Monitoring, Evaluation and Learning for the Covid-19 Response Fund for Agri Transition in India

May 2024

Impact Report - Year 2

Rabobank International | Shell Foundation | UK Government | IKEA Foundation | SAMBODHI

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Acronyms

CSA	Climate Smart Agriculture
CGTMSE	Credit Guarantee Fund Trust for Micro and Small Enterprises
DRE	Decentralized Renewable Energy
FPO	Farmer Producer Organization
FI	Financial Institutions
IF	Ikea Foundation
KIIs	Key Informant Interviews
MSME	Micro-Small & Medium Enterprises
MEL	Monitoring Evaluation and Learning
NBFC	Non-Banking Financial Companies
NPK	Nitrogen-Phosphorus-Potassium
KUSUM Scheme	Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan
PSL	Priority Sector Lending
RF	Rabo Foundation
RE	Renewable Energy
SF	Shell Foundation
SMF	Small and Marginal Farmers
SIDBI	Small Industries Development Bank of India
TA	Technical Assistance
ToC	Theory of Change
USDFC	US International Development Finance Corporation

Introduction

The COVID-19 response fund, a collaborative effort involving the IKEA Foundation, Shell Foundation (with additional funding from the UK's FCDO), Rabo Foundation, and US Development Finance Corporation (referred to as the Program team), has been created. This fund, valued at USD 55 million, is a credit risk mitigation product provided to three NBFCs: Samunnati Financial Intermediation & Services Private Limited, Avanti Finance, and Manaaveeya Development & Finance Private Limited (hereafter referred to as lenders), for a period of 8 years. The introduction of the Fund has injected vitality into the agricultural ecosystem, benefiting stakeholders at every stage of the value chain including lenders, borrowers and small-holder farmers. The fund's objective is to expand lenders' disbursement portfolios, stimulate sectoral growth, and enhance borrowers' access to finance. Through this fund, the goal is to boost farmers' income and resilience throughout the program that contributes to agricultural transition. This fund has adapted well to the Indian agricultural landscape, providing an added layer of support for lenders, ultimately bolstering enterprises and farmers alike. The fund has been catering to 4 asset classes which include the FPO, renewable energy, agritech and food-loss enterprises within the ambit of the agriculture sector. `In its inaugural year, the fund made a significant impact, facilitating over 30 disbursements across various asset classes. Year 2 has seen similar traction, both in terms of disbursement volume and value. Lenders, leveraging their increased experience, have become more willing to take on additional risks, leading to a notable increase in loans granted to micro enterprises.

One of the fund's key achievements has been its ability to connect lenders with previously overlooked borrowers, expanding lenders' exposure to innovative businesses. The impact of the fund on farmers has been positive, with improvements in access to credit and household income. However, despite entering its second year of operation, the Technical Assistance (TA) component of the fund continues to remain untapped. This highlights a need for enhanced understanding and awareness among both borrowers and lenders regarding the benefits and utilization of TA. Building on the lessons learned from year-I and the ongoing progress, adjustments and flexibility within the fund's framework are crucial. These adaptations help attract more eligible borrowers and enhance the fund's overall effectiveness. Moving forward, it will be intriguing to observe how lenders and borrowers continue to adapt, collaborate, and implement strategies to maximize impact.

The year also witnessed significant challenges due to natural disasters, which disrupted agricultural activities and caused harm to many enterprises in the sector. As per the discussion with Avanti (one of the lenders) "Disaster like drought in Andhra Pradesh and Karnataka region have impacted the yield of farmers and eventually their ability to repay the loan resulting in delayed payments". These events had a direct impact on the lending strategies of lenders, prompting caution towards the end of the year. The sector's heavy dependence on seasonality further exacerbated the challenges, making it difficult for lenders to contain defaults. This experience underscores the importance of the fund's adaptability and resilience in the face of unforeseen disruptions. Moving forward, it is imperative for the fund to incorporate contingency plans that account for such natural disasters; Community contingency fund by FAO in El Salvador, Guatemala, Honduras and Nicaragua is one such initiative providing risk protection and financial mechanism to climate-risk prone farmers[1]. By proactively addressing these issues and collaborating with lenders to develop robust risk management strategies, the fund can mitigate the impact of seasonal fluctuations and enhance its ability to support borrowers during challenging times. The fund's success hinges on its ability to evolve in response to changing market dynamics and emerging needs within the agricultural sector.

This impact report presents the consolidated results at three levels based on the insights gained from this year. The report is structured into three main sections: impact evaluation design and approach, findings, and way forward. The findings section delves into the progress made against key outcomes as envisioned by the fund compared to the previous year. In the conclusion section, the report discusses the lessons learnt and offers recommendations derived from the evaluation analysis.

1 https://www.fao.org/3/i5876e/i5876e.pdf

Impact Evaluation – Design and Approach

Evaluation Objective

The evaluation of the fund in year-II had multifaceted objectives aimed at comprehensively assessing its impact and effectiveness. It sought to evaluate the program's effects on various stakeholders, encompassing lenders, borrowers, and farmers, through a range of metrics. These metrics included:

Lender level:
- Gauging lending patterns
- Examining fund utilization patterns
- Scrutinizing any changes in lending practices and due-diligence mechanisms post-implementation.

Borrower level:
- Enhanced access to credit
- Improved financial stability
- Overall growth trajectory of their enterprises.

End-user level
- Agricultural productivity
- Income levels
- resilience of farming communities

By juxtaposing current data with findings from the preceding year, the evaluation strived to discern patterns, monitor progress, and glean insights to fortify the program's efficacy and sustainability.By conducting a comparative analysis, the evaluation endeavors to gain deeper insights into the evolution and efficacy of the program over time, thereby facilitating informed decision-making and strategic planning for future iterations.

Evaluation Methodology

Employing a cross-sectional design, the evaluation adopts a multifaceted approach to data collection, encompassing both quantitative metrics related to agricultural productivity and income from farmers, alongside qualitative feedback gleaned from interactions with lenders and borrowers. Progress monitoring occurs at regular intervals, allowing for a comparative analysis of key performance indicators against the backdrop of the preceding year, thereby facilitating an assessment of the program's developmental trajectory. Purposive sampling was done at lender and borrower level to cover all the 4 asset classes whereas random sampling was done at the farmer's level. The sample size for evaluation across the three levels is given below.

Table 1: Stakeholder sample

Stakeholder	Sample	Enquiry Approach
Lenders	3	Qualitative, Quantitative
Borrowers	42	Qualitative, Quantitative
Farmers/End-Users	225	Quantitative

Learning Questions

The impact report focuses on answering the given below learning questions:

Lender Level

- What are the key indicators of progress for the fund in its second year, specifically regarding disbursement volume, asset class-wise disbursement patterns, the number of farmers reached, and fund utilization?
- How have the capital needs of borrowers evolved over time, and what are the key learnings for the fund to address these evolving needs effectively?.

Borrower Level

- Which are the major business models that have evolved within the asset classes? What has been the disbursement trends around micro, small and medium enterprises?
- How has the fund enabled borrowers to leverage additional capital? have loan sizes differed between 2023 and 2024?

End-user Level

- How does guarantee fund enable access to finance, inputs, training for SMFs? Has there been an improvement in farmers' income?
- Whether access to agriculture services, finance, and an increase in income lead to SMF's resilience?
- Whether access to agriculture services, finance and increase in income of SMFs results in their demand for clean energy services?

Findings

The results are organized to align with the learning questions, beginning with the lenders, followed by the borrower level findings, and finally the end-user. Drawing from the fund's theory of change (ToC), this report discusses the immediate outcomes achieved in the past year (outputs) and highlights initial progress in the intermediate/medium-term outcome and impact areas. Each finding has been linked to the evaluation's learning questions for clarity and coherence.

Fund Disbursement by Lenders

The lenders have made progress in terms of the amount and volume of disbursements during the second year under the fund. There has been a notable increase in the lenders' participation as well, as evidenced by the upward trend in disbursements to borrowers with varying levels of risk across the four asset classes. The fund has encouraged lenders to diversify their portfolio. They've added borrowers in asset classes that are new to them, leading to exploration of new business opportunities and have exposed themselves to differential risks.

Disbursement Value

The lenders' disbursement portfolio grew from INR 444 Mn to INR 913 Mn since 2023, more than 100% increase vis-à-vis last year. Corresponding to the volume, Avanti witnessed substantial increase in disbursement portfolio from INR 100 million in 2023 to INR 354 Mn in 2024, which more than 2 times over a one-year period. Samunnati too experienced significant growth in its disbursement portfolio, rising from INR 285 Mn in 2023 to INR 519 Mn in 2024, an increase of 82% over the last year. Avanti received a $10 million allocation from DFC, leading to increased disbursements, particularly in food loss and Agtech. On the other hand, Samunnati has expanded its outreach to all four asset classes and has disbursed funds to the same borrowers for a second time. Manaaveeya's disbursement portfolio saw a small dip in disbursement, from INR 59 Mn in 2023 to INR 40 Mn in 2024 as Manaaveya's primary focus is on RE, however reaching to RE enterprises with an intersection of Agri has been a challenge. Manaaveya has raised a TA request to improve their reach. They are gradually expanding/exploring in other asset classes such as their disbursement in Agtech in year 2

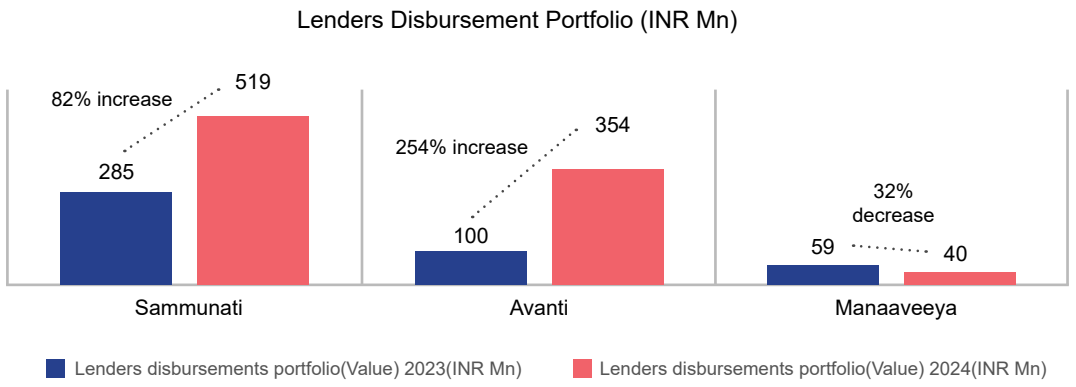


Figure 1: Lenders Disbursement portfolio

Fund Utilization

Guarantee utilization is the extent of funds exhausted by the lender out of the total allocated fund under the guarantee program. In 2023, Samunnati utilized 14% of the fund across sectors, while Avanti utilized 9.62% and Manaaveeya utilized around 5%. However, in 2024, there were notable shifts. Samunnati's utilization across asset classes surged to 38%, reflecting significant growth. Avanti's utilization increased to 34% in 2024, indicating a substantial increase from the previous year. Conversely, Manaaveeya saw a slight dip in utilization to around 3.3% in 2024.It is important to note that Avanti was granted an additional disbursement limit of USD 10 Mn in 2nd year of the fund

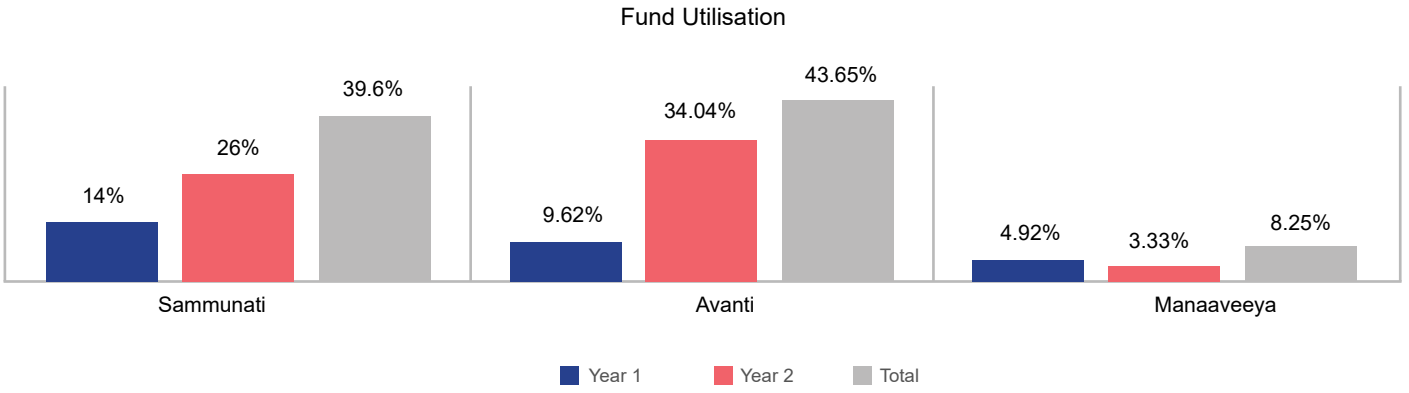


Figure 2: Fund Utilization

Borrowers Portfolio Per Asset Class

The fund encompasses four distinct asset classes: FPOs, Renewable Energy (RE), Agtech, and Food Loss. FPOs represent farmer collectives involved in various activities like crop aggregation and processing. RE enterprises utilize renewable energy for services like solar coolers and dryers. Agtech businesses use digital technologies and IoT for farmer assistance, while food loss enterprises tackle post-harvest losses through smart warehousing and related services. The lenders have experience and expertise in certain asset classes resulting in disbursements in specific asset classes. During our interaction with Avanti, they stated that "Our focus area has been food loss and agtech, while we were interested in lending to RE enterprises but were not able to tap enterprises with healthy balance sheets". Similarly, Manaaveeya in the first year of the program only lent to RE enterprises but in the current year they have diversified to agtech with one disbursement. There are some borrowers who were lent twice, because of which there is a difference in the number of borrowers and number of disbursements.

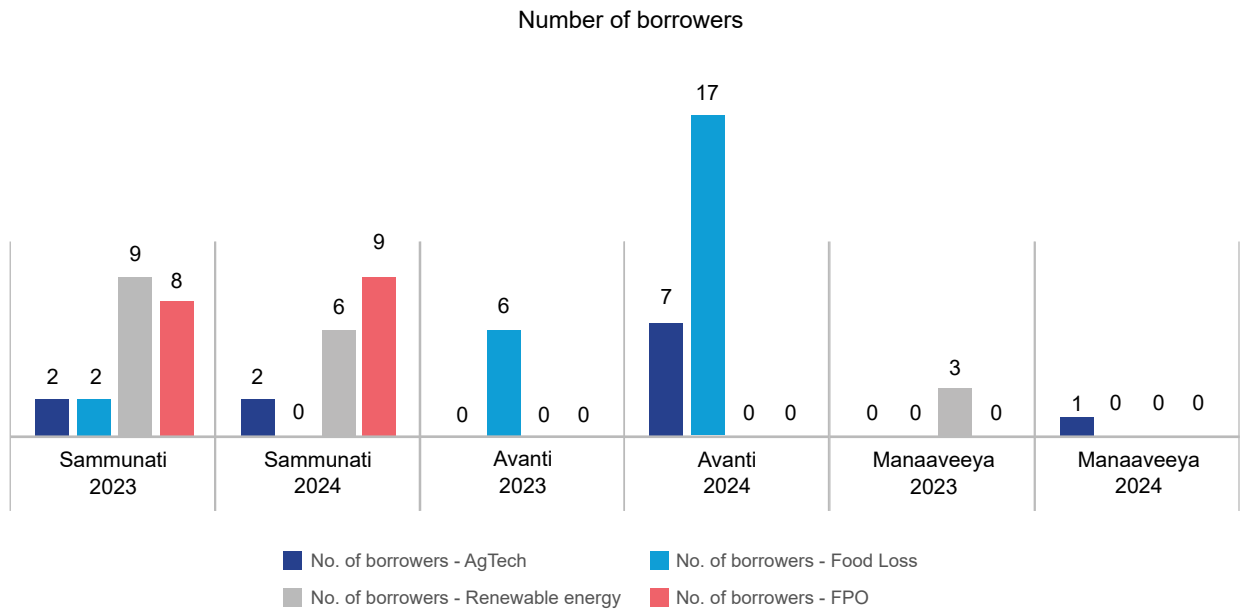


Figure 3: No. of borrowers per asset class

Number of Farmers reached

Figure 4: No. of farmers reached by lenders

The second year of the guarantee program witnessed a notable rise in the outreach to farmers. This increase is primarily attributed to elevated lending to agricultural technology platforms, which have a broader reach among farmers, coupled with a surge in the total number of borrowers.

Repayment trends, TA utilization, Changes in credit underwriting and gender focused disbursement

Repayment Trends: In the current year, there has been 4 defaults. Samunnati's portfolio recorded the default, while certain borrowers experienced delays primarily due to seasonal and farm distress in rural India over the past year. Ourfoods , an agtech enterprise defaulted; The default was INR 13 Mn of which 50% was claimed from the guarantee(the default happened the previous year but the claim was settled this year). Apni Saheli and Koyalanchal are 2 FPOs which defaulted, while Koyalanchal had INR 2.1 Mn in defaults, Apni Saheli default amount was INR I4.8 Mn. As per Samunnati "Every default is different, the defaults can't be attributed to the nature of business but to numerous reasons including operational issues as well as contextual challenges of businesses."

Technical Assistance (TA): TAs have still not got the traction similar to last year, despite ongoing discussions between lenders and borrowers. Although efforts have been made to address TA needs, implementation has not yet been realized. One of the lenders has raised a request for TA for pipeline building and understanding of the ecosystem in the RE sector in collaboration with CEEW and MicroSave consulting. Other lenders continue to face challenges in identifying what the TA facility can be utilized for. During lenders interaction one of the lenders said that "Borrowers are not able to gather the aspects of business where they might need to leverage TA and they need better understanding about TA to utilize it".

The underutilization of Technical Assistance (TA) stems primarily from a limited comprehension of its significance among both lenders and borrowers.

Changes in credit underwriting: The guarantee has been instrumental in reaching out to borrowers in capital scarred sectors, but no significant change has been observed in credit underwriting mechanism. Lenders prioritize assessing cash flow stability, liquidity, and the consistent fulfillment of obligations to creditors by companies. Another aspect to consider is the presence of farmers within the enterprise, which is significant. Lenders engage with farmers to grasp payment patterns and review market references from various stakeholders like buyers, suppliers, and bankers. Additionally, they analyze the enterprise's bank statements from the past year to discern cyclical patterns. These are some of the usual practices by lenders which haven't changed much after the rolling out of guarantee.

Gender-Focused Disbursements: The fund envisions increased women participation in management as well as in employment. Also, the fund encourages lending to women led enterprises as can be seen in the lending mandate of FPOs "with at least 50% of the number of underlying members as women across each lender's total portfolio of loans". While some disbursements have been made(only FPOs) to women-led enterprises, it has not been a deliberate focus in RE, Agtech and Food loss enterprises.

The fund has successfully enhanced participation and lending to women in FPOs through it's support for women-led FPOs.

Borrower level Findings

The assessment at the borrower level aimed to grasp the evolving business models within different asset classes and the borrower's ability to secure financing from sources beyond the guarantee program. It also delved into aspects such as average loan sizes, categorization of enterprises based on revenue, and various performance metrics including profitability. This evaluation utilized both quantitative and qualitative data to comprehensively analyze and categorize borrowers. By delving into borrower-level analysis, valuable insights can be gleaned regarding the progress and exposure of the guarantee program.

Business Models Across Asset Classes

Various business models across different asset classes have seen significant adoption, with food loss emerging as the most favored asset class, attracting the highest number of disbursements (17) throughout the year. Following closely is AgTech, which garnered 10 disbursements, while FPO maintained momentum with 9 disbursements. Renewable energy, on the other hand, experienced the lowest number of disbursements due to limited eligible enterprises (working in RE sector with strong balance sheet and an intersection of agri- based RE product) in the sector. To gain insight into the performance and evolution of these sectors, it is crucial to examine the diverse models utilized by borrowers within each asset class. The table below illustrates the various business models operating across the four asset classes.

Table 2: Business model as per asset class

Asset Class	Business Models
FPO	Crop Aggregation, Primary Processing, Crop cultivation & Poultry, Marketing & selling
AgTech	Digital platforms for credit, crop selling, insurance & advisory Trading platforms for crop selling
Renewable energy	Solar coolers, Solar dryers, Solar pumps, Manufacturers of solar products, Solar as a Service
Food Loss	Food processing, Cooling solution

The program encompasses diverse business models across sectors: FPOs engage in crop aggregation and marketing; AgTech utilizes digital platforms for credit and crop trading; Renewable energy focuses on solar solutions; and Food loss enterprises are primarily engaged in food processing.

Average Loan Size

The average loan sizes for different asset classes show interesting trends over the two years. While FPOs experienced a significant increase in average loan size from INR 5.63 million in 2023 to INR 18.33 million in 2024, AgTech saw a slight increase from INR 15.00 million to INR 17.50 million. The most substantial change occurred in Renewable energy, with the average loan size soaring from INR 17.31 million to INR 57.23 million. In contrast, Food loss witnessed a decrease from INR 20.00 million to INR 14.06 million. These fluctuations highlight dynamic shifts in funding needs and preferences within each sector, indicating potential adjustments in credit terms as per asset class.

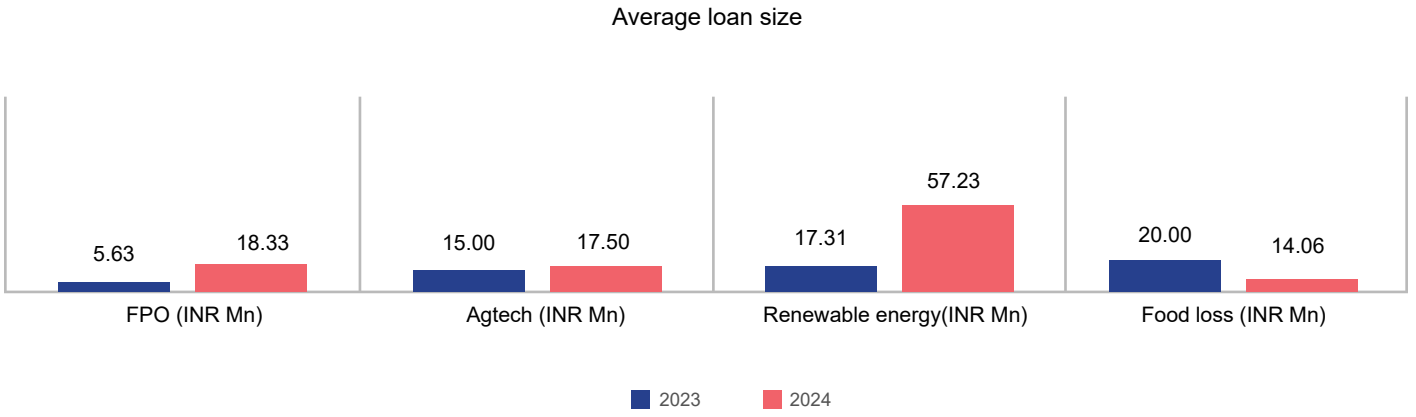


Figure 5: Average Loan Size

Evolving Credit Requirements

As the fund advances, it's crucial to continually grasp the needs of borrowers and adjust to evolving capital structures and mechanisms. Lender evaluations have highlighted that loan duration and size are the primary factors determining borrower suitability. Each asset class possesses distinct characteristics, necessitating tailored credit terms. Below outlines the credit terms matrix per asset class identified during lender assessments.

Table 3: Credit requirement as per asset class

Asset Class	Credit Tenure (Requirement)	Credit size* (Requirement)
FPO	Revolving Facility	< INR 33 Mn,
AgTech	Revolving Facility	<INR 33 Mn
Renewable energy	Long-term loans	>INR 33 Mn
Food Loss	Long-term loans	<INR 33 Mn

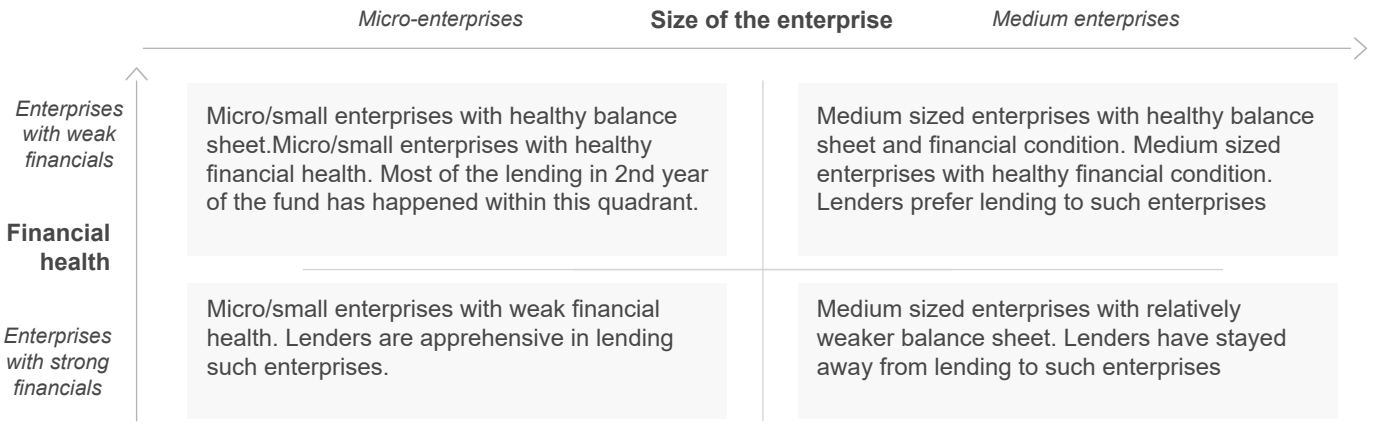
**INR 33 Mn (USD 400,000) is the upper limit for disbursement under the fund*

As per the trends in the past year, there has been an increase in the number of disbursements to FPOs with increased loan size as well. Avanti's disbursements have significantly been towards micro-enterprises (16/23) within foodloss solution enterprises and agtech. Avanti has been lending to these sectors as these are primarily micro trading companies with established payment cycle and have a relatively lesser turnaround time for profit

making, therefore lower repayment risk as compared to a capital-intensive sector like RE which directly sells it product directly to farmers has a high gestation period and to establish market presence (RE companies need more time as compared to a trading company to turn profitable).

Defining Credit risk

Credit risk for lenders comprises two main factors: the size of the enterprise and the health of its balance sheet. In the second year, lending trends indicate a surge in disbursements to micro-enterprises with strong balance sheets. Conversely, medium-sized enterprises with weaker financial conditions, such as being unprofitable and having inconsistent cash flows, have been overlooked. The primary determinants for lenders when deciding to extend credit have been the enterprises' robust balance sheets and overall financial health including positive cash flows. The matrix below explains lending patterns in the second year of the fund .



The matrix above shows that most lending has occurred in the first and second quadrants (micro/small enterprises with good financial health and medium enterprises with good financial health). This suggests that lenders have prioritized profitability and consistent cash flow over the size of the enterprises, leading to no lending to medium enterprises with poor financial health. There is a shift from previous year where medium enterprises with weak financial health were provided loans. 4/11 sampled enterprises last year were net profit negative

Figure 6: Lending pattern matrix

Additional Fund Raised

The fund aims to empower enterprises to access funds (both debt and equity) from alternative sources following the guarantee period. This outcome serves as a critical indicator of the program's success. Among the **42** borrowers assessed, **31** successfully secured additional debt from external sources subsequent to the disbursement under the fund. However, attributing this increase in debt capital directly to the program's involvement remains uncertain as enterprises source funds from various micro-finance players.

Revenue Categorization of Borrowers

The data shows a significant change in borrower distribution across revenue brackets from 2023 to 2024. Micro borrowers (revenue less than 5 crore/INR 50 million) increased from 7 to 30, representing 22.5% to 71% of the total. Conversely, small borrowers (revenue less than 50 crore/INR 500 million) decreased from 12 to 11, and medium borrowers (revenue less than 250 crore/ INR 2500 million) decreased from 12 to 1. This suggests a shift towards more micro borrowers and fewer small and medium borrowers over the years indicating that lenders are taking more credit risk.

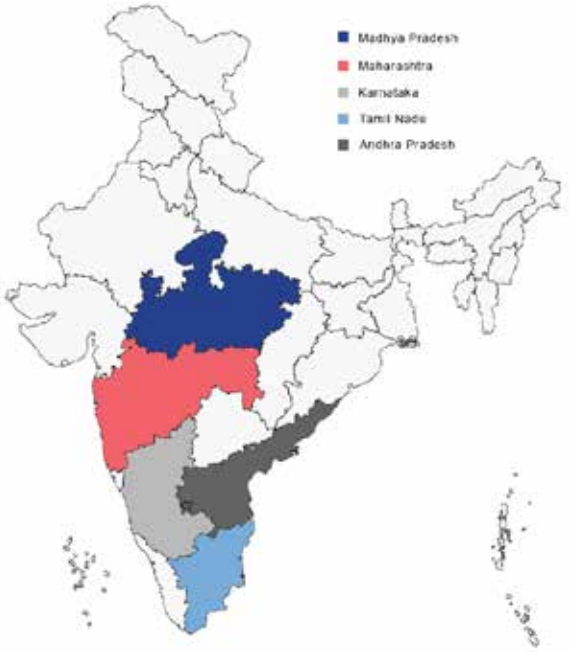
Farmer's Assessment

Smallholders and marginal farmers play a crucial role in the initiative. They represent the end-users associated with the selected borrowers as their clients or recipients. The fund seeks to increase HH income of farmers, food loss reduction as well as GHG emission reduction. The fund also aims to increase access to digital technologies for farmers.

A total of 225 farmers beneficiaries of eight selected borrowers, were surveyed to ascertain the fund's impact on them. The end-users hail from five different states and are customers of at least one of these enterprises representing all four asset classes. Before delving into the impact on end-users, the subsequent section outlines the profile of the end-users to provide context. The map indicates the survey geography of the end-users. State wise average land holding and HH income are given below.

Table 4: State-wise sample

	Karnataka	Maharashtra	Tamil Nadu	Andhra Pradesh	Madhya Pradesh
No. Of Sampled Farmers	22	119	31	24	25
Average land Holding (acres)	13.5	5.16	4.27	5.64	6.76
Average income (INR Mn)	0.56	0.27	0.7	0.18	0.19



Access to credit

The findings suggest a positive trend in end-users' access to credit over the two years. In 2023, 89% of farmers had access to credit, which increased to 94% in 2024. This improvement potentially enhances their ability to invest in agricultural inputs, machinery, and other resources critical for their farming activities. The increase in access to credit could contribute to improving agricultural productivity, income levels, and overall economic development in rural areas.

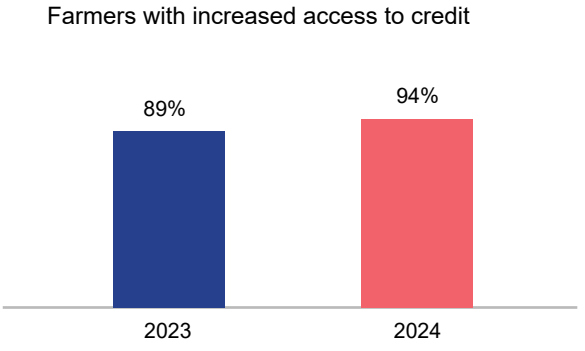


Figure 7: Access to Credit

Access to digital technologies

The data indicates a substantial increase in access to digital technology among farmers over the two years. In 2023, only 24% of farmers had access to digital technology, which more than double to 48% in 2024. This surge in digital access suggests a growing integration of technology into agricultural practices, potentially enabling farmers to access information, markets, and financial services more efficiently. Improved access to digital technology can facilitate better decision-making, enhance productivity, and expand market opportunities for farmers.

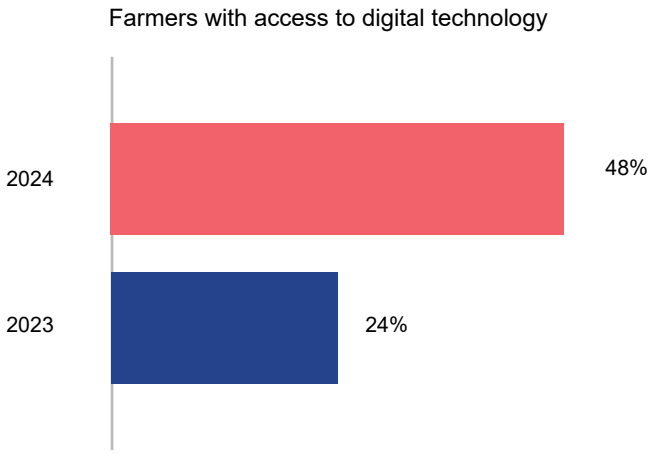


Figure 8: Access to digital technology

Farmer's reporting food loss

The data illustrates a concerning increase in the percentage of farmers reporting food loss over the two years. In 2023, 22% of farmers reported experiencing food loss, which dramatically surged to 80% in 2024. This sharp rise highlights the escalating challenges faced by farmers in preserving their produce and mitigating post-harvest losses.

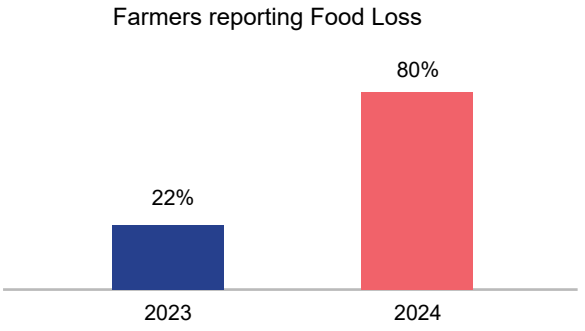


Figure 9: Farmers having food loss

Farmer's perceived Income

The data indicates a modest increase in household income over the two-year period. In 2023, 34% of households reported an increase in income, which slightly rose to 36% in 2024. While the uptick may seem marginal, even a small improvement in household income can have significant implications for families. The average household income for the fund's farmers grew from INR .24 Mn to INR .34 Mn (41% increase).

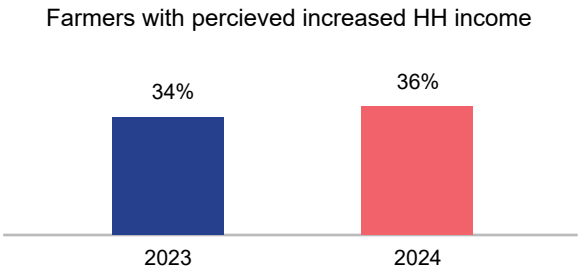


Figure 10: Farmers with increased income

Farmer's reported income

In the second year of the fund, farmers reported a 41% increase in household income compared to the previous year. Household income rose from INR 0.24 million in 2023 to INR 0.34 million in 2024. This growth is primarily due to higher land ownership among the sampled farmers compared to the first year of the fund. Additionally, factors such as improved access to digital technology and increased access to credit in 2024 compared to 2023 may have contributed to the income rise .

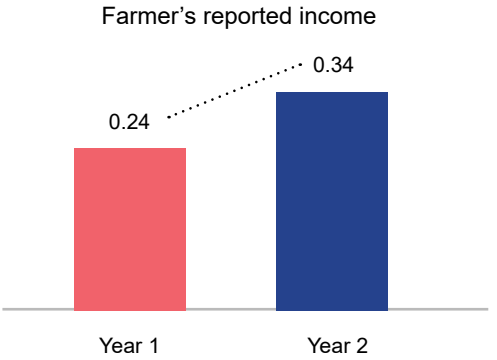


Figure 11: Farmer's reported income

Agricultural Income

The agricultural income of the sampled farmers was determined by multiplying the total amount of produce sold by the price at which it was sold. In the second year, the average farm income was INR 0.065 million. Farm income depends on the types of crops sold, crop yield, and the quantity of crops sold. Since farm income was calculated only in the second year, it cannot be compared with the first year. The data from year two will serve as the baseline for comparisons in future years .

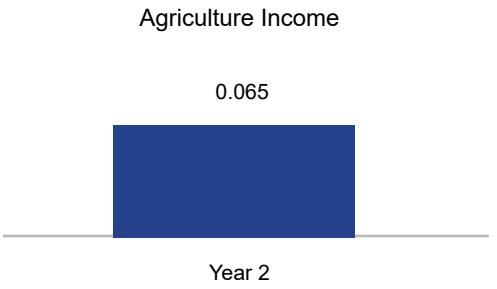


Figure 12: Agriculture income

Climate Smart Agriculture (CSA) Practices

Climate-smart agriculture (CSA) is a method of farming that attempts to decrease greenhouse gas emissions, improve the resilience of farming systems to climate change, and sustainably boost agricultural productivity. It is a comprehensive strategy that focuses on enhancing production and incomes, enhancing resilience and adaptability, and lowering greenhouse gas emissions. The fund aims to promote viable and sustainable agriculture along with enhancing the resilience of farmers as mentioned in the long-term outcomes of the theory of change.

Practice of Micro-Irrigation

Micro-irrigation techniques conserve water as they use pipes or underground tubes. It delivers water directly to the soil surface close to the plant roots – avoiding wastage of water through evaporation or flooding. The percentage of farmers with access to micro irrigation methods rose from 56% in 2023 to 84% in 2024. This increase suggests a growing access of micro irrigation practices among farmers. Possible drivers of this trend include heightened awareness of the benefits of micro irrigation, technological advancements, and supportive policies. The uptick in micro irrigation usage holds promise for enhancing water efficiency, improving crop yields, and promoting sustainable agriculture.

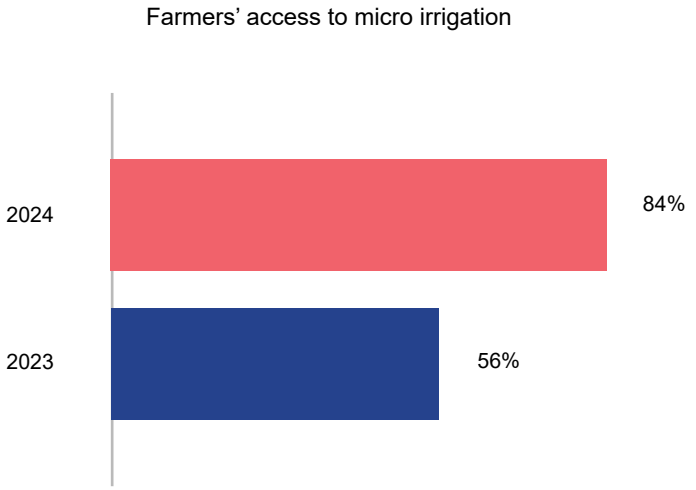


Figure 13: Farmers access to micro-irrigation

Farmers practicing crop rotation

Crop rotation is the practice of growing a series of different types of crops in the same area across a sequence of growing seasons. The proportion of farmers engaging in crop rotation declined from 68% in 2023 to 58% in 2024. This decrease can be attributed to food loss farmers. Many of whom are involved in the food processing industry tend to favor cultivating a single crop.

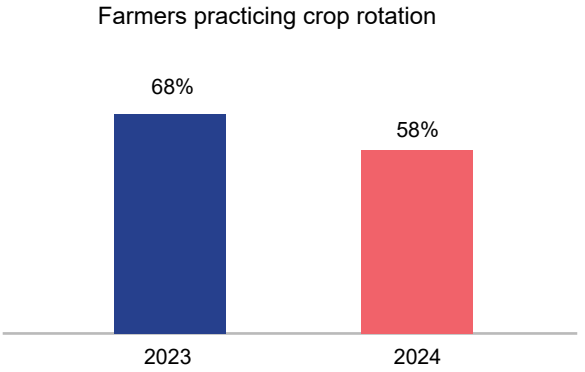


Figure 14: Crop rotation

Use of renewable energy sources for farming activities

The proportion of farmers involved in renewable energy use surged from 6% in 2023 to 20% in 2024, marking a substantial uptick in adoption. 32% of farmers who experienced an increase in income were seen to be adopting renewable energy. This notable increase underscores a growing inclination among farmers towards embracing renewable energy practices. It reflects a promising trend towards sustainability and the integration of cleaner energy sources within agricultural operations.

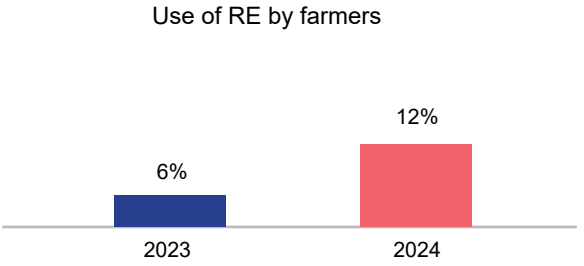


Figure 15: RE adoption

Uses of organic matter

Organic matter in agriculture refers to the decomposed and decomposing plant, animal, and microbial residues in the soil. It is a critical component of soil health and fertility. The utilization of organic matter among farmers saw a slight decrease from 43% in 2023 to 41% in 2024. 48% of the farmers who had access to agricultural information increased the uses of organic matter.

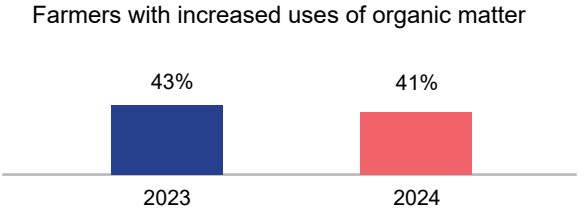


Figure 16: Uses of organic matter

The preceding section offers an overview of comparative metrics illustrating the advancement of the guarantee program. Some indicators exhibit growth or positive trends, such as increased farmer income and improved access to credit, while others show a decline. Notably, farmers dealing with food loss have seen an uptick. Within the realm of Climate-Smart Agriculture (CSA), practices like crop rotation have risen, although the use of organic matter has slightly decreased. The program's goals include boosting farmer income, enhancing access to credit, and reducing food loss. The second year demonstrated progress in many areas, albeit with some declines. While there's observable improvement in the adoption of Renewable Energy (RE) services compared to the previous year, attributing these changes solely to the fund is challenging within this evaluation. The services offered by borrowers also contribute to these shifts.

However, the evaluation faces limitations. The sample size is relatively small for showcasing comprehensive changes, and results lack validation from other sources. Additionally, the evaluation's complexity poses challenges in attributing certain indicators solely to the fund. Despite these challenges, the fund has made positive strides toward its intended outcomes. Yet, there are areas necessitating adjustments and strategic pivots to amplify impacts on farmers. The following section outlines the key learnings and observations derived from this evaluation.

Learnings and Way Forward

The evaluation of the Fund in its second-year highlights notable advancements across all facets: lenders, borrowers, and farmers. It aimed to gauge the program's impact and glean new insights. Encouragingly, there are signs of positive change, particularly evident in lenders' increased readiness to support high-risk borrowers despite el-nino hitting the Indian sub-continent in 2023. The portfolio has on-boarded new clients keeping-up with disbursement momentum of FY2023, while maintaining a very low default rate. The food-loss and the Agtech sector saw maximum traction compared with RE and FPO in FY2023. Gender focused investments too have received traction with disbursements primarily in the FPO sector and a few in the Food-loss sector. However, the credit underwriting terms remain unchanged with the lenders relying on their internal capacity and experience.

In FY2024, the borrower mix saw a significant change with 71% borrowers consisting of micro-enterprises vis-à-vis 27% in FY2023. The share of medium enterprise saw the maximum fall with only one enterprise receiving a loan in the mix. This indicates that lenders are accepting more risky investments. For these risky investments, lenders have been prudent and rigorous while assessing indicators of business sustainability and profitability as compared to the borrower mix in year FY2023, which had a larger share of borrowers who were operating at a net loss (4/9 sampled borrowers). Remarkably, in FY2024, only one enterprise out of the total was operating at a net loss, while all others were profitable. Consequently, the Fund enhanced loan accessibility for smaller enterprises however for those with robust financial standings. Another key and positive shift that has happened is that loans disbursed are being used to meet the working capital requirements for either newly acquired clients or business expansion purposes vis-à-vis FY24 where loans to a few borrower enterprises were for recovering from covid losses. This is a positive signal from a business sustainability and better reach to farmers perspective. At the farmer level, the disbursements to Agtech enterprises and FPO enterprises with large farmer reach has brought an incremental change in the number of farmers reached vis-à-vis FY23. The implications of this can be seen in indicators such as access to technology, access to credit etc. The fund can achieve much effective results with an adequate utilization of Technical Assistance by the borrowers for better outreach to farmers, the discussions of which are on-going and likely to see results in FY 25.The FY25 is likely to witness lenders exploring new asset classes outside their preference, traction in RE and Agtech is expected to increase while the momentum for Food-loss solution enterprises and FPOs is likely to continue. The support of the consortium partners and program managers and strategizing the operations of the program can better help the lenders in aligning their organizational goals with that of the Fund. Some Key Recommendations for FY25 has been given below:

Diversification as a tool to hedge lending risk

Reflecting on the lender's interaction, it was evident that those who diversified their lending portfolios across various asset classes demonstrated resilience to industry-wide challenges. Avanti ceased lending in the third quarter of this fiscal year due to agricultural distress, mainly affecting their disbursements to food loss enterprises. In contrast, Samunnati, with a diversified portfolio, continued its lending activities. The agricultural sector experienced significant distress this year, prompting lenders to temporarily suspend lending activities. A lack of diversity among borrowers, particularly across different asset classes, poses a risk to the overall agri-transition fund portfolio, making it vulnerable to sector-specific issues. The recent agricultural distress resulted in crop losses for many farmers, directly impacting food processing and agricultural technology enterprises, which in turn heightened the risk of delayed or defaulted credit repayments. To better actualize the goals of the program and mitigate such risks, program partners must encourage diversifying their disbursements beyond their preferred asset classes. This strategy can provide protection against periodic sectoral distress and enhance the stability of their lending operations through this fund.

Customization of financial offerings necessary for overall growth

At the outcome level, imposing a limit on loan amounts could hinder the potential economic impact of borrower enterprises. Micro, Small, and Medium Enterprises (MSMEs) form the backbone of the program. While borrower sizes range from INR 50 million to INR 2500 million, the guaranteed loan amount per borrower is capped at INR 33 million. Infrastructure-focused enterprises like renewable energy (RE) and food loss solutions typically require substantial capital compared to FPOs and Agricultural Technology (AgTech) ventures, which are less capital-intensive. Consequently, the program's ability to enhance the economic impact of borrower enterprises will vary across asset classes. There is a need to develop

customizable financial products and services or broaden the range of financial offerings, all while adhering to regulatory MSME lending guidelines ex. USAID's loan portfolio guarantee scheme offered loan amounts that typically ranged between USD 5 million to USD 10 million, but loan guarantees have been as low as USD 1 million and as high as USD 40 million. Since the range of enterprises falling within the MSME ambit is wide, caps can be set for micro, small and medium enterprises separately.

Utilization of TA needs a programmatic push

Even though the program has entered its second year, there has been no utilization of Technical Assistance (TA) requests. Considering TA's crucial role in the guarantee program, the absence of any utilization raises significant concerns. According to Convergence's Historical Deals Database, agriculture has one of the highest rates of TA (27%). In the agriculture sector, TAs are deployed to bridge the gap between the lack of access to finance and the lack of an investment-ready pipeline that is in-line with the lenders' desired ticket size and risk return expectations. A TA is an essential element of operations for a derisking program of this kind which can be used both at the demand side and the supply side.

TAs can be provided at the pre-investment stage or at the post investment stage. The first type of TA can be given to enterprises to become investment ready and provide support during the feasibility or due diligence processes. The support can include improving operational performance in areas such as financial management, Human Resources and Information Technology. Project preparation and implementation support related to bankability, and social and environmental impact can also form an important TA component at the pre-investment stage. These types of support can particularly be useful for first-time borrowers. For example: FPOs under this program are largely women-led with little economic and educational experience. A TA to support due diligence processes will empower such enterprises to be investment ready to access loans from various sources.

The second type of TA is the post- investment TA that focuses on sustainability of operations and profitability. Capacity building and training for operational efficiency including compliance to reporting frameworks can form an important TA component at the post-investment stage.

A sign of an effective TA is its contribution in developing a strong pipeline and to create an enabling environment to bolster the fund's impact. To address this, the program a TA monitoring mechanism along with a concurrent learning platform can be established between the program and lenders to provide them with a comprehensive understanding of TA and the benefits that can be incurred with the utilization of TA. This proactive approach can help encourage the effective utilization of TA resources, enhancing the overall impact and success of the program.

Gender inclusion strategies

Women SMFs face compounding layers of exclusion: first as SMFs and second as being a woman. Social norms limit their ability to engage in economic and educational activities which also limits their access to information and networks. Lack of credit score along with absence of collateral is an outcome of these norms limiting women's access to credit. There is a large body of evidence that suggests aggregation of women farmers help increase their income. SHGs, Joint-Lending Partnerships and FPOs are common group aggregation models that help improve income of women farmers. The fund targets FPOs which have at least 50% of members that are women. This intentional approach with dedicated outcome indicators encourages women's involvement in FPOs. To ensure sustainability of the benefits to women SMFs, it is imperative that the TA fund be utilized to empower women SMFs to make financially sound investments. Training on managing finances, monitoring of funds utilization can be measures to improve credit scores of the women-led enterprises. Another area that can be a key focus area for improvement is the access of extension services to women farmers. Women farmers are active in dairy and poultry, however, lack access to information on diseases and scientific knowledge.

The fund currently does not have gender strategies for other eligible borrowers. There is lack of data on gender diversity and participation for other eligible borrowers posing a challenge to extend targeted support like that of an FPO. Mandating reporting of women's participation in Agtech, RE and food – loss will provide evidence to set gender specific targets for the current/ future programs of this kind.

The program should take a "proactive" approach in engaging with women borrowers across all asset classes, not just FPOs. The main challenge for lenders in reaching women borrowers is the shortage of women-led enterprises. Allocating a specific portion of the fund to lend to women-led enterprises can improve gender inclusion at the program level. Additionally, tracking asset class-specific metrics and indicators can provide a clearer understanding of the status of gender inclusion within the program. Some suggested indicators are listed below:

Figure 5: Asset-class wise indicators

Asset Class	Indicators
FPO	Proportion of women participating in decision making of the FPO The percentage of women involved in marketing and sales activities facilitated by the FPO
Food Loss	Proportion of women farmers providing produce to the food loss enterprises Percentage of women farmers having access to warehouses
Renewable energy	The number of women benefiting from renewable energy solutions, such as solar-powered cold storages The impact of renewable energy solutions on the economic activities and productivity of women in agriculture
AgTech	The frequency and extent to which women access market information The percentage of female users on digital platforms
Program level indicators	Women who reached out to borrowers but were not provided service

The above-mentioned measures can be utilised to address gender-specific needs and challenges, thereby promoting a more inclusive and diverse participation across various sectors within the program.

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May 2024

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