

PARTICIPATION OF WOMEN IN GHANA'S GREEN ECONOMY:

Capturing the Individualized Stories of the Challenges Women encounter in Participating in Climate-Smart Enterprises

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LIST OF ABBREVIATIONS

CIF	Climate Investment Fund
FDA	Food and Drugs Authority
FIP	Forest Investment Programme
GCF	Green Climate Fund
GCIC	Ghana Climate Innovation Centre
GEF	Global Environmental Fund
GSA	Ghana Standards Authority
MSME	Micro, Small and Medium Enterprises
NEIP	National Entrepreneurship and Innovation Programme
PDPEA	Problem-Driven Political Economy Analysis
SBP	Sustainable Banking Principle
SME	Small and Medium Enterprises
SREP	Scaling-Up Renewable Energy Programme
STEM	Science, Technology, Engineering and Mathematics
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

KEY MESSAGES

- Women are disproportionately affected by climate change because they work in vulnerable sectors and are exposed to severe forms of the impact of climate change. However, the green economy offers opportunities to address the systemic and institutional barriers to women's effective participation in the economy.
- Increased female education particularly in the area of STEM predisposes women to the critical skills needed to work and lead businesses in the green economy. Additionally, enhanced gender mainstreaming mechanisms by international and local climate finance agencies combined with the growing financial products targeted at women-led businesses could potentially minimize the gender inequalities in access to finance. The gender difference in sustainable consumption and the need for improved human dignity could push more women into the green business sector.
- Despite the opportunities available for women in the green economy, women are hugely under-represented in the green business sector. Pre-existing challenges such as traditional and social perceptions of gender roles, inequalities in access to finance, and low awareness and lack of information about the benefits of the green economy to women could reinforce the glass ceiling, and make it difficult for women to effectively participate in the green economy. Furthermore, the absence of a clear government policy or programme to support women in green businesses compounds the existing regulatory challenges green businesses face in the market.
- Women can prosper through climate change, however, significant challenges lie ahead. Overcoming the challenges requires clear policy actions that identify the obstacles to women's entrepreneurial development in the green economy. The government must collaborate with private incubation hubs to create support platforms where female entrepreneurs can receive mentorship and career guidance on feasible ways to run sustainable green businesses.

1.0. BACKGROUND - CLIMATE CHANGE, GREEN BUSINESSES AND WOMEN

Climate change is affecting every facet of the social and economic life of many people, particularly in developing countries like Ghana. Across the world, climate change is accelerating at an increasing speed, and the attendant disasters have intensified over the last decade, pushing many people into extreme poverty. Rising sea levels, drought, unpredictable rainfall patterns, and severe flooding promise to amplify the challenges of adapting to climate change for the most vulnerable countries and populations, if green innovations are not scaled-up and countries speed up the implementation of their mitigation and adaptation programmes. In Ghana, climate change could push about one million more people into poverty and the incomes could fall by 40 percent if the green solutions are not increased in the consumption and production pathways¹. In addition, more than a third of the population work and relies heavily on rain-fed agriculture as the main source of income and livelihood². Climate change is deepening the conditions for drought and production loss, which could increase the vulnerability of the majority of the rural population. Already, more than three million people are exposed to varying forms of extreme and severe hunger across the country³. This staggering state of Ghana's exposure to climate change makes it increasingly important for the government to accelerate climate action programmes to minimize the exposure of many vulnerable people.

However, the impacts are unevenly distributed between men and women. Many women work in the agricultural and informal sectors of the economy, which are mostly high-risk sectors exposed to the impact of climate change. For instance, women constitute more than half of the agriculture population⁴, and the number of women (43.2 percent) employed in sales and service work is more than three times the number of men (12.4 percent)⁵. These jobs tend to be at the micro level with little income and limited opportunities for enhanced welfare and social mobility. As a result, women are highly exposed and are likely to experience the impact of climate change on livelihoods. Already, women face severe exclusion from key assets to economic empowerment such as land and other high-paying sectors due to cultural biases, the absence of strong policies that support upscaling women-led initiatives, and technical and financial barriers, making it difficult for women to participate competitively with men. For instance, about 39 percent of female farmers adopted improved crop varieties and other inputs like fertilizers that are climate resilient compared to 59 percent of men, and men tend to have more information about climate change than women do⁶.

¹ Ghana Can Turn Climate Challenges into Opportunities for Resilient and Sustainable Growth, says new World Bank Group Report.

² [statsghana.gov.gh/gssmain/fileUpload/pressrelease/2021 PHC General Report Vol 3E_Economic Activity.pdf](https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/2021%20PHC%20General%20Report%20Vol%203E_Economic%20Activity.pdf)

³ [statsghana.gov.gh/gssmain/fileUpload/pressrelease/Comprehensive Food Security and Vulnerability Analysis \(CFSVA\).pdf](https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/Comprehensive%20Food%20Security%20and%20Vulnerability%20Analysis%20(CFSVA).pdf)

⁴ [statsghana.gov.gh/gssmain/fileUpload/pressrelease/Final Report 11 11 2020 printed version.pdf](https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/Final%20Report%2011%2011%202020%20printed%20version.pdf)

⁵ POPULATION OF REGIONS AND DISTRICTS REPORT (statsghana.gov.gh)

⁶ https://gca.org/wp-content/uploads/2021/10/GCA_STA21_Sect3_GENDER.pdf

The above data implies that men have more adaptive capacities than women, that is, male farmers are likely to better adapt to climate change than females. In addition, about 37 percent of donor projects on climate adaptation implemented between 2013 and 2016 were not gender-sensitive, and none of the projects over the period had gender as a core objective⁷. Climate change could amplify the existing barriers to women's full participation in economic activities, and deprive them of the benefits of the green economy.

So far, only 6 percent of the wealthy population in Ghana are women⁸. In addition, women receive about 37 percent less pay compared to men⁹ and are twice as likely to be in paid employment¹⁰. The Ghana Statistical Service reports that almost 8 out of every 10 females in Ghana work in vulnerable employment (lack decent employment conditions, lack social security, and receive low income) compared to 6 out of every 10 men working in vulnerable employment¹¹.

Despite the inequalities against women, they remain key agents of development in Ghana¹². Women are at the centre of food production, energy consumption, and trade activities, which are relevant sectors of the economy. Women are responsible for producing about 70 percent of subsistence food crops, which form a large share of overall food production in Ghana. They work in family-based farms as unpaid workers or household heads operating small-scale agricultural activities including animal rearing. Women constitute almost a third of the 2.2 million agricultural holders (people who make major decisions about resource use and exercise management control over agricultural holdings)¹³. This indicates the relatively high influence of women in the control of agricultural activities in Ghana. In addition, women are high consumers of biomass energy resources, which is a third (33.5 percent) of total energy consumption in Ghana¹⁴. Most Women rely on biomass for cooking and other domestic activities. Women constitute almost 40 percent of the population engaged in non-household businesses, and about 49 percent of the people engaged in micro-sized businesses, and more than a third of large, medium, and small size businesses in Ghana¹⁵.

The recent Mastercard Women in Entrepreneurship ranked Ghana as the second highest country in Africa, where women are making significant contributions to the economy¹⁶. These indicate the immense contribution of women to the Ghanaian economy, and thus, deliberate policies are needed to ensure that women-led businesses can evolve, survive, and benefit from the green economy. In addition, women over the years have demonstrated improved capacity in poverty reduction. The Poverty Profile Report by the Ghana Statistical Service indicates that women-led households recorded a consistent decline in poverty compared to men. Between 2005 and 2017, the number of people living below the poverty line in female-led households was about 17.6 percent compared to about 25.8 percent in male-led households¹⁷ - which means that there were more poor people in male-led households than women-led households.

⁷ Care Climate Justice Centre. (2020). Ghana Climate Adaptation Finance Report. List of Content (careclimatechange.org)

⁸ Ghana: extreme inequality in numbers | Oxfam International

⁹ AHIES executive summary 1 (3_24PM).pdf (statsghana.gov.gh)

¹⁰ POPULATION OF REGIONS AND DISTRICTS REPORT (statsghana.gov.gh)

¹¹ POPULATION OF REGIONS AND DISTRICTS REPORT (statsghana.gov.gh)

¹² undp-ndcsp-ghana-gender-analysis-final2.pdf

¹³ [statsghana.gov.gh/gssmain/fileUpload/pressrelease/Final Report 11 11 2020 printed version.pdf](https://statsghana.gov.gh/gssmain/fileUpload/pressrelease/Final%20Report%2011%2011%202020%20printed%20version.pdf)

¹⁴ Energy Statistics (energycom.gov.gh)

¹⁵ SUMMARY REPORT (statsghana.gov.gh)

¹⁶ The Mastercard Index of Women Entrepreneurs

¹⁷ Poverty Profile Report_2005 - 2017.pdf (statsghana.gov.gh)

In addition, the reduction in the number of poor people in female-led households was 25 times higher (2.5 percentage points) compared to male-led households¹⁸ (0.1 percentage points) over the last decade, indicating a stagnation in poverty reduction in male-led households. This implies that investment in women-led initiatives has a more transformative effect on welfare and poverty reduction.

The green economy provides significant opportunities to enhance women's welfare and address the existing inequalities. The green economy is designed to provide sustainable jobs that improve welfare, and significantly reduce environmental and ecological risk¹⁹. A transition to a green and circular economy could potentially control the pace of climate change through mitigation and adaptation measures. This will contribute to increasing women's resilience to the risk of climate change. In addition, the green economy will create more fair and equitable jobs. Currently, the demand for green jobs has outstripped supply, and growing at about 8 percent every year since 2015²⁰. Between 2018 and 2023, the demand for green skills (9.5 percent per year) was almost double the existing growth of green talent (5.4 percent per year) within the same period²¹. The growing parity in terms of education access at all levels of education, particularly in the area of STEM indicates that a growing number of females will have adequate education and training, which makes them readily available for green jobs. Through improved education and training, women will be empowered to earn high incomes, which contributes to improved welfare. The World Bank estimates that addressing gender gaps in the green economy in terms of access to productive assets could increase women's farming yields by up to 30 percent²². Furthermore, increased access to renewable energy technologies such as solar energy could open up significant local market opportunities for women who hitherto had limited access to electricity.

Investment in women-led green businesses has been overlooked and least understood by policymakers. The impact of women in the linear economy has been highly documented, however, their potential to shape the green economy remains untapped. Women are best positioned in traditional sectors in the green transition such as climate-smart agriculture, and have identified special niches in waste management, solar technologies, and clean mobility projects in Ghana. Fostering gender diversity in a fast-changing green economy improves the availability of skilled labour for the transition and supports women to take up leadership roles in the green economy, which enables women's voices to be highly represented in issues related to sustainability and diversity, given that women are already under-represented in key sectors such as renewable energy²³. Unfortunately, there are no deliberate policies to increase the participation of women in the green economy, partly due to a lack of understanding of the gender-differentiated impacts of climate change on businesses, and the reforms required to enhance the adaptive capacities of women. Addressing the gender leadership gaps in the green economy requires deliberate reforms across all policies and sectors in Ghana's climate action. More research work is needed to understand and inform policy reforms to catalyze women-led initiatives in the green economy in Ghana.

¹⁹ International Labour Organization. (2015). Gender Equality and Green Jobs. [wcms_360572.pdf \(ilo.org\)](#)

²⁰ Global Green Skills Report 2023 ([linkedin.com](#))

²¹ Global Green Skills Report 2023 ([linkedin.com](#))

²² Green jobs for women can combat the climate crisis and boost equality ([worldbank.org](#))

²³ Renewable energy: A gender perspective ([irena.org](#))

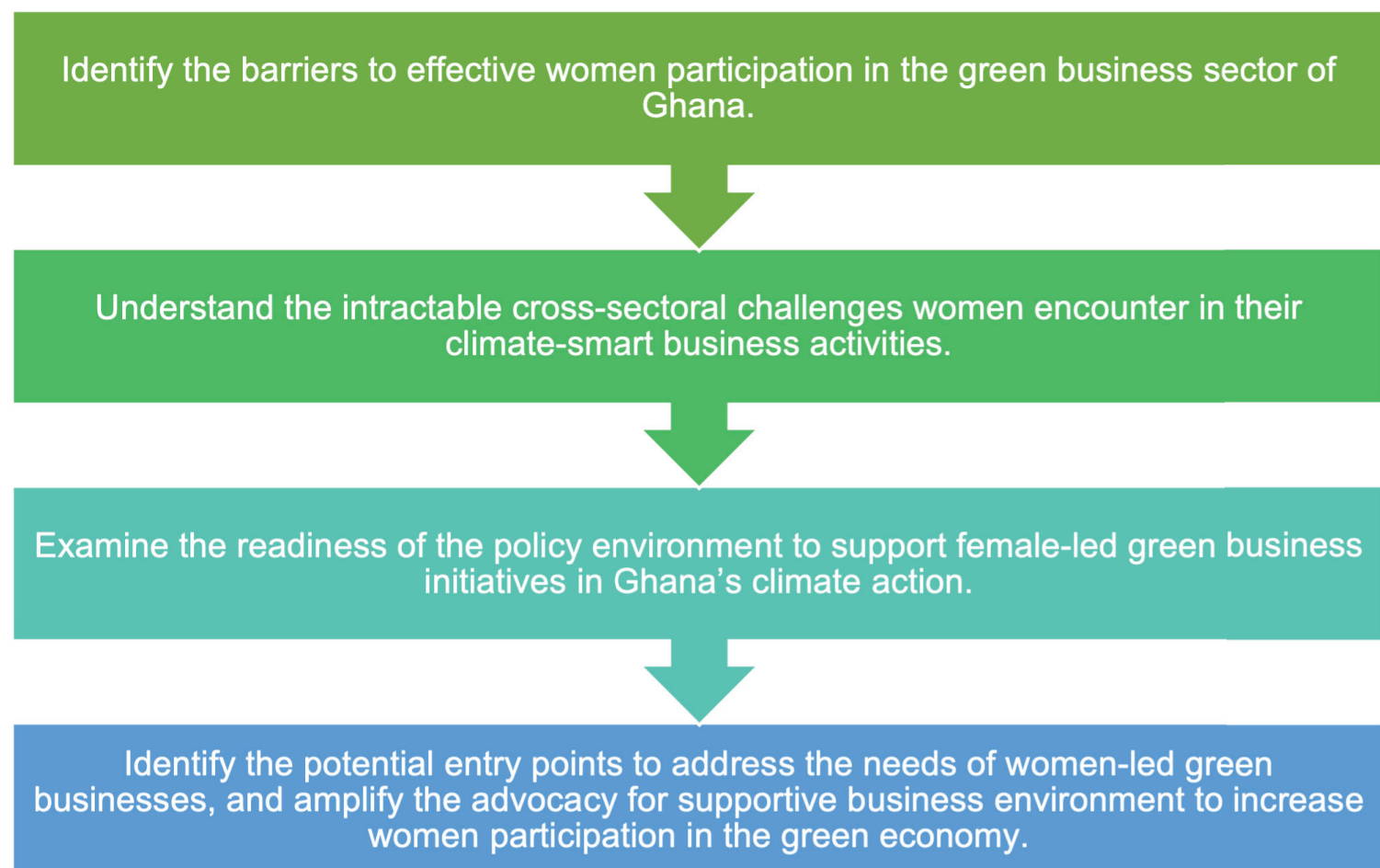
Against this background, this policy paper seeks to assess the potential and barriers to women-led green business initiatives in Ghana by capturing the challenges of women-led initiatives contributing to Ghana's climate action. The paper is intended to contribute to the advocacy for deliberate policies to support women's participation in the green economy.

1.1 OBJECTIVES AND RELEVANCE OF THE PAPER

Empowering women-led green initiatives is the smartest way to ensure that the green transition leaves nobody behind. Several developed economies are leveraging climate change to respond positively to systemic barriers that make it difficult for female-led businesses to upscale. Gender-sensitive climate policies and programmes are effective ways to ensure that women are decision-makers and business leaders in the green transition. Nonetheless, this requires an overall country strategy that understands the needs of women-led climate-smart enterprises, identifies gender-differentiated impacts of climate change, and makes deliberate policies to mainstream gender needs in climate action²⁴.

The overarching aim of this paper is to understand the barriers to successful female participation in Ghana's green economy, and the entry points to policy reforms that address the needs of women-led businesses in climate action. The key objectives of the paper are represented in Figure 1;

Figure 1: Objectives of the Paper



²⁴Supporting Women's Empowerment through Green Policies and Finance (oecd-ilibrary.org)

The key framing issues are;

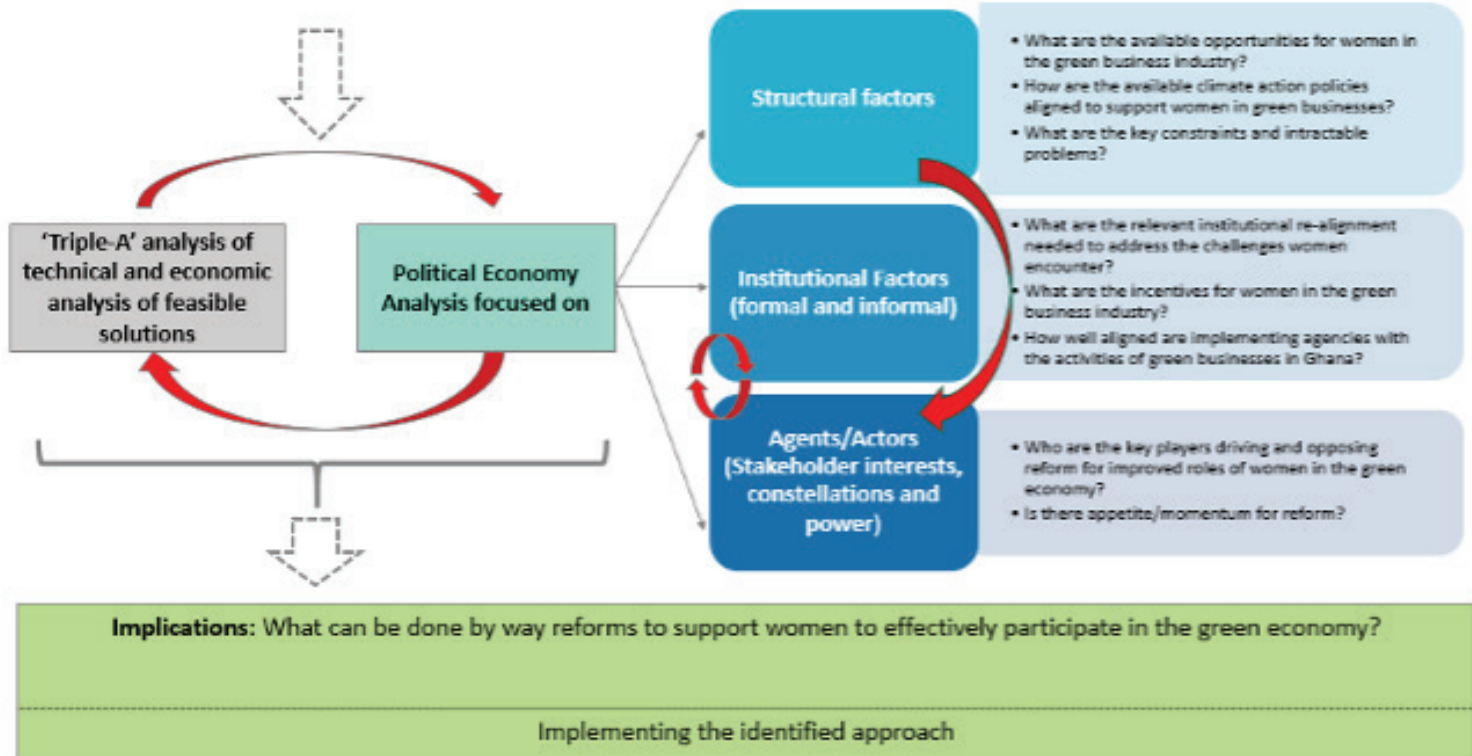
1. What are the key barriers to women's participation in the green economy in Ghana?
2. What are the intractable sectoral issues holding back the upscaling of women-led green initiatives?
3. Is Ghana's climate policy and business environment open to support women-led green initiatives? What are the gaps in best practices for promoting female participation in the green economy?
4. What are the available entry points to address the needs of women in green businesses, and who are the key stakeholders to support the advocacy?

1.2 APPROACH

Mainstreaming gender-differentiated needs of female-led green businesses occurs at an intersection between policymaking and the political economy. A Problem-Driven Political Economy Analysis (PDPEA) was adopted to conduct the study. The PDPEA integrates a technical analysis of effective policies that support women entrepreneurs, and an analysis of the institutional and policy entry points to promote women-led initiatives in the green business sector. The PDPEA was complemented by human-interest stories that captures the challenges of some selected female-led green businesses in Ghana. This is intended to highlight the contributions of women to Ghana's climate action and amplify the need for reforms that support such initiatives. A Triple 'A' Analysis was used to understand the key stakeholders to engage to amplify the needs of green businesses in a consultative dialogue.

Figure 2: Problem-Driven Political Economy Analysis

Problem identification: How can women participate effectively in the green business sector in Ghana?



Source: IMANI CPE.

2. WHY ARE MORE WOMEN MOVING TO GREEN BUSINESSES & AND PRODUCTS? - UNDERSTANDING THE DRIVERS OF WOMEN PARTICIPATION IN THE GREEN ECONOMY.

Across the world, women's entrepreneurship is recognized as critical to the sustenance of economies, especially in developing countries like Ghana. However, the increased participation of women in the economy has not delivered improved welfare and sustainable jobs. Many women work in vulnerable jobs where incomes are low and offer limited opportunities to move higher in the chain of business they operate, leaving them at the micro level with less representation and influence in decision-making. Gender inequality can be attributed to the low level of education of women, limited access to productive assets, difficulties in accessing finance, and pervasive cultural biases that combine with institutionalized barriers to women's economic freedom. Even though these inequalities continue to persist, women have made significant strides to lead climate change innovation and leverage local market solutions to bring about change in their communities. The main drivers of women in green business are discussed below.

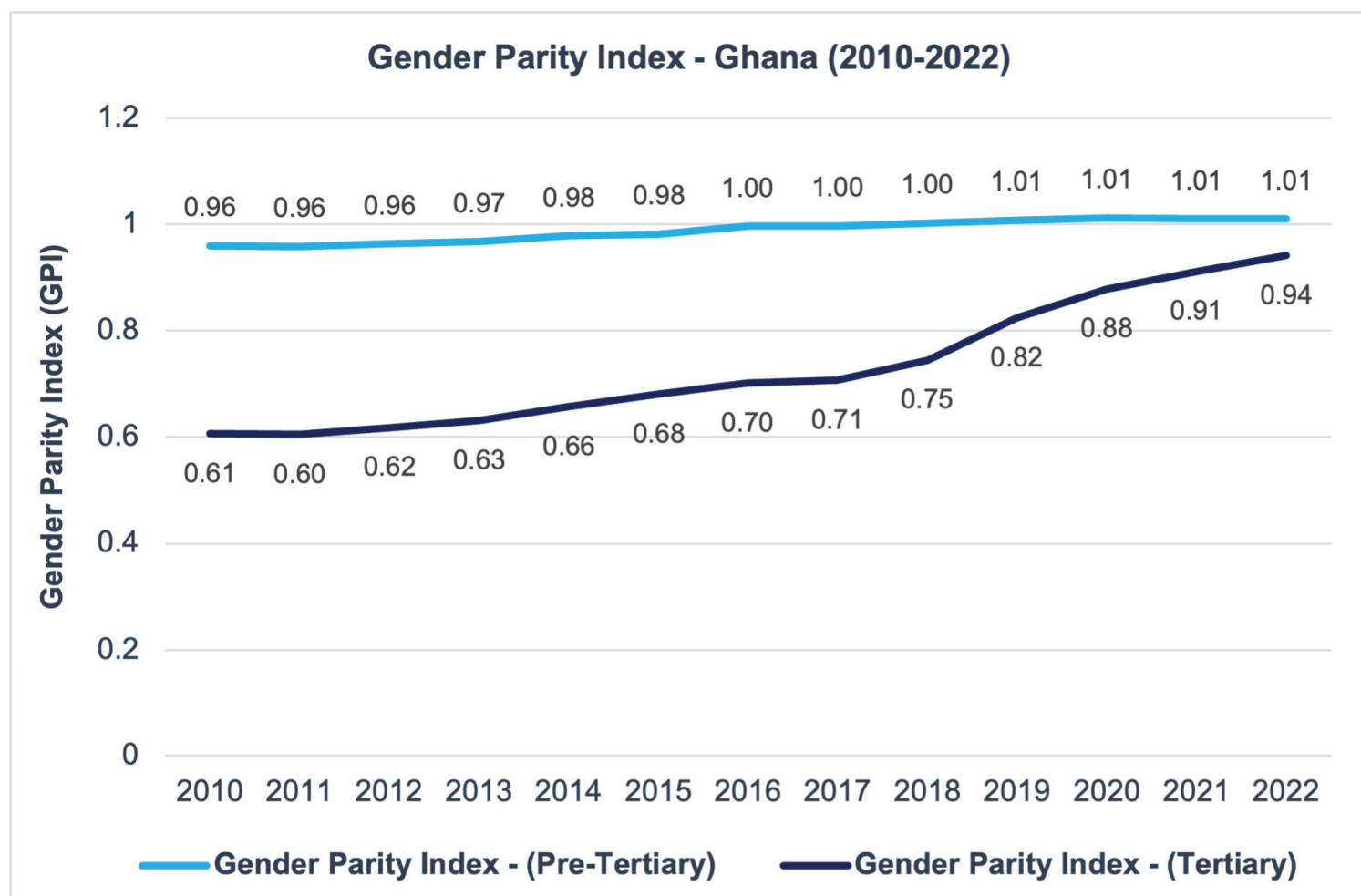
2.1 More girls and women are going to school

Access to education and information is one of the critical aspects of preparing women for green jobs that accompany the green economy. Over the last two decades, significant efforts have been directed at closing the gender gap between boys and girls across all levels of education. Between 2000 and 2020, Ghana's gender parity index at the pre-tertiary levels has consistently increased and reached one (1)²⁵, which indicates that girls have the same opportunities to be in school as boys. In addition, the number of girls in tertiary education has also increased significantly, evidenced by an increase in the gender parity index from 0.60 in 2011 to 0.94 in 2022²⁶ (See Fig. 3). This indicates that girls have improved advantages to pursue higher education. Increased access to education means that women have the opportunity to acquire at least one of the skills needed to work in the green industry. Furthermore, the increased emphasis on science, technology, engineering, and mathematics (STEM) education is critical to ensure that women have the requisite skills to improve their competencies in the green industry. Currently, the government of Ghana has launched a STEM programme and established a female STEM high school initiative indicating that a younger generation of women are being upskilled to take up higher roles in the green economy.

²⁵ School enrollment, primary and secondary (gross), gender parity index (GPI) - Ghana | Data (worldbank.org)

²⁶ School enrollment, tertiary (gross), gender parity index (GPI) - Ghana | Data (worldbank.org)

Figure 3: Gender Parity Index Ghana - Pre-Tertiary and Tertiary Education in Ghana



Data: World Bank, Chart: IMANI CPE

Improved education and skills do not only offer women an opportunity to acquire green skills, but women can leverage their education to become green entrepreneurs, managing their businesses and increasing the participation of women at the highest level of management.

More women are needed to take up skills in STEM to ensure that they can participate in high-earning roles in the green economy²⁷. The recent UNESCO report indicates that fewer women are graduating in science, engineering, computer science, and mathematics, key skills required in the green economy. In addition, only 35 percent of STEM students in higher education are women²⁸. For instance, less than 20 percent of women are graduating in engineering in Sub-Saharan Africa²⁹. In Ghana, UNESCO reports that less than a third (27.1 percent) and less than 20 percent of women are graduating in science and engineering respectively³⁰. Similarly, other industrialized countries have also recorded a slow uptake of STEM by women.

²⁷ UNESCO science report: towards 2030 - UNESCO Digital Library

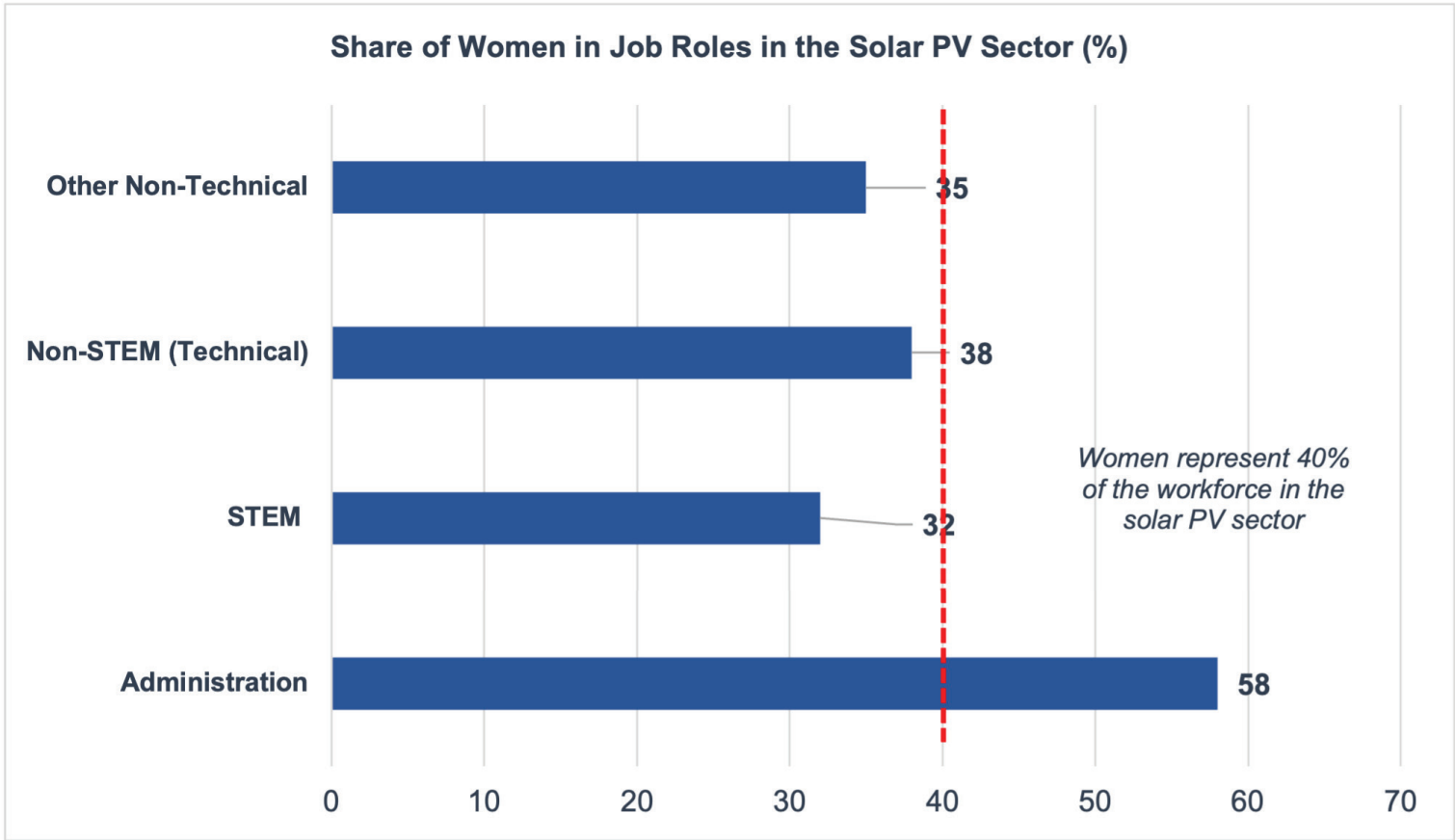
²⁸ Cracking the code: girls' and women's education in science, technology, engineering and mathematics (STEM) - UNESCO Digital Library

²⁹ UNESCO science report: towards 2030 - UNESCO Digital Library

³⁰ UNESCO science report: towards 2030 - UNESCO Digital Library

For instance, Switzerland recorded only a third (31 percent) of women graduating in science and 14 percent of women graduating in engineering³¹ in 2013. As a result of these skills gaps, women continue to be under-represented in green jobs. For example, about a third (32 percent) of the workforce in the renewable energy sector are women³². While this demonstrates a strong footing of women in green jobs, they are highly represented in the administrative and non-STEM activities in the green industry. Women constitute about 40 percent of the entire workforce in the solar PV sector, however, 58 percent of them are engaged in administrative activities and 32 percent of them are engaged in STEM roles in the solar PV sector³³ (See Figure 4). Women represent about 32 percent of the workforce in renewable energy, yet, 45 percent are engaged in administrative roles, and less than a third are involved in STEM jobs in the sector³⁴ (See Figure 5). These imply that upskilling women to be able to take up more STEM roles is the surest way to deepen women's participation in the green economy.

Figure 4: Share of Women in the Solar PV Market



Data: IRENA, Chart: IMANI CPE

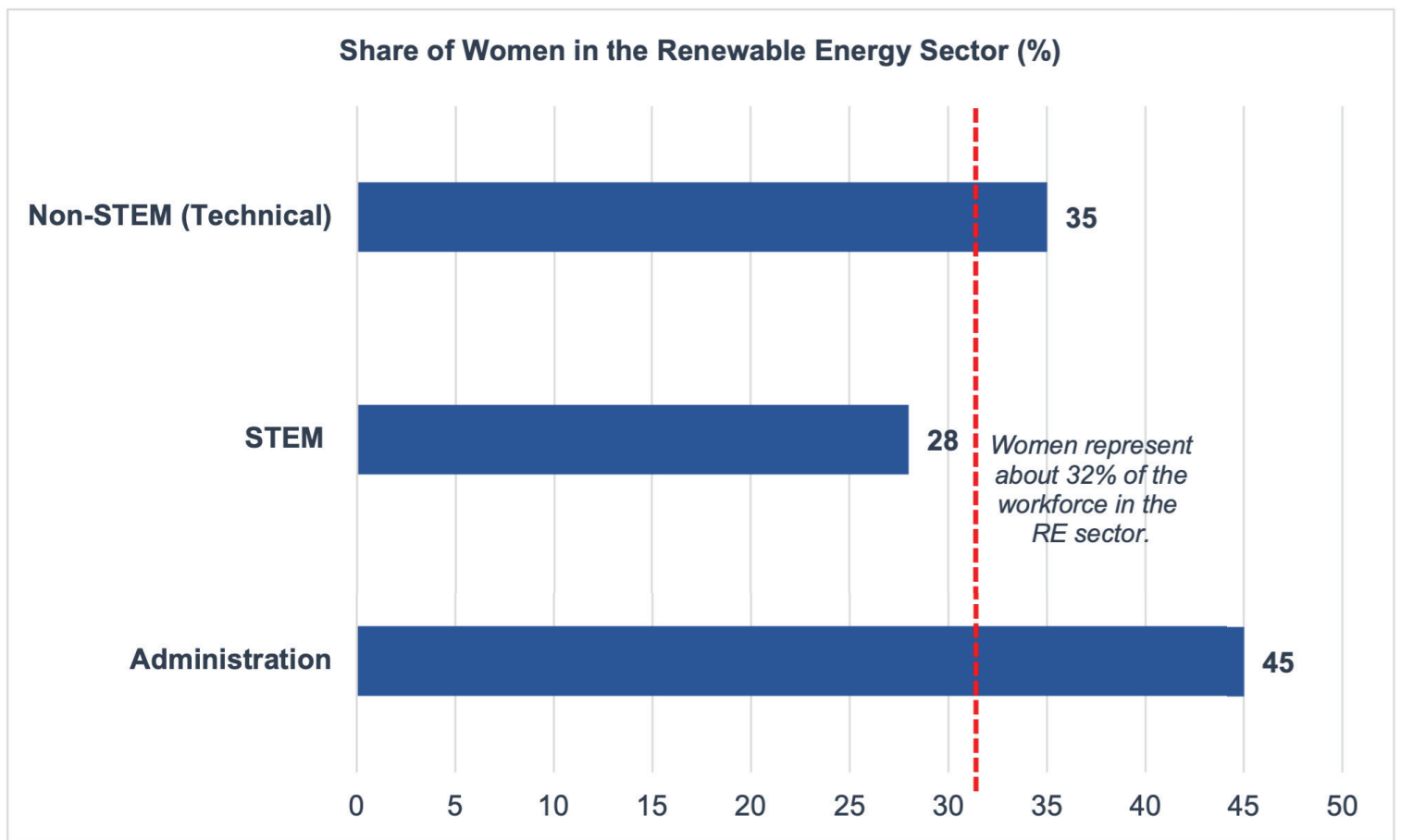
³¹ UNESCO science report: towards 2030 - UNESCO Digital Library

³² Renewable energy: A gender perspective (irena.org)

³³ Solar PV: A gender perspective (irena.org)

³⁴ Renewable energy: A gender perspective (irena.org)

Figure 5: Share of Women’s Role in the Renewable Energy Sector



Data: IRENA, Chart: IMANI CPE

2.2 Climate finance sources have become increasingly gender-responsive

Access to secured and affordable financing has been one of the obstacles to women’s economic freedom, and constrained women’s ability to up-scale their businesses from micro and small business to large enterprises. Despite the contribution of women to the economy, they do not find it easy to access finance because women are four times less likely to document their interest in productive assets such as land, and they are under-represented in decision-making and perform micro and small economic activities that provide low income³⁵. As a result, women are indirectly disqualified from accessing financing to invest in climate-smart technologies and adaptation initiatives. The green economy presents opportunities to address existing inequalities in accessing secured financing for women through the increased emphasis on climate change, Environmental, Social, and Governance (ESG), and sustainable financing. A myriad of financing programmes have been implemented by development partners, world leaders, businesses, and financial institutions to close the gender gaps in access to finance to ensure that women can access the needed financing to enhance their adaptive capacity.

³⁵ UNDP Gender and Climate Finance Policy Brief 5-WEB.pdf

At the international level, persistent advocacy for enhanced gender consideration has started yielding results, evidenced by the increased focus of existing global climate finance on supporting women³⁶. The Green Climate Fund (GCF) has incorporated gender dimensions into its funding processes and further developed a Gender Action Plan to increase funding for activities that support women³⁷. In 2011, the Global Environment Fund (GEF) adopted a gender mainstreaming policy to ensure that the funds also support women³⁸. The Adaptation Fund, one of the global climate financing streams has developed gender policy guidelines to ensure that the funds' projects are gender-responsive³⁸. Similarly, the Climate Investment Fund (CIF) has included measures to make gender responsiveness a core criterion for screening projects. For instance, the Forest Investment Programme (FIP) and the Scaling-Up Renewable Energy Programme (SREP) in low-income countries have included gender equality as a core criteria or a co-benefit before projects are approved. In addition, the technical review of projects under the FIP and SREP requires critical sectoral gender analysis, and the scorecard must show how the project benefits women³⁹. These initiatives demonstrate how multilateral institutions are mainstreaming gender equality in their climate finance programmes to increase women's access to financing towards improved adaptive capacities. Some of these initiatives are supported by several UN and UNFCCC decisions. Hitherto, less than one (1) percent of climate finance projects mainstreamed gender needs, however, the increased emphasis on gender needs in climate advocacy has resulted in improved green gender financing. For instance, the Official Development Assistance (ODA) targeting climate change that integrated gender equality objectives has almost doubled between 2014 and 2019, increasing from about US\$9.6 billion to US\$18.9 billion⁴⁰ (See Figure 6). South and Central Asia and Sub-Saharan African countries were the top recipients of the ODA climate finance flows, receiving US\$5.1 billion and US\$4.2 billion respectively, between 2018 and 2019⁴¹.

In addition, blended finance (which is a combination of private sector and public financing mechanisms) for gender and climate change has increased consistently over the last decade. Between 2010 and 2020, blended finance that supports women and climate change has increased from US\$1.7 billion to US\$6.2 billion⁴² (See Figure 7). Over the same period, about a third of the blended finance supported off-grid renewable energy solutions, and about 19 percent was allocated to agricultural finance, input support, and sustainable agriculture⁴³. Furthermore, Sub-Saharan Africa is the largest receiver of blended finance for gender and climate change. Between 2010 and 2020, the region received about 43 percent of the total blended finance. Women and girls were the end beneficiaries of about 33 percent of the projects supported with blended finance and direct beneficiaries were only 6 percent. In addition, the blended finance targeted micro, small, and medium enterprises, which received about 43 percent of the fund⁴⁴.

³⁶ CUNDP Gender and Climate Finance Policy Brief 5-WEB.pdf

³⁷ ODI. (2022). Gender and Climate Change. CFF10-Gender-and-CF_ENG-2021.pdf (climatefundsupdate.org)

³⁸ ODI. (2022). Gender and Climate Change. CFF10-Gender-and-CF_ENG-2021.pdf (climatefundsupdate.org)

³⁹ ODI. (2022). Gender and Climate Change. CFF10-Gender-and-CF_ENG-2021.pdf (climatefundsupdate.org)

⁴⁰ ODA. (2022). Development Finance for Gender-Responsive Climate Action.development-finance-gender-climate-action.pdf (oecd.org)

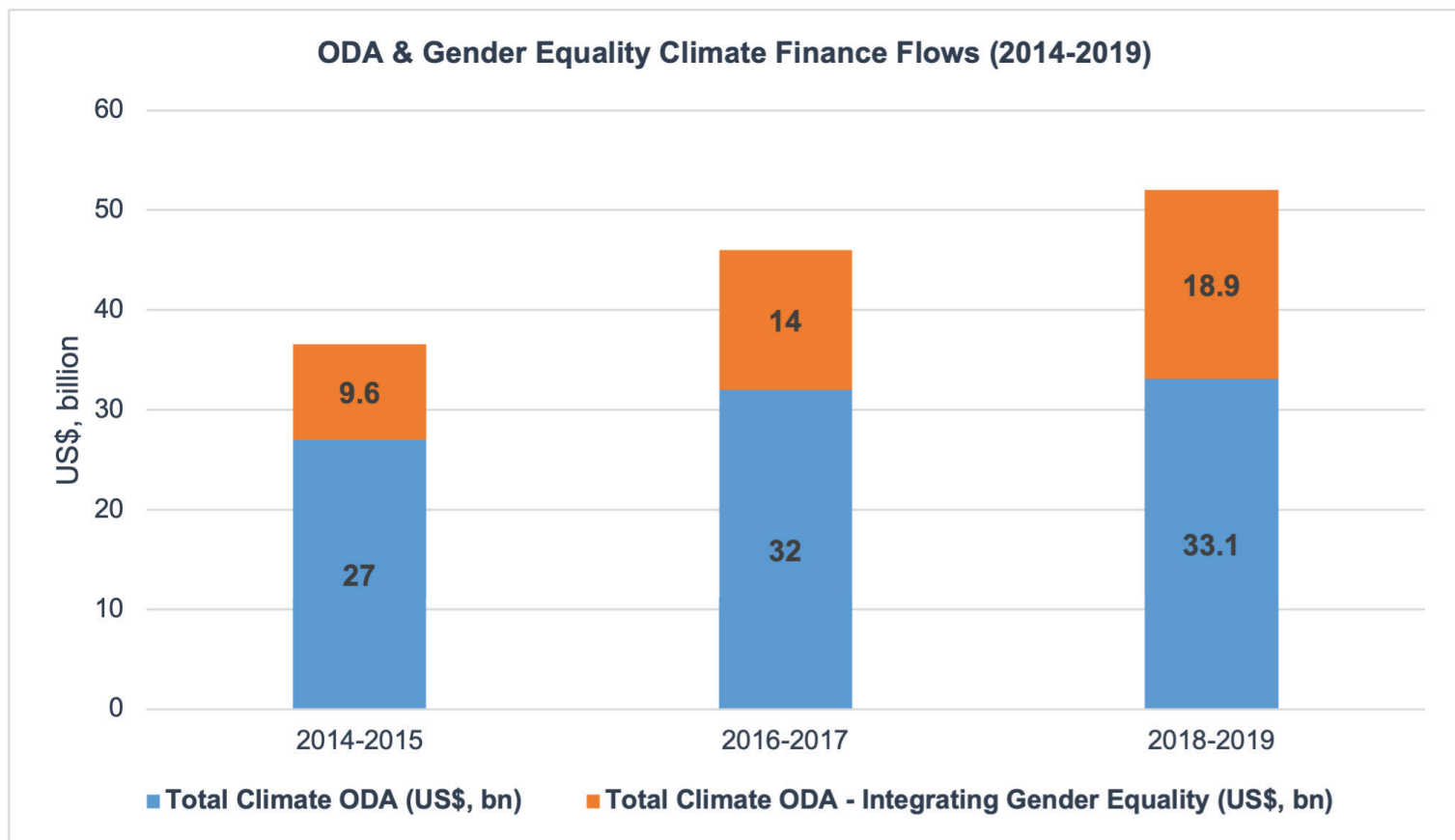
⁴¹ ODA. (2022). Development Finance for Gender-Responsive Climate Action.development-finance-gender-climate-action.pdf (oecd.org)

⁴² Convergence. (2020). Blended Finance and the Gender-Climate Change Nexus. Data Brief. Gender__CC_Data_Brief_Final_Version_1.pdf (ctfassets.net)

⁴³ Convergence. (2020). Blended Finance and the Gender-Climate Change Nexus. Data Brief. Gender__CC_Data_Brief_Final_Version_1.pdf (ctfassets.net)

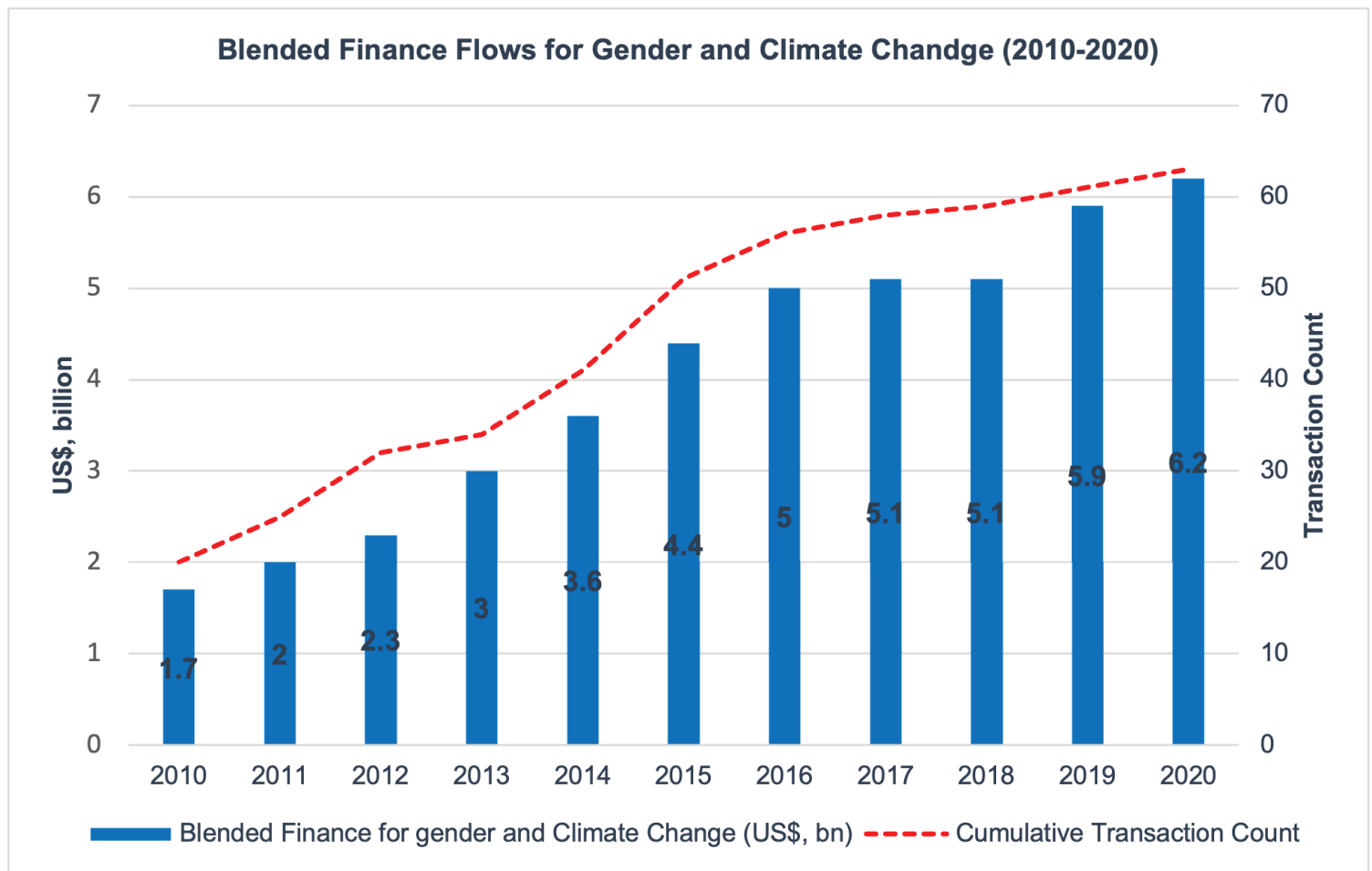
⁴⁴ Convergence. (2020). Blended Finance and the Gender-Climate Change Nexus. Data Brief. Gender__CC_Data_Brief_Final_Version_1.pdf (ctfassets.net)

Figure 6: Official Development Assistance, Climate Change and Gender



Data: IRENA, Chart: IMANI CPE

Figure 7: Blended Finance Flows for Gender and Climate Change



Data: Convergence, Chart: IMANI CPE

The blended finance mobilized over the last decade had at least one private sector investor. The main instruments were concessional debt and equity instruments. More than a third of investment to support gender and climate change was mobilized from Impact investors (investment dedicated to achieving positive environmental and social outcomes). Even though financial investment to support women is still low, these enhanced initiatives can address the credit access barriers and support women to thrive through green businesses. In Ghana, the Bank of Ghana’s Sustainable Banking Principles⁴⁵ has provided a framework for commercial banks to prioritize environmental and social impact in their lending decisions. These are expected to influence banks to shift their credit granting towards projects that support climate change. In recent times, commercial banks have designed special products that provide sustainable financing to support climate-smart enterprises. For instance, the Orange Corners Innovation Fund by Fidelity Bank is covered under their sustainable financing programme that supports SMEs scale-up their businesses⁴⁶. The sustainable financing programme is targeted at renewable energy, green infrastructure, and social impact. The ABSA Young Africa Works Programme is also another dedicated programme to support SME growth⁴⁷.

⁴⁵ Ghana-Sustainable-Banking-Principles-and-Guidelines-Book-1.pdf (bog.gov.gh)

⁴⁶ Sustainable Finance - Fidelity Bank

⁴⁷ Absa Young Africa Works Programme

2.3 Sustainable Consumption and Human Dignity

Several research works have been conducted recently to understand the gender difference in the adoption of green consumption behaviors between men and women. Existing evidence suggests that women are more likely to undertake businesses to pursue social goals and adopt green products than men⁴⁸. Even though there is limited evidence to provide the underlying psychological differences, women have proven to support green investments and products than men. The decision to go green can be intrinsic, in that the business adopts climate-smart technologies because they want to protect the environment and achieve positive social outcomes. On the other hand, some businesses adopt climate-smart innovations to respond to the pressure from regulators and consumers.

Evidence from Nguyen, Lin, and Vu's⁴⁹ assessment of the gender difference in the decision to pursue green suggests that women-led businesses are more likely to go green because of intrinsic motivation and external pressure than male-led businesses. The findings also indicate that market competition and social inequalities weaken women-led businesses' ability to maintain green initiatives. Furthermore, the World Bank reports that female employees and business leaders are more likely to act on climate change and the environment compared to men⁵⁰. As a result, more women must be upskilled and provided equal employment opportunities to reach senior and management levels. Women are responsible for over 80 percent of household consumption decisions while men spend up to about 80 percent of household income. This implies that, when women receive equal opportunities to work and control their income, they are more likely to spend and invest in green products and businesses.

Furthermore, women spend a greater part of their time on care activities such as childcare, household food consumption, and other domestic chores. In rural areas, women and girls are responsible for fetching firewood and water for household consumption. As climate change intensifies, women and girls spend a lot more time looking for water and firewood for domestic activities. Every year, about 3.2 million people die from diseases linked to household air pollution, and a sizeable number of them are women and girls⁵¹. In Ghana, about 7,927 women and girls died from household pollution in 2019, representing about 42 percent of household air pollution⁵². The risk associated with exposure to pollution through cooking and difficulties involved in meeting domestic needs are likely to incentivize women to accept and shift towards green products and investments, such as cook stoves.

⁴⁸ Lortie, J., Castrogiovanni, G.J. and Cox, K.C. (2017), "Gender, social salience, and social performance: how women pursue and perform in social ventures", *Entrepreneurship and Regional Development*, Vol. 29 Nos 1-2, pp. 155-173.

⁴⁹ Nguyen, B., Lin, H. and Vu, N. (2023), "Entrepreneurs' gender and small business going green", *International Journal of Entrepreneurial Behavior & Research*, Vol. 29 No. 7, pp. 1720-1739. <https://doi.org/10.1108/IJEER-07-2022-0679>

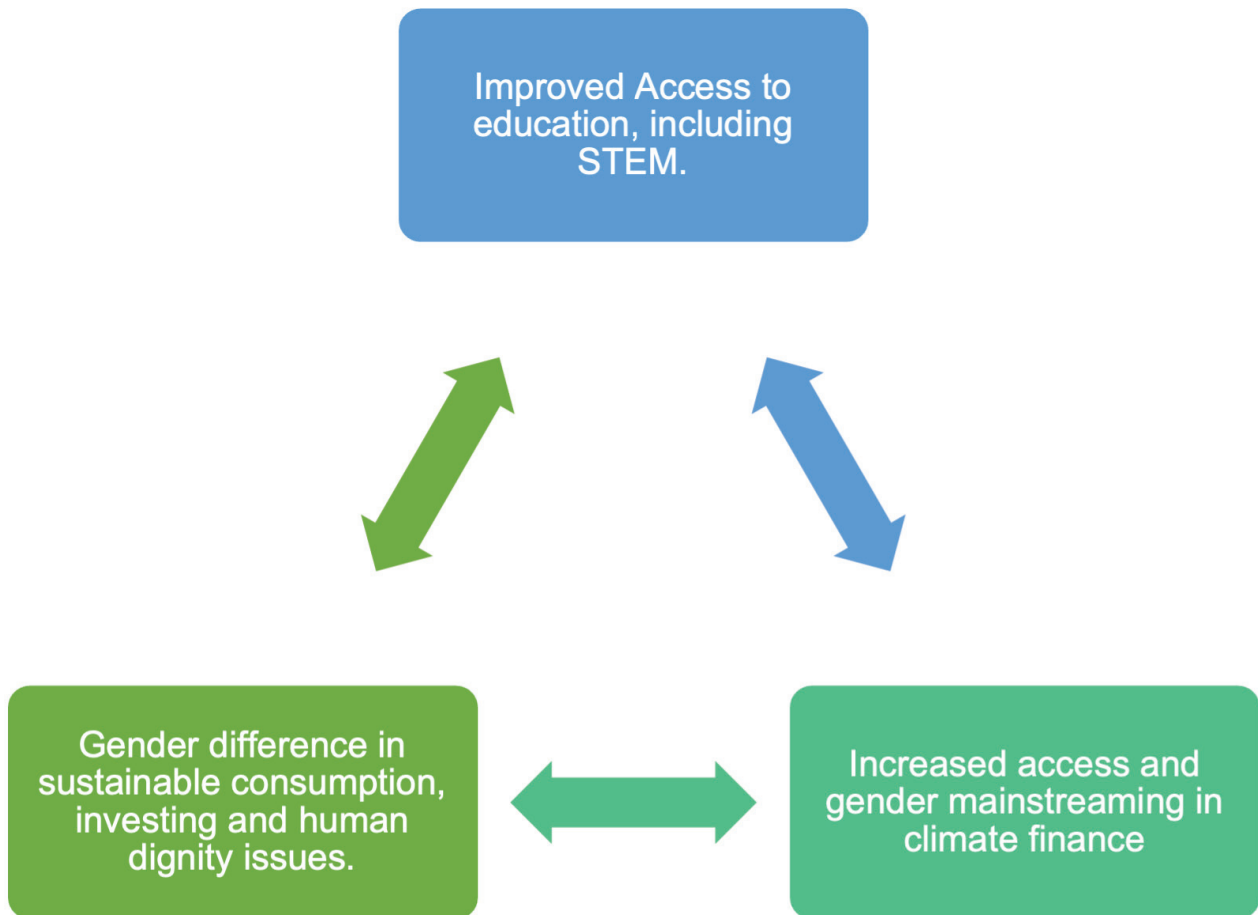
⁵⁰ Green jobs for women can combat the climate crisis and boost equality (worldbank.org)

⁵¹ Household air pollution (who.int)

⁵² Household air pollution attributable deaths (who.int)

Summarily, the challenges and barriers that hold back the enterprise abilities of women in the brown economy such as limited access to credit, cultural and social biases against women, low income, and low skills are likely to affect women’s participation in the green economy. However, a raft of measures that deliberately attempt to close the gender gaps and ensure that women prosper through climate change has accompanied the green economy. Thus, increasing women's access to STEM education, removing the barriers to finance, and making it easier for women to access green products are critical drivers of women's participation in the green economy (See Figure 8).

Figure 8: Key Factors Driving Women into the Green Economy



Source: IMANI CPE.

3 IDENTIFYING THE CHALLENGES TO WOMEN PARTICIPATION IN THE GREEN BUSINESS SECTOR

The evidence of the threats of climate change to women's economic freedom has become increasingly glaring. However, little attention has been directed toward identifying feasible pathways to addressing the barriers to the effective participation of women in the green economy. The green business sector offers women many opportunities to advance their adaptive capacities and prosper through climate change. Despite the opportunities for inclusive growth offered by the green economy, a myriad of factors continue to reinforce the glass ceiling, making it difficult for women to participate in the green economy. As a result, women are under-represented in the green business sector, and even when they participate, they occupy low-level positions, engage in non-technical activities, and operate relatively small-sized green businesses⁵³. This section documents the challenges women encounter in the green business industry by engaging top-performing female-led businesses from the Ghana Climate Innovation Centre (GCIC). Two value chains (Cooks Stove and Climate-Smart Agriculture) were used to demonstrate the layered forms of challenges women face in the industry.

3.1 Barriers to Women's Participation in the Green Business Industry

The barriers to women's participation in the brown economy are mirrored in the green economy. Fundamentally, the challenges women face in the green economy are not entirely different from the brown economy. Without strong policy actions, these challenges are likely to hold back women's ability to benefit from the green transition. The key challenges are summarized under four (4) main themes: (i) Perception of gender roles, (ii) Limited access to financing, (iii) Limited understanding of the green business industry, and (iv) Low support for green business innovations in Ghana.

3.1.1 Social and Traditional Perception of Gender Roles

The social and cultural perceptions of gender roles in the economy are widely recognized as one of the key factors that define and place limitations on the set of activities that men and women can perform. While they appear intangible, socially constructed gender roles tend to combine with institutional factors such as rules governing access to productive resources like land, to define the roles of women in decision-making and the public expectation of their roles in business. The restrictive social and cultural perception of what men and women can or cannot do is a key predictor of how effective a particular gender can perform in a chosen field⁵⁴. In Ghana, there are set of assumptions about jobs that are designed for men and women. As a result, women are perceived to be responsible for domestic activities and engaging in relatively small-scale enterprises. Thus, when a woman attempts to engage in a socially perceived male activity, the restrictive social rules are used to obstruct the woman's ability to compete fairly like men.

⁵³ Renewable energy: A gender perspective (irena.org)

⁵⁴ Renewable energy: A gender perspective (irena.org)

One of the challenges female green entrepreneurs encounter is that there are prevailing set of traditional assumptions that certain green jobs are designated for men, and thus women are not equipped with the “strength” to undertake such functions. In addition, the study found the persistence of entrenched traditional social norms that assign certain activities to men and make it socially unacceptable for women to engage in such activities. For example, the green female entrepreneurs in the cook stove industry observed that women have been culturally restricted to digging out the clay but cannot operate the potters-wheel that moulds the clay into the liners used in the cook stove. By such restrictive social rules, women have been excluded from moving up the value chain of processing the clay into highly marketable products such as liners. One of the entrepreneurs explained that:

“The challenge we face in the industry is that most of the men are not ready to accept us in the cook stove industry. Sometimes I hear comments like “This is not a woman’s job”, or “you are a woman, go and do women’s job”. Due to such biases against women, they decide not to supply you with the liners you need for your cook stoves. Also, some of the suppliers intentionally supply low-quality liners just because you are a woman. You are consistently stereotyped and discriminated against just to discourage you from investing in the sector. In my case, I had to build my factory to develop the liners I needed for the clean stove. So far, I have about 30 trucks (20-cubit size) that transport the clay to the site, and I have also constructed a factory line that can produce about 1,500 liners per process.”- A Female Green Business Entrepreneur in the Cook Stove Industry.

The entrepreneurs also face pockets of gender-based violence in the form of threats to discourage them from participating the businesses that are culturally perceived as male-dominated. Another entrepreneur added that:

“One of my competitors in the cook stove industry openly threatened me that he would not allow me to participate in the cook stove business because it was meant for men. I remember when I won a contract with the Ministry of Energy, one of the competitors attempted to threaten me to give my contract to him because he would not allow me to come into the business and dominate it. He openly told me that he would do whatever it took to stop me from operating in the cookstoves business. There are also times when suppliers discriminate against you because you are a woman. I remember I negotiated the sale of roofing sheets for the metal case of the stoves. The owner of the business told me “This is not a woman’s business, allow the men to do this business. Go and bring your husband before I can sell the roofing sheets to you”. This is happening in the 21st century. I found out my competitor had informed them not to sell to me.”- A Female Green Business Entrepreneur in the Cook Stove Industry.

Some pervasive assumptions that women cannot be in male-dominated industry, if unaddressed, influence women to begin to accept the biases as real limitations, and self-stereotypes, and pursue other businesses that are perceived to be feminine. For example, the assumption that women do not have the strength to undertake technical work in the green industry such as the renewable energy market. Due to such assumptions, most women tend to pursue non-technical skills and work in administrative and non-STEM areas in the industry. Re-constructing these perceived traditional and social gender roles and the institutions that support them can be slow and take a long time, however, deliberately implementing support and policies to upskill and support women helps to reduce their exposure to these cultural biases.

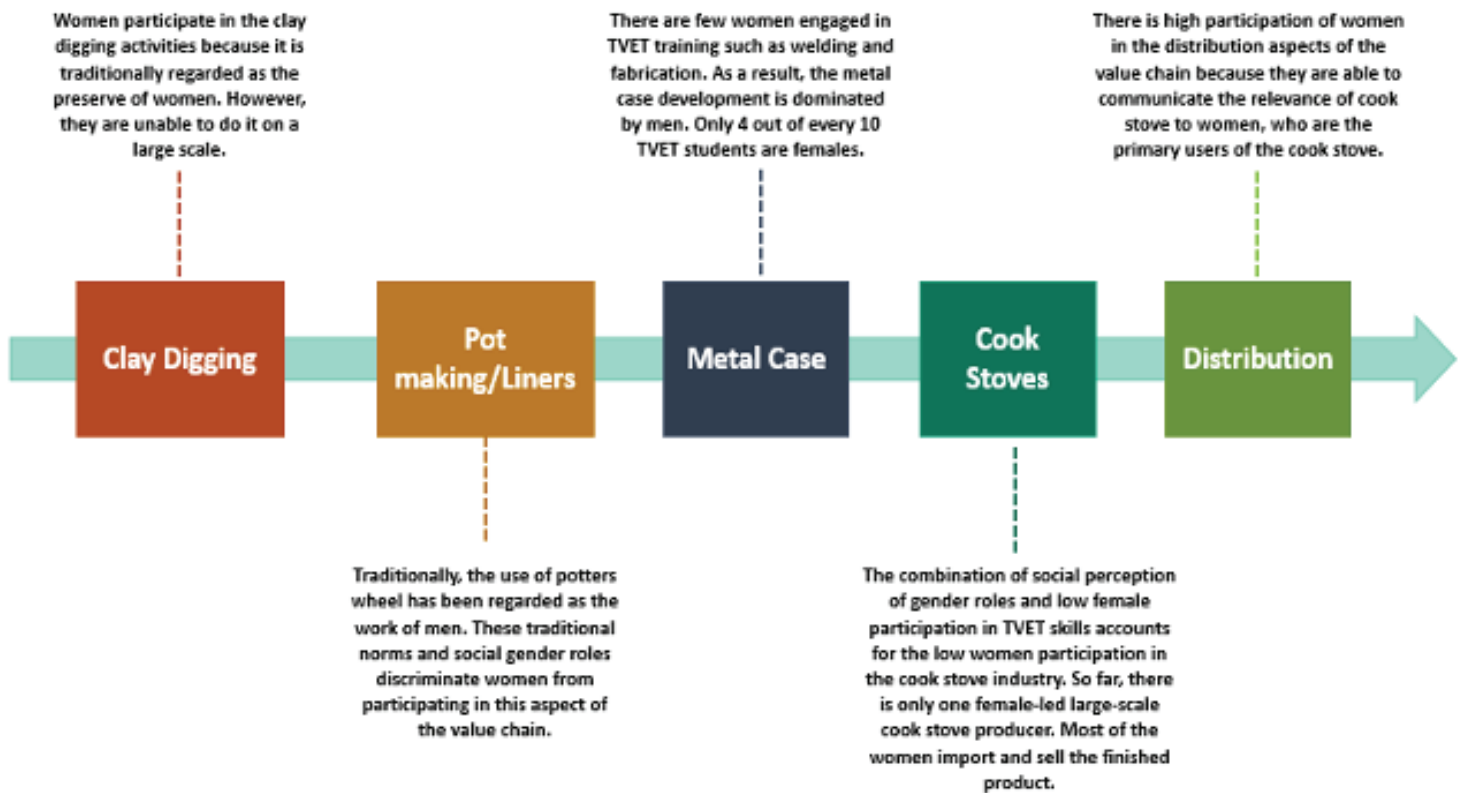
Box 1: Barriers Women Face in the Cook Stove Industry - A Focus on the Value Chain

The Cook stove industry is one the key green business, contributing to improving efficiency in cooking stoves towards clean cooking solutions for about 22 million of the population who rely on solid fuels, and support the low carbon development programmes of government. While Ghana has an established cook stove manufacturing industry, the benefits in the sector are not equally distributed because of social perception of gender roles, low female participation in TVET skills such as welding and fabrication, and limited access to finance. These factors combine to prevent women from participating in certain aspects of the value chain, depriving them of the benefits in the sector. The value chain consists of clay digging, pot making/liners, metal case fabrication, cook stove, and distribution. These form the main activities in the cook stove industry.

Women participate effectively in the clay digging and distribution aspects of the value chain because clay digging is traditionally regarded as the preserve of women, and women are perceived to possess the natural abilities to market and sell products. In addition, women are highly represented in the distribution partly because women are the primary users of cook stoves. Thus, they are able to communicate effectively the relevance of using improved cook stoves. However, women face discrimination in the production of liners (also known as the clay pot) because it is traditionally regarded as jobs for men. Traditional and social norms are used to discriminate against women from using the potter's wheel. In addition, the low participation of women in TVET skills such as welding and fabrication makes it difficult to identify women with the skills to produce the metal case for the cook stove. As a result, men dominate the metal case fabrication. Over the years, the high participation of men has led to perceptions that the metal fabrication of cook stoves are jobs for men, making it difficult for men to accept women in the cook stove industry (See figure 9).

Clay digging and distribution are the low-income aspects of the value chain compared to the pot making/liners and the metal case. Averagely, the workers in the liner production and metal case fabrication earn between GHC500 and GHC1,500 every week, while the clay digging and distribution workers earn just about 20% of the income of the workers in the liner and metal case production. Women are excluded from the high earning aspects of the value chain primarily because of social and traditional norms of gender roles and lack of technical skills such as fabrication.

Figure 9: Barriers to Women's Participation in the Cook Stove Industry



Source: IMANI CPE.

3.1.2 Access to Finance

Limited access to secured and affordable finance is one of the enduring challenges to women's effective participation in the full economy. Some of the green solutions and innovations are capital-intensive, and take relatively longer time to generate sustainable cash flow. As a result, such investments are associated with risk partly because the financial institutions have a limited understanding of the green economy and the various climate-smart businesses. While this may appear to be a financial issue, they are embedded in the cultural and social norms of the society that govern property rights, decision-making, and ownership of assets. For instance, land is a key collateral for accessing credit, however, women in patriarchal societies where lands are vested in the hands of men are less likely to access secured land that could be used as collateral to secure loans.

Furthermore, the absence of deliberate products and services by commercial banks and fund managers targeted climate-smart investments accounts for the difficulties in accessing finance. Most financial institutions do not have special products and services purposely for climate-smart start-ups or entrepreneurs partly because it is a new area of investment and there is limited information about the investment and returns dynamics of the green business industry. As a result, they tend to lump all the businesses together under the umbrella of SMEs without carefully examining the varying business dynamics. Most green businesses in Ghana are in their development stage where they earn low revenues and re-invest profits to strengthen their innovations.

Such businesses tend to rely on either equity investment, grants, long-term permanent capital or impact investors to upscale their solutions. As a result, credit acquisition conditions and processes must take cognizance of the different dynamics between green businesses and regular SMEs. Before the Sustainable Banking Principles (SBP) implemented by the Bank of Ghana, banks did not have specific guidelines to prioritize environmental sustainability in the loan assessment and business processes. One of the entrepreneurs added that:

“Getting support for green businesses is another headache in the industry. Currently, I can say that GCIC is the only incubation hub that supports green businesses by providing the needed tools and training the businesses require to thrive. There are so many hubs out there but they are not able to provide support to the businesses. About less than 3 percent of venture capital funding supports entrepreneurs. I went through a programme where I qualified for a deal with a bank, but it took over a year to close the deal and access the funding. Excuse me for saying, there are so many programmes that are touted as providing financing, but the funding is not available. For example, it took GIZ to put organizations to help us get access to some financing, while they were supposed to be readily available. You go through a lot of challenges before the funds are readily available. So, all of these culminate in one space and affect women’s participation. I can call out about 30 female entrepreneurs, and they can tell you how difficult it is to access funds. For example, if I had funding, I could train more people in different aspects of the value chain. Without funding, you cannot provide compensation and accommodation to train your staff.”- A Female Green Business Entrepreneur in Climate-Smart Agriculture.

Low sensitization and awareness of the available climate finance and limited public funding support for climate-smart businesses contribute to the challenges in accessing finance. Most of the green entrepreneurs are not aware of available climate finance programmes that support climate-smart businesses partly because the state-side agencies managing the climate funds do not share information with the private sector. For example, the Ministry of Finance is the national designated agency to manage the Green Climate Fund, however, little attention has been paid to sensitizing and preparing climate-smart businesses for international funding that support the private sector. One of the entrepreneurs explained that;

“The two climate funds you mentioned, I am not aware of these funds. I have friends in the green coffee business, paper industry, and hotel activities but I can tell you, that most of the women entrepreneurs are not aware of these funds. Sometimes you hear that some amount of money has come to support climate-smart businesses, but they never tell you the eligibility criteria. You noticed that most of the start-ups that get funding have to go outside the country. If these “so-called” funds are available, they should communicate more about the funds because we are not aware of these funds. I have benefited from other programmes that provided direct support, so why don’t we hear about the government-related funds.” - A Female Green Business Entrepreneur in Climate-Smart Agriculture.

3.1.3 Women have low awareness and understanding of the green business sector

Women need more information about the green economy to understand the risks and opportunities. Largely, women are disadvantaged in terms of access to timely information and career mentors in the green economy⁵⁵. In most cases, men are more likely to identify opportunities and receive career mentorship than women partly because there are few women in the green business industry. As a result, they are disproportionately affected when it comes to access to information about the future skills needs of their industry and mentors that can assist them in upskilling and taking up more roles in the green economy.

“I won’t even say only the women; I think some of the men do not even understand the climate change implications of the solutions in their businesses. For example, women do not know that by fetching firewood to cook, they also contribute to climate change. Everybody is talking about climate change, but some of the businesses do not understand the impact of their work on the environment.” A Female Green Business Entrepreneur in the Cook Stove Industry.

In addition, the under-representation of women in the green business can also be a disincentive to women when they struggle to receive support, which leads them to accept the status quo. For instance, there are few women in STEM, which implies that women are less likely to receive direct female mentorship. Presently, climate-smart businesses and jobs are least promoted through formal communication channels. They normally circulate through professional channels and networking platforms, where there are few women. For example, many women who work in the renewable energy industry in Canada reported that they did not hear about careers in renewable energy in high school or university⁵⁶. One of the entrepreneurs added that:

⁵⁵ UNESCO science report: towards 2030 - UNESCO Digital Library

⁵⁶ Baruah, B. (2018), Barriers and Opportunities for Women’s Employment in Natural Resources Industries in Canada, Natural Resources Canada, Ottawa.

“I think there is not a lot of information about what climate-smart practice entails. The information is not readily available for not just women but any person who wants to run climate-smart enterprises. For example, getting information about the mechanisms to source the right raw materials and the quality of the materials, as well as implications on the production process. All these influence the climate-smart mechanisms you are implementing. So, one of the challenges women entrepreneurs face is getting the right kind of information to run sustainable climate-smart businesses. For example, we go through different levels of mentorship and training programmes that seek to equip us with the skills to synchronize and manage our teams to achieve the objectives of the business. All this kind of support is readily available for most women who want to go into climate-smart agriculture“- A Female Green Business Entrepreneur in Climate-Smart Agriculture.

The entrepreneurs also reported that men undertake most of the activities in their operations because few women tend to acquire vocational and technical skills in areas such as welding, fabrication, and other technical areas. As a result, the men tend to out-perform them in terms of productivity. However, they reported improved performance of the women workforce as they learn on the job and receive regular training and incentives to motivate them to stay within the industry. An entrepreneur explained that:

“The inherent discrimination women face is deepened by their low skill levels. Sometimes the men are unwilling to train the women because of the perception that the job is for men. I have witnessed instances; where the men deliberately push most of the work into the night just to get the women out of the factory because they know the women have other domestic duties to perform. So it takes a lot of time and money to ensure that the women acquire the right skills and perform at par with the women. Sometimes I introduce financial rewards to incentivize the women to increase their production. Currently, I have one woman who is ready to fill a manager role and supervise both men and women.” A Female Green Business Entrepreneur in the Cook Stove Industry.

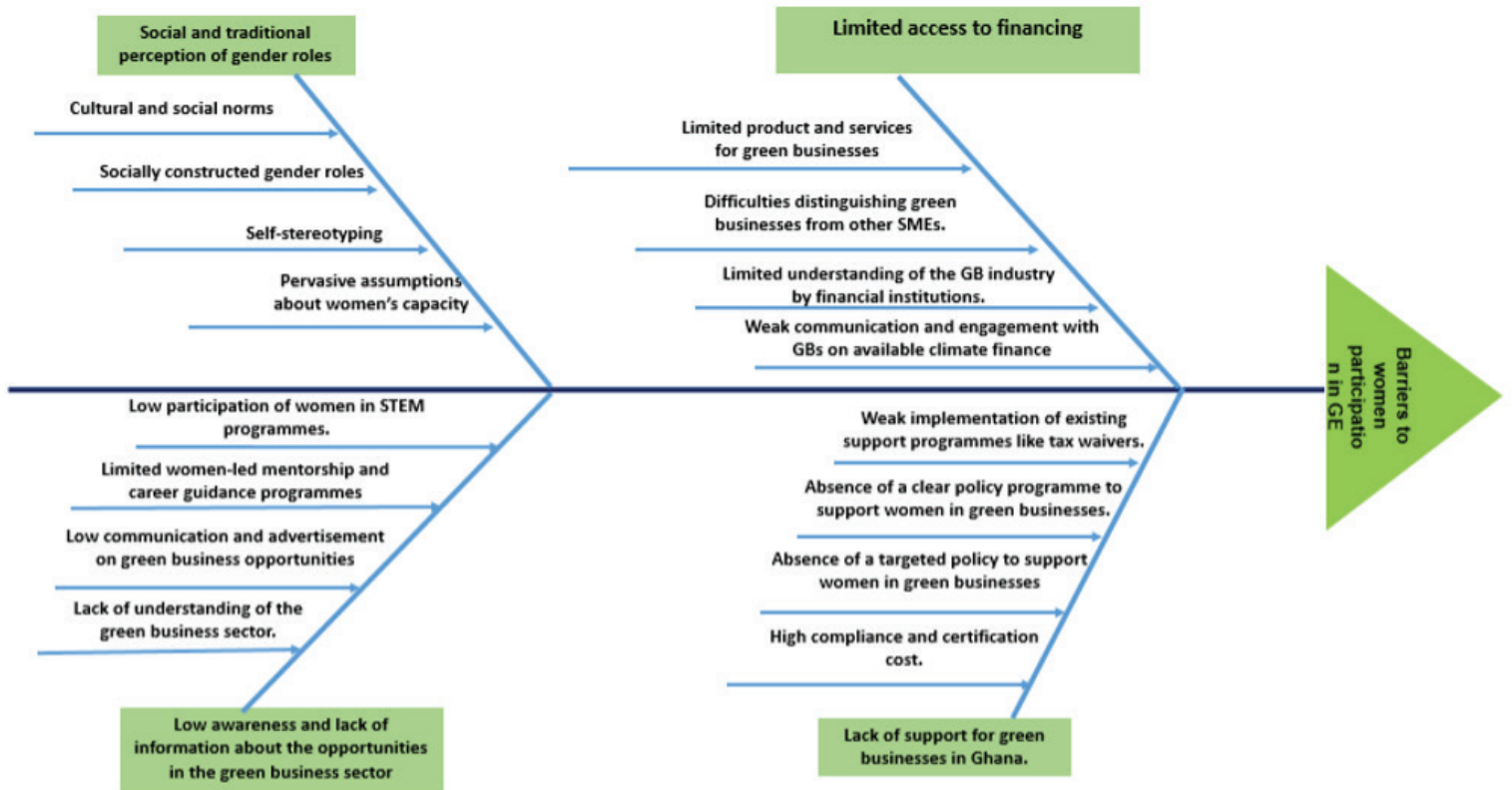
Strong networks and collaborations of women involved in the climate-smart business are needed to provide regular information and advocacy about the opportunities available for women in the green business sector. In addition, these networks could serve as collaborator platforms where women can provide direct mentorship assistance and career guidance to women who aspire to be green business leaders.

3.1.4 Lack of support for green businesses in Ghana

The green business sector offers considerable opportunities for women. However, the opportunities can be harnessed if the government implements deliberate measures to minimize the barriers and increase women's chances of success in the green business sector. Currently, there is no deliberate policy programme to accelerate women's participation in climate business. Even though there are programmes such as the National Entrepreneurship and Innovation Programme (NEIP) that targets climate-smart enterprises. However, there are no guiding policies that ensure gender equality requirements in the allocation of support. Currently, development partners, incubation hubs, and non-governmental organizations lead the support of women in climate-smart business in Ghana. Furthermore, the business identified complex regulatory and compliance processes as another challenge to doing business in the green sector. One of the businesses explained that;

“So many entrepreneurs have gone through the certification process by NEIP to qualify for tax reliefs from GRA. However, the procedure to access tax reliefs and other exemptions is also another difficulty. There are limited opportunities by the government to support women in climate-smart businesses. Also, some of the certification processes are expensive. For instance, if you are looking for certification from the Food and Drugs Authority (FDA) and the Ghana Standards Authority (GSA) you will need sometimes at least 50 samples to meet the requirement, and all these samples come at a cost to the business. I have benefited from the FDA certification programme and NEIP but how many female entrepreneurs can access such support”- A Female Green Business Entrepreneur in Climate-Smart Agriculture.

Figure 10: Barriers to Women's Participation in the Cook Stove Industry



Source: IMANI CPE.

4 CONCLUSION AND POLICY RECOMMENDATIONS

4.1 Conclusion

Climate change presents a good opportunity to address systemic and institutionalized barriers to women's participation in the economy and support them to effectively participate in the green economy. Women face the worst impacts of climate change because they work in vulnerable sectors and have weak adaptive capacity. Nonetheless, increased promotion of female education particularly in STEM, has the potential to equip women with the basic and necessary skills required to work in the green business industry and respond positively to the entrepreneurial opportunities. Furthermore, improved attention to gender mainstreaming in climate finance and the increased financing flows from development partners and commercial financial institutions to support MSMEs signal readiness to close the gender inequalities in accessing finance.

Giving women control of income and key productive assets such as land has the potential to catalyze their participation in the green economy, and incentivize a shift towards sustainable consumption and technologies that support human rights and dignity. Despite the existing efforts to address gender inequalities in the green economy, women are still under-represented due to restrictive traditional and social perceptions of gender roles that continue to limit women's participation in the economy. Additionally, women continue to face inequalities in accessing finance, and they have a low understanding of the opportunities in the green economy due to low education and mentorship opportunities, and the absence of policies to support women in green businesses. Thus, deliberate policy actions that attempt to address both institutionalized, systemic, and entrenched traditional social norms are needed to create equal opportunities for women to prosper through climate change.

4.2 Policy Recommendations

1. Develop and implement policies that address the systemic and institutional challenges to women's participation in green businesses. The government must develop clear policy actions that identify the obstacles to women's entrepreneurial development in the green economy. This can be done by conducting a critical analysis of the factors needed to accelerate female-led green businesses and follow-up with special programmes or initiatives that prioritize the needs of women in Ghana's climate actions.

2. Increase access to STEM education for women and girls. STEM skills have been identified as one of the key requirements to participate effectively in the green economy. Given that few women are likely to study STEM, the government must implement measures that expose women and girls to STEM from the basic education to the tertiary level. In addition, the government must collaborate with private STEM innovation hubs to accelerate STEM education and training in Ghana. The current STEM programme must be linked to opportunities in the tertiary schools to ensure that most of the girls from the STEM schools can upgrade and upskill.

3. Increase public awareness and campaign about climate finance solutions available to the private sector. The Climate Change Unit of the Ministry of Finance must intensify the stakeholder engagement programmes to ensure that more green businesses are aware of the available climate funds, and mechanisms to re-position their businesses to qualify for the funds. In addition, the government must work with the green innovation hubs such as the GCIC, to educate and inform women entrepreneurs about gender-related climate financing that can support their businesses to scale up.

4. Support financial institutions to improve their understanding of climate-smart enterprises and strengthen the enforcement of the SBP. The Bank of Ghana must engage climate innovation hubs, technical experts, and green businesses to assist in supporting financial institutions to understand the green business industry, the risks, opportunities, and mechanisms to streamline green business investment in their existing products and services. Furthermore, financial institutions must collaborate with green business hubs to consistently improve their sustainable investment programmes.

5. The government must develop and implement a gender equality principle in disbursing budgetary support to SMEs, particularly in the green business industry. The NEIP and the Ministry of Finance must develop and implement gender equality principles that ensure that direct interventions to MSMEs are gender-responsive. Through this, the NEIP would be able to account for the proportion of support that targeted women as direct beneficiaries.



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