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Gender and Water in Agriculture and Allied Sectors

Towards Sustainable and Equitable Models

Case Studies from Maharashtra



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Reema Sathe with village women, Happy Roots; 2030 Water Resources Group; Sulabai Sable, Happy Roots; Swayam Shikshan Prayog

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Written by

This work is a joint product of 2030 WRG and UNDP India with external contributions. The writing team includes Aafreen Siddiqui, Ajith Radhakrishnan, Gandhar Desai, Karishma Gupte, Mahesh Patankar, Rochi Khemka, and Sukhman Randhawa.

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Devendra Fadnavis
Chief Minister
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24th January 2019

FOREWORD

Women farmers are the backbone of agriculture in India, contributing to majority of the labour involved. Yet, they remain largely absent in agriculture-based decision making at the household level. While women are gradually carving out a space for themselves, I believe that revival of the agricultural sector in the State of Maharashtra and in India cannot take place in absence of women leadership. Research suggests, increasing women's labour force participation by 10 percent could add \$700 billion to India's GDP by 2025. The success of the self-help and microfinance movements in Maharashtra, is a testament to the potential of collective action by India's rural women.

Moreover, through initiatives such as reform in labour laws, launching a special policy for women entrepreneurs, creating a cadre of skilled women (Skill Sakhis), and multiple livelihood development programmes focusing on gender equality, the Government of Maharashtra is committed to creating livelihood opportunities for women.

This publication, "Gender and Water in Agriculture and Allied Sectors", jointly developed by 2030 Water Resources Group, hosted at the World Bank and the United Nations Development Programme, showcases some successful case studies where rural women are taking a lead and diverse stakeholders are coming together to demonstrate innovations in agricultural production systems.

Furthermore, the document lays out the policy recommendations concerning certain issues affecting rural women, and agriculture in particular – impacts of climate change where water scarcity assumes a central position, access to information and resources that can support women to bring about a change and the role of the private sector in revitalising agriculture through promotion of technology and connection to markets.

This document will indeed guide the Government of Maharashtra to collaborate and build greater cooperation with the private sector and community-based organisations, embed gender sensitive attributes in policy making and identify opportunities to scale certain projects and programmes in the State.

I hope that this publication drives more action on the ground and enhanced livelihood for rural women.

(Devendra Fadnavis)

Foreword



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The World Bank invested over USD 400 million for agricultural development in Maharashtra last year. While men and women play equally significant roles in agriculture and irrigation, the contribution of women often goes unnoticed and unpaid. With women comprising over 50% of the agricultural labor force in Maharashtra, and agriculture using up to 80% of freshwater in the state, the relationship of women with water and agriculture deserves urgent attention.

Women face severe constraints in accessing information, training services, inputs, markets, and resources such as water. According to FAO, women can improve agricultural productivity by 20 to 30 percent, if offered the same level of training and resources as men.

This flagship document, developed jointly by 2030 Water Resources Group, a program hosted by the World Bank, and UNDP India, showcases five successful case studies where women are reshaping communities and adding value to the local economy through enterprise development. Since scalable solutions require collective action, each of these cases highlight a unique model of collaboration with the government and/or private sector. 2030 Water Resources Group, through its Maharashtra Water Multi-Stakeholder Platform, is convening public sector, private sector and civil society representatives to support a transformative agenda to tackle the water-agriculture-gender nexus.

These are stories of empowerment, of courage and strength to improve the community and the village, and of dynamic and enterprising women who are contributing to household income. The demonstration projects highlighted in this document have benefited 50,000 women so far, offering numerous policy directions to reach scale.

With over 20 million poor in Maharashtra, we cannot stop here. With the collective responsibility to drive change through better policies, improved practices, and access to technology and market, I invite your participation in this process of transforming rural India.

Junaid Ahmad
Country Director, India, World Bank

Foreword



*Empowered lives.
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Government data suggests that three out of four rural women are farmers, and that they carry out most of the physical labour involved in agriculture. Yet, as in the boardroom, women remain poorly represented in decision-making in or out of the field and have little say in decisions at the post-harvest stage, such as in how much produce to sell, where to sell, and at what price. But it is also increasingly clear that agriculture can only sustain growth in the future if the sector embraces gender responsive solutions that enable more women to access finance, technology, information and market opportunities.

In the three years since its launch in 2015, Disha, a partnership between the India Development Foundation and UNDP, supported by IKEA Foundation, has emerged as a powerful collaboration between stakeholders, demonstrating the potential for women to participate in greater numbers in India's growth story, enabling over 7 lakh women to become economically self-sufficient. Disha achieves this through training, employment and entrepreneurial skill development, as well as testing innovative models of public-private partnership for scalability, so we can together realize our vision to empower all women. Disha has explored a unique model that creates direct links between farmers, private sector companies and the market for women producers and their families. In the drought-prone region of western Vidarbha in Maharashtra, a group of women sourcing managers, equipped with skills to deliver post-harvest management services to local farmers, are changing the narrative by enabling fair and transparent purchase of agricultural produce through village-level collection centres. This is a first of its kind end-to-end Agri-value chain initiative in association with a private sector partner, the Future Group.

At UNDP, we believe that effective collaboration with governments as well as the private sector is key to achieving the ambitious Sustainable Development Goals. The private sector has the potential to dramatically reduce poverty and transform gender disparities by connecting women to markets and economic opportunities, helping to reshape attitudes and norms among women and men about gender relations, and demonstrating the benefits of greater gender equality. On the other side, it is only by working with governments that we can achieve delivery at scale and create last-mile impact.

I thank the Government of Maharashtra and Mahila Arthik Vikas Mahamandal for creating innovative livelihood opportunities for enterprising rural women and connecting farmers with fair and sustainable supply chains. I also thank Future Group, India's leading retail conglomerate, for sharing its business expertise in training, institutional capacity building, and procurement of agricultural commodities. Its knowledge arm, Future Learning Pvt Ltd, developed comprehensive training modules on post-harvest agricultural management.

The Gender and Water in Agriculture and Allied Sectors Report, jointly developed by 2030 WRG and UNDP, looks at innovative and sustainable models in the gender and water sectors, both of which are key to achieving at least eight Sustainable Development Goals. I am certain that this report will help drive stronger interventions in the agricultural space that embeds initiatives to empower women economically and socially.



Francine Pickup
Resident Representative a.i., UNDP India

List of Abbreviations

| | |
|----------|---|
| 2030 WRG | 2030 Water Resources Group |
| APMC | Agricultural Produce Market Committee |
| BAIF | Bharatiya Agro Industries Foundation |
| BCI | Better Cotton Initiative |
| BRAC | Building Resources Across Communities |
| CAIM | Convergence of Agricultural Interventions in Maharashtra |
| CCIL | Clearing Corporation of India Limited |
| CEO | Chief Executive Officer |
| CMRC | Community Managed Resource Centre |
| CRF | Community Resilience Fund |
| CRP | Community Resource Person |
| CSO | Civil Society Organization |
| CSR | Corporate Social Responsibility |
| DAY-NULM | Deendayal Antyodaya Yojana – National Urban Livelihoods Mission |
| DFID | Department for International Development |
| ESM | Economic Survey of Maharashtra |
| FAO | Food and Agriculture Organization of the United Nations |
| FFC | Fourteenth Finance Commission |
| FIG | Farmer Interest Group |
| FMCG | Fast Moving Consumer Goods |
| FPC | Farmer Producer Company |
| FPO | Farmer Producer Organization |
| GDP | Gross Domestic Product |
| GGGI | Global Green Growth Institute |
| GoM | Government of Maharashtra |
| GPDP | Gram Panchayat Development Plans |
| GR | Government Resolution |
| GWP | Global Warming Potential |
| ICAR | Indian Council of Agricultural Research |
| IDF | India Development Foundation |
| IDH | The Sustainable Trade Initiative |
| IFAD | International Fund for Agricultural Development |
| IFC | International Finance Corporation |
| IGP | Income Generating Project |
| IL&FS | Infrastructure Leasing and Financial Services |
| ILOSTAT | International Labour Organisation Statistics |
| INGO | International Non-Governmental Organization |
| INR | Indian Rupee |
| ITNL | IL&FS Transportation Networks Limited |
| IUCN | International Union for Conservation of Nature |
| IVRI | Indian Veterinary Research Institute |
| JLG | Joint Liability Groups |
| JSA | Jalyukt Shivar Abhiyan |

| | |
|-----------|---|
| KVK | Krishi Vigyan Kendra |
| MACP | Maharashtra Agricultural Competitiveness Project |
| MAVIM | Mahila Arthik Vikas Mahamandal |
| MGNREGS | Mahatma Gandhi National Rural Employment Guarantee Scheme |
| MLP | Micro Livelihood Plan |
| MMISF | Maharashtra Management of Irrigation Systems by Farmers |
| MoHUA | Ministry of Housing and Urban Affairs |
| MSAMB | Maharashtra State Agricultural Marketing Board |
| MSE-CDP | Micro and Small Enterprises – Cluster Development Programme |
| MSICDP | Maharashtra State Industrial Cluster Development Programme |
| MSME | Ministry of Micro, Small and Medium Enterprises |
| MSP-Water | Maharashtra Water Multi-Stakeholder Platform |
| MSRLM | Maharashtra State Rural Livelihoods Mission |
| NABARD | National Bank for Agriculture and Rural Development |
| NCDEX | National Commodity & Derivatives Exchange Limited |
| NCR | National Capital Region |
| NDRI | National Dairy Research Institute |
| NeML | NCDEX e-Market Limited |
| NGO | Non-Governmental Organization |
| NOP | National Organic Program |
| NPOP | National Programme for Organic Production |
| NRCM | National Research Centre on Meat |
| NSSO | National Sample Survey Office |
| PACS | Primary Agricultural Credit Societies |
| PMKSY | Pradhan Mantri Krishi Sinchayee Yojana |
| PoCRA | Project on Climate Resilient Agriculture |
| RDD | Rural Development Department |
| RFS | Rain-fed Farming System |
| SDG | Sustainable Development Goals |
| SFAC | Small Farmers' Agri-business Consortium |
| SFPCL | Sahyadri Farmers Producer Company Limited |
| SHG | Self Help Group |
| SIDBI | Small Industries Development Bank of India |
| SOP | Standard Operating Procedure |
| SSP | Swayam Shikshan Prayog |
| UNDP | United Nations Development Programme |
| USD | United States Dollar |
| USDA | United States Department of Agriculture |
| VCRMC | Village Climate Resilient Agricultural Management Committee |
| WCRF | Women-led Climate Resilient Farming Model |
| WSM | Woman Sourcing Manager |
| WUAs | Water Users' Associations |

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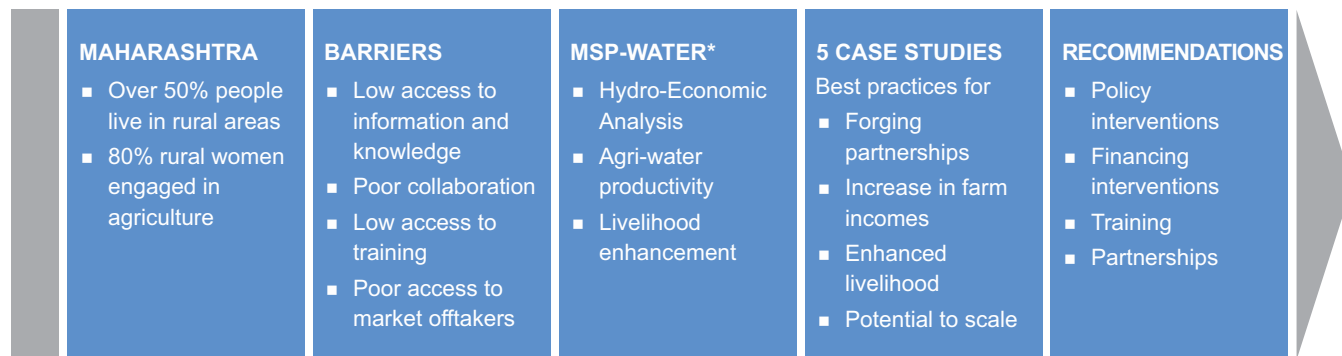
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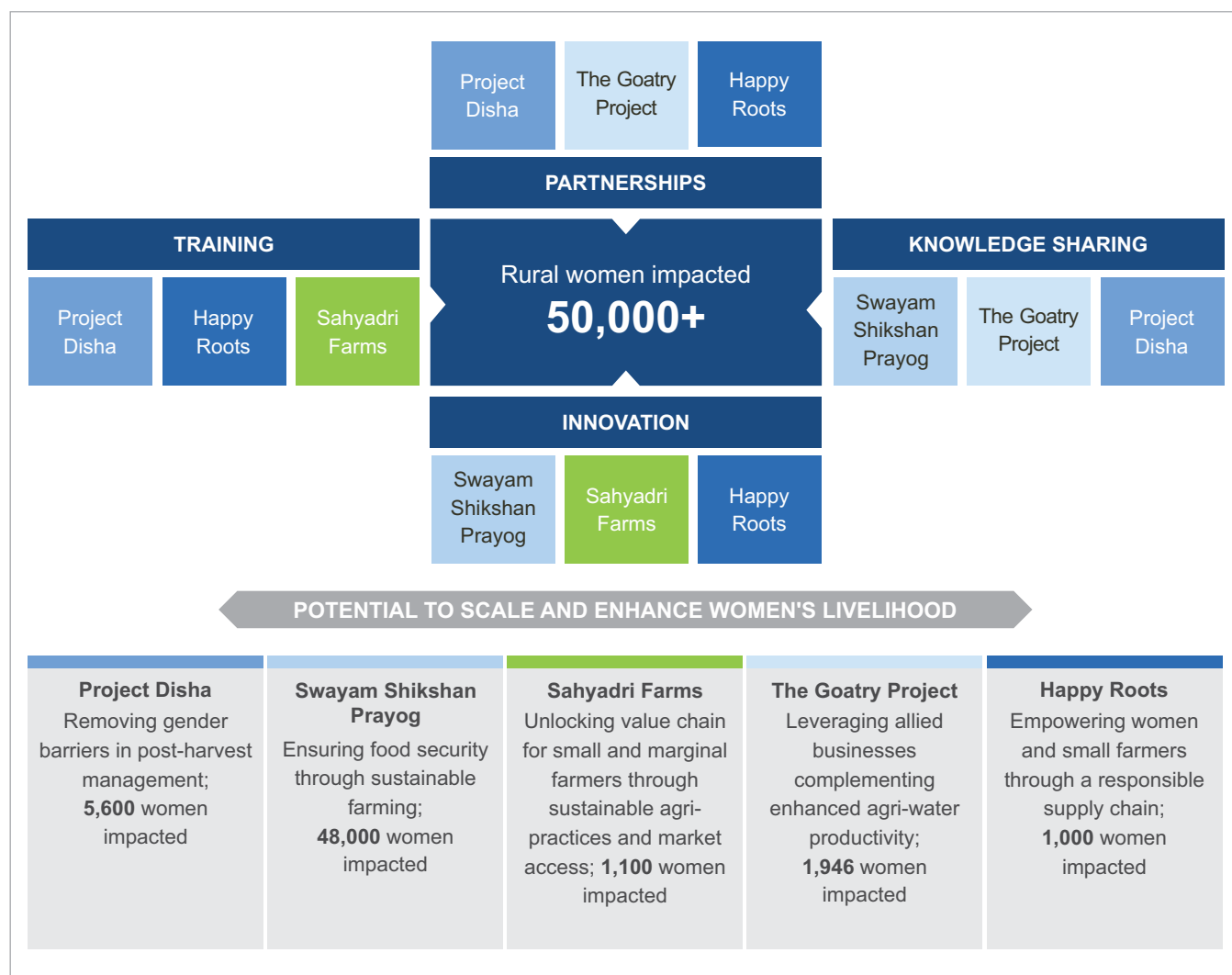
Executive Summary

Log-frame for the Publication



*With guidance from the Government of Maharashtra, 2030 WRG conducted a Hydro-Economic Analysis of opportunities to improve water use in the agricultural sector that recommended collective action, resulting in the formation of the Maharashtra Water Multi-Stakeholder Platform (MSP-Water) to facilitate optimal, sustainable and efficient approaches and solutions in the agricultural sector in the state. The MSP-Water brings together key public, private, and civil society stakeholders to assess priorities and develop concrete proposals that can help improve the management of water, improve agricultural productivity and enhance rural livelihoods.

Case Studies at a Glance



| RECOMMENDATIONS | PUBLIC SECTOR | PRIVATE SECTOR | CIVIL SOCIETY |
|--------------------------------|--|---|--|
| Policy interventions | <p>Improved market access for women-run FPCs/FPOs.</p> <p>Offer policy support for promoting nutrition-rich, indigenous, climate resilient varieties of crops.</p> | <p>Leverage ongoing government initiatives directed towards empowering women and improving their livelihood opportunities.</p> | <p>Improve awareness for women on existing government policies and schemes.</p> |
| Financing interventions | <p>Promote formation of a Special Purpose Financing Vehicle (e.g. public-private partnerships) including start-up funds and funds targeting women-run FPCs.</p> | <p>Set up innovative equity or debt funds such as credit guarantee fund or a revolving fund to facilitate working capital.</p> <p>Leverage CSR funds for developing the village ecosystem that facilitates women entrepreneurs.</p> | |
| Training | | <p>Promote training and capacity building of women farmers to facilitate integrated value chains.</p> | <p>Implement training and capacity building modules at the grassroot level and advocate for financial literacy.</p> |
| Partnerships | <p>Create an entrepreneurship and incubation facility for women-led, water-centric agri-innovations supporting existing GoM initiatives.</p> | <p>Connect women farmers to the markets through support from private sector (buying produce) and civil society (facilitating the collaboration).</p> | <p>Leverage 2030 WRG facilitated Maharashtra Water Multi-Stakeholder Platform to drive dialogues and develop partnerships in agri-water-gender through public-private-civil society engagements.</p> |



Photo credit: Happy Roots



Introduction



Seventy-eight percent of the most poor and vulnerable people around the world live in rural areas and depend on agriculture as the source of their livelihood. Agriculture continues to underperform as a sector in developing countries due to a variety of reasons that includes among others, lack of access to technology and storage facilities. A frequently overlooked factor though, is the gender gap that adversely affects agricultural productivity. Women provide approximately 40 percent of the labor force in agriculture (FAO 2011) and

are productively engaged as rural workers and entrepreneurs. However, despite their diverse contributions, women in agriculture and rural areas have less access than men to productive resources, training and information. Bringing yields on the land farmed by women up to the levels achieved by men would increase agricultural output in developing countries between 2.5 and 4 percent (FAO 2011). Strategies that look to address the gender gap in the agricultural value chain, especially through sustainable enterprise models, would have a significant impact on the social and economic development of rural and national economies.

1.1 The Indian Agriculture Scenario and Gender Imperatives

The Indian agricultural sector can realize its growth potential through gender-inclusive strategies and better water resources management. This requires the initiation of policy dialogue and targeted stakeholder interventions.

Agriculture employs 43 percent of India's workforce (ILOSTAT 2018) and contributes about 18 percent to the national GDP, and thus plays an important role in the country's economy.

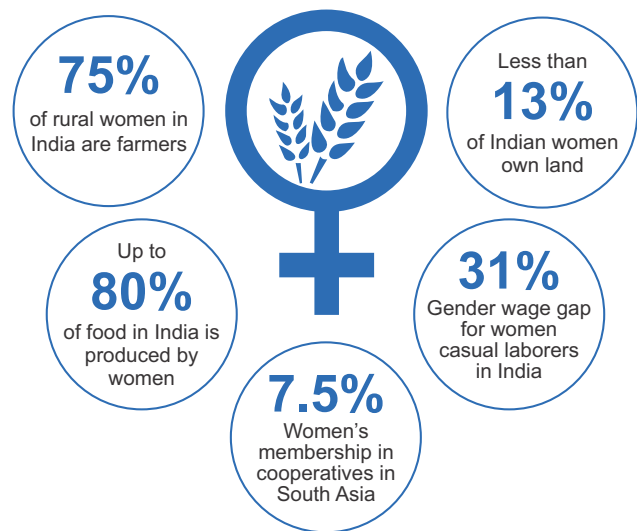
More than two-third of India's population which lives in rural areas, links its prospects to the potential for growth in agriculture and allied sectors. However, agriculture in India continues to be at the mercy of unpredictable weather patterns and acute shortage of sustainable water resources. In addition, the existing gender gap prevents women from effectively contributing to agricultural productivity improvements.

According to a government survey, 75 percent of rural women are farmers (NSSO 2014). Moreover, evidence suggests that women carry out most of the back-bending tasks on the field, that is, from preparing the land, selecting seeds, preparing and sowing to transplanting the seedlings, applying manure, fertilizers, and pesticides, and then harvesting, winnowing and threshing (Pande 2017). According to Oxfam India, women farmers produce 60 to 80 percent of food and 90 percent of dairy products (Business Line 2013). However, women have poor access to extension services and less than 13 percent of Indian women own land (Sircar 2016). Working as casual laborers, women's wages were only 69 percent of male wages (Dewan 2014). Furthermore, women are often under-represented in rural organizations and institutions, and are poorly informed regarding their rights. This prevents them from having an

equal say in decision-making processes, and reduces their ability to drive collective action, such as membership of agricultural cooperatives or water user associations. For example, women comprised 7.5 percent of total membership of the cooperatives in South Asia (Prakash 2003).

As a result, two aspects remain critical in ensuring competitive agricultural growth trends for the future: the availability of sufficient and sustainable sources of water; and gender responsive solutions that enable more women to access finance, technology, information and market opportunities.

Figure 1: Women in Agriculture in India at a Glance



1.2 State of Gender, Water and Agriculture in Maharashtra

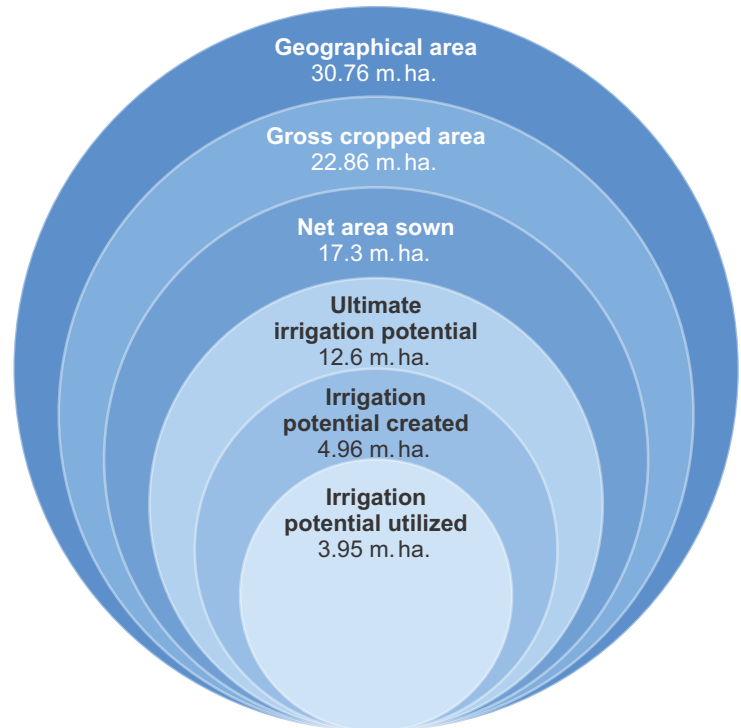
Maharashtra is the third largest Indian state in terms of geographical area and the second most populous with over 112 million inhabitants. Maharashtra is an economic powerhouse, contributing 14.6 percent to the national GDP. The state is industrialized and almost half of the population lives in urban areas. The agricultural sector employs 50 percent of the workforce in the state, while contributing less than 11 percent to its income. The agricultural sector in Maharashtra has grown at a meager 3.5 percent on average annually in the decade between 2004-05 and 2014-15, but growth in the sector fluctuates heavily and is dependent on highly erratic rainfall.

A major cause of low agricultural productivity in Maharashtra is lack of irrigation facilities. Currently, only about 18 percent of agricultural land is irrigated, whereas the total surface water irrigation potential (command area of large dams) is about 50 percent.

According to 2030 WRG's Hydro-Economic Analysis for Maharashtra, increases in agricultural productivity can boost growth by 50 percent with only 10 percent incremental water requirement, as opposed to more water-intensive strategies such as area expansion. Despite substantial investments made in the irrigation sector over the last seven decades since independence, approximately 80 percent of the agricultural land in Maharashtra remains outside formal irrigation systems provided by the state.

The state is a major producer of sugarcane, cotton, oranges, jowar and pulses but has one of the lowest food grain yields, compared to other large states such as Uttar Pradesh, Karnataka, Gujarat, and Rajasthan.

Figure 2: Agricultural Land and Irrigation in Maharashtra



Source: Economic Survey of Maharashtra (ESM) 2017-18 and Maharashtra Water and Irrigation Commission (1999)

Maharashtra is prone to various types of natural disasters such as droughts, floods, cyclones and earthquakes, significantly impacting agricultural productivity. Drought is the most frequently recurring phenomenon and has severely impacted the state in the last three years leading to grave agrarian distress. According to the World Bank report on South Asia's climate change hotspots, out of the top ten districts in India predicted to witness most change in living standards, seven districts (Chandrapur, Bhandara, Gondia, Wardha, Nagpur, Yavatmal, and Gadchiroli) are from the Vidarbha region of Maharashtra (Mani et al 2018).

Since a majority of the women in rural areas in Maharashtra are engaged in agriculture and allied activities, limited access to key resources impacts the productivity by preventing their active participation in value creation. Women are disproportionately affected by water scarcity and lack of access

to safe water. The state must meet and balance the increasing water demands – from a broad range of pressures – of a growing population with water needs for food security, economic growth, and energy production, while sustaining the ecosystem. In this context, there is an urgent need for stronger interventions in the agricultural space that address the challenge of water management and conservation, while embedding initiatives that empower women economically and socially. This could involve an enhanced role for women in local communities and for the management of village-level projects, as well as the design of incentives and opportunities to promote women's entrepreneurship in the agricultural value chain.


To address these challenges, we require integrated approaches and collective actions from the public, private sectors and civil society, which result in solutions at scale that are policy relevant and pragmatic. With guidance from the Government of Maharashtra, 2030 WRG conducted a Hydro-Economic Analysis of opportunities to improve water use in the agricultural sector that recommended collective action, resulting in the formation of the Maharashtra Water Multi-Stakeholder Platform (MSP-Water) to facilitate optimal, sustainable and efficient approaches and solutions in the agricultural sector in the state. The MSP-Water brings together key public, private and civil society stakeholders to assess priorities and develop concrete proposals that can help improve the management of water, improve agricultural productivity and enhance rural livelihoods. However, it is difficult to ignore the role of women in the rural agricultural economy. This compilation of case studies aims to demonstrate how partnership approaches can transform the livelihoods of women in rural areas.




1.3 Alignment with United Nations Sustainable Development Goals

These case studies, at the intersection of water, gender and agriculture, are closely aligned with eight Sustainable Development Goals (SDGs) of the United Nations:


Figure 3: UN SDGs Covered in Case Studies

 Recognizing women's role in agriculture and ensuring their effective participation and opportunities for decision-making at all stages in the agricultural supply chain, with equal access to resources including land, credit and skills. (5.5, 5.6)¹

 Increasing water-use efficiency in agriculture through adoption of micro-irrigation and community-based management of water resources. (6.4, 6.B)

   Increasing productivity of agriculture for small farmers with modern, sustainable and environment-friendly practices to reduce food wastage and conserve natural resources, while developing resilience to climate-related hazards and disasters. (2.3, 2.4, 12.2, 12.5, 12.6, 12.8)

  Alleviating poverty in small and marginal farmers² by creating alternate and diversified sources of livelihood and opportunities for skill development, enterprise development and value-addition. (1.2, 1.5, 8.2, 8.3)

 Creating avenues for sustainable development in developing countries through resource mobilization from various sources, creating sound policies and by leveraging multi-stakeholder partnerships between the government, civil society and private sector. (17.3, 17.11, 17.14, 17.17)

The study is divided into three key sections:

- 1) The **Policy Analysis** section provides a brief snapshot of the policy landscape and interventions in Maharashtra's agriculture sector, with a focus on gender, water, and the role of private sector.
- 2) The **Case Study** section takes a detailed look at five examples of women's empowerment through their participation in agricultural supply chains, enhanced decision-making in water and natural resource management, and leadership in managing rural businesses.
- 3) The **Recommendations** section includes key learnings and suggestions to support women with the needed enabling-environment and resources to advance water-efficient agricultural production systems.

The selection of the five case studies was based on their relevance to the agri-water agenda, the magnitude of impact generated, the nature of partnerships leveraged, and the innovative nature of the approach adopted. The case studies highlight how sustainable natural resources management and favorable livelihood conditions at the village level facilitate improved incomes and socio-economic outcomes for women and their families. It is important to note that the case studies presented here depict successes of evolving businesses that operate through interesting models. These carefully selected case studies are the result of active efforts by groups of partners (public, private and civil society representatives) to improve the livelihood of women in rural Maharashtra. These are intended to serve as models for interested public and private sector donors to contribute to the scale up of such innovative approaches.

¹ Relevant SDG targets in parentheses.

² In India, farmers are categorized according to their agricultural land holdings. A 'marginal' farmer is one who cultivates up to 1 hectare of agricultural land, while a 'small' farmer cultivates between 1 and 2 hectares.



Photo credit: Happy Roots



Relevance of Gender Issues in the State Agri-water Policies



The Government of Maharashtra (GoM) has made notable strides in the areas of water conservation and management. The policy landscape for agri-water includes various policies, programs and schemes of the state as well as the central government in areas of water resource management, conservation, sustainable agriculture, value-addition and agricultural marketing. Many of these initiatives recognize the role of women in decision-making, which require further strengthening through concrete provisions for their empowerment. This section examines some key public sector interventions in

Maharashtra focused on the intersection of gender equality, water resources management, and agricultural value chain development.

GoM proposed the State Water Policy (2003) aligned with and based on the National Water Policy (2002, amended in 2012). While both policies cover a wide range of subjects in the agri-water sector including groundwater management, climate change, demand management and water-use efficiency, both policies fail to highlight the role of women in water resources management in any form. Similarly, Jalyukt Shivar Abhiyan (2014), launched in 2014, is a flagship program of GoM with the aim to tackle water distress in over 25,000 drought-prone villages of the state, particularly in Vidarbha and Marathwada regions. The program integrates 15 water-related schemes (including

rainwater harvesting and watershed development) from multiple government departments to be implemented under the leadership of individual district collectors. The program aims to make 5,000 villages 'water neutral' each year through a range of water conservation measures such as construction of farm ponds, check dams, wells and other decentralized water storage structures, widening of streams, desilting and rejuvenation of existing water bodies, groundwater recharge and area treatment interventions. While the initiative has received a positive response from the agricultural community, the policy does not take into account the role of women and their unique potential in leading community-level initiatives.

The Fourteenth Finance Commission (FFC), constituted in 2013 to give recommendations on specified aspects of center-state fiscal relations during 2015-20, including devolution of funds to Gram Panchayats³, takes into consideration the value created by including women in village committees. In accordance with FFC recommendations, the Rural Development Department (RDD), Government of Maharashtra has published guidelines for the creation of Gram Panchayat Development Plans (GPDP 2015), ensuring active participation of women and women's Self Help Groups (SHGs) in the planning process. The guidelines also provide for the creation of 'Village Resource Groups' for managing natural resources in villages with a mandate that a third of the members of these groups should be women. At the village level, the Women's Committee of the Gram Panchayat along with the Village Resource Group formed in accordance with GPDP guidelines can act as an ideal platform for mobilizing women and ensuring their participation in interventions related to water conservation and management.

Furthermore, the World Bank has collaborated with GoM for the Nanaji Deshmukh Krishi Sanjivani Yojana (2018), also known as Project on Climate Resilient Agriculture (PoCRA). It aims to improve the quality of farming systems in the most climate vulnerable districts of Maharashtra to better cope with the impact of

extreme climatic events. The project promotes solutions and strategies for sustainable agricultural food production systems, commodity value chains, and improved governance of rural institutions that can help reduce the negative impacts of climate change in 15 districts of Marathwada and Vidarbha regions. A key feature of PoCRA is the involvement of local gram panchayats and constitution of Village Climate Resilient Agricultural Management Committee (VCRMC) to ensure active participation and ownership by the community in planning, implementation, and monitoring. Of the 11 members in the VCRMC headed by the Sarpanch⁴ of the village, five seats are reserved to represent women farmers and SHGs. As a result, women are gradually taking on leadership roles in a few pockets of the state.

Maharashtra has been a pioneer of the cooperative movement in India, with a strong existing network of district and urban cooperative banks, Primary Agricultural Credit Societies (PACS), and various agri-related cooperative units. The Maharashtra Cooperative Societies Rules (1961) provide for the formation of cooperative societies for farming, crop protection, lift irrigation, processing of goods, producers and resource management. The rules mandate reservation of seats in committees for women to ensure women's representation at decision-making levels within cooperatives. The Maharashtra Management of Irrigation Systems by Farmers (MMISF) Rules (2006) provide for the creation of Water Users' Associations (WUAs) to enable farmers to act collectively to improve the productivity of agriculture. On the lines of provisions for other cooperatives, the Act ensures adequate representation of women as Directors in the Managing Committees representing head, middle and tail reaches of the area of operation of distributary-level, canal-level, and project-level associations. However, participation of women in WUAs continues to be low, primarily due to lower levels of land ownership and decision-making powers.

With an aim to make agriculture a viable business activity, the Ministry of Agriculture released Policy and Process Guidelines for Farmer Producer Organizations (FPO) (2013), which lays out the procedure for formation of Farmer Producer Companies (FPC), with assistance from the Small Farmers' Agri-business Consortium (SFAC) and affiliated resource institutions. While the guidelines do not highlight the role of women farmers in agriculture, they speak of "achieving social impact by promoting improved gender relations in organizations and ensuring women's participation in decision-making by giving them board member positions." Prior to the guidelines, the FPC promotion regime in the state was carried out through the World Bank-funded Maharashtra Agricultural Competitiveness Project

³ Gram Panchayat: A gram panchayat is the local self-government, in India, which is responsible mainly for administration of the village and also looks after the welfare of the people in the village. Every village with a population of 500 and more must have a gram panchayat. In smaller villages, a group gram panchayat for two or three villages is established.

⁴ Sarpanch: Sar, meaning head, and panch, meaning five, jointly refer to the elected head of the five decision-makers of the gram panchayat. She/he is the the focal point of contact between government officers and the village community.

(MACP), which aimed to increase the productivity, profitability, and market access of the farming community in Maharashtra. Women-only FPC have led to their social empowerment and have increased household incomes, as highlighted through some of the case studies.

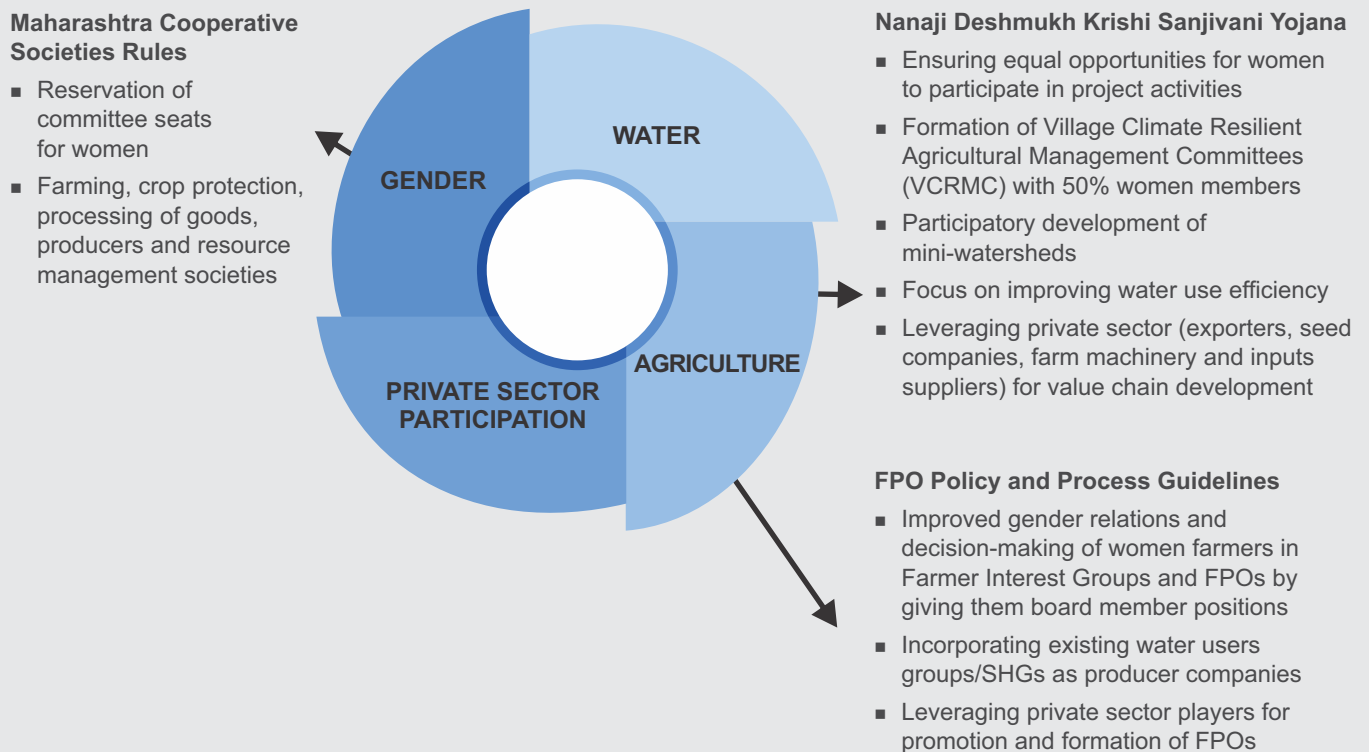
The state and central governments have provided various incentives for MSMEs through schemes such as the Cluster Development Programme (MSE-CDP 2007) and the Maharashtra State Industrial Cluster Development Programme (MSICDP 2013), which have special provisions for entrepreneurs from disadvantage groups, including women. In addition, GoM has launched the Maharashtra State Policy for Women Entrepreneurs (2017), which provides capital, subsidies and special

assistance to 100 percent women-run enterprises. These industry-oriented initiatives are complemented by programs aimed at livelihood development through women's SHGs, such as the World Bank funded Maharashtra State Rural Livelihoods Mission (MSRLM) and International Fund for Agricultural Development (IFAD)-funded 'Tejaswini' project implemented by Mahila Arthik Vikas Mahamandal (MAVIM). All of these initiatives provide enough impetus for setting up women-led enterprises in agriculture and food-processing sectors.

A list of relevant policies and programs is included in the annexure at the end of this report.

Some interventions of the government simultaneously address all critical elements related to gender, water conservation, agricultural productivity and private sector participation. A snapshot of such policies and programs is shown as follows:

Figure 4: Model Policies of the Government of Maharashtra



The policy apparatus of the state government has exhibited a strong policy thrust to support gender-sensitive agriculture and allied businesses. Key stakeholders in the

development sector can incorporate valuable insights about challenges, gaps, and positive lessons from the recommendations advocated in the next section which examines five case studies in detail.



Photo credit: Happy Roots



Case Studies from Maharashtra



Table 1: Case Studies at a Glance



POTENTIAL TO SCALE AND ENHANCE WOMEN'S LIVELIHOOD

| | | | | |
|--|---|--|--|---|
| <p>Project Disha Removing gender barriers in post-harvest management; 5,600 women impacted</p> | <p>Swayam Shikshan Prayog Ensuring food security through sustainable farming; 48,000 women impacted</p> | <p>Sahyadri Farms Unlocking value chain for small and marginal farmers through sustainable agri-practices and market access; 1,100 women impacted</p> | <p>The Goatry Project Leveraging allied businesses complementing enhanced agri-water productivity; 1,946 women impacted</p> | <p>Happy Roots Empowering women and small farmers through a responsible supply chain; 1,000 women impacted</p> |
|--|---|--|--|---|

PROJECT DISHA



Photo credit: UNDP Archives

Removing Gender Barriers in Post-harvest Management



Organizations Involved

UNDP, MAVIM, Future Group, NCDEX,
IKEA Foundation



Location

Akola, Amravati and Yavatmal districts



Duration

2017-present



Project Cost

INR 59,17,267 (USD 84,532)⁵ by UNDP and
INR 1,07,004 (USD 1,529) by MAVIM



Women Benefited

5,600 women

KEY RESULTS

Over **5,600**
women farmers trained in
sustainable agricultural
practices

30 women sourcing
managers trained for
enabling fair
agricultural procurement
from small farmers

Developed
capacity of **six**
Community Managed
Resource Centres

⁵ USD 1 equals INR 70, as on August 30, 2018.

Although women contribute to majority of the physical labor involved in agriculture, they are poorly represented in decision-making, at the post-harvest stage such as how much produce to sell, where to sell, and at what price. However, a group of 30 sourcing managers are changing the narrative in the drought-prone region of Western Vidarbha by skilling women farmers in post-harvest management practices and enabling fair and transparent purchase of agricultural produce through village-level collection centers. This is the result of 'Project Disha: Creating Employment and Entrepreneurship Opportunities for Women in India', a partnership between the India Development Foundation (IDF) and UNDP, supported by IKEA Foundation, that aims to support one million underprivileged women in India learn marketable skills offering them income opportunities. Project Disha is helping women become economically self-sufficient through training, employment and entrepreneurial skill development, and testing innovative models of public-private partnership for scalability. The pilot in Maharashtra is currently implemented by Mahila Arthik Vikas Mahamandal through its Community Managed Resource Centres.

Background

The Western Vidarbha region of Maharashtra coincides with the Amravati revenue division of the state and includes the districts of Amravati, Akola, Buldhana, Yavatmal, and Washim. With its fertile black soil, Western Vidarbha is a major cotton producing region of India. However, only 8 to 10 percent of cotton growing area in Vidarbha is under protective irrigation (VIIDP 2012) and the yield is lower compared to other cotton growing states (ESM 2017-18, page 269). Other important crops in the region include tur (red gram), chana (chickpea), and soybean.

The Vidarbha region is drought-prone. In 2016, the state government declared 5,810 villages from Western Vidarbha as drought-affected (Ghadyalpatil 2016). Successive crop failures and the resultant indebtedness are major causes behind high rates of farmer suicides in this region.

In the context of such agricultural distress, women's SHGs, especially those promoted by MAVIM⁶, have emerged as resilient support systems for women farmers. MAVIM has enabled them to create alternate sources of rural livelihood such as goatry, poultry, and dairy, mitigating the risks of crop failure.

⁶ Mahila Arthik Vikas Mahamandal (Women's Economic Development Corporation) is a not-for-profit public sector undertaking of Government of Maharashtra working for socio-economic-political empowerment of women through formation of SHGs and promotion of income generation activities. MAVIM's network includes over 75,000 active SHGs, involving more than 9,00,000 women spread across 35 of the 36 districts of Maharashtra.

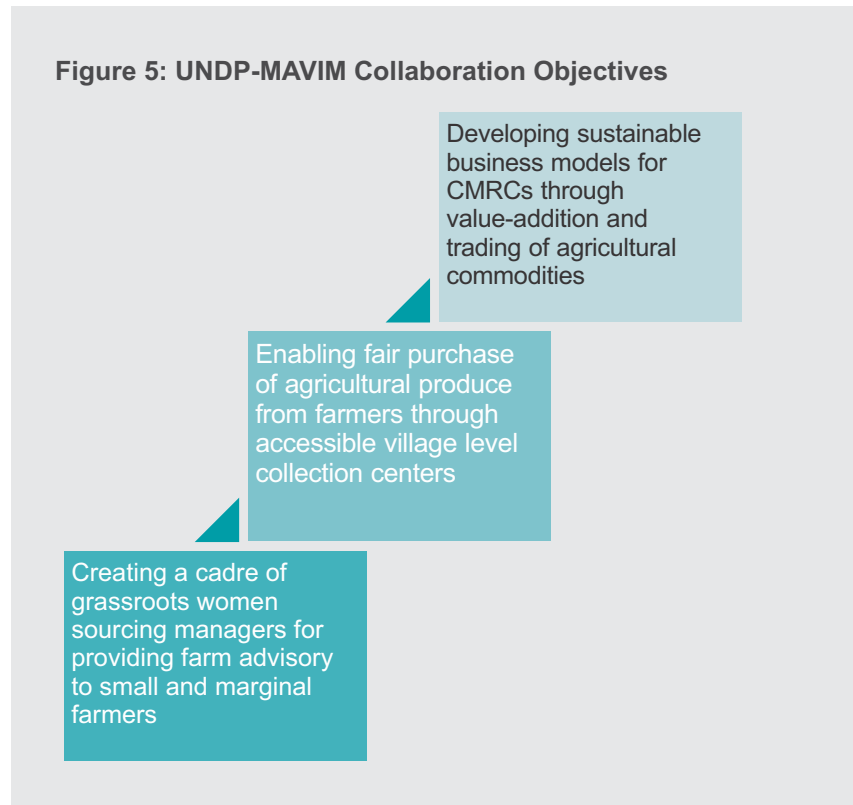
Project Disha

'Creating Employment and Entrepreneurship Opportunities for Women in India' is a partnership between IDF and UNDP, supported by IKEA Foundation, which aims to support one million underprivileged women in India learn marketable skills, offering them income generation opportunities. Project Disha is helping women become economically self-sufficient through training, employment and entrepreneurial skill development, and testing innovative models of public-private partnership for scalability. The project is active in the National Capital Region (NCR) and the Indian states of Haryana, Maharashtra, Karnataka and Telangana.

As part of Project Disha, UNDP collaborated with MAVIM to create innovative livelihood opportunities for enterprising rural women and to support small farmers by connecting them with fair and sustainable supply chains. UNDP adopted the strategy of building institutional capabilities of MAVIM's SHG federations, known as Community Managed Resource Centres (CMRCs)⁷. Considering the dire agricultural distress in Vidarbha and existing capabilities of MAVIM, six CMRCs from three districts were chosen for a pilot under Project Disha. The six CMRCs selected were Akot and Barshitakli in Akola district, Bhatkuli and Daryapur in Amravati district, and Kalamb and Ner in Yavatmal district. Since the region is a major producer of pulses, the procurement and marketing of red gram (primarily), chickpea, and soybean was selected as a business activity for the CMRCs.

A key feature of this pilot was the active involvement of the private sector at various stages in the supply chain. Most notably, UNDP leveraged support from Future Group, India's leading retail conglomerate, for their business expertise in training, institutional capacity building, and procurement of agricultural commodities. In particular, Future Group's extensive experience in procurement of pulses from the region (notably Akola, a regional agricultural hub) was invaluable.

Figure 5: UNDP-MAVIM Collaboration Objectives



Training

Thirty women from MAVIM SHGs (five per CMRC) were selected for the pilot, to be trained as Women Sourcing Managers (WSMs). Among other parameters, good communication and leadership skills were the selection criteria. Four villages were allocated to each WSM for their sourcing operations and they were paid a monthly honorarium for their efforts.

Future Learning Pvt. Ltd., the learning and knowledge development arm of Future Group developed training modules for post-harvest agricultural management and to impart capacity building training to WSMs. The modules were developed to impart skills in areas such as procurement management, grading, market analysis, buying and pricing strategies, storage basics, and soft skills and communication. Additionally, to build capacities of CMRCs in handling large number of transactions, separate modules were developed to train a manager and an accountant from each of the six CMRCs in business planning, resource management, problem solving and strategic thinking.

⁷ CMRCs are taluka-level (taluka is a block or a revenue unit comprising a number of villages) federations of 150 to 300 MAVIM SHGs from a cluster of 20 to 30 villages. CMRCs provide various services to SHGs such as capacity building training to members, links SHGs to banks to avail loans, audit, etc. In addition, CMRCs implement various livelihood development initiatives for its members in the form of micro livelihood plans (MLPs) through convergence of government schemes and other resources. 312 CMRCs were established across Maharashtra under the 'Tejaswini' program (2007-18), jointly funded by IFAD and Government of Maharashtra. Although they are promoted by MAVIM, CMRCs are autonomous organizations registered under the Societies Act.

MAVIM also leveraged its existing partnership with Krishi Vigyan Kendra (KVK)⁸, Ghatkhed, in Amravati, to impart training in a package of improved agricultural practices (land preparation, water use, etc.) to WSMs for the kharif season.

Training for the 30 WSMs and 12 CMRC staff was conducted at the regional level in Amravati in five phases over seven months. Each phase consisted of two to three days of hands-on training including exposure visits to wholesale markets and warehouses to study operations of local agricultural marketing and distribution system. The training sessions helped build confidence and prepared these women to undertake leadership roles which contributed to their social welfare.

After each phase, the WSMs returned and conducted similar training in their respective allocated villages, sharing their learnings with other SHG women farmers. Moreover, the training helped identify potential farmers interested in selling their produce through WSMs. A baseline of over 5,600 women farmers was generated in this process.

“Creating employment and livelihood opportunities for women in India is a priority workstream for us. Our goal with this project was to improve efficiency and price realization of end farmers, through improved productivity and knowledge of supply chain for Women Sourcing Managers and CMRC Supervisors. Our association with UNDP and Project Disha has presented us with learnings, which can be replicated seamlessly to value-added products and processed foods segments as well.”

**- Eika Banerjee, CEO
Future Learning**

Procurement, Value-addition, and Marketing

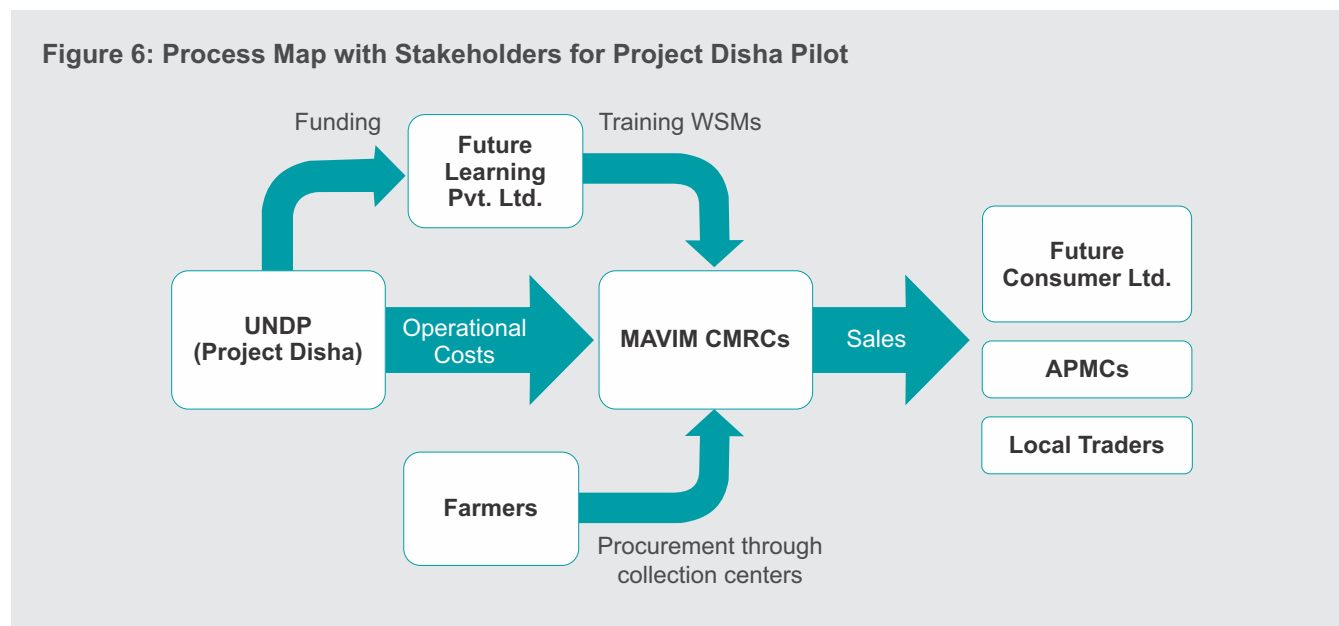
As part of the pilot, UNDP also worked with NCDEX e-Market Ltd. (NeML) to develop a standard operating procedure (SOP) for setting up village-level collection centers for agricultural produce. Ten such collection centers were set up that enabled WSMs to procure commodities for CMRCs for trading or further processing.

Given the traditionally limited role of women in post-harvest management, the WSMs encountered challenges in the procurement phase, especially from male farmers. The farmers had never sold their produce to a woman, since buying and selling of agricultural produce has traditionally been in the male domain. Also, the farmers were not convinced that these women from their community would be able to give them fair and timely compensation. After receiving fair and timely compensation, they were convinced about selling greater quantities. Interactions with farmers and successful purchase of produce gave a huge boost to the confidence of the WSMs and raised their social standing in their communities.

Future Group procured red gram directly from farmers through the two CMRCs in Akola. Funds were transferred directly to the respective bank accounts of the farmers within seven to eight days, making the process transparent and fair. For farmers, selling their produce at the village-level collection center was an attractive choice as it saved cost of transportation and labor, and provided timely compensation. The remaining CMRCs purchased soybean and chickpea, in addition to red gram, through Entrepreneurship Development funds available with them, as part of the Convergence of Agricultural Interventions in Maharashtra (CAIM) program. The purchased goods were graded, packaged and stored in warehouses/collection centers, to be sold later to local traders and Agricultural Produce Market Committee (APMC) when prices were higher, to earn a profit for the CMRC. Some of the red gram was processed into dal (lentils) through dal mills owned by CMRCs and operated by SHGs.

⁸ Krishi Vigyan Kendras (Agriculture Science Centers) are resource centers for providing agricultural extension services to farmers and are usually associated with a local agricultural university or educational institution. https://icar.org.in/content/agricultural_extension_division

The chart below highlights the institutional players involved in the pilot project as well as the process flows in the project:



Following is a list of livelihood development programs implemented by MAVIM CMRCs in Western Vidarbha. Project Disha leveraged

some of the ongoing programs that strengthened the SHGs, which facilitated training and capacity building of value chain linkages for women in the project area.

Table 2: Key Livelihood Projects Implemented by MAVIM in Western Vidarbha

| Program | Lead Agency | Description |
|---|---|---|
| Tejaswini: Maharashtra Rural Women's Empowerment Programme (2007–2018) | International Fund for Agricultural Development (IFAD) | State-wide program implemented by MAVIM to strengthen grassroots institutions (SHGs and CMRCs) for women's socio-economic empowerment, with funding from IFAD, GoM, and convergence funding (bank loans to SHGs, community contributions, etc). |
| Convergence of Agricultural Interventions in Maharashtra (CAIM) (2010–2018) | IFAD, Tata Trusts, Maharashtra State Agricultural Marketing Board (MSAMB) | Farm and off-farm interventions for poverty alleviation targeting marginalized social groups in six drought-prone districts of Western Vidarbha (Akola, Amravati, Buldhana, Wardha, Washim and Yavatmal). |
| Deendayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY-NULM) (2011–Present) | Ministry of Housing and Urban Affairs (MoHUA) | Program to reduce poverty and vulnerability of urban poor households through institution building, access to finance and convergence of government schemes and programs. |
| Better Cotton Initiative (BCI) (2009–Present) | The Sustainable Trade Initiative (IDH) | BCI supports farmers cultivate cotton compliant with the Better Cotton Standard system, focusing on environmental, economic and social sustainability. |

Project Disha: Transforming Lives

Rekha Tupwade, along with nine other women from Rustamabad village in Akola, formed the Sant Rohidas women's SHG in 2009. At the initial stage, they received support through MAVIM's village coordinator or Sahyogini. The group started with an initial savings of INR 50 (USD 0.7) per month, which has increased to INR 100 (USD 1.4) today.

"Before joining the SHG, I had little exposure of the outside world. I had not visited Amravati or Nagpur (big cities nearby) in my life," says Rekha. However, she got support and encouragement from her husband and mother-in-law, the latter herself a member of a SHG for women. After successfully leading her group for four years, Rekha was selected to work as a Community Trainer for MAVIM, where she assisted in capacity building of other groups in her village. In 2017, she was interviewed and selected as a sourcing manager through Project Disha.

Many women in Rekha's village have started livelihood activities like goat-rearing, poultry, dal mills, etc. availing internal loans from their savings groups. Rekha saw an opportunity and purchased a photocopier in 2015 with an investment of INR 13,000 (USD 186), the only one in her village to do so. She now provides her services to about 5,000 people earning up to INR 200 (USD 2.8) daily. Rekha not only took on a leadership role but also generated income, thus contributing towards her household.

Table 3: CMRC Value Chain

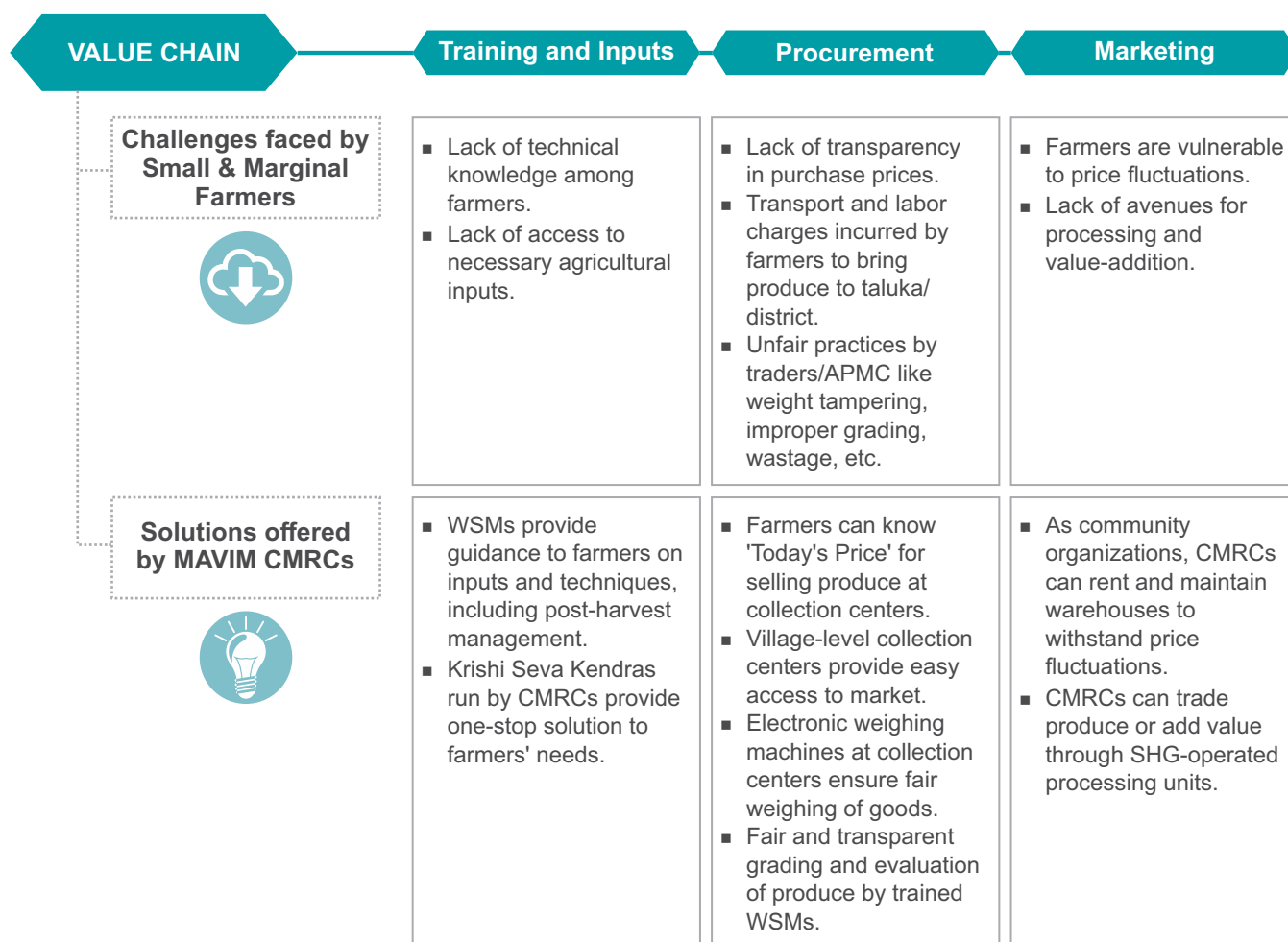
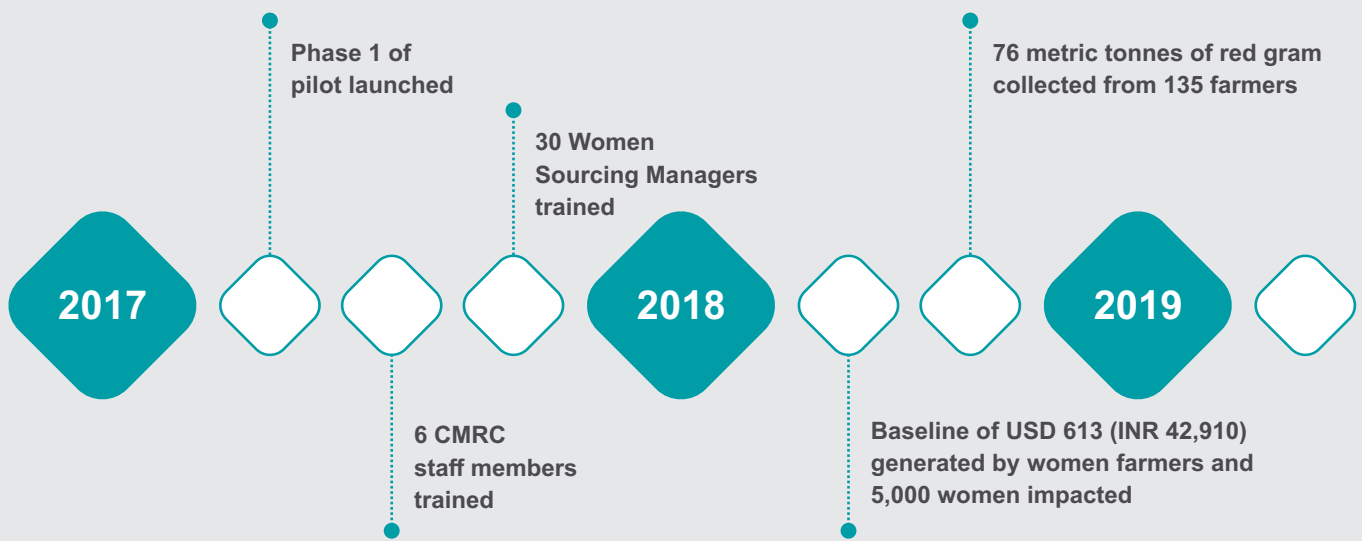


Figure 7: UNDP-MAVIM Project Timeline



Key Learnings

Empowerment of Women and Capacity Building of CMRCs

A cadre of skilled sourcing managers and trainers has been created by leveraging the expertise of the private sector. This has not only empowered women in the community, but the knowledge resources developed as part of the pilot can be used to replicate the structure for procurement of different crops through remaining MAVIM CMRCs.

Business Model for CMRCs

The pilot project has successfully demonstrated a sustainable business model for CMRCs by procuring and marketing agricultural commodities. Considering that each CMRC covers 10 to 20 villages and has around 3,000 women members, it has the potential to procure at least 300 to 500 metric tonnes of commodities annually. CMRCs can earn a 3 to 5 percent commission on sale price of goods, which will go a long way in making them profitable community enterprises and a model for other SHG federations to follow.

Role of Private Sector

Participation of the private sector ensured sustainability of the program. Assurance of procurement by major private sector players can mitigate risks associated with farming as well as markets that can be incurred by CMRCs. As a result, support from the private sector helped strengthen relations between farmers and CMRCs.

SWAYAM SHIKSHAN PRAYOG



Photo credit: Swayam Shikshan Prayog

Ensuring Food Security through Sustainable Farming



Organizations Involved

Swayam Shikshan Prayog



Location

Osmanabad, Latur, Beed, Solapur, Pune, Nanded and Washim districts



Duration

2015-present (Women-led Climate Resilient Farming)



Value Chain Component

Farming



Women Benefited

Over 48,000⁹ women



Project Cost

INR 6,00,00,000 (USD 857,143)



Project Cost Per Beneficiary

INR 3,000 (USD 43)

KEY RESULTS

25 percent increase in yield (food security)

40 percent women adopted micro-irrigation (water saving)

30 percent increase in income for women

⁹ Since the number of small and marginal women farmers is high in the eastern region of Maharashtra, they were able to reach out to more farmers through 500 community level facilitators, who helped SSP negotiate the Women-led Climate Resilient Farming model with their families.

Successive droughts, decreasing water availability, and rising input costs had made farming economically unviable for small and marginal farmers in the Marathwada region of Maharashtra. The shift from food crops to cash crops along with decreasing agricultural incomes has adversely affected food security of farming families. With the help of NGO Swayam Shikshan Prayog (SSP), women have taken up organic farming for a variety of crops on limited plots to fulfil the nutritional needs of their families, while improving yields through adoption of climate resilient, sustainable agricultural practices. In addition, given the climate vulnerability of the region, SSP is playing a key role in encouraging community and farm-level water conservation efforts such as contour-bunding, groundwater recharge, and construction of farm ponds.

Introduction

Swayam Shikshan Prayog is a non-profit organization working in 17 climate-vulnerable rural districts in six states of India, including Latur, Solapur, Washim, Osmanabad, Nanded, Beed and Pune districts in Maharashtra. SSP began its work in the wake of the devastating Latur earthquake of 1993. It was formally registered as a non-profit in 1998 and developed into a women-led movement for developing resilience in disaster-affected communities, working with government agencies in areas of housing, infrastructure, water and sanitation. SSP gradually mobilized the rural women into SHGs and assisted them in developing innovative businesses through support systems such as marketing and distribution channels, and micro finance institutions.

SSP empowers grassroots women's collectives to move from 'Margin to Mainstream'. Over two decades, SSP has built robust partnership eco-systems that enable women's entrepreneurship and leadership in sustainable development. SSP's work is centered around low income, climate-threatened communities in Maharashtra, Gujarat, Tamil Nadu, Bihar, Assam and Odisha. Along with its grassroots women's collectives and networks, SSP is transforming the communities in which they work by spawning over 1,45,000 rural women entrepreneurs, farmers and business leaders in the last eight years, who have, in turn, impacted over 5 million people to date.

Since 2011, SSP's focus has shifted to developing sustainable agricultural livelihoods and allied enterprises with greater support from the private donors and international organizations.

SSP's activities for promoting sustainable agriculture are based on the following principles:

Figure 8: Principles to Promote Sustainable Agriculture



Diagram source: Swayam Shikshan Prayog

One Acre Model / Women-led Climate Resilient Farming Model

Women play an important role in farming, but have limited decision-making power to choose the agricultural inputs, techniques involved, and the utilization of the harvest. Also, women are not usually recognized as farmers in the wider society since they don't own land in their names. The 'One Acre Model' – now known as the 'Women-led Climate Resilient Farming Model' (WCRF) – emerged as a grassroots innovation among SSP's network of women farmers in Osmanabad to assert women's right to make their own decisions in agricultural food production systems.

The model emerged in response to the worsening nutrition among farming communities in drought-affected regions of Maharashtra. Farmers, particularly men, had shifted to cultivation of water-intensive cash crops such as soybean, cotton and sugarcane over traditional

climate-resilient food crops such as sorghum (jowar), millets, and pulses. Excessive use of chemical fertilizers had severely degraded the quality of soil. Moreover, farming had become unviable owing to rising input costs, decreasing water availability and volatile prices of agricultural produce.

The complete shift to cash crops meant that farmers had to purchase all their food for consumption from the market, which adversely affected their food security. Nutritional disorders such as anaemia among women and malnutrition among children were prevalent. SSP intervened to raise awareness about sustainable farming practices and importance of food security. The drought of 2012 was a turning point for women in Marathwada when a large number took up organic farming on a small plot to satisfy their families' nutritional needs.

SSP promoted a multi-level, multi-pronged approach to build capacities of small and marginal farming households for combating drought and ensuring food and income securities of their households. The approach focused on creating a cadre of women as Samvad Sahayaks or the Community Resource Persons (CRPs) on climate resilience strategies. They transferred the learning to women farmers from small and marginal farming

households on the model with two primary goals: 1) Empowering women as farmers, decision makers and leaders; and 2) Promoting food, nutrition, income and water security in the drought-hit villages of Latur district.

This model is transferred through a series of awareness generation, training, demonstrations and learning exchanges on one hand, and intensive campaigns for land entitlement, convergence of government schemes and extension services on the other. The model encourages women to gain cultivation rights over about one acre of land (0.4 hectare). Women have complete control over the entire process including selection of seeds, farming techniques to be followed, amount of food to be retained for consumption, and where to sell the excess produce. Women are encouraged to cultivate 6 to 8 crops including vegetables, cereals, pulses, millets to satisfy nutritional needs of their families. Water efficient organic farming is promoted through use of natural fertilizers and pesticides. Vegetable cultivation is promoted both on farm and homestead garden, making use of household wastewater from bath and kitchen. Crop diversification and mixed cropping significantly reduces short term risk and ensures household food security.

Table 4: Irrigation Requirement for Common Crops

| Irrigation Requirement (mm) | |
|-----------------------------|------|
| Rice | 90.3 |
| Sugarcane | 35.5 |
| Cotton | 27.5 |
| Ragi (millets) | 8.2 |
| Pulses | 6.1 |

Source: Nithya and Shivapur 2016

Impact

A one acre farm can provide food for a family of 5 to 6 persons. By adopting organic farming methods, farmers saw increase in yields by 25 percent due to mixed cropping, intercropping, use of bio-pesticides and by conducting seed

germination tests. Typically, 60 percent of the produced food is utilized for consumption while the rest is sold in the market.

On an average there has been annual savings of INR 35,000 per household by consuming farm grown food and using natural farm inputs. Impressed by their wives' efforts and success, many male farmers gave additional land for cultivation to the women. Some have even adopted organic farming for the entire farm, including the part reserved for cultivating cash crops.

Table 5: Elements of Sustainable Organic Farming

| |
|---|
| Testing of soil and water quality (short-term and less water intensive crops) |
| Bunding of farm boundary for water and soil conservation |
| Use of drip and sprinkler irrigation for water management |
| Use of organic fertilizers such as vermicompost, manure, molasses, silt from water bodies, etc. |
| Treatment of seeds with natural insecticides, fungicides, bactericides etc. before sowing to enhance germination and improve yields |
| Adopting modern practices in sowing, pest management, harvesting and post-harvest management |
| Timely removal of weeds |
| Saving good quality grains for sowing in the next season, to reduce input costs |

In addition to improving nutrition levels of beneficiary families, the One Acre Model has also helped improve household incomes. A typical small and marginal farmer family with an average landholding of 1 to 2.5 ha used to earn between INR 50,000 to 70,000 (USD 714 to 1,000) annually in the drought-prone region. Moreover, women in the households had limited sources of income and fewer women looked outside for employment, including Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the employment guarantee scheme of the Government of India which assures paid work for up to 100 days in a year¹⁰. Having adopted the One Acre Model along with organic farming, farming households have witnessed 40 percent saving on input costs per acre per cycle by using local seeds, bio-pesticides and bio-fertilizers. Women farmers earn between INR 10,000 to 15,000 (USD 143 to 214) per month through sale of vegetables and agri-allied businesses, resulting in 30 percent increase in household incomes.

¹⁰National Rural Employment Guarantee Act, 2005

Key practices promoted under WCRF:

1. Bio-pesticides
2. Bio-fertilizers
3. Use of own seeds
4. Seed germination test
5. Diversification of food crops

Along with promoting sustainable agricultural practices, SSP promotes various interventions for conserving water and improving water-use efficiency in the drought-prone region. This includes plantation of trees on farms and in the common grazing areas for soil and water conservation as well as green manure for crop cultivation. Planting trees like Mango, Tamarind, Neem, and other local fruit trees is promoted, which serves as additional source of income for women farmers. SSP organizes awareness campaigns on techniques like watershed management, contour-bunding, recharge of groundwater sources (wells and bore-wells), and building farm ponds. SSP promotes effective irrigation methods like drip and sprinkler and use of large-scale mulching technologies. Training and demonstrations on water management and conservation, onsite technology support for farm ponds and rainwater harvesting is also provided to women farmers. About 45 percent of women farmers in the program have undertaken water conservation activities like constructing bunds, trenches, stream deepening, bore-well recharge while 40 percent women have adopted micro-irrigation systems like drip, sprinklers and rain-guns, resulting in considerable water saving. As a result of these practices 30,000 acres of land are under bio-farming through soil conservation by use of bio-inputs.

Community Resilience Fund

SSP was one of the pioneering organizations promoting formation of women's SHGs in Maharashtra. However, after the mainstreaming of SHG movement in Maharashtra through organizations like MAVIM, SSP shifted its focus to microfinance promotion and entrepreneurship development among women in areas of agriculture, clean energy and health. SSP facilitated formation of women's farmer groups, each consisting of 15 to 20 members. The SHGs and farmer groups formed by SSP were constituted into women's federations to provide various enterprise-related services in each of the 15 talukas of Maharashtra where SSP was operational. Each federation supervises 250 to 500 women's groups.

A unique feature of these federations is the Community Resilience Fund (CRF). Conceptualized by Huairou Commission¹¹, CRF is an innovative financial mechanism that delivers micro-funding to grassroots women in disaster-prone communities. SSP-promoted federations provide low interest small loans to women farmer groups to practice climate smart agriculture, adoption of micro-irrigation and use of improved farm implements. In Latur district, with CSR support from companies like Clearing Corporation of India Ltd. (CCIL) and Great Eastern Shipping, women have availed the CRF to create water conservation structures such as farm ponds, farm bunds, recharge structures and trenches. There has been a significant shift in irrigation practices by women over the last few years in the district, where use of drip irrigation, sprinklers and rain pipes has increased by almost three times.

¹¹The Huairou Commission supports grassroots women's organizations, focusing on leadership development, equitable and sustainable development practices, network building, and policy change as a prerequisite for effective poverty reduction. <https://huairou.org>

Box 2

Creating Women Role Models for Community Development

Godavari Dange from Gandhora village in Osmanabad lost her husband at a young age. In the year 2000, with SSP's support, she formed the Yashwanti Sakhi SHG along with 15 other women from her village.

In the same year, she was among the two women selected from her village by SSP for training in business and entrepreneurship. Owing to her active interest and participation, she was made SSP's coordinator for the Salgara cluster comprising of 10 villages in Tuljapur taluka where she was responsible for forming and nurturing farmer groups, maintaining records and ensuring that regular group meetings took place.

In 2004, she was made the secretary of the Sashakt Sakhi Sanstha, SSP's federation in Tuljapur. "I developed invaluable leadership skills from my experience working with SSP," says a grateful Godavari, who has earned numerous awards for her work in community-led development and empowering women.



Photo credit: UNDP

Producer Company

Having witnessed the benefits of collective efforts through farmer groups, formation of a producer company was the next logical step towards women's empowerment and improved income. In 2017, SSP supported setting up two FPCs in Osmanabad district – Vijaylaxmi Sakhi FPC in Tuljapur taluka and Manjiri Sakhi FPC in Osmanabad taluka. Active women farmers were encouraged to take on leadership roles and join as directors in the companies.

"Of the 56 FPCs registered in Osmanabad at that time, none were run by women. This inspired us to start a company of our own," says Archana Bhosale, one of the Directors at Vijaylaxmi Sakhi FPC.

Working through an FPC can provide many advantages over the federation model such as lower input costs to individual farmers, opportunities for value-addition and support in marketing. In their very first year of operation, with support from SSP, Vijaylaxmi Sakhi FPC bagged a contract to supply four tonnes of red gram, green gram and black gram to a larger

producer company in Kerala under their own brand name 'Vijaylaxmi'. In addition, it has entered into a contract farming model to cultivate quinoa, a South American cereal for an exporter, which can fetch much higher prices than traditional crops.

Organic Certification

Both the FPCs have also applied for organic certification under the National Programme for Organic Production (NPOP). The criteria for certification ensure that only natural fertilizers and pesticides are used as inputs, genetically modified inputs are avoided, and contamination from nearby farms must be absent. "We found it very difficult for individual farmers to acquire the certification although we were completely organic. Working with farmer groups makes it possible to avoid contamination from nearby farms. Acquiring the organic certification for our company will enable us to fetch better prices for our products," says Archana Bhosale. India's organic certification process under NPOP has been granted equivalence with European Union. It has also been recognized for conformity assessment by USDA's (United

States Department of Agriculture) National Organic Program (NOP) (Mallick 2017).

Technology Integration and Efficient Water Management

SSP is also focusing on the integration of technology to provide smartphone application based weather information to farmers for taking farm level decisions as well as co-designing tools and implements with government and private sector for reducing the drudgery of women farmers and increasing efficiency.

SSP helps strengthen women leadership to forge partnership with government for water stewardship projects as well as to create awareness on water conservation for farms, households, and communities.

SSP was awarded the Equator Prize in 2017 for promoting low-input sustainable farming techniques, including efficient water use, organic farming, mixed cropping, and increased crop cycles, enabling rural women to improve food security, increase climate resilience, enhance agro-biodiversity, and reduce stress on water resources (Equator Initiative 2017). Equator Prize, organized by the Equator Initiative within the United Nations Development Programme, is awarded biennially to recognize outstanding community efforts to reduce poverty through the conservation and sustainable use of biodiversity.

Key Learnings

Empowering Women through a Change in Mindset

Encouraging women to improve cultivation on their own farm land resulted in positive social and development outcomes for households. For example, food security (25 percent increase in yield), improved income (30 percent) and water savings (40 percent women adopted micro-irrigation systems). Moreover, recognition of women as important stakeholders in agriculture policy planning and decision-making is crucial to agriculture development.

Reducing Dependence on Cash Crops

Shifting from water guzzling to water efficient crops such as ragi, millets, grams and vegetables assured income for women-led households and reduced their dependency on a single crop.

Collective Efforts Reaped Benefits

Having reaped the benefits of the Women-led Climate Resilient Farming Model, women in the villages came together to form a women-run FPC where they marketed and sold their additional produce, which generated over 30 percent income increase.

SAHYADRI FARMS



Photo credit: Sahyadri Farms

Unlocking the Value Chain for Small and Marginal Farmers through Sustainable Agriculture Practices and Enhanced Market Access



Organizations Involved

Sahyadri Farms



Location

Nashik district



Duration

2011–present



Value Chain Component

Input, extension and distribution



Women Employed

1,100 women (full-time and seasonal)



Turnover

INR 3,000 million (USD 42.86 million) in 2017-18;
Share capital of INR 640 million (USD 9.14 million)
for farmers

KEY RESULTS

100 percent drip adoption
among grape growers

~20 percent farmer
shareholders are women

Sahyadri Farms, a Farmer Producer Company was started in 2011 as a professionally managed cooperative focused on value creation for small and marginal farmers. The company has created a sustainable and profitable agri-business model with marginal farmers at the center, and becoming India's leading exporter of horticulture produce. Today, Sahyadri Farms has a strength of 6,400 farmer shareholders of which about 20 percent are women. Sahyadri Farms offers end-to-end solution to the farmers – from improving quality and yield in the production stage, to specialized agronomic farming practices and water management techniques to post-harvest management. In the process, it has empowered small and marginal farmers through increased income, livelihood security and improved quality of life. Furthermore, Sahyadri Farms not only offers a market for its farmers but is also working towards developing a village level ecosystem for livelihoods enhancement through skill development and a focus on gender roles in the tribal community.

Introduction

Vilas Shinde started Sahyadri Farmers Producer Company Limited (SFPCL) in 2011 to address the numerous challenges faced by small and marginal farmers and to overcome the limitations faced in the agro-entrepreneurship space. His aim was to make farming a profitable venture with a focus on sustainable development and the upliftment of the farming community. By creating a collective of small and marginal farmers growing produce on less than two hectares of land, Shinde created a company that not only empowered small farmers by making them stakeholders in the company, but also offered a profitable business model focused on an integrated approach from farm to fork. This includes end-to-end mentorship and support for farmers – from the input stage of seed selection and sustainable farming and irrigation

practices to finance, marketing and post-harvest management, leading to maximum value creation for farmers.

Located in Nashik, a famous grape cluster in Maharashtra, the company first focused on producing high quality grapes for export and has since then branched into horticulture and is looking to expand to other regions of Maharashtra.

About Sahyadri Farms

After completing his post-graduation in agricultural engineering, Vilas Shinde, spent a decade trying various farming ventures – from growing mushrooms and strawberries to cultivating grapes. In the process, he understood first-hand the challenges and constraints that small farmers faced in India, especially related to sustainability and profitability. Some of the major challenges included lack of basic infrastructure, access to quality agri-inputs, fragmented supply chain, poor

cold storage facilities, and post-harvest losses. Having tried and experimented, a successful stint as an entrepreneur packaging grapes for export in Nashik earned Shinde a loyal contingent of grape farmers. After this, Shinde decided to create a cooperative business model where farmers share the profits and also had ownership rights. Inspired by the Gujarat Cooperative Milk Marketing Federation model, he created the Sahyadri Farmers Producer Company Limited in 2011 to which he transferred all the capital accumulated in his proprietary firm (about INR 500 million or USD 7.14 million). Farmers who became members of Sahyadri Farms and agreed to grow grapes for export were given shares of the company. Over 75 percent of shareholders are men, owing to the traditional land ownership rights, but Sahyadri Farms is gradually planning to change this scenario.

As of today, Sahyadri Farms has more than 10,000 members out of which 6,400 are shareholders with a total farmland of over 15,700 ha, emerging as the largest exporter of grapes in India. It is noteworthy that 20% of the total shareholders are women, a very high number compared to shareholding in any established company. Sahyadri Farms is collectively farming different varieties of grapes, with 1,050 grape growers, and provides end-to-end services and solutions to these registered farmers ranging from farm management, input supplies, financial support, risk coverage, post-harvest services, to marketing. Sahyadri Farms also has a state-of-art processing, storage and packing plant for grapes.

Figure 9: Sahyadri Farms Organization Structure

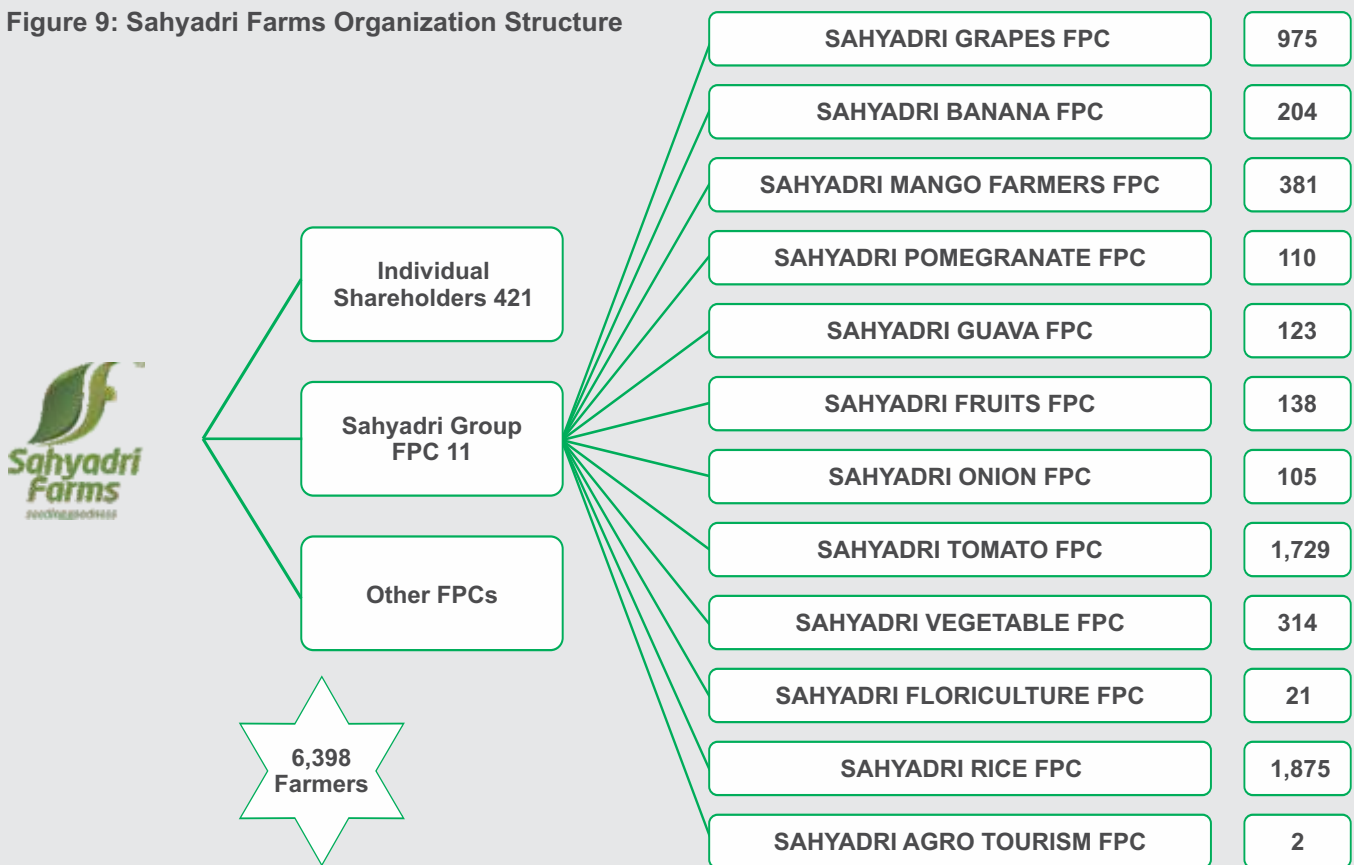


Diagram source: Sahyadri Farms

Box 3

Women in Sahyadri Farms

Sahyadri Farms believes that creating gender diversity can drive organizational effectiveness, especially through favorable working conditions for women that may encourage better performance and high retention.

The packaging facility of Sahyadri Farms employs over 50 percent of 300 full-time working women currently employed by Sahyadri Farms. This includes laborers, landless families from the local communities responsible for sorting, grading and packaging of fruits and vegetables. Women are also a part of the training and development activities that has a positive impact on the attendance and their long haul with the company. Furthermore, seasonal employees are equally important for Sahyadri Farms' grape business that brings together 800 women and 1,400 men during the grape season. Gender policies such as equal wages for equal work, a culture free of harassment and on time payments, encourages the seasonal women workers to return to Sahyadri Farms each year. Moreover, women from the tribal community are encouraged to work with Sahyadri Farms as it provides them financial assurance and daily income which they are unable to generate through their small parcels of land. As a result, over 50 percent women from the tribal areas return to Sahyadri Farms for the peak grape season every year. Women's contribution is not only relevant for the Sahyadri Farms' financial performance but is also crucial for its future expansion. Sahyadri Farms has plans to invest in developing a complete village ecosystem that can facilitate more women to take up employment and contribute to the growing rural economy.



Photo credit: Sahyadri Farms

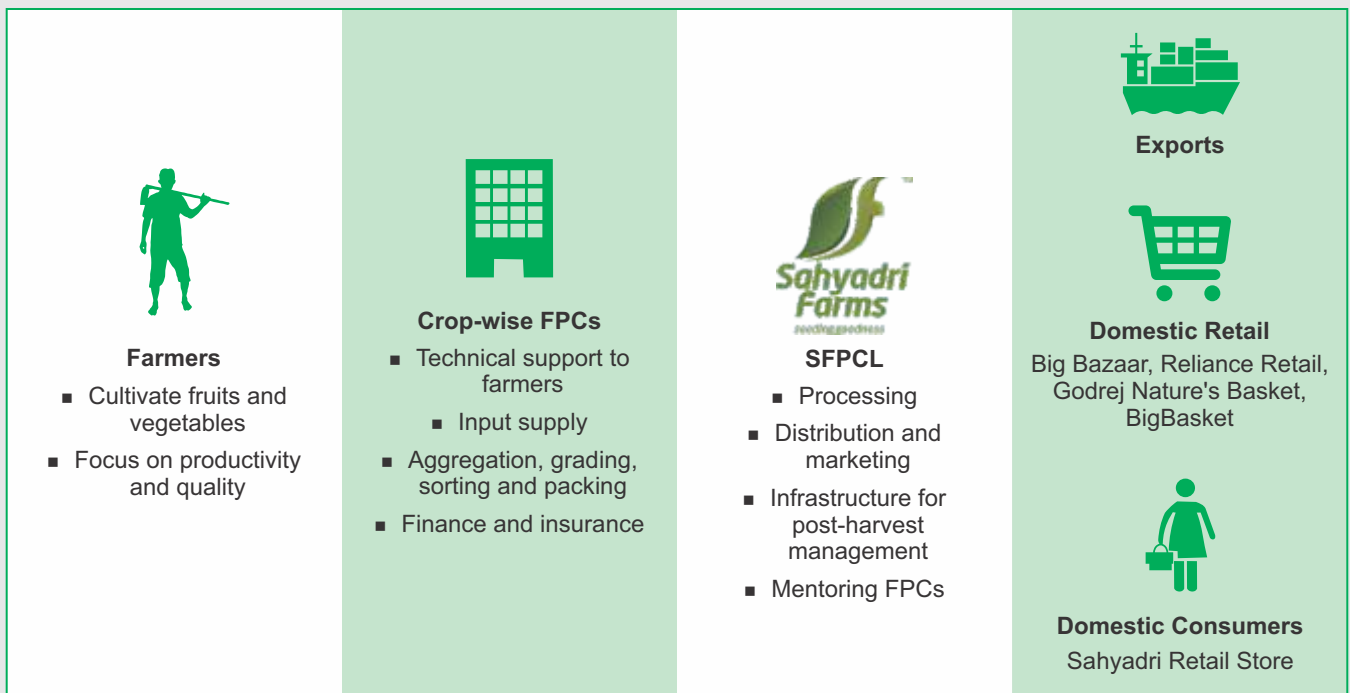
Business Model

Nashik has traditionally been a grape growing region of the country, and is the largest cluster of grape farming within India. The returns from grapes are also very high, even though price fluctuates widely year to year. It is around grapes that Nashik has emerged as a dynamic agri-export cluster. Apart from grapes, other horticulture crops that have come to characterize the region are tomatoes and pomegranates. With growth in the use of micro-irrigation among small farms, coupled with urban demand, Nashik is also emerging as a producer of a wider variety of vegetables. Given these developments and keeping in mind the seasonal nature of farming, Sahyadri Farms has also diversified to horticulture, especially tomatoes, bananas and vegetables

for domestic consumption and export. Sahyadri Farms operates through a 3-tier distribution system to provide end-to-end support:

1. **Farmers:** The farmers in the cooperative focus solely on the production and productivity aspects where Sahyadri Farms provides agronomic expertise to aid them in seed selection, best practices, fertilization programs and efficient irrigation practices.
2. **Crop-wise Local Farmer Producer Companies (FPCs):** The local FPCs support the member farmers through technical support, input supply, aggregation of farm produce, grading, sorting, and packaging, and insurance.
3. **Sahyadri Farmers Producer Company Ltd. (SFPC):** Sahyadri Farms mentors the FPCs and also helps in post-harvest management and marketing. Sahyadri Farms is also taking steps to set up its own distribution system.

Figure 10: Sahyadri Farms Supply Chain



In addition to growing grapes on the farmers' lands, the company has a dedicated 80-acre campus and has invested INR 1,400 million (USD 20 million) in plant and machinery, with INR 1,000 million (USD 14.29 million) of its own capital for post-harvest processing that provides substantial value-addition to the members of the FPOs. It is also investing in FMCG lines including tomato ketchup and

grape juice. Till date Sahyadri Farms has sustained itself on its own profits and did not access any government grants or private capital/borrowings, demonstrating the profitability of its business model. Given its focus on sustainability, Sahyadri Farms has also been directly and indirectly investing in responsible water management practices. For example, all grape farming members of Sahyadri Farms are Global Gap Program certified farmers and produce high quality grapes.

Box 4

Leading the Way in Sustainable Water Management

Sahyadri Farms encourages all the farmers in its cooperative to move to sustainable water management practices such as drip irrigation.

In more than 100 meetings conducted every year, trained Indian and global agronomists talk to the farmers about drip irrigation as well as other water conservation efforts. The company also designs special kits for drip irrigation to encourage farmers working on half an acre of land to move to this system. Further, concrete support comes in the form of special guarantees that Sahyadri Farms gives to select banks such as Axis Bank to increase the credit limit to the farmers in the cooperative so they can invest in measures such as drip irrigation. This effort has resulted in 100 percent drip adoption among Sahyadri Farms grape growers.

Today, the farmers in the producer company who are growing grapes on two acres of land are earning a net income of INR 1 million (USD 14,286), 10 times more than what they earned before joining Sahyadri Farms. This has significantly improved their quality of life in terms of healthcare, education and consumption and has led to all-round upliftment of the community.

Sahyadri Farms also deploys technology as a tool for quality improvement and profitability. Given its success in creating an integrated supply chain, Sahyadri Farms aims to replicate its success in distribution and retail by creating

its own trademark stores. Another important factor contributing to the success of Sahyadri Farms is its 'global perspective', benchmarking itself against the international norms for both quality and technology.

Investment and Profit

Last financial year, Sahyadri Farms made a profit of INR 300 crore (USD 42.86 million), out of which INR 64 crore (USD 9.14 million) was distributed to its shareholder farmers as dividend/bonus. Sahyadri Farms has also posted substantial increase in year-on-year profits for the last 3 years, emerging as the leading exporter of grapes for three consecutive years (2015 to 2017).

Goals

Today, the biggest task before Sahyadri Farms is change in the mindset and resulting social behavior within the community.

Women farmers in this region have limited financial and decision-making powers, resulting in low turnout of women for training (only 10 to 15 percent women attend training sessions) as well as the number of shareholders in the company (only 20 percent women farmers are shareholders in the company). As a starting point, Sahyadri Farms has commissioned a needs assessment in about 14 nearby villages that will highlight the community's economic and social development needs including education, housing, improved health and sanitation facilities and many others.

Sahyadri Farms has set the following goals for the next three years (2019 to 2021):

Build sustainable rural communities: Sahyadri aims to build sustainable rural communities through a cluster approach that enables maximum value creation of resources. For example, awareness of water conservation, soil moisture security, efficient value chains and access to markets.

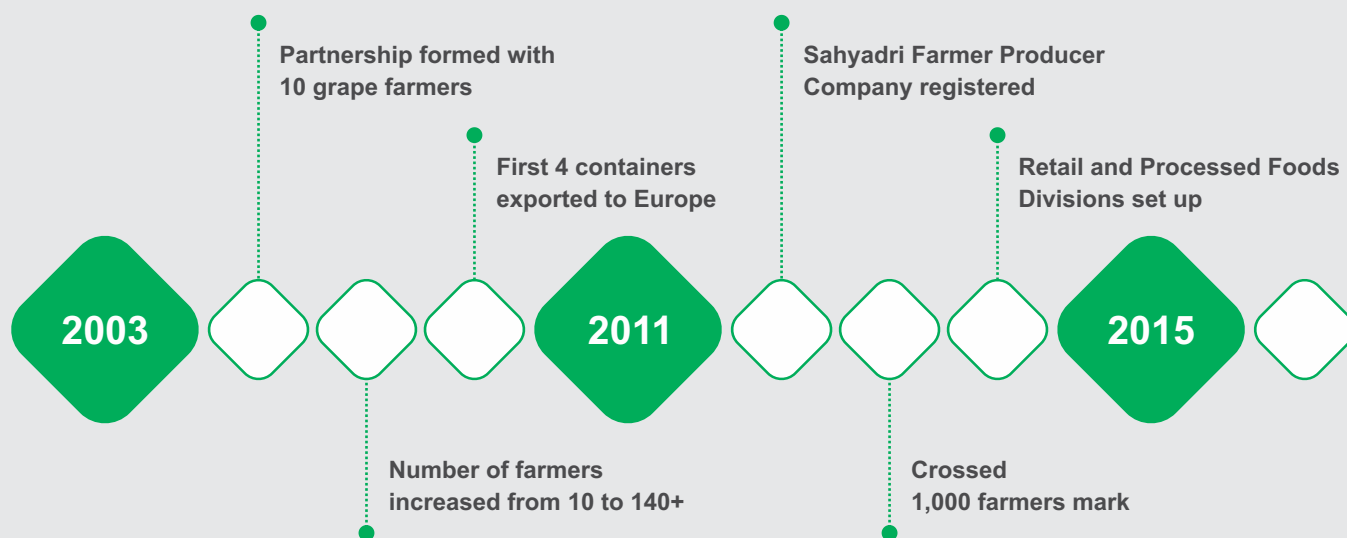
Investing in women: Sahyadri Farms is prioritizing increasing the number of women farmers as shareholders in the company as well as those employed in the company. Currently, 20 percent women are farmer shareholders while 300 women work full-time with Sahyadri Farms. The aim is to increase the number of women employed by three times in three years.

Maximize value created through water conservation: Water is required at all stages of the value chain. Sahyadri Farms imparts training and conducts awareness programs on maximizing the value created by using less water throughout the value chain that is, from farm to the fork.

Development of a state-of-the-art training center: Sahyadri Farms believes in the potential of training and skill development in enhancing the performance of employees as well as of the farmers that contribute to the entire value chain. Thus, Sahyadri Farms plans to collaborate with a Tata Company to build a training centre for youth-focused skill development.



Figure 11: Sahyadri Farms Timeline



Key Learnings

Value Created through Access to Markets

Market access for agricultural produce is crucial for improved income of the farming community, including women-led households which depend on agriculture for their income.

Retention of Seasonal Employees

Women-friendly policies such as equal pay for equal work; culture of non-harassment and favorable working conditions encourages seasonal women workers from remote tribal areas to come back year-on-year to contribute to the packaging facility at Sahyadri Farms. Currently, over 50 percent of women are employed in the packaging facility.

Assured Income for Women

Sahyadri Farms provides assured income for women throughout the year, especially landless laborers, or women with low levels of education. At present, about 1,100 women (both full-time and seasonal) are employed by Sahyadri Farms.

Aggregating Demand and Inputs

Sahyadri Farms uses a cluster-based approach for a variety of fruits and vegetables, through which it aggregates demand and input requirements, resulting in substantially reduced costs to farmers and better prices for their produce.



Photo credit: 2030 Water Resources Group

THE GOATRY PROJECT



Photo credit: 2030 Water Resources Group

Leveraging Allied Businesses Complementing Enhanced Agri-water Productivity



Organizations Involved

Nalanda Foundation (An IL&FS CSR Initiative), Yuva Mitra, National Bank for Agriculture and Rural Development (NABARD) and HT Parekh Foundation



Duration

Project commenced in 2015 and is currently underway



Location

30 villages in Sinnar taluka, Nashik district



Women Benefited

1,946 women



Turnover

INR 21 million (USD 288,818)



Value Chain Component

The project looks at improving the value chain economics of goat-rearing, which is a predominant form of livelihood for poor and marginal communities living in water-scarce regions. The program makes interventions at various stages of the goat-rearing and sales process, so as to ensure the community members are able to avail of improved incomes from the activity.



Project Cost

INR 5.5 million (USD 78,571) Nalanda grant; INR 16.03 million (USD 229,000) HT Parekh Foundation grant; INR 1.8 million (USD 25,714) NABARD grant; Total – INR 23.35 million (USD 337,571)

KEY RESULTS

Average herd size per woman, increased from 4 to 6 goats over a period of three years

Total herd size value of INR 59 million (USD 811,442), from a starting base of just INR 23.35 million (USD 337,571)

Set up of a women-run Goat Producer Company

2.5 lac m³ of additional water storage created impacting 3,000+ families

The Goatry Project was launched in partnership between Nalanda Foundation and Yuva Mitra in 2015 in 5 villages to enhance income opportunities for women through Goatry, an allied activity of agriculture as a livelihood option in the region. Through sustained efforts at improving the value chain economics of goat-rearing, the program makes interventions at various stages of goat-rearing and sales process, so as to ensure the community members are able to avail of improved incomes from the activity. As a result, women-led FPC was formed to sell the market produce and more partners came on board to develop a larger ecosystem to support sustainable livelihoods for women in the region. A natural extension to the program was the revival of 31 water harvesting structures to create a neutral water balance for enhanced livestock in the region.

Background

IL&FS Transportation Networks Ltd. (ITNL) is a private sector infrastructure developer, constructing a 135 km expressway connecting the cities of Pune and Nashik. ITNL, as a part of its inclusive business strategy, is implementing various social initiatives concurrent to the road project and assigned the task to Nalanda Foundation, the CSR arm of Infrastructure Leasing and Financial Services (IL&FS).

The Sinnar block section of the expressway falls in arid and rain shadow regions of Nashik district with average annual rainfall between 400 to 500 mm over the past 25 years, resulting in low agricultural productivity.

An initial survey by Nalanda Foundation showed that besides agriculture, the community in this area always looked for allied livelihood resources to make ends meet. Goat-rearing is

one such predominant activity owing to the adaptability of goats to local agro-climatic conditions. It was however observed that the practices were sub-optimal and marred by lack of scientific knowledge, high mortality rates (about 14 percent), small herd sizes, lack of insurance, and lack of bargaining power during sales leading to low incomes from this occupation. In June 2015, therefore, Nalanda Foundation took up the task to engage with the marginalized women in the area for improving their goat-rearing practices and partnered with a local Civil Society Organization (CSO) – Yuva Mitra.

Project Details

Yuva Mitra, a leading CSO, started implementation of the goat based livelihood project complementing the agriculture related income generation program being implemented in the project geography. The Goatry Project started with 125 women in 5 villages in 2015. Looking at the needs and scope of the goatry initiative for sustainable development of women folk, NABARD provided a grant for the promotion of a women-led Goat Producer

Company. Accordingly, 'Savitribai Phule Goat Farmers Producer Company Ltd.' was established and started its operations. In addition, NABARD provided a grant for developing a cadre of 10 pashu sakhis (para-veterinary workers) who are trained women from within the village community. After the training program, these women para-vets started providing basic veterinary services under the supervision and guidance of a veterinary doctor. In 2017, considering the impact of the Goatry Project, the HT Parekh Foundation came forward and provided a grant for extending the goatry initiative in 20 additional villages in the Sinnar block, which led to the further enrolment of over

1,200 women. The number of women involved in the project has now increased to 1,946 women.

The Goatry Project's central focus is on improving the quality of life of the goat-rearing women in the project area. This improvement in quality of life is seen as an impact resulting from an increase in income and a reduction in financial vulnerabilities of the women. At the end of three years of the program, among these 1,946 women, there has been cumulative revenue generation of INR 21 million (USD 288,818) from the sale of goats and the current goat population of 9,916 worth INR 59 million (USD 811,442). To create further value-addition, efforts are underway to establish a value chain for goat milk and cheese.

To achieve these outcomes, the following activities have been implemented:

Table 6: Activities Implemented in the Goatry Project

| Outcomes | Outputs | Activities |
|--|--|--|
| Increase in income of women involved in the project | Established and improved goat-rearing practices: | |
| | Capacities on scientific methods of goat-rearing built among the women | Group meetings, training programs, exposure visits, awareness camps, etc. have been organized regularly for overall capacity building of the women about scientific methods of goat-rearing. |
| | Regular, timely and low-cost veterinary care accessed | <ul style="list-style-type: none"> ■ Appointment of a full time qualified veterinary doctor for the provision of veterinary services to 10 to 15 villages. |
| | | <ul style="list-style-type: none"> ■ Development of a cadre of pashu sakhis (village level para-vet) with one pashu sakhi being present in each village. |
| | | <ul style="list-style-type: none"> ■ Organization of routine vaccination camps at the village level. |
| | Improved practices on fodder and feed management | <ul style="list-style-type: none"> ■ Linkages with government departments for mobilizing vaccines and medicines at subsidized rates. |
| | | <ul style="list-style-type: none"> ■ Capacity building programs for women on fodder and feed management and its scheduling. |
| | | <ul style="list-style-type: none"> ■ Demonstration of fodder crop cultivation and its economics including demonstrations on hydroponics, silage making, hay making, preparing concentrated feed, etc. |
| | | <ul style="list-style-type: none"> ■ Promotion of cultivation of fodder – like Napier grass, Lucerne grass, Berseem, Dhenchya, '<i>Casurina equicifolia</i>' (Subabhal) – to women who have land and access to water. |
| | Establishment of improved goat breeds | <ul style="list-style-type: none"> ■ Provision of one chaff cutter per village for making silage. |
| <ul style="list-style-type: none"> ■ Diagnosing infertility issues among goat population and providing appropriate treatment. | | |
| <ul style="list-style-type: none"> ■ Provision of pure breed Osmanabadi and Sangamneri bucks at the village level. | | |
| | | <ul style="list-style-type: none"> ■ Provision of training for women on the breeding cycle. |

(Table 6 continued from the previous page)

| Outcomes | Outputs | Activities |
|--|---|---|
| Increase in income of women involved in project | Improved hygiene and living conditions maintained for goat population | ■ Low-cost housing for goats designed and shared with women. |
| | | ■ Interest-free revolving fund provided to women for the construction of low-cost goat sheds. |
| | | ■ Training provided on maintaining appropriate hygiene conditions in the goat sheds to avoid spread of disease. |
| | Improved goat-selling practice | ■ Introduction of practice of pricing goats on weight basis. |
| ■ Through the Goat Producer Company, practice of collective selling of goats initiated. | | |
| ■ Establishing linkages with different agencies for large scale selling of live goats through Goat Producer Company. | | |
| Reduced financial vulnerabilities of women | Accessible finance available and provided to women | ■ Bank accounts opened for all beneficiary women. |
| | | ■ Interest-free loan provided mainly for procuring goats, making goat sheds, etc. |
| | Livelihood activity insured to prevent losses due to mortality | ■ Awareness on goat insurance products made available. |
| | | ■ Insurance policies taken on productive goats with 50 percent premium support from the project. |



Photo credit: 2030 Water Resources Group

Women's collective efforts have also been leveraged through the Goatry Project. The women are grouped into Joint Liability Groups (JLG) with each JLG consisting of 5 women. The JLGs in turn are federated into the Savitribai Phule Goat Farming Producer Company Limited. As mentioned earlier, the producer company aids with collective selling of goats for better price realization.

In addition to this, a network of partners consisting of research institutes, universities and technical agencies has been established. Through this network, on-ground collaboration towards strengthening the model and instituting its sustainability is to be established. The network of partners and the area of collaboration is delineated as follows:

Table 7: Stakeholders in the Goatry Project

| No. | Agency | Area of collaboration |
|-----|--|---|
| 1 | Mahatma Phule Krishi Vidyapeeth, Rahuri | For breed development, developing goat resource center as a regional goat development center for North Maharashtra. |
| 2 | Indian Council of Agricultural Research (ICAR) – Indian Veterinary Research Institute (IVRI), Pune | For capacity building, extension activities and establishing processing unit for value-added products. |
| 3 | ICAR – National Research Centre on Meat, Hyderabad | For establishing meat processing plant, development of goat meat products, marketing, labeling and licensing support. |
| 4 | NABARD | To support producer company, pashu sakhi activity and funding for feasibility study of goat cluster. |
| 5 | The Goat Trust, Lucknow | Environment impact study of the Goatry Project villages. |
| 6 | Animal Husbandry Department, Sinnar | For providing vaccines and medicines at subsidized rates. |
| 7 | Sinnar College, Sinnar | For implementation of the 'Bachelor of Vocation in Goatry Enterprise Management' course. |
| 8 | National Dairy Research Institute (NDRI), Bengaluru | For technical support in developing a goat milk value chain. |

Najama Yusuf (Fulfilling Aspirations)

Najama Yusuf from Khambale village in Nashik district, is a mother to four school-going children. Her husband runs a small chicken shop in the village which was the only source of income for her household of six members. The family struggled to make ends meet.

Najama tried to find jobs around the village so that she could help create a better standard of living for her children. She took up work at the local primary school, with the preparation of the daily mid-day meal. The income, however, was still not enough to contribute significantly to her household.

It was then that Najama heard about the goat based livelihood project being started in her village. She enrolled herself in the project, wherein she was provided with training in how to rear goats. With some financial support, she purchased two goats and two kids and made arrangements for a feeding stall to be set up near her house. Through the project, her goats were provided with timely vaccinations.

Najama has been able to increase her herd size to 10 goats which is worth INR 50,000 (USD 714). Starting next year, Najama will commence with the first sale of these goats which will earn her an assured income of INR 30,000 (USD 428).



Photo credit: Nalanda Foundation (An IL&FS CSR Initiative)

Najama, however, is on a mission. She is looking to develop her goat farm to 100 goats and convert this trade into her main source of livelihood.

Challenges

Mobilization of women was difficult at first. Making women move from traditional practices of goat-rearing to advanced and business-oriented approaches was tough. Additionally, when the women agreed to join the program, their families did not support their decisions as they did not feel that goat-rearing was an

economically viable activity. Furthermore, exploring the market for bulk selling of live goat, milk and other value-added products was time consuming, as women earlier sold their goats in an ad hoc fashion to one-off buyers. The project is now looking at ways to sell the goat produce at scale through partnerships with market off-takers.

Water-centric Interventions

The core objective of this project has been to build viable and sustainable livelihoods. Nalanda Foundation thus considered it pertinent to assess the environmental carrying capacity of the region, and accordingly structured the livelihood program in a way that would not affect the environment or common resources of the area. A study was thus commissioned wherein an environmental assessment and goat interrelation mapping was conducted.

As mentioned earlier, the project area comprises of dry land with medium to low rainfall. Due to erratic rainfall, most farmers cultivated only one crop in the kharif season. Goat-rearing was thus an important source of income as goats, like camels and giraffes, are highly water efficient animals.

Based on the findings of the study, it was decided to address the issue of availability of water in the region and to create a neutral water balance for enhanced livestock in the region.

Nalanda Foundation and Yuva Mitra collectively undertook primary survey in 12 villages of Sinnar block with acute water scarcity and observed that there were many defunct water structures available in the area and mere revival of these structures has a potential of creating 2.5 lac m³ of water of water harvesting, impacting 3000+ families.

Accordingly, a program on revival of existing water harvesting structures through de-siltation was developed. The program was initiated in 2016, in partnership with Tata Trusts and the local community.

The program covered villages like Nirhale, Dodi, Malwadi, Gurewadi, Dattangar, Marhal, Nandur Shingote, Chas and Manori wherein the goat-rearing program is also underway. 31 water harvesting structures across 11 villages have been revived, resulting in an additional water storage of 256,000 m³.

Additionally, the program also helped in reviving about 60 hectares of barren land by using the silt removed. These water-centric interventions enhanced the drinking water security for the population at large, the livestock in these villages, and encouraged women to grow fodder on small plots of land. With access to information on type of fodder, natural fertilizers and pesticides, women reduced their input costs, and improved water efficiency.

The program was also coupled with the plantation of trees on the banks of the water streams for avoiding soil erosion along the stream and to improve the green cover.

Apart from the revival of the water bodies, Nalanda Foundation also created micro water schemes for five tribal hamlets on the outskirts of the villages for securing the drinking water needs of about 300 families and their livestock (primarily goats).

This program also provided an impetus to the development of the village ecosystem. Increased availability of water and improved knowledge of water efficiency measures is slowly beginning to help improve farming-based incomes for households.

Goals

Creation of a sustainable ecosystem and increase in income of more than 10,000 women in the region.

The Goatry Project has established its ability to bring about an improvement in women's incomes and to be scaled up to reach more women in need of income-enhancement.

For this project to run sustainably, however, without dependence on external grant, it needs to connect to the market to sell the goat produce. To reach a scale of operations, and address the needs of the market and benefit more women, there is a long-term vision of developing a goat cluster in the region. This goat cluster will involve about 10,000+ women from the Nashik and Ahmednagar districts and work towards the creation of a conducive ecosystem with the support of different like-minded agencies, institutions, industries and the government.

The goat cluster based approach can provide excellent infrastructure for goat processing along with the value chain

from goat rearers to exporter. It includes creation of basic infrastructure support to the goat rearers, transportation, logistics and processing facilities under one roof and linkages to domestic as well as international markets. The cluster based approach will allow for key partnerships to be made towards capacity building, establishment of marketing and financing linkages and increase in technical know-how. The goat cluster will also help towards generating additional job opportunities for the local community.

The goal of establishing the goat cluster in Nashik district thus brings the imminent possibility and opportunity for a producer company, run and owned by poor women from drought-prone regions, to be able to earn regular incomes from their livelihood activities.

With respect to the ecological sustainability and addressing of agri-related water needs of the area, the goal of the project is to utilize the full potential of the existing water resources in these villages without putting any incremental pressure on the natural resources. Through this, the Goatry Project intends to have convergent growth of both goatry and water specific interventions in the area.

Figure 12: Subject Expertise in Goatry Project

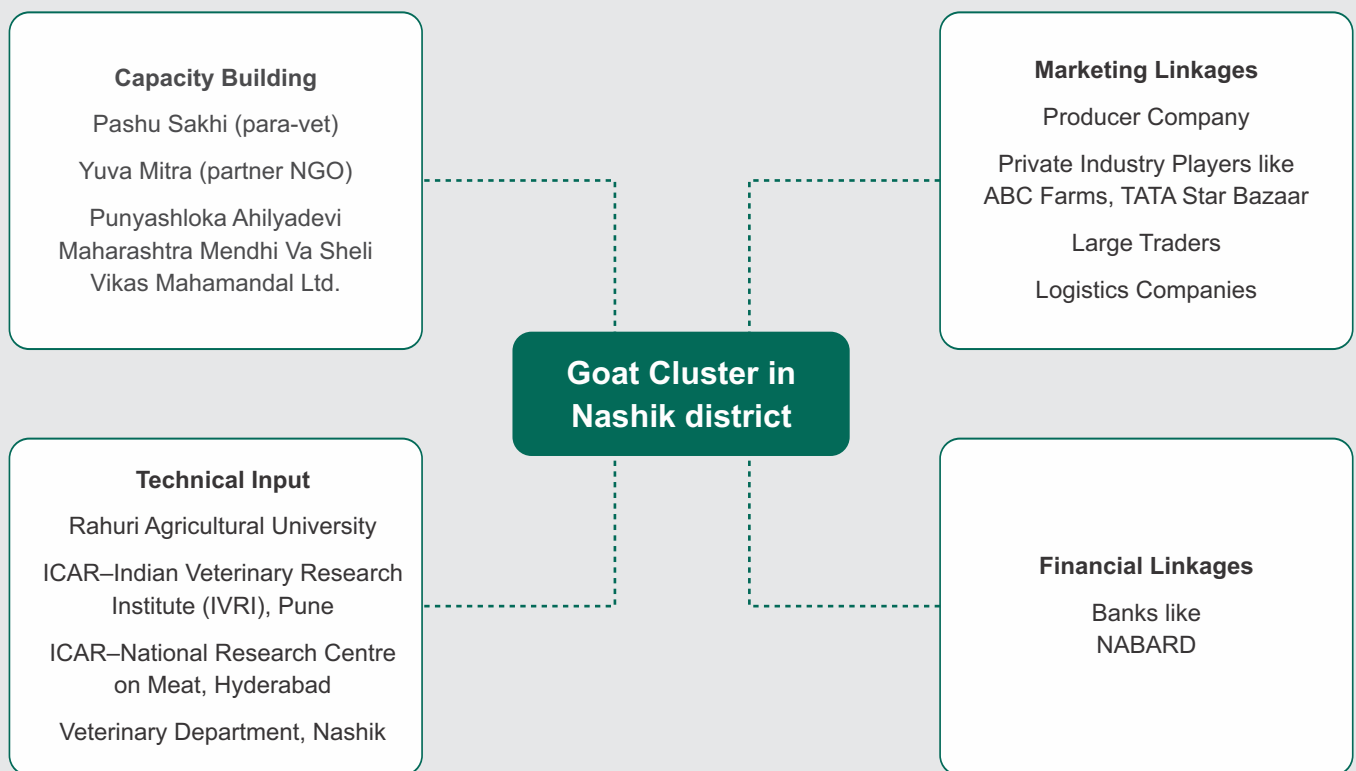


Diagram source: Nalanda Foundation (An IL&FS CSR Initiative)

Key Learnings

Improved Income for Women through an Allied Business

It makes great business sense to develop allied businesses alongside improving agriculture productivity which will reduce women's dependency on a particular crop. Through the Goatry Project, 1,946 beneficiary women from 30 villages have been institutionalized into Goat Producer Company and scientific goat-rearing practices have been promoted. Women have generated revenue of INR 21 million (USD 288,818) from the sale of goats and the current goat population of 9,916 worth INR 59 million (USD 811,442).

Need for a Market Offtaker for Sustained Income

At present, surplus goat milk is sold to local village level milk collector at very nominal rates. But, there is significant demand of goat milk and goat cheese in regional markets which can bring better incomes for women. Therefore, creating linkages with experienced industry players in this value chain will result in achieving the ultimate goal for creating the larger goat cluster.

Need for Water Interventions for Improved Village Ecosystem

Efforts of desilting of 31 water harvesting structures across 11 villages have resulted into an additional water storage of 256,000 m³ benefiting over 3,000 farmer families and more than 6,700 acres of agricultural land.

HAPPY ROOTS



Photo credit: Happy Roots

Empowering Women and Small Farmers through a Responsible Supply Chain



Organizations Involved

Happy Roots, Nirmiti Women's Industrial Cooperative Society



Location

Ahmednagar, Akola, Amravati, Kolhapur, Pune and Yavatmal districts



Duration

Organization launched in 2016 to present



Value Chain Component

Agricultural Procurement



Women Benefited

1,000 women



Project Cost

INR 10,02,786 (USD 14,326) invested by the Founder

KEY RESULTS

150 percent increase in production of indigenous crops

30 percent less water used in barley – key ingredient used in snacks

100 percent increase in annual income for women working in the factory (skill training)

Happy Roots is a socially conscious food company that promotes healthy and natural snack food, using local, farm-fresh ingredients sourced directly from small and tribal farmers in Maharashtra and handmade by trained rural women's groups. With a strong focus on sustainability, Happy Roots is a unique company that impacts the entire spectrum of the agricultural supply chain through its mutually beneficial partnerships with grassroots organizations and the private sector; focusing on supply as well as demand side of food chain. This includes a focus on climate resilient agricultural practices and water conservation measures. Powering Happy Roots is a women's cooperative called Nirmiti Women's Industrial Cooperative Society, where rural women trained by the company are handcrafting the healthy snacks, and in the process gaining meaningful employment and marketing skills.

Introduction

Box 5

Happy Roots Philosophy

- Increased farm incomes for small and marginal farmers through improved yields, risk mitigation and market linkages.
- Women's empowerment through increased participation in management of food production enterprises, including financial decision-making and marketing.
- Preservation and promotion of indigenous varieties of grains through product innovation.

The Journey

Reema Sathe found her calling in working directly with rural communities after working in marketing roles in the food and beverage industry for seven years. She quit her job in 2014 to join a start-up working with tribal farmers in Gujarat and Maharashtra states. Reema realized two key challenges: Firstly, small farmers typically made 20 percent of the end consumer's rupee¹² for their produce. Secondly, several micro-enterprises in agriculture were unsustainable due to lack of adequate marketing skills and product knowledge to match up to the rapidly changing consumer preferences.

Through her research, Reema saw an opportunity in the healthy, preservative-free, and ready-to-eat food segment. "The demand and supply gap was clear and I found a social problem which I felt passionate about to solve," says Reema. She took the plunge and set up Happy Roots Foods &

¹²For example, if the consumer pays INR 100 (USD 1.43) per kg for tomatoes, the farmer typically makes INR 20 (USD 0.3).

Beverages India Pvt. Ltd. in 2016 by investing INR 10,02,786 (USD 14,326) of her own savings. Over the next months, she assembled a small team of motivated youngsters to develop products and set up the supply chain by partnering with existing micro-enterprises and small farmers. After more than 6,000 man-hours and 60 product trials, Happy Roots launched its first range of four products in August 2016. Since then they have branched to manufacturing six products and have received a very encouraging response from the urban consumers. Reema was awarded the Nari Shakti Puraskar in 2017 by the President of India in recognition for her service towards the cause of women's empowerment.

Sourcing the Best

Happy Roots products include whole grain cookies and crackers made from indigenous grains rich in minerals, proteins and fibre. All of Happy Roots products are made from high quality local ingredients.

Happy Roots locally sources raw materials like millets, barley, wheat, buckwheat, amaranth, dairy, sugar, and spices from FPCs in Maharashtra, Telangana and Andhra Pradesh. Happy Roots has partnered with FPCs as it provides access to an established network of cultivators along with local experience and capacity for in situ value-addition. Through these FPCs, Happy Roots is linked with a network of over 20,000 marginal farmers.

Happy Roots adopts a contract farming approach for sourcing grains wherein the company handholds selected members of its partner FPCs in processes like seed selection and post-harvest management. Farmers are assured of a fixed price of purchase which is above the prevailing market price. This assures that Happy Roots gets the best quality grains from the farmers. The transparent process of procurement has cut out multiple levels of middlemen in the traditional supply chain and increased incomes of farmers by 100 percent. Also, instead of directly buying grains, Happy Roots buys the flour from the FPCs, resulting in better margins for the farmers through value-addition locally.

Partnerships

Happy Roots has partnered with Chetna Organic, an NGO working in the area of sustainable agriculture with active presence in Akola, Amravati and Yavatmal districts of Maharashtra, in addition to districts in Telangana and Odisha states. Chetna Organic works to enhance livelihoods of small-holder farmers in rain-fed areas through promotion of sustainable agricultural practices, organising farmers into Farmer Interest Groups (FIGs) and support in marketing as well as certification of organic produce. Happy Roots procures raw materials like barley, wheat and pulses from Narnala Farmers Producer Company, an FPC promoted by Chetna Organic comprising around 800 farmers from Akola district. About 300 of these farmers practice organic farming. Of the 800 farmers, about 150 are women. The farmers have benefited from a range of water-related interventions implemented by Chetna Organic such as construction of farm ponds, check dams and desilting of water bodies.

“Working with women farmers has been a positive experience for us. Women are more likely to adopt innovative agricultural practices and are very good at documenting their interventions, which makes applying for organic certification easier.”

**- Rahul Bole
Chetna Organic**

Lokpanchayat is another partner NGO working for the revival and promotion of sustainable farming practices, biodiversity conservation and women's empowerment in Ahmednagar district. Happy Roots has collaborated with Lokpanchayat and associated farmers in Ahmednagar to grow buckwheat, a fruit seed usually found in Himalayan regions of India. It is rich in digestible protein, antioxidants and minerals, and is also gluten-free. Before Happy Roots' intervention, buckwheat was cultivated only in small quantities for local consumption. With the company's support, women cultivators are also engaged in beekeeping on buckwheat farms, which has helped increase crop yields.

Lokpanchayat specializes in promotion of organic farming and conservation of indigenous local varieties of crops. It received support through the UNDP Small Grants Programme in 2005 for training women farmers in sustainable agricultural practices as well as establishing self-sustained indigenous seed banks.

To scale up sustainable farming activities, Lokpanchayat has formed the Baliraja FPC comprising of about 500 members, almost 60 percent of which are women farmers. “Women perform majority of tasks in the organic system

of farming, including biomass management and protection of seeds. For organic farming, it is easier to work with women since male farmers opt for market-based solutions to agricultural issues such as use of chemical fertilizers. This has led to sharp decline in soil quality in many regions,” says Sarang Pande of Lokpanchayat.

Buckwheat



Japanese buckwheat



Buckwheat



Barley crop



Barley grain

Box 6

Nirmiti: Creating Opportunities for Women

Women’s empowerment is a key goal and a priority for Happy Roots. For the crucial process of manufacturing the delicious snacks, Happy Roots partnered with Nirmiti, a women’s cooperative based in Sangamner, district Ahmednagar.

Nirmiti Women’s Industrial Cooperative Society was formed by members of SHG promoted by Lokpanchayat to provide a platform to collect, standardize and market various products of small women’s enterprises. One of the first ventures of Nirmiti was to set up a neem oil production unit to cater to organic farming needs of Lokpanchayat’s farmers. The cooperative has a membership of over 3,000 women.

Happy Roots has adopted the strategy of handholding and building capacity of the Nirmiti Women’s Industrial Cooperative Society as a leading manufacturing facility for producing high quality food products. Happy Roots facilitated a loan of INR 3.5 million (USD 28,571) to the organization to set up a greenfield bakery unit in Sangamner. The cooperative employs four women who were trained by Happy Roots in making cookies and snacks for the company. The women were also given training to prepare simple bakery products for the local market. There are plans to scale up operations, which would lead to more employment in the bakery unit.

“My income has more than doubled after landing a job at the bakery. I’m very happy that my 14 year old son is not forced to work to be able to afford an education.”

– Anita, trained in making bakery products



Anita Petare (Lead Trainer at Nirmiti Cooperative)

Anita came from a traditional, conservative rural Indian family where she spent her time in child-care and household activities. Among the many women of Nirmiti Women's Industrial Cooperative Society, Anita was one of the first ones to step out of her home to pursue a livelihood activity. She was a victim of domestic violence by her husband and decided to run away with her young kid. She was a part of the first women's training program conducted by Happy Roots in Pune in December 2017 and has now become the lead trainer at the cooperative unit. Through Nirmiti, she has her own individual identity in the society as well as the strength to stand up on her own and give her child the best education possible. Her son, who used to previously work at a dispensary, goes to high school, and she dreams of building a two room house in the near future.



Photo credit: Happy Roots

Building a Conscious Brand

For distribution, Happy Roots has partnered with a number of coffee shops, bistros and hotels in Pune and Mumbai. Its products are available on leading e-commerce platforms in the country, and are shipped to locations in India and abroad. Happy Roots started out by using plastic packaging for their products but has moved to fresh new, eco-friendly packaging. The company has seen turnover increase of 30 percent month-on-month since December 2017.

Snack foods is an INR 315 billion (USD 4.5 billion) market in India, expected to grow at 11.8 percent annually from 2018-22. Healthy and conscious food is a niche yet rapidly growing segment within the market. However, awareness among consumers about supply chain sustainability remains a barrier to growth. Another challenge is raising funds while mainlining sustainability of the supply chain and the stakeholders involved.

Social Impact

It took Reema and her team more than a year and half to set up a supply chain where profits were shared equitably among various stakeholders in the supply chain. It has created positive ripples within the communities they've worked with. The goodwill created through fair trade practices coupled with digital outreach has earned Happy Roots widespread recognition in India and abroad. The company is regularly approached by farmer groups from all across the country and even abroad to be a part of its supply chain.

- Although Happy Roots can absorb only a limited amount of agricultural produce for their products, they sell the excess raw materials to local traders, micro-breweries, etc. This way, Happy Roots has connected over 5,000 farmers with the market, contributing to increased incomes.
- Through training and capacity building, Happy Roots has empowered over 1,000 women to start their own enterprises. Through the manufacturing unit of Nirmiti in Sangamner, women are manufacturing additional bakery products like cream rolls, cakes, bread, etc. for local consumers, in addition to making snacks and cookies for Happy Roots. As a result, women are generating 100 percent more income annually.

Figure 13: Stakeholders in Happy Roots Supply Chain

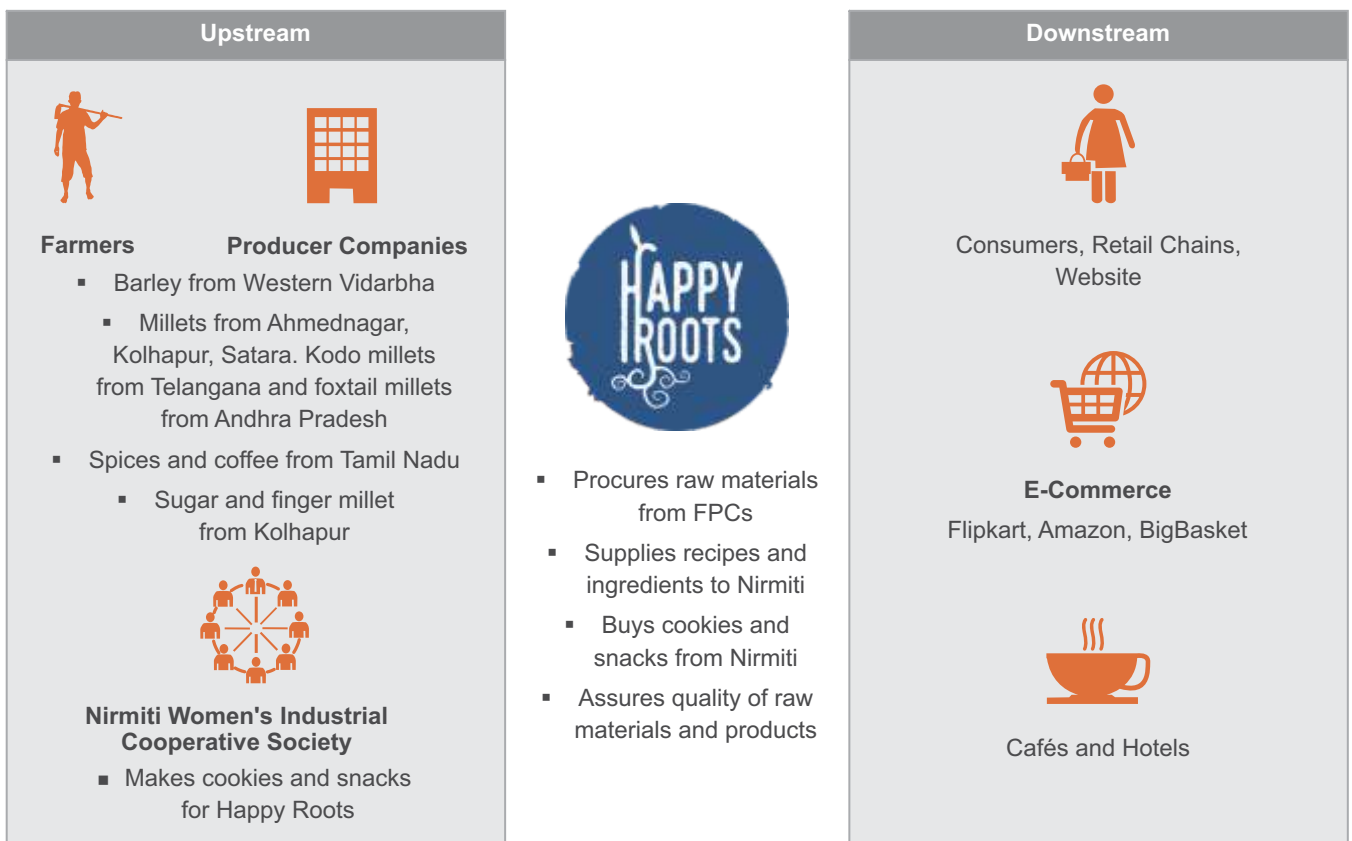
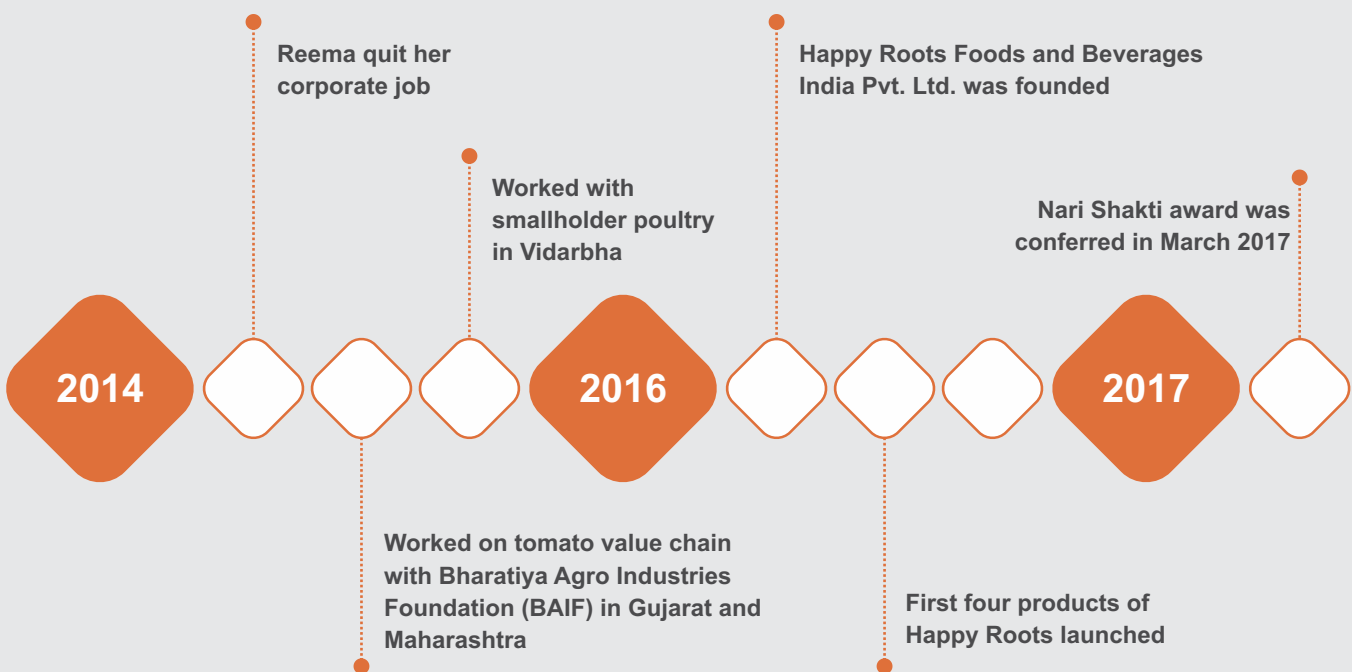


Figure 14: Happy Roots Timeline



Key Learnings

Promoting Indigenous Grains

The Happy Roots enterprise has demonstrated the viability of models that conserve and promote traditional local varieties of food grains such as various millets, rice, barley and create a consumer market for their products. Through Happy Roots interventions, there has been a 150 percent increase in the production of indigenous crops in the region. These indigenous varieties require less amount of water compared to staple grains and, hence, are sustainable alternatives for farmers. For example, barley uses 30 percent less water than wheat, a key ingredient in one of the snacks.

Potential for Food Processing

Happy Roots has demonstrated the potential value creation that can be unlocked by prioritizing the food processing sector in the promotion of MSMEs as well as creating avenues for the involvement of women in the food processing sector.

Investing in Women for Employment Beyond Agriculture

Investing in a women-run factory has resulted in positive outcomes for both, Happy Roots, a woman-led organization, and for rural women for whom employment was generated through skill training.



Photo credit: Happy Roots



Photo credit: 2030 Water Resources Group

IV

Recommendations and Way Forward



Key learnings from the project team's assessment and proposed next steps are categorized as policies and financing interventions and actions that can be driven through partnerships and platforms are

presented here. These are presented as specific suggestions to public-private-civil society stakeholders with an aim to offer substantive replication opportunities to promote the role of gender and water in agricultural production systems.

RECOMMENDATIONS

PUBLIC SECTOR

PRIVATE SECTOR

CIVIL SOCIETY

Policy interventions

Improved market access for women-run FPCs/FPOs.

Improve awareness for women on existing government policies and schemes.

Offer policy support for promoting nutrition-rich, indigenous, climate resilient varieties of crops.

Leverage ongoing government initiatives directed towards empowering women and improving their livelihood opportunities.

Financing interventions

Promote formation of a Special Purpose Financing Vehicle (e.g. public-private partnerships) including start-up funds and funds targeting women-run FPCs.

Set up innovative equity or debt funds such as credit guarantee fund or a revolving fund to facilitate working capital.

Leverage CSR funds for developing the village ecosystem that facilitates women entrepreneurs.

Training

Promote training and capacity building of women farmers to facilitate integrated value chains.

Implement training and capacity building modules at the grassroots level and advocate for financial literacy.

Partnerships

Create an entrepreneurship and incubation facility for women-led, water-centric agri-innovations supporting existing GoM initiatives.

Connect women farmers to the markets through support from private sector (buying produce) and civil society (facilitating the collaboration).

Leverage 2030 WRG facilitated Maharashtra Water Multi-Stakeholder Platform to drive dialogues and develop partnerships in agri-water-gender through public-private-civil society engagements.

Policy Interventions

Awareness on Existing Schemes

Lack of awareness about the policies supporting women, reduces their access to resources and subsidies. For example, providing information on key policies such as Women's Entrepreneurship Policy in local language can boost small businesses and women entrepreneurs who seek to benefit operating from their small enterprises.

The government can increase awareness on existing schemes by setting up information desks in local government offices, engaging women beneficiaries through mass media and through focus groups or information sessions at the grassroots. In addition, information linked to opportunities to increase income will help women to make informed decisions at the farm level as well as in the household.

Training and Capacity Building

The one-size-fits-all approach for training will not be effective if women need to build their capacities to understand the end-to-end integrated agricultural value chain, including watershed development, on-farm agri-water efficiency and post-harvest management. Specific skill development policy for women will give impetus to women's learning and development.

The Centers of Excellence and Krishi Vigyan Kendra infrastructure already in place in the state can double up as centers for learning and skill transfer. In addition, setting up centers for training of women to build FPCs that look specifically at FPC-linked knowledge areas such as procurement, processing, product diversification and marketing will allow women to make financial decisions related to their agricultural produce.

Policy Interventions for Improved Market Access

There is a need to promote market access (links to traders, offtakers, etc.) in the states for better prices for fruits and vegetables grown by women farmers or through predominantly women-run FPCs. Such a policy may outline special incentives for promotion of agricultural clusters geared towards domestic markets as well as exports. This will support women to get assured income for their households.

Furthermore, the state government's move to reform the APMC Act will open up opportunities for innovations in alternative marketing channels. For example, women-run FPCs can now directly sell their produce in the local market without relying on middlemen or private market agents.

Transforming SHGs into Women-run FPCs

Given that several women have been trained to develop a sustainable business, and procure and market agricultural commodities, for example, through Project Disha, there is an opportunity to convert progressive SHGs to FPCs. As an FPC, registered under Companies Act 1956 and the rules made thereunder, the SHGs can become profitable entities that can support the development and further training of other women in rural areas. At present, SHGs cannot register profit under Societies Act, consequently depending on availability of funds through MAVIM and other public and private resources. Policy intervention for the same will support rural women to generate income and improve their participation in post-harvest management and marketing of produce.

Policies for Promoting Nutritive Indigenous Crops

With appropriate incentives such as market linkages and product innovation, government can foster a move towards cultivation of indigenous and climate resilient varieties of crops. Nutrient-rich foods can improve health outcomes for women in rural areas, thereby increasing their productivity.

Land Ownership Rights for Women

Strengthen existing policies to increase co-ownership of agricultural land and other resources.

Financing Interventions

Formation of a Special Purpose Financing Vehicle

An incubation center for FPCs can be set up along with government funds and private sector (equity) players that may further boost public-private partnerships.

Innovative Equity or Debt Funds

A credit guarantee fund or a revolving fund may go a long way in ensuring sustainability of the women-run FPCs. The fund will seek to reassure lenders that in case of a default, the fund may meet the losses incurred by the lender. This may also encourage women-run FPCs to take on more responsibilities that will benefit the rural women (including their SHGs) in the districts.

In addition to providing capital for social enterprises, equity linked instruments that aim to improve the quality and effectiveness of investments can be explored. For example, the Samridhi Fund set up by the Department for International Development (DFID), United Kingdom, in association with Small Industries Development Bank of India (SIDBI), created a fund to provide capital to social enterprises which can deliver both financial and social returns in eight states, among them being Bihar, Madhya Pradesh and Odisha. A similar fund can be set up in Maharashtra to encourage formation of FPCs and social enterprises by women.

Leveraging CSR funds of the Private Sector

Private sector may invest its CSR funds for village development with a goal of enhancing the village ecosystem that will facilitate women to actively generate income and improve the socio-economic outcomes.

Platforms and Partnerships

Leverage 2030 WRG facilitated Maharashtra Water Multi-Stakeholder Platform

Engage public, private and civil society representatives to drive a policy dialogue and partnerships with regard to women in agriculture and in agri-business companies.

Company Best Practices such as resource efficiency management tools, for example, EDGE Green Building and other methods that can ensure women in company management, close wage gaps, offer childcare support to employees, etc., especially in agri-business companies, should be explored.

Leveraging Government Initiatives

Women groups in remote areas may also look at leveraging state government interventions such as the 'Action Room on poverty', initiated with UNDP's support. The action room aims to work on 27 development blocks of 13 of the poorest districts of the state to boost agriculture-based employment generation in a systematic way over next two years. The thrust would be on agri-businesses and value chain development and the intervention is expected to improve entrepreneurship and provide employment opportunities to 500 families per block and also improve service delivery of health and education.

Create an Entrepreneurship and Incubation Platform

Create a permanent warehouse of women-led, water-centric agri-innovations that provides business incubation and partnership opportunities for diverse stakeholders such as market offtakers, technology providers, financing organizations, etc.

Need for Partnerships

Create examples of successful women-run agri-businesses and encourage innovative partnership approaches such as partnerships with the government, private companies, academic institutions, community-based organizations, etc. Initiatives such as the Global Forum for Rural Advisory Services bridges the knowledge gap by looking at experiences of diverse stakeholders on existing good practices and evidence at the global level.

Role of the Private Sector and Market Linkages with the Offtakers

The private sector may consider investing in capacity building of women farmers on value chain aspects of the agricultural sector, that could be implemented by civil society partners. Furthermore, connecting with private sector offtakers would enable small, farmer-led businesses to move towards scalable enterprises.



Photo credit: 2030 Water Resources Group

Annexure

Agri-Water Policies and Programs that Highlight the Gender Component

| Sr. | Name of Policy | Year | Parent Organization | Summary |
|-----|---|------|--|--|
| 1 | Maharashtra Cooperative Societies Rules | 1961 | Cooperation, Marketing and Textile Department, GoM | <ul style="list-style-type: none"> Reservation of seats for women in committees. Formation of farming, crop protection, lift irrigation, processing, producers' and resource societies. |
| 2 | Maharashtra Management of Irrigation Systems by Farmers (MMISF) Rules | 2006 | Water Resources Department, GoM | <ul style="list-style-type: none"> Formation of WUAs for distribution and management of water for irrigation. Reservation of seats for women as Directors of Managing Committees of WUA. |
| 3 | Operational Guidelines of Per Drop More Crop (Micro Irrigation) Component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) | 2017 | Division of Rain-fed Farming System (RFS), Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare | <ul style="list-style-type: none"> Ensuring allocation of water for women farmers. |
| 4 | Gram Panchayat Development Plan (GPDP) Guidelines (Marathi) | 2015 | Rural Development Department, GoM | <ul style="list-style-type: none"> Formation of Village Resource Groups with at least 1/3rd seats reserved for women. Consultation with Mahila Sabha and SHGs regarding additions/changes to GPDP. |
| 5 | Nanaji Deshmukh Krishi Sanjivani Yojana (Government Resolution) (Marathi) | 2018 | Agriculture Department, GoM | <ul style="list-style-type: none"> Ensuring equal opportunities for women to participate in project activities. Formation of Village Climate Resilient Agricultural Management Committees (VCRMC) with 50 percent women members. Participatory development of mini-watersheds. Focus on improving water use efficiency. Leveraging private sector (exporters, seed companies, farm machinery and inputs suppliers) for value chain development. |
| 6 | FPO Policy and Process Guidelines | 2013 | Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare | <ul style="list-style-type: none"> Improved gender relations and decision-making of women farmers in FIG and FPOs by giving them board member positions. Incorporating existing water users groups/SHGs as FPCs. Leveraging private sector players for promotion and formation of FPCs. |

| Sr. | Name of Policy | Year | Parent Organization | Summary |
|-----|---|------|---|--|
| 7 | Maharashtra Industrial Policy | 2013 | Industries, Energy and Labour Department, GoM | <ul style="list-style-type: none"> ■ Reserved area in Maharashtra Industrial Development Corporation Industrial Estates for women entrepreneurs and enterprises. ■ Emphasis on development of food and agro-processing, logistics and warehousing. |
| 8 | Micro and Small Enterprises Cluster Development Programme (MSE-CDP) | 2007 | Ministry of Micro, Small and Medium Enterprises (MSME), Government of India | <ul style="list-style-type: none"> ■ Grant for hard and soft interventions for women-owned enterprises. |
| 9 | Maharashtra State Industrial Cluster Development Programme (MSICDP) (Government Resolution) (Marathi) | 2014 | Industries, Energy and Labour Department, GoM | <ul style="list-style-type: none"> ■ Grant to women-owned enterprises for setting up common facility centers. |
| 10 | Maharashtra State Policy for Women Entrepreneurs (Government Resolution) (Marathi) | 2017 | Industries, Energy and Labour Department, GoM | <ul style="list-style-type: none"> ■ Capital, subsidies and special assistance to 100 percent women-run enterprises. |
| 11 | Maharashtra State Textile Policy | 2018 | Cooperation, Marketing and Textile Department, GoM | <ul style="list-style-type: none"> ■ Creating employment opportunities for women through strengthening knitting, garment making and hosiery sectors. ■ Promoting sericulture and mulberry farming through SHGs. |

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