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MARKET-FOCUSED GENDER STRATEGY

FOR  Simusolar



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Gisela Ngoo.

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ABBREVIATIONS

| | |
|----------|--|
| EFTA | Equity for Tanzania Limited |
| FGD | focus group discussion |
| ha | hectare |
| HR | human resources |
| IIED | International Institute for Environment and Development |
| JUVIHMTU | An association of village banks (<i>Jumuiya wa Vikundi vya Hisa Mvomero na Turian</i>) |
| MVIWATA | A farmers' network (<i>Mtandao wa Vikundi vya Wakulima Tanzania</i>) |
| NGO | non-governmental organization |
| PUE | productive use of energy |
| SACCO | savings and credit co-operative society |
| SELFINA | Sero Lease and Finance |
| SUGECO | Sokoine University Graduate Entrepreneurs Cooperative |
| SWP | solar water pump |
| VICOBA | village community bank |
| VSLA | village savings and loans association |
| TAHA | Tanzania Horticultural Association |
| TZS | Tanzanian Shilling |



I. BACKGROUND AND MARKET ASSESSMENT



I.1 Background

The USAID-funded Power Africa Off-grid Project (the Project) provides technical assistance and targeted grant funding to help develop off-grid energy in sub-Saharan Africa. Technical assistance includes tailored support to companies looking to expand and increase sales in underserved markets. In line with its gender integration strategy, the Project seeks to support ventures, programs, and policies that strive to reduce gender inequality in the off-grid energy sector, ensuring that women are beneficiaries of increased access to energy for household and productive use.

Within this framework, the Project supported Simusolar, a supplier of clean energy products for agribusinesses in Tanzania and Uganda, to develop a market-focused gender strategy to help increase the share of women benefiting from productive uses of energy (PUE). The Project's support was a response to Simusolar's expressed interest in better understanding female customers and to tailor its business strategy to serve female customers effectively. To provide the support, the Project contracted management consulting firm E Co. Based on field research with female farmers and other stakeholders, E Co. aimed to solve the challenges and needs of Simusolar's clients in an inclusive way.

This Gender Strategy helps close some of the knowledge-gaps in understanding women's energy needs and identifies approaches to reach women with appropriate products and services. By pioneering gender inclusion in the off-grid and PUE sector, Simusolar and the Project wish to encourage other businesses operating in these industries to become more gender-inclusive.





1.2 Scope and methodology

This document is a tailored, market-focused gender strategy for Simusolar that:

1. Provides insight into the challenges and needs of female farmers—distinct from those of men—in gaining access to solar water pumping technology. This report also focuses on gender-inclusive business practices that enhance customer service and sales to women.
2. Identifies and recommends actions, services, products, and partnerships that Simusolar can implement to meet the energy demand of women in agriculture.

This research collected a mix of primary and secondary data to understand gender differences, product preferences, and the potential effect of different PUE technologies. The fieldwork and primary data collection have focused on two regions: Pwani and Morogoro, Tanzania. The criteria for selecting the locations were: The presence of value chains supported by Simusolar's products; the presence of women's associations, cooperatives, and other groups (*i.e.*, potential customers such as members of formal and informal lending schemes); and convenience (areas where Simusolar is present).

The field research was conducted between June and July, 2021, and involved interviews with female Simusolar customers and non-customers such as entrepreneurs, farmers, and representatives of cooperatives and village groups. The research team interviewed Simusolar's personnel along with several partners (existing and potential). The team held focus group discussions (FGDs) with potential customers (men and women) in each target location. Annex I lists the stakeholders consulted.



2 locations:
Pwani and Morogoro



10 interviews
with partners and
key informants



**66 female and
20 male farmers**
participated in the
study
42 interviews and 45 in FGDs



12 interviews
with **Simusolar**
staff

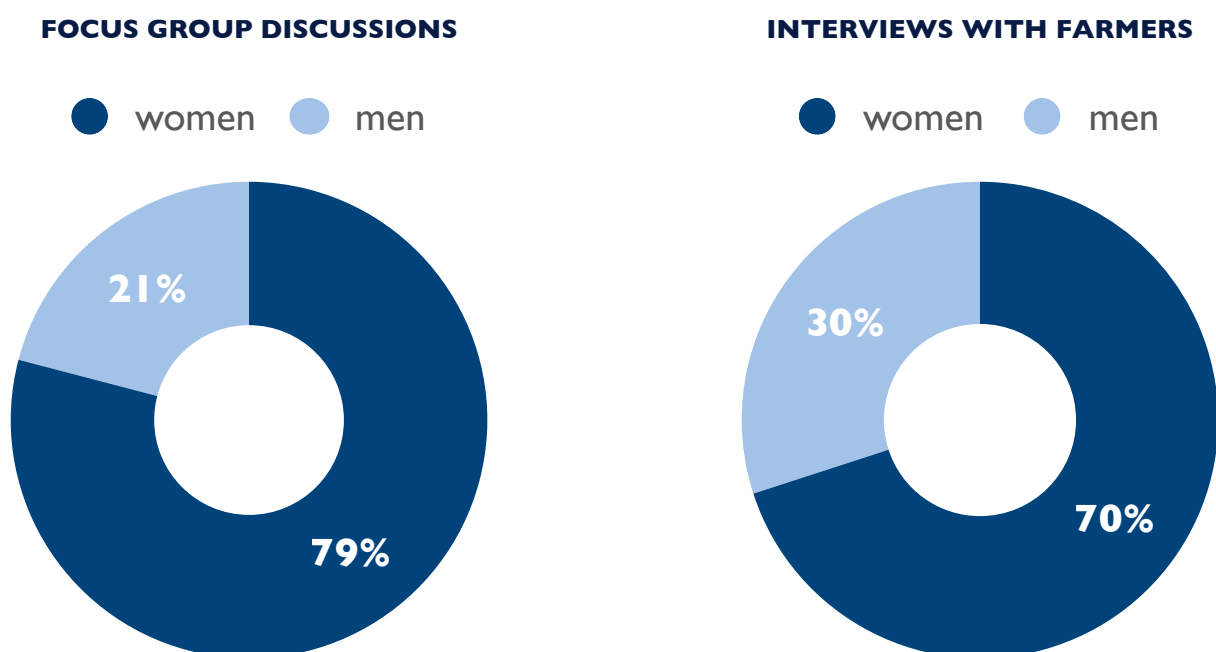
Figure 1: Map showing Pwani and Morogoro regions, Tanzania.



Table 1: Data collection methods and number of participants.

| METHOD | PARTICIPANTS | NO. |
|--|---|-----|
| Focus group discussion (three FGD in Pwani and three FGD in Morogoro) | Women-only (non-customers) | 28 |
| | Mixed group (non-customers) | 17 |
| Interview | Simusolar’s key personnel | 8 |
| | Simusolar’s field officers (sales and credit) | 4 |
| | Female farmers (customers) | 12 |
| | Female farmers (non-customers) | 20 |
| | Male farmers (customers) | 10 |
| | Partners (existing and potential) | 6 |
| | District officers (community development officers, irrigation technicians, and agriculture and irrigation officers) | 5 |


Figure 2: Focus group discussions held in Pwani and Morogoro, Tanzania.




I.3 Market assessment: Key findings

Female farmers as a customer segment: Agricultural practices, needs, and demands

Among customers and non-customers, fewer than **20%** are **subsistence farmers**

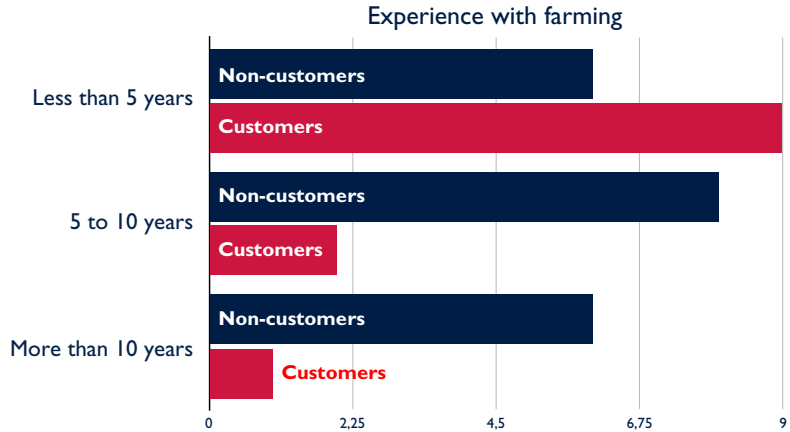
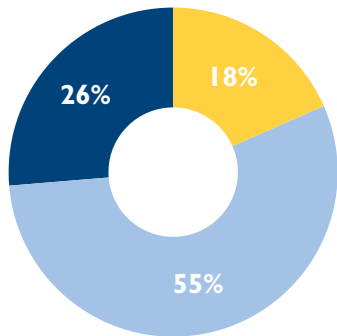


50% of Simusolar customers have both crops and animals



60% of non-customer female farmers focus solely on crops

● Subsistence ● Market ● Both

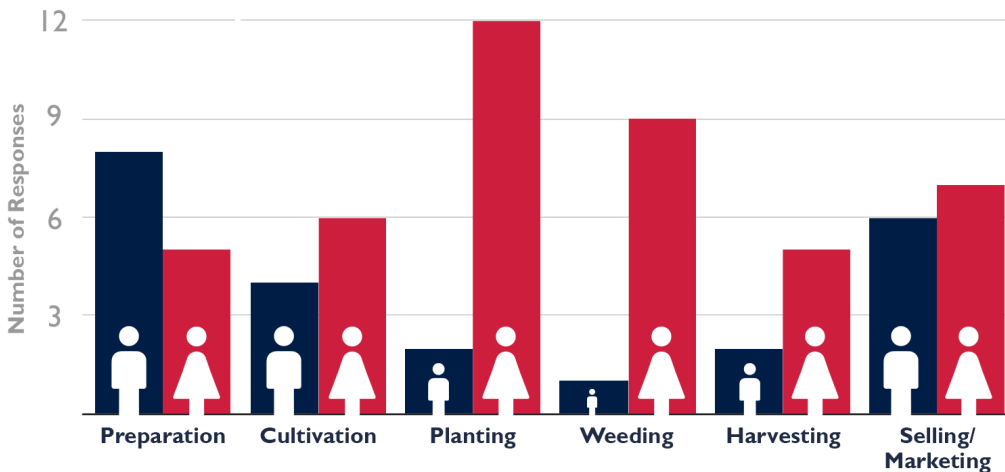


Most female non-customers rely on their own shallow wells or nearby ponds or streams as a primary water source, using buckets and cans (often having to employ external labor) or hiring fuel pumps.



Women are interested in irrigation for agricultural and domestic needs, and often prefer a small water pump that can be used for the field and for the household.

Women's and men's roles in agricultural production



Women are involved at every stage of the agricultural value chain, though they play a greater role in planting and weeding.



- Companies wanting to serve female farmers should consider these farmers' level of experience in agriculture and the different tailored services they may require.
- Understanding the different roles between men and women can help companies identify which technologies reduce women's labor burden (where women are involved in planting and weeding, for example), and which services can be offered to support them.
- Women who do not have access to markets also miss opportunities to gain income and consequently they are less able to invest in their farms. To reach these women, companies may partner with organizations that facilitate women's access to markets by linking them with buyers or by aggregating female producers.

Female farmers’ agricultural practices, needs, and demands

This section describes female farmers’ agricultural demand. The information is based on the analysis of Simusolar’s female customers and on the findings emerging from interviews and FGDs with potential customers.

Demographic profile

Female farmers are not a homogeneous group. Marital status and household structure determine women’s opportunities and challenges. Social differences—such as age, ethnicity, religion, childcare, and the presence of older children who can do household tasks—can help or hinder farming.

On average, the female farmers interviewed were between 30 and 40 years old and were married with children. Their average household size ranges from two to five people. The interviewees’ ages were broadly distributed—from 24 to 64 years—suggesting that solar water pumps may appeal to a wide demographic.

Most female farmers who are non-customers have a secondary school education, but few have graduated with university degrees. However, most female customers who also have other jobs aside from farming have graduated with a bachelor or master’s degree (or equivalent). Thus, education levels might predict these women’s financial literacy, scope for decision-making, and their understanding of the terms and references of purchase agreements.

Demand, needs, and farming practices

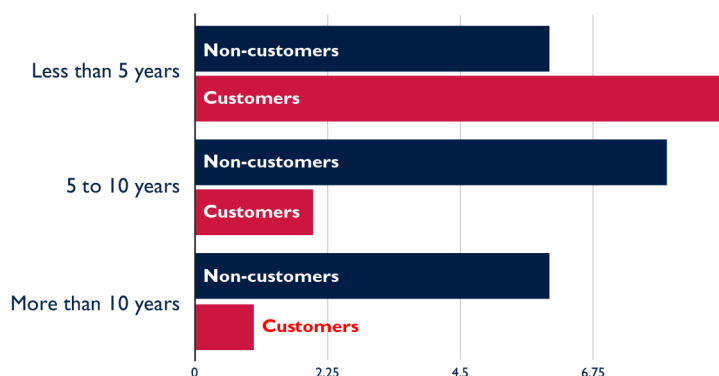
Interviewees showed a wide range of experience in farming. Among the female non-customers surveyed, 40 percent have been involved in farming for more than ten years. Thirty percent have worked in agriculture for less than five years and 30 percent between five and ten years.

In contrast to these non-customers, Simusolar’s customers have engaged in agriculture for a shorter period, with 75 percent of women farming for less than five years, and only eight percent of interviewees working in agriculture for more than ten years.



Companies wanting to serve female farmers should consider these women’s level of experience in agriculture and the different tailored services they may require. A more experienced farmer, for example, may need support in marketing her products or commercializing her production, whereas a less experienced farmer may need support in obtaining high-quality inputs and understanding the benefits of PUE.

Figure 3: Responses to the question: “How long have you been farming?”



Across all interviewed female farmers (customers and non-customers), fewer than 20 percent of women farm for subsistence. Among non-customers, 70 percent of the female farmers work in agriculture to sell their produce on the market; only 25 percent of these women are subsistence farmers. Simusolar's customers show a similar pattern, where only 16 percent of interviewees farm for subsistence.

These findings may not depict the reality of most Tanzanian female farmers. In Tanzania, about 65 percent of farmers are women and most of them are involved in subsistence agriculture, which is characterized by low or non-existent commercialization, and is often inefficient because it relies on low-quality, low-yielding seed varieties, and depends heavily on seasonal rains.

In terms of farm sizes, most non-customer female farmers farm on plots of one to five acres, and fewer farm on tracts of land between five and 15 acres. As an exception, one female farmer respondent, who was a non-customer, cultivates crops on 50 acres of land. Among Simusolar's customers, most farmers have farms larger than three acres.



Smallholder and subsistence farmers represent the largest underserved market in Tanzania, a segment where most female farmers are active. Compared to men, female farmers have lower incomes and less ability to acquire high-quality agricultural inputs or technology. A company wanting to tap into this customer segment needs to offer products and services that these customers can afford, taking into account seasonal income fluctuation and productivity issues.

Land use and vegetable cultivation show different gendered practices. One significant trend is female smallholders' growing involvement in cultivating vegetables commercially. Female farmers cultivate crops or also take care of cows, chicken, and goats. Half of Simusolar's customers have both crops and cattle, whereas most female farmers (60 percent) focus solely on crop cultivation. For them, the most common crops are vegetables, maize, rice, and fruit. The most frequently farmed vegetables are tomatoes, okra, cabbage, pigeon peas and green peas, and green peppers. For root vegetables, farmers preferred cassava and onions. The most commonly farmed fruit are bananas, papaya, watermelon, cucumber, and pineapples.

These farming practices align with regional value chains. Morogoro region has the largest harvested area for rice (210,000 ha), with crop yield of 4 metric tons/ha (the average yield in the country is 2.5 metric tons/ha). Pwani region has the largest cultivation area for cassava (81,638 ha).¹ Both regions have high cultivation rates for pigeon peas. Although Pwani region has the largest harvested area for sesame seeds (38,000 ha), this region has not reached its full production potential. Regarding vegetables, Morogoro region has the largest harvest-area in Tanzania for tomatoes (17,000 ha) and the greatest national agricultural production of tomatoes (65.6 percent).²

Gender differences appear in women's and men's roles in cultivating, planting, weeding, harvesting, and selling produce. Although women tend to be involved in some way at every level of the value chain, the extent of their involvement differs depending on the commodity type. Commercial vegetable farming still tends to be a family affair involving men, women, and children. In vegetable farming, women's roles include planting seedlings, tending the crops, harvesting, and transporting the vegetables. Men prepare land, spray pesticides, and market produce, which gives them control of the revenues from selling vegetables in large volumes. However, interviewees confirmed that women usually cultivate and sell spinach, okra, and bitter tomatoes (see Figure 4), although these crops bring in smaller revenues. Other value chains where women are most engaged include pigeon peas (in Pwani and Morogoro), sesame seeds (Pwani), and poultry (both regions).

¹ Government of Tanzania, *Annual Agriculture Sample: Survey Crop and Livestock Report (2016–2017)* (Arusha: Government of Tanzania, 2017), p. 29, accessed September 15, 2021, https://www.nbs.go.tz/nbs/takwimu/Agriculture/2016-17_AASS%20Report%20_Final.pdf.

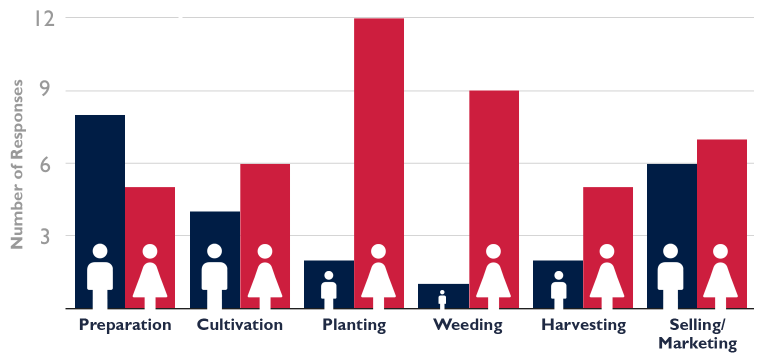
² Ibid, p. 48.



Understanding how agricultural roles differ between men and women can help companies identify which technologies reduce the labor burden of women (where women are involved in planting and weeding, for example), and which services can be offered to support them.

Women need to gain access to markets outside their community to boost their income from crops. Most female customers (54 percent) and non-customers (60 percent) reported that they sell their crops in their communities. In FGDs, female farmers reported that they have limited access to markets and sell their produce below the market price. For example, a woman mentioned that larger watermelons are sold to brokers at 2,000 to 2,200 TZS on the farm and at 10,000 TZS on the market. Female interviewees who sold their crops outside their locality are few: Only about ten percent of non-customers and 36 percent of customers sold in markets outside their community. The rest sell their crops in the community and in an external market.

Figure 4: Women’s and men’s roles in agriculture, according to respondents.



These findings indicate that women who do not have access to markets also miss opportunities to gain income and consequently invest in their farms. To reach women, companies should partner with organizations that facilitate women’s access to markets, linking them with buyers or by aggregating female producers. This strategy enables technology providers to reach women who have more stable sources of income.

Most female farmers (customers and non-customers) aspired to expand their agricultural activities, not only for revenue and subsistence, but because they enjoy farming. These farmers mentioned a lack of other reliable sources of income as a reason for farming. Most women aspire to increase, and in some cases double, their farming plots and would like to farm all year round and not depend on the rainy season. Some of the women would like to expand into commercial crops such as papaya and cardamon and include animals such as poultry and pigs. Overall, all women involved in the study would like to improve their agricultural practices and technical skills.



Companies that aim to serve female farmers should understand women’s aspirations and desires when marketing to female farmers. A company wanting to appeal to a wider female customer base should offer solutions that speak to women’s ambitions.



“I want to have more technical skills and better equipment. In skills I want to be updated on the new changes because things change everyday [...] I want to have a solar water pump because the one I am using is very costly and sometimes I cannot irrigate because I don’t have money for fuel.”

Female farmers as a customer segment: Income and access to finance

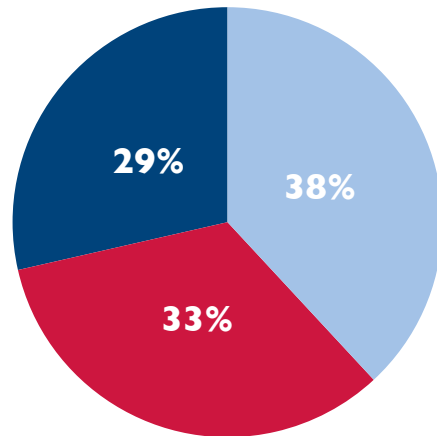
75% of female customers have a bank account

65% of non-customers invest more than \$2,150 each year in their farms




For many, informal savings groups remain the only way to save and gain access to credit. Most women have taken a loan before.

Women's primary source of income




● Farmer ● Employee ● Entrepreneur

Single women often use available cash for children's education and household expenses, and may not be able to prioritize loan repayments for solar pumps, especially outside of the harvest period. Other payment priorities may cause them to fall behind with their instalments.



Among Simusolar's customers, agricultural income is not used to repay loans.



Lack of financial literacy and understanding of loan requirements is common among non-customers.

Female farmers who are members of formal associations are more likely to engage in other groups simultaneously. Savings and credit groups seem to go hand-in-hand with groups more focused on production and marketing.



- Women who are already financially included and have previous experience in applying for loans represent a first entry point for companies such as Simusolar. Such women would have a better understanding of loan conditions and repayments, as well as a track record of savings.
- When designing an offer that is suitable to women, companies can consider matching prices and payment plans with women's annual spending.
- Offering group savings and enabling group lending or social collateral can widen women's access to technology.
- Group membership can be used as a scoring mechanism by companies wanting to reach female farmers, as women who belong to groups are more likely to have links to markets and other income-generating opportunities. Groups also give access to networks of other women who may become interested in purchasing technology.

Income and access to finance

Both Simusolar's customers and non-customers rely on some type of farming for their income, and about one-third farm for supplementary income but rely on off-farm income-generating activities. Among surveyed customers, about 70 percent of men and 50 percent of women reported to be employed or with pension as their main income source; farming was their secondary source of income. Examples of off-farm activities include retail, cosmetics, charcoal vending, employment as medical staff, teaching, and soap-making. These findings match the analysis of Simusolar's surveyed women who applied for a solar water pump (SWP) loan (150 women surveyed by sales officers). Most women are farmers (32), followed by employees (28), and business owners or entrepreneurs (24). From the initial analysis of their loan applications, most customers (women and men) have their main source of income as farming, whereas interviews with customers revealed other sources of income.



These findings imply that stable income may be an important criterion for farmers to invest in new technology.

Depending on the size of their farm plots, women's key farm investments include farming inputs and external labor. Although 45 percent of female farmers invest less than TZS 5 million, the other 45 percent of female customers invest between TZS 5 and 10 million per year. The remaining ten percent of female farmers invest more than TZS 10 million. Most women depend on loans to make such investments and others combined the loans with savings. In general, female farmers prioritize savings for household, education, and emergency situations. However, all female farmers mentioned that they are willing to invest more in their farms if they had the opportunity.

Non-customers' major preference for future investments is water pumps followed by increasing the size of the farm plot. However, 68 percent non-customer female farmers consider the price of water pumps to be too high, delaying their investments. Other barriers, sometimes misperceptions owing to a lack of information, include long loan procedures, long payback periods, and lack of guidance.



When designing an offer that is suitable to women's needs, companies can consider matching prices and payment plans with women's annual spending. To lower barriers preventing women from adopting a new technology such as SWPs, companies should consider appropriate deposit amounts and repayment plans.

The research confirmed findings from the literature that women's primary source of financing is informal lending, such as group-lending from village community banks (VICOBA) and savings groups. Fieldwork indicates that men and women can acquire financing equally. However, some women are averse to taking on agricultural loans. Although interviewees did not identify access to finance as a primary barrier to investment, the sources of loans between men and women are not the same. Women have more access to community-level lending schemes like VICOBA and other village savings and loans associations (VSLA), which have smaller loan sizes (up to TZS 1 million) than banks. Women use these schemes because they do not require collateral, have low interest rates, and are managed at the community level. Lack of land ownership is one of the major hurdles for smallholders, and for women in particular, as they are unable to use it as collateral for bank loans.



Tapping into group savings mechanisms and enabling group lending or social collateral offer opportunities for supplying more products.

Key informant interviews indicated that the bankability of female farmers is their primary access-to-finance barrier. Several interviewees mentioned limited financial literacy and understanding of loan conditions as a barrier to women’s access to agricultural equipment.



These access-to-finance concerns reveal the need to provide dedicated capacity-building to increase women’s understanding of loan conditions and to help women choose the most suitable option for them.

Most women interviewed for this study have taken a loan before and some have their own bank account. Sixty-six percent of Simusolar’s customers affirmed to have taken a loan before, and 75 percent of the non-customer female farmers have their own bank account. The main reasons for not having a bank account include the high cost of opening and management, lack of identification documents, and limited knowledge of the administrative aspects. However, some Simusolar customers mentioned that they would like the opportunity to save for the deposit but sometimes struggle to put the money somewhere for safekeeping. Female farmers demonstrate good awareness of financial service providers in the region. Key financial institutions are: Vision Fund, BRAC, Equity Bank, TADB, Standard Chartered Bank, NMB Bank, HEMBETI, District Women Development Fund, and TCCIA. Supplementing these are savings and credit cooperatives (SACCOs) and VICOBA. Seventy percent of the customer and non-customer female farmers have taken a loan from these finance institutions.



Women who are already financially included and have previous experience in applying for loans represent a prime market for companies such as Simusolar. These women would have a better understanding of loan conditions and a track record of savings.

Interviews with Simusolar’s customers indicate that income generated from farming is not used to pay for solar water pumps. All women mentioned using their savings or other sources to repay the loan.



“It’s not easy [for women to gain access to loans for equipment], especially if she expects agriculture to pay that loan. Because they will require land, inputs [seeds, fertilizer, pesticides], and then equipment; all of which means a big investment. For women to be successful they will require extra sources of income [beyond agriculture].”



“Women fear risk. Men can take risks and are able to manage those risks. I can refer men to Simusolar and they agreed to take a pump, but not women. There is a woman whom I talked with but she decided to drill a short well instead [of buying the pump]. Women fear that if they fail to pay this may cause conflict within the family and they might fail to care for their children. This has been roadblock to women’s development.”

Interviews reveal that members of formal agricultural groups may engage in other groups simultaneously. For example, affiliation with SACCOs appears to align with participation in groups focused on production and marketing. Women involved in SACCOs have developed a habit of using the small internal loans either to develop an income-generating activity, or to invest in farming. SACCOs appear to be a central feature of women’s participation in collectives. One common element is that higher household wealth is positively associated with group membership. Women from households with greater wealth may have more incentives and more opportunities to join groups.

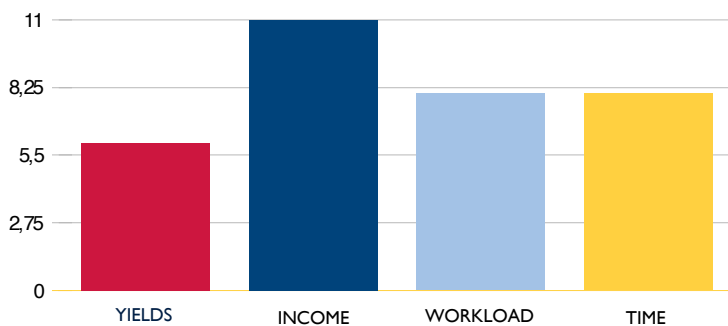


Group membership can be used as a scoring mechanism for companies wanting to reach female farmers, as women who belong to savings and credit groups are more likely to be linked to marketing and other income-generating opportunities. Groups also give access to networks of other women who may become interested in purchasing SWPs.





Female farmers as a customer segment: Technology use and awareness



Most important benefits from using the water pump

“The irrigation system is the first priority because without that I cannot farm continuously. I prefer solar systems to fuel pumps, but I have not contacted any suppliers;TAHA will advise me. I also wish to invest in a greenhouse.”

17% of female customers operate the pump on their own; others rely on farm labor

Female customers do not generally attend product training as they do not consider it necessary.

Lack of knowledge and inadequate information on agricultural technologies constrain technology adoption. Even when women have heard about a technology, they do not know how it works in practice and have limited understanding of the investment needed.



- Understanding women’s agricultural practices, water needs, and the cost to customers of investing in technology is key for companies wanting to serve these customers.
- Understanding who the primary users are and the challenges they may experience in using the water pump is crucial to design appropriate user training, customer care, and maintenance services.
- Companies should communicate the benefits of their technologies to women. Female customers may be interested in adopting a new technology if they can see its benefits clearly.

Technology use and awareness

The main methods used by farmers to obtain water for irrigation include gravity, buckets, hand pumping, and fuel pumping. Survey findings show that using buckets was the main method for obtaining water for irrigation. In mainland Tanzania, irrigation with buckets is practiced by 44.9 percent of the farmers, followed by gravity (36.4 percent), and water pump (16.1 percent).³ The irrigated fields are in most cases 100 m to 500 m away from the main water source. The size of the irrigated area and the irrigation technology used correlate, thus the larger irrigation areas are served by diesel pumps and canals. Farms with smaller irrigated areas use mechanical, manual, and rain-fed systems.

These findings indicate that the opportunity for providing solar water pumping is large and diverse in Tanzania.



Most non-customer farmers rely on irrigation for their vegetables and maize, whereas rice paddies are rain-fed. Most non-customer female farmers rely on their own shallow wells or nearby ponds or springs as their primary water source. Female customers rely predominantly on deep wells. They use buckets or cans to irrigate their lands, paying workers to fetch the water, or hire fuel pumps. Irrigation using these methods is a substantial expense (TZS 10,000 per day for renting the pump plus TZS 10,000 per 5 liters of fuel). On average, women irrigate their crops using hired water pumps at least twice a week. Interviews with key informants indicate that women are interested in satisfying both irrigation and domestic needs and often prefer a small water pump that can be used for the field and the household.

Understanding women's agricultural practices, water needs, and the costs implicated with existing technologies is key for companies wanting to serve these customers.



Although Simusolar's female customers confirmed that using the solar pump is easy, only 17 percent of them are operating the solar pumps on their own. In most cases (75 percent), the pump is operated by the employees and not the female farmers. However, this is not owing to the level of difficulty of using the pump. Female customers generally do not attend Simusolar's training as they do not consider it necessary. Still, customers said that they can rely on Simusolar to maintain their pumps.

A constraint for the customers is the ability to water early in the morning, before sunlight is sufficient to operate the pump. The presence of a water tank or a battery would solve this issue. Simusolar is introducing a financed water tank option, provided by local suppliers, to supply water when sunlight is unavailable.

Understanding who uses SWPs and the challenges they may experience in using the product is crucial to design appropriate user training, customer care, and maintenance.

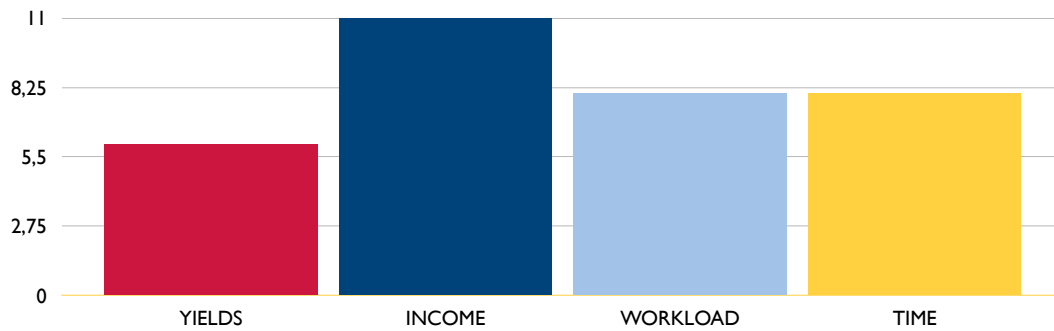


The benefits of solar pumps are multi-dimensional. Most customers (72 percent) indicated that they have increased their income, saved time, and reduced their workloads. Other customers indicated that they have observed an increase in their crop yields. Other benefits included independence and self-reliance, expanded social networks, and opportunities to experiment with new crops. Half of the female customers reported that SWPs benefit them primarily, whereas the other half share the benefits with the household.

³ Government of Tanzania, *Annual Agriculture Sample: Survey Crop and Livestock Report (2016–2017)* (Arusha: Government of Tanzania, 2017), p. 16, accessed September 15, 2021, www.nbs.go.tz/nbs/takwimu/Agriculture/2016-17_AASS%20Report%20_Final.pdf.



Figure 5: Most important benefits of using the water pump mentioned by female customers.



Companies should communicate the benefits of the technologies in women's lives in their marketing and sales strategies. Female farmers may be interested in adopting a new technology if they can see its benefits.



Female farmers as a customer segment: Agency and decision-making

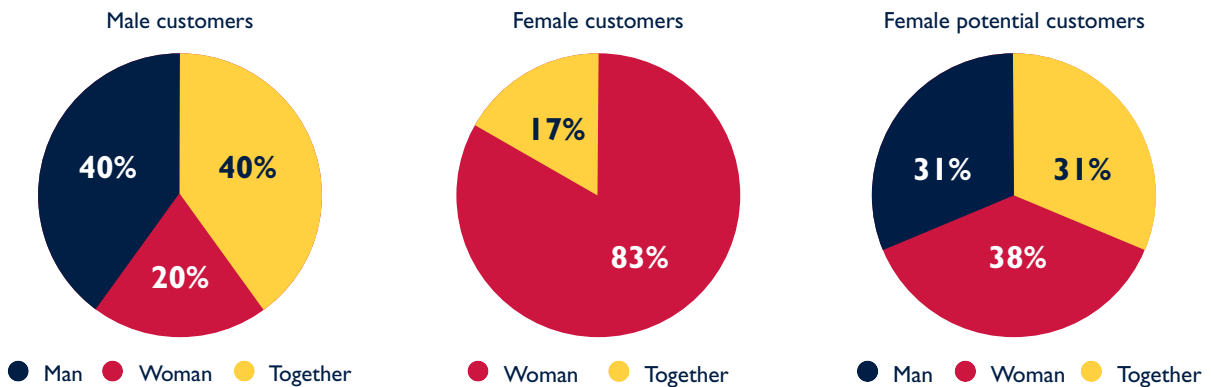
66% of female customers decided to buy a pump together with their husbands



Simusolar’s female customers do not need permission to use the land they farm and share land ownership with their partners. However, because of traditional norms, they need permission from their partners when using land as collateral for an investment, and will consult their partners on key decisions (e.g., which crops to cultivate).

- Married women have less control over their finances. Widows and non-married women have full control over purchase decisions.
- Women are less likely to invest in PUE if they do not own the land.

Who decides how to spend agricultural incomes?
Different perceptions between men and women.



- Getting men involved in transactions is central to empower women in agriculture and to help them invest in relevant technology. Companies serving female farmers should consider men and women’s roles in decision-making by, for example, requiring both partners or spouses to co-sign loan applications.
- Tackling gender norms and changing household decision-making patterns remain complex challenges, particularly for the private sector. However, companies should encourage shared decision-making by involving both spouses in transactions.



Agency and decision-making

Married women have less scope to make decisions in the household. Most interviewed women mentioned that they have to accept the decision of their husbands about how they can use their land, which crops to cultivate, types of investment, and how to spend their money. For example, although female customers do not need permission to use the land they farm, they need permission from their partners when using land as collateral for an investment. Female farmers consult their partners on key decisions such as which crops to cultivate. Land ownership in Tanzania is governed by customary norms where men have the upper-hand in decision-making. By contrast, widows and single mothers have full authority of the land they use and crops they farm.



“I have to ask for permission from my husband. Sometimes he might want to use the farm for something else.”

Women are more likely to invest in new technologies if they have the power to decide how to spend their income. Eighty-three percent of the interviewed female customers had the power to decide how to spend their income earned from farming. Many female customers (66.7 percent) had decided to take a loan and acquire the SWPs without approval from their husbands. For female non-customers, only 31 percent reported deciding how to spend their earned income without the approval of their spouse.



The findings show that men’s involvement is central in efforts to empower women in agriculture and increase investment in relevant technologies. Companies serving female farmers should consider men and women’s roles in decision-making by, for example, requiring both to co-sign loan applications.



“I have to get permission from him. For example, I wanted a loan, so I asked him and he said no.”

Men and women have different perspectives on household decision-making, with 40 percent of men affirming that they take decisions alone (see Figure 6 below). Participants in the FGDs in Pwani revealed that female non-customers can decide how to spend income from low-value crops like vegetables, whereas decisions regarding high-value crops like fruits are taken by men. This gendered difference is reflected by a study by IIED (2020) on SME financing, where farmers with low-value crops usually have fewer market links and find it difficult to gain access to finance.



Tackling gender norms and changing household decision-making remain complex challenges, particularly for the private sector. However, companies can encourage shared decision-making and involve both spouses in purchases or finance.



“I keep the income from selling vegetables. But if we sell bananas, he will also keep the money.”

Female farmers as a customer segment: Access to information and services



ALL INTERVIEWED WOMEN HAVE MOBILE PHONES

Women's channels for information:

- Social media (e.g., farmers' WhatsApp groups)
- M-Kilimo mobile app
- TAHA
- Communication with peers

95% of female non-customers are involved in savings or agricultural groups



NGOs train women, link them to service providers, and promote financial literacy and access among women

Extension officers are non-customers' preferred source of information on technologies, crops, and farming practices

"I am a member of Faidika VICOBA group. It enabled me to access farming services from extension officers. In these groups, we get information [on] better inputs and better farming techniques. This has impacted positively my own farming as I have seen improvement of my yields."



- Although mobile phone ownership is high among interviewed women, fewer Tanzanian women than men own mobile phones. Marketing strategies to reach female farmers should consider combining digital channels (e.g., social media) with more traditional forms of communication, including women's networks and radio.
- Companies should work with NGOs and extension officers to promote technologies to women and to offer training on PUE.
- Companies can approach women's groups to disseminate product information and to get customer referrals.

Access to information and services

All interviewed women have mobile phones and most use phones to access information on farming. However, fewer female non-customers reported to have smartphones which allow them to go online. Most of the interviewed female customers use their phones to get information through internet search, social media (e.g., WhatsApp farmers' groups, Instagram, and Facebook), and through the M-Kilimo mobile app⁴ which was mentioned by two female non-customers as a source of information on farming. Other sources mentioned included television and radio for female customers. However, women's main sources of information are referrals from friends, posters on streets, and during the farmers' fair (NaneNane).



Although phone ownership is high in the interviewed sample, Tanzanian women still have less access to mobile phones than men. Marketing strategies to reach female farmers should combine digital channels such as social media with more traditional forms of information, including women's networks (i.e., word-of-mouth) and radio.

Most female non-customers mentioned that they receive technical support and services from extension officers, district offices, and non-governmental organizations. These include, among others, the Tanzania Horticultural Association (TAHA), Feed the Future, and Sokoine University Graduate Entrepreneurs Cooperative (SUGECO). Interviewees said that the local NGOs MVIWATA and JUVIHMTU in Morogoro were effective in providing training, links to service providers, financial literacy information, and help with forming groups. These NGOs have trained local agents as contact persons to communicate information to women in remote areas, especially those who are organized in groups.



Working with these organizations represents an opportunity to promote SWPs to women and to combine technical training with PUE promotion.



"I get information about agricultural activities from the District Extension Officer, in agro-vets shops, seed supplier, and exhibitions such as the one in Nanenane. I am a member of a District WhatsApp group of extension workers regarding SWPs. I have heard about the company distributing the pumps; I have seen them on TV. I know the benefits associated with it [SWPs] but I don't have knowledge on how it functions. I hope it is better than the fuel pumps due to operation costs. My main interest is for a SWP that can reliably pump water because I need to irrigate my crops."



"The extension officers have been visiting us and they taught us how to find markets through smartphones, but I don't have a smartphone. Also, they advise us on farm inputs and other techniques, like how to use pesticides."

Most interviewed non-customers (95 percent) are members of VSLAs. These groups have been an important source of information. These groups are organized and registered under the District Development Office. A group may have up to 30 members and they meet regularly. Also, apart from groups, fellow farmers in the village usually share information about farming; one female non-customer mentioned that she visits a successful farmer to learn about aquaculture. Cooperatives, by contrast, are less active in the region and none of the non-customers are members.



As mentioned above, groups can be tapped into as an effective marketing strategy to disseminate information and to get customer referrals.

⁴ Mobile Agriculture (M-Agriculture) is a mobile technology that aims to help farmers, breeders, and fishermen gain access to crop markets through their mobile phones. This technology enables farmers to reach buyers of their products without needing to export the products to the market. See: <http://exts.kilimo.go.tz/about-us>.



“I am a member of Faidika VICOBA Group. It has enabled me to access farming services from extension officers. In these groups, we get information on better inputs and better farming techniques. This has impacted positively my own farming as I have seen improvement of my yields.”

Interviewees mentioned inputs shops as another way to gain information on seeds, fertilizers, and other inputs. Information on markets and prices is available from intermediaries who are the primary buyers of crops.

Availability of agricultural capital, financing, and information

This section outlines the available products and services that meet women's demand for technology, financial services, and information. It describes practices and examples of organizations that work with female farmers in Tanzania successfully.

PUE and service providers

In Tanzania, suppliers can do more to meet the demand for irrigation products, especially by reaching female farmers more effectively. The market-size for irrigation technologies in Tanzania was estimated at \$86.2 million in 2018 and is expected to grow to \$151.3 million by 2022, with great potential to move subsistence farmers toward market-based production. While SWP distributors exist in the biggest urban centers, they are rare in rural and off-grid areas and possibly unknown to farmers living there.⁵ Interviews with non-customers show that suppliers of PUE, and particularly SWPs, are in most cases unknown to women and they would therefore not know where to purchase SWPs. In this regard, 60 decibels found that Simusolar is providing customers a product they cannot easily find elsewhere; eight in ten people could not find alternatives to the Simusolar SWP.⁶

Research by UN Women in Ethiopia, Malawi, Rwanda, Uganda, and Tanzania, shows that gender gaps in agricultural productivity do not arise because women are less efficient farmers but because they experience inequitable access to agricultural inputs. Solutions to close these gender gaps include equalizing women's access to agricultural inputs, supplying time-saving equipment (where SWPs could present a key opportunity), and increasing the return on these inputs.⁷

Agricycle, partnering with MVIWATA, focuses on smallholders and youth and women's groups, providing them with access to solar dehydrators to preserve fruits and vegetables. Agricycle's services are deployed through a group-purchasing model and include agricultural inputs and capacity-building on food safety standards. Agricycle links farmers to global markets through its vertically integrated portfolio of brands

Simusolar has established partnerships with seed providers (Rijkzwaan) and retailers (Holland Green Tech). Simusolar can take advantage of these partnerships to bundle products and coordinate marketing campaigns dedicated to meeting the demands of female farmers.

Financial service providers

Twenty-eight percent of Tanzanians are financially excluded, most of whom are women living in rural areas.⁸ Financing sources for female farmers remain limited and women are still left behind in great numbers. Finscope (2017) identified that asset ownership is the biggest barrier to women's financial inclusion and that only a third of Tanzanian women own the land they live on. Although Tanzania has made strides in expanding financial inclusion in the country, there is a nine percent gender gap for traditional bank accounts and an 11 percent gap for mobile money use.⁹ Women's limited access to markets and value chains (described in the previous section) represent another barrier to finance because of the transaction costs and risks. Female farmers living in off-grid and remote locations have limited options to reach markets to sell their goods, making them dependent on intermediaries (who are mostly male), whereas farmers who have a strong relationship with buyers and direct market access have better opportunities to raise capital.¹⁰

⁵ Efficiency for Access, *Tanzania Market Snapshot: Horticulture Value Chains and Potential for Solar Water Pump Technology* (Efficiency for Access, March, 2019), https://storage.googleapis.com/e4a-website-assets/SWP_MarketSnapshot_Tanzania.pdf.

⁶ 60 Decibels, *Lean Data Survey: Simusolar, Tanzania* (60 Decibels, 2021).

⁷ UN Women, "The Gender Gap in Agricultural Productivity in Sub-Saharan Africa: Causes, Costs and Solutions," Policy Brief No. 11 (New York: United Nations Entity for Gender Equality and the Empowerment of Women, 2019), accessed September 15, 2021, <https://pea4sdgs.org/sites/default/files/2021-09/un-women-policy-brief-11-the-gender-gap-in-agricultural-productivity-in-sub-saharan-africa-en.pdf>.

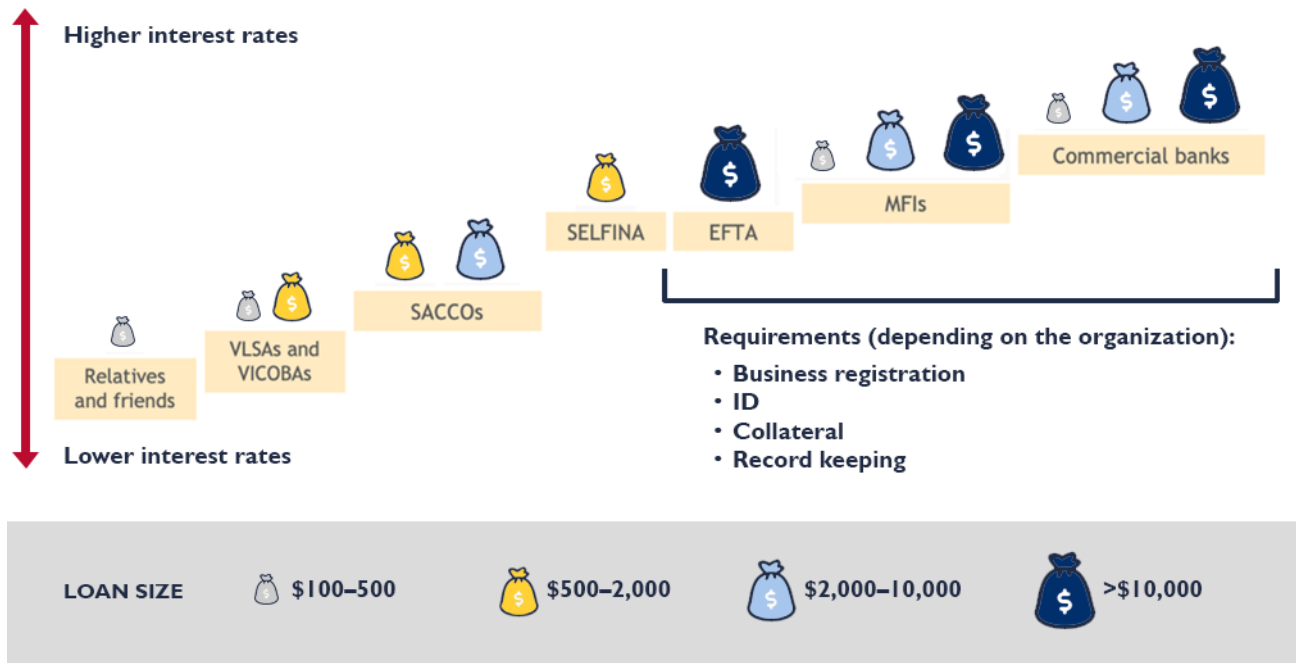
⁸ FinScope Tanzania, *FinScope Tanzania 2017* (Tanzania: FinScope, 2017), accessed September 15, 2021, p. 57, www.fsdt.or.tz/wp-content/uploads/2017/09/FinScope-Tanzania-2017-Insights-that-Drive-Innovation.pdf.

⁹ Ibid.

¹⁰ International Finance Corporation, *Access to Finance for Smallholder Farmers: Learning from the Experiences of Microfinance Institutions in Latin America* (Washington, D.C.: International Finance Corporation, 2014), accessed September 15, 2021, www.ifc.org/wps/wcm/connect/536ed03b-82ef-4733-ac27-2282844cdf8e/A2F+for+Smallholder+Farmers-Final+English+Publication.pdf?MOD=AJPERES&CVID=kAQzrkq.

An analysis of financial options for PUE available to rural households and SMEs in Tanzania identified a range of opportunities to access financing.¹¹ However, because of inequalities in access to finance, women remain served by predominantly informal and semi-formal lending providers which offer smaller loans, lower interest rates, and often no formal requirements (e.g., collateral, ID, and business registration).

Figure 7: Overview of financing options for female farmers and SMEs in Tanzania. Prepared by E Co. based on IIED (2020).



Limited evidence exists about effective financial services available to women for purchasing PUE and SWPs. Even when dedicated agricultural credit is available, it often excludes the most vulnerable and poorer segments of the population.¹² Research indicates that even where microfinance institutions offer agricultural credit, it is usually short-term seasonal credit to purchase seeds and fertilizer and not PUE.¹³

Traditional financial providers and microfinance institutions (MFI) have tailored their offerings to meet female farmers’ needs. Women interviewed in Pwani and Morogoro confirmed that they have taken loans from VisionFund, BRAC, Equity Bank, the Tanzania Agricultural Development Bank (TADB), Standard Chartered Bank, and NMB Bank. TADB finances agricultural assets, including irrigation equipment. The credit guarantee scheme, aimed at smallholder farmers, supports smallholders to transition from subsistence to commercial farming and links farmers or farmer groups to commercial and community banks. This type of scheme can help lower some barriers that women experience in accessing the right capital to grow their farms.

Some MFIs in Tanzania, such as FINCA, have successfully reached women by offering collateral-free loans and group-lending options which have proven to be suitable for women. FINCA has reached 54 percent of female borrowers and created more than 66,000 jobs for women in Tanzania.¹⁴

¹¹ Kevin Johnstone, Nipunike Perera and Ben Garside, *Small Business Big Demand: Facilitating Finance for Productive Uses of Energy in Tanzania* (International Institute for Environment and Development, November, 2020), accessed September 15, 2021, <https://pubs.iied.org/sites/default/files/pdfs/2021-01/16681IIED.pdf>.

¹² Miriam Otoo, Nicole Lefore, Petra Schmitter, Jennie Barron and Gebrehaweria Gebregziabher, *Business Model Scenarios and Suitability: Smallholder Solar Pump-based Irrigation in Ethiopia* (Colombo, Sri Lanka: International Water Management Institute, 2018), accessed September 15, 2021, www.iwmi.cgiar.org/Publications/IWMI_Research_Reports/PDF/pub172/rr172.pdf.

¹³ Douglas J. Merrey and Nicole Lefore, “Improving the Availability and Effectiveness of Rural and “Micro” Finance for Small-scale Irrigation in Sub-Saharan Africa: A Review of Lessons earned,” Working Paper No. 185 (Colombo, Sri Lanka: International Water Management Institute, 2018), accessed September 15, 2021, www.iwmi.cgiar.org/Publications/Working_Papers/working/wor185.pdf.

¹⁴ “Why Choose finca?” Finca, 2019, accessed September 15, 2021, www.finca.co.tz/wp-content/uploads/sites/5/2019/01/Why-Choose-FINCA.pdf.

BRAC Tanzania Finance Limited offers two main products: Individual microloans for women delivered through groups, and enterprise loans for male and female small-scale entrepreneurs. This MFI also provides credit to youth and small-holder farmers through its agricultural finance programs. In 2018, BRAC, partnering with Solar Sister, launched the “Women Entrepreneurship through the Solar Value Chain for Economic Development in Tanzania” project, which works with networks of women to supply solar systems to rural communities. Similarly, VisionFund Tanzania provides microfinance to financially excluded groups with loans that do not require collateral and have flexible repayment terms. One of VisionFund Tanzania’s programs included working with women’s groups on poultry raising and providing financing for chicken incubators and refrigerators.

Another example of tailored financial products for women involves the Cooperative Rural Development Bank, which introduced the Women’s Access to Funds guarantee for women involved in sunflower value chains in the Rukwa region, helping them purchase processors with reduced loan fees.

Despite several programs supporting women’s access to finance for agricultural inputs, these programs are often pilot projects or small-scale interventions that have yet to scale.

Our field research confirmed prior findings that women’s primary source of finance remains village saving groups and loans associations. Groups of people organize semi-formal and formal VICOBA and SACCOs and offer different types of lending to each other. Overheads are usually minimal, which allows these groups to charge lower interest rates of around five percent per month. Community-based semi-formal lenders are growing in importance in many countries in sub-Saharan Africa, but often do not offer medium-term loans for PUE such as pumps.¹⁵

A study by IIED (2020) shows that more women than men resort to VICOBA as their primary option for business financing. Among surveyed farmers, women use VICOBA particularly to purchase electrical appliances. These findings fit with the history of VICOBA in Tanzania, which were established as a way for women to begin saving and accessing small loans for the first time.¹⁶ Organizations such as JUVIHMTU (described in the box below) that have strong connections with farmers’ groups have been supporting women with training and by linking them to financial providers.

Although improving access to credit through village savings and loans associations has been supported by many development projects, these models have been inappropriate for farmers wanting to invest in PUE.¹⁷

JUVIHMTU is an NGO established in 2010 by CARE International to support the growth of informal savings and lending groups. With its head office in Turian, JUVIHMTU has services in all districts of Morogoro and it is planning to expand nationwide. Their activities include:

- Mobilizing farmers in VSLAs and helping them to register as VICOBA. Groups comprise mainly women.
- Supporting saving groups by linking them with banks and service providers.
- Training farmers on financial management.

¹⁵ Josef Grimm and Maren Richter, *Financing Small-scale Irrigation in sub-Saharan Africa Part 2: Country Case Study Kenya* (Eschborn, Germany: GTZ, 2006), accessed September 15, 2021, [https://wocatpedia.net/images/c/cb/GIZ_\(2006\)_Financing_Small-Scale_Irrigation_in_SSA_Part_2_Case_Study_Kenya.pdf](https://wocatpedia.net/images/c/cb/GIZ_(2006)_Financing_Small-Scale_Irrigation_in_SSA_Part_2_Case_Study_Kenya.pdf).

¹⁶ Kevin Johnstone, Nipunike Perera and Ben Garside, *Small Business Big Demand: Facilitating Finance for Productive Uses of Energy in Tanzania* (International Institute for Environment and Development, November, 2020), accessed September 15, 2021, <https://pubs.iied.org/16681iied>.

¹⁷ Douglas J. Merrey and Nicole Lefore, “Improving the Availability and Effectiveness of Rural and “Micro” Finance for Small-scale Irrigation in Sub-Saharan Africa: A Review of Lessons earned,” Working Paper No. 185 (Colombo, Sri Lanka: International Water Management Institute, 2018), accessed September 15, 2021, www.iwmi.cgiar.org/Publications/Working_Papers/working/wor185.pdf.

Another emerging option for PUE financing involves lease financing (lease-to-own), a model that can lower some of the barriers that female farmers face. Equity for Tanzania Ltd (EFTA; see box below) has been pioneering the leasing model in Tanzania with loans averaging \$10,000 to \$60,000. For smaller amounts, the “micro-leasing” model offered by Sero Lease and Finance (SELFINA), whereby women repay the loan while generating income from the asset, could be viable for rural areas. SELFINA helps women obtain equipment through a financial lease (with a 40 percent deposit) and monthly instalments (typically ten months) to acquire the asset gradually. Women can sell the equipment back to SELFINA and obtain working capital for their businesses or farms.

EFTA Ltd is a Tanzanian finance company that serves small and medium enterprises and farmers. EFTA focuses on equipment loans of up to \$100,000, with no collateral required except for the equipment itself. With headquarters in Moshi and offices across Tanzania, EFTA serves informal and small enterprises that do not meet collateral requirements to grow their businesses.

EFTA has financed agricultural processing equipment (e.g., flour mills) for farmers’ groups. Under certain schemes and value chains (e.g., rice farming and timber), women are organized in groups and can obtain financing through an off-taker. The off-taker manages the group and provides inputs such as seeds and fertilizer. At harvest-time, the group has a guaranteed market and can sell at an agreed price. The off-taker will deduct the initial costs of the inputs and give the net balance to farmers. This type of mechanism guarantees payments for groups who are not formalized and can be particularly suitable for reaching female farmers, who are often not formally registered as businesses.

Agriculture information and training providers

Gender gaps exist in access to market information and access to capacity-building and training. All women interviewed for this study conveyed their thirst for knowledge and agricultural support. These findings are confirmed by low access rates to TAHA’s market information services, where only 33 percent of their network members are women.

Interviews with partners highlighted good practices for ensuring equitable access to training services. Organizations looking to support female farmers should conduct women-only training and demonstrations of technologies; tap into women’s savings groups and women’s networks; and train women in villages to ensure that they can participate and do not need to travel.

Mtandao wa Vikundi vya Wakulima Tanzania (MVIWATA) is a network of farmers’ groups operating in each region of Tanzania. Members of MVIWATA consist mainly of VICOBA, traders’ groups, and farmers. Members pay a joining fee and meet each month to discuss their needs and challenges. MVIWATA provides several services to its members, including training on business development, governance of farmers’ groups, technology use, and sustainable farming practices. MVIWATA also advocates for farmers.

Women use three key channels for getting information on farming practices, market access, and technology: District officials and agricultural officers, NGOs, and women’s groups or peers. Given the presence of several organizations that offer capacity-building to women in Tanzania, such groups can be approached to market products.

Tanzania Horticultural Association (TAHA) is an NGO that works with farmers across 24 regions in Tanzania. Members range from larger firms to smallholder farmers, including farmers' groups. TAHA works in the following areas:

- **Market access:** Through its Market Information System, TAHA provides marketing, demand, and supply trends; prices; and agronomic information to members.
- **Production and productivity:** Focuses on exposing members to different technologies to increase their productivity and supports safety standards and accreditation schemes for exports.
- **Business and enabling environment:** Focuses on lobbying and advocacy to create an enabling environment for agribusinesses. TAHA also trains farmers in business development and connects them with financial institutions.
- **Institutional capacity-building and sustainability:** Support provided by community-based facilitators and agronomists.

TAHA's commercial division comprises two subsidiary companies, TAHAFresh Handling Ltd and Fresh2Sokoni Ltd, providing complementary logistics and retail.

Bundling capacity-building with financing and technology access has proven to be a successful strategy for increasing women's ability to expand their businesses. Energy4Impact in Tanzania has bundled a training and mentorship package with access to electric appliances for 82 female entrepreneurs in Kigoma, which increased their sales by 80 percent.¹⁸ Similarly, evidence from a study by the Center for Global Development found that combining business training with improved access to mobile savings accounts for female entrepreneurs increased the amount of savings and transactions on the mobile savings platform.¹⁹

Interviews with Simusolar's partners show that once women receive training and mentorship, they widen their networks and business opportunities. For example, experiences with Rijkzwaan's training demonstrate that female farmers who received entrepreneurial training have started aggregating and organizing themselves in groups to improve their market access. However, targeted mentorship may not be commercially viable at a large scale. Companies should partner with NGOs that can support these efforts or employ knowledgeable women as ambassadors.

¹⁸ "More Productive and Empowered Women in Tanzania Contribute to Food Security and Poverty Reduction," Energy4Impact, September 2, 2019, accessed September 15, 2021, <https://energy4impact.org/news/more-productive-and-empowered-women-tanzania-contribute-food-security-and-poverty-reduction>.

¹⁹ Gautam Bastian, Iacopo Bianchi, Markus Goldstein and Joao Montalvao, "Short-term Impacts of Improved Access to Mobile Savings, with and without Business Training: Experimental Evidence from Tanzania," Working Paper No. 478 (Washington, D.C.: Center for Global Development, March, 2018), accessed September 15, 2021, www.cgdev.org/sites/default/files/short-term-impacts-improved-access-mobile-savings-business-training.pdf.



1.4 Simusolar

This section describes Simusolar’s business model and discusses the results of the gender diagnostic.

Simusolar distributes, finances, and maintains PUE in East Africa. Active in Uganda and Tanzania, Simusolar supports farmers and off-grid businesses with appliances and services provided with a purchaser-financing plan.

SIMUSOLAR AT A GLANCE

Active since 2014 in
Tanzania and Uganda

9 offices across
Tanzania

SERVING
17,000 smallholder farmers and
fisherpeople

17 percent of customers are women

82 percent of customers are men

132 employees²⁰

28 percent of workforce is female (37 women)

Women are most represented in:

- Customer care (67 percent)
- Finance (50 percent)
- HR (100 percent)

²⁰ Includes Uganda and Tanzania.

ANALYSIS OF SIMUSOLAR'S BUSINESS MODEL

| | | |
|--------------------|--|--|
| Technologies | <p>Catch fishing-lamps: 13 W solar PV, lithium battery, LED light, charging slot for mobile devices.</p> | <p>Products are supported by a proprietary digital platform which helps Simusolar collect customer data, track payments, monitor equipment remotely, and maintain equipment.</p> |
| | <p>Water pumps: Surface and submersible pumps from different suppliers.</p> | |
| Consumer financing | <p>The equipment is provided through cash sales or fixed-installment payment plans. Customers opting for a fixed instalment plan need to pay a deposit of 25 percent of the price and pay fixed amounts monthly with repayments monitored digitally. After the credit period (22 months), customers own the system.</p> <p>This model helps rural business owners reduce operating costs, generate a reliable income, and enhance efficiency and productivity, thereby supporting a transition from subsistence farming to agribusiness.</p> | |
| Distribution | <p>Sales staff distribute products.</p> | |
| Customer segments | <p>Customers include fisherpeople, farmers, and agribusinesses in off-grid areas. More than 63 percent of Simusolar's customers were below the Tanzanian poverty line at the time of purchase and 78 percent of customers said it was the first product that they had bought on credit.</p> | |
| | <p>Loosely linked farmers cultivating one- to three-acre farms and relying on rain-fed agriculture. Annual revenue ranges from \$600 to \$1,500. More than 90 percent of clients fall in this category.</p> | |
| | <p>Entrepreneur farmers cultivating around five to 12 acres of land, to grow cash crops. They use fuel pumps for irrigation and their annual revenue ranges from \$1,500 to \$7,300.</p> | |
| | <p>Agribusinesses cultivating around 15 to 30 acres of land (including greenhouses) and earning up to \$18,000 annually. They rely on boreholes as sources of water for irrigation and use diesel pumps.</p> | |
| | <p>Subsistence fisherpeople living in the Lake Region and relying on fishing as the source of livelihood. They use kerosene lamps for fishing.</p> | |
| Partners | <p>Input suppliers, capacity-builders, and NGOs.</p> | |

Simusolar’s approach in reaching women and findings of the gender diagnostic²¹

Marketing and sales

Women are less likely to participate in product demonstrations and exhibitions, and when they do, they will need more support to help them convince their spouses to purchase the technology. Referral pathways remain male-focused. Social media remains the second-most used marketing approach.²²

Because many of the interviewed female customers obtain farming information through social media, companies should design marketing messages that reach women on these platforms. The fieldwork indicated that female customers appreciate the increased yields, income (from saving money on fuel), and reduced labor due to SWPs.²³ Marketing material should stress these benefits to women.

Simusolar customer data (self-reported) indicate referral pathways shared between men and women. Fifty-five percent of male customers versus 41 percent of female customers gained information about the technology through field visits; 23 percent of male customers versus 31 percent of women through word-of-mouth; and 11 percent of male customers versus 12 percent of female customers through events or expos.

Feedback from staff showed that female customers are good listeners and once they feel comfortable, they ask questions to understand the benefit of the technology. However, companies still prefer to market to male customers because of their purchasing power and confidence in using the technology. Discussions revealed little difference between marketing approaches to men and women despite these customers’ different priorities.

Customer finance

Discussions on customer finance revealed that women may have difficulty paying down-payments or would prefer collecting their down-payment in a secure savings account before submitting it to Simusolar. Simusolar has opted to have a longer repayment period (22 months) and to refund the full deposit (25 percent of the product’s cost) if customers pay off the product in three months and half the deposit back if they repay in six months. This approach rewards early payers and is easy to communicate. The company is open to exploring other plans. One respondent indicated that in the Ugandan market, clients seem to want a one-year plan because they want the amount due to be lower.²⁴

Some staff suggested a rewards system as a way to increase sales to women given their better track record with repayments (see the customer personas in Section 1.5). Simusolar has also experimented with payment plans based on harvest cycles, but discontinued them because customers could not grasp the details of the varying instalment amounts. Customers with varying payment amounts started distrusting the credit team; others were fine with repaying lower amounts but could not afford the larger harvest-time payments. Moreover, different crops and regions have different harvest cycles (further influenced by the farmers’ habits and the presence of multiple crops), making it very hard to design practical payment plans.

The Simusolar team collects basic metrics for the consumer finance process, including looking at asset ownership, land-tenure, and income streams. For example, customer profiles reveal that the primary occupation for men is “farmer” (44 percent) and “businessman” (16 percent); for women, “farmer” (34 percent) and “employee” (24 percent). Rather than a formal credit rating system, Simusolar relies on a vetting process that filters out customers whose identity cannot be verified or who lack the basic resources needed to farm. The company tries to focus on enabling customers to gain access to credit and to also enable customers to improve their credit record.

²¹ Based on staff interviews, fieldwork, and Simusolar company data.

²² Interview with sales officer.

²³ Analysis of female customers.

²⁴ According to Simusolar staff interviews.



“We assess whether a potential customer has other sources of income, a low number of dependants, good involvement or collaboration with others in farmers’ groups, and if they have taken a loan and paid it back. We also check whether applicants have another loan to avoid burdening them too much. Another income source assures us that the customer will continue to pay if something happens to their agricultural activity.”

Simusolar’s staff seem to regard women as more reliable in making repayments. Women tend not to lag behind as much with making repayments as men do, which is confirmed through further analysis of Simusolar customer data. Some staff indicated that they ask women (i.e., partners or wives) to reach male customers to follow up on late payments. Data on underwriting suggest that the rates of male and female customers who have had credit declined is similar. However, more men have been written-off (seven percent) than female customers (one percent). Men and women are equally likely to be current in terms of their accounts, but men are more likely to be very late in their payments, which can lead to defaults. For active accounts, women are on average 15 days ahead on making payments and men 11 days behind. This trend seems to change when focusing on small pump systems. More men with small pumps are ahead and current on their payment plan. Twelve percent of male customers are ahead and 31 percent are current versus the nine percent of women who are ahead and 12 percent current.²⁵ Simusolar could investigate the reason behind this trend.

After-sales and customer service

Women may be less familiar with, and confident in, the use of their SWPs given personal reasons or cultural norms that play up men’s ability to use and fix technology. Simusolar should collect more sex-disaggregated data on after-sales and customer care calls.

Research and development

Simusolar’s current product offering such as the SWPs benefit men and women, given their involvement in agriculture. The company could investigate expanding into the dairy industry (e.g., yogurt making), processing, and solar drying, because many women are involved in these industries.

Human resources (HR) and company culture

In June 2020, Simusolar adopted a Diversity & Inclusion Strategy. Simusolar was co-founded by a woman and has women in leadership roles in departments such as hardware, customer care and credit, marketing and sales, human resources, and finance. Half of the executive leadership comprises women and several female investors hold stakes in the company (70 percent female ownership). Twenty-eight percent of Simusolar’s workforce are women (37 women out of 132 employees). Employee feedback indicates a commitment to gender equality by the company’s leadership and a pro-active stance on sexual harassment and affirmative action.²⁶ However, women are under-represented in sales (at 21 percent of staff), presenting an opportunity to expand women’s roles and thereby increase female customers’ engagement with the company. Simusolar should identify barriers to recruitment and retention, including cultural norms, transport and mobility difficulties, self-efficacy gaps, and skills-matching of candidates with roles. The selected staff members involved in this study wanted further training related to their job functions by, for example, attending training on pitching to female farmers, or understanding their unconscious bias.

Partnerships

Tanzania hosts many farmers’ organizations, such as TAHA, that Simusolar can use to reach more customers. However, few such groups focus on women’s needs. Interviews with Simusolar’s partners showed a basic understanding of women’s needs and of ways to reach them (e.g., through capacity-building). Simusolar should also consider partnering with JUVIHMTU and the Tanzania Women Development Fund through District Officers.

^{25,26} According to Simusolar staff interviews.

Table 2: List of Simusolar's partners.

| PARTNER | REGION | INDUSTRY | PARTNERSHIP TYPE |
|--------------------------------|-----------------------------|---------------------------------------|--|
| AGRA | All regions | Agriculture | Lead-generation partner |
| Breddas | Lake, Central, Coastal | Off-takers | Lead-generation partner/farmers' financing |
| Clinton Development Initiative | Southern Highlands | Horticulture | Lead-generation partner/farmers' financing/policy advocacy |
| ELICO Foundation | Southern Highlands | Renewables | Lead-generation partner/farmers' financing |
| Energy4Impact | Lake, North, Coastal | Marketing | Lead-generation partner |
| FarmAfrica | All regions | Agriculture | Lead-generation partner |
| GBRI/Agriedo | Southern Highlands | Horticulture, training, and marketing | Lead-generation partner |
| Helvetas | Southern Highlands, Central | Horticulture | Lead-generation partner/farmers' financing/policy advocacy |
| Holland Green Tech | All regions | Seeds/agri-equipment | Lead-generation partner |
| Ilovo | Morogoro | Sugarcane | Lead-generation partner/farmers' financing |
| MVIWATA | All regions | Horticulture | Lead-generation partner |
| PASS Leasing Co. | All regions | Machinery, input | Lead-generation partner/farmers' financing/policy advocacy |
| Rikolto | North, Southern Highland | Horticulture | Lead-generation partner/farmers' financing/policy advocacy |
| Rogimwa | Southern Highlands | Inputs and off-taker | Lead-generation partner/farmers' financing |
| SAGCOT | Southern | Agriculture | Farmers' financing |
| SNV | All regions | Agriculture | Farmers' financing |
| TAHA | All regions | Horticulture | Lead-generation partner/farmers' financing/policy advocacy |
| TAREA | All regions | Renewables | Lead-generation/policy advocacy |
| TDT | All regions | Agriculture | Farmers' financing |



1.5 Gaps and opportunities

This section identifies gaps in the market and within Simusolar, and describes the actions that Simusolar can take to reach more women.

Female customer personas

The market assessment helped us to develop three customer personas, informed by data from Simusolar's customers and non-customers. The customer personas aim to describe the female customers that Simusolar prioritizes; we have used these profiles to develop the recommendations of this Gender Strategy.

Farm size: One acre.

Agricultural practices: She cultivates seasonal crops, mostly green leafy vegetables including pigeon peas and tomatoes, and roots such as cassava. Jacqueline also has a few chickens. Her produce is mostly rain-fed, but she also uses a shallow well for manual irrigation and fetches water with cans at a spot approximately 300 m from her farm plot.

Sources of income: Farming. She sells produce in her community.

Needs: She is interested in small pumps which can also be used in the household.

Financing/ability to pay: She spends about \$430 a year on her farm. She has taken loans of about \$215 from VICOBA and saves \$5 each week through her savings group.

Aspirations: Jacqueline is interested in a small pump to reduce her workload and to improve her yields. She has taken loans from VICOBA in the past. She needs appropriate training on using the equipment and mentoring on how to increase her farm's productivity. Because of her limited knowledge of financial products and unfamiliarity with loans, Jacqueline needs help to understand which payment method is suitable to her income and farming needs.

How Simusolar can meet her needs: Simusolar can meet her irrigation needs by supplying a small pump which is also suitable for household use. Simusolar can combine training on pump use with capacity-building on agricultural productivity by putting Jacqueline in touch with partners who provide seeds, fertilizers, and training.



JAQUELINE

Farm size: Three acres.

Agricultural practices: She farms tomatoes, peppers, onion, green banana, and rice. Grace relies on a shallow well and a nearby pond. She pays workers to fetch the water with buckets and irrigates her farm on average twice a month.

Sources of income: Farming and other business. She has crops and animals and sells outside of her community.

Needs: She rents a fuel-powered pump and invests a considerable amount of money to irrigate her crops.

Financing/ability to pay: She spends about \$1,290 a year on her farm. She has taken loans of \$430 USD in the past, and saves \$10 each week.

Aspirations: Grace aspires to reduce the cost and labor associated with her farm. In the future, she would like to expand her farm and cultivate more cash crops. She has a bank account, but has not taken agricultural loans before.

How Simusolar can meet her needs: Simusolar can meet her irrigation needs by supplying a small pump for her farm plot and a medium pump so that she can extend her farm. Simusolar can combine training on pump use with capacity-building by putting Grace in touch with its partners.



GRACE

Farm size: Five acres.

Agricultural practices: Miriam receives support in farming and she employs one to two workers. In addition to raising goats and chickens, she cultivates vegetables, maize, rice, and fruit. She rents a fuel-powered pump for irrigation.

Sources of income: Miriam is a civil service employee and has a family farm that provides enough harvest for her family and for the market.

Needs: She is aware of SWPs but is not sure how to choose the right product for her farm.

Financing/ability to pay: She spends about \$2,150 a year on her farm. She spends up to \$10 a day hiring and operating the fuel-powered pump. She has taken loans of \$1,290 in the past and saves \$20 each week.

Aspirations: Miriam enjoys farming and would like to expand her farm. She is interested in increasing productivity, in reducing the expenses on fuel-powered pumps, and in selling her produce to larger markets.

How Simusolar can meet her needs: Simusolar can meet her irrigation needs by supplying a medium pump. Miriam can benefit from obtaining market information to expand her market access.



MIRIAM

Recommended actions

Factors that influence women's adoption of PUE are wide ranging. They can include issues such as equitable access to information; suitability for the crops grown by women; participation in networks of female mentors; and access to finance. Below we highlight actions that Simusolar can take to implement a gender-sensitive sales strategy.

Marketing and sales

Reaching women with the right information: Simusolar has a unique opportunity to reach female farmers and business owners with its SWPs. Given women's limited participation in product demonstrations and hesitancy to ask questions in larger groups, Simusolar should organize an information campaign by partnering with women's groups, district offices, and VICOBA associations (e.g., JUVIHMTU). Simusolar should demonstrate its products at times and places convenient for women.

Simusolar should train its sales team on how to engage female farmers in groups, how to discuss product specifications, and how to capture and report sex-disaggregated data to track marketing activities, sales, loan applications, and repayments. Simusolar should also enhance its messaging by featuring prominent female farmers in videos shown locally. The company's marketing should speak to women's aspirations as entrepreneurs and state the benefits of Simusolar products for women clearly.

Tackling cultural norms and engaging local mobilizers: Social norms dictate how, when, with whom, and about what women make decisions, including purchasing SWPs. Evidence points to the fact that financial service providers are most successful at reaching women when their approach also challenges norms around women's financial decision-making.²⁷

Research on couples' household financial decision-making and women's economic empowerment can be adapted into marketing materials that normalize joint decision-making and that help advance women's access to technology (particularly after marriage). Simple gender-relations approaches involve the company requesting joint discussions on purchases, encouraging men and women to make joint decisions, and outlining the income-generating benefits of investing in agricultural assets. Organizations that have run modules focused on these issues include ICRW,²⁸ Helen Keller International,²⁹ and CARE.³⁰ Simusolar should engage local leaders, religious NGOs, and other institutions so that they understand the rationale behind this gender-relations approach and support the idea to amplify the message.

Building a diverse sales force: Simusolar's commitment diversify its sales force will yield benefits if the company becomes more responsive to a female client base and their preferences. The benefits of a gender-balanced sales force can include enhanced sales, strong customer loyalty (leading to more reliable repayments and fewer refunds), enhanced local presence, and lower staff turnover.³¹ Communicating with Solar Sister and Living Goods about their approaches to expand the coverage of female sales agents will be valuable. For Simusolar to scale its efforts to hire a more diverse sales force, it can optimize recruitment, retention, and promotion procedures. Actions can include:

Recruitment: Simusolar partners with local recruitment agencies to gain access to talent. Further efforts could focus on posting job notices on professional network platforms with a large female membership, explicitly encouraging female candidates to apply and providing details on the company's

²⁷ Sarah Gammage, Neetu John and Emily Schaub, "Intra-household Bargaining and Decision-making, Social Norms and Women's Empowerment: Evidence from a Global Investment in Gender Equality and Women's Empowerment," Learning Brief (International Center for Research on Women, 2020), accessed September 15, 2021, www.icrw.org/wp-content/uploads/2020/04/DcsnMaknig_v3-digital.pdf.

²⁸ "Getting Down to Business: Women's Economic and Social Empowerment in Burundi," (New York: International Rescue Committee, 2013), accessed 15 September, 2021, https://mangotree.org/files/galleries/674_Burundi_EASE_Imact_Eval_Formatted_Final.pdf.

²⁹ Courtney Meyer, "Examining Impact of Gender Relations Curriculum," Hellen Keller International, April 19, 2016, accessed September 15, 2021, www.hki.org/our-stories/two-continents-one-transformative-approach-researchers-examining-impact-gender-relations/.

³⁰ "Gender Orientation Pack: Key Information for CARE Staff," CARE International, February, 2018, accessed September 15, 2021, http://gender.careinternationalwikis.org/_media/care_gender_orientation_pack_18-2.pdf.

³¹ "A Business-first Approach to Gender Inclusion: How to Think about Gender Inclusion in Small and Medium Enterprise Operations," Shell Foundation, 2018, accessed September 15, 2021, <https://shellfoundation.org/app/uploads/2018/10/A-business-first-approach.pdf>.

benefits, such as flexibility and safety. An ENERGIA paper³² indicates that it is key for companies to prioritize candidates who have strong social and professional networks in the relevant industry, are trusted, and have some sales or business experience.

Retention and advancement: Simusolar should consider changing its managers to ensure a culture of flexibility is built into the sales team's management ethos (which could also expand into other departments). Retention and advancement policy should accommodate women's domestic responsibilities and offer flexible work hours for care responsibilities. These adjustments can apply also to male employees, helping them to balance their domestic and work responsibilities.

Simusolar should ensure that women in the sales team feel safe and comfortable with modes of transport, distances travelled, who they are paired with when going into the field, and with Simusolar's sexual harassment policy. The sales team could explore decentralizing the team in the territories they cover, allowing women with family responsibilities or limited appetite for travel to work more locally.³³

The company should check in with female and male staff on their experiences and any challenges they face. For example, cultural norms can limit not only individual freedoms, but also the number of customers that female sales agents can reach compared to their male counterparts.

Sex-disaggregated marketing and sales data: Sex-disaggregated information allows the company to track the effect of its gender-inclusion strategy. For example, user data can be analyzed once information is disseminated through channels such as women's groups or through an influential female farmer engaged to reach other female farmers. Key metrics include the gender of the individuals reached by the new campaign, the number of product demonstrations delivered in partnership with women's groups, and attendance numbers.

Customer finance

Co-signing assets: Simusolar has in the past encouraged female and male partners to co-sign their assets, but has lapsed on recording data on this policy. This policy introduced a couples-based approach to decision-making on large technology purchases. Simusolar could strengthen this co-signing policy by requesting the presence of both spouses or partners when negotiating financing.

Deposit amount and cash-back rewards: Simusolar's deposit of 25 percent of the product's cost may be a barrier to women's access to SWPs. Simusolar should explore lowering the deposit or providing options for the down-payment amount to be paid in two instalments. The company should weigh the risk of consumers becoming less invested in paying off the rest of the amount. This risk can be lessened by screening customers before offering the benefits of the lower deposit to female customers.

Simusolar has seen male farmers use a female partner to apply for loans when they did not qualify for credit, and could well use the same technique to take advantage of discounts intended for women. Vetting would require close collaboration between the sales team and customers and would include questions to build customer profiles, which include their needs and aspirations for the technology. Alternative risk screening criteria could prioritize diverse income streams, group membership, financial literacy, and financial management skills, taking into account prior loans and financial training.

Cash-back rewards can also encourage better repayment rates. Simusolar can consider piloting new payment terms for women, such as extending the cash-back reward beyond three or six months, given the initial evidence that women seem to repay their loans more consistently. Extending the cash-back reward time-frame would reduce the costs of the product and encourage quick repayment. Simusolar should weigh the cost of offering such consumer benefits.

³² Soma Dutta, *Supporting Last-mile Women Energy Entrepreneurs: What Works and What Does Not* (ENERGIA, 2019), accessed September 15, 2021, <https://energia.org/assets/2019/01/Supporting-Last-Mile-Women-Entrepreneurs.pdf>.

³³ Scott A. Roy, "Shedding Light on Women in Solar: How – and Why – Off-grid Solar Companies Should Hire More Female Sales Agents," NextBillion, December 19, 2019, accessed September 15, 2019, <https://nextbillion.net/off-grid-solar-women-sales-agents/>.

Bridging the savings gap: Women in rural areas with low incomes face barriers to saving for down-payment for Simusolar’s products because of limited time, mobility, and access to finance. Simusolar should expand its partnerships with savings groups (e.g., VICOBA, District Women Development Fund, local SACCOs like MVIWATA, and formal financial institutions.) Some formal financial service providers such as NMB Bank Tanzania have set-up an instant-access account called ChapChap (“FastFast” in Swahili). A partnership between financial service providers and savings groups may help female customers save more easily toward making a down-payment. Expanding access to finance through partnerships can expand women’s household decision-making by increasing their control over money and making it easier for them to invest in their farms (by purchasing an SWP, for example).³⁴

Simusolar can also offer a layaway approach by setting a price at which the customer can place an item on hold, and pay the rest over time. This approach would need to outline the cost of the plan, the payment due, the timeline, and the conditions for late or missed layaway payments.

Leveraging group lending with a focus on managing off-taker risks: Given that many women and men rely on informal financial services such as VSLAs, these groups are ideal to reach women with SWPs. Because of the inherent off-taker risk associated with group-lending, Simusolar could identify an off-taker to arrange the financing for the group. Equity For Tanzania Limited (EFTA) have rolled out such approaches in groups where women are more prevalent in a specific value chain (e.g., flour milling and timber processing in Arusha). The off-taker takes out the finance for the whole group and then deducts the initial costs of inputs and gives the net balance to farmers.

Sex-disaggregated information on access to finance: Simusolar has rich underwriting data and other customer data. The company should consider looking further into its credit approval and rejection process (including understanding the consumer profiles according to employment and asset ownership) to see payment trends for female versus male customers. Once it has selected key metrics, Simusolar could revisit monthly or quarterly reports to analyze the gender statistics to inform the credit teams.

After-sales and customer service

Expanding customer care: Simusolar could optimize its after-sales process to provide female customers with confidence in using and maintaining the technology by developing instructional materials and training sales staff. Such interventions could include developing a set of questions asking consumers about their level of confidence with the technology, creating chances for hands-on use and basic maintenance, and distributing visual aids on product use and troubleshooting. Developing manuals explaining how to use the SWPs productively and safely will help female farmers to get the most out of their investment.

Sex-disaggregated customer feedback: Simusolar should capture sex-disaggregated feedback from customers on product use and satisfaction. Doing so will allow the company to see how effective its gender-specific interventions in maintenance guidelines and customer satisfaction have been.

Research and development

Focusing on women’s agricultural activity: As Simusolar expands its product offering, it should focus on helping women increase the shelf-life of their produce through crop- and fish-drying, diversify their income, and lessen the labor and drudgery of farming. Ensuring that female farmers know how to use their investments productively will help them to keep up their payments.

Mapping value chains and developing an asset ownership gradation model: Simusolar should map value chains involving large numbers of women and their equipment to inform the company’s strategy and to develop an asset ownership gradation model (as used in other sectors). Various agriculture asset financing models can help consumers build their credit worthiness. For example, BrightLife, a social

³⁴ “Exploring Fintech Solutions for Women,” Scoping Paper (International Development Research Centre, n.d.), accessed 15 September, 2021, <https://media.africaportal.org/documents/IDL-57158.pdf>.

enterprise by FINCA, offers a rebate to customers once they have paid off the solar technology. These customers can use their good repayment record to apply for additional credit for their businesses.

HR and company culture

Implementing the Diversity & Inclusion Strategy: Simusolar's Diversity & Inclusion Strategy provides a good foundation for reviewing policy on leadership, equal pay, product development, and client engagement. Simusolar should focus on tracking the progress of these commitments and on making staff more aware of them during onboarding and via seminars or retreats. As the company grows, it should formally enshrine diversity and inclusion as a company policy, because leadership changes could easily change the company's priorities.

Strengthening gender equality through training: Simusolar should integrate gender considerations into ongoing staff training.

Adopting HR approaches to gender equality: The HR team has an opportunity to develop tools to enhance gender equality by formulating clear guidelines for recruitment. HR should reach out to female-focused professional networks to recruit talent, engage staff on gender equality regularly, and hold exit-interviews to understand the reasons for female staff turnover.

Partnerships

Partnering to reach new customers: Local partnerships can aid marketing and support customer education and after-sales service. For example, partnering with community-based organizations and capacity-builders such as TAHA, MVIWATA, and Rikolto can allow for more effective information dissemination to female farmers and encourage new customers to invest in SWPs. Simusolar should also engage local officials and extension workers (keeping in mind that most of them will be male) to distribute product information.

2. GENDER STRATEGY

This section summarizes Simusolar's commitment to gender equality and proposes an approach to implement the company's gender objectives.

2.1 Setting goals

Gender equality statement

We envision economies that are sustainable, equitable, and inspiring to all.

We would like to be a *company* that represents the world we'd like to live in, with a balance of gender, race, origin, age, identity, profession, personality, and more.

We want our *leadership* to inspire and represent the opportunities available to all backgrounds.

We want our *conversations* to be dynamic and diverse, pushing us out of our comfort zones as we pursue shared goals, forcing us to grow as people and as an organization.

We want our *policies* to be fair and meritorious, with our biases diluted by the diverse contributions and culture we have cultivated.

We want our *clients* to know they are welcome and understood, thanks to being served by a team that is as varied as they may be. We want to open new client markets, reaching groups that were underserved because companies did not see their needs and opportunities.

Gender equality objectives

Why? Simusolar believes that its mission is to provide economic access and takes ownership of the historic inequities that have led to a gap in that access. We also believe women represent a powerful economic segment that has been overlooked by the market. It is a commitment and an opportunity to meet their needs. To realize that opportunity, our team and culture need to innovate on products, services, delivery models, and business models that have not served this market. To innovate, we need to have a safe environment for differing perspectives, open dialogue, and collaboration. This kind of environment is best realized by a diverse team with supportive policies and practices.

Our strategy starts with diversity and ends with diversity; it's both the goal and the means.

How? Simusolar aims to achieve its gender objectives by taking specific actions across several business areas to serve women better. These actions are described in the Gender Action Plan.

2.2 Accomplishing goals: The Gender Action Plan

| CATEGORY / OBJECTIVE | INITIATIVES | BASELINE | SUCCESS INDICATORS | RESPONSIBILITIES |
|---|--|---|--|------------------------|
| Marketing and sales objective: Design marketing and sales strategies that appeal to a wider female customer base | | | | |
| Develop and adopt a marketing and sales approach focused on women. | Launch an information campaign and expose women to technology by partnering with women’s groups, district offices, and VICOBA associations (e.g., JUVIHMTU). | No targeted campaigns conducted to date | Campaigns reaching at least 100 women conducted and analyzed, with a report to management | Marketing Manager |
| | Train the sales team to engage groups of female farmers; to discuss product specifications; and to capture and report sex-disaggregated data on marketing and sales. | Sales team has not been trained to engage women in groups effectively | Trained at least 10 sales officers (one-third of the team); evaluated impact for a quarter | National Sales Manager |
| | Create content and messaging that speak to female farmers’ preferences. | Marketing material is gender-blind | Content generated and in circulation; created a dedicated phone number on collateral to track impact | Marketing Manager |
| Tackle cultural norms and engage local mobilizers. | Adapt materials from research on couples’ household decision-making, their financial resources, and women’s economic empowerment: Introduce a farm-plan economics worksheet that the Sales Officer discusses with the husband and wife together. | No discussions on family economics as part of current sales approach | Household farm-plan economics worksheet developed; team trained on its use; use was tracked and analyzed | Co-CEO |
| | Reintroduce dual-signature on contracts, but do not set targets (as they can be gamed easily). | Tried in past but no information systematically collected | Tracked number of contracts with dual signature and noted in our CRM for future analysis | Co-CEO |
| | Add the spouse as a contact in the application form and in the CRM; evaluate notifying both with SMS about balance and payments. | Only one space for a contact and a non-specified back-up contact | Implemented in CRM | Customer Care Manager |

| CATEGORY / OBJECTIVE | INITIATIVES | BASELINE | SUCCESS INDICATORS | RESPONSIBILITIES |
|--|---|---|---|------------------------|
| Build a diverse salesforce. | Work with schools or programs that train women; hire within regions to reduce relocation challenges; get referrals from female staff. | 21% of sales team are women | Target: 30% | National Sales Manager |
| Report quarterly on sex-disaggregated marketing and sales data. | Analyze leads generated by information disseminated through women's groups or influential female farmers (using Lead Source in SalesApp). | Limited sex-disaggregated marketing and sales data collected and analyzed | Compiled quarterly report; fields for gender-data incorporated into monthly reporting | Sales Analyst |
| | Track number of demonstrations delivered in partnership with women's groups and attendance numbers. | No metrics tracked | Designed a process for capturing info; added SalesApp functionality; trained the team to use SalesApp | Marketing Manager |
| | Track number and gender of people reached during each campaign. | No metrics tracked | Implemented process for updating Lead Source tracking for each campaign | Marketing Manager |
| Consumer finance objective: Pilot new financing approaches and establish new partnerships to offer tailored solutions for women | | | | |
| Pilot a new approach to down-payments and cash-back rewards. | Explore lowering the down-payment amount or providing options for the down-payment amount to be paid (e.g., in two instalments) for female farmers. | No differentiated approach to consumer financing | Concluded analysis and write up recommendations on how to introduce gender-based financing | Co-CEO |
| | Evaluate cash-back rewards for on-time repayments, given the evidence that women seem to repay more consistently. | No incentives for timely repayments beyond 6 months | Evaluated program; if appropriate, design and document SOP; implement in platform; launch and market | Credit Officer |

| CATEGORY / OBJECTIVE | INITIATIVES | BASELINE | SUCCESS INDICATORS | RESPONSIBILITIES |
|---|---|---|--|------------------------------|
| <p>Bridge the savings gap: Develop a strategy and partner to bridge savings gaps.</p> | <p>Expand partnerships with savings groups (VICOBA, District Women Development Fund, local SACCOs), or formal financial institutions that attempt to cater to women.</p> | <p>No financing partnerships in place</p> | <p>Engaged at least 2 savings groups or financial institutions to evaluate feasibility and design the solution</p> | <p>Co-CEO</p> |
| | <p>Explore the option of offering a layaway approach by setting a price at which the customer can place an item on hold and pay the rest over time.</p> | <p>No savings or layaway options for consumers in place</p> | <p>Evaluated legal, operational, credit, and market implications of introducing layaway option</p> | <p>Credit Officer</p> |
| <p>Leverage group lending with a focus on managing off-taker risks.</p> | <p>Explore how savings and loans groups can be used to sell SWPs to women.</p> | <p>No engagement with group lenders</p> | <p>Engaged VSLAs to evaluate potential for group lending solutions; drafted programs to market via groups</p> | <p>Co-CEO</p> |
| <p>Collect sex-disaggregated information on access to finance.</p> | <p>Analyze credit approval and rejection process; assess consumer profiles according to employment and asset ownership; identify trends for female versus male customers and payment performance of female versus male customers.</p> | <p>Limited analysis of existing underwriting data</p> | <p>Reported quarterly on sex-disaggregated access to finance data</p> | <p>Co-CEO</p> |
| <p>After-sales service and customer support objective: Collect sex-disaggregated data to understand the needs of women</p> | | | | |
| <p>Expand customer care with services designed to support female customers' needs.</p> | <p>Optimize the after-sales process to provide female customers with confidence in technology use and maintenance by developing instructional materials and training sales staff. Propose standardized questions asking consumers about their level of confidence with the technology.</p> | <p>Limited customer care approaches focused specifically on women</p> | <p>Identified at least 3 new protocols to support female customers to adopt technology Female customers' CES score reduced by 25%</p> | <p>Customer Care Manager</p> |

| CATEGORY / OBJECTIVE | INITIATIVES | BASELINE | SUCCESS INDICATORS | RESPONSIBILITIES |
|--|--|--|--|-----------------------|
| Collect sex-disaggregated customer feedback. | Analyze sex-disaggregated feedback from customers on use and satisfaction. | Limited tracking and analysis of sex-disaggregated customer feedback | Reported quarterly on sex-disaggregated customer feedback | Customer Care Manager |
| | Expand annual customer survey with broader sex-disaggregated analysis. | | Integrated gender-specific analysis into existing annual survey | Customer Care Manager |
| Research and development objective: Focus on agricultural value chains that involve many women; identify new opportunities to serve these women | | | | |
| Extend reach to agricultural sectors dominated by women. | Research the business opportunities of female-dominated agricultural sectors. | Some R&D | Researched commercial opportunities; developed protocols to increase gender-lens evaluation of R&D | Co-CEO |
| Map value chains and develop an asset ownership gradation model. | Map value chains with a large share of women and their demand; develop an asset ownership gradation model where appropriate. | Limited information on women's value chains and demand | Mapped women's value chains, technology needs, and market opportunities | Co-CEO |
| Partnership objective: Increase the company's female customer base | | | | |
| Create new partnerships to reach female consumers. | Formalize partnerships or sign memorandums of understanding. | No partnerships with organizations focused on women's economic empowerment | Partnered with 3 institutions focused on women's empowerment | Co-CEO |

| CATEGORY / OBJECTIVE | INITIATIVES | BASELINE | SUCCESS INDICATORS | RESPONSIBILITIES |
|--|--|--|--|------------------|
| HR and company culture objective: Increase diversity in the workforce and raise awareness of gender equality within the company | | | | |
| Make the Diversity & Inclusion Strategy company policy. | Disseminate policy internally and raise staff awareness of the policy during onboarding and staff training. | Low awareness of Diversity & Inclusion Strategy Aspects of policy in HR Manual but not stand-alone or comprehensive | At least 80% of staff aware of Diversity & Inclusion Strategy Policy enshrined and communicated | HR Director |
| Build a strong culture of gender equality in the company through training. | Integrate gender considerations into ongoing staff training. | Existing training does not include gender equality training | All staff training includes gender equality | HR Director |
| Adopt tools to pursue gender equality through HR. | Enhance gender equality by formulating clear guidelines for recruitment. Reach out to female-focused professional networks to recruit talent. | Limited external talent partnerships | Developed 1 to 2 new relationships with women's talent networks | HR Director |
| | Hold exit-interviews to understand the reasons for staff turnover; note if there are differences between male and female employee satisfaction. | No standard reporting | Quarterly report instituted | Co-CEO |
| Increase the share of women on Simusolar's board. | Communicate to investors the company's desire to increase the number of women on the board; identify candidates for external board seats. | 1/7 board members is a woman | One-third of board members are women | Co-CEO |

BIBLIOGRAPHY

- African Development Bank. 2020. “Gender and Energy Country Brief—Tanzania.” African Development Bank. <https://www.afdb.org/en/documents/gender-and-energy-country-brief-tanzania>.
- Baden, S. 2013. *Women’s Collective Action: Unlocking the Potential of Agricultural Markets* Oxfam. <https://oxfamilibrary.openrepository.com/bitstream/handle/10546/276159/rr-womens-collective-action-unlocking-potential-africa-agriculture-270312-en.pdf;jsessionid=D16C40D090B42089CC15BC1BD2E3A062?sequence=6>.
- CARE. 2018. “Gender Orientation Pack: Key Information for CARE Staff.” CARE International. http://gender.careinternationalwikis.org/_media/care_gender_orientation_pack_18-2.pdf.
- Clancy, J., T. Winther, M. Matinga and S. Oparaocha. 2012. “Gender Equity in Access to and Benefits from Modern Energy and Improved Energy Technologies.” Background Paper, ENERGIA. https://ris.utwente.nl/ws/portalfiles/portal/5131975/WDR_Norad_ENERGIA_Main_Paper.pdf.
- De Haan, A. 2016. “Enhancing the Productivity of Women-owned Enterprises: The Evidence on what Works, and a Research Agenda.” International Development Research Centre. https://www.idrc.ca/sites/default/files/sp/Documents%20EN/report_-_enhancing_the_productivity_of_women-owned_enterprises.pdf.
- Dutta, S. 2019. *Supporting Last-mile Women Energy Entrepreneurs: What Works and What Does Not*. ENERGIA. <https://energia.org/assets/2019/01/Supporting-Last-Mile-Women-Entrepreneurs.pdf>.
- Efficiency for Access. 2019. *Tanzania Market Snapshot: Horticulture Value Chains and Potential for Solar Water Pump Technology*. Efficiency for Access. https://assets.publishing.service.gov.uk/media/5caf1467e5274a5e1cbd551b/SWP-in-Tanzania_26_3_2019_FINAL.pdf.
- ENERGIA. 2020. Gender and Sustainable Energy Country Briefs for Kenya, Rwanda, Tanzania, and Uganda. ENERGIA. <https://www.energia.org/energia-the-african-development-bank-and-the-climate-investment-funds-join-efforts-to-strengthen-gender-in-the-energy-sector-in-africa/>.
- Food and Agriculture Organization. 2018. *The Benefits and Risks of Solar-powered Irrigation: A Global Overview*. FAO. <http://www.fao.org/3/I9047EN/i9047en.pdf>.
- Fisher, G., S. Wittich, G. Malima, G. Sikumba, B. Lukuyu, D. Ngunga, J. Rugalabam. 2018. “Gender and Mechanization: Exploring the Sustainability of Mechanized Forage Chopping in Tanzania.” *Journal of Rural Studies* 64: 112–122. <https://www.sciencedirect.com/science/article/pii/S0743016718304340>.
- GIZ. 2015. “Unlocking Benefits of Electrification for Women.” GIZ. https://gender-works.giz.de/?wpfb_dl=1100.
- Gomme, S., J. Neetu and E. Schaub. 2020. “Intra-household Bargaining and Decision-making, Social Norms and Women’s Empowerment: Evidence from a Global Investment in Gender Equality and Women’s Empowerment.” Learning Brief, International Centre for Research on Women. https://www.icrw.org/wp-content/uploads/2020/04/DcsnMaknig_v3-digital.pdf.

Harrison, K., S. Khan, T. Adams and S. Dichter. 2020. “Why Off-Grid Energy Matters.” 60 decibels. <https://60decibels.com/energy-report>.

Hivos. n.d. “Including Women’s Energy Needs in Tanzania. Hivos. <https://hivos.org/story/including-womens-energy-needs-in-tanzania/>.

Kumaraswamy, S.K. 2021. “Examining PAYGo Solar Through a Gender Lens: An Exploratory Study.” Presentation, CGAP. <https://www.findevgateway.org/slide-deck/2021/04/examining-paygo-solar-through-gender-lens-exploratory-study>.

Institute of Development Studies. 2019. “A Gender Approach to the Promotion of Productive Uses of Energy.” Policy Briefing 162, IDS. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/14578>.

IISD. 2015. “Financing for Agriculture: How to Boost Opportunities in Developing Countries.” Policy Brief No. 3, International Institute for Sustainable Development. <https://www.iisd.org/system/files/publications/financing-agriculture-boost-opportunities-developing-countries.pdf>.

International Rescue Committee. 2013. “Getting Down to Business: Women’s Economic and Social Empowerment in Burundi.” International Rescue Committee. https://mangotree.org/files/galleries/674__Burundi_EASE_Imact_Eval_Formatted_Final.pdf.

JICA. 2016. *Country Gender Profile: Tanzania*. Japan International Cooperation Agency. https://www.jica.go.jp/english/our_work/thematic_issues/gender/background/c8h0vm0000anjqj6-att/tanzania_2016.pdf.

Johnstone, K., N. Perera and B. Garside. 2020. *Small Business Big Demand: Facilitating Finance for Productive Uses of Energy in Tanzania*. International Institute for Environment and Development. <https://pubs.iied.org/sites/default/files/pdfs/2021-01/16681IIED.pdf>.

Johnstone, K., K. Rai and F. Mushi. 2019. “Remote but Productive: Practical Lessons on Productive Uses of Energy in Tanzania.” Discussion Paper, Hivos and IIED. <https://pubs.iied.org/sites/default/files/pdfs/migrate/16652IIED.pdf>.

Kiprono, A. and A. Llario. 2020. *Solar Pumping for Water Supply: Harnessing Solar Power in Humanitarian and Development Contexts*. Practical Action. https://www.fsnnetwork.org/sites/default/files/2020-10/Solar_pumping_pdf_1.pdf.

Lesseri, G. and J. Aikaeli. 2018. “Stepping up Indigenous Knowledge and Technologies for Higher Incomes for Women in Rural Tanzania: A Case of Food Processing and Storage.” *IK: Other Ways of Knowing* 4: 95–132. <https://journals.psu.edu/ik/article/view/60446/60766>.

Meyer, C. 2016. “Examining Impact of Gender Relations Curriculum.” Helen Keller International. <https://www.hki.org/our-stories/two-continents-one-transformative-approach-researchers-examining-impact-gender-relations/>.

Nafziger, A. 2020. “Experiences in Gender-sensitive Solutions to Collateral Constraints.” MEDA. <https://www.meda.org/document/experiences-in-gender-sensitive-solutions-to-collateral-constraints/?wpdmdl=4571&refresh=611b8a474f6ea1629194823>.

O'Dell, K., S. Peters and K. Wharton. 2014. "Women, Energy, and Economic Empowerment: Applying a Gender Lens to Amplify the Impact of Energy Access." Deloitte. <https://www2.deloitte.com/us/en/insights/topics/social-impact/women-empowerment-energy-access.html>.

Powering Agriculture. 2017. Powering Agriculture Gender Resources. USAID. <https://www.usaid.gov/energy/powering-agriculture/resources/gender>.

Powering Agriculture. 2018. Toolbox on Solar Powered Irrigation Systems (SIPS). GIZ and FAO. https://energypedia.info/wiki/Toolbox_on_SPIS.

Pueyo, A., M. Maestre, M. Carreras, S. Bawakyillenuo and G. Ngoo. 2018. *Unlocking the Productive Uses of Energy for Women in Ghana, Tanzania and Myanmar*. ENERGIA. <https://www.energia.org/document/unlocking-the-benefits-of-productive-uses-of-energy-for-women-in-ghana-tanzania-and-myanmar/>.

Pueyo, A. and M. Maestre. 2019. "Linking Energy Access, Gender and Poverty: Review of the Literature on Productive Uses of Energy." *Energy Research & Social Science* 53: 170–181. <https://www.sciencedirect.com/science/article/pii/S2214629618306145>.

Shell Foundation. 2018. "A Business-first Approach to Gender Inclusion: How to Think about Gender Inclusion in Small and Medium Enterprise Operations." <https://shellfoundation.org/app/uploads/2018/10/A-business-first-approach.pdf>.

Tanzania National Bureau of Statistics. 2015. "Gender Dimension Monograph." Government of Tanzania. <https://www.nbs.go.tz/index.php/en/census-surveys/population-and-housing-census/177-2012-phc-gender-dimension-monograph>.

UN Women, UNDP and World Bank. 2015. "The Cost of the Gender Gap in Agricultural Productivity in Malawi, Tanzania and Uganda." World Bank. <https://openknowledge.worldbank.org/bitstream/handle/10986/22770/The0cost0of0th0Tanzania00and0Uganda.pdf?sequence=1&isAllowed=y>.

Varangis, P., J. Buchenau, T. Ono, R. Sberro-Kessler and A. Okumura. 2021. *Women in Agriculture Using Digital Financial Services: Lessons Learned from Technical Assistance Support to DigiFarm, Fenix, and myAgro*. World Bank. <https://openknowledge.worldbank.org/handle/10986/35471>.

ANNEX I: LIST OF STAKEHOLDERS INTERVIEWED

Simusolar team

Charles Masanyiwa, Policy and Special Projects Manager

Sophie Ibrahim, Customer Care Manager

Betty Mtui Emtui, Senior HR Officer

Elizabeth Bululu, Credit Officer

Mosi Satima, Finance Manager

Vivien Pratt, CFO

Marianne Walpert, CEO

Hobokela Mwakanyamale, Regional Sales Manager

Jaqueline Ally Mbwanga, Sales manager (Morogoro)

Abdul Razack, Sales Officer

Partners and other organizations

Elianchea Yerico, TAHA (Arusha)

Harald Peeters, Rijkzwaan (Dar es Salaam)

Iddi Haridi Mohamedi, Holland Green Tech (Dar es Salaam)

Spensor Lisheta, JUVIHMTU (Pwani and Morogoro)

Jaqueline Mboya, EFTA (Dar es Salaam)

Leonard Kunambi, MVIWATA (Pwani)

Pudencian Lulu Domel, District officers (Pwani)

District Community Development Officers (Morogoro)

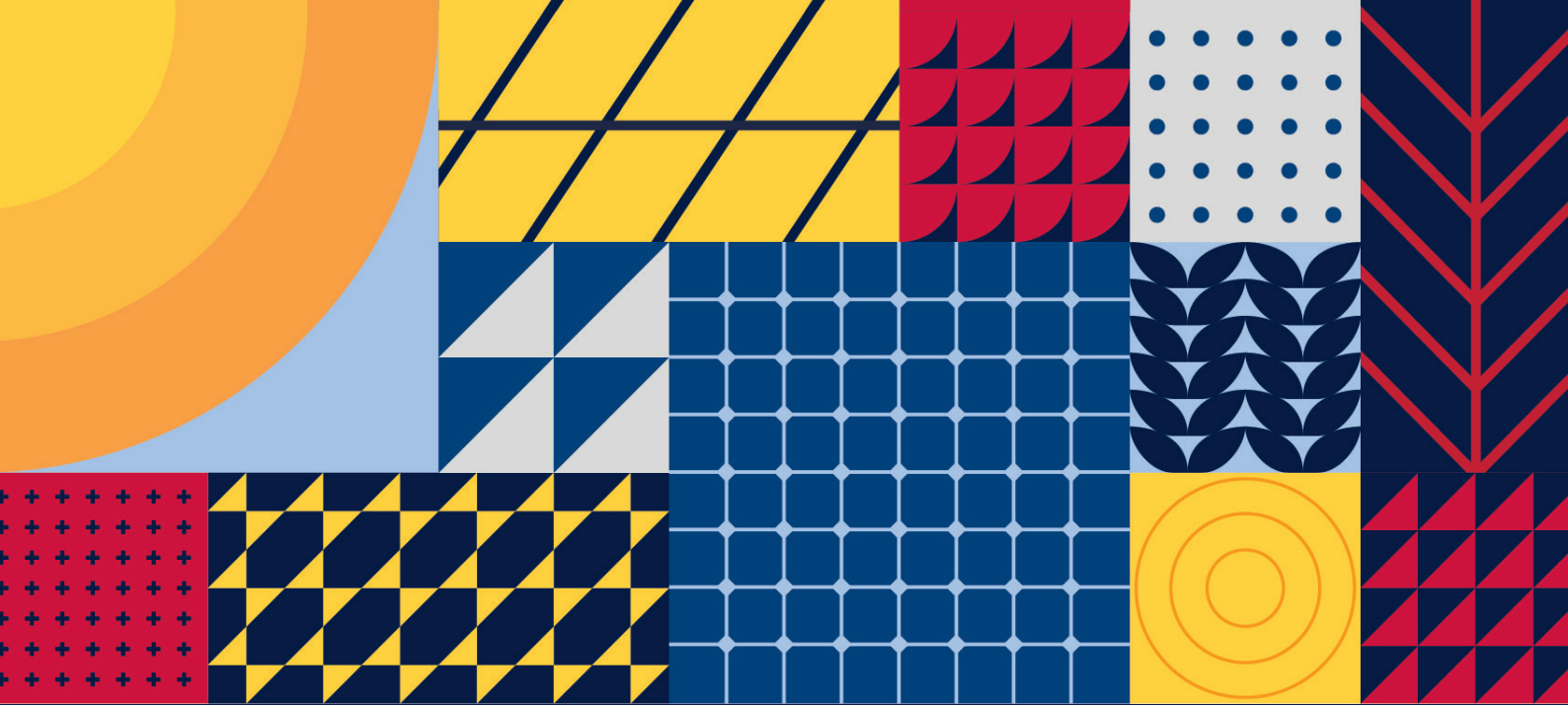
Anastazia Joseph Mganwa, District Irrigation Technician (Pwani)

Consolatha Andrew Tarimo, Agriculture Extension Officer (Morogoro)

ANNEX 2: CUSTOMER JOURNEY MAP

Customer journey map template

| Phases | Awareness | Information gathering | Decision-making | Purchase | Product use | After-sales |
|----------------------------------|--|---|--|--|--|--|
| Actions | <ul style="list-style-type: none"> How does she first hear about the product or service? | <ul style="list-style-type: none"> What does she do once she has gained information about the product or service? | <ul style="list-style-type: none"> How does she decide to purchase the product or service? Who is involved in the purchase decision? | <ul style="list-style-type: none"> What are the actions she takes to purchase the product or service? | <ul style="list-style-type: none"> How does she use the product or service? Who else uses the product? What benefits does she experience? | <ul style="list-style-type: none"> What are the actions she takes after purchasing the product or service? What does she do if problems arise? |
| Customer service channels | <ul style="list-style-type: none"> Which channels—e.g., radio or social media—does your company use to reach the customer? | <ul style="list-style-type: none"> What does your company do to provide information on the product or service? | <ul style="list-style-type: none"> What does your company do to help the customer make purchase decisions? | <ul style="list-style-type: none"> How does your company interact with her during the purchase? Who else is involved? | <ul style="list-style-type: none"> How does your company interact with her while she uses the product? | <ul style="list-style-type: none"> How does your company provide after-sales service? Who is involved? |
| Customer grievances | <ul style="list-style-type: none"> Does she react negatively to your marketing? What is preventing her from hearing about your product or service? | <ul style="list-style-type: none"> Does she experience problems in finding information about the product or service? | <ul style="list-style-type: none"> Can she gain honest information from your company to make an effective purchase decision? | <ul style="list-style-type: none"> Is anything hindering the purchasing process? | <ul style="list-style-type: none"> Does she experience problems in using the product or service? | <ul style="list-style-type: none"> Can she get after-sales support from your company easily? |
| Opportunities | List ways to solve the customer's problems here. | List ways to solve the customer's problems here. | List ways to solve the customer's problems here. | List ways to solve the customer's problems here. | List ways to solve the customer's problems here. | List ways to solve the customer's problems here. |



Power Africa aims to achieve 30,000 megawatts of new generated power, create 60 million new electrical connections, and reach 300 million Africans by 2030.

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