their communities. Women's economic empowerment helps communities thrive and weather crises: During emergencies, including climate-related crises, savings group[9] members (77% of whom are women) are 75-85% more likely to have savings to draw upon. They have a 12-fold increase in savings and as much as a 60% increase in food security[10].

Findings from Singida further showed that agri-business and financial literacy training positively impacted women's productivity and entrepreneurial capacities. Women interviewed shared that they felt more able and confident to sell their products at the market, knew the steps to start small businesses and how to register as women-farmer groups.

For agribusinesses and their suppliers, the importance of resilience of communities from which they source goes beyond the stability of the immediate supply chain. Companies working with their sourcing communities can therefore consider building women's financial security through financial literacy and agri-business trainings and establishing Village Saving and Loans (VSLA) groups. Similar to helping agri-businesses with market linkages, the support could also include linking groups to agricultural extension services and building their awareness on how to access these services, so that women can make appropriate agricultural investment decisions based on likely climate impacts. In addition, they can work with financial service providers to offer tailored products to women based on their specific needs such as concessional loans or grants to invest in climate smart inputs or digital micro insurance to protect assets. For example, in Singida we found that the government utilizes Community Development Officers (CDOs) to connect farmer groups with access to loans and agricultural inputs, but women farmers had less awareness on how to form these groups and connect to wider services.

9 Savings groups are a form of microfinance involving small groups of 15 to 25 members that have well-defined procedures, allowing members to make basic rules about saving and borrowing and operating in transparent and democratic ways. This leads to a secure system that encourages responsible use of the savings, borrowing and social insurance services offered by the group.

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Recommendations for business to strengthen their supply chain and community interventions on both gender equality and climate

The role of businesses to tackle gender inequality and climate change together

Without taking action to tackle gender inequality and climate change together, agribusiness companies risk seeing a drop in the production and productivity of essential commodities due to increasing difficulties for farmers to farm, and a lack of community-level coping strategies to enable communities to be more resilient in the face of changes detrimental to their well-being, health and productive capacities.[11] Actions to prepare for and adjust to effects of climate change often are under-researched and resourced, and can further suffer from a low sense of urgency from stakeholders. This is even more true for actions that intentionally integrate gender considerations into adaptation solutions.

The below recommendations emerge from Diageo and CARE's experience supporting smallholder farmers in agricultural supply chains in Africa and draw upon best practices we have observed in our wider work on gender and climate. As our joint work and the project in Tanzania on which our case study is based are focused on the lower end of the supply chain, we are restricting our recommendations to this area only. There are additional, wider recommendations for private sector actors along the value chain in other literature and studies such as the WOW Action Toolkit - Women and the net zero economy.

Recommendations

To ensure that gender and climate considerations are well integrated and jointly addressed in actions supporting sourcing communities and farmers, especially women farmers, private sector actors can consider the following:

Data driven programming and decision-making

Any intervention or action planned should be based on a clear understanding of the needs of the target group. For programming and decisions relating to women in agricultural supply chains and their vulnerability to climate change, companies can partner with experts to conduct sex, age and disability disaggregated data analysis and needs assessments to understand what challenges women and people with disabilities face and what their needs are. The following tools and actions can help companies craft the right solution:

- Carry out a *Climate Vulnerability and Capacity Analysis (CVCA)*: This participatory climate analysis tool is used to gather and analyse data and information on community-level vulnerabilities to and capacities for climate change and to identify actions that support communities in increasing their resilience to climate change. It can be adapted to supply chain participants and contexts.

11 https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/materials/KMBusiness.pdf



▲ In Mozambique, women farmers use drought-resistant seeds to protect their crops from climate change and extreme weather.

- Carry out a *supply/value chain gender analysis*: A gendered value chain analysis helps understand the roles and power dynamics between the various stakeholders and women farmers. Diageo and CARE carried out a gender value chain analysis in the barley value chain in Ethiopia in 2019 – see here.
- Put in place a participatory and inclusive monitoring framework to ensure you can measure progress and adapt as necessary to improve success rates. These include quantitative indicators such as number trained in equitable and climate resilient production, or qualitative feedback such as community satisfaction scores.
- Make use of platforms such as Sedex to gain supply chain visibility, assess your risks through access to suppliers' data and ESG performance and report on ESG impact and supply chain data (such as gender equality) across your supply chain.

Targeted actions to include women

Based on analyses conducted, companies can consider which standalone activities targeted at improving gender equality and women's economic empowerment whilst taking into account appropriate climate considerations are suitable for their supply chain.

- Make use of tools such as Gender and Power Analysis and subsequent Community Dialogues which engage the whole community in raising awareness of and addressing social and gender norms limiting women's participation in economic, household and community decision-making. Include activities that help women to increase food security and resilience to climate related shocks, such as:
  - Help setting up kitchen gardens and train participants on fertilisation, management, and harvesting, all adapted to local conditions

- Diversifying consumption and improve nutrition by providing training on the growing of climate resilient crops with high nutritional value.
- Train farmers on better storage and processing skills.

- Through approaches such as Farmer Field Business Schools, deliver training on seasonal production and climate smart agricultural skills. Ensure (see first bullet above) that trainings are inclusive by design and make use of appropriate tools to reduce gender based barriers to women's participation and success
- Increase women's financial resilience by supporting women and their communities with micro-savings solutions such as Village Savings and Loans Associations (VSLAs) and then via linking with financial service providers to offer tailored financial products to women.

Invest in innovative climate-adaptation activities to provide co-benefits

- Develop water management schemes and climate smart agriculture solutions on farm. Support planting economic trees around edges of farms to offer a potential second income.
- Support locally led adaptation and nature based-solutions such as planting indigenous crop varieties that are heat-tolerant and/or drought tolerant.
- Champion ecosystem-based adaptation: restoration of soil, introduce rainwater harvesting techniques, protection for crops from wind/rain and intercropping with plants that provide additional shade for the crops to protect them against high temps whilst also sequestering carbon.
- Provide training on early warning systems and disaster risk management, and local climate services available for farmers.

Collaboration and partnerships for greater impact

Collaboration on gender transformative programmes tackling agricultural gender gaps and climate change.



▲ Storage and processing training can help farmers to maintain food production despite climate impacts.

- With company budgets often insufficient to address all challenges, consider collaboration on gender transformative economic, environmental and climate activities which falls within the pre-competitive corporate partnerships space. On community and farming support programming, share best practices, materials and approaches and pool funds to be able to take support to smallholder farmers to scale across similar value chains.
- Collaborate with not-for-profit actors, local governments, the civil society and multilateral organisations and financial organisations with aligned goals, such as for the 10-month pilot example used here – Diageo, CARE Tanzania, CARE UK, Kilimo Trust, Serengeti Breweries, Sightsavers, Syngenta.

Advocate for solutions to the challenges faced by women and other groups in sourcing regions vulnerable to climate change

- Work with local women's rights organisations, service providers and local governments to ensure information and services about climate-change are accessible by smallholders. This is especially important to scale impact, as it's difficult for a single actor to transform a landscape.
- Use corporate influence to shape policy and funding for national climate-change preparedness plans integrating economic empowerment for women and people with disabilities.

Next steps

Diageo and CARE will use the findings from this case study and the lessons learned from their programmes to keep advancing the conversation and actions to tackle the intersecting challenges of climate change and gender inequality.



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