



Dialogue Series on

Challenges and Opportunities

In

Managing Climate risk & monitoring adaptation

for

Financial Institutions

Report – Dialogue 1

(January 2022)

Table of Contents

1. INTRODUCTION.....	3
1.1 INAUGURAL ADDRESS	4
1.2 OPENING REMARKS.....	5
2. CLIMATE SMART AGRICULTURE: FARMERS' PRODUCER ORGANIZATIONS & FUNDING CHALLENGE	6
3. ADVANCES IN AGRICULTURAL TECHNOLOGY FOR CLIMATE-RESILIENT AGRICULTURE	11
4. ADDRESSING THE FINANCING CONUNDRUM: SOME POINTERS FOR FIS	15

1. Introduction

This document presents the summary of the discussions that took place in the first dialogue series event on “Challenges and Opportunities in managing Climate risk & monitoring adaptation for Financial Institutions”, organized by FWFB on 11 January 2022. This event was organized as a virtual conference and featured five expert presentations and two panel discussions. The experts had been invited from Farmer Producer Organizations (FPOs), Resource Institutions, Non-Government Organizations (NGOs) working in the area of agriculture and climate action as well as financial institutions. The following illustration presents the schedule of the event.

S.No.	Time	Session	Details
1	10:00 AM - 10:05 AM	Session Opening	Introduction & Welcome address
2	10:05 AM - 10:10 AM	Key Remarks	Key Remarks -GIZ
3	10:10 AM - 10:20 AM	Inauguration	Inaugural Address
4	10:20 AM - 10:25 AM	Welcome	Presentation on context
5	10:25 AM - 10:55 AM	Thematic Presentations	Presentation - Shri Bala Krishnan S
			Presentation - Shri Animesh & Rajat
			Presentation - Shri Yogesh Dwivedi
6	10:55 AM - 11:00 AM	Theme Context set up	Presentation
7	11:00 AM - 11:45 AM	Panel Discussion - FPO	Shri Jagatram - Narmada Self Reliant FPO, MP
			Dr Ajay Mishra - IRRI
			Shri. Ashish Mondal - ASA
			Ms. Vaishalee – Dilasa NGO
			Shri C S Reddy - APMAS
			Shri Sridhar Easwaran - Samunnati
8	11:45 AM - 12:00 Noon		Q n A / Plenary
9	12:00 Noon - 12:10 PM	Abridgment	Setting the floor for thematic discussions
10	12:10 PM – 12:30 PM	Agri tech	Presentation – Shri Puran Singh
			Presentation – Shri Atul Mittal
11	12:30 PM – 01:15 PM	Panel Discussion	Shri Mohit Saxena – Kheyti
			Shri. Tharakeshwar – Dwara
			Shri. Anuj Kumbhat- WRMS
			Shri. Hemendra Mathur – ThinkAg Venture Partners
12	01:15 PM – 01:25 PM		Q n A / Plenary
13	01:25 PM – 01:30 PM		Vote of Thanks – FWFB Team

Shri SS Bhat, CEO of FWWB welcomed the chief guest **Shri P V S Suryakumar, DMD – NABARD** and other participants to the dialogue. In his welcome address Shri Bhat made the following pertinent points:

1. The dialogue series being organized by FWWB, with support from GIZ, places the severity of risk posed by climate change at the centre and seeks to draw strategies for adaptation and mitigation.
2. The distress faced by farmers in Himachal Pradesh because of water scarcity exemplifies the challenge caused by climate change.
3. Natural farming by farmers in Andhra Pradesh, in water-scarce areas is an example of a solution with the involvement of the local community. The success of this model is driven by the fact that farmers learn from other farmers, who, have experienced success and act as credible trainers.
4. There is a need to encourage such success and create a conducive environment for their replication and scale-up.



Shri S S Bhat, CEO - FWWB

1.1 Inaugural Address

Shri P.V.S. Suryakumar, Hon. Deputy Managing Director – NABARD, in his address, stated that environmental concerns around climate change have been viewed from an economic perspective. Many powerful people have even denied climate change risk when it has suited their economic viewpoint. However, it is a reality and its impact is being felt more increasingly. Events such as FWWB’s dialogue



Shri P V S Suryakumar, DMD - NABARD

series give us an opportunity to reflect and evolve actionable strategies. He further said, seen from the continuum of farmers, FPOs, RIs, and FIs, it is important to arrive at the role each of these can play in order to face the challenge that climate change poses.

Stressing that, most of NABARD’s initiatives have been focused on climate adaptation – things one can do to adapt farm practices to the risk posed by climate change, Shri Suryakumar made the point that

mitigation of climate change has not been discussed sufficiently in popular discourses. There is also a need to promote handy tools that can be used to quantify the benefits of efforts undertaken for climate risk mitigation, for example, tools that can enable us to assess the quantity of carbon sequestered when a particular number of trees are planted.

Concluding the above, he said, financing for climate risk initiatives needs to be ensured. In this regard, it will be helpful if quantitative monetary estimates could be arrived at for the potential losses from climate change. This can spur critical financing, including viability gap funding, for climate projects.

He also appreciated the initiative of FWWB in starting this dialogue as a first mover to create greater awareness in the ecosystem about this burning issue.

1.2 Opening Remarks

In his opening remarks **Dr Shailendra Dwivedi, Senior Advisor, GIZ India** said that it was essential to figure out ways and means to deal with the risks posed by climate change. Elaborating further on the purpose of the dialogue series, Dr. Dwivedi said that one needs to figure ways and processes to engage with farmer producer organizations on the issue of climate change so that their decision-making is informed by climate science. Further, there was a need to identify appropriate measures that could help farmers cope up with climate change. Finally, he stated that there is also a need to motivate and incentivize financial institutions such as MFIs to provide finance for initiatives that enable farmers to adopt climate-resilient practices as well as to adapt to climate change. A collaborative approach that can synergize financial incentives for MFIs, opportunities to monetize carbon credits and priority sector lending norms in agriculture -an area where advocacy may be required for greater sensitivity to climate issues, can greatly spur financing.



Dr Shailendra Dwivedi - Senior Advisor, GIZ India

Dr. Dwivedi's address was followed by a presentation from Mr. Atul, M2i, where he highlighted some questions for deliberation during the dialogue such as

- Has climate risk started showing up in production losses? What is its likely impact on farm incomes in the near to medium term?
- What role FPOs and Resource Institutions can play in mitigating the impact of climate risks on farmers?
- What kind of financial products can enable farmers to take to climate-smart practices?
- Can we incentivize curbing of harmful practices such as Stubble Burning that releases tons of carbon?
- How can we raise awareness levels of farmers on the issue? Training on climate best practices in agriculture?

2. Climate Smart Agriculture: Farmers' Producer Organizations & Funding Challenge

This part of the virtual conference consisted of discussions on the role of FPOs and Resource Institutions in encouraging climate-resilient agricultural practices as well as the challenge of finding finance for them to undertake such projects. It included three presentations followed by a panel discussion on the subject.

Presentations

- Shri Balakrishnan S, CEO - Vrutti Livelihoods
- Shri Rajat Tomar, CEO - Ram Rahim Pragati Producer Company Limited
- Shri Yogesh Dwivedi, CEO - MADHYA Bharat Consortium of FPOs

The first presentation was made by **Shri Balakrishnan S, CEO of Vrutti Livelihoods Impact Partners**. Vrutti works with 31 FPOs across six states – Karnataka, Tamil Nadu, Andhra Pradesh, Chhattisgarh, Madhya Pradesh and Maharashtra. It offers a bundle of services to reduce risks of farmers, improve productivity, and lower costs.

Vrutti has been encouraging the farmers associated with it to take up scientific and sustainable agricultural practices. This includes monitoring and maintaining soil quality, conservative water use practices such as drip irrigation, use of solar energy. In order to improve the resilience of farmers, it helps its FPOs in input aggregation and facilitates the marketing of outputs. It provides a market guarantee mechanism for nascent FPOs assuring their members of a minimum price.



Shri Balakrishnan – CEO , Vrutti

Vrutti has been advising farmers through FPOs, to diversify their livelihoods with supplementary activities such as agri allied activities, value addition of farm products and non-farm livelihood activities. In order to build the resilience of the farmers associated with it, Vrutti seeks to ensure that they have basic minimum insurance enabling access to cost-effective insurance schemes promoted by the government such as Pradhan Mantri Jeevan Jyoti Beema Yojana (PMJJBY). In addition, it also promotes livestock insurance, health insurance, and other forms of insurance among the farmers associated with it. It encourages farmers to build up their savings which they can draw upon when there is a need.

Shri Rajat Tomar, CEO of Ram Rahim Pragati Producer Company Limited (RRPPCL) in his presentation said that agricultural practices such as excessive use of chemical pesticides and fertilizers contribute to climate change as their production, transportation, and storage are a source of emission of greenhouse gases. The unscientific use of these inputs has a negative impact on crop quality and promotes weed and pest proliferation.

RRPPCL, with the help of its resource organization – Samaj Pragati Sahayog (SPS), has taken a holistic view of sustainable and climate-resilient agriculture in its operational areas in Madhya Pradesh. This includes:

- Crop management practices such as crop diversification and multiple cropping,
- Pest management through bio repellent such as pheromones and sticky boards, while completely doing away with the use of chemical pesticide
- Use of bio-growth promoters and scientific use of chemical fertilizers
- Use of improved seed varieties, scientific planting and crop specific package of practices
- Monitoring of soil health and application of tank silt to improve water holding capacity

RRPPCL's initiatives have had several positive impacts:

- The production of traditional crops has increased significantly. The practice of monoculture has diminished.
- There has been an increase in the carbon content of soil and stubble burning has reduced. There has also been a reduction in the depletion of local water resources

Shri Tomar illustrated how this has improved the resilience of the farmers. In 2021, because of heavy rains, the production of wheat crops suffered. However, there was abundant production of Bengal Gram, which reduced financial losses.

Shri Yogesh Dwivedi, CEO - MADHYA Bharat Consortium of FPOs (MBCF), then presented his organization's initiatives to help farmers adapt to climate risk. MBCF is working with 1.67 Lakh farmers of Madhya Pradesh and Chhattisgarh state directly and through a network of farmer producer organizations. Shri Dwivedi stated that over the previous five years farmers in MP have experienced unpredictable weather in the form of excessive rain impacting the Kharif crop. This has resulted in losses to farmers who grow soybeans and pulses. As a result, several have shifted from these crops and taken to paddy cultivation, which has the potential to cause production imbalances.



Shri Yogesh Dwivedi, CEO - MBCF

MBCF has been encouraging the members of the FPOs associated with it to adopt practices such as the "ridge and furrow" method and the "dharvad" method. The "ridge and furrow" method helps farmers to cope up with fluctuations in rainfall. MBCF has demonstrated this method with the help of 6 FPOs, and the results have been good particularly for soybean and peas crop. It is expected that this method will also be applied for other pulses. The Dharvad method similarly also minimizes losses on account of excessive rainfall and is being piloted at present. Summarizing the above, Shri Dwivedi emphasized the need to bundle insurance with agricultural loans, so that the financial risks to the farmers can be

Panel Discussion

Moderator: Shri Emmanuel Murray, Senior Advisor, Caspian Debt

Panelists

- Shri Jagatram, Board Member, Narmada Self Reliant Farmer's Producer Company
- Dr AK Mishra, Associate Soil Scientist, IRRI
- Shri Ashis Mondal, Founder Director, ASA
- Shri C S Reddy, Founder – CEO APMAS
- Ms Vaishalee Khadilkar, Vice President, Dilasa Janvikas Pratishtan
- Shri Sridhar Easwaran, Founding Member, Samunnati Financial Intermediation & Services Private Limited

minimized. Shri Dwivedi's presentation led to the first panel discussion moderated by Shri Emmanuel Murray, Senior Adviser - Caspian debt.

Shri Emmanuel Murray, in his presentation stated that the signals of climate change are visible and there are climate smart agricultural (CSA) practices that can aid adaptation and mitigation.

1. Temperature increases and heat stress can reduce crop yield – CSA would include use of heat-tolerant crop varieties, mulching, water management, shade house, and boundary trees. For livestock, this will involve appropriate housing and spacing.
2. Extreme weather events can lead to unanticipated droughts and flooding, topsoil erosion, damage to trees as well as infrastructure – CSA would include flood-tolerant crop varieties, rainwater harvesting, contour planting, terrace plantation on slopes as well as composting, use of treated manure and nitrogen-fixing plants for preserving soil quality.
3. Weeds, pests, and disease – CSA would include intercropping, increasing crop diversity, mulching, and encased beds. This will also require improved livestock health management.



Panel Discussion moderated by Mr. Emmanuel Murray

Shri Jagatram who is a board member of Narmada Self Reliant Farmer's Producer Company stated that by organizing as an FPO, the farmers of Mandla district have been able to improve their crop production by adopting modern practices – by putting land to better use and bringing barren land under cultivation. Farmers have also been linked to markets that have improved their income. A similar approach could help them adapt to climate risks.

Dr. AK Mishra, working as an associate soil scientist with the International Rice Research Institute (IRRI), observed that it is important for the latest scientific practices to be adopted in practice. He further stated that different crops have different input requirements. For instance, for each crop, fertilizers need to be applied at the right time, right dose, and right place. He also stated that it was important to have a check of soil health periodically for optimizing yield.

Dr. Mishra shared some agricultural technologies developed at IRRI, that can improve yields and reduce costs for farmers:

1. Site-specific nutrient management: This technology is about customized nutrient management for different crop varieties depending on potential yield, the type of land, availability of fertilizers etc.
2. Water management "pani pipe": This is based on Alternate Wetting and Drying (AWD), which is a water-saving technology that farmers can apply to reduce their irrigation water consumption in rice fields without decreasing its yield.

3. Ecological engineering: This is based on age-old practices of mixed and intercropping that can control pests.

Dr Mishra concluded his remarks emphasising upon the need for customized practices to be adopted based on crop variety, soil type and agro-climate.

Shri Ashis Mondal, Founder Director ASA, shared the experience of a successful organic farming pilot project related to cotton, in western Madhya Pradesh that was started in 2014-15. While it was difficult to find a viable market in the initial 3-4 years, there are now reputed institutional buyers for the organic cotton produce.

This project has involved around 26,500 farmers and 17 FPOs. The production has reached 10,000 tons of raw cotton, which is being successfully marketed. The buyers are willing to pay a premium for organic cotton. The buyers have also been instrumental in linking financial institutions with the FPOs which has brought down the cost of credit. The project has been successful and the buyers are looking forward to increase the production base manifolds.

Drawing on this experience Shri Mondal emphasized that managing climate risk is a shared responsibility. While FPOs have credibility and can promote certain agricultural practices, the buyers of agri-commodities have the bargaining power in the market to influence a particular set of practices. He also said that a set of packages including financing incentives should be developed to encourage natural farming.

Shri C S Reddy, Founder – CEO APMAS, spoke about the role women and their collectives such as SHG, federations, and FPOs can play to improve climate resilience. He shared the experience of a climate project undertaken in six villages of Anantpur district of Andhra Pradesh, which has been a drought-affected area. The project had five interventions:

1. To make sure SHGs, Federations and FPOs are climate-smart and prepare risk mitigation strategies like promotion of crops such as horticultural crops and millets which require less water.
2. Provide timely climate and weather knowledge such as expected delay in rains, for suitable action by farmers.
3. Promotion of practices to conserve soil quality and reduce the unscientific use of chemicals, including tank silt application, bio-pesticides, agro-forestry, etc.
4. Focus on climate-smart nutrition which included encouraging kitchen gardens, millet-based recipes, and emphasis on adequate nutrition for women and children.
5. Renewable energy solutions such as solar irrigation pumps, solar sprayers, solar street lighting, energy-efficient stoves, and bio-gas.

Shri Reddy further added that women are willing participants in climate action, all they need is a little encouragement.

Ms. Vaishalee Khadilkar, Vice President, Dilasa Janvikas Pratishtan, spoke about her experience of working on agricultural projects in Marathwada and Vidarbha – two of the most drought-affected regions in the country. The project involved over 39,000 farmers, who are most vulnerable to climate risks. The projects involved raising awareness of farmers on climate change and how it has been affecting rainfall in the area. It also involved encouraging them to conserve water and to take to agricultural practices that require less water. This required demonstrations on practices starting from sowing to harvesting with the

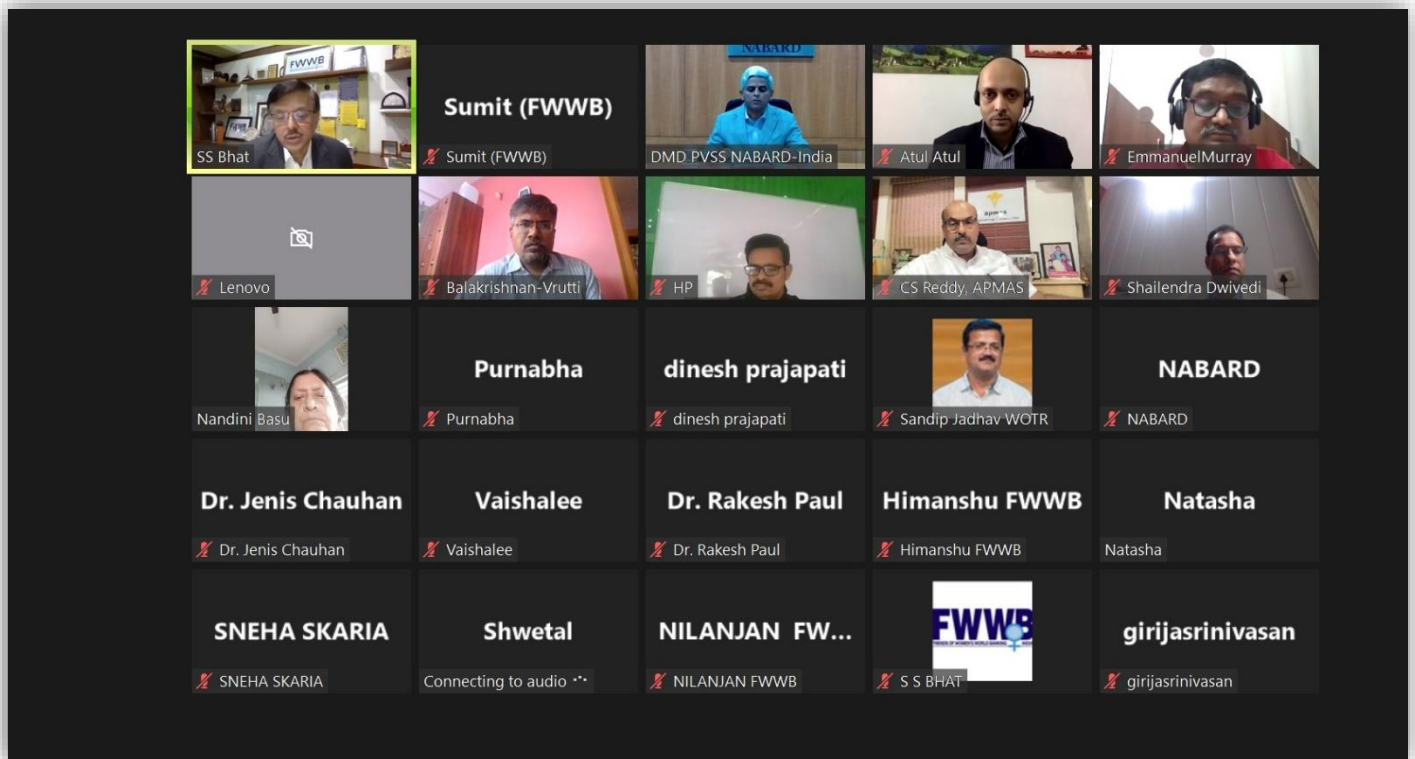
help of early adopters. Farmers were also made aware of agroforestry and its role in improving their resilience against climate risks. The project involved the use of information tools and SMS to provide early warnings about weather events.

Shri Sridhar Easwaran, Founding Member, Samunnati Financial Intermediation & Services Private Limited opined that there are two challenges in finding funds for climate-smart agricultural projects. The first challenge is that the upfront investment required is high, and the returns accrue over a long period of time. The second challenge lies in the fact that the market does not value the environmental benefits of such projects.

Shri Easwaran mentioned that on its part, Samunnati encourages CSA by providing a range of financial products including working capital for farmers so that they can practice scientific agriculture. It is also involved in the capacity building of FPOs so that they can engage deeply with their members and motivate them to adopt CSA.

For mature FPOs, Samunnati provides finance for taking up agri-processing projects that use renewable energy sources such as solar energy. Insurance is an important part of the overall package of financial services offered by Samunnati. It seeks to connect with FPOs, CBOs as well as agri-tech providers to evolve innovative financial solutions.

In order to address the funding challenge, it has issued Green-Bonds with the help of the Symbiotics group. The Green Bond will enable Samunnati to strengthen its climate resilience initiatives across the agri-sector, particularly benefitting small and marginal farmers.



Dialogue 1 : Glimpses

3. Advances in agricultural technology for climate-resilient agriculture

This part of the dialogue focused on agri-tech initiatives that seek to address the challenge of climate risk. It consisted of two presentations followed by a panel discussion. Some questions that were put for deliberations included:

- How can recent advances in agricultural technology help climate resilient agriculture?
- Are there new solutions to old problems for example, agricultural & livestock residue?
- Are the financial products adequate to address climate risks?
- How are new-age, agritech companies trying to solve problems related to climate smart agriculture?
- How do we communicate the economic benefits that accrue to the farmers through technology?
- How can we raise awareness levels of farmers on the issue? Can technology be used for disseminating climate best practices in agriculture?

Presentations on technological solutions mitigating Climate risk

- Shri Puran Singh of EF Polymers
- Shri Atul Mittal of Sistema Bio



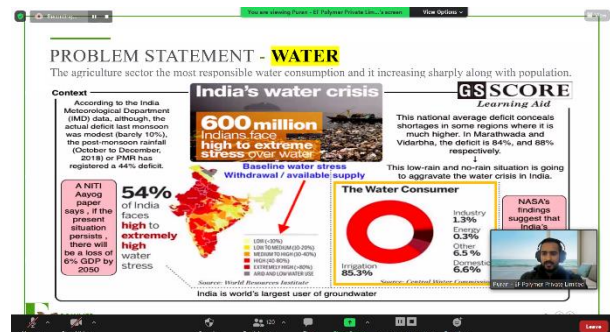
Shri Puran Singh – EF Polymers

Shri Puran Singh Rajput, an entrepreneur running a start-up named EF Polymer Private Limited, made a presentation on how he with his enterprise has sought to address the problem of water scarcity in agriculture. He has introduced an innovative product called “Fasal Amrit”, which substantially reduces the water requirement in agriculture. This award-winning product has been developed through two-year research conducted in the Okinawa Institute of Science

and Technology. “Fasal Amrit” uses organic wastes to develop a material that has the capacity to hold water of up to 100 times its weight. It releases this water gradually which can be used by the growing crop. The product also releases micronutrients which improve crop yield.

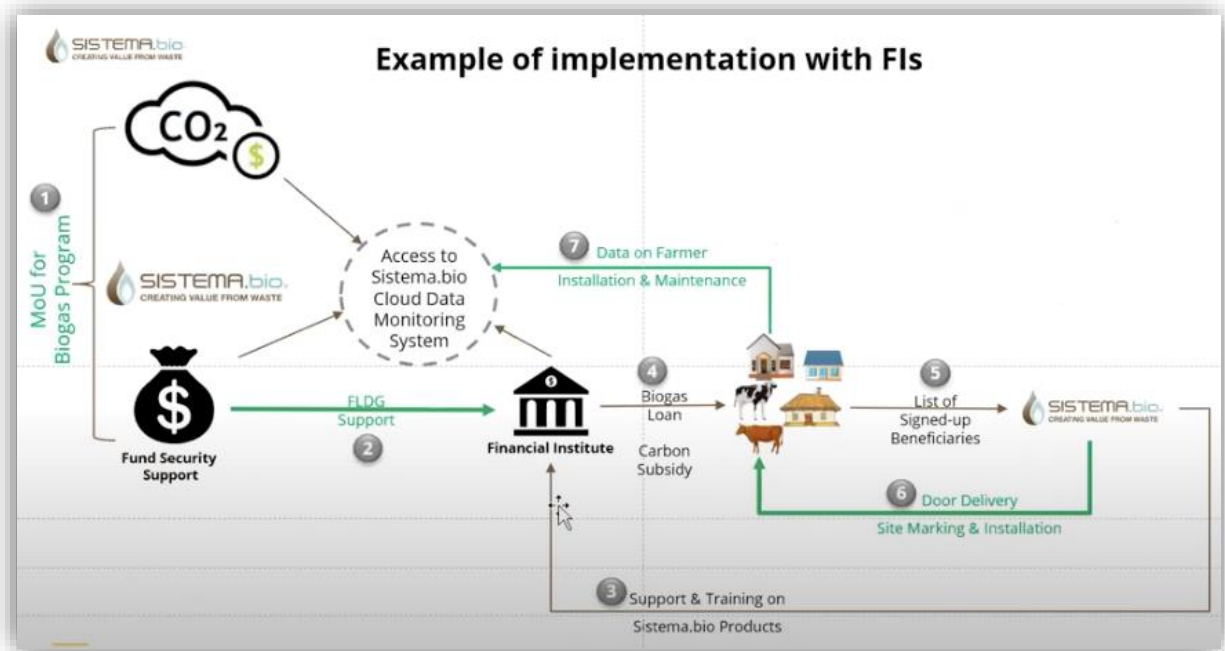
Shri Rajput presented a testimonial from Navachetna FPC, Mirzapur, which has benefitted from the use of this product. An interesting feature is that the use of “Fasal Amrit” reduces the man-hours required to irrigate the fields, and the time freed up can be used for other purposes.

EF Polymer has so far recycled 500 tons of biowaste to save 291 million liters of water. Its research suggests that the use of “Fasal Amrit”, improves crop yields and farm incomes by nearly 30%.



The second presentation was made by **Shri Atul Mittal**, Director – Sistema.bio, which is a leading social enterprise operating in Latin America, India, and Africa that seeks to impact climate change, food security, and poverty by deploying technology, training, and financing to small farmers. It manufactures, sells, installs, and finances its patented biodigester systems for small and medium-scale farmers to convert their waste into energy. This has a beneficial effect on the environment, on the one hand, it also has a positive impact on the health and well-being of farmers, as the energy produced releases less carbon and no particulate matter.

Shri Mittal stated that the key advantage of Sistema.bio’s digester over traditional bio-gas models is its reliability and durability, which makes it an economically viable product for farmers. The company also offers a long-term warranty to ensure that the user experience is hassle-free.



Presentation – Shri Atul, Systema Bio

Shri Mittal presented a schematic of Sistema bio’s approach, which involves partnership with Financial Institutions to finance its biogas products. The Financial Institution can benefit from First Loss Default Guarantees through a fund security support that the company facilitates.

Shri Mittal’s presentation was followed by a panel discussion, which was moderated by Shri Sanjoy Sanyal, senior adviser at Caspian Debt. The panelists in this session discussed the role which the emerging technological solutions can play in encouraging farmers to adopt climate-resilient practices.



Panel Discussion - Glimpses

Shri Anuj Kumbhat, Founder & CEO, Weather Risk Management Services (WRMS), said that for the players like WRMS who offer agriculture insurance products, extreme weather events have resulted in unexpected payouts because such events were not factored in their risk models. Such unpredictable and high-impact events can make risk management solutions unviable for the offerors and unaffordable for the producers, negatively impacting risk management and resilience of farming practices. He also said that lots of data is available from remote sensing sources as well as from their own network of IOT devices, which can help the organization in predicting weather events to a reasonable extent. However, the crop yield datasets are not available in India which makes it difficult to model the impact of each event on crop yields. Availability of detailed data on the ground water resources will also be useful.

Panel Discussion

Moderator: Shri Sanjoy Sanyal, Senior Advisor, Caspian Debt

Panelists

- Shri Anuj Kumbhat - Weather Risk Management Solution (WRMS)
- Shri Tharakeshwar - DVARA
- Shri Hemendra Mathur - ThinkAg Venture Partners
- Shri Mohit Saxena - Kheyti

Shri. Hemendra Mathur, Co-founder ThinkAg and Venture Partner, Bharat Innovation Fund said that emerging technological solutions can broadly be classified in three categories from the point of view of their focus - Risk Reduction, climate adaptation and climate resilience.

- Risk reduction technologies mainly focus on data. There have been technological advancements in data collection over the years and a significant volume of data collection is happening at the ground level using Internet of Things (IOT) devices. This data is being used to build models for offering insurance products, for lending and for providing advisory to farmers.
- Climate adoption technologies aim to make farmers adopt climate friendly farming practices. Examples of such technologies include those which aim at increasing water use efficiency, optimizing use of fertilizers and pesticides and efficient nutrient management.
- Climate resilience technologies aim at improving overall resilience of the farm sector by bringing efficiency in supply chains and farming practices.

Shri Tharakeshwar, Head- FI Solutions, Dvara E-Registry, citing an example from Odisha, also pointed out that extreme weather events have also resulted in reducing the accuracy of the weather prediction models further increasing the vulnerability of agriculture. The organization uses data from various sources and provides advisory to the farmers as well as lending institutions.

Shri Mohit Saxena, Business Strategy Manager, Kheyti, an organization that provides greenhouse solutions to the farmers to protect them from the vagaries of nature, also recounted an example where an extreme rainfall event resulted in significant losses for the farmers despite them using the solutions provided by Kheyti.

The participants lamented the fact that long-term district-wise projections for climate-related indicators are not available. 5-10 years climate projections are generally for large geographies and have a restricted scope.

Shri Mathur said that in addition to the capital, these innovations require support to establish linkages with various ecosystem players like FPOs, Banks, and MFIs. Additionally, a system of monetary incentives needs to be built for the farmers to help them adopt such climate-resilient practices.

The panelists also emphasized the need to make women farmers the focal point of technological innovations as experience suggests that women are more receptive to the idea of adopting climate-resilient practices.

Conclusion

The virtual conference concluded with the resolve to look for innovative solutions to address climate risk in agriculture.

4. Addressing the Financing Conundrum: Some Pointers for FIs

1. Organizations working in the agriculture sector (both FPO support organizations and agri-tech enterprises) have faced damage from extreme climate events in recent years. However, their ability to plan for climate change is limited because they do not have access to long-term climate projection data. This means that reactions to climate change are short-term and tactical: responding to the threats of extreme weather events. Financial Institutions could obtain longer-term climate data from research institutions and make them available to FPOs, FPO support organizations, and agri-tech enterprises. This would help in increasing the capacity of these organizations and would help financial institutions by reducing lending risks.
2. There is a vibrant community of agri-tech enterprises that are bringing new technologies for climate-smart agriculture and also have the ability to increase the resiliency of smallholder farmers. It is important that a formal mechanism is created to help FPOs and FPO support organisms learn about these products and services and interact with innovative agritech enterprises. This would help the financial institutions as well in creating new lending opportunities.
3. There is widespread awareness of climate-smart agriculture practices. This offers an opportunity for financial institutions. In their agriculture lending, financial institutions can apply a “climate lens” and identify sustainable practices that can be adopted by their borrowers. This would help financial institutions in both reducing risk and identifying new lending opportunities.
4. Finally, it is very important that funding is made available to create markets for sustainable food and agricultural produce. Ultimately, market demand will help farmers switch to new products and practices in a way that improves their livelihood.
5. Farmer Producer Organizations and their members have a fair level of awareness regarding climate risks and they are willing to adopt environmentally sustainable practices and new technology. At the same time, in order to adopt them, they need access to appropriate financial products for investments and working capital needs.
6. Adequate finance is not available because of a perception that CSA projects have high upfront investments and carry significant risks. Also, the availability of affordable insurance for the farmers and farm community is a big need of the hour.
7. Providing finance for the adoption of CSA is inherently viable in many cases. The experiences shared by RRPPCL and SPS, show that production risks reduce considerably and the yield is more predictable. This allows timely repayment of loan installments.
8. Whenever, financing has been made available, farmers with the help of their FPOs and CBOs have adopted climate-smart practices and the results have been very encouraging. This is illustrated in the success of ASA’s organic cotton farming project in western MP.
9. Non-Banking Financial Institutions like Samunnati, have been successfully providing working capital loans to FPOs. Several of these loans have been used to promote CSA. For mature FPOs, it provides loans to set up processing units that run on solar energy. It has also issued Green-Bonds with the help of the Symbiotics Group, which will enable it to strengthen its climate resilience initiatives across the agri-sector, particularly benefitting small and marginal farmers. This is an example of a financial institution successfully using its competence to help the cause of climate-smart agriculture and maybe worth exploration by other FIs.
10. Access to long term climate data might prove helpful in determining the climate risk involved in the farm finance sector.
11. Many new-age agri-tech companies have evolved innovative solutions that address problems such as water scarcity and soil degradation. While these can materially improve agriculture

practices as well as farm incomes, they require an additional cost to be incurred on the part of the farmer.

12. Microfinance Institutions have the necessary competence to evaluate whether financing such inputs is viable. If they can provide financing even as pilot or demonstration projects, it can have a multiplier impact as gains from the use of these technologies become visible.
13. Some organizations such as Sistema bio have evolved partnerships that allow them to facilitate the provision of First Loss Default Guarantee to the lenders of their products. Such partnerships allow for risk-sharing and considerably lower the barriers to adoption. Providing insurance with loan funds is another approach that leads to risk sharing and lowers the barriers. It may be worthwhile for lenders interested in this space to explore the opportunities that arise from this and similar initiatives.



Friends of Women's World Banking: FWWB

Address: 1st, Sakar 1, Railway Station, 101,
Ashram Rd, opposite Gandhigram,
Ahmedabad, Gujarat

Chief Executive Officer: S S Bhat

Mail : bhatss@fwwbindia.org