

SECURING WATER FOR FOOD

# GENDER REPORT

August 2016

SECURING  
WATER  
FOR FOOD:  
A GRAND CHALLENGE  
FOR DEVELOPMENT



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# List of Acronyms

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|                |  |                    |   |
|----------------|--|--------------------|---|
| <b>Agtech</b>  | Agricultural Technology                    | <b>RFI</b>         | Request for Information   |
| <b>AIWW</b>    | Amsterdam International Water Week         | <b>RFP</b>         | Request for Proposal  |
| <b>AOR</b>     | USAID Agreement Officer's Representative   | <b>SAM</b>         | System for Award Management   |
| <b>AWP</b>     | Acceleration Work Plan                     | <b>SF-270</b>      | Federal Financial Report – Request for Advance or Reimbursement                                     |
| <b>CEO</b>     | Chief Executive Officer                    | <b>SF-425</b>      | Federal Financial Report – Quarterly Reporting  |
| <b>CFOR</b>    | Chief Financial Office Representative      | <b>Sida</b>        | Swedish International Development Cooperating Agency  |
| <b>COP</b>     | Chief of Party                             | <b>SME</b>         | Small to Medium Enterprise  |
| <b>COR</b>     | USAID Contracting Officer's Representative | <b>SNV</b>         | Synovus Financial Corp, an international not-for-profit development organization in The Netherlands |
| <b>CRM</b>     | Customer Relationship Management           | <b>SO</b>          | Strategic Objective   |
| <b>Desal</b>   | Desalination                               | <b>SOW</b>         | Scope of Work   |
| <b>DUNS</b>    | Data Universal Numbering System            | <b>STTA</b>        | Short-Term Technical Assistance   |
| <b>Gin</b>     | Global Indicator                           | <b>SWFF</b>        | Securing Water for Food: A Grand Challenge for Development  |
| <b>LL</b>      | Lessons Learned                            | <b>TA Facility</b> | Technical Assistance Facility   |
| <b>LOE</b>     | Level of Effort                            | <b>TBD</b>         | To Be Determined  |
| <b>M&amp;E</b> | Monitoring and Evaluation                  | <b>USAID</b>       | United States Agency for Development  |
| <b>MOU</b>     | Memorandum of Understanding                | <b>USG</b>         | United States Government  |
| <b>NGO</b>     | Non-Governmental Organization              | <b>WEF</b>         | World Economic Forum  |
| <b>PIRS</b>    | Performance Indicator Reference Sheets     |                    |   |
| <b>Q&amp;A</b> | Questions and Answers                      |                    |   |
| <b>QSS-O</b>   | Quality of Service – Overall               |                    |   |

# About This Report

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Over the past year and a half, Securing Water for Food Founding Partners (USAID, Sweden through the Swedish International Development Cooperation Agency (Sida), the Ministry of Foreign Affairs of the Netherlands, and the South African Department of Science and Technology) have strongly advocated for an increased focus on gender in the program.

In recent months, Sida funded an analysis of gender perspectives and gender integration in Securing Water for Food to assess individual innovators and provide recommendations for gender integration.

SWFF broadly supports the notion that integrating women and gender equity into SWFF innovators' operations, marketing, and technology adoption, in addition to engaging and empowering both men and women in a fair and equitable manner would create lasting benefit.

This report, which was prepared in response to the Founding Partner's gender suggestions, examines the context in which the SWFF program (which includes the SWFF Founding Partners,

the SWFF Technical Assistance Facility, and the SWFF innovators) are operating and showcases evidence of how the program is moving from analysis and theoretical considerations to practical activities and recommendations.

However, as noted herein, there are significant challenges and barriers that need to be addressed to achieve this goal of gender integration. Prepared by the Securing Water for Food Technical Assistance Facility, this report:

- Seeks to address the topic of gender and its influence in the assurance of development outcomes
- Looks specifically at the distinct benefits in addressing gender
- Addresses the multiple gender-based barriers faced by SWFF innovators and others working in water and agriculture
- Enumerates broad challenges experienced when selling to bottom-of-the-pyramid male and female customers

- Examines the effort made by SWFF innovators as it relates to gender integration and gender empowerment
- Highlights operational changes, challenges, and lessons learned as it relates to gender for the SWFF TA Facility operations
- Documents feedback from the SWFF innovators
- Offers practical recommendations and early actions that can have a positive impact on the broader goals of development, the communities and customers served by SWFF innovators, and directly benefit the growth and sustainability of SWFF innovators

# 1

## Executive Summary

### Where We Are

SWFF has always supported efforts to address gender programming, having required gender specific indicators on customer/end-user adoption since the program's inception, having had three gender workshops since the program's inception, and having had gender experts serve on the SWFF Innovation Investment Advisory Committee (IIAC) and review and provide specific feedback on Round 3 applications.

However, the program recognizes that more must be done. Though many SWFF innovators are making efforts on their own to address gender equity, they need additional support from the

program to intentionally improve the access of women and girls to their innovations within the confines of a varying set of local cultural contexts and barriers.

Though SWFF innovations often don't distinguish between men and women as end users, the lack of a specific gender lens may prevent them from reaching out to a larger customer/end-user population because they aren't always incorporating gender considerations into their product design and marketing strategies.



## Going Forward

Securing Water for Food believes that gender isn't just about women and that integrating gender into SWFF programming requires gender analyses that examine how differences in power, status, and gender norms affect people's lives. SWFF is committed to addressing the constraints that women and girls face with respect to both access to and use of SWFF innovations and, where feasible, seek to

further understand the context, attitudes, and norms in their communities that affect gender and impact water and agricultural processes.

Addressing these concerns will require enhanced efforts by the SWFF program, the SWFF TA Facility, and SWFF innovators to continue our ongoing efforts to integrate gender equity into the program, as well as increase

our efforts towards gender equality. However, as in any programming with limited staff and limited funding, SWFF will continue to focus on actionable and concrete strategies that incorporate gender into our efforts in a way that is accessible to and useful for the early and mid-stage innovators that the program is supporting.



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# 2

## Introduction – The Context

### Role of Women in Agriculture

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The role of women in agriculture varies widely by region, age and social class. Women work as farm owners and as farm labor, both paid and unpaid, on family farms or on commercial farms. Women comprise on average 43% of the agricultural labor force in developing countries, ranging from 20% in Latin America to 70% in Sub-Saharan Africa (FAO 7). Approximately two-thirds of poor livestock keepers are women, though they usually own small animals whereas men keep larger animals like cattle and oxen (FAO 14).

Though their participation in the agricultural labor force is close to equal in some regions,

women are often smallholder farmers, earning a smaller income than men. In most developing countries, a relatively low proportion of the rural population works for a wage, but in these paid positions, women tend to be in lower-wage, seasonal or non-traditional employment (FAO 18).

In addition, they have largely been excluded from larger contract farming arrangements due to a lack of control over secure land and constraints on their time, limiting their ability to maintain the reliable flow of produce that is required for contract farming (FAO 13).

Women also tend to and are expected to take a larger role than men in childcare, cooking and household chores which limits the amount of time they have for farming (FAO 13).

Household division of labor usually dictates that women grow food for the family, while men manage cash crops and farming contracts. Beyond social norms and time constraints, lower levels of education and experience may also be to blame for the large income gap between men and women.

## KEY DEFINITIONS

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**Gender Equality** is an outcome in which men and women have equal rights, freedoms, conditions, and opportunities for realizing their full potential and for contributing to and benefiting from the economy, society and culture. Equality means society values men and women equally for their similarities and differences and the diverse roles they play.

Gender equality is not a “women’s issue”; rather it involves working with men and women, boys and girls to bring about changes in attitudes, behaviors, roles and responsibilities.

**Gender Equity** is the process of being fair to women and men. It often requires interventions to compensate for historical and social biases that prevent women and men from operating on a level playing field. Equity leads to equality. Gender equality is a development goal; gender equity interventions are the means to achieve that goal.

**Female Empowerment** is achieved when women and girls are able to act freely, exercise their rights and fulfill their potential as full and equal members of society. It is both a process and an outcome, collective and individual.

**Gender Integration** involves identifying and addressing gender inequalities during strategy and project design, implementation, M&E and learning.

## Gender and the Assurance of Development Outcomes

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In multiple sectors, closing the gender gap has been shown to increase national productivity, reduce poverty and promote economic efficiency. When women are given access to the same resources, technology and educational opportunities as men, they are often more productive and better able to support themselves financially (FAO 5). In addition to the economic gains, increased income for women has been shown to lead to better outcomes on health, nutrition and education (FAO 9).

Evidence from a variety of developed and developing countries shows that when women have more control over household income—whether from their own earnings or from cash transfers—more money is spent on food, health and education (FAO 43). Gender roles in the household often put women in charge of caring for the family, so increasing their income is one way to improve these essential development outcomes because when they have more money to spend, it benefits children more than an increase in men’s income. This creates better outcomes on health and nutrition, which by extension reduces childhood mortality and malnutrition.

Women’s empowerment also adds new perspectives to policy choices on economic, political and social issues. In India, it was discovered that giving women more power at the local level led to better outcomes on the provision of public goods (e.g., water and sanitation) which mattered more to women than men (World Bank “World Development Report” 6). Gender equality leads to more diverse perspectives and greater innovation across all business lines, including in government.

Finally, gender equity is a development outcome on its own. Gender equality and empowerment of women is Goal 3 of the UN’s Millennium Development Goals. Gender equality is a human rights issue, and

women's empowerment gives women more confidence and control over their own lives.

Despite the growing evidence that gender equality leads to positive development outcomes, many agriculture-related development assistance programs still lack a formal effort at gender integration. The depth of inequality that exists between men and women means that gender-neutral practices are not enough; strategies that target women

### **Addressing the Gender Gap Will Help Drive Economic Growth**

Research shows that gender equity may enhance economic productivity, human development, and institutional performance, while discriminatory gender practices can harm growth. Some recent research also suggests that having women in the highest levels of an organization is correlated with increased profitability (MCC).

post-harvest technologies. In many developing countries, women receive less than 10% of the credit awarded to smallholder farmers as a group. Legal barriers and cultural norms often preclude women from engaging credit facilities on their own, and women generally lack access to fixed assets to be used as collateral on loans (FAO 33). The use of productive resources and technology often requires access to complementary inputs such as land, credit, education and labor, all of which tend to be more constrained for women. This leaves women at a disadvantage and often unable to invest in resources and technology.

With the agricultural landscape changing, female smallholder farmers' lack of access to affordable technology may increase gender inequality because they cannot compete with large commercial farms. New breakthroughs in technology often fail to address women's needs, addressing instead tasks primarily done by men, putting women even further behind in the agriculture market and may make them more vulnerable to rising food prices, climate change and deforestation. This demonstrates why programs to help women in agriculture

Gender equality leads to more diverse perspectives and greater innovation across all business lines, including in government.

are needed to increase their access to resources and their participation in the marketplace. Excluding women from needed resources hurts productivity in agricultural labor markets, given the high proportion of women that are smallholder farmers or farm laborers (FAO 3-4).

### **Access to Resources**

In the ag sector specifically and in areas where Securing Water for Food innovators are implementing their activities, women are often marginalized and face little or no access to credit facilities, improved technologies, and

are sorely needed (World Bank “Gender in Agriculture Sourcebook” 3).

For similar reasons, extension services through the government or other organizations are less accessible to women in developing countries. Often, women are not even approached by agents—85% of whom are men—since women are less likely to adopt new technology. In some cases, cultural norms prevent women from having direct contact with men outside the family (FAO 32). Because women are less likely to adopt new technology and because men are thought of as the decision-makers in the household, extension agents focus their efforts on men.

Household burdens are also a factor in accessing extension services. Women’s responsibilities in the home reduce the time they have available to participate in trainings offered by extension agents. Only about 5% of extension services are directed toward women (FAO 32).

Gender inequalities undermine women’s productivity when there is limited access to essential resources and/or institutionalized barriers to credit and land ownership. The vast majority of research shows that women are just as efficient as men in agricultural production given equal levels of resources (e.g., fertilizer, technology and financial services). If women did have the same level of inputs as men, women could increase their yields by 20 to 30%. With this increase, incomes and GDP would rise, and the world could potentially feed up to 150 million additional undernourished people (FAO 42).





### **Value Chain Development Affects Gender Roles and Relations**

A value chain is the set of activities that a firm or industry undertakes to take a product or service from production to the market. Cultural restraints and inadequate resources often bar women from participating in a value chain or relegate them to low-paying activities in the chain. Men tend to hold positions in the value chain with higher barriers to entry and therefore higher returns because they have more resources to surmount the barriers (“Gender and Value Chains” 1).

In general, value chain development seeks to increase efficiency and competitiveness across the chain which often necessitates a shift toward technology and modern practices which affect gender roles. The introduction of new technology:

- Changes labor requirements
- Shifts control over necessary resources
- Has a profound impact on gender relations which are sensitive to shifts in the division of labor and power dynamics in the household

The impacts can be either positive or negative for gender equity, in some cases increasing opportunities and market linkages for women and in other cases diminishing them due to their limited access to resources (USAID 10-11).

### **Gender Equity and Value Chain Competitiveness are Mutually Supportive**

Understanding gender roles is important to developing value chains that take advantage of the opportunities, resources and strengths of both men and women. Gender inequality constrains productivity,



A gender-inclusive value chain promotes efficiency and competitiveness by promoting access to the best talent regardless of gender.

growth and innovation by restricting people’s—namely women’s—ability to contribute to the value chain. A gender-inclusive value chain promotes efficiency and competitiveness by promoting access to the best talent regardless of gender. Utilizing the different strengths of men and women improves the effectiveness of the value chain as a whole (USAID 11).

### **Business Diversity and Gender Perspectives**

Some of the available research suggests that organizations that respect and value diversity may be

more effective at attracting and retaining high-performing employees (WGEA 1). Not only can diversity increase the size of the talent available for hiring, but studies have found that gender diversity reduces turnover since both men and women tend to stay in an organization longer if they perceive it as being fair.

One such study showed that diversity is also linked to company performance (WGEA 4). The ability to manage a diverse team that comes from different backgrounds can bring together a multitude of perspectives, reduce groupthink, and

foster innovation. Moreover, some research shows that having more women in senior positions may lead to greater innovation, independence and good governance, all of which affect performance and employee satisfaction (WGEA 4). Openness to diversity and gender perspectives may be the key to a productive, high-performing business.

# Gender-Based Barriers to Ag Technology Adoption

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Some evidence indicates that men are far more likely than women to adopt new technology (FAO 34). Contributing factors to this trend include financial barriers, cultural norms, time constraints and limited mobility. Even if they can overcome these barriers, women often do not have the level of education required to understand the need for some technologies or to participate in training that uses a lot of written material.

Other technologies, like irrigation pumps, may require physical strength to move and operate, requiring a male presence. As a large portion of the agricultural labor force, women are part of SWFF innovators' target customer base, but these barriers make it more challenging to design and market products to women.

## **Access to Land, Capital and Other Complementary Inputs**

One recent FAO study noted that women control less land than men, and the land they do control is of lesser quality



and uncertain tenure (FAO 23). In many countries, customs and legal discrimination prevent women from owning or inheriting land, so they do not necessarily own the land on which they work (FAO 46). Working land that they do not own disincentivizes investment in productive inputs and technology. In many cases, women fear that if the land becomes too productive the owner will appropriate the land to take advantage of the increased profits by selling the crops themselves.

Women's ability to purchase productive resources and technology often depends on access to land, capital and other complementary inputs. These inputs and fixed assets can be used as collateral to obtain credit that can be invested in innovations that improve yields and ultimately increase income. Without access to credit, smallholder farmers are less able to bear the risk

and up-front costs associated with these innovations.

When they do have access to credit, rural women usually receive it through small loans from microfinance organizations. Legal barriers and cultural norms often preclude women from engaging banks and other facilities on their own, but microfinance organizations are willing to loan small sums to women.

In some instances, however, when women take out loans male members of the household may use the credit or suspend their contributions to household budgets, putting a greater burden on the woman to pay back the loan and provide for the household (Ashby 4).

### Gender Division of Labor

As noted, division of labor in the household and on the farm is often gendered, depends on region and culture,

and may be divided by task or by type of crops produced. Men are often responsible for running equipment, ploughing fields, and spraying fields, while women may be responsible for weeding or poultry processing. When labor is divided by type of crops cultivated, men take responsibility for cash crops and women primarily grow crops for subsistence farming to feed the household.

## HOUSEHOLD ACTIVITIES INCLUDE:



TENDING ANIMALS



PROCESSING AND PREPARING FOOD



COLLECTING FIREWOOD AND WATER



SELLING OR TRADING IN MARKETS



CARING FOR FAMILY MEMBERS



MAINTAINING THEIR HOMES

## Time Allocation and Mobility

Women's time and mobility are also constrained by their responsibilities in the household, limiting their ability to take advantage of work opportunities or participate in training. Rural women manage complex households and pursue multiple livelihood strategies at the same time, often responsible for the care

of large families. Some time allocation studies have shown that women work more hours than men between the combination of household and agricultural tasks (Doss 3). This limits their ability to attend workshops and training, especially outside the home. They may also find it difficult to find affordable transportation, which limits their mobility even if time constraints do not.

## Decision-Making and Control Over Income

In many locations, a traditional and accepted role is for men to be the primary generators of income. Men often have more control over their income and typically make more of it, so decisions on spending for construction and technology are usually made by men. In some regions and cultures, women are given control over



the income they earn, while in other regions and cultures, men control all income for the family (World Bank “Gender in Agriculture Sourcebook” 364). However, when women are allowed to decide how to spend their profits from agricultural production, they often make less than male members of the household because they have smaller plots of lands and are primarily responsible for subsistence farming.



Men may sometimes prioritize projects that benefit them, for example, purchasing electricity and equipment for a television rather than improving the kitchen or purchasing improved cook stoves. Women tend to work more in the home, but projects that make their household tasks easier may be a low priority because men tend to make the decisions for the household.

### **Community Level Constraints**

When it comes to community-level decision-making in developing countries, women’s voices are often left out of conversations on the provision of resources and placement of infrastructure. Female participation in community associations and local government is often limited, and even when they do participate in meetings, in many locations women may not feel free to voice their opinions. Projects that are important to men are prioritized over those that women most need or desire.

### **Knowledge, Awareness and Access to Information**

In many developing countries, women in rural areas are frequently less educated than men, limiting their opportunities to receive training on new agricultural technologies (FAO

32). Both male and female farmers are often reticent to adopt new technology because new ag innovations may require an upfront cost and the promise of payoff later.

This reticence prohibits technologies from being adopted in new markets because farmers are often not convinced of the benefits of the product, a task sometimes made more difficult when the customer has less education and may not understand the need. Conducting training on the new technology may also be problematic for lesser-educated female farmers, especially for those that involve extensive written material.

Reaching women with information is another challenge to marketing products to women. Men and women usually have different social circles which can mean information about new products is not passed from men to women as easily. Decreased mobility means that women—and their social circles—are more constrained to the area near their homes, and news of new technology may not reach them through word of mouth.

# 3

## Innovating Around Gender Mainstreaming

### Which Technologies are Preferred by Women?

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Limitations on women's access to land and credit in addition to their lower levels of education lead women to prefer different technologies that are cost effective, reliable, and easy to use. Since women are most often smallholder farmers, products that are cost effective even on small farms will benefit them more than those developed for commercial farms that may require economies of scale to be cost effective.

Women may also be more vulnerable since they have smaller plots and limited access to credit, and may benefit from products that stabilize yield rather than products that take time to start producing a profit. Women

prefer products that are easy to understand and easy to use since they may be less educated than male farmers.

Finally, strength limitations and cultural norms that require men to handle heavy products and machinery are generally a barrier to women's adoption of heavy products. In general women prefer light-weight products that they can use themselves.

The depth of cultural norms that promote gender discrimination may be so ingrained in some societies that specifically targeting women is necessary to promote change and secure women's access to resources.

Women benefit from technology in different ways than men, so a product that helps men with their tasks will not necessarily be beneficial to women. Women farmers in developing countries face greater time constraints than men, so innovations that require additional labor steps may be less desirable.

Conversely, there is a big opportunity and female market for products that reduce overall labor requirements. Any technology that reduces farm labor, increases productivity or reduces processing time benefits women. New technology can also have an unintended effect on women, so it is important to consult women on

their needs during product design stages (e.g., in some cases, an increase in productivity or decrease in labor time has led men to appropriate land that had been allocated for women's use).

Another example of an innovation that is detrimental to women is labor-saving technology that women cannot afford to own. In Nigeria, a mechanized grater reduced the time it took to grate ghari from one day down to fifteen minutes, but women could not afford the new grater, so they were forced out of the grating market (World Bank "Gender in Agriculture Sourcebook" 294). Although products that reduce labor time are expected to be beneficial to women, sometimes they have the reverse effect of hurting their income.

## Outreach and Awareness Models

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Consulting women on product design and conducting research on how men and women use technology differently will improve the chances that the resulting product will be marketable to women. Companies can hire women to take part in product design or consult women to discuss their needs and how the technology could be tailored to those needs. This may be a simple design choice to package fertilizer in smaller bags so women can carry them without male help.

Marketing to women may be challenging because women are more housebound than men due to their household responsibilities. Hiring women as service providers and reaching out to women's groups are proven methods of improving gender balance in service delivery and can help in demonstration activities.

Obtaining buy-in from men, however, is equally important. Evidence shows that men's support is critical to the success of gender-responsive projects. Programs and products that take into account the gender-differentiated roles and opportunities are the most successful.

The depth of cultural norms that promote gender discrimination may be so ingrained in some societies that specifically targeting women is necessary to promote change and secure women's access to resources.

Marketing technology to women can be difficult due to constrained mobility, lower levels of education and the limited reach of extension services, so efficient outreach and awareness models are needed to reach women. In addition to developing and enhancing innovations with women in mind, customer outreach should include a focus on women.

Innovations that are easy for farmers with lower education levels to test and learn about, through demonstrations or advertisements, may be more relatable for women.

Engaging with customers is more effective when they see innovations tested and proven by “farmers like me.” This can include packaging and advertising that show women using the product, which might enhance the ability of women to imagine themselves or people like them using the technology.

Outreach to women’s groups can also be an effective means to reach women and address gender barriers that prevent women from participating fully in the market. Women’s groups often go beyond the social component, acting as production cooperatives, savings associations and marketing groups. The

group is better able to absorb upfront costs and risks than an individual by pooling resources, thereby reducing the barriers to accessing credit and productive agricultural resources. Microcredit institutions often prefer to loan money to groups of women in order to reduce their risk.

Community organizations and self-help groups that include both men and women have also proven to be effective for disseminating information and increasing technology adoption. Groups need not be women-only to increase adoption of technology by women. Some research shows that groups with equal numbers of men and women are just as effective at increasing adoption rates among women as outreach to women’s groups (FAO 55).



# 4

## Sida Report on Gender Integration

Sweden, through the Swedish International Development Cooperation Agency (Sida), funded a report prepared by the International Law and Policy Institute in January 2016 titled *Gender in the Challenge Funds: Securing Water for Food and Powering Agriculture*. It focused on the analysis of gender perspectives and gender integration in SWFF

and another challenge fund in the energy-agriculture nexus, Powering Agriculture – An Energy Grand Challenge for Development.

The analysis set out to assess individual innovators and provide recommendations to the challenge funds. The report, which presented recommendations both for the SWFF

program and its innovators to improve their approach on gender integration, concluded that gender integration strategies should be considered from the initial application stage in Grand Challenges in order for innovators to be the most successful in addressing gender issues.

### High-Level Recommendations for SWFF

1. Convey to innovators that gender sensitive design/marketing leads to greater adoption of innovations with specific evidence that justifies these activities
2. Include gender-specific questions in the application form and make gender a compulsory part of the program
3. Develop short-term and long-term goals around gender integration
4. Include gender-specific indicators in the program's M&E framework
5. Make supporting gender integration part of the technical assistance work



- 6.** Assist the innovators in developing relevant activities on gender issues, especially through workshops
- 7.** Engage applicants on gender considerations in the Round 4 RFA. Understanding the key gender issues that affect implementation of and access to innovation are an important part of developing an effective gender integration strategy that targets both men and women. By requiring applicants to think about gender strategies early in the process, SWFF will be better positioned to make a greater impact on gender integration over the course of working with the innovators. This will give the program the best assurance that a gender focus will be embedded in the project once implementation begins.

## High-Level Recommendations for Innovators

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- 1.** Develop a gender-inclusive M&E framework and collect gender-disaggregated data
- 2.** Conduct gender-sensitive activities, such as workshops, training sessions and information sharing
- 3.** Conduct a gender analysis on the organization
- 4.** Partner with women's groups to reach female farmers
- 5.** Understand rural livelihoods and potential adopters of the technology, as well as divisions of labor in the regions targeted

# 5

## SWFF Innovators and Gender Integration

Though some generalizations can be made about gender integration in the developing world, every region and country faces different realities with regard to gender integration. The research and assessment contained in this report provide a broad context around gender in the water-ag nexus as it relates to SWFF innovators. Information was gathered from the following activities: the application process, video teleconference interviews with innovators, pre-award surveys, acceleration diagnostic exercise and interviews, and M&E monitoring conducted through and with the SWFF Technical Assistance Facility.

Overall, the evidence reveals that:

- SWFF innovators require assistance understanding country-specific gender integration strategies for the countries in which they operate
- Contextual in-country gender analyses would help innovators to understand what shapes technology adoption
- Innovators need to know how to assess and implementation methods to expand adoption by women
- Country policies on gender need to be assessed in their capacity to aid or to hinder the gender integration process

The SWFF program recognizes that there are key changes that can be made to move toward greater gender integration.

Having said this, there is strong and consistent evidence of gender equity, integration, empowerment throughout the Securing Water for Food at the program level, within the operations and outputs of the SWFF innovators, and at SWFF Technical Assistance Facility.

The section below examines the details of these three ecosystems and reports on the findings.



# 6

## Analysis of Innovator Current Operations

### Pre-Award Survey

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The goal of the pre-award assessment survey (PAS) is to assess the financial and organizational strength in the following areas: organization structure and legal status, internal controls and segregation of duties, standard written policies and procedures, current financial and accounting systems, budgeting, annual audits, and staff general experience and knowledge of USAID policies and procedures.

The narrative consists of an explanation of the pre-award survey requirements, areas to be assessed, process of administering the assessment, outcome and decision-making

process. The SWFF TA Facility gathered gender-specific information throughout the pre-award survey process during the pre-award phase.

Fifteen out of the total 30 SWFF innovators (current and alumni) have women in primary leadership positions or in leadership roles and 15 innovators have teams that comprise 41% women.

Women and men share roles in leadership (including ownership/CEO), mid-management (including program management, financial management and accounting, and grants and contracts support), and support staff

(including plant/workshop employees). This is particularly true of small businesses, as opposed to NGO-connected projects that may have the support of peripheral specialists and human resources.

# Semi-Annual M&E Reporting

In preparation for the 2016 semi-annual report, the SWFF TA Facility asked innovators for gender-specific insights. An analysis of this information revealed a trend that some innovators that were private enterprises struggled to demonstrate an understanding of gender barriers, opportunities and impact beyond the anecdotal level. One innovator noted that “only 5-10% of women farmers come in direct contact with the markets” where they sell their product.

Another noted that “while the women may benefit from the potential increase in income... they don’t usually directly interact with our product in most cases.” SWFF innovators that are publicly-funded and have past experience reporting to donor institutions were more likely to have structured gender outreach and a more clear understanding of how to engage their customers for gender-related insights.

In some cases, the local context is itself a barrier to productive gains in gender with innovators in the MENA region (e.g., International Center for Biosaline Agriculture) citing religion, cultural practices and general attitudes

towards women as reasons that they have not yet expanded their gender outreach.

In Kenya, Islamic Relief promotes the adoption of AgroSolar Irrigation Technology in Mandera County, which

rigid societal norms that impacted their operations as it related to gender

- They understood implicitly that businesses benefit from incorporating women into every step of their



is predominantly Muslim. The innovator, based on the organization’s recent experiences, said that they would benefit from an analysis of the nexus between technology adoption and religion as this is something that would be directly applicable to their operating circumstances.

Other innovators noted that:

- There were limited opportunities for equal gender engagement
- They were experiencing

operations, but they lacked the capacity to address gender issues, explore women’s and men’s roles along the water-agriculture value chain<sup>1</sup> or to address the industry- and society-induced constraints that are imposed on women

In general, it is important to note that contextual gender analyses require time, qualified personnel, access to

<sup>1</sup> Value chains, which are typically male dominated, would require massive effort to change or adjust.

information, and additional financial resources that SWFF innovators often do not have.

Overall, SWFF innovators were initially chosen because they could produce more food with less water, and any new efforts to introduce assistance around gender would require additional financial and technical resources from the SWFF Founding Partners, which would be in addition to the technical assistance that the program had already promised SWFF innovators.

The current level of effort required of all innovators is that they provide full lists of their customers (or appropriate proxies, such as measures of distribution) and collect gender disaggregated data to the extent possible. In collecting this data, many innovators have conducted household surveys to determine demographic and impact-related detail. Two innovators are also required to conduct

customer satisfaction surveys, which is another contact point where gender-related data can be collected.

Innovators are aware that they can use their acceleration funds for a variety of purposes. The possibility of using these funds for data collection capacity building has been a part of discussions, though few have opted to utilize their funds this way.

Innovators have asked for assistance and received a series of workshops from Sida which they felt were over-generalized and did not move them towards actionable insights. In both convenings where numerous workshops were provided, the gender sessions were ranked lowest, with 26-36% of innovators characterizing them as below average or poor. Specifically, they noted that the GFIA gender workshop was “too general” and “poorly executed.” They were complimentary

about the innovator discussion that followed describing it as “interesting and thought-provoking.”

In Amsterdam (November 2015), innovators stated that “the focus was mostly on why gender was important” with a “great interactive exercise... to bring gender issues to mind,” but was “disappointing,” “below average,” “very academic,” and “exceedingly frustrating” due to the lack of “case studies” for innovators to learn from and the lack of discussion of how to integrate approaches into innovator operations. While SWFF recognizes the potential value of gender workshops the evidence above indicates that any future gender workshops for awardees must provide direct and specific actionable value to each individual innovator, and should be planned and organized by taking into account the lessons learned described above.

## Product and Service Decisions

While SWFF does not have complete information about the initial design process of individual innovations, the program asks innovators to report on the degree

of user feedback that they incorporated into their ongoing design process, as well as the methods they use to collect gender-sensitive feedback. Based on the 2016

semi-annual reports, 16 of the 22 current SWFF innovators identified specific ways of including women in this feedback loop, which are summarized below. One-on-one

interviews and surveys were the primary methods of gathering this information.

Whether SWFF Innovators have the capacity to integrate gender-focused data collection and analysis into their

projects depends on three primary considerations:

- The resources of their organization
- The resources provided by SWFF

- The fit/context of their innovation with regards to gender impacts

Though SWFF innovators vary greatly in the size of their staff dedicated to project implementation and data collection,

## METHODS OF GATHERING GENDER-RELATED FEEDBACK

| INNOVATOR                        | INFORMAL DISCUSSIONS | INTERVIEWS | FOCUS GROUPS | SURVEYS | OTHER                                   |
|----------------------------------|----------------------|------------|--------------|---------|---|
| Centre for Environment Concerns* |                      | ■          | ■            |         |   |
| Conservation South Africa*       |                      |            |              | ■       |   |
| CSDS*                            |                      | ■          | ■            | ■       |   |
| FutureWater                      | ■                    |            |              | ■       |   |
| Green Heat*                      |                      | ■          |              | ■       |   |
| ICBA                             |                      |            |              |         | Trainings                               |
| Ignitia*                         |                      |            |              | ■       | Local NGO engagement, 3rd party studies |
| ICU Peru*                        |                      | ■          | ■            | ■       |   |
| ICU Tunisia                      |                      |            |              |         | Event feedback                          |
| Islamic Relief Kenya*            | ■                    | ■          |              |         |   |
| MetaMeta (Waterpads)             |                      | ■          |              |         |   |
| Practical Action Bangladesh*     | ■                    |            | ■            | ■       | Market visits                           |
| Reel Gardening*                  | ■                    | ■          |              |         | Women-led design and production         |
| Si Technologies                  |                      |            |              |         | Farmer meetings                         |
| Water Governance Institute*      | ■                    | ■          | ■            | ■       | Interactive radio                       |
| World Hope*                      | ■                    | ■          |              |         |   |

\*Innovators who show evidence of structured gender-sensitive outreach (vs. innovators whose data collection has yielded gender data of interest).

the average SWFF innovator has five to eight people on their project team. With such small teams, SWFF innovators generally rely on the SWFF awards they receive to expand their staffing capacity.

### **Understanding An Innovation's Impact on Women and Men**

Generally, the SWFF innovations are designed to solve specific problems (e.g., low crop yields, limited growing seasons, lack of fresh water sources) of the person in the agriculture role, regardless of gender. Aquaponics designed its product with the stated goal of providing sources of income to women and the disabled.

However, in most cases, women are the user of the product and men are the purchase decision-makers. Therefore, innovators must communicate the value proposition to the men, while delivering an impactful product used by women. For example, on site visits to India to promote its BioEnsure® product to farmers, Adaptive Symbiotic Technologies found it very difficult to engage with women. Only men attended the promotional meetings.

During visits to farmers' homes, women would retreat to the back of the house and not engage. In aQysta's experience, "machines' are associated with 'men.'" Men are involved in the installation of aQysta's Barsha pumps while women, the primary participants in farming activities, are the beneficiaries.

### **Targeting Women as End-Users and Customers**

In multiple cases, SWFF innovators are considering specific ways to target women as customers or to engage



them in their business models. Collectively, SWFF innovators have reached an estimated 396,916 female customers/end users.

For example, Adaptive Symbiotic Technologies is exploring integrating women into its model as distribution partners and seed treaters at the village level. They are currently seeking outside funding to pilot the approach and hope to apply the lessons learned to implementation throughout India.

Practical Action Bangladesh is specifically recruiting female end-users to grow pumpkins on sandbars in Bangladesh, breaking from local cultural norms that typically see women engaged almost exclusively in post-harvest activities. While women are primarily responsible for irrigation, crop management, pumpkin storage, and cash management, the men play a more active role in land preparation, fertilizer application, harvesting, transportation, and marketing of the product. Their approach has also engaged youth in the families, with pumpkin production becoming a family endeavor.

In the case of World Hope, women make up a majority of its customers. However, they tend to have less agronomy expertise than

men. World Hope has adapted its service strategy to include training, troubleshooting and follow-up.

However, World Hope has noted that its business will not reach sustainability if it focuses solely on women as the target customers. Male customers with greater agronomy expertise tend to lead mid-sized farms and are able to grow and sell produce quicker and at a higher profit. This impacts customer financing strategies. World Hope's male customers

is focusing deliberately on engaging underemployed women and girls. They do so because they have found that women are more likely to adopt and remain committed to the operation of the aquaponics units than men.

## Understanding Customer Needs

Many of the SWFF innovators are seeking to improve their understanding of their potential customers regardless of gender. In many cases, the SWFF program is advising

World Hope's male customers tend to be able to purchase the greenhouses with fewer installment payments, whereas women purchase on a cost recovery basis.

tend to be able to purchase the greenhouses with fewer installment payments, whereas women purchase on a cost recovery basis.

The Water Governance Institute, which is piloting household-scale implementation of aquaponics units,

that an innovator take a step back and gather much more robust information about their potential customers – the specific problem they need to solve, their interest in the solution the innovator is offering, their willingness to pay for the product or service.

This model for women empowerment is comprised of a recruitment effort run by women for women to identify entrepreneurial females living in the India villages who are interested in becoming seed treaters, applying the BioEnsure® to seeds.



As good business practice, innovators should be gathering information that will help them identify the differing needs of a female customer from a male customer and work to determine if differences truly exist. The SWFF TA Facility supports this effort by including gender considerations in acceleration support scopes of work. In many places, women constitute a large proportion of smallholder farmers, so gender strategies are necessary to increase technology adoption. For example, a successful marketing strategy for Practical Action Bangladesh required consideration of gender roles because women are a large segment of their

customer base. The support workplan will include a gender component. More details on this effort by the TA Facility appear in the Acceleration Support section below.

Some innovators are thinking about the gender issue not just from a target customer objective, but from an internal employee or business partner objective – integrating women-owned businesses in their value chains or focusing attention on the hiring and professional development of women. Reel Gardening has employed and trained women in its head office and its seed tape production facility.

In fact, eight of the nine full time employees of the company are female.

In the production facility, Reel Gardening specifically seeks to employ previously unemployed, low skilled mothers. The more the company scales, the more of these women can be hired, providing many more opportunities to improve the livelihoods of their children.

Women also serve in the role of trainer at school gardens. In this capacity, women are working with garden “champions” at a school to teach them how to properly care for a garden and train them in techniques to increase the



likelihood of higher crop yields. A trainer has responsibility for working with multiple schools and does the critical job of transferring growing skills to children, which then provides a platform for systemic change.

Adaptive Symbiotic Technologies (AST) is developing a comprehensive strategy to integrate women into its value chain. This model for women empowerment is comprised of a recruitment effort run by women for women to identify entrepreneurial females living in the India villages who are interested in becoming seed treaters, applying the BioEnsure® to seeds. This model

provides an opportunity for females to be a source of revenue for their villages. AST will be seeking sources of funding specifically to deploy this component of its business model.

Aybar Engineering also has a policy of hiring greater numbers of women in the manufacturing and distribution of its product. They have found that women are more careful in carrying out the manufacturing steps in the factory, and that the overall quality of work is higher than that of their male peers.

Many innovators have highlighted the difficulty of engaging women in local

environments, particularly in contexts where the easiest channels for product feedback (e.g., trade shows or village meetings) are male-dominated. Si Technologies has highlighted the difficulty of making female contacts through business transactions, as their commercial focus is on finding distribution partners, and these actors are overwhelmingly male. Nevertheless, they have successfully engaged female farmers at the customer-level through field demonstration days.

ICU Tunisia noted that the local context limits the involvement of women in marketing and promotion activities, due

A challenge that many SWFF innovators face: where sales are conducted through third parties and distributors, the intermediaries are most often male, and gathering feedback from female users is a more resource-intensive exercise.

to purchase decisions being male-dominated. When they piloted an installation team that included women, they were forced to abort the effort due to the fact that “it is not yet socially acceptable” for a group of women to move and do business independently.

The International Center for Biosaline Agriculture (ICBA) faces similar issues. The team works in a regional context where men almost exclusively perform farm labor and make farm-level decisions. They have incorporated female perspectives by engaging female staff in regional agricultural authorities and implementation agencies. Additionally, staff within their local partner’s socioeconomic and microbiology and nutrient team are mainly women, and they play key roles in project activities and implementation.

MyRain is another innovator that has highlighted the difficulty of engaging with female end-users, partially due to the structure of their business where they sell to retailers (who are almost exclusively male) and are one step removed from end-users on the ground. MyRain does sell and install a portion of their drip irrigation products directly to end-users, and in these cases they have been able to gather feedback from female end-users on the farm. However, this does highlight a challenge that many SWFF innovators face: where sales are conducted through third parties and distributors, the intermediaries are most often male, and gathering feedback from female users is a more resource-intensive exercise.

### **Gender Sensitivity in the Design Process**

In about half of SWFF innovations, the technologies were designed to meet the needs and preferences of the end user, regardless of gender. In the case of Aybar, though the user of the product is dictated by who is the head of household (often men), the BBM product is lightweight and easy to manage, making it appealing to women in particular.

During the SWFF site visit, women interviewed expressed an equal level of interest in purchasing the product and equal levels of satisfaction with its

ease-of-use as their male colleagues. Other innovations, such as those of Adaptive Symbiotic Technologies and Si Technologies, feature a technology that was designed primarily to tackle the goal of increasing water efficiency and are incorporating discovery of women’s needs and preferences into their implementation of their SWFF awards.

AST and Si Technologies purposefully include women in pilots and trials and seek ways to empower women and incorporate gender-balanced feedback into the resulting value and distribution chains.

Over half (12 of 22) current SWFF innovators have incorporated women’s needs and preferences into the design of their innovations prior to the SWFF award. For example, the International Center for Biosaline Agriculture (ICBA) carried out multiple years of participatory information gathering to evaluate and select the best crop genotypes and farm practices for their approach.

They specifically sought to include the views of rural women who were “instrumental in the selection” and had a “high interest” in the new varieties of crops and practices.

Nearly all innovators monitor the degree to which their innovation is reaching both genders, with 11 of the 22 showing evidence of structured gender-sensitive outreach (marked with asterisks on in the table below).

In the case of Green Heat, their innovation has a multitude of benefits for women, with biogas digesters that require less water—unburdening women from water

Another example of how innovations address the needs and preferences of women can be found in the Centre for Environment Concerns, who have noted that the idea and development for SWAR partially arose from and was motivated by “women [using their] head to load water from long distances” in pots and female feedback on the burden of carrying water.

## GENDER-INCLUSIVE FEEDBACK IN INNOVATION DESIGN, PRIOR TO SWFF AWARD

### EVIDENCE OF GENDER-INCLUSIVE FEEDBACK IN DESIGN PROCESS

Centre for Environment Concerns  
Conservation South Africa  
CSDDES  
Green Heat  
ICU Jordan  
ICU Peru  
ICBA  
Islamic Relief Kenya  
Practical Action Bangladesh  
Reel Gardening  
Water Governance Institute  
World Hope

### EVIDENCE OF GENDER-NEUTRAL FEEDBACK IN DESIGN PROCESS

aQysta  
Adaptive Symbiotic  
Aybar  
FutureWater  
ICU Tunisia  
Ignitia  
MetaMeta Potato  
MetaMeta Waterpads  
MyRain  
Si Technologies

transportation duties—and that decrease manual labor by producing a dry fertilizer that is easier to carry.

This does not change the fact that the decision to purchase and utilize a biogas digester is often made by men, but the impact of the slurry separation system on women is purposeful and an integral part of the design.

Water Governance Institute specifically designed its approach to piloting and maintaining its aquaponics units with women and disabled customers in mind, due to the fact that their experience has shown that women-operated units are more productive, better maintained, and an excellent source of additional household income.

## Measurement of Impact Outcomes Across Gender

Most SWFF innovators do not collect data on longer-term outcomes and impacts of their innovations, instead focusing on metrics that are nearer-term and more directly tied to their business/enterprise activities, such as the number of customers and the immediate benefits of using their products or increased crop yield.

Often the impact of SWFF innovations is intended to benefit the person in the farmer role, whether that be a man or a woman. And in most cases, men are the decision-makers and men or women may be the ultimate users of the product or service. As such, these innovators (aQysta being one such example) often directly interact with a male purchaser that may not be the only end user.

The more public-sector-oriented innovators (such as Practical Action Bangladesh or Conservation South Africa), have backing organizations with built-in incentives to collect information on gender-related impact, and these organizations do quite well at measuring impact across gender.

In the case of Practical Action Bangladesh, they carry out

in-depth household surveys that capture impacts (e.g., increased household income and changes in work-life along gender lines).

Conservation South Africa extensively verifies the extent to which females are employed in conservation teams and the degree to which female heads of household see increased incomes from their approach.

They also have invested effort into understanding the unintended impacts of their approach, for example finding that rotational herding techniques remove cows from areas where women prefer to grow crops, reducing the prevalence of cows trampling the fields.

## Gender Integration in Planning, Implementation, and Participation Stages

Gender integration in planning, implementation and participation stages is happening on a case-by-case basis. As indicated above, Adaptive Symbiotic Technologies is specifically looking for women to participate as distribution partners and seed treaters. At its home office, over half of the staff are women and play key roles in the organization.

Reel Gardening's approach of finding a "garden champion" in the schools it works with is

one that empowers women to give feedback on the project roll-out and success of its implementation.

Islamic Relief Kenya is working with farmer groups to create financial accessibility to solar powered irrigation systems. Of the 550 farmers it is currently working with, over 200 are women. Additionally, financing is more easily accessed by women given lenders' preference in microfinance situations. As a result, inclusivity of women works in the favor of farmer groups seeking this financing.

In many cases, with regards to the customers that SWFF innovators reach, it is the women who are primarily working in agriculture. The products and services SWFF innovators are bringing to the market are designed for agricultural workers, therefore women are being served. It is often the case that gender concerns are not overtly being integrated into planning and implementation. However, innovators are often addressing these issues in the early stages of implementation, when women farmer's challenges are being identified.

## Gender Integration in Long-Term Strategies and Monitoring Techniques



Innovators are working within local cultures and traditions and therefore define the value proposition in terms of the typical roles of women in the processes and activities in which the innovator product or service is used. For example, in many cases men are the purchasing decision-makers however women are the ultimate users of the product.

Therefore, sales pitches and the communication of the value proposition must consider a primarily male-dominated audience while the design and impact of the product or service must consider needs of female consumers.

In some cases, women are the primary purchasers of the product. For example, the vast majority of customers purchasing seed tape from Reel Gardening are women. Reel Gardening seeks to understand the buying decision of that primary customer segment, and marketing strategies will be designed with that learning in mind.

Water Governance Institute (WGI) is specifically targeting underemployed women, housewives, and the disabled for the adoption of its product. WGI is working within the context of local culture, traditions, and taboos to design, market and sell a compatible product.

In other cases, government job creation schemes that benefit women are being incorporated into business models. Conservation South Africa is leveraging a South African scheme to clear land of invasive plant species—the first step in creating the cattle grazing land that livestock owners need to raise healthy livestock which can be sold in the marketplace for enhanced revenues.

# 7

## SWFF Program-Wide Gender Integration

SWFF has made concerted efforts to address gender programming, having required gender specific indicators on customer/end-user adoption since the program's inception, having had three gender

workshops since the program's inception, and having had gender experts serve on the SWFF Innovation Investment Advisory Committee (IIAC) and review and provide specific feedback on Round

3 applications. In addition, SWFF has increasingly made strides to better integrate gender into SWFF programming as is noted below.

### Round 1 and Round 3 Innovator Applications and VTC Interview Notes on Gender

The fact that gender analysis was not integrated into the early budget recommendations for SWFF innovators was identified as a constraint, as most innovators did not budget funds specifically for gender analysis and gender integration. However, gender was mentioned as a thematic area (e.g., as was sustainability) to applicants at

the concept note stage, and specific questions about gender were asked by the Sida representative during the VTC interviews for both Round 1 and Round 3 innovators.

In the application, each innovator was asked what percentage of the innovation team were women. Ten of 21 of SWFF innovators

responded that at least 41% of their team were women. Round 1 and Round 3 applicants were also asked how their innovation impacted vulnerable groups including women, and Round 3 applicants were asked questions on gaps in participation between men and women. Though it's common knowledge that farming technology adoption

tends to be male-dominated, several innovators noted that targeting women as end users was important for their business/enterprise.

The Center for Sustainable Dryland Ecosystem and Societies (CSDDES), the Centre for Environment Concerns, Practical Action Bangladesh, Reel Gardening and World Hope took it a step further in identifying specific actions they were taking to incorporate women in their customer base.

As an example, CSDDES proclaimed its desire to “shrink the gender and age parity gaps” in technological and agricultural practices through collaborative participation by both genders. Reel Gardening stressed its desire to encourage women-led development through the social impact part of their business. Ignitia took a practical approach in identifying the need to target women based on analysis from an NGO partner that women were more keen to adopt the technology.

Practical Action Bangladesh and the International Center for Biosaline Agriculture (ICBA) even discussed in the application having consulted female farmers in the design of their innovation.<sup>1</sup>

<sup>1</sup> Additional information pertaining to innovator comments and responses are available upon request and with approval of the SWFF innovator.

During the SWFF Round 3 selection process, the IIAC Gender Expert, Asa Torkelson, evaluated stage 1 and stage 2 applications on the innovations’ overall impact on women and the strategies the organizations put in place to reduce the gap between men and women. Many of the innovations outlined their intentions to create more work opportunities for women, provide capacity building to overcome women’s

Below is a summary of the Gender Expert and Founding Partner’s evaluation of innovations that were selected as finalists. The gender evaluation of the innovations is one of the subcategories of the sustainability criteria.

Out of 30 SWFF Round 3 finalists, 28 innovations were reviewed specifically by the IIAC Gender Specialist or were asked gender-related questions in their video

Many of the innovations outlined their intentions to create more work opportunities for women, provide capacity building to overcome women’s skewed access to resources and provide positive effects on women.

skewed access to resources and provide positive effects on women. Nonetheless, a couple of the organizations did not have concrete outreach strategies to reach more women to benefit from the innovation or have a clear gender strategy for effective and equitable execution.

teleconference interview. Out of the 12 innovations that were reviewed by the Gender Specialist on the IIAC, five had clear and acceptable gender strategies that could be furthered improved with a sustainability score of 75% or higher. The other seven innovations reviewed received a score of 50% in

the sustainability criteria, did not have an acceptable gender strategy, and/or had elements that needed further clarification. Of the 28 that were interviewed on gender, 64% gave thorough responses and 36% gave more superficial responses to gender equity-related questions.

In Conservation South Africa's proposal, the innovator

mentioned that women were enthusiastic supporters of their business model as it enhanced their ability to farm successfully through improved access to knowledge and to trained herders. To further improve their gender strategy, it was recommended that an assessment of how women can be engaged in the required collective models would be beneficial to

ascertain the project sustainability and equity effects.

Another example of an innovator that scored high in the sustainability criteria was Islamic Relief Kenya. The innovator said it would mobilize and train Group Savings and Loans Associations (GSLAs) to provide group security to get financial services from banks, taking a



whole value chain approach so as to rectify the current fragmented value chain that would benefit women.

It was recommended that the gender strategy further clarify how the benefits would be effectively conveyed, and what different considerations the outreach strategy needed to have to effectively reach both women and men.

The gender evaluation of two other innovators suggested that the innovations needed more conscious and concrete gender strategies to ensure women's participation. For the first innovator, it was mentioned that the gender parity had been addressed by ensuring collaborative participation by both genders, but this may not be a sufficient strategy and women's

technology access was not explored. The innovator did not take into account gender gaps in access to resources nor women's differential outreach and training needs. The innovator mentioned that the equal representation on the participating farmers would be actively sought. However, a more specific strategy would be needed to ensure success.



## Round 4 Call for Innovations

SWFF has refocused the Round 4 RFA to engage applicants on gender considerations by including new text that describes key gender issues, as well as adding proposal questions that require applicants to describe gender issues that may affect implementation of and access to the innovation by women.

In Round 4, applicants are required to show that their innovations should contribute, directly or indirectly, to more equal gender relations and how it will benefit women. SWFF is seeking innovations that at least address women and men equitably rather than focusing on men, but is preferably looking for women-focused innovations that highlight the roles, skills,

and capacities of women. An example would be addressing practical or strategic needs of women by providing a positive impact on the workload of women or increasing their access and control over production means. Proposal questions around gender include a description of the target end users and their gender, the potential growth organizations foresee by including gender in their activities, and the implementation risks if the project was gender-blind.

As written in the SWFF Round 4 RFA: "By including a gender perspective into business strategies and plans, the potential of an innovation to scale increases. Addressing gender issues will improve the efficiency

in the implementation of the business plan, as well as improve the social benefits, or outcomes, from the use of our water resources. Successful innovations can break boundaries and catalyze transformative changes in people's lives. Investing in

women is not only a moral and institutional imperative; it is also a smart thing to do."

In addition, SWFF requires that applicants describe expected gaps in the levels of participation between men and women and how

cultural norms and beliefs, access to and control over assets, and patterns of power and decision-making could be causing these gaps and how the proposed innovation would shrink those gaps.

## The Securing Water for Food Technical Assistance Facility

Operational challenges faced by the Securing Water for Food Technical Assistance Facility as it relates to gender integration stem from: limited staff size; the lack of early stage discussions about gender integration during the creation of the SWFF TA Facility; the lack of funding earmarked for gender activities in the SWFF TA Facility; lack of access to gender expertise within the Kaizen Consortium; and lack of resources to address our understanding of big picture and innovator level challenges as it relates to gender.

While there has been no formal funded effort for gender integration or mainstreaming, the TA Facility, which is led by Chief of Party Dr. Donna Vincent Roa, maintains a gender-sensitive approach to:

- Human capital and hiring
- Operations management
- Acceleration service delivery
- M&E
- Grants and contract management
- Partnerships
- SWFF program communication and branding
- Procurement of services

The SWFF TA Facility management understands that gender-balanced project leadership is a critical factor in an organization's short- and long-term success, is committed to putting gender at the core of its hiring practices, and continues to explore diverse

approaches and techniques to improve the gender balance of the TA Facility staff (e.g., hiring intentionally to rebalance gender on the TA Facility project team with interns since we have no additional staffing slots).

The TA Facility also incorporates gender components into acceleration support scopes of work when applicable, and SWFF is requiring our technical assistance providers to include in their technical assistance to innovators the message that gender sensitive design and marketing may lead to greater adoption of innovations.

For example, a support engagement to create a sales and marketing strategy will assess women specifically as a target customer and what, if anything, should be done



differently to appeal to this potential customer segment. A staff recruiting support engagement would look specifically at how to attract more female applicants.

At present, the TA Facility is made up of five full-time staff and project support from four individuals from The Kaizen Company Home Office team. Collectively, the team comprises five (5) women and four (4) men, and as noted, is led by a dynamic female. This is clear and ongoing evidence of promoting gender sensitivity and mainstreaming into the TA Facility's

recruitment processes. Since January 2015, the TA Facility has hired seven interns to support our work. Five of these interns were women, and two were men.

### **The SWFF TA Voucher System**

The Voucher System, the SWFF program's rapid procurement mechanism for acceleration services, has 35 vendor organizations/businesses, many of whom are owned, operated or led by women. The Voucher System allows procurement of services for the innovators

on an as-needed basis in a manner compliant with USAID regulations.

At least one vendor has extensive gender-specific experience working with female entrepreneurs to develop business plans, and others have indicated some experience working around gender integration. These vendors, which were chosen through a rigorous selection process, can provide services in 19 categories ranging from business development to supply chain development and more.

# Acceleration Support

To date, no innovator has requested specific support to better integrate gender goals into a business model or operations. Gender workshops have been held at SWFF events in Abu Dhabi (February 2015) and in Amsterdam (November 2015). However, as already noted, innovator feedback indicated these were of limited value, in part because they failed to connect concrete gender goals to the day-to-day concerns of an

SWFF consortium members, Imagine H2O and SNV, are however looking for creative ways to integrate a gender component into existing scopes of work. Primarily these are in the areas of sales and marketing and business model advisory. For example, the sales and marketing support that SNV will provide to Practical Action Bangladesh will look specifically at the role women are playing in the pumpkin cultivation. Women

The SWFF program continues to work with Practical Action Bangladesh and other innovators to gather gender-related challenges and successes to inform future scopes of work and valuable discussions about gender.

Other examples of how the TA Facility, through SNV, is integrating gender into the acceleration support scopes of work include:

- For FutureWater, gender-specific approaches are needed to ensure successful uptake of technologies or adaptations by the market and to identify the specific benefits realized by women and children when inclusive business principles are exercised. SNV is working with FutureWater to assess the viability of various business models and suggest improvements. SNV is also advising on the creation of a support unit to provide administrative, promotional and logistical/technical assistance to FutureWater business operators. Given the benefits realized by women through the FutureWater service offering, the business model assessment and

The SWFF program continues to work with Practical Action Bangladesh and other innovators to gather gender-related challenges and successes to inform future scopes of work and valuable discussions about gender.

enterprise attempting to scale and did not provide “practical recommendations” that could have an immediate impact on operations and strategies.

in Bangladesh are not generally involved in agriculture. Therefore, any marketing campaign will look specifically at how this can be communicated in the value proposition.

the methods by which the support unit will bring in new customers will have to consider and integrate the value proposition as experienced by women.

- The feminization of poverty and agriculture in rural Mozambique has created a situation where women disproportionately depend on subsistence agriculture for their livelihoods. In Mozambican society, men are more mobile and travel to seek employment while women tend to be restrained to the domain of agriculture. Within agricultural enterprise, men tend to be involved in commercially-oriented production models and favor cash crops for production for food. Invariably, models targeting commercial production models will benefit enterprises led by men, whereas models that target food production for consumption will benefit women as they represent a majority smallholders

engaged in production for subsistence. The support provider working with World Hope is looking to integrate identifying women-led farmer associations and develop a specific sales strategies aimed at working with these groups into their scope of work.

- Currently, ICU Peru's customer target is mostly males due to the fact that every association they have approached so far are run by men. According to the support provider, ICU Peru needs more information on their customers so they can define the customers, but also define which irrigation to use and decide which crops they would help (so crops need to be identified also) to be sure they are investing in something that gives a return. Those indicators are going to be addressed and then gender will come into play in the strategy.

Imagine H2O is revising customer feedback surveys to include questions that will highlight differences in the value proposition of an innovator's product or service from the perspective of men and women. The data gathered through these surveys will help innovators to better segment their customers and ensure that their product or service is meeting the needs of men and women if and where they diverge. It will also inform sales and marketing campaigns and how best to design communication and branding strategies if there are distinct differences between men's and women's view of the product offering.

The TA Facility will continue to explore creative ways of incorporating gender objectives into scopes of work in the coming year (e.g., potentially influencing value chains) when clear objectives can be defined and when mutually beneficial outcomes for both the innovator and women can be identified.

## M&E Processes and Project Reporting

At the direction of the SWFF Program Manager, and based on consultations with the SWFF external Mid-Term

Evaluator, SWFF has not chosen to go beyond gender-disaggregated customer/end-user adoption numbers

because of the increased burden it places on awardees to collect that information. Instead, the SWFF program

recently worked with Sida and the SWFF IIAC gender experts to incorporate a set of more specific gender questions into the bi-annual reports submitted by innovators. Innovators are prompted to reflect on how the gendered patterns and roles among their customers have impacted their internal product development, adaptation, and marketing. They are also asked to reflect on gendered patterns of product adoption and on whether their innovation has had any positive impacts on gender equality. Specifically, innovators are asked:

- Are there any local context/beliefs that make it easy/difficult to sell your products equitably between women and men?
- What different problems/needs are identified by your potential customers, depending on whether they are women or men?
- Does gender influence who is the decision-maker about whether to purchase your product?
- Does access to information about your product differ among your potential women/men customers?
- Who participates in the local organizations

or informal networks through which you could market your product? Who leads these organizations and networks?

- What types of methods have you used to be able to answer the questions above?

The answers provided by innovators for the 2016 semi-annual report are available upon request and with approval from the SWFF innovator. These answers allow the innovators to provide more clarity on their gender work and then receive feedback from the SWFF program without having to add increasing management and cost to collecting additional indicators.

### Site Visit Protocols and Reporting

The SWFF program uses site visits to confirm that reported impact on customers is occurring, that appropriate monitoring and financial systems are in place, and to discuss in greater depth with innovators their challenges and successes. The SWFF program places special emphasis on meeting with women customers/users to gather their feedback on the product and approach. We also set aside time to meet with the project leaders to discuss in-depth: 1) The role of

women in implementing the project locally; 2) The extent of female adoption of the innovation; and 3) How the innovator is making an effort to reach female customers.

An example of the insights the SWFF team has gained from these discussions is Conservation South Africa highlighting their success at employing women in conservation teams, and the difficulty of employing women as Ecorangers due to cultural norms and safety concerns. In another case, the site visit and discussions with FutureWater staff revealed that women's use of the innovation was much higher than it appeared on paper, as men are the owners of land on record, but there were many more women (70-90%) working the fields who were receiving services.

Where possible the SWFF site visit team makes suggestions for areas of increased outreach and emphasis. For example, in one innovator's training and outreach program to establish model farmers, it became clear that women were less likely to receive equal access to the program and to be chosen as model farmers, despite demonstrated willingness of women to purchase the innovation. The SWFF team flagged this imbalance during



the site visit and will continue to monitor progress towards improving this outreach program. All this information is collected systematically in our site visit report templates and provided to the innovator as well as to all team members upon return. This data is used to contextualize subsequent semi-annual progress reports and quarterly calls with the innovators.

## Communication and Outreach

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Gender is an important focus for SWFF's communication and outreach materials. With an ever increasing emphasis, SWFF has worked to ensure that outputs and deliverables, where possible, feature men and women equally. SWFF appreciates equality and deems important the gender dimensions of social diversity in efforts, have diligently worked to become better informed on gender issues, and support the advancement of women in our communication and outreach. Across the board, we apply special consideration to:

- Gender balance of speaker slates for public presentations (Abu Dhabi, Amsterdam, Washington, DC)
- Videos that are shot and produced to represent the program and SWFF innovators (we have increased our emphasis on visual representations of women farmers, as well as entrepreneurs working to serve farmers)
- Production of feature and news articles on innovators that highlight the importance of women in agriculture
- Production of blog articles that highlight the challenges faced by women
- Program deliverables (e.g., annual report) that include photos representing innovators, customers and other beneficiaries
- Identifying women customers and beneficiaries for expanded documentation and storytelling
- Resisting the culture of casual stereotypes in our decision making

# 8

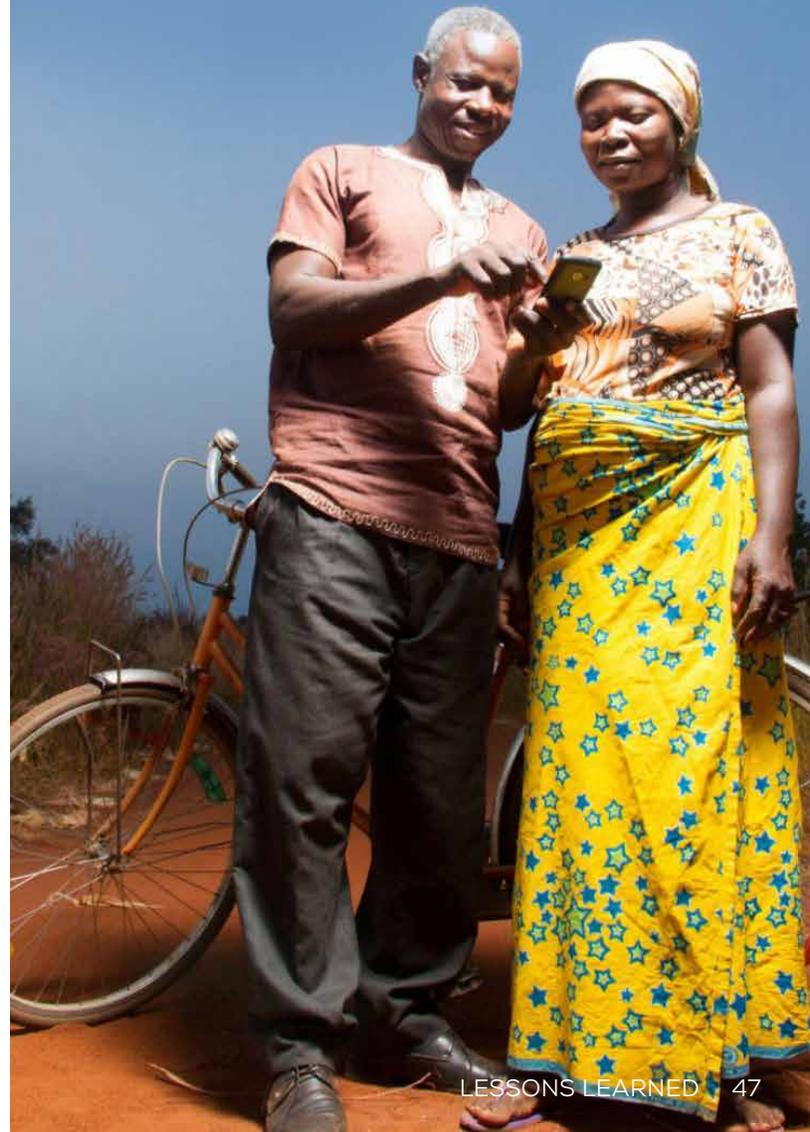
## Lessons Learned

This section highlights key lessons learned during the past two years of the SWFF program. The bulk of the lessons learned came from reactions from the innovators to our gender programming, reactions from the innovators in response to the Sida Report, and the team's experience with innovators during innovator-led field trips. Here are some of the highlights:

- Solutions and changes cannot be imposed. If you want innovators to integrate gender, it should be in ways that improve their processes without added technical and financial burden
- Expectations for gender programming and gender implications need to be set as early as the application process so that there are no surprises
- Innovators struggle with gender prescriptions when they do not fit with their business model, cultural context, religious practices, or capability to implement
- Gender programming must take into account different socio-economic contexts of the areas where SWFF innovators are working
- Many innovators have concrete gender strategies in place, but have limited resources to address issues that are beyond their control (i.e., women's access to land and other resources)
- Most innovators can provide evidence of gender influence on some aspect of their businesses (e.g., marketing strategies)
- Innovators are "doing gender" but are often not labeling it as such
- Gender programming may be better received by the innovators if the focus is on understanding context of "gender situations," relationships, and issues to foster equality rather than just focus on women's issues
- Innovators show evidence of women's empowerment, count gender issues as integral in their operations, and in the gender training sessions felt like facilitators were "preaching to the choir"

- Gender recommendations need to be actionable so that if a commitment is made, it is clear what is expected of all parties
- Innovators want SWFF to help their business address the issue of gender with practical recommendations (e.g., an HR training program that focuses on hiring and developing women; implementation of pragmatic, doable, and low cost/high impact tailor measures)
- A gender lens should be used as early as project design, in implementation, and in all evaluation tools, and innovators need assistance to do this
- If you push gender, you must be a partner in helping to increase its applicability
- Theoretical gender information is not seen as useful by SWFF innovators and is not the most effective way to convince others of the utility and effectiveness of gender integration
- Capacity to collect gender-related insights varies greatly among innovators, with small private enterprises struggling the most given the necessity of using their limited resources efficiently

“ Tackling gender calls for patience, perseverance, unwavering pursuit and understanding of cultural dimensions and taking actions and at multiple levels. Gender is not only about empowering women, but of changing and influencing men, society, religion, and hierarchy.



# 9

## Gender Integration & Practical Recommendations

While we support the notion that effective, responsible development requires a careful consideration of gender equality, gender equity, and female empowerment, the idea of solving cultural and legal gender discrimination outright is impractical for an individual project like SWFF to

achieve. However, there are steps that SWFF and its partners can take to make gender considerations a priority and address some of the issues outlined in this document.

Understanding the problem of gender inequality is the first step to addressing gender

bias in business and agriculture, so creating awareness, collecting statistics and establishing project gender goals are key elements to moving the needle on gender. The following recommendations are practical ways that SWFF can promote gender integration and gender equity.

### Program Level Recommendations and Changes

*Note: This is a list of potential recommendations that can be considered for implementation pending staff availability, budget, and other considerations.*

*In some cases, the recommendations can be implemented in a straightforward*

*and meaningful way for minimal costs. In other cases, it would require a readjustment of the allocation of project hours in the TA Facility's formal work breakdown structure, and in overall SWFF funding allocations.*

#### General/Operations

##### COMPLETED

Add a gender category in the lessons learned record in the LL (Lessons Learned) in the Podio app

##### IMPLEMENTATION IN PROCESS

Step up the incorporation of gender in all stages of the

project life cycle and portfolios (e.g., project design, communication, visual presentation and storytelling, implementation, hiring, M&E, acceleration, grants and financial management, evaluation, etc.)

#### PLANNED

The 2017 Work Planning for the Securing Water for Food Technical Assistance Facility will address gender goals and the final Work Breakdown Structure will include time allocated for employees toward gender activities

#### PLANNED

Implement an annual staff gender workshop that features practical and action-oriented insights, and gender-sensitive technical and acceleration approaches

### Acceleration

#### IMPLEMENTATION IN PROCESS

Apply gender principles/lens to all TA Facility delivered SOWs

#### PLANNED

Develop survey to capture tailored needs regarding gender focus (market segmentation) with acceleration support providers

#### PLANNED

Connect innovators with local women's organizations in their country of implementation

#### PLANNED

Work to identify gender-related factors that influence the success or failure of the acceleration services that we deliver

### M&E

#### PLANNED

Define present, midterm and longterm goals for integrating gender across the innovator cohort

#### PLANNED

Research gender related materials/statistics/data available in countries SWFF is operating in and share with innovators that could be positively impacted

#### PLANNED

Research current cultural, political barriers of successfully pushing for more gender integration in each SWFF implemented country

#### PLANNED

Create a gender plot/map of where innovators are in terms of implementing gender in their business (plotting actions and commitments of innovators)

#### PLANNED

Research viable gender programs successfully done or well recognized across the world

### Grants & Contracts Management

#### PLANNED

Capture and document the different roles, responsibilities, and gender integration within the applicant organization (workplace) during pre-award survey process, including discussing the following questions and collect data related to:

- If applicant organization has policies in place related to gender and if they have any plans in the future to incorporate gender related topics.
- Where do opportunities or entry points exist to encourage an equitable division of labor and equal opportunity?

#### PLANNED

Capture organization capital distribution between men and woman

### Communication

#### PLANNED

All future Securing Water for Food Annual Reports will incorporate a section devoted to gender reporting.

#### IMPLEMENTATION IN PROCESS

Reach out to gender experts to ask for advice, including seeking support from the Global Development Lab at USAID and others

experienced with the subject matter and learn about their successes (maybe call for brown bags)

#### IMPLEMENTATION IN PROCESS

Add some language including statistics on to the SWFF website that addresses gender issues

#### PLANNED

Create gender specific case studies

#### PLANNED

Provide an infographic with gender statistics in each country SWFF innovators are

operating in and describe why integrating gender/empowering women is important and how it can contribute to success in business

### Voucher System

#### PLANNED

Improving the provision and use of the already existing gender-related support service in the Voucher System and make few consultants or businesses available for the support, especially for Round 4

#### PLANNED

Conduct follow on research to identify specific vendors with gender expertise and invite their participation in a forthcoming Voucher System call for vendors

#### PLANNED

Allocate funding and write and implement a scope of work that procures an “on-call” gender advisor/consultant for both the TA Facility and for SWFF innovators



# 10

## Conclusion

Securing Water for Food and the SWFF Technical Assistance Facility is deeply committed to addressing gender issues and is continually examining:

- 1.** The constraints that women and girls face throughout our innovator ecosystems
- 2.** How we can partner with the Securing Water for Food Innovators on the gender issues?
- 3.** Where possible, seek to further understand the context, attitudes, and norms in their communities that affect gender and impact water and agricultural processes

There are many cultural, social, and logistical barriers

to gender integration, and in some cases, the barriers are so pervasive that active (rather than passive) solutions are required.

As noted, women make up a large proportion of smallholder farmers in the areas our innovators work in, so targeting women as customers is a necessity.

Based on our semi-annual report, only 10 of 22 Round 1 and Round 3 innovators have taken significant steps to target women. In the report, innovators cited a mix of cultural barriers and limited staffing bandwidth as barriers to gender-focused programs. Those that are associated with NGOs which require them to keep gender stats and make efforts toward gender integration are more

successful at addressing gender issues—for obvious reasons—than those that are not required by their partner.

Innovations are targeted to end users, and since women are end users, it is believed that innovations are gender equitable without further intervention. But, this is not enough if our innovators didn't consider women as users carefully enough or focus on making their products more beneficial to women. They might actually be missing out on possible customers because they didn't think about the product from a gender perspective during the design phase.

# 11

## **Annexes**

**ANNEX A – ABOUT SWFF**

**ANNEX B – INNOVATOR SUMMARY TABLE**

**ANNEX C – WORKS CITED**

# A

## Annex A – About SWFF

USAID and Sweden through the Swedish International Development Cooperation Agency (Sida) launched the Securing Water for Food Grand Challenge for Development the first week of September 2013 during World Water Week in Stockholm. Over the last several years, the Kingdom of the Netherlands and the Republic of South Africa have joined as Founding Partners. Through Securing Water for Food, the partners have worked to identify and accelerate science and technology innovations and market-driven approaches that improve water sustainability to boost food security and ultimately alleviate poverty.

Securing Water for Food aims to increase access to innovations that help

farmers produce more food with less water, enhance water storage, and improve the use of saline water and soils to produce food.

Since the 2013 launch, Securing Water for Food has issued three calls for innovation: the first in November 2013; the second – the Desal Prize – in May 2014; and the third on March 9, 2015. The 17 first round innovators representing exceptional initiatives with high potential for transformative impact were announced on September 1, 2014 at World Water Week in Stockholm, Sweden. The Desal Prize winners were announced on April 22, 2015.

The twelve awardees of the third round of Securing Water for Food were announced

at Amsterdam International World Week (AIWW). Innovators were selected from 408 applications representing 67 countries, 65% of which were from developing nations. During this most recent round, a greater emphasis was placed on differentiating between Stage 1 and Stage 2 applications by further defining “innovation” for the former and “potential to scale” for the latter. Additionally, Securing Water for Food prioritized innovations that emphasized the engagement of women.

The SWFF ecosystem includes the founding and funding partners, SWFF broader program management, the SWFF Technical Assistance (TA) Facility, which provides accelerations services to the innovators through the

team, the SWFF TA Facility Consortium, and the suite of Voucher System vendors.

The SWFF TA Facility, which is a contract of The Kaizen Company, is a USAID-funded, \$7.4 million water-ag innovation accelerator that provides technical assistance to Grand Challenge Winner to support market-driven business development, commercial growth, and scaling in a development context. The team is made up of five women and four men and is led by a female Chief of Party. Of the seven interns the team has hired to support its work, five of them have been women.

The TA Facility provides demand-driven services<sup>1</sup>, grants and financial management guidance, M&E

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<sup>1</sup> Some types of services that we can efficiently provide include: improving the innovation; management team capacity building; improving distribution models; improving operational efficiency; expanding access to capital to finance the growth strategy; improving market linkages; securing contracts; building partnerships, enabling penetration of new markets; support in attracting a growing customer base; advisory services; technical services; business model improvements; business pitch development; improving prototypes through testing/piloting; improvements in business operations (including human resource management and organizational capacity building/training); strategic marketing; manufacturing; and distribution networks; and partnership identification, building and facilitation; and networking, among other services.

and partnership support to innovators that have been awarded grant money from the Securing Water for Food: A Grand Challenge for Development. The Facility also provides communication support and counsel for broader SWFF program needs. The TA Facility has provided direct support to 28 innovators operating in 30 countries. Four of these 24 SWFF projects—Conservation South Africa, ICU Tunisia, Reel Gardening and Ignitia—are led by women, while four others—Practical Action Bangladesh, World Hope, Water Governance Institute and Green Heat—have an impact that is women-focused or benefits women more than men.

The TA Facility's business objectives and strategy are driven primarily by customer satisfaction and by the overarching concern about how it can create greater value for SWFF innovators. The lean and robust team constantly monitors the Facility's orientation to serving innovator needs, in addition to improving its operational efficiency, achieving economies of scale or scope, and closely monitoring the effectiveness of its business tools, methods, and processes.

The TA Facility is committed to incorporating gender integration into the support it provides by integrating gender components into the acceleration support scopes of work, collecting gender-disaggregated data, including gender integration surveys in its reporting and applying a gender lens to its communications and outreach.



The TA Facility Consortium comprises two firms: Imagine H2O and SNV Global. San Francisco-based Imagine H2O is the leading path-to-market resource for water-sector entrepreneurs. Imagine H2O provides support services to SWFF innovators in the form of exploring and making investor connections, reviewing and advising

on sustainable business models, and preparing innovators for investor pitch sessions.

SNV, a global firm with access to consultants worldwide (1,000 service providers spanning 39 countries), including a number of locally-based services providers where SWFF innovators operate, has extensive experience accelerating

innovations in developing economies. The firm integrates local knowledge and understanding with market intelligence and opportunity identification, business design and readiness, management and technical consulting, and matchmaking (financial and market) and knowledge management. The SNV contact for the TA Facility is female.



The Voucher System allows the TA Facility to rapidly procure services for the innovators on an as-needed basis in a manner compliant with USAID regulations, has 35 vendors, many of whom are owned, operated or led by women. At least one has extensive gender-specific experience working with female entrepreneurs to develop business plans, and others have indicated some experience working around gender integration. These vendors, which were chosen through a rigorous selection process, can provide services in 19 categories ranging from business development to supply chain

development and more. The Voucher System includes:

- Individual consultants
- A large number of small businesses (many of whom are locally-based in countries where our innovators operate)
- One university
- A medium-sized firm

The system was operational in August 2015 and has had two separate calls for vendors. A key value-add of the Voucher System is that it prevents duplication or substitution

of services already covered by the procurement options stated in the contract and give the TA Facility an additional line of support to access services that the SWFF innovators need. This fourth line of support enables us to access qualified vendors if a particular scope of work cannot be addressed by one of the first three lines of support offered by the SWFF Technical Assistance Facility (i.e., 1 – the TA Facility; 2 – USAID/USAID Network; 3 – The TA Facility Consortium). The Voucher System is the SWFF TA Facility’s fourth line of support.

## SWFF Technical Assistance Facility **Accelerates Innovations and Provides Needs-Based Support**



**DR. DONNA VINCENT ROA**  
Chief of Party



**KEVAN HAYES**  
Acceleration Facilitator



**RAMI KHYAMI**  
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M&E Coordinator



**CASSY RODRIGUEZ**  
Jr. Program Coordinator



# B

## Annex B – Innovator Summary Table

| AWARDEE   |              | INNOVATION                    | PRODUCT SUMMARY   |
|---|--------------|-------------------------------|---|
| Adaptive Symbiotic Technologies<br>(For-Profit)   | SWFF ROUND 1 | BioEnsure®                    | A fungus found in Yellowstone National Park that reduces water consumption, increases drought tolerance, and enhances crop yields with no negative impact when applied to seeds.                                  |
| aQysta Holding BV<br>(For-Profit)   | SWFF ROUND 1 | Barsha Pumps                  | A low-cost hydro-powered irrigation pump that does not require any fuel or electricity, has no operating expenses, and does not emit any polluting greenhouse gases.  |
| Arcadis<br>(For-Profit)   | SWFF ALUMNI  | Freshwater Management System  | A sustainable, innovative freshwater management system that prevents groundwater salinization in coastal areas.   |
| Aybar Engineering<br>(For-Profit)   | SWFF ROUND 1 | Broad Bed and Furrow Maker    | Broad bed and Furrows Maker (BBM) reduce planting time and drain excess water away from crops, using lighter-weight materials appropriate for Ethiopian farmers.  |
| Centre for Environment Concerns<br>(Non-Profit)   | SWFF ROUND 3 | SWAR                          | The innovation delivers assured spread moisture at plant root zone to cultivate vegetables, flowers, fruit/forestry trees using only one fifth of water compared to Indian drip irrigation systems.               |
| Center for Sustainable Dryland Ecosystem and Societies (CSDS) – University of Nairobi<br>(For-Profit) | SWFF ROUND 3 | M-Fodder                      | Enables smallholder livestock farmers to send an SMS and receive high-quality hydroponically-produced fodder for their livestock.   |
| Conservation South Africa<br>(For-Profit)   | SWFF ROUND 3 | Ecorangers and Meat Naturally | Meat Naturally Pty uses ecological science, a government job creation program, and market interest in sustainable meat to implement communal grazing systems that result in improved water and food availability. |
| Deutsche Welthungerhilfe E.V.<br>(Non-Profit)   | SWFF ALUMNI  | Greenhouse                    | An innovative combination of low-cost rainwater harvesting and greenhouse technology that allows vegetable production during colder months when no water for agricultural production is typically available.      |

| AWARDEE   |                 | INNOVATION                            | PRODUCT SUMMARY  |
|---|-----------------|---------------------------------------|--|
| <b>FutureWater</b><br>(For-Profit)  | SWFF<br>ROUND 1 | Flying Sensors                        | FutureWater provides smallholder farmers with insights that are critical to improving their application of limited resources such as water, seed, and fertilizer   |
| <b>Green Heat Uganda LTD</b><br>(For-Profit)                                | SWFF<br>ROUND 3 | Slurry Separation System              | A slurry separation system that vastly reduces the water demands of anaerobic digesters, creates a solid fertilizer which is easy to handle, increases gas production, and improves pathogen kill.   |
| <b>Ignitia AB</b><br>(For-Profit)   | SWFF<br>ROUND 3 | Tropical Mobile Weather Forecasts     | A highly accurate weather model that helps farmers to sow, fertilize and harvest at the optimum time, manage their daily activities, improve crop yields, and optimize food production.  |
| <b>Institute for University Cooperation (ICU) – Jordan</b><br>(Non-Profit)  | SWFF<br>ROUND 3 | Groasis Waterboxx                     | An integrated planting technology that allows planting fruit, fodder trees and shrubs in degraded farmland and rangelands.   |
| <b>Institute for University Cooperation (ICU) – Peru</b><br>(Non-Profit)    | SWFF<br>ROUND 3 | Irrigation Scheduling System          | An irrigation scheduling system that provides farmers with direct indications on when and how much to irrigate. Through a climate station, the system measures air temperature, humidity, wind speed and direction, intensity of solar radiation, and rains. |
| <b>Institute for University Cooperation (ICU) – Tunisia</b><br>(Non-Profit) | SWFF<br>ROUND 3 | The Buried Diffuser                   | Patented underground irrigation technique for field and green house trees, shrubs, vegetables in fields and green houses that enhances efficiency of water resources, increases crop productivity, and makes rain-fed agriculture sustainable.               |
| <b>International Center for Baseline Agriculture (ICBA)</b><br>(Non-Profit) | SWFF<br>ROUND 1 | Salt-Tolerant and Resilient Crops     | A non-GMO, salt-tolerant quinoa that can enable significant food production in saline soils, without the need for fresh water.   |
| Islamic Relief Kenya<br>(Non-Profit) (SWFF Round 3)                         | SWFF<br>ROUND 3 | AgroSolar                             | SunCulture's AgroSolar Irrigation Kit (ASIK) is a combination of off-the-shelf, proven, no-frills, cost-effective, solar powered pumping and drip irrigation technologies.   |
| <b>MetaMeta &amp; SaltFarmTexel</b><br>(For-Profit)                         | SWFF<br>ROUND 1 | Salt-Tolerant Potato                  | A non-GMO, salt-tolerant potato that requires very little fresh water for cultivation. Scaling up access to this potato will contribute to better use of lands and waters that have high salinity and will reduce the pressure on freshwater resources.      |
| <b>MetaMeta Research B.V.</b><br>(Non-Profit)                               | SWFF<br>ROUND 3 | WaterPads®                            | A sandwich of paper and jute with an inner layer of 0.5 mm large granular polymers in dry form. The polymer absorbs 100 times its own weight of water (7 grams absorbing 1 liter of water) retaining water at binding tension.                               |
| <b>MIT-Jain</b><br>(For-Profit)   | SWFF<br>ROUND 2 | Electrodialysis Reversal (EDR) System | EDR is desalination process in which an electric potential is applied to electrodes, and dissolved salt ions are pulled through ion exchange membranes to separate the salts from the water.   |

| AWARDEE   |                 | INNOVATION                              | PRODUCT SUMMARY   |
|---|-----------------|---|---|
| <b>MyRain LLC</b><br>(For-Profit)   | SWFF<br>ROUND 1 | RainMaker                               | A customized irrigation system design tool that removes the complexity of drip irrigation design and installation for small agro-retailers across India. The application enhances water efficiency by up to 50%.  |
| <b>Practical Action</b><br>(Non-Profit)                                       | SWFF<br>ROUND 1 | Sandbar<br>Cropping                     | A low-cost model that transforms previously unused sandy islands that appear after each rainy season into large-scale pumpkin farms.  |
| <b>Puralytics</b><br>(For-Profit)   | SWFF<br>ALUMNI  | LilyPad                                 | A reusable, chemical-free solar-activated water treatment product that floats on a body of water to kill viruses, bacteria, and protozoa in water used for agriculture.   |
| <b>Reel Gardening</b><br>(For-Profit)   | SWFF<br>ROUND 1 | Biodegradable<br>Seed Tape              | A simple, quick, and effective biodegradable paper tape that encases organic fertilizer and seeds at the correct depth and distance apart, resulting in a potential saving of 80% in water consumption.   |
| <b>Si Technologies International</b><br>(For-Profit)                          | SWFF<br>ROUND 3 | NewSil                                  | NewSil applies silicic acid to food crops in an affordable and environmentally friendly way that substantially reduces crop loss in times of water stress and drought.  |
| <b>Trans African Hydro-Meteorological Observatory (TAHMO)</b><br>(For-Profit) | SWFF<br>ALUMNI  | Weather<br>System                       | TAHMO's weather stations measure meteorological and water resource variables (rainfall, radiation, temperature, humidity, wind speed/direction, soil moisture, etc) and send the data via GSM networks to a data server, providing accurate, localized, and timely weather information. |
| <b>University of Texas – El Paso</b><br>(University)                          | SWFF<br>ROUND 2 | Zero Discharge<br>Desalination<br>(ZDD) | ZDD is a hybrid process that combines reverse osmosis (ornanofiltration) as the primary desalter and electrodialysis metathesis (EDM) to recover additional water from the desalination brine.  |
| <b>Wageningen University &amp; Research Center</b><br>(University)            | SWFF<br>ALUMNI  | Salt-Tolerant<br>Quinoa                 | Non-genetically modified salt-tolerant quinoa that not only grows but also thrives in saline soils.   |
| <b>Water Governance Institute</b><br>(Non-Profit)                             | SWFF<br>ROUND 3 | Aquaponics<br>Farming                   | Promoting commercial aquaponics farming among smallholder farmers/ households for water efficiency, food security and livelihoods improvement.  |
| <b>World Hope International</b><br>(Non-Profit)                               | SWFF<br>ROUND 1 | Affordable<br>Greenhouses               | In partnership with Penn State, World Hope is producing and distributing Affordable Greenhouses that enable a year-round growing season and reduction in water consumption.   |



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SECURING  
WATER  
FOR FOOD:  
A GRAND CHALLENGE  
FOR DEVELOPMENT

Securing Water for Food has sourced and invested in a portfolio of innovative solutions that aim to help farmers use water more efficiently and effectively; improve water storage for lean times; and remove salt from water to make more food. Our cohort of innovators are helping people in 30 low-resource countries with tools they need to produce more food with less water.

To learn more about Securing Water for Food,  
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