

Towards a Gender-Transformative Climate Finance Roadmap

An Ecosystem Approach to Inclusive, Equitable and Transformative Change for Women Climate Entrepreneurs

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Towards a Gender-Transformative Climate Finance Roadmap: An Ecosystem Approach to Inclusive, Equitable and Transformative Change for Women Climate Entrepreneurs

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ACRONYMS

AKFC	Aga Khan Foundation of Canada
ANDE	Aspen Network of Development Entrepreneurs
AWCE	Accelerating Women Climate Entrepreneurs
CSO	Civil Society Organization
DFI	Development Finance Institutions
FSP	Financial Service Provider
GAC	Global Affairs Canada
GoC	Government of Canada
NBS	Nature-Based Solutions
ODA	Official Development Assistance
WCE	Woman Climate Entrepreneur
WUSC	World University Service of Canada

INTRODUCTION

This Roadmap presents a way forward for achieving Gender-Transformative Climate Finance (GTCF) in Sub-Saharan Africa. It examines the convergence of the entrepreneurial ecosystem, with a focus on women climate entrepreneurs (WCEs), and the climate finance ecosystem along with its various stakeholders (investors, other financial service providers, intermediaries, ecosystem builders and governments). The Roadmap builds on research carried out between 2021 and 2022 in consultation with over 150 individuals (predominantly women) who are active in entrepreneurial and climate finance ecosystems in Sub-Saharan Africa.

Purpose of the Roadmap

The purpose of this Roadmap is to present recommendations to donors, including Global Affairs Canada (GAC), on how to facilitate WCEs' access to appropriate climate finance, contributing to greater equality and inclusion in Sub-Saharan Africa.

The long-term goal is to expand and develop climate finance ecosystems to be gender-transformative, requiring an ongoing process of systemic change. In particular, the Roadmap addresses the assumption that greater volumes of climate finance will lead to positive outcomes for WCEs.¹¹¹ Ultimately, it is not only the amount of capital invested that matters, but also how that capital is invested, ensuring that there is an intentional and collective adoption of a gender lens to tackle the root causes of gender inequality.¹¹² This systemic shift requires change both in social and enabling environments (e.g., attitudes, beliefs, bias, discrimination) as well as within WCEs themselves (e.g., confidence, leadership, capacity). Although this report mainly examines changes at the institutional level (e.g., investors, intermediaries), it also includes references to social and enabling environment reform that will facilitate gender transformation in climate finance.

Following a presentation of key research findings, a series of recommended solutions are presented that lay out the role of various ecosystem actors in contributing to lasting, large-scale and beneficial change for WCEs. The long-term objective is to enable WCEs to access and utilize climate finance to develop and grow their businesses while contributing to climate change mitigation and adaptation and nature-based solutions (NBS), leading to greater well-being of their households and communities.

WOMEN CLIMATE ENTREPRENEURS (WCEs):

The research conducted by the World University Service Canada (WUSC) defines WCEs as those whose locally available, contextually appropriate goods and services prioritise or significantly contribute to mitigation of and/or adaptation to climate change. WCEs support green growth directly (e.g., selling solar panels), indirectly (e.g., using renewable energy to power operations), or through a supporting role (e.g., offering training related to climate change). The term WCE is aligned with the Small and Growing Business (SGB) definition in that they have 5-250 employees and are seeking growth capital of CAD 26,000– CAD 2.6 million.

Climate Change, Gender, and Development Finance

Climate change and gender inequality are among the world's most pressing and complex development challenges. Over the last 40 years, each decade has been warmer than the last, and within the past ten years, the effects of the human-induced climate crisis have become increasingly more profound.^{iv} Simultaneously, key aspects of gender inequality not only continue to persist but have worsened as a result of recent global crises – for example, during the pandemic, reports of gender-based violence increased around the globe, and women's food insecurity levels compared to men's rose by four percent between 2019 and 2020 in the face of environmental and economic upheavals.^v

Climate change and gender inequality are separately dangerous and consequential; together they pose a grave threat to people all over the world. Climate change, and its widespread and iniquitous consequences, are not gender-neutral. Women and girls face climate hazards that exacerbate pre-existing vulnerabilities and inequalities from the intersection of socio-economic structures, gender biases, institutionalised discrimination, and social norms and expectations.^{vi} Gender inequality means that women face higher risks and greater hardships from the impacts of climate change, which are compounded by issues such as poverty, conflict, financial crises or a global health emergency like the COVID-19 pandemic. Figure 1 below provides an overview of challenges confronting women in the face of climate change and gender inequality. Overall, women's climate leadership, purchasing power and experience as primary users and managers of natural resources are being increasingly recognized. And yet, significant challenges for WCEs remain – related to finance, technical assistance, mentorship and underlying social norms (described in more detail in Table 1 on page 11). Moreover, in the Sub-Saharan African context there is high vulnerability to climate change while the green sector is nascent, which compound the challenges faced by WCEs as they strive to develop and promote their products and services.

CLIMATE CHANGE ADAPTATION:

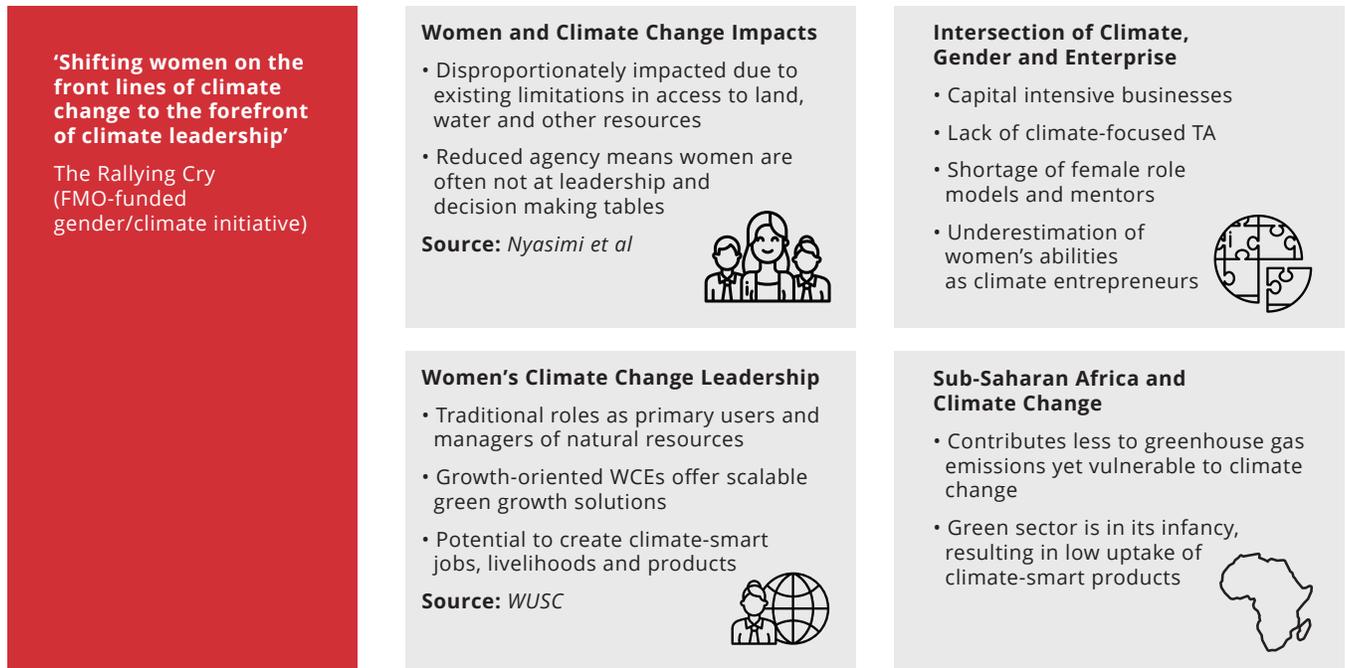
Climate change adaptation projects are those that intend to reduce climate change vulnerability. Climate vulnerability is generally considered to be a function of 3 primary variables: biophysical exposure, socio-economic sensitivity and adaptive capacity. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. Adaptation can mean forest protection, improved infrastructure and building design and changing agricultural practices to respond to different growing seasons and temperature.

CLIMATE CHANGE MITIGATION:

Climate change mitigation involves strategies and activities that intend to reduce or avoid the release of greenhouse gases (GHGs), resulting from human activity, into the atmosphere. Climate change initiatives also include those that intend to absorb/ sequester GHGs from the atmosphere. Mitigation can mean using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behaviour.

Source: GAC [Climate change concepts - Canada.ca](https://www24.international.gc.ca/climate-change-concepts-climate-changement-conceptes-climate-changement.aspx)

Figure 1: Key Gender and Climate Considerations:



Based on official development assistance (ODA) data reported by 27 DAC members for both gender and climate change Rio markers, ODA shows a record high global commitment to both climate action (USD 33.1 billion) and the amount earmarked for integrating gender equality (USD 18.9 billion). However, climate ODA dedicated to gender equality as the “principal” objective stood at only USD 778 million in 2018-2019 – a little over four percent of all climate-related ODA.^{vii} Climate change adaptation programmes present the highest share of climate ODA integrating gender equality objectives (above 60%), while mitigation programmes show the lowest share (46%). Moreover, women’s underrepresentation in decision-making processes and labour markets means that women are prevented from fully contributing to climate-related planning, policy-making and implementation.

However, if funded, women can contribute significant experiences, solutions and learnings that can help cope with climate change impacts, as well as promote preparedness, anticipation and adaptation to these impacts, resulting in more sustainable development and thus minimising climate-related losses and damages^{viii}. Women play a critical role in the conservation and use of natural resources, and are leading global capacity development and efforts that contribute to low-emissions and sustainable development according to the OECD 2022 report *Development Finance for Gender Responsive Climate Action*. Although often viewed as victims of climate change, women are catalysts for innovative solutions, and play an important role in mitigation, adaptation and development of NBS at local, regional, national levels and international levels.

This Roadmap highlights ways that climate finance can be more responsive to these women climate entrepreneurship opportunities, ultimately leading to a transformative climate finance ecosystem that addresses root causes of gender inequality.

GENDER ANALYSIS:

Gender analysis is an approach to understanding the availability of resources and life chances for women and men, and their capacity to uptake and utilise these opportunities. This requires a deep understanding of the barriers faced by women and men including systemic issues arising from discriminatory social norms and gender-blind enabling environments. With specific reference to climate finance, the aim is to determine if the finance as offered (e.g., collateral requirements, borrowing experience, terms of loans) is accessible to WCEs, and if WCEs have the knowledge, skills, experience, and capability to take advantage of existing climate finance.

ECOSYSTEM LENS:

An ecosystem lens takes us beyond the transaction between financial service providers (FSPs) and WCEs to explore functions and influences in the system (e.g., supporting services, socio-cultural norms, regulations), and the ecosystem actors that participate with potential to perpetuate or mitigate WCE challenges. Relevant actors include investors, incubators, accelerators, government agencies, FSPs, and social groups).

Approach to Research and Analysis

A Gender-Analytical Ecosystem Lens

As noted in the Introduction, it was evident early in the research process that a transactional analysis would not be sufficient to create transformative change – that is, the assumption that if finance is ‘available’ to WCEs, then WCEs will be able to access that finance, and that access to finance will lead to increased women’s economic empowerment. WCEs in Sub-Saharan Africa (and indeed in much of the world) operate in a system where socio-cultural norms, regulations and policies, business practices, and the opportunities for women and girls’ advancement throughout their lives are often limited (e.g., education, skills and knowledge development, mobility, access to resources). Therefore, in addition to the standard assessment of actors and functions in the ecosystem, gender analysis offers deeper insights into root causes of unequal access and growth of WCEs in climate finance ecosystems. With the use of a gender-analytical ecosystem lens, the researchers were able to expand recommendations that can lead to the modification of the incentives and behaviour of ecosystem actors.

The key stakeholders which can facilitate access to finance for WCEs include:



- **Intermediaries:** The two main types of intermediaries relevant to WCEs are:
 - **Incubators:** Incubators are the companies or non-profit entities that assist and empower new entrepreneurs and start-ups with the necessary support. From office space to equipment to advisors, incubators offer a launching pad to new businesses.
 - **Accelerators:** A business accelerator expedites the growth and development of an existing company with a product or a service offering. The business owner may receive a package of support including mentorship, technical support and linkages to FSPs such as banks and or investors to help create networks to promote its products or services in the market.
- **Investors / Financial Service Providers:**
 - **Financial Service Providers (FSPs):** FSPs are institutions engaged in the business of financial transactions such as savings, loans, investments, and currency exchange. For WCEs, FSPs encompass a broad range of business operations within the financial services sector including village savings and loans, microfinance providers (savings, loans, insurance), banks (including SME banks and agriculture development banks), trust companies and insurance companies.
 - **Investment Funds:** Private, public or private/public investment funds (including Development Finance Institutes, DFIs) which commit finance to climate enterprises, including WCEs in some cases, with an expected rate of return as a loan or in equity. Impact investment funds may offer a reduced rate of return in consideration for expected social and environmental outcomes from the investment. These could involve blended finance mechanisms coupled with grants to achieve desired outcomes.
 - **Climate Funds:** Climate finance can come from different sources: public or private, national or international, bilateral or multilateral. There are also numerous types of instruments, some of the most common of which are: green bonds, debt swaps, guarantees, concessional loans, grants and donations.^{ix} These funds typically go to government and large public private partnerships and for the most part do not directly reach the SGB segment, including WCEs (as such they were not included in the research).
- **Ecosystem Builders:** Ecosystem builders include development organizations (not-for-profits and management contractors), associations of investors, think tanks/researchers, women's business networks, chambers of commerce, and other private and public sector actors. Ecosystem builders have the capacity to strengthen the environment for WCEs and to create gender-transformative conditions amongst investors, FSPs, intermediaries and other stakeholders.
- **Donors:** Bilateral donors such as GAC, multilateral organizations (e.g., AfDB) and foundations (e.g., Gates Foundation) – offer grant finance for programs including those focused on ecosystem change, as well as blended finance (e.g., concessionary finance) to promote sustainable ecosystem change
- **Government:** Through supporting the enabling environment, national and sub-national government ministries and agencies have a key role to play in the development of policies, strategies and funding mechanisms to support WCE growth.

Primary Research

Primary research was carried out over four months in 2021 and two months in 2022 across West, East and Southern Africa. Consultations and interviews with WCEs and other stakeholders provided a range of perspectives on the challenges and opportunities around the acceleration of WCEs across the region.

Consultation workshops were organised with 53 accelerators, incubators and training providers that included 37 women and 16 men. The research team carried out interviews with 52 WCEs with a main focus on small and growing businesses, and their situations, needs, barriers and opportunities. Lastly, there were stakeholder interviews with 30 key informants from FSPs, investment funds and ecosystem builders (26 women; 20 men) and in-depth interviews with accelerators and incubators (5 women; 4 men) to delve into ecosystem perspectives and innovations in the field.

Secondary Research

Desk research was also conducted on those organisations that are gender-inclusive or gender-transformative and have developed gender-responsive funding mechanisms. Climate finance providers were also investigated beyond those interviewed through desk research to see which ones may provide loans or investments to WCEs and those that have an explicit gender lens approaches or criteria. Citations from this research are included as endnotes.

Research Limitations

The research was limited by a small sample size in comparison to the large geographic region covered, although clear trends emerged and aligned with findings from secondary research. In addition, COVID-19 constrained the number of interviews that could be held in person which was mitigated by current best practice for remote research, and identification and mobilization of local researchers.



FINDINGS - ECOSYSTEM ACTORS

Findings - WCEs

Thirty one percent of the WCEs interviewed have businesses whose operations and activities contribute to climate change adaptation. These are primarily in the areas of agriculture using climate smart agriculture techniques that reduce the use of chemical inputs and are more water efficient, or through distribution of drought-resistant seeds or plant varieties. Some WCEs are engaged in agroforestry, which includes both adaptation and mitigation benefits. Annex 1 provides a comprehensive list and brief overview of each WCE business.

The majority of WCEs interviewed have been involved with incubators and accelerators, although few have received a loan or investment as a result. In fact, while incubators and accelerators indicated they have contact with women entrepreneurs, this was not the case for FSPs.

Opportunities: WCEs interviewed provided insights into the type of businesses that offer opportunities in the climate space. WCEs' main sectors of focus are climate-smart agriculture and renewable energy - a mix of mitigation and/or adaptation focused - with a small number of WCEs focused on recycling and eco-fashion. The majority produce products and services for local markets. The average size of a business is eight employees. Fewer than 10 percent are aware of their country's National Determined Contributions (NDCs) or National Adaptation Plans (NAPS) on climate change but nevertheless align with these priorities.

WCEs interviewed – see Figure 2 below for a snapshot of these inspiring entrepreneurs – provided a variety of reasons for starting their enterprises. Some see a business opportunity in the lack of climate-friendly products in the market such as organic produce, bamboo, or renewable energy. Others have witnessed the harmful impacts of climate change, mostly on women and children – e.g., indoor pollution, unreliable water supplies, lengthy search for firewood, etc. – and are motivated to protect community members and the environment through the promotion of climate-smart technologies and processes. Still others started their business out of a passion (e.g., textile production) and later realised it aligned with a climate change trend such as eco-fashion. A few WCEs, through their studies, became aware of climate issues which motivated them to start a social enterprise – such as the distribution of clean cookstoves – to support climate adaptation or mitigation.

Figure 2: Illustrative Examples of Successful WCEs



Barriers to Growth: While many of the gender-specific challenges facing WCEs are shared by women entrepreneurs operating across a variety of sectors, the challenges for WCEs are exacerbated due to the nature of the climate finance industry. As illustrated in Table 1, a variety of common themes were identified by WCEs as barriers to starting and growing climate businesses, i.e., access to finance, capacity building, mentoring and gender bias. The table also describes the support WCEs have received from accelerators, incubators and FSPs.

Table 1: Challenges and Experiences of WCEs

UNDERLYING FACTORS	CHALLENGES	VOICE OF WCEs & STAKEHOLDERS
<p>ACCESS TO FINANCE</p> <p>Limited access to finance is particularly constraining for capital-intensive climate businesses that have high upfront costs.^x</p>	Requirement for collateral	‘I needed collateral to access financial support and the bank’s lack of awareness about briquettes as a product worsened the situation. Besides, their interest rates for loans were very high with lengthy procedures that waste a lot of time.’ WCE, Uganda
	No targeted products or services	‘Women entrepreneurs aren’t weak. They are disadvantaged by the capital structure that exists. Where do you expect them to get a title deed that they can present to a bank? Instead, look at the entrepreneurs on their own merit and structure the facility based on the weaknesses in the system. There is no lack of capital, the problem is the way capital is allocated.’ Climate finance fund manager, Kenya
	Gender and social bias	
<p>CAPACITY BUILDING PROGRAMS</p> <p>There is a marked gap in mainstreaming women’s needs into programming.</p>	Unsuccessful in accessing programs	<p>‘Support given is piece meal, some will just give materials with no additional support, while others will give technical support and no funding, it would be better if support was provided as a full package.’ WCE, Uganda</p> <p>‘Although women entrepreneurs are passionate about starting and growing climate-driven enterprises, they lack access to the technical expertise to scale their businesses to meet market and global demand.’ CEO of climate incubator, Ghana</p> <p>‘The support that is out there only supports established women entrepreneurs, as such most companies end in the infant stage due to insufficient capital. The issue of wanting 3 years audited reports to support WCEs sometimes bars others from getting the much-needed support and as such they fail to grow.’ WCE, Malawi</p>
	Absence of mainstreaming women-specific needs	
	Climate experts not available	
<p>MENTORING and NETWORKING</p> <p>Mentoring, success stories and networking are not available to WCEs.</p>	Lack of linkages to finance providers	<p>‘Women entrepreneurs are not being encouraged and mentored... this makes it difficult to make a case for aspiring entrepreneurs to venture into the climate field because there is no demonstration of ‘success’ or wealth creation.’ WCE, Ghana</p> <p>‘Overall, there is a lack of knowledge on climate change. Someone might be running a business but doesn’t know their business is harming the environment or doesn’t realize the opportunities to take advantage of climate. More education is needed.’ Head of incubator, Malawi</p>
	Male-dominated industry with lack of female role models	
	Success stories not available	
	Limited networking	
	Not identifying as a climate entrepreneur	
Lack of knowledge of commercialization		

GENDER BIAS Unsupportive social norms at the household/ community levels and within formal institutions – were emphasised by stakeholders as significantly contributing to WCEs’ barriers.	Attitudes and behaviours towards women in business	‘There is a bias that women are not naturally people that have solutions for hard STEM issues...Culturally, people are not used to seeing women in the sector and women don’t see themselves represented in the sector.’ CEO of climate incubator, Ghana
	Time restrictions	
	Business environment	‘Depending on the nature of the business, society often disregards the efforts of WCEs and disrespects them. Society doesn’t see the tangible or direct benefit of climate entrepreneurship.’ WCE, Kenya

Findings – Intermediaries (Incubators and Accelerators)

Most of the incubators and accelerators that were consulted are familiar with the key challenges that WCEs face, though the majority have not received specific training on how to address these challenges.

Focus on Climate: This is consistent with the fact that of the 53 organisations which participated in consultations, only three focus on climate change adaptation and mitigation. The large majority are sector agnostic but might engage in climate-related sectors such as agriculture and renewable energy. When a gender lens is applied, which occurs infrequently, it is therefore not climate specific. While intermediaries recognize that their current outreach model does not effectively identify and attract WCEs, they do not have the capacity to make the required adjustments in order to encourage more WCEs to take part in their programs.

Expansion of Services: There is significant interest among incubators and accelerators to expand their service offering to work more intentionally with WCEs, given the critical role that WCEs play in addressing the impacts of climate change. Through interviews, common themes emerged about what has worked well for intermediaries in supporting WCEs and areas that have been more challenging. For example, many organisations have done training to build their gender capacity but do not have a dedicated gender specialist with the needed expert knowledge. Related to this, several intermediaries indicated that while they recognize the importance of integrating a gender lens into their work, this is not always prioritised by donor funding in which case they are not able to proceed with gender-responsive programming.

‘Even when there are **women-owned businesses in the green sector**, the service providers and incubators in Africa do not have the skill set that is required to understand their unique position within the sector, as there is not enough information within the sector to help inform, navigate and explore opportunities.’

Source: Interview with Program Manager, Edge Growth, South Africa

Findings – Financial Service Providers and Investors

Access to finance is a critical gap for WCEs, so understanding the appetite and capacity of FSPs and investment funds to serve this market is critical. With the growing recognition of the important role that women play in combating climate change, climate finance stakeholders are increasing their efforts to understand and address the gender/climate nexus.

FSPs

Size of Loans: FSPs have a key role in contributing to the start-up and growth stage of WCEs, however as indicated, the majority of WCEs interviewed have been unsuccessful in securing loans from FSPs that are large enough to support significant growth of their businesses.

Tailored Financial Products: Interviews confirm that FSPs require increased expertise in climate finance in general given the climate sector – which includes goods and services that provide mitigation and/or adaptation to climate change – is in its infancy, along with gender-responsive climate finance in particular, with a specific need for financial products tailored to WCE requirements.

Partnerships: Partnerships are critical for leveraging the expertise of various ecosystem actors in order to respond to the needs of WCEs. For example, the Kenya Climate Innovation Centre (KCIC) is partnering with the Kenya Bankers Association and Financial Sector Deepening (FSD) Kenya to support the development of climate loan products, including for women entrepreneurs.

Risk Aversion: The limited FSP knowledge of the climate sector leads to misunderstandings of risk. For example, when requesting a loan to support the transition to clean cooking, one WCE observed ‘It is not clearly understood by banks that (the) charcoal cooking business is a large business with millions of households who are estimated to spend Ksh 3000 [USD 25] per month on charcoal.’ This, added to the hesitancy of banks to provide low-cost capital to start-ups, particularly those of WCEs, makes it challenging for WCE businesses to grow.

Investors

Mismatch of Investment Offering: African investment fund managers that were interviewed confirmed that while there are increasing numbers of funds that are dispersing significant capital to climate entrepreneurs, most are making investments of over USD 1M. This level of investment is too high for many WCEs who require financing of USD 20,000 to USD 200,000. For example, the executive director of an innovation hub in Ghana stated that many of the companies pitching to investors are asked to return in one to two years when the companies that they represent are larger and more profitable. Bridge financing to support this growth is lacking, with WCEs eager and able to be reliable borrowers. At the same time, several African fund managers indicated that women business owners tend to underestimate their own performance, and request or receive no or too little funding for their needs.

A Relationship Approach: With an emphasis on personal relationships based on trust, a desire for ongoing consultations with investors, and a lack of familiarity with investment, the preference of WCEs is to walk the journey with investors. If WCEs are unable to find funders who provide this type of hands-on support, they may be unlikely to accept investment.

Unattractiveness of the Climate Sector: The perception of the climate sector by investment fund managers is less positive, viewing it as more risky than other more traditional sectors. Fund managers opt for other sectoral options if available: e.g., in Ghana government securities are preferred over investments in the climate sector by local investors due to guaranteed returns.

Exceptions: A few of the funds interviewed have a specific climate focus with a gender strategy such as Kenya Climate Ventures and Wangara Green Ventures. One fund manager commented that there is a tendency for investors to prefer climate mitigation products which have direct cost recovery mechanisms – e.g., number of stoves or solar units sold - and therefore less risk exposure. Many investors shy away from climate adaptation products as they depend on other indirect performance outcomes for cost recovery - e.g., increased yields resulting from use of solar powered irrigation - and as such are perceived to be higher risk.

Impact on WCEs: Overall, the majority of climate finance is unavailable to WCEs directly, but comes to them through: national climate centres; incubators and accelerators that may receive funding to support WCEs; and banks where business loans can be offered, although in only a few cases were banks identified that specifically focus on climate. In most cases, banks require secure capital and measure WCE loan worthiness with standard metrics. In many instances, women’s enterprises are fostered through international and local non-governmental organisations (NGOs) who receive grants from foundations and bilateral donors.

Findings – Ecosystem Builders

Ecosystem builders include development organizations, associations of investors, think tanks/researchers, women's business networks, chambers of commerce, and other private and public sector actors. These organisations are crucial for bringing together ecosystem actors for capacity building, deal making, information sharing, and networking to address and advance ecosystem growth. Examples of ecosystem builders are GenderSmart and the 2X Collaborative which both have gender/climate working groups/communities of practice. These ecosystems builders can play an important role in aligning gender and climate, given access to both climate and gender capacity building and access to climate finance to facilitate these linkages.

Donor (bilateral and foundation) Programs: Donor-funded programs frequently offer an entry for WCEs, providing capacity building, grant funding and technical information that contribute to business growth. In many instances, these grant-based programs come with gender responsive / transformative approaches, such as Convergence's Gender-Responsive Climate Finance Window and GAC's new initiative, 'Partnering for Climate,' which aligns with their Feminist International Assistance Policy (FIAP), in particular the Environment and Climate area, and will fund projects from Indigenous and other civil society organizations to support climate change adaptation in the Global South.

National/Regional Climate Centres: Emerging organizations representing national/regional interests provide information, research, incubation and financing to new ventures that are developing innovative solutions in energy, water and agribusiness to address climate change challenges which may or may not integrate gender. Examples in Sub-Saharan Africa include the Ghana Climate Innovation Centre (GCIC) and the Kenya Climate Innovation Centre (KCIC).

Carbon Credit Development and Carbon Credit Brokers: Carbon credit organizations provide project development and certification of tradable carbon credits in either the voluntary or compliance markets. While many WCEs run businesses which could use carbon credits as a means to access increased income or finance -- such as those engaged in clean cookstoves, agroforestry and waste management -- none of those interviewed used carbon finance or seemed aware of it. Similarly, incubators and accelerators did not mention carbon finance, or the use of this vehicle for revenue flow for the businesses that they support. Lack of awareness, the complexity of getting and verifying credits, and the fact that carbon credit developers and brokers in general ignore WCEs, deprive them of a possible finance opportunity.

RECOMMENDED SOLUTIONS CONTRIBUTING TO GTCF ECOSYSTEM CHANGE

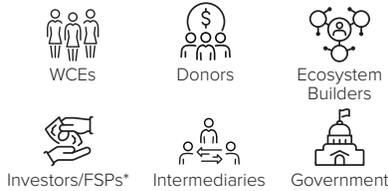
The following describes what is required in order to progress to a fully gender-transformative ecosystem that allows WCEs to thrive.

Towards a Gender-Transformative Climate Finance Roadmap

The following infographic illustrates the key barriers identified by WCEs and the potential roles of ecosystem actors in overcoming these barriers. Recommended solutions are further elaborated below.

Towards a Gender-Transformative Climate Finance (GTCF) Roadmap for Women Climate Entrepreneurs (WCEs) in Sub-Saharan Africa

Ecosystem Stakeholders:



- “ I was denied a loan because I didn't bring my husband to give his consent. – WCE, Uganda
- “ There are far more accelerator training programs than there are funding opportunities. – WCE Kenya
- “ Culturally women are not expected to do better than men...women are asked to give sexual favours in exchange for support. – WCE, Malawi



Barriers Confronting WCEs

Lack of Understanding of WCE Barriers:
Context-specific WCE barriers

Access to Finance Challenges: Collateral, targeted products, gender biases

Capacity Building Deficiencies: Appropriate programming, climate expertise, linkages to investors

Mentoring and Network Gaps: Male-dominated, success stories, identification as a WCEs, connections, knowledge of commercialization

Social Norms Bias: Discrimination, time restrictions, business environment attitudes

Enabling Environment: Policies and regulations do not consider the specific needs of WCEs



Donor-Supported Solutions

- Conduct assessment and analysis of target ecosystems to determine context-specific barriers and opportunities for GTCF and key funding needs
- Support innovative finance at the nexus of gender and climate
- Support intermediaries and FSP/investors to integrate stronger gender and climate lenses
- Equip WCEs with the information, knowledge and skills to access climate finance on equitable terms
- Enable opportunities for mentorship and networking, enabling WCEs to make connections, gain knowledge and learn about success stories
- Tackle gender bias and discriminatory practices of stakeholders that impact WCEs' ability and agency to start and grow their climate businesses
- Promote enabling environment reform to create conditions for GTCF

Long-Term Change for WCEs



More inclusive and equitable GTCF results in increases in the number and percentage of WCEs receiving finance and growing their businesses contributing to climate change adaptation and mitigation, while improving the well-being of their households and communities

*Financial Service Providers

Donor-Supported Ecosystem Impacts



Have the agency (confidence, power, voice etc.) to access appropriate GTCF



Promote change among ecosystem actors through donor-funded programs



Investor attitudes / approaches shift recognizing the value of financing WCEs



Enable WCEs to move along the pathway to growth



Policy reforms support GTCF creating an environment for WCE success

Donor learning agenda feedback loop

Recommended Donor-Supported Solutions to Barriers

Donor-supported solutions can shape the agenda for climate finance that empowers WCEs. Donors play a critical facilitating role, both understanding the optimal entry points for programming and providing funding to the corresponding ecosystem actors to achieve the desired change. This means that donors require the cooperation and collaboration of other actors in the ecosystem, while offering a range of funding modalities, for example grants, loan guarantees, concessionary finance.

The following discusses priority actions for ecosystem stakeholders to advance towards climate finance that is genuinely gender-transformative. In carrying out these actions, emphasis should be placed on supporting local organizations across Sub-Saharan Africa who understand the local context, and are already well-positioned to work in the climate space or have their capacity built to do so.



Conduct assessments of target ecosystems to determine context-specific barriers and opportunities for WCEs and key funding needs

Context-sensitive assessments of WCEs and the wider ecosystem, carried out by ecosystem builders, are crucial in understanding the issues confronted by WCEs in accessing finance and building their businesses. For example, assessments can determine appropriate loan/investment sizes, terms which are favourable to WCEs and barriers such as lack of collateral. Comprehensive assessments can ensure climate finance is structured in a way that responds to WCEs' needs while offering return to investors and other FSPs. Ecosystem builders who have expertise in gender and/or climate finance assessments are well positioned to offer this service.

To achieve sustainable systemic change, deeper gender analysis is also required (beyond the above assessment); this means delving into underlying gendered socio-cultural beliefs, biases and discrimination, as well as enabling environment regulatory frameworks that are often gender-blind and therefore maintain the status quo. There is an excellent opportunity to build on the results of the current GAC-funded [Advancing Research and Investment Standards for Equity \(ARISE\)](#) program in which Criterion, GenderSmart and ANDE have partnered to develop best practices in gender analysis in impact investing. ARISE addresses the fact that gender analyses are generally not valued as part of investment decision making processes, and as such, critical information about gender dynamics is often missed. Results of ARISE can be scaled and applied to actors in the climate space – investors and FSPs as well as other ecosystem actors – to ensure rigorous gender analysis is taking place. For more on socio-cultural and enabling environment issues refer to the corresponding sections below.



Support innovative finance at the nexus of gender and climate

Women continue to be underrepresented in climate-related sectors, as green tech founders, employees of renewable energy firms and in investment decision-making. FSPs and investors are generally not aware of the impacts of and responses to climate change and therefore view developing new products and services as too risky. That being said, there are a growing number of investment opportunities at the nexus of gender and climate; for example, DFIs are exploring this area (see text box to the right) and there are over 50 private-

IFC INITIATIVE AT THE NEXUS OF GENDER AND CLIMATE:

The IFC is carrying out a pilot program for commercial financial institutions in Côte D'Ivoire and Mexico to extend climate financing to women MSMEs. Following the pilot, they aim to replicate the program in additional countries.

Source: Interview with IFC

market vehicles that combine gender and climate in [Project Sage 4.0](#), as well as numerous examples in public markets.^{xi} However, scaling and replication of these approaches is needed to increase the capital available to WCEs, and there is a significant opportunity for catalytic donor funding to play a valuable role.

- **Scale existing models.** While not common, there are examples of existing programs in Africa which aim to catalyze donor and DFI investment to grow and scale gender-smart climate enterprises across Africa. One such example is [The Rallying Cry](#) initiative. Beyond catalyzing investments, this initiative supports the development of financial instruments that are tailored to the needs of WCEs. Given the program's ecosystem approach and focus on supporting WCEs, there is significant potential for GAC's innovative finance and climate grant funds to leverage and scale this initiative to reach additional WCEs beyond the program's current pilot in Kenya and Zambia.
- **Replicate existing models.** There are a variety of models that leverage donor funding in gender and/or climate investment programs which can be replicated with WCEs in mind. For example, supported by the Australian government and led by Canadian-based impact investor Sarona Asset Management, the [Emerging Markets Impact Investing Fund \(EMIIIF\)](#) provides investment capital and technical assistance (TA) to financial intermediaries who in turn provide access to financing for SMEs in South Asia, Southeast Asia and the Pacific. EMIIIF integrates a strong gender lens and will also be applying a climate lens to its investments. Potential exists for GAC to replicate the current investment and TA infrastructure in Africa, or develop a new consortium of Canadian partners focused on Africa.

THE RALLYING CRY:

The Rallying Cry is an ecosystem initiative funded by FMO designed to catalyze private sector investment in gender and climate, starting in Africa. Targeting women-led agri-enterprises in Zambia and Kenya in its initial phases, The Rallying Cry seeks to shift capital to, and narratives about, business women leading solutions on the front lines of climate change. The initiative is about building capital provider capacity on gender and climate, curating a high-quality pipeline of opportunities, and championing inclusive, collective climate leadership at the global level.

Source: Interview with The Rallying Cry

As it develops new innovative finance initiatives, donors can take a more proactive role to ensure gender considerations are integrated into the development of investment strategies and implementation approaches. For example, this could involve requiring that process metrics which consider power dynamics are integrated into decision-making. Donors can also borrow from other models such as the [UK's Kindred Capital](#) which shares at least 20% of the fund's profits with investees as a way to ensure a more equitable, versus extractive, approach to investing. This sector-agnostic model is being utilized by other funds - such as [Beyond Capital Ventures](#) which invests in early-stage businesses across Africa and India.

Donors can also enable carbon finance for WCEs that has the potential to result in tradable and voluntary carbon credits. None of the institutions or WCEs interviewed were aware of or accessed finance from carbon credits, even though many sold clean cookstoves or solar panels, or were engaged in agroforestry or other types of activities that could receive voluntary credits with certification. WCEs and the organisations that serve them need a better understanding of this finance mechanism: how to access it by receiving support from certifying bodies for carbon credit certification and from carbon brokers and businesses who buy these credits. While it can be a complex process, many businesses are already receiving income from carbon credits in areas such as clean cookstoves as in the cases of UpEnergy in Uganda and Burn in Kenya, both male-founded and operated.



Support intermediaries and FSPs/investors to integrate stronger gender and climate lenses

Capacity building deficiencies – including appropriate programming, gender and climate expertise, and lack of linkages to investors – serve as a barrier for WCEs. Ecosystem builders can support other actors to build their knowledge on the integration of gender and climate lenses into their work, particularly given that climate entrepreneurship is a nascent area in Sub-Saharan Africa and women’s significant leadership role in this sector has not yet been embraced. Many climate organisations do not have experience or in-house expertise in gender, the ability to conduct a gender analysis, involvement in gender-responsive projects, or appropriate financial products. Based on this research, there is also explicit and implicit gender bias towards WCEs among both leadership and staff of climate finance providers. This bias reflects attitudes towards traditional roles for women in the community, and an overall lack of understanding of the viability of a climate enterprise.

The scarcity of climate expertise represents a significant opportunity for ecosystem actors to gain knowledge, given the urgent need to address increasing impacts of climate change. Included in this is the need to significantly increase capacity building and finance for NBS. Many donors have begun focusing on NBS as a means to reach climate objectives. As per the case study below, the research found that WCEs, incubators, accelerators and FSPs are unaware of what this term means and how NBS might present business opportunities. If WCEs are to contribute to NBS they need greater awareness of the opportunities, and improved access to and increased availability of funding to support such ventures. This may be accomplished through working with women’s groups or CSOs that can both build capacities and achieve the scale needed to implement effective NBS solutions.

NATURE-BASED SOLUTIONS (NBS):

A relatively new term, NBS is defined as actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.



NATURE-BASED SOLUTIONS:

Nature-based solutions, actions that harness the power of nature to address climate change, have a significant role to play in protecting, restoring and sustainably managing ecosystems in ways that increase communities' resiliency and ability to address environmental and social challenges, while safeguarding biodiversity and improving human wellbeing. For example, conserving and restoring mangrove forests positively impacts people in coastal communities who depend on these ecosystems for their livelihoods, while providing protective natural barriers to combat erosion and storms.

Building on approaches that have existed for hundreds of years, donors and investors have recognized the importance of nature-based solutions in climate change adaptation and mitigation. This means that NBS has been brought to the fore as a focus area for both funding and learning. To explore nature-based solutions further within the context of AWCE, research on the state of NBS in Kenya and Malawi was carried out from July – Sept, 2022. This included secondary research as well as interviews with nine WCEs and eight incubators and accelerators.

"If we have taken years, decades, to degrade the environment, can we realistically reverse that in a six or twelve-month calendar accelerator programme?"

Lead, Kenya-based Accelerator

Key Findings

- Although solutions that harness the power of nature are not new, increased awareness around their value in addressing climate change has spurred donors and ecosystem actors to action, to both better understand and promote nature-based solutions.
- Nature-based solutions are a wide-ranging collection of approaches that include regenerative agriculture, agroecological approaches, landscape restoration, reforestation, conservation of biodiversity, environmental conservation and sustainability.
- Many of the challenges faced by NBS WCEs are similar to those faced by WCEs overall, which are outlined above. Access to finance, socio-cultural norms, lack of gender and climate expertise by incubators and accelerators and limited mentors are all key barriers that limit the growth potential of NBS WCEs.
- As such, NBS are not clearly recognized by WCEs, incubators and accelerators. WCEs who do not view their enterprises as NBS will therefore not seek funding from investors and programs supporting this area. Similarly, NBS receives little attention from investors. Despite making up more than a third of the climate solutions needed, NBS receive less than 2% of global climate change mitigation finance today.

In Practice

- [mHub Malawi](#) makes strides in conserving forests through the Modern Cooking for Healthy Forests, an activity co-funded by USAID and UK Aid, which promotes sustainable forest management and energy options to maintain forest cover and to reduce land-based emissions in Malawi.
- Challenge: Threat to forests in an environment of increasing demand for charcoal and firewood.
- Solution: The Modern Cooking for Healthy Forests (MCHF) programme promotes saving of trees by providing alternative sources of energy. Products include energy-saving cookstoves, briquettes, and liquefied petroleum gas (LPG).
- Impact: Adoption of cleaner energy sources by households through established networks of climate entrepreneurs who are linked to manufacturers/distributors and consumers.

Source: Interview with mHub

The following recommended solutions target incubators/accelerators and investors based on their important roles in working with WCEs. Typically, the support needed by intermediaries, investors and other FSPs can be provided by ecosystem builders (often through donor-funded programs).

Incubators and Accelerators: Intermediaries offer critical support to enterprises at the early stage of growth, however intentional efforts are required to ensure these ecosystem actors have strong gender and climate expertise. Ecosystem builders are well positioned to offer this support.

GHANA CLIMATE INNOVATION CENTRE'S (GCIC) WOMEN ENTREPRENEUR TRANSFORMATION PROGRAM (WETP):

To respond to WCE's desire to gain skills that go beyond the traditional ones offered by many incubators and accelerators, GCIC launched WETP in 2018 which addresses the socio-cultural nuances that women experience related to pursuing an entrepreneurial career and work-life balance. Key topics include public speaking, inner leadership, self-care, work life balance and mindsets and perceptions.

Source: Interview with GCIC

ANDE GENDER / CLIMATE INVESTMENT MANAGER TRAINING:

Building on their successful investment manager trainings (IMTs), ANDE rolled out a revamped IMT curriculum in 2022 which intentionally integrated gender and climate content. The curriculum was piloted in one IMT and later adopted in a training-of-trainers to ensure local capacity exists to train investors in this area. Some of the new cohort trainees were selected to run IMTs for ANDE across West, South and East Africa. This program was supported by GAC and can be scaled to specific countries and/or regions of Sub-Saharan Africa.

Source: Interview with ANDE

It is helpful when climate experts are retained by incubators and accelerators to provide support to WCEs as needed, including areas related to renewable energy and waste management (mitigation businesses), climate smart agriculture and agroforestry (adaptation businesses), and topics such as green packaging and marketing of climate-smart products. Such technical advisors are part of existing climate-focused programs like the [Private Financing Advisory Network \(PFAN\)](#), a global network of climate and clean energy financing experts that offer business coaching and investment facilitation to emerging market entrepreneurs. Organisations such as the [African Centre for a Green Economy](#) and the [African Climate Foundation](#) could also be explored. In addition to strengthening climate expertise in existing entities, donor funding would also be well-placed in supporting the establishment of additional climate innovation centres across the continent similar to the [Kenya Climate Innovation Centre \(KCIC\)](#) and the [Ghana Climate Innovation Centre \(GCIC\)](#). However, of the over 50 incubators/accelerators interviewed, these are the only two that have a specific focus on the climate sector, and are unusual in the level of the climate support they are able provide to entrepreneurs (while also integrating a gender lens).

Similarly, gender expertise can be sought to assist intermediaries in adopting a gender lens and becoming aware of challenges faced by WCEs (from social norms to transactional issues around collateral and payment terms), as well as opportunities in relevant areas such as NBS. Inclusive incubator and accelerator programs will be those that are developed with and for women, to ensure they are addressing gender-specific barriers experienced by women in the climate sector. This includes effective outreach to women entrepreneurs, ensuring flexibility in admission requirements, facilitating access to childcare services as required, and prioritizing gender diversity in the selection committee. In addition to technical expertise, capacity building programs need to focus not only on hard skills but also soft skills, and pairing technical assistance with gender inclusive finance. Two excellent resources to boost capacity in this area are Value for Women's [Gender](#)

[Smart Nexus](#) and the [Gender Lens Incubation and Acceleration Toolkit](#) developed by Frontier Incubators and the Sasakawa Peace Foundation's Asian Women Impact Fund. While these are very valuable resources, donor support could be directed toward adding a climate lens to this work or creating stand alone toolkits that reflect the gender/climate nexus.

FSPs and Investors: FSPs and investors across sectors require support to more intentionally integrate gender lens. For example, our research indicated that they generally struggle to identify women-led enterprises that are focused on climate change adaptation and mitigation. Once WCEs are identified, FSPs and investors need tools to work with them to develop demand-driven products that include flexibility around collateral requirements, loan/investment sizes, payback periods and other relevant areas.

WCEs are often not ready for bank loans or investment, but need smaller influxes of capital along the way to build their business to the point of being investable. Microfinance and Village Savings and Loan Associations (VSLAs) as well as local forms of group financing such as Merry-Go-Round saving groups, are a potential source of finance. New products might include micro-investment schemes, where smaller investment tranches are linked with business development services to grow the business with the aim of graduating to larger investments. Likewise, blended finance (a combination of grants and loans) at a level appropriate for WCEs will contribute to the continuum of growth which can result in WCEs attracting larger investments.



Equip WCEs with information, knowledge, and skills to access climate finance on equitable terms

In addition to supporting FSPs/investors to better meet the needs of WCEs in inclusive and equitable ways, intermediaries can further support WCEs with information, knowledge, skills, agency and access to products and services. This is particularly critical for WCEs who are less familiar with investment terms and deal structuring, and are underrepresented in the climate space. One such example is the workshop series offered by Adventure Finance (see text box to the right). While currently sector-agnostic, this type of capacity building could be customized to the gender/climate nexus. To ensure that this enables a long-term increased capacity of WCEs, it will be important for these to be offered as a longer-term series of workshops.



Enable opportunities for mentoring, networking and success stories for WCEs

Mentoring, networking and role model gaps negatively impact WCEs and their ability to learn, share experiences and information with other WCEs, or be inspired by successful women entrepreneurs. Intermediaries and ecosystem builders can contribute to filling this gap by intentionally seeking opportunities to connect WCEs with mentors and other WCEs, and to gather material for success stories. For example, sharing innovations, successes and failures of WCEs – through blogs, publications, annual reports, webinars and conferences – can inspire WCEs, offering examples of role models to aspiring entrepreneurs. Examples of mentoring, networking and role models include [She Changes Climate](#), [Vital Voices - Women Leaders Fighting Against](#)

ADVENTURE FINANCE ENTREPRENEUR TRAINING:

A globally recognized impact investing advisory firm, Adventure Finance has recognized that entrepreneurs' ability to grow their businesses is strengthened when they are equipped with a thorough understanding of the spectrum of financing products available to them and their appropriateness for different stages of a company's growth and their funding needs. This shifts the power dynamics and allows the entrepreneurs to be empowered to make decisions about their capital needs as opposed to feeling they need to accept what is offered. The firm offers a series of in-person and on-line workshops to entrepreneurs (and investors).

Source: Interview with [Adventure Finance](#)

[Climate Change](#) and [Women Energy Entrepreneur Role Models](#). Incubators and accelerators can also look to promote WCEs on ecosystem platforms such as GenderSmart's Gender & Climate Investment Working Group, ANDE, Convergence and the AVPA.



Tackle gender bias and discriminatory practices of stakeholders that impact WCEs' ability to start and grow their climate businesses

Unsupportive gender norms, the male-dominated nature of the climate sector (and business ecosystems in general) and general lack of awareness by a range of stakeholders of the opportunities that exist for WCEs are significant. Through gender analysis, ecosystem builders can identify negative gender norms and stereotypes of women in business, as well as shine a light on successful women climate leaders and their role in finding climate solutions to meet the Paris Agreement, Nationally Determined Contributions and National Adaptation Plans of their country.

To address this, ecosystem builders can facilitate a range of initiatives, such as: robust social marketing campaigns to targeted audiences that highlight the critical role that women play in climate action and serve to encourage more women in Science, Technology, Engineering and Math (STEM) programs; establishment of internship opportunities for women at climate enterprises; integration of gender/climate curriculum into relevant university programs; and widespread dissemination of program results to increase visibility of WCEs and elevate the voices of women in the climate space to help ensure that their experiences and challenges are understood within the wider ecosystem.



ADDRESS POWER DYNAMICS:

There is an assumption by many in the impact investment space that moving large volumes of capital creates good outcomes. However, if that capital is not designed to meet the needs of the target entrepreneurs – WCEs in this case – and has been developed utilizing investment processes that privilege investors and do not value the input of underrepresented populations such as women entrepreneurs, it will not lead to transformative change and increases in gender equality. In short, the way capital is shared, and the power dynamics underlying those processes, is equally important as how much capital is moved ([Stanford Social Innovation Review, 2021](#)). As part of funded programs, donors can support investors to intentionally integrate processes that allow for more equal and collaborative decision-making between finance providers and clients thereby contributing to systemic change. Target investors would be those who support the SGB segment with investment sizes that respond to the needs of these entrepreneurs – such as SGB investment funds and angel investors – in order to increase access to inclusive, demand-driven capital among WCEs. Donors, including GAC, can support investors to integrate the Criterion Institute's [Process Metrics that Analyze Power Dynamics in Investing](#) in their investment processes in order to intentionally promote an equal playing field between investors and investees.



Promote enabling environment reform to create conditions for GTCF

The enabling environment of policies and regulations do not typically consider the specific needs of WCEs. Ecosystem builders can support governments to reform policies so they are no longer gender-blind but meet WCE needs in the climate finance ecosystem. While this research did not look at policies as barriers to WCE creation and growth, it is a critical part of the WCE ecosystem and an area where donors may influence policies of their own countries and of those to which they provide ODA for climate action. For example, ecosystem builders can influence national governments to update regulatory frameworks to support WCEs through regulations around banking policies that dictate collateral requirements or terms of loans. Procurement and taxation policies can also be adjusted intentionally tailoring them to needs of WCEs. Finally, country and regional level green growth strategies can be developed with a focus on specific ways to promote WCE growth. Key to accurately informing these updates are consultations with WCEs and women's entrepreneur networks. UN Women's [Green Jobs for Women in Africa](#) is a comprehensive assessment of barriers for women in the green sector as well as opportunities for growth.

Develop a robust learning agenda to enhance learning, sharing and coordination

A robust internal WCE learning agenda will enable donors to learn from programming and adapt approaches and processes. For GAC, this could ensure results from GE2 and GE3 climate and economic growth programs are shared across GAC departments to facilitate learning, adaptation of programming and scaling of initiatives. A variety of learning questions could be developed to guide such an agenda: How are gender norms around WCE's participation in the climate sector most effectively addressed? How can approaches used in GE3 climate programs be adapted to GE2? How can GE2 climate programs be adjusted to be more gender transformative? This can be piloted using early results from the Accelerating Women Climate Entrepreneurs (AWCE) program and the [Convergence Gender/Climate Design Funding Window](#), both of which can be replicated and scaled.

Beyond internal learning and sharing, prioritizing the sharing of program results will create awareness of the variety of approaches that can be utilized at the nexus of climate and gender. For example, it is not uncommon for gender to be layered onto a climate finance program, while less often gender investments that have large climate impacts are considered (i.e., gender-forward ventures which are supported to operate as green businesses). Investing in clean cookstoves is a common area which reduces women's unpaid care work, reduces harmful health impacts and also has significant environmental impacts too. Other less common examples include investments in electric vehicles, which have climate benefits as well as time saving benefits for women, allow greater access to jobs and also improve safety conditions if designed taking into consideration routes for women. Participation in external forums such as [GenderSmart's Gender](#)

GREEN JOBS FOR WOMEN IN AFRICA:

This report, published by UN Women and the African Development Bank, aims to provide evidence to inform policy reform on women's valuable role in transition to a green economy. It highlights opportunities to ensure women participate in and benefit from this transition. For example, the Government of Ghana's 2021 – 2025 National Green Jobs Strategy supports the creation of green jobs and identifies women as a priority group. This includes supporting women's participation in green entrepreneurship development through business development services and access to finance.

Source: UN Women and African Development Bank, [Green Jobs for Women in Africa](#)

[and Climate Investment Working Group](#) and the [2X Collaborative 2X Green Community of Practice](#) can support donors' thought leadership at the nexus of gender and climate as well as offer opportunities for continuous learning of industry best practices.

Finally, the learning agenda can be a key catalyst to bring together governments, donors, FSPs and investors and intermediaries who are working at the nexus of gender and climate. With increased activity in this area is the urgent need for intentional coordination to ensure that climate finance is accessible by WCEs and other climate entrepreneurs.

CONCLUSIONS

This Gender-Transformative Climate Finance Roadmap has the opportunity to shift the ecosystem for WCEs, arming them with the agency (confidence, power, voice etc.) and opportunities to access appropriate finance and grow their businesses. This can be facilitated by donors who partner with:

- I. Ecosystem Builders that promote change among ecosystem actors through donor-funded programs
- II. Intermediaries (incubators and accelerators) and other service providers that enable WCEs to move along the pathway to growth
- III. Investors and Financial Service Providers, who recognize the value of financing WCEs, are motivated to adapt their products to meet the needs of this growing demographic
- IV. National governments to reform gender-blind policies and regulatory frameworks thereby promoting inclusion and creating an environment for WCE success

This can result in long-term change for WCEs, through the creation of inclusive and equitable GTCF, leading to increases in the number and percentage of WCEs receiving finance and growing their businesses, and ultimately making positive contributions to climate change adaptation and mitigation, while improving the well-being of WCE households and communities.

ENDNOTES

- ⁱ The Roadmap is a result of research carried out as part of the Accelerating Women Climate Entrepreneurs (AWCE) project, a two-year initiative funded by Global Affairs Canada (GAC) and carried out by the Aga Khan Foundation of Canada (AKFC), Aspen Network for Development Entrepreneurs (ANDE) and World University Service of Canada (WUSC).
- ⁱⁱ Suzanne Biegel, 2022 [What will it take to bring climate and gender finance together? Lessons from investors and policy makers.](#)
- ⁱⁱⁱ Suzanne Biegel, 2022 [What will it take to bring climate and gender finance together? Lessons from investors and policy makers.](#)
- ^{iv} Synthesis Report of the Sixth Assessment Report, A Report of the Intergovernmental Panel on Climate Change, IPCC 2021
- ^v Gender, climate and security: Sustaining inclusive peace on the frontlines of climate change, UN Women 2020
- ^{vi} Development Finance for Gender-Responsive Climate Action, Development Co-Operation Directorate, OECD March 2022.
- ^{vii} Development Finance for Gender-Responsive Climate Action © OECD 2022
- ^{viii} United Nations Framework Convention of Climate Change (UNFCCC), Gender and Climate Change, Glasgow Climate Change Conference, 2021
- ^{ix} United Nations Framework Convention of Climate Change (UNFCCC) [Introduction to Climate Finance | UNFCCC, 2022](#)
- ^x ANDE (2021). Climate Entrepreneurship in Developing Economies: Supporting Entrepreneurs Tackling Climate Change. Pg 30. <https://www.andeglobal.org/?action=tracking&file=2021/03/Climate-Entrepreneurship-in-Developing-Economies.pdf>
- ^{xi} Suzanne Biegel, 2022. [What will it take to bring climate and gender finance together? Lessons from investors and policy makers.](#)

Annex 1: WCE Businesses

Business Name	Business Description	Country
CocoVita	Promotes conservation of coconut orchards and planting of coconut trees in Kilifi County. They cold press coconut and produce oils for cooking, hair/skin care, and nutrition. By products are sold for making briquettes and animal feeds	Kenya
SafiOrganics	Offers biochar-based fertilizer that is processed from biomass through carbonization to enrich soils for organic farming	Kenya
Griincom	Convert organic waste from households and county government of Nakuru, compost the waste, fortify and package it for sale and use by small holder farmers	Kenya
Patvention Ltd	Promote bee keeping for pollination and honey farming by offering hives. Currently planning of scaling construction of hives using recycled plastics and rice husks	Kenya
Sello Designs	Production of bags and fashion accessories in a sustainable way, largely by using waste, i.e. fabric offcuts from tailors	Kenya
Blossom Health Essentials	Promote cassava farming for soil cover and offers alternative to vulnerable crops such as maize that require chemical and synthetic inputs	Kenya
Byestar International Ltd	Installation of biogas systems for both commercial and domestic use. Organic waste is fermented with no oxygen to produce methane gas and used for energy	Kenya
Omina Otsieno Enterprise	Make jewellery from banana fibre starting from harvesting of banana stem to extracting fibre and weaving the jewellery	Kenya
Gardenology Gardening Solutions	Training and offering products to urban gardeners and small holder farmers; Composting for soil regeneration, preserving pollinators, and agroforestry	Kenya
Giraffe Bioenergy Ltd.	Solar drier for foods which helps address post harvest losses for vegetables and fruits Offer ethanol - clean liquid biofuel produced via a fermentation and distillation process from cassava flour to replace use of firewood and charcoal for cooking	Kenya
Good Farmland Management Kenya, Trading as Sistema. bio	Provide biodigester technology that converts animal waste into biogas and biofertilizer	Kenya
Drop Access	Solar powered irrigation systems for small holder farmers	Kenya
Kakia Oils Ltd	Cold-pressed organic base oils and pure essential oils	Kenya
Malian Agribusiness Solutions	Grow/buy and add value to sweet potatoes by baking bread, cakes and donuts, with land restoration in an ASAL region and uses solar driers	Kenya

GreenLife Development Initiative	Provide green technologies for energy, water management, waste management, and land management	Kenya
Trainer/Consultant	Consultant/ trainer on sustainable finance and green financing	Kenya
Better Foot Investment Services	Trader and dealer in solar solutions and improved cook stoves	Kenya
KOFAR Kenya Ltd	Production of organic fertilizers and soil fertility products	Kenya
Jufra Food Processors	Promotes growth of cereal crops in ASAL which provides an alternative income to charcoal and trains farmers on smart farming methods	Kenya
SUNKEN LIMITED	Energy saving stoves and solar powered water pumps	Kenya
Pine Kazi	Recycling of pineapple leaves to make biodegradable fashionware	Kenya
Appropriate Energy Saving Technologies (AEST)	Empowering women through production of charcoal briquettes and energy saving stoves from agricultural wastes	Uganda
Gang Pur Farmers Limited	Supplying farmer groups with climate smart inputs	Uganda
Good Fire Limited	Providing clean and smart energy solutions and producing bamboo as a faster and alternative source of firewood and raw materials for charcoal briquettes	Uganda
Women in Renewable Energy Association	An organization that fills the gap of women in the renewable energy space. The project involves biomass, energy, male engagement and innovations	Uganda
Go5 Packaging	Replaces polythene which is detrimental to the environment by making reusable and decomposable bags	Uganda
Athena Girls Innovation Compound	Dealers in briquettes, energy saving cook stoves and training women and girls in production	Uganda
Uganda Stoves Manufacturing Limited	Manufacturing of energy saving stoves	Uganda
Best of waste limited	Produces cook stoves, briquettes, kitchen construction, kitchen gloves, baskets and capacity building of women and youth	Uganda
Potential Energy Uganda	Deals in improved energy saving cook stoves which reduces energy consumption, research services and training in cook stove production	Uganda
Prime green Bioenergy	Produces and sells energy saving cook stoves	Uganda
Masupa Enterprises	Creates awareness about climate change through trainings to sensitize communities to use locally available materials to make briquettes and charcoal stoves, improve hygiene, create jobs	Uganda
Peace Abla Gavvo Enterprise	Fish processing using clean-tech ovens and traditional methods	Ghana

Sugarland Limited	Climate-smart production of seasonal vegetables using circular economy principles	Ghana
Global Bamboo Products Limited	Agroforestry and processing of bamboo into products such as bamboo charcoal and briquettes	Ghana
HMR Organics	Processes vegetables that have been organically cultivated on the farm into packaged fresh vegetables and salads for consumption	Ghana
Ecocent Recycling Limited	Manufacturing of building and construction materials from recycled plastic and sand	Ghana
SabonSake	Innovative use of negative emissions technology to convert agricultural waste into locally produced premium soil amendments that sequester carbon and reduce CO2 emissions	Ghana
Ensonyameye Enterprise	Fish processing using clean-tech ovens and traditional methods	Ghana
Even Birth Enterprise	Fish processing using clean-tech ovens and traditional methods	Ghana
Daasgift Enterprise and Renewable Energy Services	Distribution of clean energy products	Ghana
Farminista Africa Ltd	Land brokering for farmers including WCEs, retail of agri-inputs including climate-smart types, training in climate-smart agriculture, access to finance support for farmers including WCEs	Ghana
Ashdam Solar	Provides clean, affordable and uninterrupted smart energy solutions	Nigeria
Sustainable Farming Solutions	Off-takers of the produce from WCEs whom they have taught to use different approaches in Agro-forestry to ensure increased yield without increasing the cost of production	Malawi
Homes Industries Ltd	Training on climate smart agriculture and Moringa tree planting as an alternative source of income for farmers	Malawi
TLC Investments	Horticulture and livestock farming using manure to grow crops	Malawi
Tanthwe Farms	An inclusive agribusiness specializing in growing high-value vegetables and fruits for supermarkets, individuals and hotels. The venture also trains and incubates aspiring farmers and agriculture students, including youth and women.	Malawi
Truss Group	Provides a low-cost, comprehensive solid waste management service to residents of underserved, low-income urban townships, and converts plastic waste into paver block	Malawi
Nomonde Designs	Works with young women and girls in making crafts and jewels by recycling fabric and offering them a platform to market their products	Malawi
Briglo Enterprise	Production of organic fertilizers for use on their horticulture and livestock farm	Malawi



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WUSC acknowledges that its main office, in Ottawa, Ontario, Canada, is located on the traditional, unceded Anishinaabe Algonquin Territories. WUSC has employees who work and benefit from living on Indigenous territories across Canada, the United States, and globally.

