Interim Report

The Future of Agriculture: Empowering Women Farmers for Sustainable Development

New Farmers – Women Farmers
Sustainable Livelihoods and Growth with Technology

A Paradigm Shift in Agriculture

Traditionally, women were engaged in ancillary farming activities, yet their contributions were undervalued. Today, women farmers are emerging as leaders in agriculture, driving sustainable growth, innovation, and self-reliance. This report highlights the transformative journey of empowering women farmers across Gujarat.

Empowering Women Farmers for Sustainable Development Goals (SDGs)

Empowering women farmers is crucial for achieving sustainable livelihoods, economic growth, and climate-resilient agriculture. This initiative is aligned with the **Sustainable Development Goals (SDGs)**, ensuring that the efforts contribute to broader global objectives:

	**1. No Poverty** **Impact**: Enhancing women farmers' access to resources, tools, and knowledge increases incomes and reduces rural poverty. **Action**: Supporting **micro-enterprises** and ensuring access to financial resources like **microloans** through partnerships with institutions such as NABARD.
	**2. Zero Hunger** **Impact**: Women farmers play a vital role in ensuring food security and boosting agricultural productivity. **Action**: Promoting **good agricultural practices**, **soil health management**, and **climate-smart agriculture** techniques.

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	**3. Gender Equality** **Impact**: Closing the gender gap in agriculture by recognizing women as **farmers**, not just workers, and providing them access to land, credit, and training. **Action**: Conducting **targeted training programs** and introducing **gender-friendly agricultural tools** to enhance participation and productivity.
	**4. Clean Water and Sanitation** **Impact**: Encouraging smart water usage and irrigation techniques to reduce water wastage. **Action**: Promoting **laser irrigation**, **moisture meters**, and water conservation practices such as **farm ponds** and **trench systems**.
	**5. Affordable and Clean Energy** **Impact**: Adoption of renewable energy sources for sustainable agriculture reduces reliance on conventional energy. **Action**: Promoting **rooftop and farm-based solar panels** for energy-efficient farming and household activities.
	**6. Decent Work and Economic Growth** **Impact**: Empowering women farmers creates **rural employment opportunities** and boosts economic growth. **Action**: Supporting **women-led micro-enterprises** and agro-processing initiatives to enhance incomes and livelihoods.
	**7. Industry, Innovation, and Infrastructure** **Impact**: Introducing modern agricultural tools and technologies to rural areas fosters innovation and increases productivity. **Action**: Training women in the use of **drones**, **precision agriculture techniques**, and other **mechanized tools**.
	**8. Responsible Consumption and Production** **Impact**: Promoting sustainable farming ensures efficient resource use and minimizes waste. **Action**: Encouraging **natural farming**, **composting**, and using **organic inputs** for sustainable agriculture practices.

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	**9. Climate Action** **Impact**: Building resilience to adverse weather events and climate change strengthens agricultural systems. **Action**: Training on **climate-smart agriculture**, using **weather advisory systems**, and planning for contingencies.
	**10. Life on Land** **Impact**: Sustainable farming supports biodiversity conservation and improves soil health. **Action**: Promoting **agro-forestry**, **biodiversity preservation**, and **natural resource management**.
	**11. SDG 17: Partnerships for the Goals** **Impact**: Collaborating with government, NGOs, and financial institutions ensures successful project implementation and scaling. **Action**: Establishing partnerships with **NABARD**, **local governments**, and other stakeholders for financial and technical support.

Key Challenges Faced by Women Farmers

1. **Lack of Recognition**:
   - Women often lack official recognition as farmers due to land ownership disparities, limiting their access to government schemes and benefits.
   - Tools and resources remain male-centric, creating operational barriers.
2. **Increased Responsibilities**:
   - Women juggle farming decisions, household duties, and childcare, taking on roles traditionally dominated by men.
3. **Limited Access to Training**:
   - Insufficient exposure to modern agricultural techniques and climate-resilient practices.
   - Low awareness about advanced technologies and tools.

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A Vision for Change: The Training Initiative

This initiative, executed across five districts, is designed to:

- Equip women with modern agricultural tools and techniques against to sustainable climate change situation.
- Promote sustainable farming practices, entrepreneurship, and self-reliance.
- Align with the Sustainable Development Goals (SDGs) for long-term impact.

Program Scope:

- **Districts Covered**: Bhavnagar, Bharuch, Kutch, Amreli, and Navsari.
- **Villages Reached**: 50 villages.
- **Participants**: Over 2,760 women farmers trained.

Training Highlights:

- Workshops conducted before Kharif, winter, and summer cropping seasons.
- Customized sessions on climate-smart agriculture, water conservation, and entrepreneurship.

Key Topics Discussed

Climate-Smart Practices:

- Techniques to adapt to changing weather patterns, including agroforestry,farm ponds and livestock
- Training on weather advisories and contingency planning for crop cycles.

Technological Advancements:

- Drone technology for efficient spraying of pesticides and fertilizers.
- Soil health analysis using modern tools like moisture meters.

Natural and Organic Farming:

- Use of eco-friendly fertilizers like Jeevamrut and vermicompost.
- Transition to chemical-free farming practices.

Entrepreneurship and Micro-Enterprises:

- Training on value-added products such as pickles, papads, and sweets.

- Support for setting up home-based industries with advanced machinery.

Water and Energy Conservation:

- Introduction of solar-powered farming tools.
- Smart irrigation techniques to maximize water use efficiency.

District-Wise Report Highlights

District-Wise Training Report

1. Bhavnagar

- **Taluka**: Shihor
- **Villages Covered**: 10
- **Participants**: 651 women farmers

2. Bharuch

- **Taluka**: Jambusar
- **Villages Covered**: 10
- **Participants**: 588 women farmers

3. Kutch

- **Taluka**: Mandvi
- **Villages Covered**: 10
- **Participants**: 500 women farmers

4. Amreli

- **Taluka**: Rajula
- **Villages Covered**: 10
- **Participants**: 521 women farmers

5. Navsari

- **Taluka**: Navsari
- **Villages Covered**: 10
- **Participants**: 500 women farmers

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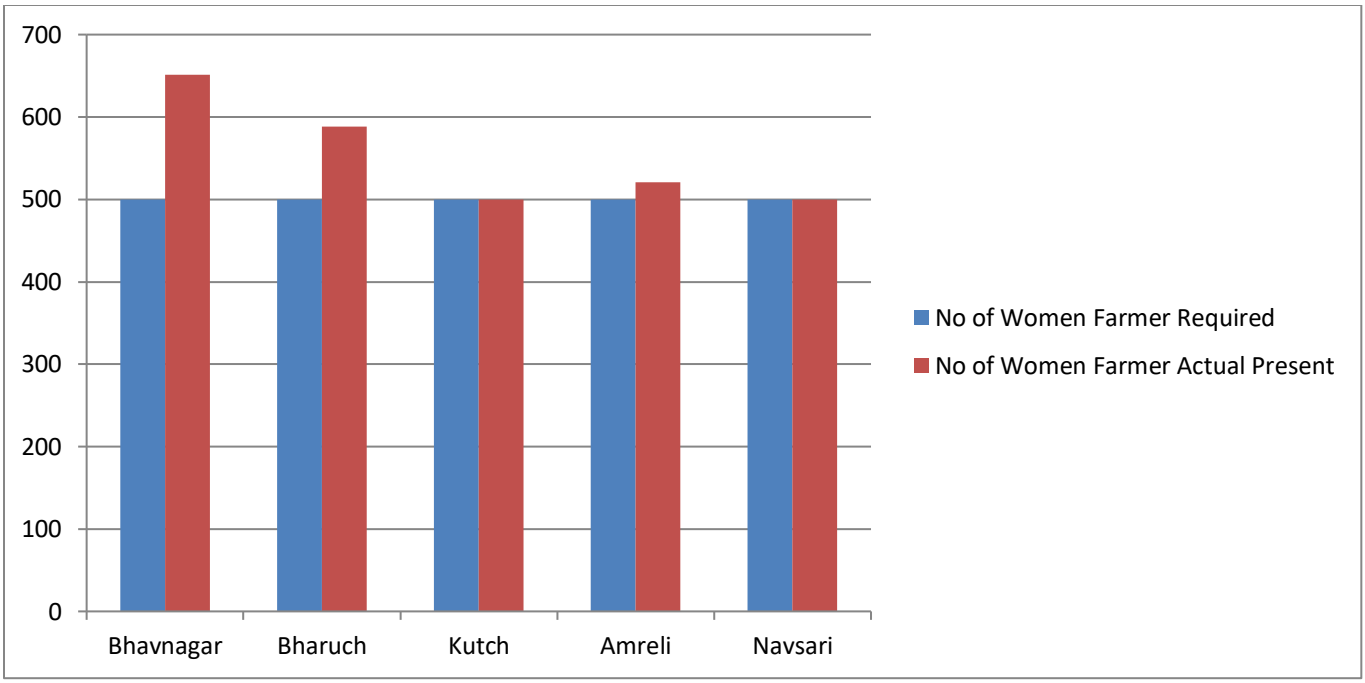

Key Highlights:

- High participation in climate-smart agriculture.
- Focus on soil health and efficient irrigation techniques.
- Introduction of women-friendly equipment for farming.
- Training on entrepreneurial ventures like food processing & value addition.
- Use of solar energy in farming operations.
- Promoting natural farming with Ghanjivamrit techniques.
- Focus on collective marketing and micro-enterprises.
- Training on post-harvest management practices.
- Highest attendance recorded for advanced technologies like drones.
- Discussions on water conservation and agroforestry.

Women Farmer Development Project: Grand Launch Events
The Women Farmer Development Project commenced with a series of launch events across five districts in Gujarat.

- **Launch Event in a Village, Mandvi Taluka, Kutch District**
  Date: 15th October 2024
  Launch By: **Shri Ashwin C. Shroff**, Chairman, Excel Industries & VRTI

- **Launch Event at Samoj Village, Jambusar Taluka, Bharuch District**
  Date: 16th October 2024

Launch by: **Anju Sharma, IAS**, Additional Chief Secretary

- **Launch Event at Khari Village, Sihor Taluka, Bhavnagar District**
  Date: 22nd October 2024
  Launch by: **Dr Neelam Patel**, Senior Advisor, NITI Aayog

- **Launch Event at Kumbhariya Village, Rajula Taluka, Amreli District**
  Date: 21st November 2020
  Launch by**: Dr. Patil**, Director, Human Resources, ONGC

- **Launch Event in Navsari**
  Date: 24th November 2024
  Launch by: **Dr. A. R. Pathak**, Former Vice-Chancellor of Junagadh Agricultural University and Navsari Agricultural University

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Support from Key Stakeholders

Government Organizations

The success of this project was made possible with the active involvement of **government departments and agencies** such as **ATMA** (Agricultural Technology Management Agency) and **KVK** (Krishi Vigyan Kendra). These organizations:

- Facilitated access to **government schemes** like PM-Kisan and soil health programs.
- Provided **training sessions** within this initiative, ensuring women farmers were well-informed about government schemes and support systems.
- Helped disseminate information about **new government programs** and institutional support, empowering women farmers to leverage these resources for better agricultural practices and improved livelihoods.

Local Organizations

Local organizations played a critical role in:

- **Mobilizing farmers** from neighboring villages by distributing invitations and information about the training programs.
- Sharing valuable insights about the **assistance and support available** to farmers through their initiatives, ensuring women farmers were better connected to local resources.

Farmer Producer Organizations (FPOs)

The involvement of **Farmer Producer Organizations (FPOs)** was instrumental in:

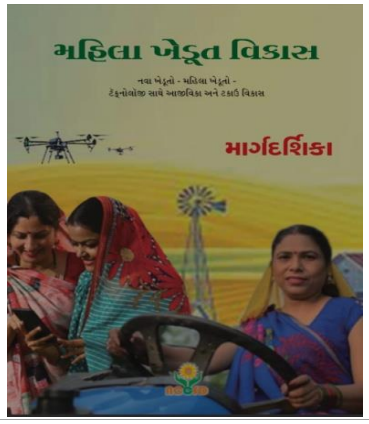
- Encouraging **collective farming initiatives** to reduce costs and enhance resource sharing.
- Supporting the development of **micro-enterprises** and **home-based industries**, enabling women to establish small-scale production units such as food processing.
- Providing training on **marketing, production management, and enterprise operations**, helping women farmers understand how to manage and grow their businesses effectively.

Other Support Groups

- **Self-Help Groups (SHGs)**, **women's groups**, and other small local collectives provided essential help during the training sessions.
- These groups supported women farmers in understanding the nuances of small industries, collective decision-making, and community engagement, significantly enhancing the overall impact of the program.

Comprehensive Guidebook for Women Farmers

Under this project, a **comprehensive guidebook** has been developed and distributed to all participating women farmers. This guidebook serves as a crucial resource, providing detailed and easy-to-understand information on key agricultural practices.



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Topics Covered in the Guidebook : The guidebook is structured to address all critical aspects of modern and sustainable farming, including:

1. **Weather-related Adversities and Their Impact**:
   Strategies to manage the effects of climate change and unpredictable weather patterns.
2. **Good Agricultural Practices (GAP)**:
   Adopting efficient and effective farming techniques for higher productivity.
3. **Soil Health Analysis**:
   Techniques for soil testing and selecting suitable crops based on soil quality.
4. **Soil Health and Moisture Management**:
   Tools like moisture meters for managing water use effectively.
5. **Smart Use of Water and Energy**:
   Adoption of advanced technologies such as **laser irrigation** and **solar energy systems**.
6. **Essential Inputs for Farming**:
   Use of natural inputs like **PSB culture**, **Metarhizium**, **Trichoderma**, and **pheromone traps** for sustainable farming.
7. **Use of Drones**:
   Drone technology for spraying fertilizers and pesticides efficiently.
8. **Natural Farming Practices**:
   Transition to organic methods using **Jeevamrut**, **vermicompost**, and other eco-friendly solutions.
9. **Post-Harvest Management**:
   Training on cleaning, organizing, storing, packaging, and transportation of agricultural produce.
10. **Market Selection**:
    Guidance on choosing the right markets to maximize profits.
11. **Protective Measures**:
    Precautionary steps to safeguard crops against pests and diseases.
12. **Selection of Farming Tools and Equipment**:
    Introduction to women-friendly tools for reducing labor and enhancing efficiency.

Seasonal Implementation of Guidebook Content

To ensure focused learning and practical application, the guidebook topics are divided into **three seasonal sessions**, tailored to the farming cycles of the year:

1. Kharif Season (November-December)

- **Focus Topics**:
  - Climate resilience and managing weather adversities.

- Soil health analysis and crop selection for the monsoon.
- Natural inputs for pest and disease management.
- Natural farming

2. Rabi Season (March –April)

- **Focus Topics**:
  - Good Agricultural Practices for winter crops.
  - Smart water and energy usage through solar and irrigation tools.
  - Post-harvest management techniques for winter produce.
  - User-friendly tools and advanced technologies.
  - Improve agro techniques for summer crops.

3. Summer Season (May-June)

- **Focus Topics**:
  - Soil moisture management during high temperatures.
  - Training on the use of drones for summer crop maintenance.
  - Establishing collective marketing strategies and promoting dietary diversity.
  - Improve effective agro practices for kharif crops

Training and Knowledge Dissemination Strategy

1. **Guidebook as a Core Learning Tool**:
   The guidebook is supplemented by **multimedia resources**, including videos and audio materials, ensuring accessibility even for women who could not attend training sessions.
2. **Practical Demonstrations**:
   - Each session incorporates **hands-on training** to demonstrate the guidebook concepts in real farming scenarios.
   - Demonstration of **user-friendly tools and advanced technologies** tailored to women farmers.
3. **Community Knowledge Sharing**:
   The guidebook acts as a **long-term resource** for women farmers to share knowledge within their communities, encouraging collective efforts for sustainable agriculture.

Upcoming Training Programs

To ensure sustained progress and knowledge enhancement, the project includes a structured roadmap for future training sessions:

Second Session

- **Scheduled Start**: March 2024
- **Focus Areas**:
  - Training women farmers on advanced techniques for **summer crops**.
  - Introducing **solar energy-based farming systems**, including solar pumps and energy-efficient tools.

Third Session

- **Scheduled Start**: May 2024
- **Focus Areas**:
  - Promoting **natural farming practices** for monsoon crops.
  - Training on **collective marketing strategies** to ensure better returns for agricultural produce.
  - Emphasizing **dietary diversity** to improve household nutrition

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Future Plans

Scaling Training Programs:
Conduct district-wise follow-up sessions focused on summer crops and water-saving techniques.

Expanding Coverage:
Add more villages and participants in the next phase.

Digital Knowledge Sharing:
Distribute multimedia content, including training videos and guidebooks, for remote learning.

Results of the First Training Session and Feedback from Participants

The first training session was successfully completed, and the **feedback from the women participants** has been highly encouraging and inspiring. After attending the training:

- Many women expressed their **eagerness to form groups** and start home-based industries.
- A group of women is ready to initiate a **cloth bag manufacturing enterprise**, promoting eco-friendly alternatives to plastic.
- Another group showed interest in producing **snacks and pickles**, tapping into local demand for homemade food products.
- Women from various districts demonstrated a keen interest in this project and have actively engaged in providing inputs for the upcoming training sessions.
- Training programs have been very useful for many women farmers in increasing their farming income."

Their enthusiasm and specific suggestions for **particular topics** in future sessions reflect the project's impact and the participants' commitment to improving their livelihoods. This

feedback strengthens the project's goals and motivates us to continue empowering women through tailored training programs.

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Conclusion

By empowering women with modern tools, climate-smart practices, and entrepreneurial skills, this initiative is not just transforming agriculture but reshaping rural economies. With continued support from stakeholders and a commitment to sustainability, women farmers are set to become the torchbearers of a resilient and prosperous agricultural future.

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