

Women's Smallholder Farmers and Digitization and Their Contributions to Localization

Focal Points: WFP, NGO Consortiums, National Governments, IFAD, FAO, WB, Africa Improved Foods etc.

1. What in brief is the solution?

WFP recognizes that supporting smallholders, particularly women, to increase their productivity and incomes and building stronger food systems through inclusive agricultural and economic development through local market access are key to achieving food security. These women smallholders are receiving support to enhance food production by adopting nature-based solutions, to build their collective capacity and voice in accessing markets through innovative digital tools for information empowerment and market access.

This results in increased participation of women in farmers organization/cooperatives or other types of aggregators that market smallholder production. Access to local markets through digital platforms have been enabling them to sell their produce in the local markets and hence positively contributing to a shorter supply chain.

Women constitute 80% of the food producers and are critical influencers of household food and nutrition security, but they are most vulnerable to agricultural challenges experienced, more so production and market access. Efficient and functioning markets are critical to agricultural diversification, food availability and income growth. However, undeveloped infrastructure and other last mile challenges limit access to markets for diversified agricultural produce for smallholder households in rural areas.

Smallholder food producers living in rural areas often must choose between dealing with logistical and transaction losses to access market in urban centers or accept low exploitative farm gate prices from few buyers. The ability to access markets for agricultural production is a major incentive agricultural diversification. Use of digital solutions such as mobile applications are key to creating efficiencies in agricultural market systems hence improving incomes, enhancing diversity of available food for household consumption and critical to achieving national nutrition objectives and providing economic opportunities to rural communities especially women and the youth.

To build on technology and digital innovation to connect smallholders to markets, a Virtual Farmers' Market (VFM) app was developed as an e-commerce platform where farmers' surplus and buyers' demand for crops are advertised and traded. It provides a transparent, open and trustworthy space for smallholders and buyers to negotiate fair prices and deals. The app was piloted in Zambia in 2017 with the name Maano, meaning 'Intelligence' in the local language. Maano was used by over five thousand farmers. The share of women farmers participating in VFM amounted to 39 percent in 2018, demonstrating the value of the app in enhancing market access and economic empowerment of women.

Another example is the Farm to Market Alliance (FtMA) in Eastern Africa successfully engaged almost 90,000 farmers in Kenya, Rwanda, Tanzania, and Zambia and developed a network of Farmer Service Centres that serve as a one-stop shop through which farmers interact with service providers. Since 2015, FtMA has catalyzed over US\$30 million in smallholder crop sales purchased by commercial buyers and involved over 65 local private sector players, significantly increasing the transactions between smallholders and formal commercial markets.

To support local economic development and smallholder farmers' access to markets and financial institutions, the school feeding programme in Rwanda purchase all the beans requirements from farmer cooperatives and smallholder farmer-friendly processors in Rwanda. This activity is linked to WFP's FtMA initiative, where smallholder farmers are linked to local markets. Digital solutions like Farm2Go is empowering these smallholders and helping them access market information and host of other services effectively.

The solution seeks support to build this portfolio of work to replicate and bring to scale the projects across regions with multiple stakeholders to improve markets and access to innovative digital solutions for women smallholders.

2. What was/were the source(s) from which this solution emerged?

The solution is born in partnership with communities, civil society, local authorities, the private sector and non-governmental organisations. WFP is part of a global network investing in programmes to strengthen women's capacities across the agricultural value chain, supporting eco-system friendly production, addressing bottlenecks for affordable small scale food storage and information technologies with women led cooperatives, and connections to public-private sector trade opportunities.

In addition, discussions with partners from Action Tracks 3, 4.

3. What problem is it trying to address within food systems?

Food systems are reliant on a complex network of environmental factors and human influences made up of interconnected feedback systems. Unfortunately, the current global food system fails to keep the world fed as a combined result of many of these factors. At present, more than 690 million people remain undernourished and almost 2 billion are unable to sufficiently access or utilize food (FAO, 2020). Rising populations are exacerbating these pressures on our food system and food insecurity has been steadily increasing over the past couple of years.

Under current conditions, by the year 2050, the global food demand will have increased by 60 percent as the world will grow to nearly 10 billion people (United Nations et al., 2019; FAO, 2020). In Sub-Saharan Africa alone, the population is expected to double from one billion to two billion in a region that is already facing high levels of food insecurity (United Nations et al., 2019). While enough food is produced to feed every single person, there are number of underlying causes to growing hunger in this region including systematic inequalities within food systems that disproportionately, post-harvest losses, rapid population growth and most urgently increasing climate change impacts (Nelson, 2010; Holt-Giménez et al., 2012; Pachauri et al., 2014). These impacts alter existing environmental conditions and disrupt local agricultural production cycles.

The Role of women in smallholder agriculture is essential. In most LDCs and MICs, women manage the majority of the smallholder agricultural activities. However, these women often lack access to resources and funding to effectively manage production and post -production processes -including marketing-. Additionally, while women in many countries are increasingly taking on management responsibility in smallholder agriculture, gender-gap remains in decision-making on land use and in access to needed resources. Moreover, biodiversity loss poses a disproportionate burden for women and girls by increasing the time required to obtain necessary resources such as water, fuel wood, and medicinal plants, which reduces the time they can spend on income generating activities and education.

4. Why is addressing that problem important for achieving the goal of your working group?

Since 80% of food will be consumed in cities by 2050, cities can significantly influence the way food is grown and moves further within the food system, particularly by interacting with producers in their peri-urban and rural surroundings. In a predominantly linear food system, a very high proportion of food flows into cities where it is processed or consumed, creating organic waste in the form of discarded food, by-products or sewage. Cities that actively plan for resilient food systems that is built on the concept of localization, will ensure that (a) the food supply chain is diversified and resilient to future shocks; that (b) food access remains at, or swiftly returns to, pre-disaster levels, and (c) the impact on vulnerable food systems actors is mitigated, including smallholder producers, informal traders, and low-income and marginalised groups.

While linking local producers to the nearby markets promotes localization of the food system, this solution builds women's agency by enhancing their natural, financial, physical, human and social capacities.

5. How can this solution address that problem (theory of change)?

Often, individual smallholders, most of whom are women, are unable to take advantage of markets as they cannot sell their produce at good prices. They essentially need collective bargaining power. We need to strengthen the capacity of farmers' organizations to organize themselves and effectively manage their members, improve their governance capacity and facilitate their official registration, access to financial services and agricultural inputs. These farmers' organizations also need to be supported on the post-harvest handling and processing. This improves their capacity to store and transport commodities and adds value to their produce by converting a crop into a more valuable commodity for sale in local and regional markets. With trainings on marketing skills, coupled with access to information, the farmers' groups can improve their bargaining power and engage with formal buyers, supporting them in the identification of market opportunities, development of business plans and compliance with contracts.

6. Why does this solution align to the definition and criteria for a 'game changing solution' developed by the Summit?

The programme represents best practices in existing food system structures to reach equitable livelihoods, looking at poverty across the food value chain and the groups whose livelihoods are most limited by current food systems practices, like women. Strengthening women's role in the food system has multiple benefit pathways – economic (including financial), food security and nutrition and social. This solution offers an effective way to build women's collective power by bridging the digital divide, along with provision of other complementary services to make the food supply chain shorter, and hence a more resilient food system.

7. Existing evidence supporting the argument that this solution will work, or at least achieve the initial outcomes?

Employing an integrated approach, national and local level agents, including WFP, bring together a bespoke package of support to women small holder farmers and build female led cooperatives with linkages to the digital economy. The paragraphs below provide some examples of the different components of programs implemented globally:

- The Farm to Market Alliance (FtMA) in Eastern Africa successfully engaged almost 90,000 farmers in Kenya, Rwanda, Tanzania, and Zambia and developed a network of Farmer Service Centres that

serve as a one-stop shop through which farmers interact with service providers. Since 2015, FtMA has catalyzed over US\$30 million in smallholder crop sales purchased by commercial buyers and involved over 65 local private sector players, significantly increasing the transactions between smallholders and formal commercial markets.

- Activities expanding Women Smallholder Production Capabilities, by sustainably investing in their lands productive capacity using nature-based and nature positive production practices. Examples include soil and water conservation practices that promote agro-biodiversity, establishment of micro and community gardens for vegetable and fodder production (including hydroponics technologies).
- Building Women Smallholder cooperatives: In addition to nature-based solution to increase production, the global programme undertakes activities to strengthen the capacity of stallholder farmers and farmers' organizations, with a special focus on women led cooperatives, to organize themselves and effectively manage their members, improve their governance capacity and facilitate their official registration, access to financial services and agricultural inputs.

Finally, the global programmes use rigorous monitoring and impact evaluations, looking at efficiency, effectiveness and economy to inform the implementation. For pro smallholders' initiatives, impact pathways are used to measure results including:

- i. boosting smallholder productivity and incomes,
- ii. strengthening sustainability of the value chain beyond the short- and medium-term needs of immediate participants.
- iii. gender equality and ownership, including access to resources, and equal voice in decision-making for women and men and empower women and men.

8. What is the current and/or likely political support for this idea?

Member states, Rome based UN agencies, the Permanent Forum on Indigenous Issues, the UN Rio conventions, and international and local NGOs, among others from the scientific community are strong advocates for recognizing the role of traditional knowledge in sustainable food systems and the importance of working with indigenous peoples as equitable partners in moving this work forward.

9. Are there certain contexts for which this solution is particularly well suited, or, not well-suited.

The actions proposed can be implemented globally. The solution is currently more easily implementable in contexts where there is sufficient on-grid or off-grid electricity infrastructure and mobile telephone coverage.