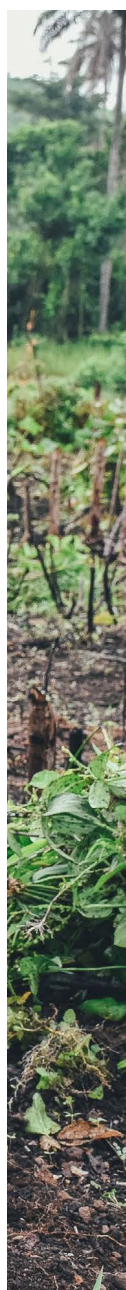


NOVEMBER 2021

MAINSTREAMING GENDER-SMART INVESTING TO ACCELERATE THE TRANSFORMATION OF FOOD SYSTEMS UNDER A CHANGING CLIMATE

Strategies to unlock climate returns by
leveraging gender equality



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EXECUTIVE SUMMARY

What ?

This white paper makes a proposition with potentially far-reaching consequences: that using a gender-smart approach when investing in food systems can increase risk-adjusted financial returns, while also improving climate-change mitigation and adaptation outcomes. It examines this idea within the context of three food value chains, showing in each how gender-smart approaches have helped improve financial returns while also making a positive environmental or social impact. It also builds on the data and research generated by investors and ecosystem-builders that illustrates this nexus between gender and climate change within food systems. By highlighting promising early examples, this white paper intends to demonstrate that there is good reason for more such investments and interventions in the future.

How ?

The white paper draws both on primary and secondary research. It builds on the secondary research of ecosystem-builders and international research organizations such as CGIAR and FAO, private investors such as Root Capital, and public donors such as the UN and the World Bank. The authors themselves have conducted primary interviews with a diverse set of key stakeholders in the food systems value chain (see the [appendix](#)). Very few organizations are currently incorporating both climate and gender considerations in an interrelated way. Hence, findings from the interviews are predominantly anecdotal; however, they provide valuable insight into how public and private organizations can further incorporate gender considerations into their operational and investment strategies. The paper also showcases examples of existing gender and climate investments, with a spotlight on climate adaptation in Africa and three value chains: livestock and dairy, coffee and rice.

Why ?

The white paper asks who today is already considering this intersection between gender, climate and food systems, and how. It examines this question for public and philanthropic funders, private investors and various ecosystem players such as food and beverage companies and research organizations. It finds that many investors make both climate-positive and gender-positive investments – yet there is a disconnect between the two areas, which means these goals are being pursued in isolation. Most investors still lack an understanding of how gender can be material to financial, business, social and environmental outcomes, and are unsure how they can apply such approaches in their own investment processes. The white paper provides a list of suggested actions specific to the different ecosystem players operating within food systems, on how to mainstream gender considerations into their operations to gain financial, social and environmental returns.



EXECUTIVE SUMMARY

Key findings

1

Most investors are currently addressing climate action and gender equality – two key SDG goals – separately. Addressing these issues together has the potential to enhance financial returns, gender returns and climate returns, while also lowering investment risk

3

For food systems to be transformed globally, and for the food sector to adopt a gender-inclusive response to climate-change risks, the private sector must embrace policies and practices like those outlined in this paper

2

Food systems around the world must be transformed in order to realize climate-change goals. Including more women in decision-making and leadership roles could help spur the changes needed. The white paper highlights multiple examples in which women are leading such transformations

4

Studies have shown that women face multifaceted barriers in accessing capital. However, gender-balanced businesses perform better financially. Private and public sector capital providers, along with food and agriculture companies, should work harder to incorporate women in decision-making roles. To do so, they should reassess and adjust their investment and supply-chain procurement processes

Call to action

The evidence is mounting: Incorporating gender considerations into investment strategies can improve investment performance. Doing so can create more resilient food systems, and an increasingly equitable and sustainable world. The roadmap that concludes this white paper is thus intended to help readers incorporate a climate and gender-smart approach into their own decision-making processes. Stakeholders across the investing spectrum – from private and public financial investors to philanthropic donors and food and agriculture companies – all can play a role in supporting a gender-inclusive transformation toward low-carbon and resilient food systems. To this end, the roadmap offers a diverse set of innovative strategies and processes, with the ultimate goal of increasing the volume of capital that views the sector through these vital climate and gender lenses.

WHY GENDER EQUALITY AND CLIMATE CHANGE?

By 2050, the world will need to feed nearly 10 billion people while remaining within our planetary boundaries. We can address the interlinked challenges of food security, climate-change adaptation and climate-change mitigation by applying a climate and gender-smart food systems approach. We can use strategies such as climate-smart agriculture to produce more and better food, to improve nutrition security and to boost farmers' incomes. We can enhance climate resilience by reducing vulnerability to drought, pests, diseases and other climate-related risks and shocks. And finally, we can reduce emissions from food production, avoid deforestation from agriculture and food production and identify ways to absorb carbon out of the atmosphere.

Strengthening gender equality to support the realization of women's rights and accelerate their socioeconomic empowerment is a development goal that is often

overlooked in the implementation of technical solutions. Yet improved gender equality will be necessary to support population-wide resilience to climate change, sustainable economies and equitable access to climate solutions. This requires that capital providers and large food and agriculture companies take a gender-smart approach that mainstreams gender analysis in investment decision-making processes, from providing the necessary capital to women-owned and led companies, to ensuring that women farmers are empowered across the entire food system.

This white paper aims to highlight opportunities and identify strategies that increase capital flow towards women-owned or led enterprises, enterprises that offer products and services that clearly improve the lives of women and girls, and enterprises that work to dismantle structural gender inequality in the food systems space.



INTRODUCTION TO GENDER-SMART INVESTING

WHAT IS GENDER-SMART INVESTING (GSI)?

Gender-smart investing (GSI) is defined as an investment strategy that seeks to intentionally and measurably use capital to address gender disparities and better inform investment decisions. Gender as a factor of analysis can highlight opportunities and reveal risks that can strengthen investment decision-making to achieve greater financial and social outcomes. Capital allocators can assess and invest in companies, bonds, funds, infrastructure projects etc. across different gender-smart strategies. Below are some examples of these strategies (not an exhaustive list): ¹

- Owned by women and/or with women represented in leadership
- Committed to a gender-diverse and equitable workforce
- Committed to a gender-inclusive value chain
- Committed to offering and designing products or services that consider the distinct needs of women as a consumer segment
- Committed to an integrated approach that analyzes gender patterns for differentiated experiences for men and women
- Committed to ensuring their operations do no harm to women in the community



When applying GSI to climate-smart food systems, two approaches are relevant:

- An investment process that integrates gender considerations, from pre-investment activities (e.g., sourcing and due diligence) to post-deal monitoring (e.g., strategic advisory and exiting) to contribute to positive business outcomes from the investments. Case studies and anecdotal evidence highlighted in the white paper suggest that increased gender diversity or equity in agri-business investments improves climate returns and positive business outcomes
- An investment strategy within food systems that seeks to achieve gender equity to ensure inclusive growth. With respect to investments in climate-smart food systems, the strategy would seek businesses whose:
 - Vision or mission to address gender issues at the grass-root level i.e., issues faced by smallholder women farmers/traders
 - Organizational structure, culture, internal policies and workplace environment are inclusive and promote gender equity
 - Data-capture methods incorporate gender-disaggregated data when measuring the climate-positive impact of internal and external operations
 - Focus is on the use of data and metrics for the gender-equitable management of performance and to incentivize behavioral change and accountability within internal and external stakeholders
 - Financial and human resources signify overall commitment to gender equality within their organization and with their interactions with external stakeholders along the extended value chain, including but not limited to suppliers and distributors

¹ 2xCollaborative and CDC Gender-smart investing toolkit

WHY IS GSI IMPORTANT?

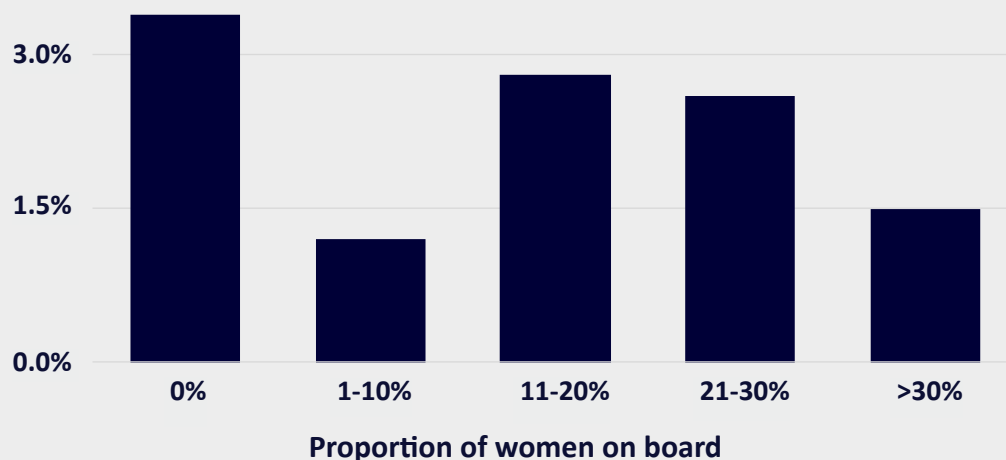
There is growing evidence that gender diversity in the workplace across geographies and industries can improve business and financial outcomes. Below are some of the prominent findings:

- Global evidence across industries in emerging markets shows that gender diversity in the workplace across all levels and departments improves business performance and value across a range of metrics²
- Gender-diverse teams have been shown to outperform in business returns. According to a recent study by the International Finance Corporation (IFC), private equity (PE) and venture capital (VC) funds with gender-balanced senior investment teams generated 10-20% higher returns compared to funds that have majority male or female leadership. Portfolio companies with gender-balanced leadership teams have also outperformed companies with non-diverse teams in median valuation increases by as much as 25%³
- Calvert Impact Capital's internal study found that diversity in leadership and inclusion of women in leadership leads to stronger business performance. Companies with the highest percentages of women in leadership positions had 18.1% return on sales (ROS), 3.9% return on assets (ROA) and 8.6% return

on equity (ROE) compared to -1.09%, 0.3% and 4.4% respectively for companies with fewer women in leadership positions⁴

- A recent study by Sodexo indicates that gender-balanced management teams, defined as teams with 30-70% women, achieved on average of 5% better brand awareness, 12% higher client retention, 13% higher growth and 23% higher gross profits over three consecutive years⁵
- An analysis by the Sasakawa Peace Foundation of more than 11,700 companies globally found that a critical mass of 30% of women on a company's board made a difference to climate governance and innovation, as well as a lower growth rate of emissions: 0.6% compared to 3.5% for companies with no women on their board⁶
- A study by Haas School of Business suggests that the presence of more women directors encourages proactive pursuit of sustainable business practices and opportunities. Board diversity was also shown to be correlated with reduced emissions, to some extent. Globally, the growth rate of emissions from companies with more than 30% women board members was only 0.6%, compared to 3.5% for the companies without any women board members⁷

Emission growth 2016-2018



Source: Bloomberg Terminal Note: Gender data is from FY2017. Sample size =2,800

Exhibit 1: Correlation of gender diversity and reduced emissions⁷

² How to invest with a gender lens, V4W (2020)

³ Private equity and value creation, IFC & CDC (2020)

⁴ Just good investing: Why gender matters to your portfolio and what you can do about it, Calvert Impact Capital (2018)

⁵ Gender-Balanced teams linked to better business performance: A Sodexo study (2016)

⁶ "Gender diversity and climate innovation," The Sasakawa Peace Foundation

⁷ Gender diversity and climate innovation, Bloomberg NEF and Sasakawa Peace Foundation (2020)

INTRODUCTION TO CLIMATE-SMART PRACTICES ACROSS THE FOOD SYSTEM

Research released by the European Commission in 2021 indicates that food systems were responsible for a third of global greenhouse gas emissions, with 71% attributable to agriculture and land use/change⁸. Additional research suggests that crop and livestock production within the farm contributes more than 50% of methane and 75% of nitrous oxide emissions from human activities globally. The impacts of global climate change on food systems are expected to be widespread, complex, geographically and temporally variable, and profoundly influenced by socioeconomic conditions.⁹

Given the intricate relationship between climate change and food systems, it is critical to explore the various ways through which current and future climate threats can be managed or averted to ensure resilient food systems. Climate-change management approaches are categorized into adaptation and mitigation measures.

Climate-change adaptation aims to manage climate risk to an acceptable level, taking advantage of any positive opportunities that may arise. Climate-change adaptation measures and actions can be aimed at:¹⁰

- Accepting the impacts and bearing the losses that result from risks (e.g., managing retreat from sea level rise)
- Off-setting losses by sharing or spreading risks (e.g., through insurance)
- Avoiding or reducing exposure to climate risks (e.g., building new flood defenses, or changing location or activity)
- Exploiting new opportunities (e.g., engaging in a new activity, or changing practices to take advantage of changing climatic conditions)

Climate-change mitigation is a human intervention aimed at reducing greenhouse gas (GHG) emissions or enhancing the sinks of greenhouse gases (IPCC 2007). Mitigation of climate change is mandated by the 2015

Paris Agreement, to which 197 countries belong to reduce warming to levels below 2°C and preferably 1.5°C by 2100. Food systems provide a significant potential for GHG mitigation. Climate-change mitigation efforts can focus on:

- Avoiding land use change of high-carbon stock lands such as forests or peatlands
- Reducing emissions from agriculture and the supply chain through, for example, more efficient use of fertilizer or improved quality feed for livestock
- Shifting dietary consumption to less GHG-intensive or emitting food
- Improving soil management and reducing soil degradation to enable more carbon sequestration
- Reducing food loss and waste¹¹

The Food and Agriculture Organization (FAO) has highlighted measures for climate-change adaptation and mitigation that can serve as a guide for existing and potential investors in the climate-smart food systems space, (found in the appendix [here](#)).

Climate-change mitigation remains urgent but is not yet sufficient to manage the impact of the changing climate, and there is a clear need for climate-change adaptive technologies to be used in tandem to address the impacts of climate change on agriculture and food systems.



⁸ "Food systems are responsible for a third of global anthropogenic GHG emissions", Nature Food

⁹ Climate change and food systems, Sonja J. Vermeulen, Bruce M. Campbell, and John S.I. Ingram

¹⁰ "Identifying adaptation options", UK Climate Impacts Programme

¹¹ "Actions to Transform Food Systems Under Climate Change", CGIAR

WHY IS IT IMPORTANT TO ADOPT A GENDER-SMART APPROACH IN CLIMATE-SMART FOOD SYSTEMS?



Women are at the center of their communities and households – they are the gatekeepers in the management of natural resources, food production, water governance, education, healthcare, purchasing power. When women are in leadership positions, both within our organization, within our partnerships and as clients – there is a broader perspective employed when making decisions across the entire value chain. We need that in order to build climate resilience.

– Brandi DeCarli, Farm from a Box



Evidence shows that climate change disproportionately affects women. Poor communities are the most vulnerable to climate change, and women represent 70% of the world's poor. Women are also more exposed to the effects of climate change on natural resources as they are often responsible for producing food, collecting water or sourcing fuel. On the other hand, women can be the driving force in the transition to climate-smart practices and their involvement is a success factor in many adaptation and mitigation strategies.

– Marie Puaux, Head of Impact Management, Bamboo Capital Partners

Climate and gender-smart investing approaches can guide transformative actions needed to reorient food systems to ensure food security in a changing climate. FAO estimates that if women had the same access to productive resources as men, they could increase yields on their farms by 20-30%, potentially resulting in 100-150 million fewer hungry people in the world¹². Applying a gender-smart approach within the context of climate-smart food systems has the potential to enhance outperformance in business and financial terms as well as climate-positive returns within food systems.

Though the relationship between food systems and climate change is increasingly understood¹³ – with food systems adversely impacting climate change and, in turn, climate change affecting the sustainability of food systems – the nexus of gender, food systems and climate is relatively new. Climate and gender represent two SDG goals that most investors currently address separately even though addressing them together can enhance financial returns, gender returns and climate returns, while also de-risking investments.

Research indicates that women are disproportionately

impacted by climate change.¹⁴ Women's unequal participation in decision-making processes and labor markets compound inequalities and lead to sub-par climate-related planning, policymaking and implementation, suggesting the cost of excluding women from decision-making in food systems could be significant. However, their contribution to food systems can be leveraged to implement solutions that tackle these issues. By utilizing their expertise, leadership, community involvement, purchasing power and lived experience, climate and gender-smart opportunities can be unlocked to strengthen climate resilience and deliver stronger climate and environmental outcomes.¹⁵

At the grass-root level, women smallholder farmers are known for taking decisions and adopting practices that positively impact their community. These practices are likely to consider climate change and the environment.

MEDA's experience in Ghana with soyabean and cocoa farms have shown that women smallholder farmers are advocates of local variants of crops – which are more sustainable, less water intense and better suited to the local climate

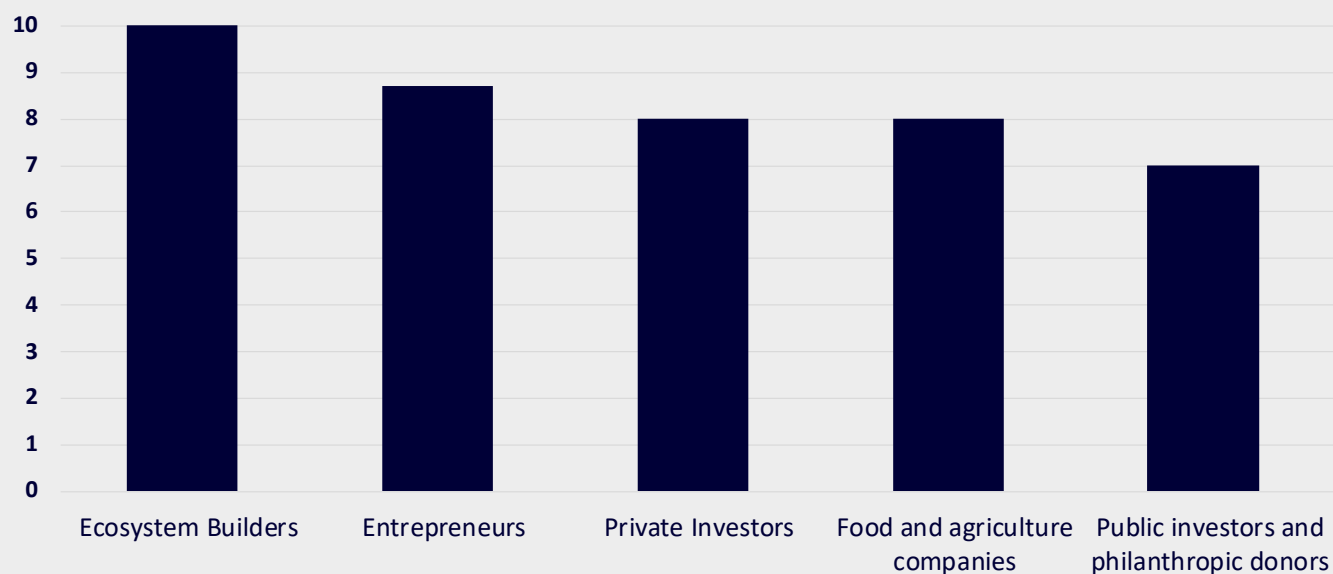
¹² *"When you think farmer – think female!"*, FAO - 2021

¹³ *International Panel of Climate Change (IPCC, 2013)*

¹⁴ *Gender and climate change*, IUCN

¹⁵ *"Integrate Gender When Designing Climate Policy"*

ON A SCALE OF 1-10, HOW IMPORTANT DO YOU THINK GENDER IS IN IMPROVING BUSINESS OUTCOMES IN CLIMATE AND FOOD SYSTEMS IN YOUR ORGANIZATION?



Source: We conducted this survey with the interview partners listed in the [Appendix](#)

Exhibit 2: Importance of gender considerations in business outcomes within climate and food systems according to our interview partners



OUR FINDINGS

A Most investors and food companies treat the issues of climate change and gender equity as separate topics. But addressing them together can improve business outcomes, financial returns, gender returns and climate returns, and even reduce investment risk

Comprising around 40-50% of the global agricultural labor force¹⁶, women play a major role in global food systems that is often overlooked by the investment community. Women have local knowledge and expertise that can be leveraged to find solutions to climate change. They have the power to drive transformative change within food systems. Consciously including women as decision makers and supporting women entrepreneurs can thus help generate the inclusive solutions needed to address climate change.

Bringing more women into decision-making roles across the food-system value chain increases diversity and helps to future-proof businesses. Indeed, investing in building a gender-balanced supplier network and internal workforce is critical to tapping the benefits of diversity.

Gender-smart capital providers and private corporations leading this charge should share their implementation experiences and any lessons they have learned with others looking to undertake a GSI approach. This will help others adopt the strategy and allow it to enter mainstream practice.

B Eliminating food-system inefficiencies can be a large and attractive opportunity for climate and gender-smart investing

Global food systems are valued at USD 8tn, including USD 3.2tn from primary production. The societal cost of the negative externalities associated with the current food system is estimated to be around USD 6tn. Eliminating

inefficiencies in the food systems thus constitutes a huge market opportunity for investors. Food systems receive only about 2% of global government expenditure, 1-2% of development finance capital and around 6% of impact investments. Estimates suggest that adequate climate-change adaptation in the sector would require at least USD 80bn per year of investment by 2050. Despite this, just USD 20bn in climate financing was recorded for agriculture in 2017-18.

These gaps in food-system financing reveal a large market opportunity. Most of this capital could be invested with a climate and gender-smart strategy.

C Women entrepreneurs and farmers typically face many barriers in accessing capital and markets for their products. Working with them can be financially rewarding for private investors and food companies

Studies show that women routinely confront multifaceted barriers in accessing capital, despite increasing evidence that women-led and gender-balanced businesses perform better financially.^{2,5} Consequently, women also face multiple barriers in seeking to become agents of change in the agricultural sector. The IFC estimates that women-owned businesses have up to USD 1.5tn in unmet financing needs worldwide, with 70% of women entrepreneurs who own SMEs having inadequate or non-existent access to capital.¹⁷

This financing gap means vast potential is today going untapped. With capital to unlock their knowledge and experience, women will be able to develop and adopt technologies that can increase productivity, lower agriculture's detrimental impact on the environment and build resilient food systems. Investors can help this happen while improving their own returns. For their part, food companies that include women-owned and women-led companies in their supply chain can make their value chains more resilient, while also furthering their climate-change adaptation and mitigation goals.

¹⁶ *Agriculture As a Source of Women Empowerment*, Malini Revankar, Dr. Hanamagouda C (2018)

¹⁷ *"Investing in Women," IFC*

D Blended finance transactions can transform our food systems while ensuring a gender-inclusive response to climate change

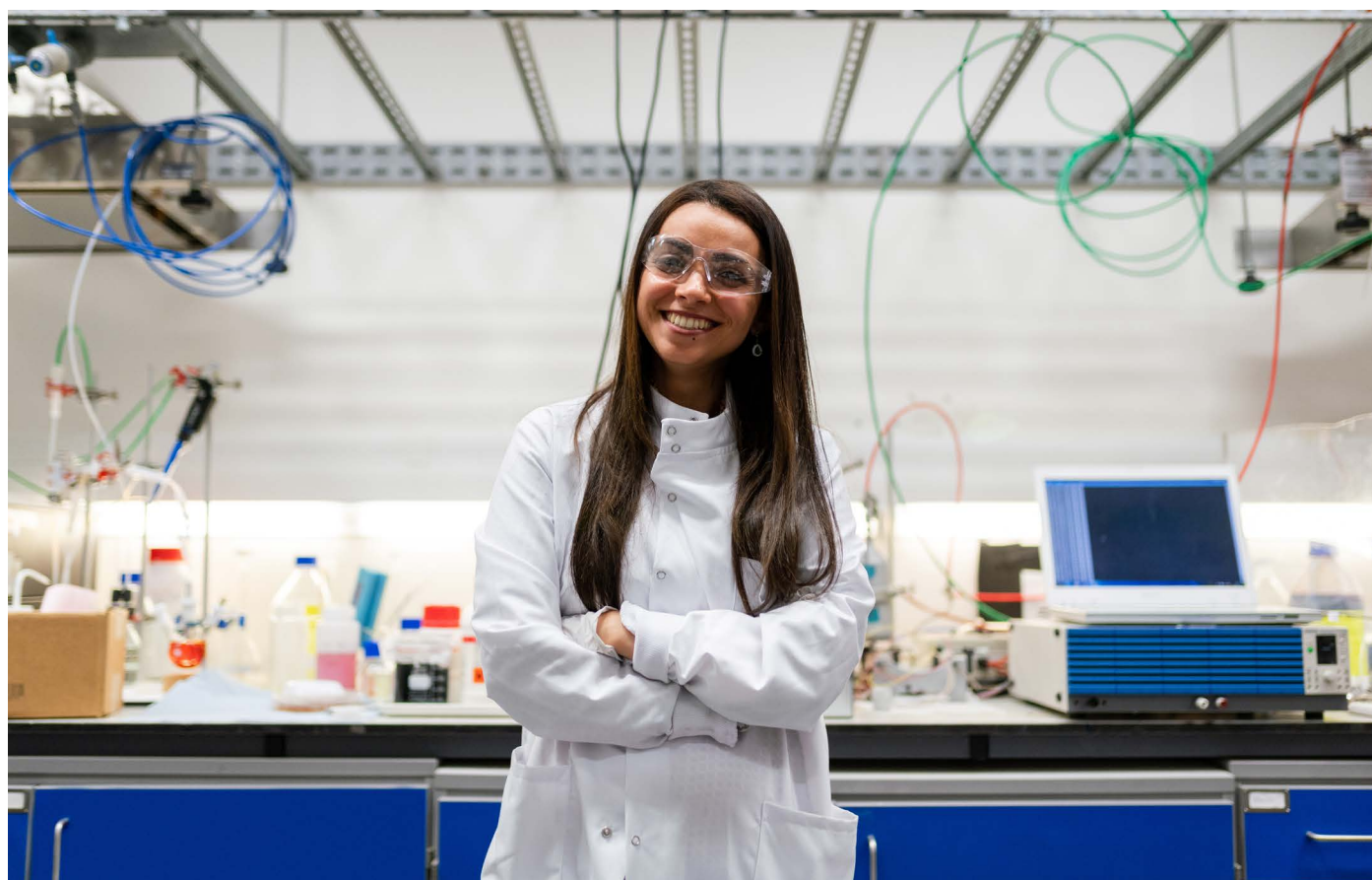
With blended finance instruments, the public sector can crowd in private investors and food companies by lowering the perceived risk associated with gender-smart climate investments. A 2021 Convergence Finance report¹⁸ examining blended finance for climate highlights that to-date, over 60 blended finance transactions, totaling over USD 6bn have been deployed at the nexus of gender and climate change, and a quarter of these transactions have been in the agriculture sector.

One example is [The Blended Climate Finance Program](#) established by the International Finance Corporation (IFC) and the Government of Canada with a USD 200m commitment to provide concessional financing into gender-responsive climate investments, including agriculture in order to catalyze private sector investment

“

Agriculture is underperforming in many developing countries for a number of reasons. Among these is the fact that women lack the resources and opportunities they need to make the most productive use of their time. Women are farmers, workers and entrepreneurs, but almost everywhere they face more severe constraints than men in accessing productive resources, markets and services. This ‘gender gap’ hinders their productivity and reduces their contributions to the agriculture sector and to the achievement of broader economic and social development goals. Reducing gender inequalities in access to productive resources and services could produce an increase in yields on women’s farms of between 20% and 30%, which could raise agricultural output in developing countries by 2.5% to 4%.

– Food and Agriculture Organization (FAO)¹⁹



¹⁸ [“The State of Blended Finance 2021,” Convergence](#)

¹⁹ [“The State of Food and Agriculture – Women in Agriculture, Closing the gap for development,”](#) Food and Agriculture Organization (FAO)

EXISTING MARKET FAILURES

BARRIERS TO SUPPLY OF CAPITAL

When investing in climate and gender-smart agriculture, private investors, food and agricultural companies, public investors and philanthropic organizations face some of the following challenges:

Lack of awareness and understanding

Climate and gender-smart investing is a relatively new investment strategy. There is a misconception that integrating gender into climate-focused investments will add an additional layer of complexity and perceived risk to ensuring successful investments. Research suggests that adding climate and gender considerations into the investment process has the potential to improve financial returns and reduce investment risk

Large food and agricultural companies have launched multiple initiatives to improve gender equity within their organizations and their supply chains. While some of these initiatives were started under a corporate social responsibility (CSR) umbrella, many have the potential to improve gender equality while also helping the organization generate better financial and climate returns

Sparse demonstrative examples of successful GSI

Given the nascence of GSI there is a lack of examples demonstrating its outcomes, especially when involving the private sector. Sharing success stories can decrease the perception of risks involved with new investment strategies and provide a basis for other investors to draw upon when developing their own internal GSI efforts. Providing a pioneering example, a Calvert Impact Capital study found that companies featuring more gender-balanced leadership had a better return on sales, ROA and ROE²⁰. The effect of leadership goes beyond financial returns. Companies with gender-balanced leadership tend to have better climate governance and are more likely to proactively pursue sustainability

Misconception that applying GSI leads to a smaller potential deal flow

It was evident from the interviews that the investor community continues to struggle with preconceived notions about GSI, such as the idea that incorporating a gender-smart approach could lead to a significant narrowing of the investment pipeline in both developed and emerging markets. However, when GSI investors incorporate multiple additional gender-sensitive networks and sources into their deal flow instead of limiting themselves to the more traditional sources that may have implicit gender-biases, this usually results in broadened deal pipelines. CDC has highlighted the practical steps fund managers can follow to expand and diversify their networks²¹. Additionally, there is a notion that GSI investments can only be made with women entrepreneurs. This might be the strategy for a few select GSI investors, but most of them focus on gender-balanced founding teams, management teams and boards. Similarly, there is a notion that gender-smart investments have lower financial returns, while existing research suggests the opposite



²⁰ *"Just Good Investing", Calvert Impact Capital*

²¹ *"Private Equity and Value Creation: A Fund Manager's Guide to Gender-smart Investing", CDC*

Lack of in-house expertise

Both climate expertise and gender expertise are necessary for organizations to get to smarter outcomes. For the past few years, investors and food and agriculture companies have been building expertise around climate change. Some have started building expertise in gender, but since this expertise is placed in different silos with little or no thematic interaction, it usually results in fragmented approaches. While the dual expertise exists in the marketplace, it is not well understood. It is also not often connected to investment and investment advisory teams. Those who understand the gender differentiated needs of and solutions for employees, customers, supply and distribution channel partners are critical to add to teams in order to get to successful climate and gender-smart outcomes

Cultural and systemic barriers faced by women entrepreneurs and farmers

The risky nature of fundraising process and the high reliability required from procurement processes structurally disfavours women entrepreneurs and suppliers.²² Female entrepreneurs and suppliers are also usually held to a higher standard in these processes. Investors, bankers and procurement teams have explicit and implicit biases against women, and typically also ask different questions from them. Even the language used to describe female and male entrepreneurs and suppliers can be significantly different. Additionally, female entrepreneurs and farmers are also disadvantaged in their access to critical (male) networks. In addition to these structural biases there are multiple cultural biases that might slightly differ geographically but usually tend to limit women's social, cultural and financial independence. There are organizations like [Investing in Women](#) working on mitigating these cultural and structural biases but a lot more needs to be done

Lack of women in investment and procurement teams

Within organizations themselves there is a lack of women in investment teams, management boards and procurement organizations of corporates. Research by

the IFC found that private equity and VC funds with gender-balanced senior investment teams generated 10-20% higher returns compared to funds that have a majority men or women leaders only 17% of executive supply chain leadership positions are held by women.²³ According to a 2021 Gartner study, women account for just 39% of the total supply chain workforce, despite accounting for more than half of the workforce. Further, only 17% of executive supply chain leadership positions are held by women²⁴

Lack of high-quality data

Investors typically depend on data to build and optimize their investment strategies. Given that climate and gender-smart investing is a relatively new strategy within food systems, there is a gap in the availability of high-quality gender-disaggregated data. This makes it difficult for investors to assess risks and execute adequate risk mitigation strategies accurately. It also artificially creates a perception of higher risk and lower risk-adjusted returns, which discourages capital deployment. Over the last couple of years more and more gender-disaggregated data is emerging. We need to not only collect and analyze this data but also make use of the additional data that is being collected through case studies throughout the 2x Challenge and from actors such as MEDA, Value for Women, ICRW, Criterion Institute and others

The funding gap between gender-focused microfinance and traditional finance

While microfinance helps finance women's entrepreneurship at a smaller scale in low- and middle-income countries, it is not sufficient to help them grow to access traditional modes of finance, such as bank loans and direct private investment capital. Direct investments in these smaller grassroots-level investment opportunities can sometimes require high transaction costs, longer development lead times or technical assistance for private and public investors. There are many innovative financing solutions being implemented by organizations like [LadyAgri](#), [MEDA](#), [Investing in Women](#), [The Rallying Cry](#) etc. But we need more solutions to cater to this "missing middle"

²² ["Advancing gender equality in venture capital"](#), Harvard Kennedy School

²³ ["Moving towards gender balance in private equity and venture capital"](#), IFC

²⁴ ["2021 Women in supply chain research"](#), Gartner

BARRIERS TO DEMAND FOR CAPITAL

Women entrepreneurs and farmers face multiple challenges in trying to access capital. Below are some of the challenges that were highlighted during our interviews:

Women farmers tend to have less control over productive resources

In low and middle-income countries, a large proportion of women are involved in agriculture particularly in low-skilled, labor-intensive parts of the value chain, without control over productive assets and machinery (if available at all). Frequently, such productive assets like land and cattle are owned by men, which results in women lacking the decision-making capacity and financial collateral to partake in financing activities that could increase earnings such as contract farming²⁵

Women farmers do not have equal access to traditional networks

While women play a dominant role in cultivation and other labor-intensive processes, women have limited access to male-dominated food-processing, trading networks and broader market entry due to cultural and social norms. Hence, they are reliant on men in their extended family or intermediaries for support

Women smallholder farmers and early-stage women entrepreneurs lack adequate business knowledge

A significant number of women involved in agriculture and agribusinesses may not have access to basic education, which hinders their involvement in agribusiness activities. A lack of business knowledge can exclude women farmers and entrepreneurs from participating in investor processes even though they may have greater knowledge of traditional climate-positive methodologies for farming. Many lack sufficient business knowledge to run the farming operations independently and are dependent on extended family members

Women entrepreneurs manage their business differently and have different financing needs

Women entrepreneurs often prefer relatively lower-risk business models and may not chase the rapid growth business models that VC investors are more comfortable investing in. Capital allocators need to do more to eliminate bias by acquiring a better understanding of where and how to find these women-led businesses, how women entrepreneurs may manage their businesses differently, what the market opportunities or risks look like, what those businesses look for in investors and what they need from investors^{26 27}

Lack of social support systems

Women often lack the social support system needed to be successful entrepreneurs. In most parts of the world, social and cultural norms hold them responsible for housework, childcare and elderly care responsibilities, reducing time and energy available to be spent on entrepreneurial activities. Although some of these norms have been changing, the COVID-19 pandemic has set back progress²⁸

Absence of successful role models

Due to a smaller number of successful women entrepreneurs in the past, the newer generation of women entrepreneurs lack role models to learn from on topics such as creating successful enterprises, anticipating future capital needs and finding different ways to secure capital



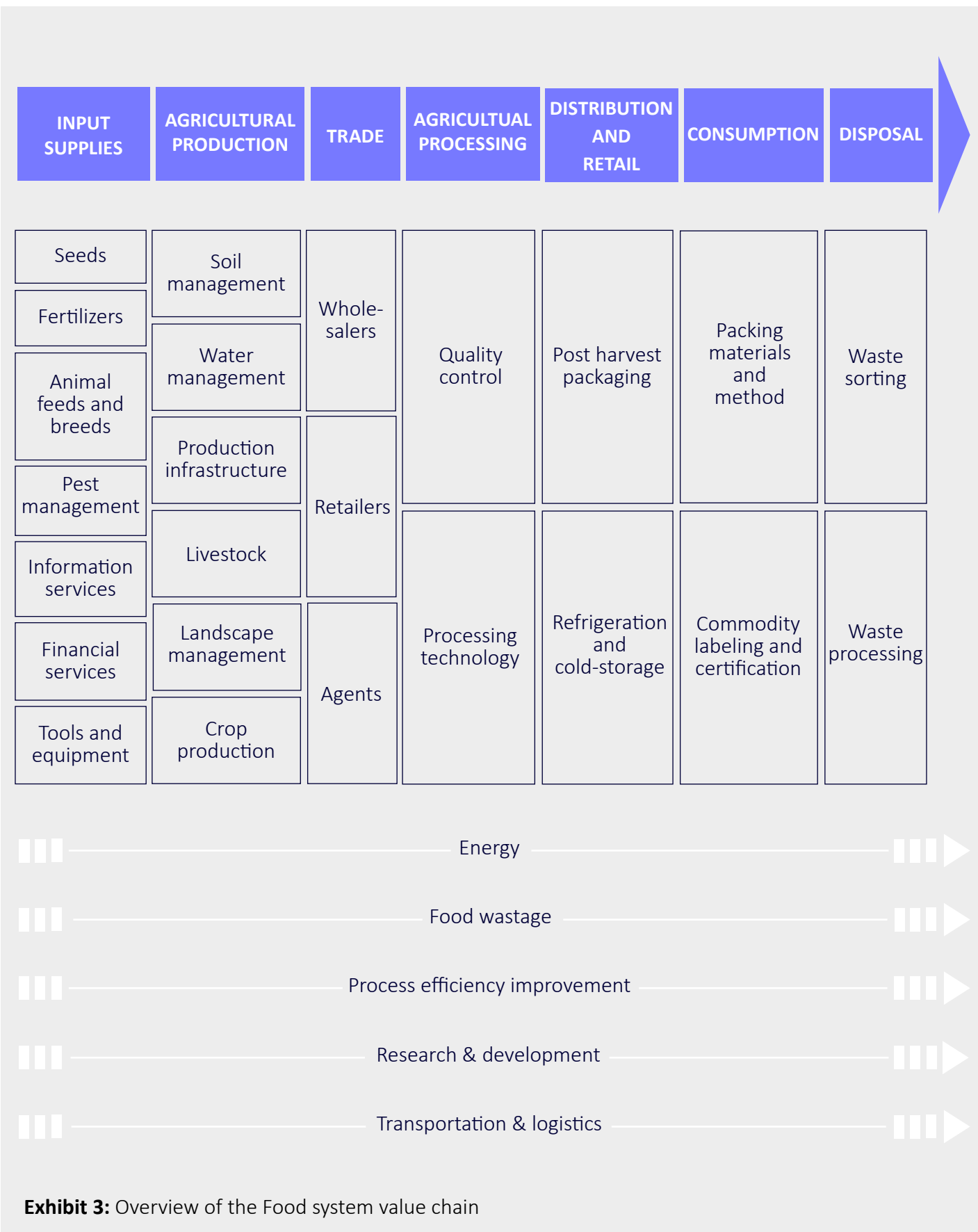
²⁵ [“Closing the gender gap in agriculture”](#)

²⁶ [“The female tech bosses who want zebras not unicorns,”](#) BBC

²⁷ [“Fixing venture capital for women entrepreneurs,”](#) Cartier Women’s Initiative

²⁸ [“COVID-19 and gender equality: Countering the regressive effects,”](#) McKinsey

MAPPING CLIMATE AND GSI OPPORTUNITIES



FOUR TYPES OF CLIMATE- AND GENDER-SMART INITIATIVES

The examples of climate- and gender-smart initiatives highlighted across food-system value chains in the following section have been classified by climate and gender impact. Many of the examples cover multiple impact areas highlighting the interconnectedness of “impact” returns and “business” returns, showcasing how climate adaptation and mitigation lowers business risk to shocks, thereby contributing to improved productivity returns. Below are the four impact categories:



Climate-change mitigation returns

refers to avoiding and reducing emissions of greenhouse gases into the atmosphere. For food systems, this may include better cropland management, livestock management and management of organic soils. In the context of gender, this means investing in women as drivers for approaches that unlock climate-change mitigation returns. This is particularly relevant for large food and agriculture companies that have committed to lowering their emissions footprint.



Productivity returns

refer to higher yields or increased income through efficient use of inputs, better soil quality due to a reduction in fertilizer use, reduced food loss and waste per unit of product, etc. In the context of gender, this means investing in women as drivers of productivity returns.



Climate-change adaptation returns

refers to adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects or impacts. In the context of gender, this means investing in women as drivers for approaches that unlock climate-change adaptation returns. Climate-change adaptation can lower the investment risk in the food-system value chain as this improves resilience against future shocks. Adapting to climate change is particularly relevant for long-term patient capital providers as a strategy that improves risk-adjusted returns in the long run.



Gender-equity returns

refer to the significant improvement in the lives of women and girls that can be achieved by investing in opportunities that accelerate women’s socioeconomic empowerment. With outsized gender-equity returns, these investments are ideal for philanthropic donors, public investors or DFIs that focus on gender equality. As stronger evidence emerges on improved business outcomes linked to gender equity, there is a greater rationale for future private sector investment which is currently limited to a few industry-leading organizations.

SPOTLIGHT ON GENDER AND CLIMATE-CHANGE ADAPTATION IN AFRICA



[AfDB](#) has stated that it expects to channel USD 150m to women in agriculture in Africa by the end of 2021. Noting that the financing gap for African women in food systems in sub-Saharan Africa is close to USD 15.6bn, AfDB aims to help women in agriculture partner with public and private sector actors to increase the ability of women farmers and women-led or -owned SMEs to access

financing and skills they need to grow sustainably. In Ghana, a USD20m project is expected to benefit 400 women-led micro, small and medium enterprises through a line of credit from [Ecobank Ghana](#) as well as technical assistance

Much of the work in in agri-food systems in Africa is performed by women. In fact, 79% of economically active women across the continent report agriculture as their primary source of livelihood.²⁹ The share of women labor input into primary agriculture averaged 40% in six countries (Ethiopia, Malawi, Niger, Nigeria, Tanzania and Uganda).³⁰ When other post-harvest agricultural activities such as processing and marketing are included, this number increases, sometimes by up to 80%.³¹

Yet there exists an amply documented gender productivity gap in sub-Saharan Africa. Productivity of women farmers consistently lags that of men farmers. Women farmers and livestock keepers in Africa are more vulnerable to shocks that negatively impact farming and livestock activities such as climate change because

they are generally less well-informed and less well-resourced. Gender inequalities in access to and control over resources, technology and information restricts women's ability to act on and implement climate adaptation practices in agriculture. Adaptation strategies include a range of agricultural practices and technologies that aim to sustainably improve agricultural practices and household income, thereby strengthening farmers' resilience and reducing greenhouse gas emissions or, when possible, sequestering carbon.

²⁹ Food and Agriculture Organization. 2011. *The State of Food and Agriculture 2010-11*. Rome: FAO.

³⁰ Palacios-Lopez, A., L. Christiaensen, and T. Kilic. 2015. How much of the labor in African agriculture is provided by women? *Food Policy* 67: 1-192.

³¹ Doss, C. 2011. *If women hold up half the sky, how much of the world's food do they produce?* Rome: FAO.



As part of the [Livelihoods Fund](#) project, the [Women in Shea Initiative](#) aims to build a responsible shea supply chain in the East Gonja District of Northern Ghana by providing 13,000 women farmers with sustainable income, diversified agricultural production and preservation of the shea natural ecosystem in a particularly arid area. This 10-year project is in partnership with Mars Incorporated, AAK, USAID, CARE and local NGO partners to provide tools and trainings that improve shea production efficiency and product quality to increase income for women farmers, improve natural resource management of shea parklands, and increase the resilience of the shea ecosystem to climate shocks, benefiting both women smallholders and corporate supply chains

In 2019, implementation of the Climate Smart Agriculture (CSA) Monitoring framework in Kaffrine (Senegal), a Climate Smart Village (CSV) was setup by [CGIAR Research Program on Climate Change, Agriculture and Food Security \(CCAFS\)](#) in the Daga-Dirame village of Kaffrine in the context of the [AR4D project](#) led by the Alliance of Bioversity International and CIAT.³² Climate-smart options were demonstrated on community plots and featured strategies such as agroforestry or tree planting (baobab, jujube, tamarindus, guava), farmer-managed natural regeneration, planting drought-tolerant varieties (millet, maize or groundnut), reduced tillage and organic fertilizers (manure compost). Sex-disaggregated data collected to assess the perception of benefits from CSA practices as well as its scaling potential showed that climate-related shocks were the main drivers of changing farm practices and 70% of women farmers adopted one or more of the promoted CSA practices. These farmers reported benefits associated with improving food access and nutrition (95%), increasing income (94%) and reducing vulnerability to climate shocks (82%)



³² Bonilla-Findji O, Ortega A, Ouédraogo M, Fall M, Chabi, A, Andrieu N, Eitzinger A, Zougmore RB, Läderach P. 2020. How are smallholder farmers coping with and adapting to climate-related shocks in Kaffrine Climate-Smart Village, Senegal? CCAFS Info Note. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).

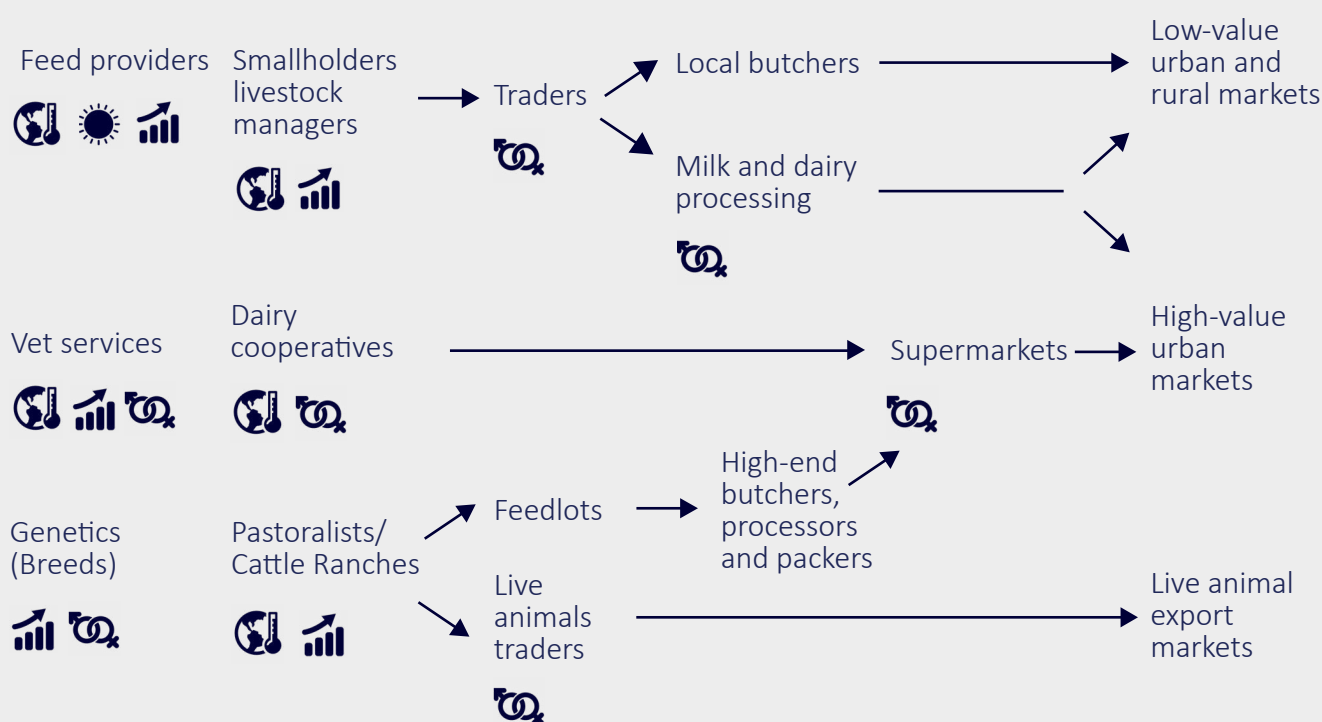
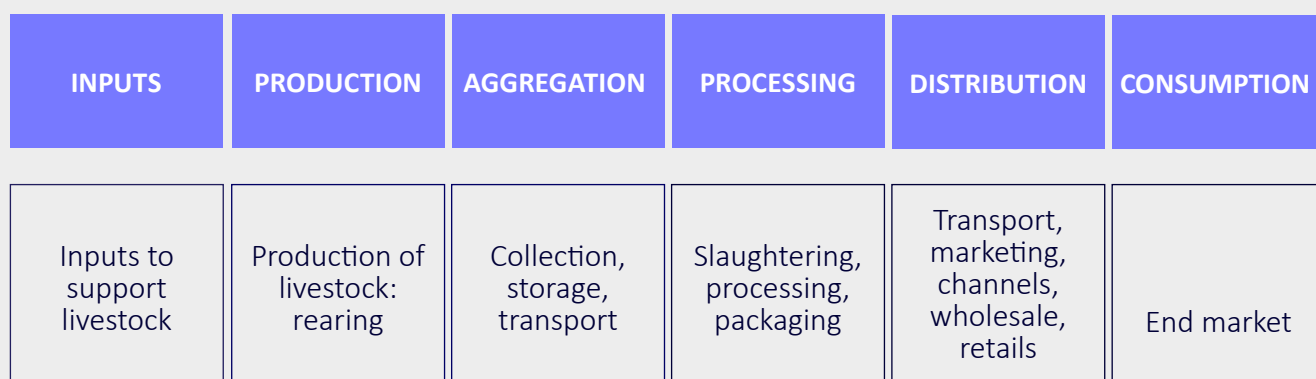
DEEP DIVE INTO LIVESTOCK AND DAIRY

Global demand for livestock products (meat and dairy) is expected to double by 2050, due to increasing populations as well as improvement in the worldwide standard of living. Climate change is a threat to livestock production because of the impact on the quality of feed crop and forage, water availability, animal and milk production, livestock diseases, animal reproduction and biodiversity. Meanwhile, the livestock sector contributes to 14.5% of GHG emissions, further accelerating climate change. Recently, Worldwatch Institute, a Washington DC environmental think-tank, reported that livestock emissions account for 51% of greenhouse gases attributable to agriculture. Consequently, the livestock sector will be a key player in the mitigation of GHG emissions and improving global food security.

Rural women play a key role in livestock management in some regions. Women make a significant contribution to food production involving small livestock. A recent study in Pakistan³³ found that rural women were engaged in a wide range of livestock management practices such as the processing of milk (100%), making and storing of dung cakes (90%), collection of manure (87.5%), watering of animals and feeding of livestock (75.8%), cleaning sheds of animals (72.5%) and in fact, women participate mostly in taking care of diseased animals (82.5%), brooding and breeding (64.2%) and marketing of animals' produce (60%).



LIVESTOCK VALUE CHAIN - POTENTIAL FOR CLIMATE AND FINANCIAL RETURNS GENERATED THROUGH GENDER INTERVENTIONS



Impact criteria:



Climate change mitigation returns



Climate change adaptation returns



Productivity returns



Gender equity returns

Exhibit 4: Overview of the livestock and dairy value chain

Impact criteria:



Climate change mitigation



Climate change adaptation



Improved productivity or financial returns



Outsized gender equity return

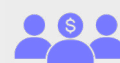
Investor suitability:



Private investors



Food and agriculture companies



Public investors and private philanthropic organizations

Below are some of the initiatives identified within the livestock and dairy value chain, where integrating a gender analysis or including more women in the value chain yields positive climate returns, productivity returns or large gender-equity returns:

1. Adoption of sustainable tech-enabled inputs by women farmers/livestock managers:

In many middle and low-income countries and in rural areas in particular, women are generally responsible for managing the household as well as livestock, which can be quite time-intensive. Studies suggest that they are more likely to adopt technologies that improve processing time or minimize manual efforts while reducing their emissions footprint. In fact, there are examples of women-led organizations which are trying to provide such solutions

The women-led UK-based startup [Smartbell](#) which provides animal-health monitoring solution platforms that can help farmers detect early signs of diseases and improve the longevity and hence the sustainability of livestock, has observed much faster adoption by women smallholder farmers

Another women-led startup based in [South Africa](#), [3DIMO](#) has developed infrared technology to detect diseases in livestock and has seen a substantial initial demand from small and medium shareholder farmers, particularly women



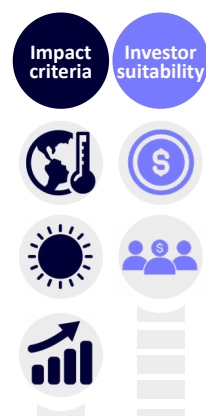
Our work with women smallholder soyabean farmers in Northern Ghana has shown that women farmers tend to be quicker at adopting pooled transportation options, including renewable energy options – that are both cost-effective and climate positive

– Dr. Dorothy Nyambi, Chief Executive Officer and President, Mennonite Economic Development Associates' (MEDA)

2. Prevalence of stall-feeding among women livestock managers:

Women livestock managers tend to adopt “stall-feeding” practices, which are effective in reducing the threat of deforestation posed by pastoralists. Stall-feeding is also linked to higher agricultural produce yields since the animal waste can be easily collected and then used as fertilizer

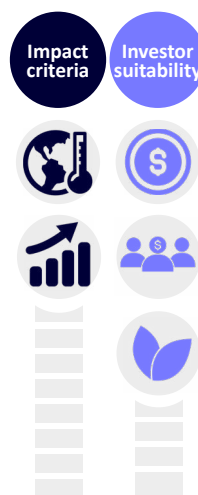
According to an FAO study, the introduction of stall-feeding in Rajasthan, India resulted in higher crop yields as farmers were able to improve soil quality by using manure easily collected through stall-feeding³⁴



³⁴ [“When livestock are good for the environment: Benefit-sharing of environmental goods and services”, FAO](#)

3. Adoption of sustainable livestock management:

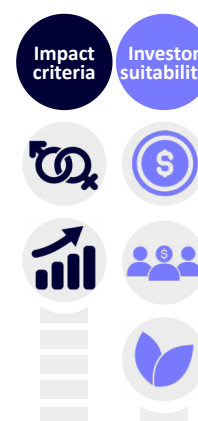
Women livestock managers are generally associated with “kinder” and “conscientious” livestock management which, in turn, improves livestock productivity. Women livestock managers are the first ones to spot a disease outbreak and are more likely to prevent it if they have easy access to veterinary services. Improved productivity could be an ideal investment opportunity for food companies and private investors



[Southern Africa Newcastle Disease Programme](#), found that livestock managed by women was relatively healthier than that managed by men. To tackle Newcastle disease in chickens, the program focused on recruiting more women as vaccinators, which resulted in a lower rate of disease outbreaks amongst the region’s animal population

4. Improve access to technology:

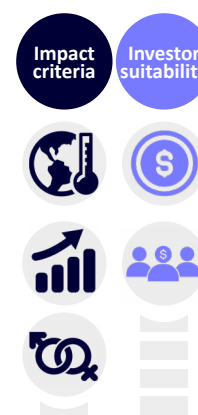
Set up women farmers for success by facilitating fair pricing and effective processing through access to technologies such as quality testing technology (e.g., lactometer and digital milk-fat testing meters)– that limit the “need” to negotiate



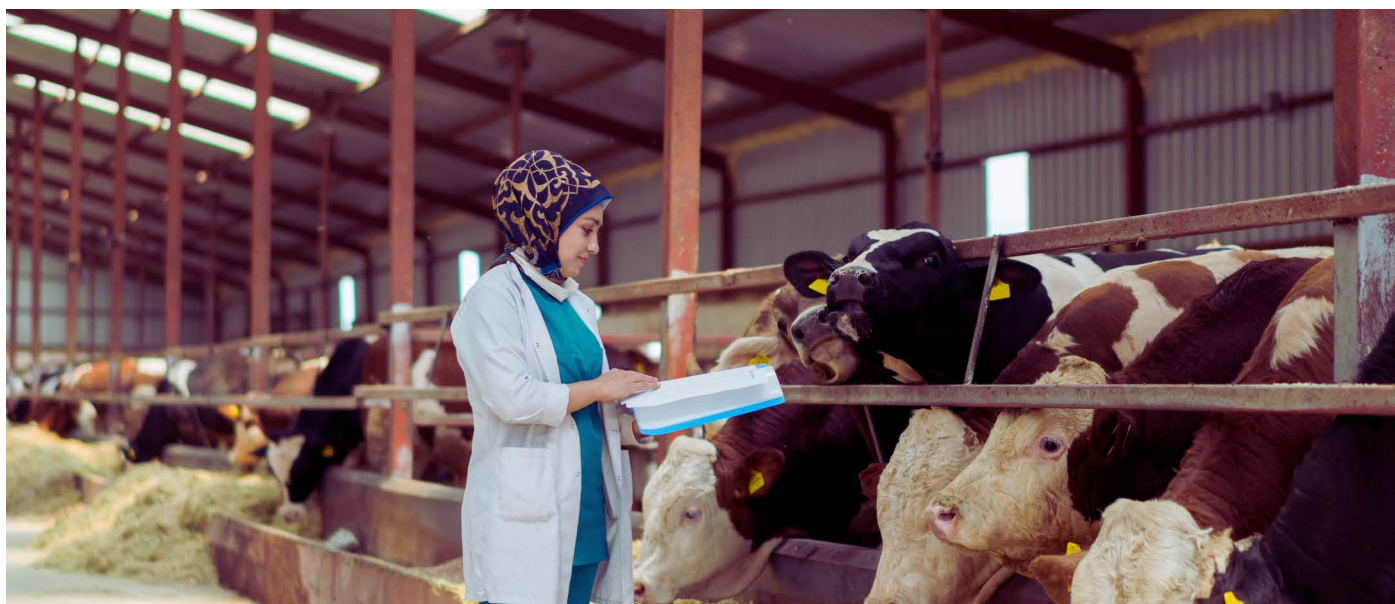
[CARE Bangladesh](#) provided training and education for 36,000 farmers and 1,162 producers groups so that participants could increase the productivity of their cows and improve their marketing skills. It also supported access to technologies that improve dairy production, such as fat testers, cooling equipment and transport

5. Improve women farmers’ access to services (like veterinary services):

Access to essential services (like veterinary services) can be significantly improved by partnering with or investing in women-led organizations. This will further facilitate rural women’s economic independence



As a women-led organization aiming to support women managing livestock, [Kenya Women’s Veterinary Association](#) has helped in reducing disease incidence amongst livestock



DEEP-DIVE INTO COFFEE

Every year, we drink around 400bn cups of coffee worldwide, making coffee the most widely traded agricultural commodity of the tropics. Coffee is produced by around 25 million growers, around 70% of whom are smallholder farmers directly dependent on coffee for their livelihoods.³⁵

As a crop, coffee has been hard hit by climate change but, at the same time, coffee cultivation continues to contribute to global greenhouse gas emissions. The fact that coffee is largely produced in farming

communities in tropical countries and predominantly sold in coffee shops in Europe and North America means transportation alone gives coffee a high carbon footprint.

It is evident from Exhibit 5, that in emerging markets, women make up to 70-80% of the labor force in coffee farms. However, less than 20-30% of these women have a claim to the land for coffee production or even the income generated from coffee production.



³⁵ Coffee and climate change, a round-up story, CGIAR (2014)

WOMEN'S PARTICIPATION IN THE COFFEE VALUE CHAIN, GLOBALLY

WOMEN'S PARTICIPATION AS A PERCENTAGE OF TOTAL WORKFORCE

Function in the value chain	Variation (low-high)	"Typical" participation
Fieldwork	10-90	70
Harvest	20-80	70
In-country trading	5-50	10
Sorting	20-95	75
Export	0-40	10
Other (Certification, laboratories etc.)	5-35	20

WOMEN'S OWNERSHIP AS A PERCENTAGE OF TOTAL (INCLUDING CO-OWNERSHIP)

Property	Variation (low-high)	"Typical" level of ownership
Land used for coffee production (including other rights)	5-70	20
Coffee (when harvested)	2-70	15
Coffee (when traded domestically)	1-70	10
Companies in the coffee sector (e.g., exporters, laboratories, certifierstransortation)	1-30	10

Source: "[Women in Coffee](#)", International Trade Forum Magazine

Exhibit 5: Women's ownership and participation in the coffee workforce

Coffee is among the crops under threat from climate change. An extensive study published in 2019 found that 60% of wild coffee species – or 75 of 124 plants – are at risk of extinction.³⁶ Given women's wide-scale participation in coffee farming and the impending threat to their livelihood, including them in climate-smart measures on coffee farms is vitally important.

³⁶ How climate change is killing coffee, Wharton 2019

COFFEE VALUE CHAIN – CLIMATE AND FINANCIAL RETURNS GENERATED THROUGH GENDER INTERVENTIONS

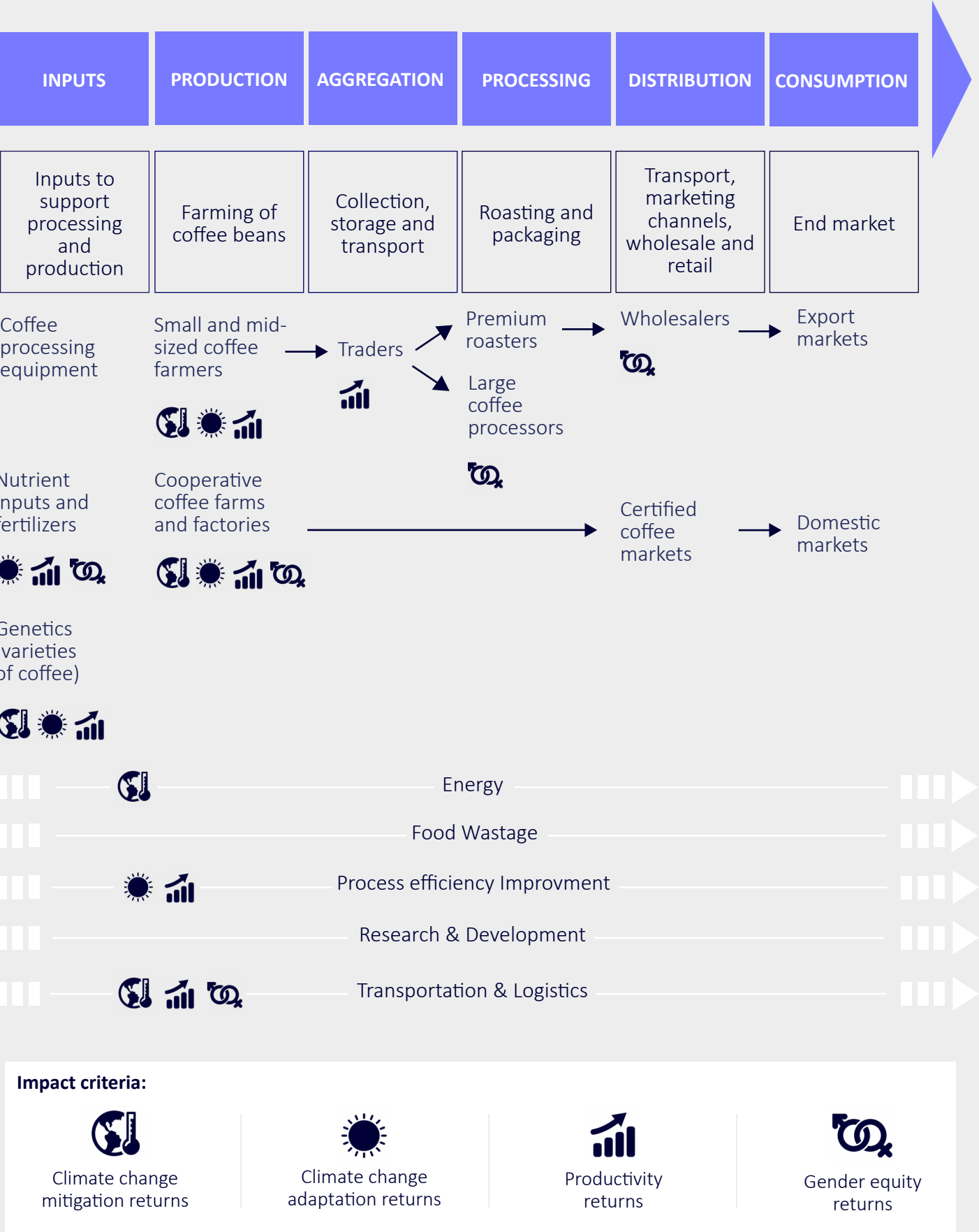
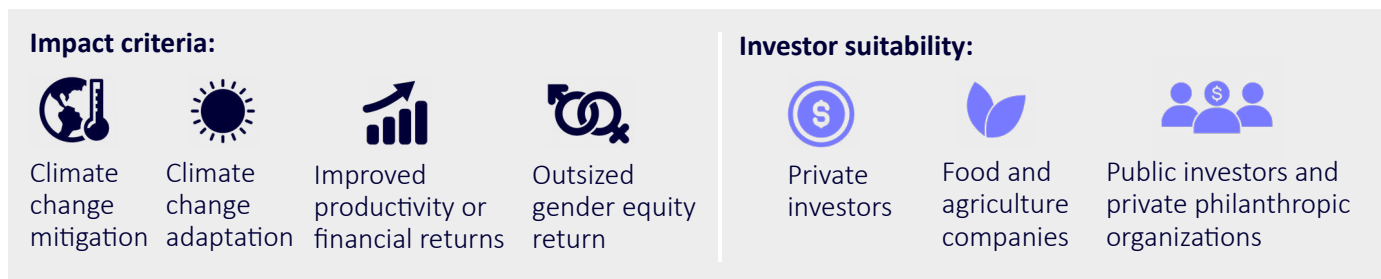


Exhibit 6: Overview of the coffee value chain

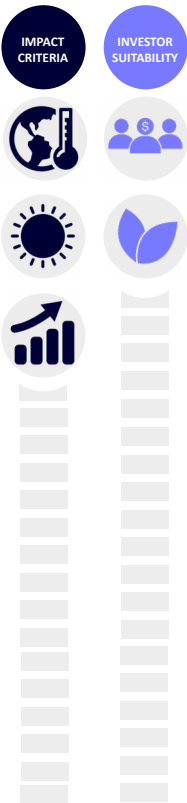


We identify below initiatives within the coffee value chain that have yielded gender-equity, positive climate returns and/or productivity returns by integrating a gender analysis or including more women in the value chain:

1. Adoption of environmentally sustainable practices by women coffee farmers:

Women coffee farmers are particularly environmentally conscious of the impact of water pollution/wastage attributable to coffee production on their households. This environmental consciousness is driven by the focus on the well-being of the community and the household. Women farmers tend to adopt various techniques such as rainwater harvesting and planting of shade trees to reduce water dependence and increase coffee productivity (Peru, Bolivia, Rwanda)

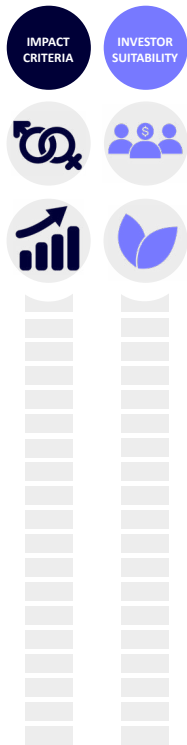
- Members of [Cooperativa del Sur del Cauca \(COSURCA\) \(women coffee farmers\)](#) in Peru implemented rainwater harvesting measures to ensure improved coffee yields during times of drought and even went a step ahead in adopting sustainable/environmentally friendly practices in their kitchen by moving away from wood or coal stoves to electric/ecologically sound stoves
- [Java Mountain Coffee Cooperative](#) in Indonesia, a purpose-driven business, works closely with women coffee farmers to improve their access to finance and training, helping them achieve certification and investing in climate-resilient agricultural practices
- As part of its CSR efforts, Nestle has a launched climate adaptation initiative for coffee farms in its supply chain by garnering the support of women coffee farmers to plant trees in the coffee farms



2. Efficiency gains of coffee production through women-focused coffee-growers’ cooperatives:

Women farmers organizing into cooperatives increases women producers’ workforce productivity and bargaining power

- [Café Femenino](#), an all-women coffee-growing group based in Latin America and Africa runs programs to empower women coffee farmers and support them in growing and selling their coffee
- [Amprocal](#), a women-led, all-women coffee cooperative based in Honduras, was founded to strengthen the presence of women producers in the region. The cooperative provides its members support, which includes that of agronomists who help improve productivity and sustainability with a focus on environmental conservation. The cooperative also helps members use organic fertilizers and generate power from wastewater
- [Sanchirio Palomar](#) is a coffee cooperative in Peru that acquired a gender-equity grant from Root Capital to support a women’s only production line of coffee, thereby generating additional revenues for the women and the broader cooperative



3. Sustainable and fair pricing achieved through the participation of women in “fair trade” cooperatives: Including women in coffee trading has changed pricing dynamics. By ensuring 100% good-quality coffee, women farmers have been able to price their coffee at the fairtrade premium and eliminate middlemen to increase profit margins

[Musasa, a cooperative based in Rwanda](#), has made long-term investments in installing mini-stations where women farmers can easily sell their coffee roasts. Given the branding opportunities and higher quality of coffee made available through these mini-stations/trading points, they are appealing to wholesalers

Aldi Supermarket has rolled out organic and fairtrade-certified coffee under the name “[Hermanas del Café](#)” from the La Florida cooperative, which supports women involved in coffee production in Peru. La Florida aims to empower women to achieve greater economic and social independence. The cooperative supports women across various levels, from granting micro-credits to organizing training programs. It also assists in the areas of education, health and sustainable cultivation methods. In addition, fairtrade and organic certifications ensure that the production process aligns with important social and ecological standards. Aldi sources all the coffee for its “Moreno La Florida” brand from this cooperative

4. Increased economic independence of women farmers by improving access to training

[Coopfam \(cooperative\)](#) in Brazil provides microfinance and training regarding nutrients for coffee production and processing. This enables women to run small enterprises independently and sustainably

[ADESC \(Asociación de Desarrollo Social Los Chujes\)](#) in Central America provides training through an app that connects more than one million farmers in remote areas with climate-smart agriculture methods, technical assistance and each other

5. Increasing women farmers access to finance and partnerships to improve income

[International Women’s Coffee Alliance](#) is a pilot project to finance coffee agriculture in El Salvador. It works to provide women farmers interest-free loans and training on rust-resistant coffee plants. The project has yielded a 100% repayment rate thus far

[APROCASSI](#) in Peru launched a brand of coffee sourced exclusively from women farmers which earns them USD 10,000 more per container and is sold at Whole Foods



DEEP DIVE INTO RICE

Rice is the main staple for 3.5 billion people globally and is therefore essential to food security for half of the world's population. Rice uses 40% of the world's irrigation water and is acutely sensitive to changes in the climate.³⁷ Rice farming is an enormous contributor to climate change, emitting 10% of global methane emissions, a potent greenhouse gas. In Southeast Asia, rice cultivation accounts for up to 25-33% of the region's methane emissions and 10-20% of its overall GHG emissions. "Climate-smart" rice farming practices are a tremendous impact opportunity and could transform global value chains. Simple changes, such as removing rice straw from a field instead of burning it or alternating wet and dry field conditions instead of flooding, could radically reduce methane emissions by up to 70% and slash water use by up to 50%.³⁸

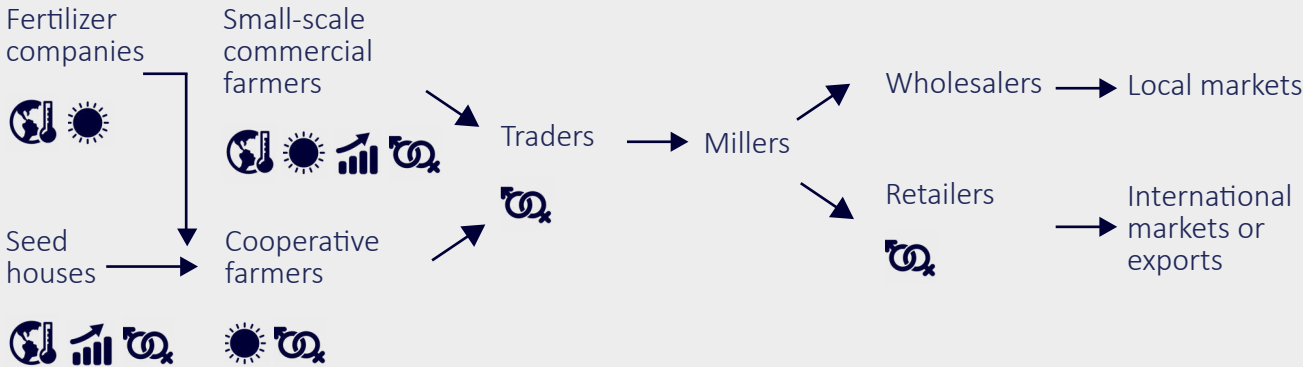
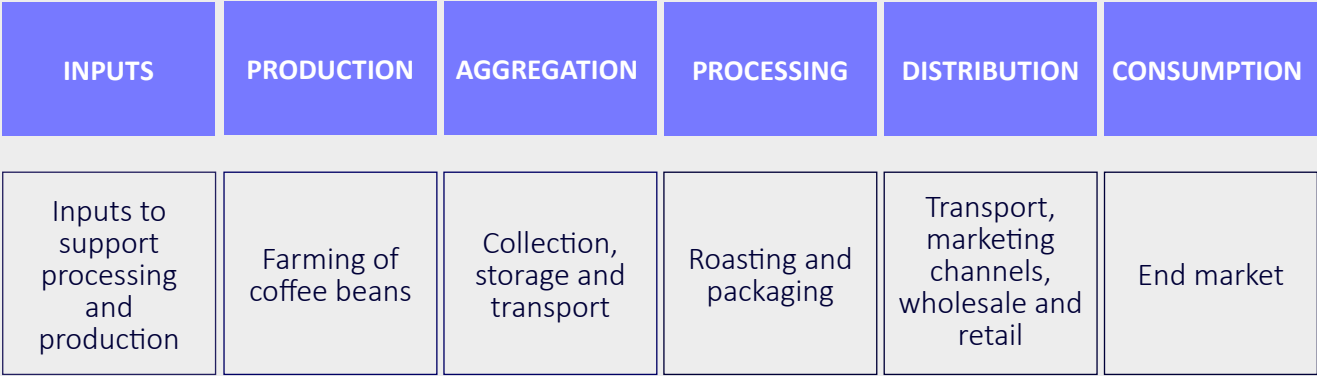
Women make a significant contribution to rice farming, processing and marketing but only have limited access to technical knowledge and technologies that can reduce their drudgery and labor bottlenecks while providing them with additional income. The significant role of women in rice farming in West Africa (Burkina Faso, Côte d'Ivoire, Madagascar, Mali and Sierra Leone) and even in some parts of Asia is undeniable. For instance, nearly 55% of local rice producers in Côte d'Ivoire are women. In Sierra Leone, nearly 50% of the agricultural labor force of rural women is invested in rice-based production, the rest being used in vegetable production or off-season crops.



³⁷ United States Agency for International Development (2013)

³⁸ Reuters Events (2019)

RICE VALUE CHAIN – CLIMATE AND FINANCIAL RETURNS GENERATED THROUGH GENDER INTERVENTIONS



Impact criteria:



Exhibit 7: Overview of the rice value chain

Impact criteria:

Climate
change
mitigation



Climate
change
adaptation



Improved
productivity or
financial returns



Outsized
gender equity
return

Investor suitability:

Private
investors



Food and
agriculture
companies



Public investors and
private philanthropic
organizations

Below are some of the initiatives identified within the rice value chain that yield positive climate returns, productivity returns or large gender-equity returns by integrating a gender analysis or including more women in the value chain:

1. In certain geographies, women farmers do a significant amount of the labor in rice. They tend to be more open to accepting innovative technology for rice transplantation and tilling, which increases productivity and enhances the quality of the produce in comparison to mechanical transplantation

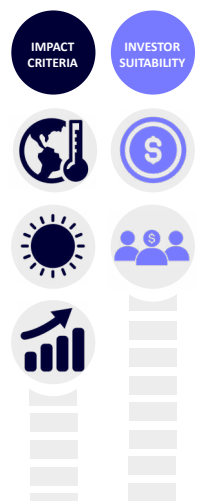
[Helvetas Swiss corporation](#) worked in Pakistan with Mars and their leading supply aggregator, Rice Partners Limited (RPL), to make the production of rice more water-efficient. One of their main initiatives was to introduce new technologies that would replace the manual labor of transplanting seedlings. They realized that women farmers and workers were often the first to adopt the new technologies. This also led to an increase in the farms' productivity and improved incomes for the farmers



2. Adoption of better-quality and more sustainable varieties of rice (or rice substitutes) by women farmers

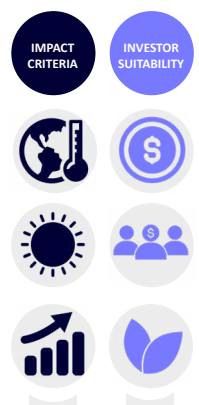
[Helvetas Swiss corporation](#)'s work in Pakistan shows that women-led farms tend to pick better-quality rice seeds over predominantly male-led farms

[Tribal Bonda women in Odisha](#), India are replacing flooded rice production and reverting to the cultivation of non-flooded native millet varieties like finger (ragi), foxtail (kakum or kangni), barnyard (sanwa), proso (chena) and pearl (bajra) millets. These varieties are climate-resilient and ensure the community's food and nutritional security



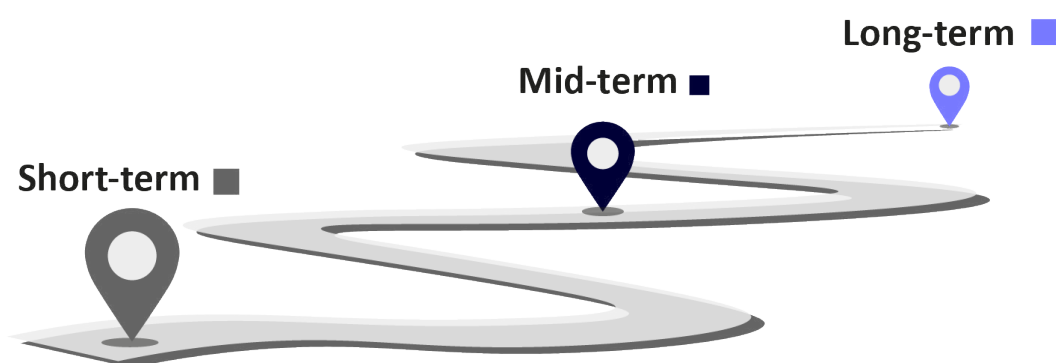
3. Women farmers are faster at adopting greener, healthier and more climate-change resilient rice cultivation methods like the System of Rice Intensification (SRI). They also use rice crop for consumption and waste generated from it as animal fodder

[Lotus Foods](#), a women-led organization, has created fairtrade practices in rice cultivation and has been partnering with small family farmers in Africa and Asia that grow rice sustainably and preserve rice biodiversity. They work with smallholder farmers, particularly women farmers, who seek high-quality varieties of rice. They also promote the SRI method, which is particularly useful to women farmers in reducing the intensity of labor associated with rice cultivation



ROADMAP FOR INVESTORS AND FOOD COMPANIES

The following roadmap aims to guide the different stakeholders in mainstreaming and incorporating a gender-smart investing approach into their decision-making processes and thereby advance equitable climate-change mitigation and adaptation objectives. For each stakeholder, the roadmap highlights relevant initiatives that can assist in making strategic gender-based decisions and improve the adaptability and efficiency of food systems in the face of climate change.



PRIVATE INVESTORS



Private sector investments have the potential to deliver gender-inclusive economic growth, environmental sustainability and poverty reduction. While investors are starting to pursue climate-positive and gender-smart investments, there is some disconnect between these two areas. Integrating a gender lens into climate-smart food systems opens up opportunities for higher financial returns, reduced risk, more resilient business models, and positive environmental and social impact.

Short-term initiatives

In the short term, private investors should take the following measures to make climate and gender-smart investment decisions:

A Create capability and awareness within the investment team by strengthening the understanding of different kinds of climate-positive

actions – mitigation vs adaptation measures – and how gender can intersect with both. This can be done by recruiting team members with previous relevant experience, by training team members or by bringing in external technical expertise

B Implement gender-conscious considerations for climate actions by asking simple questions across the different steps of the investment process. Sample questions include: “How does gender play a role in this company or business model or value chain? What new opportunities or risks might be uncovered with additional gender considerations?”

C Recognize gender-biases within the current investment processes and adjust them to identify more women-owned, women-led and women-driven businesses across the value chain

Many early-stage investing deal-sourcing channels include pitching events. Most pitching events happen in evenings after work hours during a weekday. This poses a challenge for women entrepreneurs who might have family care demands or who live in regions where social norms or safety concerns discourage their participation. Hence, most such pitching events have little representation from women entrepreneurs

D Develop gender-focused tools and frameworks in conjunction with experts in the field

[responsAbility Investments](#) is a leading Swiss sustainable asset manager with over USD 3.5bn in assets under management (AUM). In 2020, they brought into action a growing commitment to focus on gender at their firm and within their investment process. The team worked with leading impact and gender advisors [Catalyst at Large](#) and [Sagana](#) to create a tailored gender-smart investing framework to promote the advancement of gender equity and other social and environmental outcomes for the benefit of its businesses. As a result, one of their funds has qualified for the [2X Challenge](#) and is now engaging with their investors and portfolio companies to create gender equality and better business outcomes

E Share success stories and case studies, even if they are imperfect. Because GSI in climate

-change mitigation and adaptation within food systems is a relatively niche strategy, building awareness is essential. More case studies from an investor’s perspectives are needed to help build a track record in the space

[Root Capital](#) has created and published multiple case studies even before exiting their investments. They are available on their [website](#)

[AVPN](#), [EVPA](#) and [GenderSmart](#) regularly publish case studies and get investors or entrepreneurs to presents them at events. They also host such case studies on their websites

Mid-term initiatives

In the medium term, over the next 3-5 years, private investors should take the following measures:

A Develop a robust impact measurement framework to capture gender-disaggregated data for investments in climate-change mitigation and adaptation, thereby helping measure the performance of gender-smart investment strategies

[Root Capital](#) is capturing gender-disaggregated data for each of their portfolio companies and are in the process of analyzing the relationship between the team’s gender diversity and gender practices with their climate impact

B Enhance gender diversity across the organization including the investment team. Diverse opinions help to strengthen the firm’s investment proposition, and expanded networks can help strengthen investment and talent pipelines. Better gender diversity within the investment firm’s ownership and leadership has been linked with improved financial returns and more inclusive decision-making

C Set up GSI processes to qualify for the [2X Challenge](#), an initiative of G7 and other DFIs, to collaborate with and access gender-focused public funding. DFIs have committed to deploy over USD 15bn into gender-smart investments. The 2X Challenge should be viewed as a minimum starting point; firms are encouraged to go above and beyond these requirements

to fully reap the benefits of gender-smart investments and a gender-balanced organization

D Create, test and scale gender-focused investment strategies within climate-change mitigation and adaptation investments

[Bamboo Capital](#) recently invested in Apollo – a financial intermediary which uses machine learning and automated operations technology to help small-scale farmers, specifically women, access the resources they need to maximize their profitability

E Partner with public investors, philanthropic donors or other ecosystem-builders to create blended finance instruments that promote the success of climate and GSI. Blended finance can be an effective tool to incorporate GSI approaches, as it can de-risk solutions that simultaneously address sustainable food production, climate resilience and gender equality

Examples include the Land Degradation Neutrality Fund, which is supported by first-loss capital to invest in projects that reduce or reverse land degradation while advancing gender equality from project design through to implementation

[Root Capital partnered with Investing in Women](#), an initiative of the Australian Government, to promote women's economic empowerment in Southeast Asia

by financing agricultural enterprises owned or led by women. The project focuses on lending to women-led small- and medium-sized agricultural businesses in Indonesia, the Philippines and Vietnam. For each investment, Root Capital is expected to raise additional private sector capital in order to leverage the capital invested by Investing in Women. The project has experimented with innovative financing structures and has identified approaches to cater to the “missing middle” – the financing gap for medium sized enterprises that are too big for microfinance but are too small to access bank finance

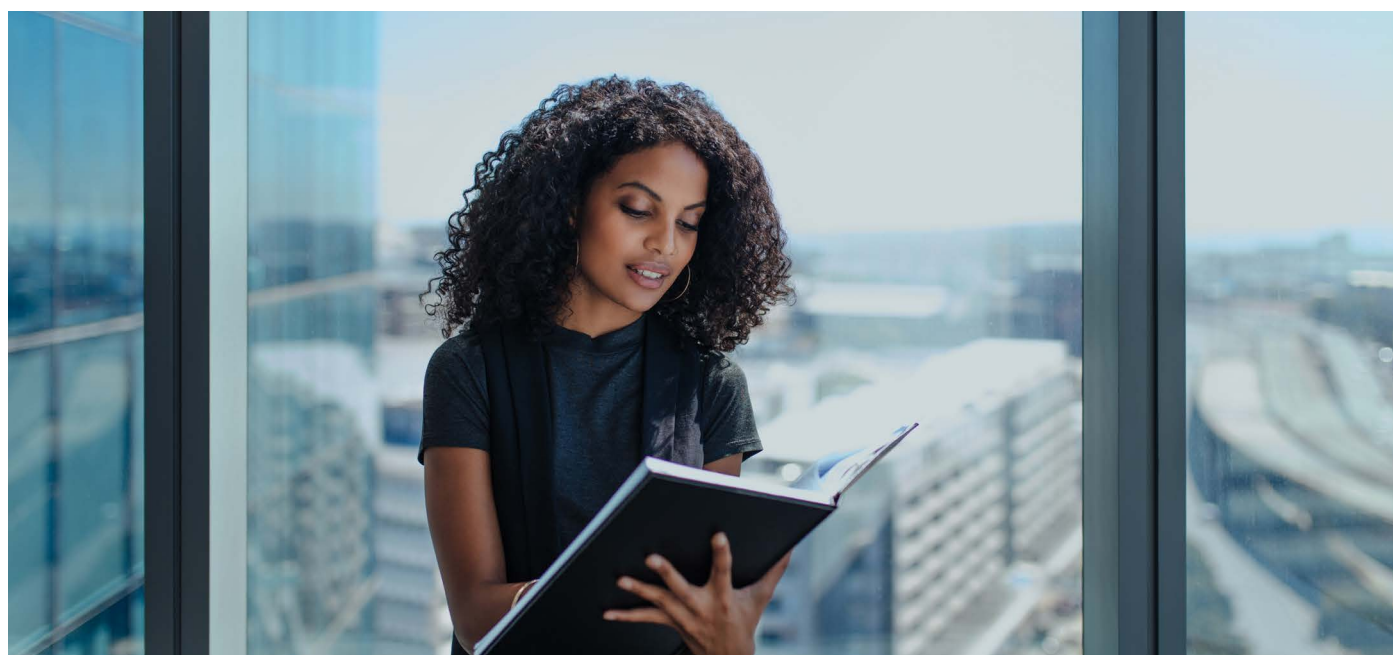
Long-term initiatives

In the long run, private investors should take the following measures:

A Establish gender-specific performance benchmarks for climate-smart portfolios to communicate and lead the gender and climate-smart movement in food-system investments

B Create tailored, well-understood investment products to support climate- and gender-smart investments that can attract mainstream investors

C Develop a track record of climate- and gender-smart investments in the food-system sector to strengthen the case for mainstream institutional investors



FOOD AND AGRICULTURAL COMPANIES



The 50 largest food manufacturing companies account for over half of global food sales in the industry. The “Big 10” food and beverage companies are significant emitters of greenhouse gases across their global operations, emitting more GHGs (263.7 m tons per year) than Finland, Sweden, Denmark and Norway combined.³⁹

Most of the big food companies are already being hit financially because of climate change. An MSCI analysis of food companies valued the global revenue risk from

lack of water availability for irrigation or animal consumption at USD 459bn. According to the same analysis, USD 198bn is at risk from changing precipitation patterns affecting current crop production areas.

Food and agriculture companies need to further strengthen their plan for climate-change mitigation and adaptation. Leveraging gender-smart initiatives to do so can mitigate risk and provide strategic advantages.

Short-term initiatives

In the short term, food and agriculture companies should take the following measures to make climate and gender-smart investment decisions to improve their profitability, reduce production risk and create climate-resilient supply chains:

A Train team members to build awareness within the organization about the importance of gender-inclusive climate-smart agricultural practices

- Identify gender champions within the organization or recruit relevant experts to lead awareness campaigns or programs. Having strong gender champions and role models can significantly improve the effectiveness and reach of these awareness campaigns

B Better understand the needs and preferences of women consumers by conducting market research, surveys and studies to offer more inclusive products and services

C Include more women in the supply chain and operations. Women are key decision makers for many products and services. Their preferences and needs can differ from those of male consumers, and they are often willing to pay a premium for responsible or sustainable products

³⁹ Standing on the sidelines, Oxfam (2014)

USAID is currently working with the AlphaMundi Foundation to provide gender-smart support to [Kentaste](#) and eight other SMEs located in Latin America and East Africa. They have partnered with Value for Women, a specialized advisory firm, to identify gender-smart solutions to their business challenges. This involved conducting a market study to better understand the needs of women coconut suppliers. The employee satisfaction and organizational culture survey showed that Kentaste's women employees wanted a safer workplace that took their family needs into account. The company revamped their processing plant to include a nursing room, daycare facility and a women's locker room to provide a safe changing area. The company is also looking into a shift schedule that would better align with school hours, enabling working mothers to pick up their children at the end of the workday. The initiatives have increased staff retention and satisfaction

- Management – organizations with gender-diverse teams tend to make better long-term decisions
- Product design, sales and marketing teams – gender-balanced teams will be better-positioned to cater to various needs of the diverse consumer group

In 2020, Unilever announced their [global corporate strategy](#), and they are leveraging the progress made on gender equality in recent years and lessons learned in the process to do more. They plan to better understand the intersection of gender and social inclusion in terms of human rights, climate change and packaging waste. They have introduced a new Gender Equity Framework that will help them systematically address the needs of women across their value chain. They are committed to exploring how to empower women and drive gender equity across topics on climate, health and the future of work

D Reinforce climate-positive financial and impact targets that intentionally include women as drivers of change within and outside the organization

E Evaluate supply chains to see where women are currently involved and where they could be more involved, especially with an eye towards creating gender-equitable and climate-resilient supply chains

F Shift from corporate social responsibility (CSR) driven action on gender equality to investing in business models, products and services that have gender equality at their core

Mid-term initiatives

Improve the gender-balance within the organization, specifically in terms of:

A Improve the gender-balance within the organization, specifically in terms of:

- Leadership – organizations need to improve women's representation within their senior leadership and among board members in order to diversify decision-making and organization strategies

B Establish gender-balanced targets for food value chains for the supplier and distributor base in particular. Develop a roadmap for diversifying the supplier and distributor base to include more women farmers and suppliers as a means of improving product quality, reduce carbon footprints and enhance climate-change resilience of the supply chain

C Incentivize farmers and suppliers to ensure long-term continuation of climate-friendly as well as gender-inclusive practices. Below are three examples where food companies have created incentive programs for farmers to ensure that sustainable practices continue in the long term. They should add gender considerations to such incentives and create similar incentives to promote gender equality within their supplier base

Danone is promoting soil health and water outcomes on 82,000 acres of dairy feed and almond crops in the US with targets set for 2025

Ingredion, based in the US, has committed to adopting regenerative agricultural practices on 500,000 acres of crops, including corn, tapioca and others, grown in high-risk watersheds by 2027. By 2030, they intend to double that goal with 1 million acres

Mars will work in high-risk watersheds in the US and Spain to support sustainable agriculture practices and programs on over 40,000 acres of rice farms. These regions are critical to the company's journey to eliminate unsustainable water use in its value chain – starting with a 50% reduction by 2025⁴⁰

D Establish regular impact reporting for gender-disaggregated metrics

- Annual reporting for grass-roots level climate and gender data (e.g., number of women farmers, number of women suppliers and carbon emissions reduced)
- Quarterly/bi-annual reporting of internal gender targets
- Regular evaluation of gender initiatives, tools and programs, and integration of learnings into future initiatives

E Partner with self-help groups, non-profit organizations and companies working with smallholder farmers to ensure their access to capital, knowledge, technology and other key inputs

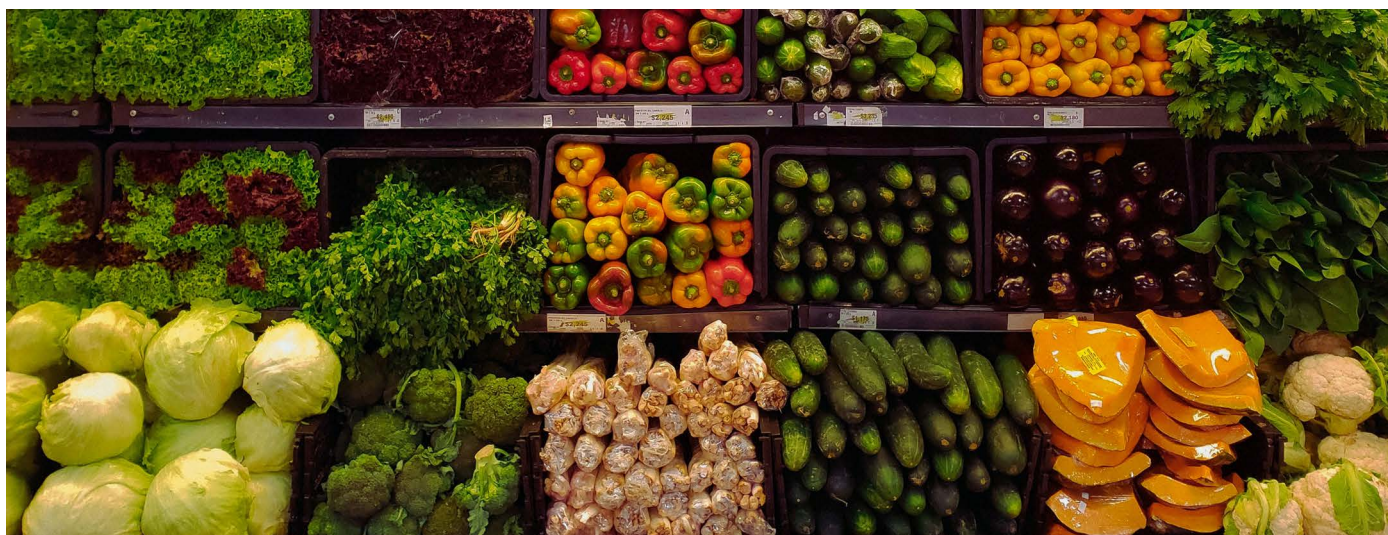
[Archer Daniels Midland](#), offers incentives for farmers to adopt more climate-friendly practices as part of industry efforts to meet corporate and government carbon-reduction goals. By tracking gender-disaggregated metrics, they could further tailor their incentives to better reach women and drive the climate-positive changes they're seeking

Ethiopia is the world's fourth-largest beeswax producer. However, low productivity, poor quality and limited market access have forced smallholders to sell most of their product locally at lower prices.⁴¹ Women smallholders thus organized themselves into self-help groups and negotiated with cooperatives to revise the by-laws on women's membership and introduce a functional adult literacy intervention. Gradually through this collective action, they became more involved in the management of the union and cooperatives. Due to these efforts, women farmers who previously produced small quantities of low-quality honey have increased production by 400% in two years, boosted household incomes by 200-400% and now export certified organic honey to international markets. Increased incomes have enabled smallholder women farmers to invest in education and other services. Women's participation in beekeeping jumped from 1% to 17%, and their training involvement increased to 30%

Long-term initiatives

In the long run, food and agriculture companies should take the following action:

A Diversify product portfolios, making them climate- and gender-smart, by focusing on the sales and marketing of climate-positive products



⁴⁰ ["Three major companies announce new AgWater Challenge Commitments to improve water stewardship and sustainable agriculture"](#)

⁴¹ Oxfam – ["What Works for Women – Proven approaches for empowering women smallholders and achieving food security"](#)

PUBLIC INVESTORS AND PRIVATE PHILANTHROPIC ORGANIZATIONS



The public sector can play a key role in creating enabling policy and legal environments for climate- and gender-smart food systems. Enabling environments allow private sector and civil society stakeholders to make the timely, well-informed and efficient decisions associated with securing food production, adapting to climate change and reducing and removing greenhouse gases.

Improving climate adaptation and food systems' resilience requires investments at different scales that

allow stakeholders to access, adopt and uptake the best climate-smart practices. To achieve this, various interrelated systems and their distribution channel actors, service providers, market actors and producers need access to different forms of finance. Effectively linking finance is key to increasing their adoption. Such large-scale financing efforts require public and private philanthropic organizations to take the lead in providing innovative and catalytic capital.

Short-term initiatives

In the short-term, public investors and private philanthropic organizations should take the following measures to make climate and gender-smart investment decisions:

A Invest in research programs to identify opportunities for climate- and gender-smart agricultural practices, with the aim of building a robust business case for including more women in food systems

B De-risk early-stage companies, initiatives and investment strategies. This will allow private investors to participate in such investments and recognize the advantages of including more gender-smart investing, thereby building a robust business case for GSI

- Use blended finance structures to de-risk solutions that have the potential to create robust businesses and investment case studies while gathering extensive data to build the evidence base

- De-risk private sector financing models to enable large-scale investments from private investors

[BIDUK](#) a private investment vehicle, partnered with [Investing in Women](#), an initiative of the Australian Government, to promote women's economic empowerment in Indonesia by exploring alternative financing mechanisms for women-owned and led enterprises. The BIDUK project aims to develop products and services currently unavailable in the Indonesian market to support small growing businesses that are slow- and/or steady-growing, that have progressed beyond the typical size and capital needs of microfinance institution (MFI) clients, but which are not yet large enough or do not meet typical bank-lending requirements

C Identify internal organizational policy changes to make climate-smart food systems more gender inclusive. Without an intentional gender lens, current climate investments will only strengthen the status quo and increase the gender gap

D Establish gender and climate returns impact goals for investment in the agricultural landscape. Publish these goals and the framework to make it easier for others to get involved

E Strive to collect, track and analyze comprehensive sex and age disaggregated data on food security and nutrition that is timely, accessible and comparable. This data should promote gendered analyses of food security and nutrition-related issues, including – but not limited to – food price volatility, large-scale land acquisitions (or “land grabs”) and land titling

The monitoring and evaluation system of [Feed the Future](#), the US government’s global hunger and food security initiative, aims to track gender impacts through three main approaches:

1. Engendered performance monitoring
2. Gender-focused impact evaluations
3. Development and utilization of the Women’s Empowerment in Agriculture Index (WEAI)

Mid-term initiatives

In the medium term, over the next 3-5 years, public investors and private philanthropic organizations should take the following measures:

A Create gender diversity within the organization, as diverse teams tend to take more “holistic” decisions. Women economists and managers are in certain cases better-positioned to contribute to resolutions of concerns associated with women smallholder farmers

B Promote initiatives that lobby for policy reform or change, address harmful social norms and improve access to resources for women farmers and entrepreneurs. Largely excluded from the development of research, policies and programs addressing food systems, women farmers and entrepreneurs often lack a voice and political representation. They are therefore

less likely to be able to articulate their needs or lobby for investments in infrastructure and services that are needed to help them secure their livelihoods and increase their income-generating opportunities

NGOMA is an organization for small-scale dairy and maize farmers representing seven districts in the Rift Valley, Kenya. They organize dairy and maize farmers to address the problems related to production, processing and marketing, and to advocate for agricultural policies that support small-scale farmers. Realizing that women smallholder farmers in the dairy and maize sectors do not benefit proportionately from national agricultural policies, they initiated the NGOMA Campaign to advocate for policies that provide rural women farmers equal access to inputs, and to educate and mobilize these women to come together and speak out on the issues that affect them the most

C Disaster resilience and risk-management approaches must be gender-sensitive and integrated into development interventions. The ever-increasing frequency of climate-change related disasters affect women and men involved in food systems differently. They may need different approaches to reduce the risks they face, adapt to change, cope with the aftermath of disasters, and rebuild lives and livelihoods⁴²

In Tajikistan, food security is an increasing challenge due to shifting seasons that are negatively impacting women’s kitchen gardens. In a dialogue with local men and women, simple technologies were introduced by [CARE International](#) to help them adapt to climate change. Cold frames (simple wood and glass frame (simple wood and glass frame structures that act as small-scale greenhouses) were constructed to start herb and vegetable seedlings earlier in the spring and to extend the growing season into the fall. This resulted in increased household production, crop diversity and nutrition⁴³

Another disaster preparedness program tailored to women is being conducted in an area vulnerable to floods, landslides and earthquakes by [Oxfam](#). Women trainers run women-only groups to build confidence, encourage them to voice concerns, and deliver training on skills such as first aid and disaster

42 DFID Disaster Risk Reduction Interagency Coordination Group – “[Characteristics of a Disaster-resilient Community - A Guidance Note](#)

43 “[Adaptation, gender and women’s empowerment](#)”, CARE International

management. These women then train other women in their community. Recently, one of the prepared communities in Tajikistan noticed an imminent landslide, sent out a warning, evacuated the area, and saved the lives of 35 households⁴⁴

D Increase investments in gender-sensitive public services and infrastructure such as clean and renewable energy and childcare centers, which can significantly optimize women's time and resources spent in care and reproductive activities while allowing them to engage in other productive and leisure activities

E Sponsor and launch skill-training activities for women in rural communities to create awareness of the role they can play in building resilient agricultural landscape

- Launch community-driven programs such as gender-sensitization programs, "free education for all" programs that are led by women or have a high participation rate among women, thereby allowing women to play a key role in social settings
- Provide training for women as entrepreneurs, particularly in the food-processing part of the food value chain

F Establish small-grant programs to support climate and gender-smart agriculture

In 2012, Root Capital launched the [Women in Agriculture Initiative](#) (WAI) to promote greater economic opportunity for women by supporting small and growing businesses that are committed to gender inclusion. Starting in 2016, Root Capital partnered with Value for Women, an expert in evaluating business practices with a gender lens, to help three Kenyan clients – The Village Nut, Sagana Nuts and Shalem Investments – design projects to improve their inclusion of women and enhance workers' quality of life. Each project was awarded a Gender Equity Grant (GEG) of USD 20,000 for a one-year long pilot with each also investing some of their own resources in the program. These projects have helped build a robust business case for gender inclusion by demonstrating that short-term investments in women pay off for the companies involved in the long term

Long-term initiatives

In the long run, public investors and private philanthropic organizations should take the following measures:

A Build tools and benchmarks to facilitate climate- and gender-smart investments by private investors and food companies. These tools can lay out the key sub-sectors and interventions that could maximize the impact of investments with a gender- and climate-smart focus

B Build specialized tools targeting women smallholder farmers. For instance, microcredit providers will need a more nuanced understanding of women smallholders' goals, livelihoods and cashflows, which can be very different from those of men. There are several tools that can help practitioners develop more client-centric strategies and products that can be applied with a gender lens to serve women smallholders⁴⁵

C Focus on building partnerships in sectors and geographies which are difficult for private investors to reach. This could also involve investing in first-time fund managers

In 2015, the Inter-American Development Bank (IDB) announced the establishment of the [Climate-Smart Agriculture Fund\(CSAF\)](#) to provide incentives for private sector companies across the region to scale up investments in climate-smart agricultural practices in order to increase carbon sequestration, build resilience to climate change and improve farmers' livelihoods. Created in partnership with the GEF, CSAF seeks to unlock greater private sector investment in sustainable land use and climate-resilient agribusiness

D. Public investors could mandate gender-disaggregated reporting from the different stakeholders associated with them, including the organizations implementing their programs. They should also effectively incentivize these stakeholders to do so. Such efforts can create the desperately needed data needed to advance the strategy

⁴⁴ "Gender, Disaster Risk Reduction, and Climate Change Adaptation: A Learning Companion", Oxfam

⁴⁵ CGAP – "The CGAP customer-centric guide

CONCLUSION

The investment community is becoming more comfortable with climate-positive and gender-positive investments. Yet there is currently a disconnect between these two areas, with most investors pursuing their climate goals and gender goals in isolation. While gender considerations in particular can play a critical role in climate-smart agriculture, most investors have yet to explore this nexus.

Nonetheless, the appeal of such an approach is becoming increasingly clear from the perspective of both societal and financial gains. With the right strategy, private sector investments can deliver gender-inclusive economic growth, enhance environmental sustainability and reduce poverty. Moreover, such activities promise to improve financial returns and reduce investment risks.

Investors thus have a significant opportunity ahead of them. To help unlock this considerable untapped potential, they should take a lead in investing in women-owned, women-led or women-driven businesses throughout the climate-smart food systems value chain – from inputs to production to distribution. The private sector should also work with public sector organizations to develop innovative vehicles, such as blended finance structures, which are able to reduce the risk associated with new gender-smart approaches.

Large food and agriculture companies are today in a difficult position. They are responsible for a large proportion of greenhouse gas emissions but are also suffering financially due to the changing climate and extreme weather events. To increase their own resilience, food and agriculture companies urgently need to strengthen plans for climate-change mitigation and adaptation within their supply chains. Doing so

inclusively, by leveraging gender-smart initiatives, can provide significant strategic advantages and lower risk.

Public sector investors and philanthropic donors also have a critical enabling role in mainstreaming climate- and gender-smart agriculture. This is a relatively new strategy, and most private investors and large food companies are not fully aware of the approach. Public investors and philanthropic donors should thus build on the existing awareness and start a conversation about the climate- and gender-smart approach. They should sponsor research in the space, publish case studies highlighting successful models, create blended finance instruments, and partner with private investors and food companies to build robust business cases.

More broadly, food systems have an increasingly pressing need to make climate adaptations and enhance resilience. But to access and adopt best climate-smart practices, they will need investments at a variety of scales. Financing will be needed across value chains, from the small local growers to the level of the vast global distributors and service providers. Such large-scale, coordinated financing efforts will require public investors and philanthropic organizations to take the lead.

Integrating a gender-smart approach into climate-smart food systems can thus create a myriad of opportunities, increasing financial returns and expanding positive environmental and social impact. This paper identifies steps that organizations can use when implementing such a strategy – and in doing so, help bring gender-smart investment approaches into food systems globally, accelerating the transformations needed to adapt to climate change.

APPENDIX

INTERVIEW PARTNERS

The white paper leveraged both secondary research and primary interviews with a diverse set of key stakeholders who are part of the food systems value chain. The team has built on the existing work of ecosystem-builders such as CGIAR, private investors such as Root Capital and public donors such as the UN, FAO and World Bank. Additionally, the team's understanding of how gender, climate and food systems interact derives from several interviews conducted with a diverse set of stakeholders, namely:

Private investors

- Christine Roddy, Executive Director, Alpha Mundi Foundation, USA
- Emanuele Santi, Fund Manager, Bamboo Capital, Luxembourg
- Enrique Alvarado Hablutzel, Partner, Bamboo Capital, Switzerland
- Enaam Ahmed Ali, UN women representative and Product Owner Wholesale and Rural Innovation, Rabobank, Netherlands
- Gwendolyn Zorn, Head of Impact, Phatisa, South Africa
- Hans Loth, Global Head UN Environment Partnership, Rabobank, Netherlands
- Katie Naeve, Director of Impact and Partnerships and Lead of the Women in Agriculture Initiative, Root Capital, USA
- Lisa Scheible Willems, Managing Director, AlphaMundi Group (G-SEARCH Coalition), USA
- Marie Anna Bénard, Impact and Gender Specialist, responsibility Investments, Switzerland
- Marie Puaux, Head of Impact Management, Bamboo Capital, Switzerland

Food and agriculture companies

- Brigitte Mugiraneza, Human Rights & Inclusion Manager, Olam, Côte d'Ivoire
- Heidi Koester Oliveira, Global Director, Social Impact, Mars, USA
- Nathan Bello, Nestle Cocoa plant manager, Côte d'Ivoire
- Piet van Asten, Head Sustainable Production Systems, Olam Coffee, Singapore

Public investors and private philanthropic organizations

- Corianne Van Veen, Sustainable Finance Officer, FMO, Netherlands
- Najada Kumbuli, Head of Investments, Visa Foundation, USA
- Nicci Bouwman, Senior Corporate Governance Advisor, FMO, Netherlands
- Rogier Pieterse, Managing Director, Pymwymic, Netherlands
- Vicki Wilde, Senior Program Officer, Agricultural Development and Women's Economic Empowerment, Bill & Melinda Gates Foundation, USA

Startups or SMEs

- Brandi DeCarli, CEO and Founding Partner, Farm from a Box, USA
- Caryl Levine, Co-Founder and Co-CEO, Lotus Foods, USA
- Kenneth Lee, Co-Founder and Co-CEO, Lotus Foods, USA
- Olivia Vent, SRI Rice, Cornell University and Lotus Foods, USA

Other ecosystem players

- Dorothy Nyambi, President and CEO, Mennonite Economic Development Associates (MEDA), Canada
- Jeannette Gurung, Founder and Executive Director, Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN), USA and Thailand
- Rebecca Fries, CEO, Value for Women
- Suzanne Biegel, Founder, Catalyst at Large, UK

RESOURCES AND TOOLKITS

Sector specific tools

- CDC: [Gender toolkit: Food and agriculture](#)
- ICWR: [Gender-Smart Investing Resource Hub and Materiality Maps for Agriculture](#)
- ISEAL Alliance: [Tools for developing standards and metrics for gender mainstreaming in sustainable agriculture](#)
- Value for Women: [Gender Inclusion Self-assessment Tool](#)

Further reading

- CDC: [Private Equity and Value Creation: A Fund Manager's Guide to Gender-smart Investing](#)
- FAO: [Gender in Climate-Smart Agriculture Module 18 for the Gender in Agriculture Sourcebook](#)
- FAO and CARE: [Good Practices for Integrating Gender Equality and Women's Empowerment in Climate-Smart Agriculture Programmes](#)
- GenderSmart: [Gender & Climate Investment: A strategy for unlocking a sustainable future](#)
- IFC: [Investing in Women along Agribusiness Value Chains](#)
- OECD and FAO: [Guidance for Responsible Agricultural Supply Chains](#)
- UNDP: [Global Gender & Climate Alliance training module on Gender & Climate finance](#)
- UNDP: [GGCA Ensuring Gender Equity in Climate Change Financing](#)
- Value for Women: [Innovations in Gender-Inclusive Climate-Smart Agriculture: Examples of good practices](#)
- Value for Women: [Gender Inclusion for Climate-Smart Agribusinesses: A practical framework for integrating gender in climate-smart agriculture](#)

MEASURES HIGHLIGHTED BY FAO FOR CLIMATE CHANGE ADAPTATION AND MITIGATION

The FAO⁴⁶ has highlighted a few measures for climate-change adaptation and mitigation that can serve as a guide for existing and potential investors in the climate-smart food systems space:

PART OF THE VALUE CHAIN	ADAPTATION	MITIGATION
Production	<p>Promote conservation agriculture and sustainable mechanization</p> <p>Diversify through agroforestry, intercropping or other diversification strategies</p> <p>Utilize improved seed varieties that are adapted to climate change (e.g., drought-resistant, heat tolerant and flood tolerant)</p> <p>Expand irrigation as appropriate based on water availability</p>	<p>Promote sustainable soil management practices to improve carbon storage (e.g., conservation agriculture)</p> <p>Improve fertilizer application practices to increase fertilizer-use efficiency</p> <p>Divert animal waste for reuse (e.g., organic fertilizer, biogas production)</p> <p>Improve water-use efficiency (e.g., through alternate wetting and drying in rice systems)</p>
Aggregation	<p>Invest in infrastructure and storage (e.g., silos)</p> <p>Relocate to less vulnerable areas, if necessary</p>	<p>Reduce food loss and waste by investing in adequate infrastructure</p> <p>Improve coordination within the value chain to reduce transportation distances</p>
Processing	<p>Strengthen processing facilities to be able to withstand the potential impacts of climate change (e.g., extreme weather events, pest infestations)</p> <p>Invest in packaging that maintains quality and safety under climate risks, such as extreme heat</p>	<p>Reduce energy use (e.g., invest in upgraded energy-efficient processing; use renewable energy sources, where possible)</p>
Distribution and retail	<p>Improve coordination within the value chain to reduce transportation distances</p>	<p>Encourage supermarkets to take measures to minimize refrigerant leakage and reduce energy use</p>
Consumption	<p>Promote local food products for perishable foods</p>	<p>Reduce food waste at home and in restaurants and catering by encouraging sustainable consumption (see Sustainable Development Goal 12)</p> <p>Encourage the use of more energy-efficient cooking methods</p>
Disposal	<p>Weather-proof landfills</p> <p>Divert more food waste to compost and energy generation</p>	<p>Invest in improved landfills and more efficient waste collection systems</p> <p>Reuse and recycle food packaging materials</p>

⁴⁶ Climate smart agriculture sourcebook, FAO

THE AUTHORS

This report has been written in collaboration with various organizations that have extensive investing and research experience across the three key aspects explored in the report: gender diversity, climate change and agriculture. The unique mix of collaborators – from leading ecosystem-builders to researchers to investors – ensured that different dimensions were considered in developing the key recommendations to manage climate change.



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



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The other collaborators on this report include Chi Impact Capital and Sagana – impact focused investors and GSI ecosystem-builders.



Chi Impact Capital is an independent and women-

powered Impact Fund Advisor based in Zurich. “Chi” stands for “conscious,” “holistic” and “impactful” investing. Chi Impact Capital advises a Luxembourg-based impact venture fund that invests in transformative companies that help solve the most burning issues of our time along the core impact verticals of food tech, green innovation and climate tech as well as the circular economy and conscious commerce



Sagana is a global impact

investment advisory firm working to unleash the potential of people, capital and business to create a better future for all. Sagana leverages decades of experience in private equity, impact investing and entrepreneurship to discover, invest in and grow companies that are successfully solving some of the biggest challenges of our time in topics like climate change, sustainable fashion, food technology, plastics, health and wellness, education, and gender and diversity. Sagana clients are family offices, foundations, corporations and development agencies who are looking for both attractive financial returns and positive social and environmental impact.



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