

# Women led Climate Resilient Farming

## The Case for Empowering Women Farmers and Making it Happen

SSP's climate resilient farming model is de-risking small and marginal farmers in drought prone Marathwada by transforming grassroots women from supporting roles to decision makers in agriculture







## About this Resource Guide

**C**an there be a farming model which improves productivity, increases income, enhances health and nutrition of the family, and on the top of that transforms marginalized women from agro-labourers to changemakers in agriculture? Well, this resource guide is just about that. In this document we have encapsulated Swayam Shikshan Prayog's (SSP) efforts in building a Women led Climate Resilient Farming Model in the drought prone region Marathwada. In the last 4 years, SSP has empowered 41,000 small and marginal women farmers in the region. In the process, the farming families have become more food secure, increased their on-farm earnings and improved their productivity – all these with using naturally available bio-inputs.

We firmly believe, this resource guide will raise curiosity and interest in this model and inspire organizations from different sectors to partner, invest and collaborate.

## Acknowledgements

**W**e take this opportunity to thank Prema Gopalan, Upmanyu Patil, Anwesha Tewary and Anjali Verma for their nuanced inputs and valuable guidance throughout developing the guide.

We express our gratitude to Naseem Sheikh, Tabassum Momin and Devkanya without whom we would not have been able to bring out the field insights. We also thank Krishi Samvad Sahayaks and field coordinators of SSP who have relentlessly worked to arrange and schedule the field surveys.

Lastly and most importantly, we would also like to thank all the women farmers who have constantly inspired us to develop this guide and bring out their stories.





## Foreword by Prema Gopalan

It is a proud moment for me to present this public document on Women led Climate Resilient Farming. This is a consolidation of Swayam Shikshan Prayog's (SSP) initiative to build resilience and reposition women as farmers, leaders and decision makers in agriculture. This document elucidates the conceptual framework of climate resilient farming centre-staging women as key change agents, and speaks from the experience of those who have reversed the impact of drought on their communities by adopting climate resilient farming practices. It highlights the contribution of grassroots women in addressing climate change that threatens their families and communities by suggesting what works and what doesn't during such situations.

Globally, 80% of poor farmers are women, however, they have always been considered as mere labour on their own farms. It is high time that international organizations, government, private sector and other key stakeholders recognize the critical role of these women as farmers and decision makers in agriculture. A radical shift in the policy making is the need of the hour that will, in turn, direct the financial resources and extension services towards women farmers.

This document brings in focus women farmers - leaders who are silently leading a revolution in the rural areas, fighting climate change by ensuring food security, increasing their income, providing jobs and boosting local economies. These women are no longer mere beneficiaries instead they have emerged as partners in driving the initiatives at the last mile and bringing lasting impact.










Swayam Shikshan Prayog seeks collaboration of the Government, corporates, foundations and other donor agencies to further grow and scale up this initiative in empowering large numbers of small and marginal women farmers as leaders in the climate threatened areas.

I hope you enjoy a good read throughout, and I welcome your valuable feedback.

### Prema Gopalan

Executive Director  
Swayam Shikshan Prayog

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## Executive Summary

**43%**

of the labor force globally in agriculture are women, and in India, 79% of rural women are engaged in agriculture as compared to only 63% of rural men. Yet, what picture comes to your mind when you think of agriculture and a farmer in India? Invariably of a man. The underappreciated role of women in agriculture over the decades has resulted in women not having access to resources – knowledge, land, and finances. They hardly take any decisions regarding agriculture- what to grow, how to grow and when and where to sell.

On the other hand, over the last four decades, farmers have gradually moved away from natural agricultural methods practiced by their forefathers and have been drawn deep into growing chemical and water intensive cash crops. This move had made them vulnerable to climate risks.

SSP's operations area in Marathwada, receives 44% less rainfall than the national average and only one-fifth of the cultivable land is irrigated. However, even small and marginal farmers have allocated almost their entire land to water-intensive crops like sugarcane and farmers and neglected food crops. The food grain production in Maharashtra dropped by 25% in 2014-15, with almost a similar increase in cash crops like sugarcane and cotton. With three years (2013-15) of consecutive drought in Marathwada, the cash crops failed. The farmers who took loans for buying chemicals, seeds and other farm inputs placed themselves in dual risk scenarios. They neither had money to buy food from the market nor did they grow any food for themselves on their farm.

SSP's work with empowering women in agriculture made them realize women in the farming households are key to bring in the shift in existing agricultural practices to balance the need for cash income and securing food security and nutrition of the family. In SSP's Women led Climate Resilient Farming Model we have transformed women to become decision-makers in agriculture, revive traditional farming practices and address multipronged challenges of climate uncertainties.

However, why women? Men are naturally inclined to earn cash for his family while women are more concerned about the food security, health, and nutrition. Being the food managers of the family, women, when empowered to decide what to grow in the farm ensuring food security in times of climatic stress. As mothers, women are inherently protective about the health and nutrition of their children and family and are more inclined towards chemical less farming.

SSP keeps women at the centre of the model and transform them as change-makers in agriculture with a view to promote resilient livelihoods. To operate the model, SSP has designed an enabling ecosystem with Government, Agrotech partners, Training partners and Knowledge & Resource partners to empower women through farm literacy, decision making abilities, access to land and leadership skills. On ground, SSP's community resource persons take a center-stage to disseminate the model and be a constant linkage between the model ecosystem and the women farmers.

In the last 3 years, we have been able to impact 41,000 women farmers. Those who have adopted the model have experienced 25% increase in the average yield of food crops, 25% savings in farm input costs and INR 35,000 average annual savings per household due to farm grown food. The early results of Women led Climate Resilient Farming Model, and national and international accolades inspire us to upscale and further strengthen the programme. This resource guide makes a case for empowering women in agriculture, how to make it happen, SSP's plans to further strengthen the model and partnership opportunities for likeminded stakeholders who appreciates the value in what SSP is doing.







Swayam Shikshan Prayog was selected from 806 nominees across 120 countries and was awarded the Equator Prize by UNDP for its Women led Climate Resilient Farming Model in 2017



**Marathwada is not just about farmer suicides, it is also about people like us who have challenged drought and destiny**

**Shaila Narore**

Adopter of SSP's Climate Resilient Farming Model



# 01 Why Us?

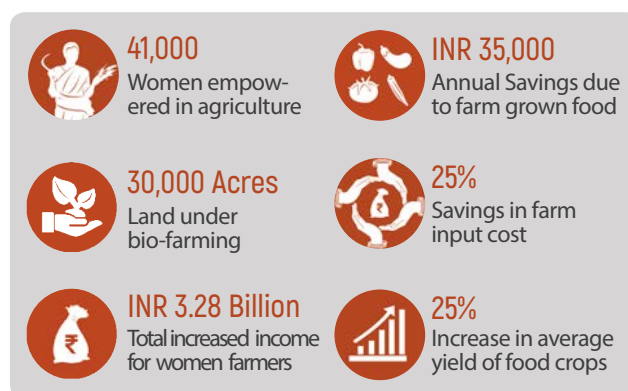
**S**wayam Shikshan Prayog (SSP) stands for self-education for empowerment and aims to bring grassroots women from margin to mainstream to achieve inclusive and sustainable development. In the last 20 years, we have supported this transition through multi-sectoral interventions in energy, health services, sanitation and agriculture. In the last 4 years, we have worked closely with the community and nurtured women as agriculture leaders from marginalized sections which shaped our Women led Climate Resilient Farming Model today. This public document consolidates our experiences, framework and model as we embark upon the next phase of the journey.

## Exhibit 1 Our Achievements

### Key Achievements of SSP as an Organisation






### At a glance: Impacts delivered through our Resilient Farming Model



Since inception when the model was adopted by 500 women who struggled with their families to get cultivation rights to today when 41,000 women farmer adopters are practicing climate resilient farming independently, our program has evolved over the years regarding not only outreach but also the solution itself. With constant endorsements from the State Government and support from donor organizations, we have been able to make vertical and horizontal scaling ups in the last four years.

## Evolution of the Women led Climate Resilient Farming Model

|   |  |  |
|---|--|--|
|  | <b>2015</b><br><b>Women led Nutrition Sensitive Agriculture</b>      | Partnered with Misereor Germany in promoting women's leadership in nutrition sensitive agriculture with improved access to food and livelihoods in rural Maharashtra and Gujarat   |
|  | <b>2016</b><br><b>Initiating Resilient Farming Techniques</b>        | Collaborated with Government of Maharashtra to scale up Mahila Kisan Sashaktikaran Paryojana (MKSP) to 21,000 farmers through Maharashtra State Rural Livelihood Mission (MSRLM)<br><br>Funded by the Clearing Corporation of India Limited and the Great Eastern Shipping Company Limited to develop women as farmers and community leaders to fight impacts of drought by improving women's knowledge in agriculture, promoting diversification of livelihood through enterprise development support and creation of water conservation structures |
|  | <b>2017</b><br><b>Scaling up Women led Climate Resilient Farming</b> | Funded by Azim Premji Philanthropic Initiatives (APPI) to scale up Women led Climate Resilient Farming Model in two districts of Maharashtra – Latur and Osmanabad   |





## 02 Why Now?

**"D**uring 2013-14 we could not grow any crop in our land due to drought. We had to take loans to run the house"- recalls Puja Popat Bhawar from Osmanabad. Earlier Puja and her family used to grow an acre each of Sugarcane, Cotton, and Soybean in their 3-acre land. With complete dependency on cash crops and chemical inputs, the family placed itself in the perils of climate uncertainties. Today the Climate Resilient Farming Model has helped Puja to grow 10 different food crops including vegetables and pulses in an acre of their land and derisk multiple climate change challenges. Puja is not alone. SSP's Women led Climate Resilient Farming model is delivering social, economic and ecological resilience to small and marginal farming community in drought-prone Marathwada – vulnerable to acute climate shocks. SSP's unique cascading approach in ground deployment of the model, through its large network of women, makes it scalable, replicable and efficient.

**With high reliance on chemical inputs and alarming drift towards cash crops, small and marginal farmers have become food poor and vulnerable to climate shocks**



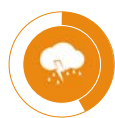
**25%**

Drop in Food Grain Production in Maharashtra in 2014-15

In 2015-16, food grain production has witnessed a 25%<sup>1</sup> decline in Maharashtra with almost a similar increase in production of cash crops like sugarcane and cotton. This has subsequently increased the dependency on chemical inputs with a steep increase in the cost of cultivation for the farmers.

This along with the shift in agricultural practices thus places the farmer in a dual risk scenario:

1. **Economic Risks:** In case the crop fails the farmer gets no return on hefty investments for farm inputs thereby getting into a debt trap.
2. **Health and Nutrition Risks:** The farmer has neither grown any food crop, nor he now has adequate money to buy any from the market – putting the household in abject food poverty



**44%**

Lower Rainfall in Marathwada than national average

**Marathwada's crippling water shortage coupled with extremely low coverage of irrigation increases more risks than rewards for the farmers growing cash crops**



**20%**

Irrigation Coverage of Marathwada

**W**ith 44% lesser rainfall than the national average and 20%<sup>2</sup> irrigation coverage in Marathwada, water guzzlers like cotton and sugarcane stand a high probability of failure rate in adverse climate conditions. Yet, several farmers have abandoned local crops like sorghum (jowar), channa (chickpea) to grow these water intensive cash crops. Marathwada has an annual average rainfall of 821 mm<sup>3</sup> while sugarcane ideally needs 2100mm to 2500mm rainfall. So, with frequent droughts, farmers in the districts of Osmanabad, Latur, Nanded and Beed have faced acute economic, social and ecological challenges due to failure of their crops. Unable to identify any solutions to their misery, some farmers have even resorted to committing suicides. In 2017 alone, 789 farmers<sup>4</sup> in Marathwada had taken their lives. A climate resilient farming model will go a long way in helping the farmers of Marathwada to improve their agriculture practices, come out of their miseries and stop taking their lives.

1 [https://www.maharashtra.gov.in/PDF/EcoSurvey\\_2015\\_16\\_Eng.pdf](https://www.maharashtra.gov.in/PDF/EcoSurvey_2015_16_Eng.pdf)

2 <http://agricoop.nic.in/sites/default/files/Maharashtra%2026-Aurangabad-3%201-12-2011.pdf>

3 [http://hydro.imd.gov.in/hydrometweb/\(S\(0ymurl55bikbhgzupnyvny0\)\)/PRODUCTS/Publications/Rainfall%20Statistics%20of%20India%20-%202016/Rainfall%20Statistics%20of%20India%20-%202016.pdf](http://hydro.imd.gov.in/hydrometweb/(S(0ymurl55bikbhgzupnyvny0))/PRODUCTS/Publications/Rainfall%20Statistics%20of%20India%20-%202016/Rainfall%20Statistics%20of%20India%20-%202016.pdf)

4 <http://www.livemint.com/Politics/FYufr1MknwRyxgeYAWxgVP/Maharashtra-reports-2414-farmer-suicides-in-JanuaryOctober.html>





## 03 Why Women ?

More than three-fourth of the rural women in India are engaged in agricultural but with limited access to land they are hardly allowed to make any decisions around crop and farm input selection



**79%**

Rural women in India are engaged in agriculture



**But Only 13%**

Agricultural land in India are owned by Women

**F**ood and Agriculture Organization (FAO) reports 43% of the labour force in agriculture in developing countries are women<sup>5</sup>. When we shift our focus to India female participation is even more. A Press Information Bureau (PIB) release states<sup>6</sup> 79% of rural women in India are engaged in agriculture as compared to only 63% of rural men.

But despite their consistent and considerable contribution, women seldom play decision making roles in agriculture. Instead they receive directions from the male members of the house to run errands in typically low-skill jobs in their land like sowing, weeding, applying farm inputs, and harvesting. The traditional practice of inheritance of the land only by the male members of the family have further distanced women in taking decisions in crop and farm input selection. This inability to show land in their names deprive women of access to credit and many government schemes. However, GOI's directive<sup>7</sup> last year to allocate at least 30% of the state agricultural funds for Women specific agriculture schemes may initiate bettering the situations for women farmers.

**SSP's Climate Resilient Farming Model answers why Women should be transformed as decision makers in agriculture**



Women as compared to men are better listeners and what they learn, they share in their groups which make them extremely efficient in implementing new learnings

**Dr. Anita Jinturkar,**

Scientist, Krishi Vigyan Kendra, Osmanabad, Maharashtra

**W**e at Swayam Shikshan Prayog operate at the intersection of resilient livelihoods and empowering marginalized women. Through years of on-ground experience SSP has realized women play a pivotal yet unrecognised role in agriculture and are indispensable in breaking the its existing mould .

We have observed when women are empowered to decide what to grow, what inputs to use, when and where to sell – key shifts happen in agriculture. Women, for years have been managing the livestock in their homes and are better suited to implement integration of farming sub-systems in their land. Moreover, being the food managers in the family help them to decide what to grow in the farm ensuring food security in times of climatic stress. As mothers women are inherently protective about the health and nutrition of their children and family and are more inclined towards chemical less farming.

In the model SSP has put these theories to practice and have developed women farmers who are influencing even their husbands' agricultural practices. "Now she is my teacher and I'm working on the farm as her student" – asserts Kamalbai Ghurband's husband from Loha, Nanded District, Maharashtra.

<sup>5</sup> <http://www.fao.org/docrep/013/am307e/am307e00.pdf>

<sup>6</sup> <http://pib.nic.in/newsite/PrintRelease.aspx?relid=170364>

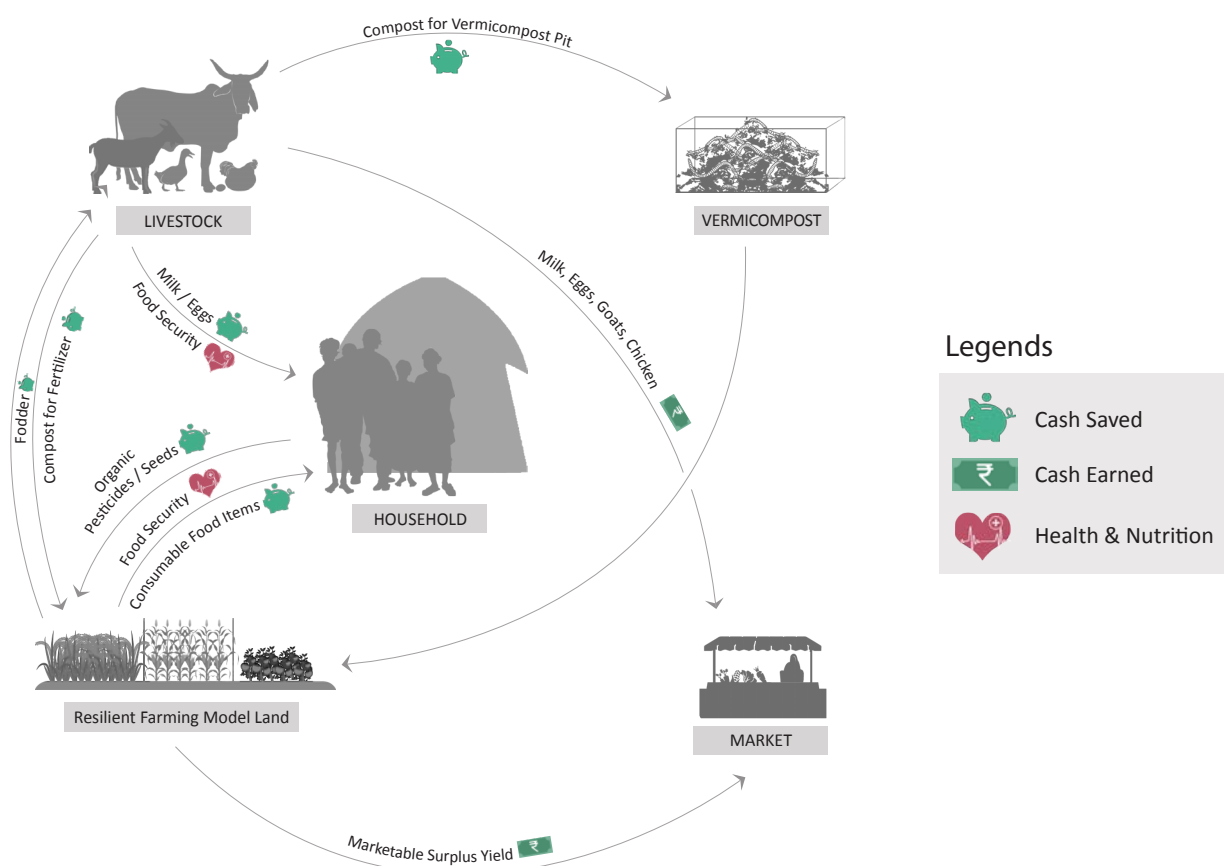
<sup>7</sup> <http://pib.nic.in/newsite/PrintRelease.aspx?relid=171730>



## 04 The Model

**S**SP's Women led Climate Resilient Farming Model aims to empower women as change-makers in agriculture with a view to promote resilient livelihoods for small and marginal farming households. In the process, the model ensures farming becomes an economically viable venture for these small and marginal holders. This is through integrated farming techniques, increasing livestock and farm-allied businesses, increasing consumption and marketing of nutritious farm grown food crops. This model encourages women to gain cultivation rights, from their families on a small piece of land, to grow local food crops. On the acquired piece of land, which usually starts with half or one acre, women practice water efficient, chemical less cultivation of vegetables, millets, cereals and pulses through mixed cropping, diversifying to 6-8 crops per season and by increasing crop cycles. Women lead the complete decision making around what to cultivate, what to sell, what to keep for the family, what and where to sell, thus gaining control over income and savings.




Exhibit 2 The interactive linkages among different subsystems form the core strength of SSP's Climate Resilient Farming Model



At farm level, the dynamic linkages of different subsystems unlock the true potential of the model. Firstly, integrating livestock with farm practices provides a three-way impact. The farmland gets organic fertilizers for bio farming, the family gets a regular intake of protein like eggs, chicken and milk for improving their nutrition status and the surplus livestock outputs sold become an alternate stream of cash flow for the household. Secondly, the part of the farmland which the women have cultivation rights delivers a dual impact to the family. The land now produces vegetables, millets, pulses and cereals and provides the family a daily intake of organically farmed nutritious food. The surplus farm produce sold to the market gives the household a regular cash inflow.



Through the Climate Resilient Farming Model SSP aims to make interventions at three different levels

| INTERVENTION AREAS   | WHAT   |
|--|--|
|  <b>Individual Women Farmers</b>    | <ul style="list-style-type: none"> <li>• Providing farm literacy to women and increasing overall participation of women in agriculture</li> <li>• Improving access to land for women and advocating for their cultivation rights</li> <li>• Conducting intensive training sessions and workshops on key components of the model and thereby improving their decision making in various aspects of agriculture</li> <li>• Increasing financial independence by facilitation of marketing their farm produce</li> </ul>  |
|  <b>Farmland and Farm Practices</b> | <ul style="list-style-type: none"> <li>• Growing food crops (Pulses, Vegetables and Food Grains)</li> <li>• Using home grown seeds</li> <li>• Germination Test</li> <li>• Mixed/Intercropping and Crop Diversification</li> <li>• Use of Bio-pesticides (Dasparniark, Neem Ark, Brahmastra, Agniashtra)</li> <li>• Use of Bio-fertilizers (Compost, Cow Dung, Vermi-compost)</li> <li>• Soil Testing</li> <li>• Seed Treatment</li> <li>• Water conservation techniques (Farm pond, Drip irrigation, Sprinkler sets, Tree plantations)</li> <li>• Soil Conservation</li> </ul> |
|  <b>Community</b>                 | <ul style="list-style-type: none"> <li>• Institutionalizing women farmers</li> <li>• Developing Krishi Samvad Sahayak (KSS)</li> <li>• Increasing recognition of women as farmers in the community and to the Government</li> </ul>  |



**Initially, it took 2 to 3 months to convince my husband for getting 10 gunta (0.25 acres) of land. But he was happy seeing the results and gave me 1 acre to farm on**

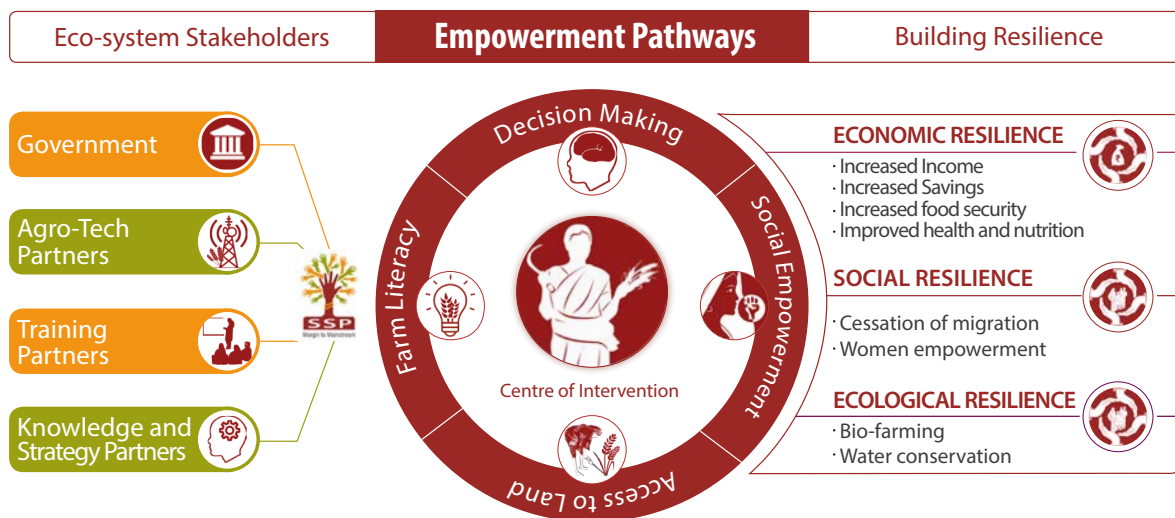
**Puja Popat Bhawar**  
Javla, Osmanabad







## 05 The Framework

**S**SP's Climate Resilient Farming Framework engages key ecosystem partners and empowers women to access part of their farmland, exercise their cultivation rights and take decisions in crop selection, farm input selection, sowing pattern and market the produce. Parvati Bibhute from Osmanabad shares, "At one point of time when we were growing sugarcane it was difficult for us to earn profits, even after 2 years of harvesting". Parvati, whose family was growing Soybean, Jawar and Sugarcane in 5 acres of land, adopted SSP's climate resilient farming model in 2015 and since then she has been growing 16 food crops in 1 acre of land all by herself only with bio inputs. While the family consumes most of the farm produce now, selling the surplus contributes around INR 35,000 per year. "Now the men of the house do not need to migrate to the cities and work as labourers", gleams Parvati with pride. SSP puts women at the centre of the Climate Resilient Farming Framework to address multipronged challenges of climate uncertainties.

Exhibit 3 SSP's Climate Resilient Farming Framework

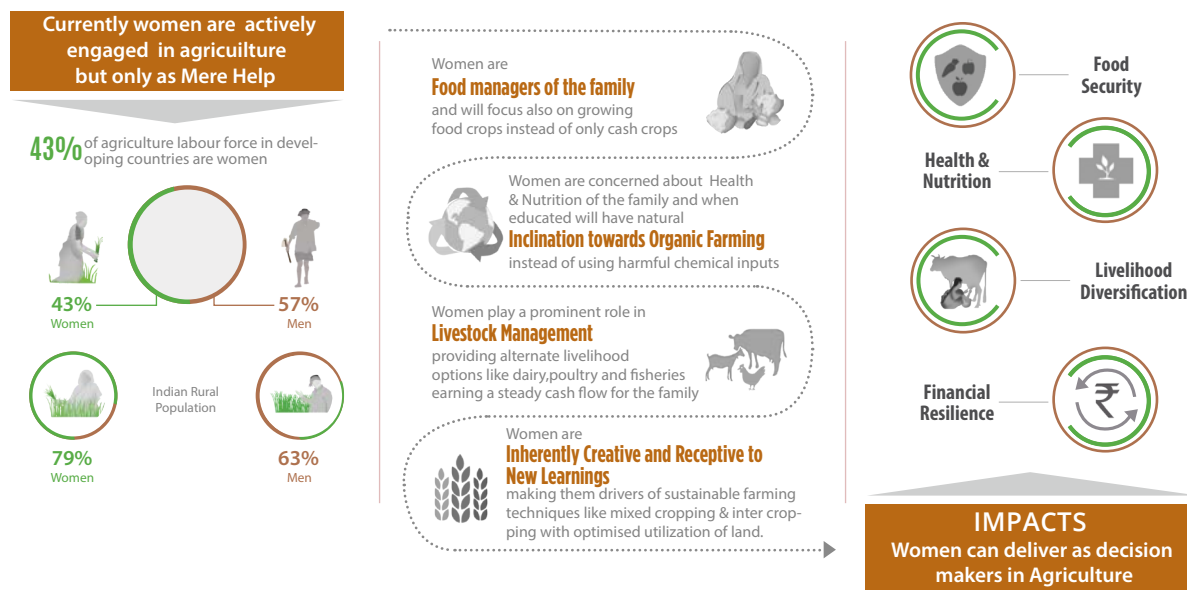


### SSP's Stakeholder Engagement Strategy

| Ecosystem Partners   | Engagement Strategy   |
|--|---|
|  <b>Training Partners</b>               | SSP facilitates training sessions in partnership with agriculture training bodies like Krishi Vigyan Kendra (KVK). Such institutes are instrumental in conducting capacity building programs, trainings and knowledge sharing sessions on relevant topics of the model and develop the skill levels of the women farmers. |
|  <b>Government</b>                      | Government agricultural bodies disseminate schemes, policies and subsidies pertaining to farming. SSP acts as a facilitator and smoothen the access to such schemes and subsidies for the farmers and sensitizes the community.   |
|  <b>Technology Partner</b>              | Technology partners like Agricultural Technology Management Agency (ATMA) are responsible for disseminating technologies related to agriculture. SSP cohesively engages with them and ensures the farmers have access to these extension services for implementing key components of the model in their land.             |
|  <b>Knowledge and Strategy Partners</b> | SSP collaborates with knowledge and strategy partners to shape the operations planning and implementation approach of the model and assess the project progress.  |



## Exhibit 4 Why women as decision makers in agriculture ?



Women as decision makers in agriculture can produce crops with shorter gestation period and improve the cashflow, manage agro-allied activities and diversify livelihoods, use low cost bio inputs and avoid the vicious debt cycle

**"W**e used to have two meals a day and I cooked only one vegetable each meal. Being food secure I do not need to restrain meals of my family now. Today I cook 2 to 3 kinds of vegetables per meal", shares a contended Vaishali Pawar from Kallam, Osmanabad who adopted SSP's climate resilient farming model in 2015 and now grows 22 different food crops without using any chemical inputs.

When empowered with access to land, cultivation rights and decision making in agriculture women grow vegetables, cereals and pulses for consumption of their family. To make it healthier they will opt for chemical less farming. This apparently simplistic approach towards farming safeguards the family with a four-dimensional economic resilience – enhanced savings, improved cash inflow, livelihood diversification and increase income from farm produce.

### FOUR-DIMENSIONAL ECONOMIC RESILIENCE



Enhanced Savings

The family which used to block its entire farmland for cash crops, now consumes farm grown food and saves the cost incurred in buying food items from the market. Bio inputs, a cheaper option by large margin than chemicals help the family to restrict the operating costs.



Increased Income

After consumption by the family the surplus farm produce are sold in the market which provides the family an increased income from farm produce.



Improved Cash Inflow

Cash crops like sugarcane, cotton or turmeric although provides a lump sum pay, sugarcane typically takes 12 to 18 months for gestation and the farmers need to wait longer for returns on their investment. This brings an inherent economic risk with it. Women growing vegetables and pulses will have a shorter turnaround time and will get a steady cash inflow thus minimizing the risks of crop failure.



Livelihood Diversification

Women have traditionally been engaged in livestock management. While it becomes indispensable to have a cow or buffalo to implement bio-farming, women's knowledge and experience in animal husbandry can provide the family an alternate stream of income by selling livestock or livestock outputs. Poultry, Dairy, Goat rearing etc. de-risks financial instabilities for the household and increases overall family income.

## SSP'S MODEL BUILDS AN ECOLOGICAL RESILIENCE BY WEAVING WATER EFFICIENT AND CHEMICAL LESS FARMING INTO THE FARM PRACTICES

## EMPOWERING WOMEN TO DELIVER FOOD SECURITY AND BETTER HEALTH AND NUTRITION TO THE FAMILIES SHAPE SOCIAL RESILIENCE OF THE MODEL

Leveraging skill sets of Women farmers in climate resilient farming can promote environment stewardship programs through soil and water conservation, using bio inputs and optimal land utilization through mixed and inter cropping techniques

**W**omen, unlike men are seldom drawn towards productivity at the cost of health and nutrition of the family. While male farmers vehemently use chemicals for increasing productivity of their crops, women's maternal instincts make them the harbinger of growing food crops and chemical less farming.

Savita Awle from Loha, Nanded says, "Earlier our children were falling ill frequently. After we started chemical less farming we hardly had any medical expenses". When we transform women as decision makers, we promote a large section of the community to use bio inputs and practice ecologically harmless farming.

Cash crops generally require more water than vegetables and cereals. For example, sugarcane requires up to 2500 mm of water per hectare for surface irrigation during its growing period and Sorghum being a cereal requires 650mm<sup>8</sup>. Vegetables require even less but more frequently. When women grow food crops like cereals, pulses and vegetables they practice cultivation with drastically lesser amount of water and are more likely to adopt micro irrigation techniques. Empowering women in deciding what and how to grow thus is closely intertwined with ecologically harmless farming.

Transforming women from mere help to decision-makers in agriculture promotes gender equality in agriculture, prevents forced migration during lean seasons, provides food security and develops women as change-makers in the community

**"N**ow I feel more confident as an individual in the community", shares Puja Bhawar, 24, who adopted SSP's climate resilient farming model in 2016. This model is empowering thousands of Puja's to find their voice in the community and get recognized as a farmer.

At 60, Vanita Sahebrao More is practicing organic farming and is an inspiration to budding women farmers in her district. She adopted the model in 2012 and got title rights of 3.5 acres land from her husband. Like Vanita, today many early adopters are training other women in their villages in climate resilient farming. Vaishali Balaji Pawar from Kallam, Osmanabad who adopted the model in 2015 is training 100 women farmers now and relaying the baton forward.

Through a steady inflow of cash and farm grown food the model provides a 360 degree resilience to small and marginal farming families who otherwise during extreme climate conditions are subjected to acute survival challenges.

Rekha Shinde and her family from Osmanabad witnessed tough times during drought. Due to heavy investments in chemical inputs and high reliance on single crop Jawar, Rekha's husband had to migrate to cities to make their both ends meet. "Now my husband does not need to migrate outside for labour work", says Rekha with a big smile on her face.



Now the men of the house do not need to migrate to the cities and work as labourers during lean seasons

**Parvati Shankar Bibhute,**  
Ghatingri, Osmanabad



## RESILIENCE INDICATORS

## HOW SSP's CLIMATE RESILIENT FARMING MODEL DELIVERS IT

### Economic Resilience



#### Increased Cash Income

- Selling surplus farm produce at smaller intervals than cash crops with a steady cash inflow
- Selling surplus livestock and/or livestock outputs like milk, chicken, eggs and goats and diversifying livelihoods



#### Increased Cash Savings

- Consuming farm grown food and saving on bought food items
- Preparing own farm inputs (seeds, bio fertilizers, bio pesticides) and saving on expensive chemical inputs
- Reducing medical expenses borne due to poor nutrition levels



#### Cessation of Seasonal Migration

- Continuous cash flow through the model imparts a robust economy to the family and eliminates the compulsion of migrating outside in search of labour work during lean seasons

### Social Resilience



#### Increased Food Security

- Growing food crops like pulses, cereals, millets, vegetables for own consumption asserting a steady food flow
- Livestock outputs like milk and eggs forming part of regular diet



#### Improved Health and Nutrition

- Farming with bio inputs will eliminate consumption of chemical infused food grown in farmland
- A regular diet of farm grown food eliminating compulsion of restricted intake
- Milk, chicken and eggs from owned livestock increases protein intake for the household



#### Women's Empowerment

- Providing access to cultivation rights and land rights
- Improving women participation in farming, making them farm literate and transforming them as decision makers in agriculture
- Imparting them with financial independence and empowering them to take decisions in key expenditures at household level
- Increased recognition of women as farmers in the society and by the government

### Ecological Resilience



#### Preservation of Farmland

- Using bio-inputs which help to retain the soil fertility, arrests erosions thereby preserving the land quality



#### Water Conservation

- Micro irrigation models and growing lesser water intensive crops
- Promotion and use of bunding and farm ponds use improve water usage



## 06 Implementation Approach

**S**wayam Sikhshan Prayog as a facilitator enables the ecosystem by engaging a wide range of stakeholders such as resource organisations, agri-science institutions, knowledge partners, policy makers towards training, technical support, market linkages, financial services and other key resources. SSP's experience in working with marginalized women provides us ample expertise to weave an expansive network of rural women from the community. The model draws its strengths from the peer to peer horizontal learnings that take place under the tutelage of SSP through workshops, practical demonstrations and network meetings. Women farmers grow through these learning sessions and become eligible for shouldering responsibilities as Samvad Sahayak for SSP who in turn takes the baton forward. We believe peer learning augments an implementation approach manifolds. That is why we have developed early adopters as model farmers who have been able to adopt all the components and reached a stage where she can train other women in the community to implement the model and thus making the programme sustainable. We also plan to develop two demonstration farms in each village which contain the key components of our model. The practical sessions conducted in these demonstration farms further strengthen the implementation approach.



Being a Samvad Sahayak my first and foremost responsibility is to educate every women farmer on bio-farming practices and promote collective farming in the community

**Neeta Dhananjay Bhore,**  
Nagul, Osmanabad

### SSP's on-ground approach led by Samvad Sahayak to disseminate the model makes all the difference

**S**SP has build an army of Samvad Sahayaks across all its project areas. They take a centre stage when it comes to on-ground deployment of initial campaigns, awareness, trainings and selection of women farmers. Samvad Sahayaks form a continuous linkage between the model ecosystem and the farmers and facilitates phase-wise adoption of the model. In the target villages, SSP will build technical capacities of the Samvad Sahayaks, who will mobilize farmers, identify potential women farmers and families and provide them continuous handholding support throughout the project period. The Samvad Sahayaks will also act as facilitators between small and marginal women farmers and local government officials by offering information and training. Currently the climate resilient farming model deploys one Samvad Sahayak for each village to perform these activities.

#### Role of a Samvad Sahayak :

- Identifying, screening and selecting women farmers who meet the selection criteria and can be potential adopters of the model
- Cascading training and information to women farmers
- Facilitating access to resources, government schemes and subsidies
- Handholding and being a constant linkage throughout the project period
- Forming farmer groups at village level for ease of training dissemination and collectivization activities



The phase wise implementation plan spreads out the evolution of a woman farmer over 3 years from selection to leadership development

Exhibit 5 Implementation Plan of Resilient Farming Model



**SCREENING  
& SELECTION  
OF FARMER**

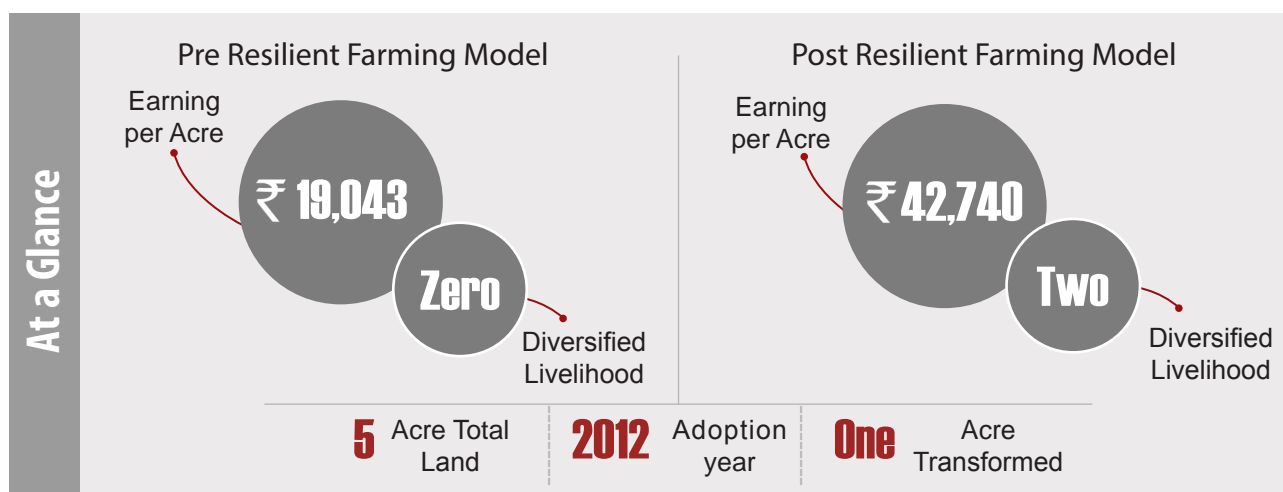
## LEVELS OF RESILIENT FARMING MODEL ADOPTION

| Initiation  | Level I: Adoption of Practices<br>Knowledge and Skills   | Level II: Economic Benefits<br>Increasing Yield and Income   | Level III: Maximizing Income<br>Collectivization  |
|---|--|--|---|
| <ul style="list-style-type: none"> <li>Awareness, assessment, selection and training of the women farmer.</li> <li>Selection</li> <li>Intensive training on adoption measures.</li> </ul>   | <b>Adoption of Improved Agriculture Practices</b> <ul style="list-style-type: none"> <li>Germination Test</li> <li>Seed Treatment</li> <li>Local Fertilizers</li> <li>Local Pesticides</li> <li>Local Seeds Preparation</li> <li>Mixed and Inter Cropping Systems</li> <li>Cultivation of Food Crops for Household Consumption</li> </ul>  | <b>Food Security and Marketing Surplus</b> <ul style="list-style-type: none"> <li>Natural Resource Management [Tree plantations, Soil &amp; water conservation structure by Govt. convergence]</li> <li>Farmers in Producer Groups</li> <li>Cultivation of vegetables in three cycle</li> <li>Cultivation of food crops for HH purpose &amp; surplus sale in market [start for marketing]</li> <li>Promote livestock management</li> </ul>   | <b>Improved Market Linkages</b> <ul style="list-style-type: none"> <li>Collective procurement of agri inputs</li> <li>Collective sale of agricultural produce</li> <li>Agro based enterprise development (Vermi-compost entrepreneurs, dairy, poultry, goat keeping, sale of local pesticides, local fertilizers and surplus food crops)</li> <li>Value Addition</li> <li>Leadership Development</li> <li>Land Ownership</li> <li>Increased area of cultivation of food crops and vegetables</li> </ul>                                       |
| Key Activities  | Key Activities   | Key Activities   | Key Activities  |
| <ol style="list-style-type: none"> <li>Assessment of current land and its components (layout, livestock, irrigation, crops)</li> <li>Training and Technical support to launch the model</li> <li>Decision on which components need to be modified or added</li> <li>Decision on investment requirement</li> </ol> | <ol style="list-style-type: none"> <li>Awareness Campaign – Resilient Farming Model, Livestock and Agri Inputs</li> <li>Classroom Training on Agri Inputs and Natural Resource Management</li> <li>Field Demonstration and Farmer Field Schools for Inputs</li> <li>Experience sharing by adopted and benefitted farmers</li> <li>Exposure visit to result benefitted farm</li> <li>Develop Model Farms</li> </ol> | <ol style="list-style-type: none"> <li>Awareness Campaign-Resilient Farming Model, Livestock and Agri Inputs</li> <li>Classroom Training on Agri Inputs and Natural Resource Management</li> <li>Field Demonstration and Farmer Field Schools for Inputs</li> <li>Experiences sharing by adopted &amp; benefitted farmers</li> <li>Exposure visit to result benefitted farm</li> <li>Develop model farms</li> <li>Dialogue workshop with Government</li> <li>Sakhi Mela at District Level</li> </ol> | <ol style="list-style-type: none"> <li>Class-room training</li> <li>Exposure visit to market, Farmers' Producer Company and other organizations</li> <li>Dialogue workshop with Government</li> <li>Workshops with govt., financial institutions and market players</li> <li>Leadership development workshops</li> <li>District and State level policy workshops</li> <li>Linkage with govt. schemes related to agriculture, water, livestock, market and finance</li> <li>Seed fund support</li> <li>Sakhi Mela at District level</li> </ol> |

# Success Story

Meet Mrs. Rekha Satish Shinde who transformed 1 acre of her farmland ensuring food security for her family and integrating livestock management to implement a financially sustainable farming model.

**Rekha Satish Shinde** 32, comes from Hingalwadi village of Osmanabad district, Maharashtra. She has a 7-member family including two sons and twin daughters.



## Life Before Implementing the Resilient Farming Model

The Shinde family owned 5 acres of farming land and took an additional 5.5 acres of land on lease. While Rekha's husband and mother-in-law took decisions regarding crop selection and farm inputs she used to carry out weeding and harvesting activities. Theoretically, this may look like a mantra to a successful farming model but the reality was strikingly different. Growing single crop, majorly Jawar in their farmland had placed the family in middle of acute financial instability, more so during adverse climate and market scenarios.

Osmanabad being a drought prone area had further worsened the situation. The family was unable to grow any crop in their land during 2010-11 and Rekha along with her husband had to work as daily wage labourers to earn their living.

Furthermore as the family did not grow any food crops, the family had to buy all food items from the market (worth Rs. 25,000 per annum). Financial insufficiency made the same very difficult and made the family vulnerable to food security risks.



## The Transformation Story

It was not an easy journey for Rekha to convince her husband and mother-in-law to bring a change in the way the family has been farming for years. More so because women traditionally have not been considered as decision makers in agriculture. After a lot of persuasion and convincing her husband gave her half an acre to farm on.

Rekha cultivated fenugreek, potatoes and brinjals on the small piece of land and by selling surplus marketable potatoes the family earned a profit of Rs. 50,000. This also helped the family pay off the loan of Rs. 25,000 which they took for commissioning a borewell for their land. Elated with the results Rekha's husband decided to let her farm on an entire 1 acre of land where she majorly grew food crops like pulses (Toor, Moong, Urad) and vegetables (Chillies, Coriander, Spinach, Fenugreek, Gawar etc.).

Post adoption of the Resilient farming model the family experienced a tremendous economic impact of 124% considering only farmland cash earnings and savings providing Rekha and her family a financial steadiness. Moreover, cash income from selling surplus marketable food crops is providing a continuous cashflow to the family vis-à-vis their earlier condition of getting a lump sum amount at the end of the season.

Integrating livestock is providing the family diversified sources of income and helping them implement chemical free organic farming, thereby reducing costs on fertilizers.

### Economic Impact through livestock



Exhibit 6 Economic Impact through Resilient Farming Model Adoption

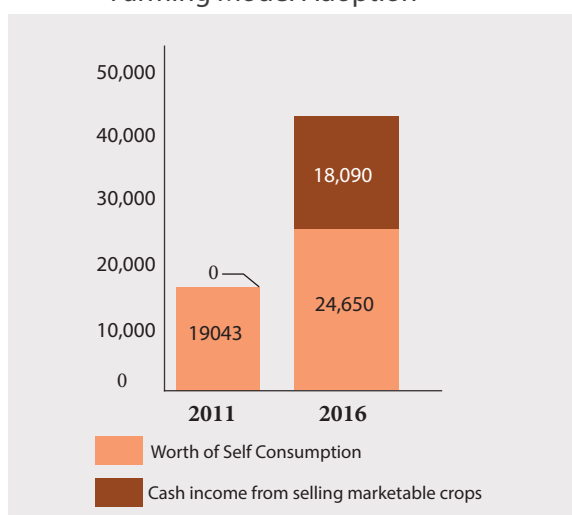
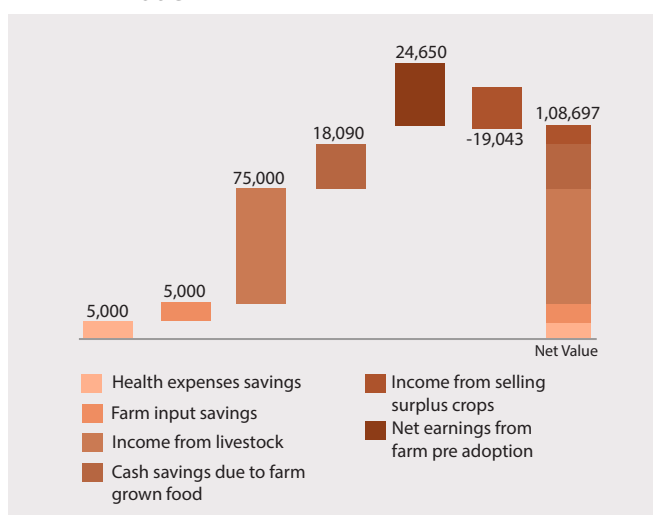


Exhibit 7 Value Creation through Resilient Farming Model



## Post Transition Impacts



### Food Security, Health and Nutrition

- Reduced dependency on bought food items by growing pulses and vegetables in own farm
- Improved health for the family through organically farmed food crops
- Enhanced nutrition and diet with a regular intake of milk and eggs sourced from owned livestock



### Social Impact

- Rekha has now transformed herself from a mere help to a decision maker in her farmland thereby empowering herself
- Rekha along with her husband has now stopped migrating outside the village looking for daily wage labourer jobs
- The financial steadiness has ensured improved and continued education for Rekha's children



### Environmental Impact

- Livestock integration has affirmed elimination of chemical inputs in farming thus protecting ecology through arresting soil erosion and improving soil fertility

## In their own words



A year back I started working on the farm as a novice but now I can manage the entire farm independently

**Puja Popat Bhawar**  
Javla, Osmanabad



Earlier my husband had to migrate outside and work as daily wage labourer during lean farming seasons. After implementation of resilient farming model we have become economically self-sufficient and do not need to search for work outside

**Parvati Shankar Bibhute**  
Ghatingri, Osmanabad



We used to have two meals a day and I cooked only one vegetable each meal. Being food secure I do not need to restrain meals of my family now. Today I cook 2 to 3 kinds of vegetables per meal

**Vaishali Balaji Pawar**  
Javla, Osmanabad



Growing cotton blocked the land for an entire year. It was also prone to crop diseases. The land quality was also deteriorating due to application of chemicals and it was becoming difficult to continue farming cotton. Shifting to growing food crops gave us stability

**Savita Shivananda Awle**  
Loha, Nanded



We used to grow sugarcane in our entire land of 1 acre due to which we bought our food from the market and spent considerable sums on chemical inputs. Today we have shifted to food crops and feel secure.

**Lakshmi Datatre Birajdar**  
Chiwri, Osmanabad



I grow 16 different kinds of crops in my 3-acre land organically out of which 6 are fruit tree plantations. Resilient Farming Model has helped me diversify my livelihood and I earn around Rs.6,000 per month only through my allied source of living.

**Vijaya Gundu Mula**  
Killaj, Osmanabad











## 07 Going Forward





In the last 4 years, we have developed a model which is a cohesive force to join disjunct pieces of resilient livelihoods. The small and marginal families who have adopted this model have become more food secure, strengthened their economics, improved their health and nutrition – all these center-staging the women farmers. We feel this is the correct time for the model to level up. To realize the opportunities of a greater impact we need to strengthen the model focusing on four key dimensions: Market Linkages, Federating Women Farmers, Technology Integration and Water efficient micro irrigation models.

| Plans  | How   |
|--|---|
| <b>Strengthening Market Linkages</b>                        | <ul style="list-style-type: none"> <li>• Facilitating organic certification of produce by the farmers and providing access to market the same</li> <li>• Formation of farmer producer groups</li> <li>• Skill building and training for value addition activities like food processing</li> </ul>               |
| <b>Federating women farmers to form agro enterprises</b>  | <ul style="list-style-type: none"> <li>• Formation of agro allied enterprises in dairy, poultry, vermi-composts, local seeds etc</li> <li>• Federating women farmers to sell their farm produce through agro enterprises</li> </ul>   |
| <b>Integrating technology for farm level solutions</b>    | <ul style="list-style-type: none"> <li>• Smartphone application based weather in formation farm level decisions</li> <li>• Designing technology with the Government or private sector related to farm, water etc. to reduce drudgery and increase efficiency</li> </ul>   |
| <b>Promotion of Water Efficient Irrigation Models</b>     | <ul style="list-style-type: none"> <li>• Water stewardship projects in convergence with Government programs</li> <li>• Creating awareness on water conservation for farm, household and community</li> <li>• Increasing access to water efficient irrigation techniques through government subsidies</li> </ul> |



## 08 Partnership Opportunities

It needs a collaborative effort to unlock the true potential of a model. Hence, to further scale up the model and strengthen it, SSP is exploring partnership opportunities and create an ecosystem of stakeholders for creating a greater impact. We invite organizations from different spheres to partner with us in taking the Women Led Resilient Farming Model ahead and leverage our experience of delivering sustainable impact to the communities.

| Partners   | How  |
|--|--|
| <b>Government</b><br>               | <ul style="list-style-type: none"><li>• Greater convergence with Government schemes and programs in agriculture</li><li>• Large scale promotion of climate resilient farming and women in agriculture</li><li>• Certification support for organic farming</li><li>• Collaborations in skills, knowledge and resources in similar agricultural programs</li></ul> |
| <b>Financial Institutions</b><br> | <ul style="list-style-type: none"><li>• Agriculture loans to women farmers in farming and allied activities</li><li>• Seed funding for agro entrepreneurship ventures</li></ul>  |
| <b>Corporates</b><br>             | <ul style="list-style-type: none"><li>• Partnerships in similar social responsibility projects</li><li>• Co-designing tools, products, technologies to provide solutions at farm and farmer level</li><li>• Creating marketing opportunities for sale of agri produce, local seeds, bio inputs and value-added products</li></ul>                                |
| <b>Donor Organizations</b><br>    | <ul style="list-style-type: none"><li>• Partnerships in scaling up the existing Women led Climate Resilient Farming model</li><li>• Support in research and impact assessment studies</li><li>• Organize training programs for SSP's team and ground staff for capability building</li></ul>   |



## Program Partners



## Swayam Shikshan Prayog

Swayam Shikshan Prayog (SSP) stands for self-education for empowerment and aims to bring grassroots women from margin to mainstream to achieve inclusive, sustainable development. By choice, SSP work in and has scaled to 16 climate-threatened rural districts across India. In the last two decades, SSP has built robust ecosystems - community level federations, associate non-profit companies, producer companies and social enterprises that enhance women's access to their rights, entitlements, skills, and health-enhancing opportunities. Since 2009, SSP has partnered with private, public stakeholders to spawn a generation of over 145,000 empowered women.



## Re-emerging World

Re-emerging World (ReW) is SSP's program and knowledge partner for the Resilient Farming Model India program. ReW has taken up the responsibility of documenting this Resource Guide.

We are a global strategic advisory firm with one goal: inclusive and sustainable growth in emerging markets. We work with our clients to assess new growth opportunities, design and pilot models that deliver innovation, social and environmental impact.

In the last 12 years, we have delivered 75+ projects in 11 countries and 12 sectors.



## **Swayam Shikshan Prayog**

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