

Rapid Ecosystem study - Women Smallholder farmers

Focus geographies: Uttar Pradesh, Andhra Pradesh and Telangana

June 2022

AgriFin for Women India (A4W)



**MERCY
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AGRIFIN

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AgriFin for Women (A4W) India aims to offer tailored bundles of digitally-enabled financial products and ag services to 100,000 women smallholders

Our goal Agrifin for Women (A4W) India, a Mercy Corp's Agrifin Program, supported by the Walmart Foundation, focuses on building digital financial inclusion for 100,000 WSHFs, bundled with services to increase productivity, income and resilience by at least 25% over a two-year period.

Target group

- TG: Women engaged in agriculture (belonging to farming households; but not only casual laborer)
- Focus regions: UP, Telangana, Andhra Pradesh

Approach and Methodology A4W is adapting the AgriFin model to meet the needs and requirements of the Indian Ecosystem as well as the Walmart Foundation objectives and focus. To do this:

- A4W is developing partnerships with private sector organizations that have a large reach and commitment to reach women farmers. For this the A4W team has conducted a detailed partner selection process alongside a rapid Ecosystem Study and has identified its core partners.
- The program will undertake multiple rounds of innovation engagements with each partner to deliver high-impact, digitally-enabled services to 100,000+ WSHFs.
- The A4W team will adopt the Human Centered Design (HCD) and prototyping approach to help partners build both sustainable and scalable products in the form of bundles.
- The bundled service approach helps to increase potential uptake, active use and impact of products, as well as lowering the cost of delivery of services, enabling affordable access to financing, markets, e-learning & climate-smart tools, using gender transformational approaches.
- To develop suitable bundles of products, A4W will seek to develop partnerships between its core partners and other key organizations that offer Value Added Services (VAS) such as advisory, market linkages among others.
- The program also seeks to disseminate learnings from our work for the benefit of the ecosystem.

The objective of this first study is to conduct a rapid scan of the ecosystem and identify potential innovation opportunities

For the A4W program, **MCA conducted a study to understand the landscape of women smallholder farmers, initiatives that focus on collectivization of women, and potential partnership opportunities for the A4W program in India.** The intent of the study was to scope out high potential partners and what could product/service roadmaps for them look like.

This work was inspired by the ecosystem studies that Mercy Corps conducts as part of the inception work in each AgriFin country. A full ecosystem study typically seeks to help Mercy Corps understand the country context, farmer needs, and key drivers for the growth of digital services in agriculture which can accelerate service delivery and impacts for smallholders around productivity, income, resilience, and inclusion. However, **this study was designed to be rapid and focused on partnership opportunities rather than an exhaustive scan of challenges and opportunities in the WSHF landscape in India.**

As the program evolves and new learnings emerge in our work with partners, **this study will be supplemented and followed up with additional learning notes.**

Lastly, **while the study is focused on Uttar Pradesh, Andhra Pradesh, Telangana, data at the state level specific to WSHFs is often unavailable.** Thus, several listed challenges are not geography-specific. As we continue to do fieldwork in these geographies, the learnings will also be updated in the subsequent learning notes.

We adopted a nimble approach with a mix of secondary research and partner discussions to develop this learning document

1 Stakeholder interviews



We conducted conversations across 20 actors¹ including potential core, VaS partners, digital producer groups, grassroot organizations, ecosystem partners during Sep'21 – Nov'21

2 Secondary research



We supplemented the data with a mixed method secondary research:

- **Quantitative** –government statistics, international databases etc.
- **Qualitative** – research publications, international journals etc.

3 Working sessions



Finally, we conducted multiple working sessions with identified potential partners to validate our findings through their rich experience on ground



Note: 1. Detailed list of organizations contacted is attached in the annexure



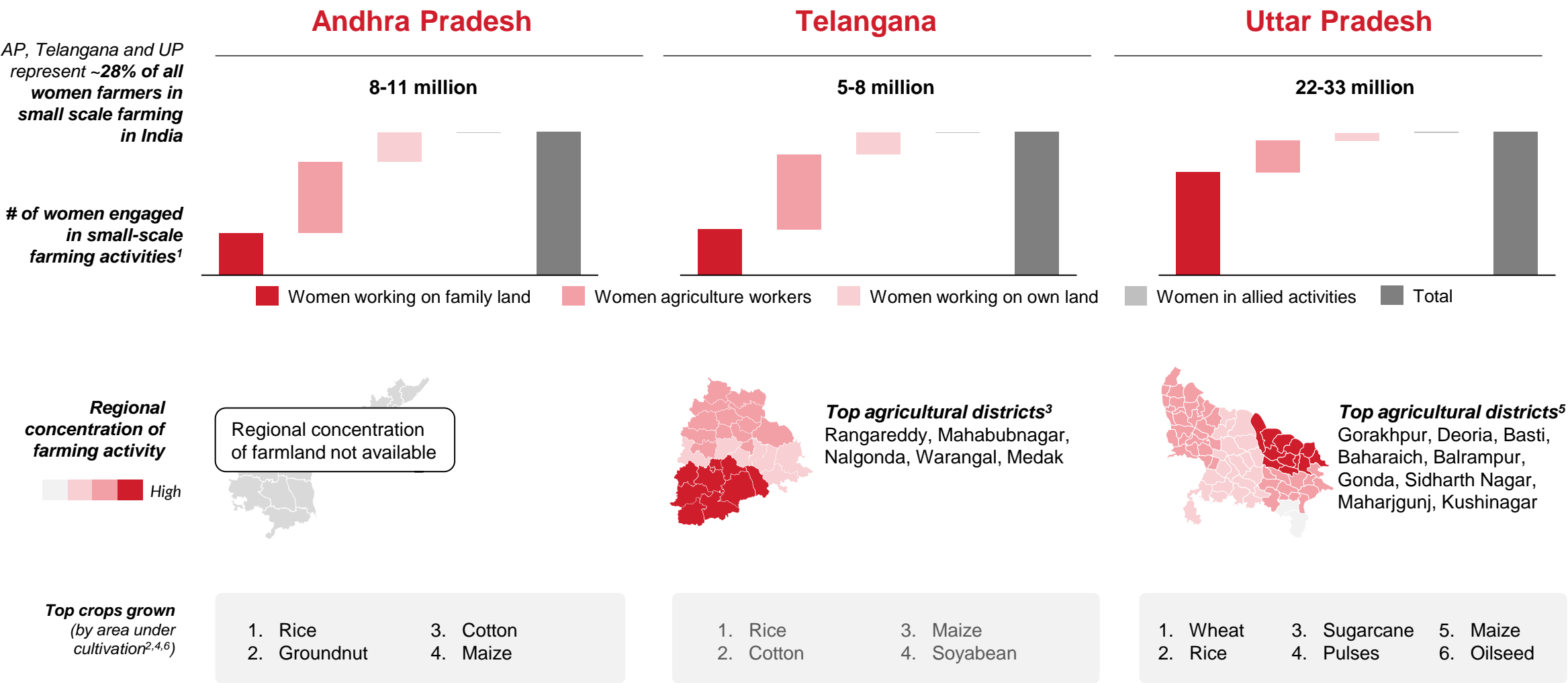
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WSHFs in India: Overview & Challenges

Potential Intervention Areas for WSHFs

There are 35-52¹ million women engaged in small scale farming activities in Andhra Pradesh, Telangana and Uttar Pradesh



Sources: (1) Dalberg Analysis; (2) AP Govt Department of Agriculture Website; (3) Report "Identification of Predominant Farming Systems and their Economics in Telangana" 2015; (4) Niti Aayog Report on Telangana; (5) Farmech Website (UP); (6) University of Allahabad, "State Agricultural Profile of Uttar Pradesh 2014-15", 2015; (7) Economic Survey 2017-18; (8) TNAU Agritech Portal, (9) Agricultural Stats at a glance, Oxfam; Ministry Of Agriculture & Farmers Welfare, "Agricultural Wages in India 2018-19"

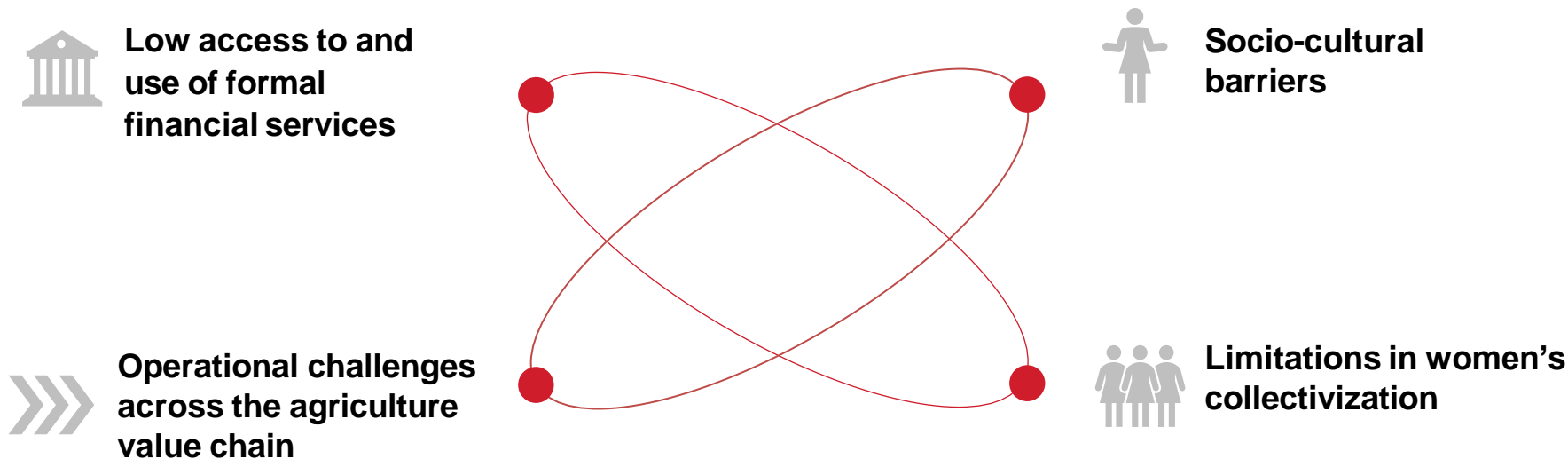
Note: (A) Top agricultural districts defined as those with high farmland concentration in the state

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Challenges and barriers to productivity and income can be classified into four categories

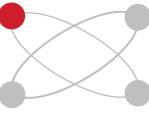
Not comprehensive

The following four challenges surfaced repeatedly in our conversations with practitioners in the ecosystem



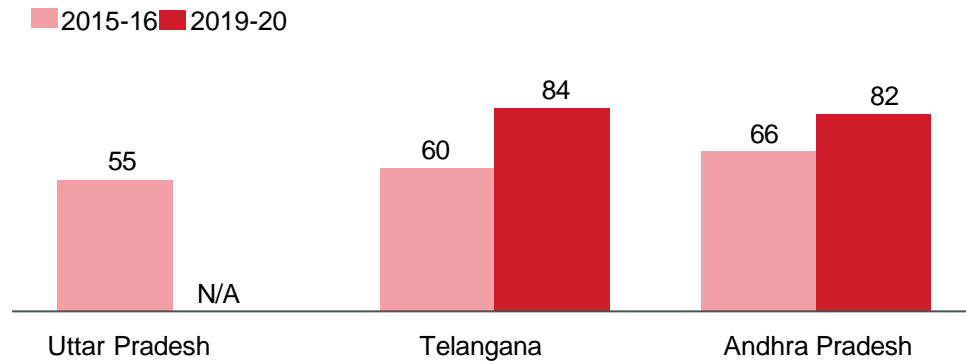
The impact of **climate change** exacerbates these challenges for women smallholder farmers

While most women own a bank account; its usage and of other financial services including formal sources of credit remains low



While most women (aged 15+) own a bank account; its usage and of other financial services remains low

% of women having a bank or savings account that they themselves use ¹



- **Usage of bank accounts is low:** In 2017, 54% of women with an account reported having made no deposit or withdrawal in the past year vs. 43% of men²
- **Informal sources like family and friends most common for borrowing** (5% of women borrowed from a financial institution, 30% borrowed informally through family and friends, and 4% borrowed from a savings club)³
- 7% of women **saved to start, operate or expand a farm or business** vs. 12% men, and 3% of women vs. 6% of men borrowed for the same³

Information asymmetry and high serving cost to WSHFs leads to lack of formal sources of credit⁴

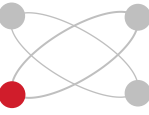
Information Asymmetry

- Financial Infrastructure shortcomings (e.g., low credit bureau coverage on farmers, others)
- Reliance on traditional models of credit scoring (e.g., land ownership, tax returns)
- Limited availability of data for non-traditional assessments (e.g., low digital payments penetration)

High cost of WSHF customer acquisition, serving, and capital

- Low density and high geographic fragmentation
- Relatively smaller loan sizes
- Labor-intensive lender models
- Lack of affordable sources of capital for select non-banks

WSHFs face deeper operational challenges across the supply chain



Inputs and Cultivation

- **Access to inputs:** WSHFs lack access to quality inputs including HYV of seeds; Formal seed systems leave smallholder farmers, particularly women, in remote areas with limited access to quality seed of preferred varieties⁸
- **Lack of Awareness:** A lack of exposure leads to unawareness about updated techniques and technology and thus, a yield gap between men and women farmers; On average, women-run farms produce 20 to 30 percent less than farms run by men⁷
- **Lack of facilities:** Lack of facilities for storage, processing and cold chain leading to post harvest loss; Research suggest that women disproportionately experience postharvest losses due to time constraints, low decision-making powers and lack of access to processing & storage⁹
- **Unequal wages:** Women are paid 23% low wages as compared to men for the same work²

*“WSHFs are still using very old variety and non drought resistant seeds ”
– A CSO focused on water management*

“Most of the farmers in our region have transitioned from ploughs to tractors – such equipment are not available to WSHFs” – A CSO focused on women empowerment

“Most women send their children and husbands instead of coming themselves for advisory and capacity building” – A mid sized FPO

Market linkages

- **Low involvement in marketing:** A significant proportion (>40%) of women farmers work as laborers on others' farms⁶ and hence are not involved in marketing activities
- **Lack of collectivization:** Lack of aggregation reduces the effects of economies of scale while selling the produce; there are only 3% women FPOs in the country⁵
- **Low bargaining power:** WSHFs are not given fair rates for their produce relatively and are considered to have low bargaining power, as per the NSSO 2017 data²

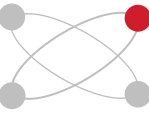
“Women are mostly involved in weeding, plucking, harvesting while men are more involved in marketing” – A women FPO

“30% have smartphones at household levels leading to lower awareness of different marketing mechanisms” – A leading Agri tech

“Women find it tough to sell outside their community and need tech advisory services ” – A leading Agri tech

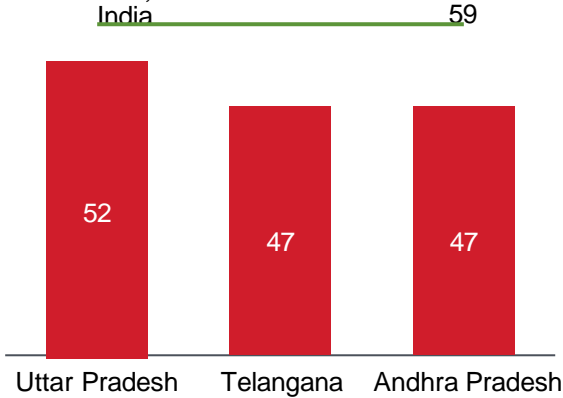
“As men migrate to cities in search of work, WSHFs find it tough to negotiate pricing and often end up selling below MSP rates” – A CSO focused on water management

Literacy, mobile and internet usage remains low among rural women, accentuating the other challenges



Literacy rate¹

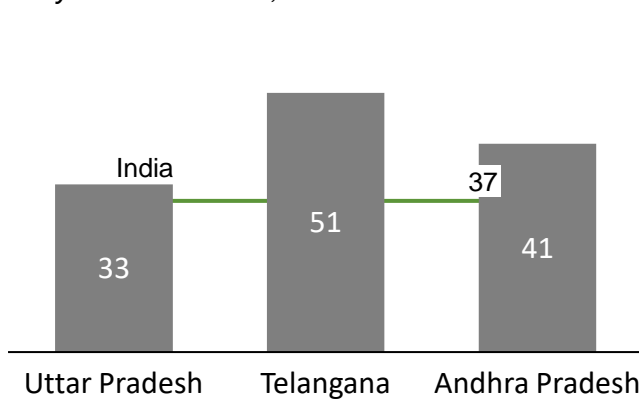
% of rural women age 15 years and above who are literate, 2018



- **Financial literacy among women is low.** While 70% of women in India had financial numeracy, only 43% have financial management skills and 15% were financially literate in 2018^{3, B, C, D}
- **Women lack agency** in opening banking accounts and purchasing smartphones on their own. Their ownership becomes contingent on the decision of the male counterparts.

Mobile phone ownership²

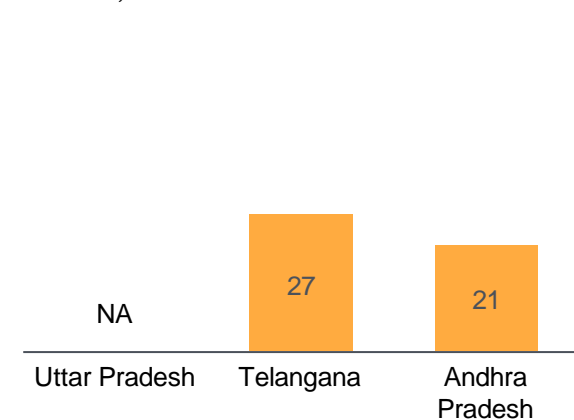
% of rural women having a mobile phone that they themselves use, 2019-20



- **Smartphone ownership is extremely low.** Only 14%⁴ of women in India own a smartphone in 2019.
- **Cost of handset/SIM, literacy** (ability to use a mobile and reading and writing proficiency) **and belief that phones are not relevant for them are the main barriers** to mobile⁴ ownership.

Internet usage^{2, A}

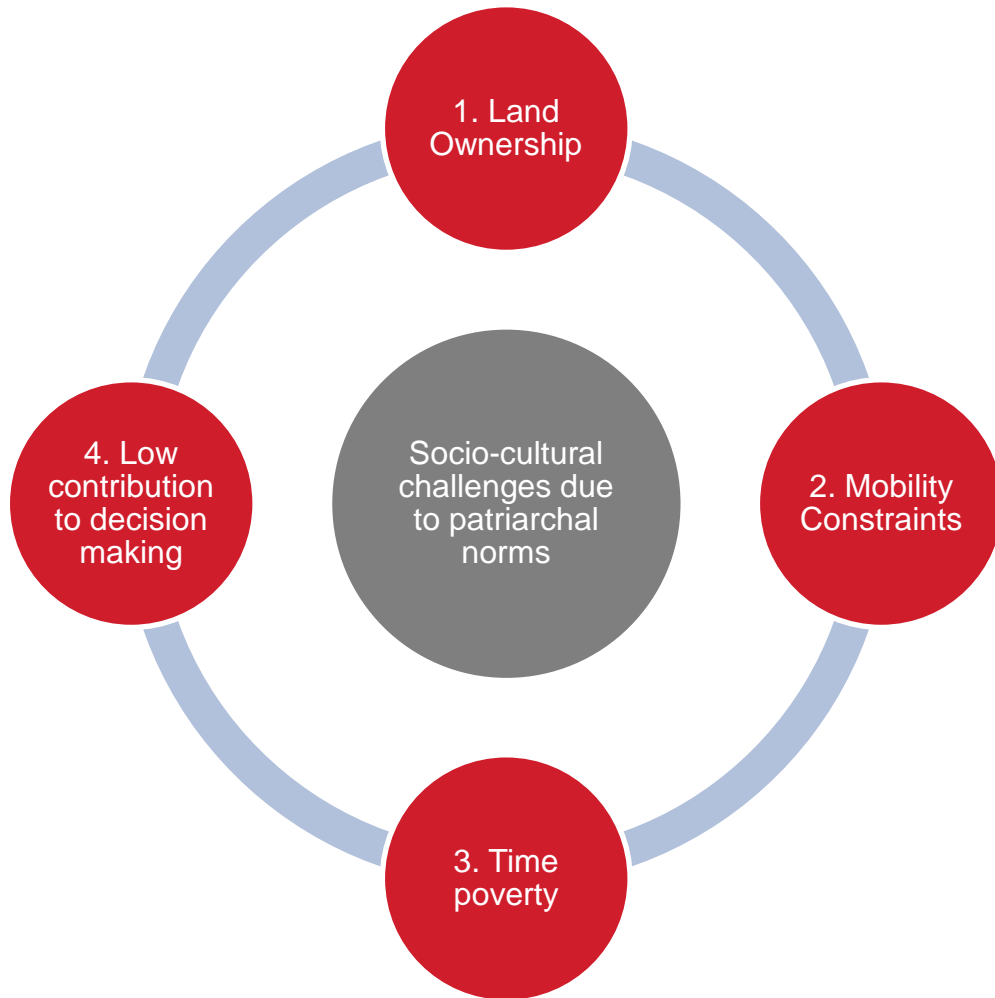
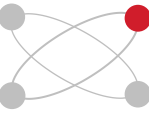
% of rural women who have ever used the internet, 2019-20



- **Awareness and usage of mobile internet are low.** 50% of women in India were aware of mobile internet in 2019. 21% of women were mobile internet users vs. 42% men^{4, F}
- **Lack of connectivity is not the key driver of these low numbers.** Over 98% of villages across these states were covered within the existing mobile and internet grids in 2020⁵

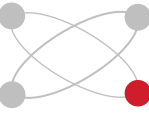
Sources: (1) NSS 75th Round, 2017-18, (2) NFHS-5 and NFHS 4, (3) Financial Inclusion Insights, "India, Wave 6 Report, Sixth Annual FII tracker Survey, May 2019, (4)) GMSA, "The Mobile Gender Gap Report 2020", (5) [Communication Ministry Press Release](#), (6) Dalberg Analysis; Notes: (A) Figures for 2019-20 for Andhra Pradesh and Telangana and 2015-16 for India and Uttar Pradesh, (B) Financial numeracy is the ability to read numerical place value and other key numeracy skills needed to complete a financial transaction on a mobile phone without assistance., (C) Financial literacy is the basic knowledge of four fundamental concepts in financial decision making as measured by the Standard and Poor's Rating Service's Global Financial Literacy Survey, (D) Financial management skills is calculated based on response to the question "Do you have the skills and knowledge to manage your finances well?"; (E) Ability to send and receive a text message is a proxy indicator for the ability to use a financial account on a mobile (E) Data from the FFI report is for a sample of 25,162 women, (F) A "mobile internet user" is a person who has used the internet on a mobile phone at least once in the last 3 months,

Often underlying these challenges are socio-cultural norms that hamper ownership, limit mobility, increase time poverty and limit decision making



1. Most land in India is either owned by men or undivided families, only 13% women hold land, on an average¹. One of the primary reasons for this is that the transfer of land in India is determined by inheritance, with the mediation of women's land rights determined through a set of religion-centric personal laws and customary practices, instead of the law.
2. Women's mobility remains limited to farms or within their villages, thus, limiting their information networks, as well as access to input and output markets
3. Women are responsible for managing homes and children apart from their work on the field which results in a division of time and efforts between the two responsibilities.
4. Traditionally, key decisions around choice of crops, timing, inputs, and output linkage among others are taken by men in the HH. This is inline with the gender roles seen predominantly in farming.

Several government schemes are aimed at strengthening FPOs as a channel for supporting smallholder farmers



Not comprehensive

Central scheme has set ambitious targets to increase the number of FPOs

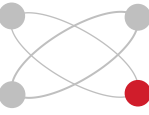
- "Formation and Promotion of Farmer Producer Organisations", a central scheme has been launched to **promote 10,000 FPOs in five years starting 2019-20**, with a **proposed budget of Rs. 6,865 crores**¹
- FPOs will be provided **financial assistance up to Rs 18 lakh** per FPO for a period of 3 years⁶
- **Data from implementing agencies (SFAC, NABARD, etc.) will be integrated** into a new portal being developed by National Project Management Agency (NPMA)

State governments in the target states are also focusing on FPO promotion

- Uttar Pradesh government has decided to set up at **least one FPO in all 822 community development** blocks of the state by the end of FY 2021-22. A **state FPO portal**, the first of its kind in the country, has been developed by the department of agriculture²
- Andhra Pradesh started a **pilot to encourage bee-growing FPOs** and providing support towards improving production and marketing³
- Telangana government has requested **NABARD to support a programme for scaling up FPOs** and also suggest policy support initiatives to ensure improved income to farmers⁴
- **AP and Telangana governments** regularly promote FPOs through webinars in conjunction with other organizations⁷

The guidelines highlight that each FPO's board of directors should **have at least one female board member**, but do not have other guidelines with a focus on increasing the role of women farmers. **Women's participation is included as one of the social development indicators** on which FPOs are evaluated by NABARD

However, FPOs face several challenges in their formation and operation and don't necessarily focus on WSHFs



Compliance challenges and accessing government benefits

- **Complex compliance requirements:** Regulatory requirements are complex (similar to other registered companies), expensive (up to Rs. 2 lakh for compliance) and do not account for the capabilities of small producers. The penalty of delayed compliance adds additional burden on young units
- **Difficulty in availing benefits of government schemes:** FPOs have limited success with availing benefits due to lack of awareness among local governments and bank officials about the concept of FPOs and lack of clarity about eligibility of FPOs for schemes for cooperatives



Lack of access to credit and financial products

- **Lack of access to affordable credit:** Less than 2% of the working capital requirements and 10% of the term loan requirements of FPOs are met. Lack of collaterals and credit history limit access to institutional credit and low mobilization of farmers and their financial constraints lead to low equity capital
- **Lack of risk mitigation mechanisms:** Few, if any, mechanisms exist to cover risks related to production through insurance schemes



Inadequate access to market and infrastructure

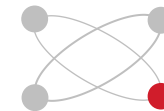
- **Inadequate access to market and poor marketing of products:** FPOs have insufficiently penetrated traditional market channels and do not have sufficient presence in other markets such as commodity exchanges, eNAM. Moreover, brand building of FPOs and infrastructure required for aggregation is often lacking. FPOs are also more active in input market linkage than output linkage.



Managerial challenges

- **Lack of ownership among stakeholders:** Directors and shareholders of FPOs are often unaware of the workings of companies, their responsibilities, and display low ownership, which threatens the sustainability of FPOs.
- **Lack of technical and management skills:** FPOs lack handholding support, legal and technical knowledge and have insufficient trained manpower to manage operations and finances. High dependence on POPIs risks FPOs' sustainability once POPIs exit

Women-led SHGs can be used to create women-led FPOs however, in practice this has happened infrequently



Not comprehensive

Millions of women are members of SHGs in the target states

Andhra Pradesh

6.1
million

Telangana

4.2
million

Uttar Pradesh

35
million

Converting SHGs to FPOs has advantages...

- **SHGs already perform several functions** – savings and credit, common resource management, promoting home based-entrepreneurial activities, building women's capabilities in financial literacy etc. which lay a strong base for functions carried out by an FPO
- The strong organizational capabilities in SHGs can ideally **lead to strong leadership and effective governance of FPOs**

...but the approach faces challenges of scale and time

- SHGs are often **too small in scale** to form a viable FPO¹
- The **approach takes longer** than direct formation through membership campaigns

NGOs, government organizations/departments or any person or groups of persons can initiate the establishment of FPOs for an SHG

Samruddhi Mahila Crop Producer Company Ltd, Rajasthan

Samruddhi Mahila Crop Producer Company is owned by ~2482 women who primarily produce soya, urad, wheat and mustard seeds. With the support of SRIJAN, the community was organized into SHGs, which came together to form the Samriddhi Mahila Mandal Trust where two women represented each SHG. This was eventually converted into a producer company, in which each woman shareholder put in Rs 1,000 as an investment.

Aaranayak Jeevika FPC, Bihar

Aaranayak Jeevika is a Farmer Producer Company (FPC) of ~2600 women farmers. The FPC started with an SHG involved in the procurement of seeds, fertilizers and other inputs for farmers. When the SHG grew in number to 500 members, it registered itself as a farmer producer company, with an initial equity contribution of Rs 200 per member. Later, the FPC partnered with JEEVIKA under TechnoServe's program for technical support.

There are **only a few examples of SHGs converted to FPOs as this is not a common practice**. There are also **no policy guidelines/interventions to encourage such a conversion**. In the long term there may be a strategy to converge FPOs and SHGs, but not in the current scenario

Climate change is likely to exacerbate the problems faced by SHFs today including for WSHFs

Increase in temperatures and decrease in rainfall due to climate change directly impact agriculture

Increase in temperature

- In India, average annual **temperatures rose by 0.48 degrees Celsius** from 1970 to 2016²
- It is expected to rise **by another 2-4 degrees by 2100**, with the maximum effect being felt in northern India³

Decrease in rainfall

- From 1970 to 2016, India saw a **26mm fall in average monsoon rainfall**, accompanied by a steady **increase in the number of very hot & dry days**²
- Experts predict a **10-15% increase in monsoon rains in certain regions**, with a **5-25% decrease in drought-prone central and northern India**¹

Impact on agriculture

- **Climate change might reduce annual agriculture income** in the range of 15 percent to 18 percent and up to 20 percent to 25 percent for unirrigated areas by 2100⁴
- **Rice yields are predicted to decrease by 10%, wheat by 15%, and maize by 20%** by end of the century due to climate change

WSHFs face a disproportionate impact of climate change

Poor access to finance limits WSHFs' ability to absorb shocks

- **Unavailability of proper documentation:** Farmers, especially WSHFs, often lack land-related documents and share cropping agreements required for insurance
- **Low insurance coverage in rainfed and remote areas:** Lack of coverage by insurance companies, and subsequently low competition, has led to high premium in certain areas (e.g., 25% insurance premiums in some areas of Telangana)

Poor access to inputs limits WSHFs' adaption to climate change

- **Dependency on rain:** WSHFs are still largely dependent on rain as the key source of water supply
- **Poor access to quality seeds:** WSHFs find it difficult to get climate resistant seeds leading to low defensibility against climate change

Climate change has a more severe impact on women health

- Women in rural areas where homes do not have running water have to walk longer to fill it, and this takes a toll on their bodies
- Greater salinity in drinking water supply on account of sea level leads to **higher rates of hypertension, miscarriages and pregnancy complications in women**⁶



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































Introduction

WSHFs in India: Overview & Challenges

Potential Intervention Areas for WSHFs























Ecosystem of Agricultural and Agri-tech service providers is mature with six prominent models...

Illustrative only,
not exhaustive

| Model Type | Description | Players |
|--|---|--|
| Farming as a Service (FaaS) Models for Equipment | On-farm equipment, tools and services on a pay-per-use basis |  Gold Farm  Trringo  farMart  EM3 Agri Services  R.A.V.G.O.  Xen |
| Market Linkage | Tech-enabled market linkage for farmers to input companies and buyers |  BigHaat  Sabzi Wala  ninjacart  agrevolution DeHaat  711  RESHAMANDI  SuperZop  crofarm  bigbasket  AgroStar  AGRI BOLD  Frontier Markets |
| Customized RAS | Advisory, diagnostics, predictive analytics and farm management based on satellite, drone & mobile imagery and soil, weather, remote equipment data |  digitalGREEN  Precision Agriculture for Development  ropin  Satsure  skymet  AGNEX  AgRisk  MyCrop  RML |
| Hardware and Systems | Implements, tools, irrigation solutions, and farming systems |  ZANANI  KAMAL KISAN  JAIN Jain Irrigation Systems Ltd.  FLYBIRD INNOVATIONS  SYS3E  Kisan Raja |
| Post-production Supply Chain Infrastructure | Storage, transport, post-harvest processing, and distribution solutions |  nanopi  Inficold  leaf  ecoZen solutions  ergos  ThinkLink  NeoMandi  S4S technologies |
| Credit and Risk Management | Access to finance and insurance, either as a separate solution or integrated with the primary offering |  M-PESA  JAYALAXMI Agro tech  EM3 Agri Services  skymet weather wise  Satsure  MyCrop  Agrowoods |

...along with a well-developed Fintech landscape with four prominent models

Illustrative only,
not exhaustive

| Model Type | Description | Players |
|------------|--|---|
| Payments | CRC, C2B, C2C |        |
| Credit | Asset Financing & Working Capital, Non-agriculture loans | <div>     </div> <div>   </div> |
| Insurance | Crop & Livestock, Personal Insurance | <div>    </div> <div>    </div> |
| Savings | General Savings Products |    |

Agriculture specific offerings

However, current interventions are not gender intentional, creating a gap that can be filled by gender focused programs like AgriFin for Women (A4W) India



Increasingly, there is **awareness and recognition** that WSHFs play an important role in Agriculture.



Further, **there are a few who are aware that serving WSHFs also represents a financial opportunity.**



However, **very few are actively designing offerings** targeted at them due to competing business priorities, lack of a clear understanding of WSHFs needs and large-scale evidence around impact on the business, and risk capital among other drivers.

“To close the gender gap in agricultural services, we have developed a gender strategy framework.”

– An agri-enterprise focusing on collective growth

“Women farmer is one of our most profitable segments”

– A fin-tech firm focusing on underbanked spectrum

“The work of overcoming the gender gap has already begun, but there is a long road ahead. ”

– An agri-tech firm focusing on women smallholder farmers

We seek to explore three pathways to target WSHFs – through VLE networks, bundled financial and agri services, and value chain specific interventions

Potential pathways

1

Leverage women village level entrepreneur (VLE) network as trusted channel for demand aggregation and last mile delivery of agri products and financial services to WSHFs

2

Offer bundled financial (insurance and credit) **and agri services**, (advisory as well as market linkage) tailored to the needs and challenges of WSHFs

3

Offer value chain-specific bundles for women in the **dairy sector**, including sector-specific advisory and/or insurance products bundled with a **tailored savings product**

Challenges addressed

Mobility constraints, information asymmetry, poor market linkage, and disaggregated demand

Low penetration of formal credit, low willingness to pay for insurance, information asymmetry, and limited know-how

Lack of relevant savings products, information asymmetry and limited know-how

Potential partners



Digital tools can address the pain points of farmers at the last mile...



Digital lends itself to customization: Digital allows for products, information and services to be tailored for a specific location or farm. Digital can improve access to the right inputs at the right time.



Digital provides a platform for multiple providers to reach SHFs with products and services: Bundling the best available information, services and inputs that women small holder farmers need can increase farmer access and use.



Digital is a rapidly developing field that allows for real-time and better decision making: The sector will transform over the next decade. More data will be processed through ML allowing a better understanding of what is working, opening- up more opportunities to customize for women SHFs.

Challenges faced

Agribusinesses need full-time visibility and certification of goods when sourcing from smallholders

Digital solutions

Track & trace systems, farm management systems

Overall lack of visibility for buyers and sellers (including delays in sourcing inputs) hampers market dynamics

Online agriculture marketplaces and associated analytics

Farmers lack knowledge of best-practices and lack skills and access to agri-related information

Digital information and advisory services

Farmers rely on informal moneylenders and manual savings practices for their financial needs

Digital financial services

...however, WSHFs may require ‘digitally assisted’ models to overcome their exacerbated digital access challenges

Most rural women in target states in India do not own smartphones or internet and thus, reaching them as digitally assisted models requires a strong network of micro- entrepreneurs or Village Level Entrepreneurs (VLEs) who can leverage digital backend platforms and be the trusted conduit between service providers and WSHF.

VLEs can provide a range of financial and non-financial services (illustrative only):

Financial

- Farm credit
- Personal loans (e.g., gold loans)
- Cash-in-cash-out services
- Insurance advisory and sale

Non-financial

- Demand aggregation and sale of inputs
- Supply aggregation and purchase of farm produce

Key open questions to be addressed while considering VLEs model approach for assisted digital services for WSHFs are:



Business Model and operations

What VLE models exist in India, and is there a need for Women specific VLEs to support WSHFs? What are best practices in identifying the women VLEs, their training, distribution and delivery of services to WSHFs?



Needs and Product Offerings

What is the relevant ag. product/services bundle offered through a network of women VLEs that can improve outcomes (including income, productivity, resilience) for WSHFs?



Finance and Unit-Economics

What is the optimum product portfolio that offers a viable unit economics for women VLEs as well as WSHFs?

Learning from other geographies shows bundled services can be a critical innovation to increase potential uptake, active use and impact of products

- Our previous HCD research, and extensive experience of MercyCorp's Agrifin programs in Africa shows **bundling financial and agri services, especially using digital channels can greatly increase the uptake, active use and impact on income, productivity and resilience of SHFs, especially women.**
- **Advisory services typically become the first part of the bundle**, which helps SHFs get easy access to updated and high-quality information; often advisory services may also bundle ancillary topics like horoscopes, information about education loans etc. to build familiarity and eventual trust in using newer channels, especially digital services.
- However, to move the needle on income and productivity, **there is a need to bundle other services like credit, insurance, and market linkages** among others.
- Alongside developing tailored bundles that need specific needs/ challenges for WSHFs, it is important to also define tailored Go-to-market (GTM) strategies – the proposition, messages and channels.

Case Study: DigiFarm, a Safaricom subsidiary, is an integrated mobile platform for digital services targeting farmers. With a basic feature phone, Kenyan SHFs can access bundled services. DigiFarm has had over 1.3 million registered users since its launch and with additional features, it has become a one-stop shop for Kenyan farmers



In India, there is a need to learn about optimum product/service bundles for WSHFs and develop tailored go-to-market strategies

Bundles may include a combination of products and services (illustrative only), depending on partner, value chain and role of WSHFs

- | | |
|---------------------------------------|---|
| Information/ Advisory Services | <ul style="list-style-type: none"> • Agriculture advisory on specific practices where women are more involved such as weeding and sowing • Information on government entitlements and ag-relevant schemes • Updates on weather and climatic conditions |
| Financial Products | <ul style="list-style-type: none"> • Linkage with credit products like loan during sowing season upon regular savings during the year • Linkage with crop and cattle insurance (depending on the value chain) |
| Market Linkages | <ul style="list-style-type: none"> • Linkage with input suppliers/ procurement like discount on fertilizer purchase • Linkage with output aggregation to procure better rates for produce |
| Non-Agri Products and Services | <ul style="list-style-type: none"> • Linkage with non-agricultural services like family health and child education loans |

And bundle adoption can be optimized through targeted go-to-market strategy



Segmentation

WSHFs is a large target group – how can we segment them further (by role, demographics, personality etc.)? What are their differentiating attributes that can impact uptake of bundles?



Value Proposition and Messaging

What is the value proposition of these bundles for different segments? What kind of messaging, design do they respond to?



Channels

What are suitable channels that can increase uptake of these bundles? What support is needed to increase digital adoption and stickiness for women?

WSHFs play a key role in dairy farming; however, face several challenges during production and market linkage as well as poor access to fin. services



Nearly half of the dairy farmers involved in the selling of milk are women ²



Less than half of the total dairy farmers involved in credit, loans, and bank management are women

- Most of the animal husbandry activities in the dairy sector including bringing fodder from field, chaffing the fodder, preparing feed for animals, offering water to animals, protection of animals from ticks and lice, cleaning of animals and sheds, preparing of dung cakes, milking and ghee-making are performed by women.
- Dairy women farmers are not involved in decision making including buying and selling of cattle and market linkage activities including marketing and selling of produce.³

Small Holder Dairy Farmers lack veterinary support, advice on cattle nutrition, access to optimal nutrition for animals, and market access for their milk⁴

Animal Fodder and Health: There is an acute and ever-growing shortage of green fodder and good-quality feed. The lack of proper health facilities for animals also results in yield reduction. **Lack of access to relevant insurance** to women farmers escalates the loss in case of poor animal health.

Poor returns: Dairy cooperatives are not a preferred choice for landless or small farmers, especially women, escalating the challenge of market linkage.

Unorganized nature and fragmented supply chain: The majority of cattle raisers are unorganized, particularly women. The fundamental challenge in dairy is maintaining quality and quantity within a diversified supply base. Due to its perishable nature, dairy requires more complex supply chain operations and logistics to ensure freshness and safety, creating a challenge for women because of mobility constraints.

Price sensitivity: Dairy Farmers are highly susceptible to even minor shocks. For instance, small changes in the employment and income of consumers can leave a significant impact on milk demand. Because of a lack of savings behavior and lack of access to formal credit facilities for women, this results in working capital issue for the women dairy farmers for subsequent sales.

The dairy value chain is witnessing entrepreneurial and policy momentum, but questions remain for increasing value generation for WSHFs

The dairy value chain is witnessing increasing entrepreneurial activity as well as policy momentum in the recent years:

Dairy focused startups have raised ~140 million USD (INR 1000 + Cr) in India¹

- Farm Management
- Cattle Health
- Market Linkage



Training Program by National Commission for Women²

The aim of the project is to collectivize women, dairy farmers, into self-help groups in every district of India and empower women to achieve financial independence.

Key open questions to be addressed while offer value chain specific bundles for women in the dairy sector are:

- What are the needs of WSHFs in the dairy sector that can be addressed through digital information & services?
- How can access and linkage to market for women improve through digital and financial products?
- How can partnerships lead to sustainable business models and drive transformative changes for WSHFs in the dairy value chain?
- What is the impact of providing products/services bundles (including savings and advisory) for WSHFs in dairy value chain on their income, productivity and resilience?




ANNEXURE



List of stakeholders interviewed

| Organization | Stakeholder Group | Organization Type |
|-----------------------------|--------------------------|------------------------------|
| Airtel Payment Bank | Core | Fintech company |
| DeHaat | Core | Agritech company |
| Samunnati | Core | Fintech company |
| Digital Green | Backup Core | Agritech company |
| Kuza | Potential VaS Partners | Agritech company |
| NASA | Potential VaS Partners | Research institute |
| Cropin | Potential VaS Partners | Agritech company |
| Syngenta | Potential VaS Partners | Agritech company |
| Avanti Finance | Potential VaS Partners | Fintech company |
| Kalgudi | Potential VaS Partners | Agritech company |
| Microsave | Digital Producers Groups | Research institute |
| CGIAR | Ecosystem Partners | Research institute |
| ICRISAT | Ecosystem Partners | Research institute |
| Paani | Ecosystem partner | Civil Society Organization |
| Happy roots | Ecosystem partner | Civil Society Organization |
| Trust Community Livelihoods | Ecosystem partner | Civil Society Organization |
| PRADAN | Ecosystem partner | Civil Society Organization |
| FPO1 | Ecosystem partner | Farmer Producer Organization |
| FPO2 | Ecosystem partner | Farmer Producer Organization |
| FPO3 | Ecosystem partner | Farmer Producer Organization |



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