Impact Assessment

of Focused Development Program (FDP) P0383 of HDFC Bank CSR 2023



MÖDEL

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Project Location: Sawai Madhopur, Rajasthan

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EXECUTIVE SUMMARY

About the FDP: HDFC bank carries out its CSR activities under the umbrella of 'Parivartan', through which it tries to reach out to communities and enable them to shift from poverty to growth. The Focused Development Program (FDP) of HDFC Bank CSR is one among its many important programs, where the Bank chooses an implementing partner with expertise in one of the focus areas and tries to improve the lives of the target beneficiaries around that particular focus area.

This FDP project focused on 'promotion of livelihood and was implemented between March 2021 to Feb 2022 by *Udyogini*, the NGO supported by HDFC Bank. The key goal of the project was to improve the lives of 500 women farmers through improving their produces through collective selling, processing and marketing. The program also aimed to register producer groups to become part of the Farmer Producer Organization (FPO) to help gain direct benefit from the produces and reduce the involvement of middlemen for selling of produces. Farmers, women, FPO and community members formed the 4 key beneficiary group for this FDP.

The project made use of various strategies towards achieving its goal primarily centred around expansion and strengthening of the existing livelihood option of chili cultivation in the area. In a nutshell, these strategies included training, awareness and capacity building of farmers for adoption of improved chili crop management practices, setting up of community nursery and agri-clinic for providing input support and technical guidance to farmers, establishing of women enterprise groups (WEG) to work towards production of value-added chili and other products from raw material procured from farmers, training and capacitating the WEG members towards this end and finally strengthening the existing local FPO not only to act as the anchor institution for channelizing the implementation of all these strategies but also to act as a platform for forward market linkage for the produce of farmers/ WEG members.

About the Impact Assessment: The proposed study was commissioned to conduct an Impact Assessment of the FDP project P0383 in Khandar block of Sawai Madhopur district in Rajasthan. The objective of the Assessment was to provide estimates on impact indicators in key domain areas along with evaluation of the efficacy, effectiveness of the project interventions and sustainability of the project's outcomes. The research design for this study followed a mixed method approach to data collection involving structured quantitative interviews with project beneficiaries and qualitative focus group discussion (FGDs) and Key Informant Interviews (KIIs). Since there were no baseline estimates for the implemented project, a *retrospective recall approach* was adopted for collecting baseline information, and thereby assess the impact. The number of beneficiaries of the FDP project were 398 FPO members spreading across 22 villages all of whom were sought to be interviewed. Final achieved sample size was 388 quantitative interviews, 5 FGDs with beneficiaries and 10 KIIs with key stakeholders. The data collection for the study was done between 22nd March- 30th March, 2023.

Study Findings: The high point of the project was the increase in overall household income by 43 percent from before the project and the increase in income through chili cultivation by 57 percent. Farmers were greatly benefitted by the training and exposure visits which encouraged them to adopt improved chili cultivation practices on their farmland, thereby increasing their quality, yield and hence income. They were appreciative of the input support given in the form of good quality of seeds and inputs at subsidized rates which not only helped to bring more land under chili cultivation but also ensured decrease in certain input costs. Support of the FPO in marketing of farmer's produce worked towards helping farmers realise a better price for their produce. The role of middlemen in purchasing farmers' produce did seem to have lessened during the initial project period, with farmers benefitting from the collective aggregation and sale through the FPO. Farmers preference to sell through the FPO from where they always got a fixed and right price also resulted in price correction by middlemen/ other market players.

However, the limited duration of 1 year for a project of this nature, brought its own set of challenges. The farmers initially were unable to fully comprehend the activities and envisaged benefits from participation, and by the time they did, much of the project duration was over. Towards the end of the project there was less involvement of the implementing partner in providing technical guidance to farmers or purchase of their produce. On the marketing front, this made the farmers fall back on the middlemen again who still predominate as the primary channel of sale for farmers; however, the corrected price and an improved sense of the market has empowered farmers with better negotiating power for their produce.

Another main arm of the intervention was the creation of WEGs and their training and capacity building for producing value added chili and other products. 17 WEGs were formed, a good number for a 1-year project. The training provided was easy to grasp for the beneficiaries and helped enhance their knowledge systems and empowered them to start their small enterprises. Machinery for processing was also provided for them at the FPO. The FPO formed their own brand name for the sale of produce under one name-*Chokha*; this was also registered under FSSAI. Quality control was a major priority for which they ensured packaging and bottling at a centralized level.

KEY PROJECT OUTCOMES

- A 43% increase in overall household income of project beneficiaries from Rs. 1,50,404/- before the FDP to Rs. 2,15,422/- after receiving support from the FDP.
- Income earned through chili increased by 57%, from Rs. 87,619/- before the FDP to Rs. 1,37,841/after.
- Increase in total land size under chili cultivation by
- Increase in total production of chili before and after the project by 46%.
- Decrease in input cost was seen notably in Transportation and marketing (12%), Pesticide/ Insecticide (8%), Seeds (6%), Storage /godown (5%), Fertilizers (1%) and Rent/ Hire of machinery (1%).
- 17 WEGs formed. Value-added products made by WEG members included: Chili pickles; Seasonal pickles such as mangoes, hog plums (amda), lemons and mixed pickles; Tomato chutney; Tomato sauce; Guava jam and marmalade.
- A finished product under the brand name Chokaa developed which was also AGMARK certified.
- Collective and direct selling by FPO helped in reducing their dependence on middleman completely for 31% beneficiaries, to a considerable extent for 28% and to some extent for 24%.

While most women did express satisfaction with the training received for manufacturing value-added products, there were others who were unhappy that the training lasted only for a day with no follow-up or else that no provision of raw material was made by the FPO to make the products that they were provide training in. Average annual income earned by WEG members was also only around Rs. 22,000/- Further, the marketing channels for WEGs could not be as well established as initially envisaged owing to quite a few challenges. The primary challenge pertained to the limited project duration of 1 year which was not deemed enough for the creation of a new value chain with a new product. Also, given that the volume of production by the WEG was not as much as per market standards, they could only sell to local stores in the market. Lower volume also meant the FPO was unable to bring down their price to competitively match up pricing with other similar products in the market. Absence of effective marketing channel through the FPO meant that WEGs also at times had to rely on sale through middlemen/ traders or locally through retail sale. Production was apparently intermittent during the project duration and minimal post that. Some WEGs and few members are still functional owing to the support given to them in terms of knowledge and machinery, though many of the WEGs are now dismantled.

Strengthening of the existing local FPO under the project did reflect in terms of enhanced membership, adherence to legal and statutory compliances and extent of support given to farmers and WEGs through it. The FPO continues to work today though in a no profit-no loss situation. They are involved in making marketing arrangements for pickles on their own and also the sale of animal feed by hiring of vehicles. But with only nascent development of the WEG marketing channels when the project was operational and many of the WEGS being dismantled by now, the competency of the FPO to scale up and manage the chili value chain on its own in this post project period seems challenging.

In sum, it can be said that the goal of the project seems to have been fulfilled to a considerable extent though not fully. The project did positively impact the chili farmers to a good extent and WEGs to some extent. The implementing partner was able to garner trust and support in the project area through its consistent effort in the initial period but owing to its challenges and less involvement towards the end of the project, few farmers and WEG members felt a disconnect with them. The 1-year duration of the project was deemed to be less against the activities planned especially with regard to marketing of value-added products. A more clearer exit strategy across villages and for all beneficiaries would have been helpful.



INTRODUCTION

HDFC bank carries out its CSR activities under the umbrella of 'Parivartan', through which it tries to reach out to communities and enable them to shift from poverty to growth. Through interventions in the areas of rural development, education, skill development and livelihood enhancement, healthcare & hygiene, and financial literacy, Parivartan aims to contribute towards the economic and social development of the country by sustainably empowering its communities.

The Focused Development Program (FDP) of HDFC Bank CSR is one among its many important programs, where the Bank chooses an implementing partner with expertise in one of the focus areas and tries to improve the lives of the target beneficiaries around that particular focus area. Systematic routine monitoring and independent evaluations are regularly undertaken to assess the effectiveness of projects under their programs.

The proposed study was hence commissioned to conduct an Impact Assessment of the FDP project P0383 in Khandar block of Sawai Madhopur district in Rajasthan. The project was also known as **Project Sambal** during implementation.

This FDP project focused on 'promotion of livelihood and was implemented between March 2021 to Feb 2022 by *Udyogini*, the NGO supported by HDFC Bank. The key goal of the project was to improve the lives of 500 women farmers through improving their produces through collective selling, processing and marketing. The program also aimed to register producer groups to become part of the Farmer Producer Organization (FPO) to help gain direct benefit from the produces and reduce the involvement of middlemen for selling of produces.

Farmers, women, FPO and community members formed the 4 key beneficiary group for this FDP. The key activities undertaken as part of the project intervention are shown in Figure 1.1 below.

FARMERS WOMEN **FPO** Training of farmer producers Formation of WEGs Strengthening and including exposure visits strengthening of existing • Training of WEG members • Establishment of Agri-Clinic for production of chili value Collective selling, processing added products Development of Community and marketing Nursery **COMMUNITY MEMBERS**

Figure 1.1: Key Activities undertaken as part of FDP P0383



STUDY METHODOLOGY

This chapter describes the research methodology adopted for conducting the said Impact Assessment.

2.1. RESEARCH DESIGN

The research design for this study followed a **mixed method approach** as suggested in the RFP floated for the study and considered to be a suitable and apt approach to address the research focus at hand. Since there are no baseline estimates for the implemented project, a *retrospective recall approach* was adopted for collecting baseline information, and thereby assess the impact.

The *objective* of this Impact Assessment was:

Primary Objective: to provide estimates on impact indicators in key domain areas.

Secondary Objective: evaluate the efficacy, effectiveness of the project interventions and sustainability of the project's outcomes

2.2. SAMPLE SIZE

The number of beneficiaries of the FDP project were 398 FPO members spreading across 22 villages in Khandar block of Sawai Madhopur district, Rajasthan. The list of these beneficiaries was provided to MODEL Resource at the beginning of the study.

As a usual practice in development research, when the unit of analysis is the block level, and considering a single report, a statistically significant sample size requires a minimum sample of 400 quantitative interviews to be done from among the program beneficiaries. This sample size is deemed sufficient to estimate the main indicator of interest within 5 percent points and a confidence level of 95% for each sub-group of interest. This level of precision is considered sufficient to establish the level of this indicator to inform survey objective decisions, using the following formula¹:

$$n = \frac{z^2 pq}{d^2}$$

It may be inferred that the exact sample size arrived through the abovementioned calculation is 384. However, taking into consideration non- response rate and with a view to reducing the sampling error, an inflated sample size rounding off the required number to 400 is usually followed in most surveys.

Now, given that the FDP project population is itself 398, a take-all/census approach to data collection was adopted wherein all 398 project beneficiaries were sought to be interviewed for the Impact Assessment.

¹ Where; n = the desired sample size (when population is greater than 10,000); z = the standard normal deviate, here set at 2.0 which corresponds to 95% confidence level; p = the proportion in the target population estimated to have a particular characteristic. As there is no reasonable estimate, here it is taken as 50 percent (.50); q = 1.0 - p; d = the degree of accuracy desired, here set at .050.

With respect to the qualitative component, 5 Focus group discussions (FGD) with beneficiaries and 10 Key Informant Interviews (KII) with key stakeholders were decided to be conducted to draw qualitative insights in keeping with the scope of the Assessment.

Table 2.1: Achieved Sample Size

Respondent	Achieved		
Quantitative			
Project beneficiaries 388			
Qualitative			
Focus group discussions (FGD)	5		
Key Informant Interviews (KII)	10		

During fieldwork, 388 quantitative interviews were conducted among beneficiaries. The remaining 10 could not be interviewed for reasons such as: beneficiary not found in village, beneficiary out of village during fieldwork duration, refusal of beneficiary for participation in interview, beneficiary no longer alive.

Other than this, all 5 FGDs and 10 KIIs were completed as planned. Details of FGD/ KII conducted is given in <u>Annexure 1</u>.

2.3. STUDY TOOLS

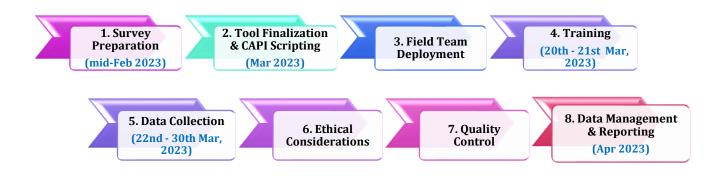
The research tool developed was in alignment with the intervention done under the FDP, with the aim to arrive at quantifiable impact indicators and assessing the project's efficacy, effectiveness and sustainability of outcome. Project related documents as obtained for HDFC Bank CSR were studies to get detailed understanding of the project and hence develop the tools. The tools developed as part of this Assessment included the following:

- Quantitative questionnaire for beneficiaries
- Focus group discussions (FGD)
 - o With WEG members
 - With Farmers
- Key Informant Interviews (KII) Guide
 - Udyogini personnel/ staff (during Project Sambal)
 - o FPO Leader
 - WEG Office Bearer
 - VDC Member

The quantitative research instrument was a structured questionnaire with mainly close-ended questions, enabling capture of responses through pre-defined set of (multiple) response choices and will be finalized in consultation with HDFC Bank CSR. The qualitative FGD and KII Guide had questions to help draw qualitative insights in keeping with the scope of the Assessment, with special attention to assessing the project's efficacy, effectiveness and sustainability of outcome. Each of the qualitative guides were prepared and customized for the respective respondent type.

2.4. STUDY IMPLEMENTATION

The preparation for the Impact Assessment after commissioning from HDFC Bank CSR began in mid-February 2023. One of the important initial tasks was to study the project documents comprising of the Project Proposal, Quarterly Report and Impact Report shared by HDFC Bank CSR, for developing an understanding of the project. The study tools were then developed and shared with HDFC team for approval. The CAPI digital scripting was also undertaken in preparation for the field launch in addition to other field level preparation. Field Team Training was held on 20^{th} – 21^{st} March, 2023 at Sawai Madhopur for orienting and training the teams on the study protocols and tools. Soon after, data collection was launched from 22^{nd} March onwards and completed by the end of the month. This was followed by data processing, management, analysis and preparation of Report which was completed in the month of April.





Field Team Training at Sawai Madhopur



 $A\, quantitative\, interview\, in\, progress$



A chili farm in the project area



A FGD with Farmers



A Board on HDFC Bank CSR's FDP in Sanwalpur Village

2.5. DATA MANAGEMENT, ANALYSIS AND REPORTING

After completion of data collection, final data collation, checking and cleaning of the completed quantitative interviews were done. Like-wise, transcription and further content analysis was undertaken for the qualitative capsule. Once the data was cleaned, it was analysed and Draft Findings Report prepared on its basis.

2.5.1. ANALYTICAL FRAMEWORK

This Report on the Impact Assessment of FDP PO383 has followed the standard **Outcome-Impact Framework** to analyse and measure the outcomes and impact of the project by way of tracing the changes since the implementation of the project and establishing the causes of these changes. The themes of analysis to be so used are presented in the Figure below outlining the various outcome and impact *expected and envisaged* as a result of the project intervention.

OUTCOME LEVEL 1 OUTCOME LEVEL 2 INPUT ACTIVITIES IMPACT Farmers receiving support under key activities Training of producers Engagement in chili and Change in input cost incurred vegetable cultivation Establishment of Enhanced production Agri-clinic Adoption of improved chili Capacitated women & **FDP** cultivation methods Producers' Access To Market, farmers Development of Reduced Dependence On P0383 community nursey Trained WEG members Middlemen And Higher Empowerment of women Negotiating Power Through Formation of WEGs Collective Selling Production of value added participation chili products Training of WEG Fair price for produce members FPO strengthening and Enhanced income Increase in its membership Strengthening of existing FPO Backward market linkage for chili producers

Figure 2.1: Output-Impact Framework applied to FDP P0383

As deduced from the figure above, the project intervention FDP P0383 acted as the input under which various activities were undertaken for promotion of livelihood of people in the project area. These activities, also outlined in Chapter 1, primarily included training of farmer producers on chili crop management, establishment of community nursery and agri-clinic for technical guidance and input support to farmers, setting up of Women Enterprise Groups (WEG), training and capacitating them with skills for value addition of chili and other products along with entrepreneurship and leadership skills. Strengthening of existing local FPO (Prawah Mahila Kisan Producer Company Ltd) to facilitate and promote the income generation activities of farmers and WEG members was another important activity undertaken under the project.

As a result of these activities, the immediate outcome or *outcome level 1* included trained farmers who in turn newly took up or expanded their involvement in growing chili brining more land under chili cultivation. Trainings and exposure visits further helped the farmers to adopt scientific and sustainable chili cultivation methods. The chili produced by farmers were procured by the WEG for further value addition, packaging and branding for which they were provided training, to be ultimately sold by the FPO through the various marketing channels developed.

The next level of outcome or *outcome level 2* formed the key expected outcomes under this 1-year project, leading to a favourable change in input cost incurred by farmers, enhanced yields, reduction in the dependence on middlemen for sale of produce and farmers' own access to market/ higher negotiating power through collective selling. These in turn were expected to help farmers/ WEG members get a fair price for their produce/ products leading to enhanced income.

In terms of the long-term *impact* that this intervention was expected to bring about included Capacitated women & farmers, enhanced social participation of women in village institutions, their empowerment and overall well-being of project beneficiaries and household.

2.6. FIELDWORK CHALLENGES

Data collection for this Impact Assessment did have its share of challenges. One of the primary challenges being the availability of beneficiaries given the ongoing harvesting season. Since this was a very specific project around chili cultivation and WEGs, it required pre-testing of the tool in the project area itself and no other area could serve as a proxy for pre-testing. However, attempts by HDFC Bank CSR team towards arranging 3-4 beneficiaries for the pre-test could not materialise as the beneficiary farmers were busy in the harvesting season and were unavailable. This meant that pre-testing of the tool could not be done which was straightaway fielded for data collection as per directions from HDFC Bank CSR.

During the course of data collection, the harvest season meant interviewers had to reach out to the beneficiaries in their fields and not their home to request for the interviews. This strategy did help in achieving the required samples size. Further, a few of the interviewed beneficiaries were unable to answer the questions substantially as there has been a gap of one year after the conclusion of the project; they were hazy on the particulars of the implementation of the project and its activities.

Due to the closure of the project, the hands-on staff specific to the project from the implementing partners were unavailable as they were no longer associated with them. This meant that an overall perspective from the main project implementors/leaders could not be sufficiently gathered. The staff from the implementing partner that were available were newer and were unable to provide some of the needed relevant information.

STUDY FINDINGS



BACKGROUND PROFILE

The present chapter collates the findings at the beneficiary and household level, giving insights into the overall demographic and socio-economic status of the households surveyed and interviewed.

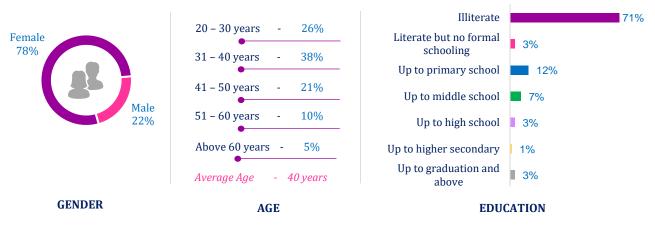
3.1. BENEFICIARY PROFILE

Of the 388 respondents interviewed as part of the assessment, 78 percent were females while 22 percent were males (Figure 3.1).

The average age of these beneficiaries was 40 years, ranging between 20 to 75 years. The average age of female beneficiaries, the main focus of this FDP, was slightly lower at 39 years as compared to male beneficiaries whose average age was 43 years.

In terms of their educational level, the beneficiaries were mostly found to be illiterate with 71 percent not having received any education, followed much behind by 12 percent beneficiaries who had completed schooling up to their primary level (class 5) and 7 percent who had completed schooling up to the middle level (class 8). It may be noted here that the high level of illiteracy reported among the beneficiaries was primarily driven by female illiteracy, wherein 80 percent females were reported as illiterate as compared to half the males, at 41 percent, reporting illiteracy.

Figure 3.1: Demographic profile of beneficiaries surveyed



N = All beneficiaries [388]

With regard to occupations that beneficiaries are engaged in, 98 percent are primarily farmers/cultivators while the remaining 2 percent are wage labourers. In terms of secondary occupation, working as wage labourer serves as the key livelihood source for 51 percent of the beneficiaries. Another 11 percent also engage in animal husbandry. About 36 percent beneficiaries do not engage in any secondary occupation.

In terms of gender distribution of beneficiaries across the primary occupation of farming, data suggests that similar proportion of both males

Table 3.1: Occupational distribution of beneficiaries

Occupation	Primary	Secondary
Farmer/ Cultivator	98%	1%
Wage labour (agriculture/ non-agriculture)	2%	51%
Animal husbandry	-	11%
Trading/ Small business or enterprise	-	<1%
Salaried service (govt./ pvt.)	-	<1%
No secondary occupation	n/a	36%

N = 388 [All beneficiaries]

and females engage in farming/ cultivation. However, in terms of secondary occupation, comparatively greater proportion of females are engaged in wage labour (male - 37%; female – 55%), while for males, comparative involvement is greater in animal husbandry (male - 16%; female – 10%).

3.2. HOUSEHOLD PROFILE

3.2.1. SOCIO-DEMOGRAPHIC PROFILE

A review of the beneficiaries under this FDP suggests that households have an average of 6 members. Households primarily belong to socially marginalized communities, majority of them being Scheduled Castes (SC) (48%) followed by another one-third (34%) who are from the Other Backward Caste (OBC).

In terms of possession of Ration Card, 74 percent project possess the APL Card and fall above the poverty line as per Government of India categorization. Those possessing the BPL Card constitute 23 percent while the remaining 3 percent are extremely poor, given their possession of the Antyodaya Card.

Around 90 percent beneficiaries also had a bank account, primarily with a nationalized bank. Kisan Credit Card (KCC) was available with 41 percent beneficiaries interviewed, among whom 82 percent reported transacting regularly with it in a quarter.

Majority beneficiaries (60%) stay in pucca houses, while about one-fourth (27%) have a semi-pucca house.

The most common drinking water source among beneficiaries (54%) happens to be the public hand pump/dug well, followed by 30 percent of them who have their own hand pump/dug well for drinking purposes. Those having a tap water supply connection at home comprise only 7 percent.

For cooking, over 9 in 10 households (94%) use firewood. LPG/ Gas cylinder is only used by the remining 6 percent.

In terms of toilet, 79 percent households do have a toilet in their house. Among them (n=308), 92 percent households confirmed that all members in the house make use of the toilet. For the remaining 8 percent (n=24), non-usage of toilet was primarily for reasons such as: habit – to go outside (46%); child too small to use the toilet (25%); toilet

Beneficiary Household Profile SC - 48% OBC - 34% Social Category ST- 11% of HHs General - 7% APL - 74% Possession of **BPL** -23% **Ration Cards** Antyodaya - 3% HHs with Bank Account HHs with KCC 90% 41% - 60% Pucca Type of House Semi-pucca - 27% Kaccha Main drinking water source Public hand pump/dug well - 54% Own hand pump/ dug well Main cooking HHs with toilet source Firewood - 94% LPG/ Gas - 6% 79% HHs electrified 97%

11%

under construction/ incomplete (17%); no/ less running water in the toilet (8%) and toilet pit is full/ overflowing (4%).

Among them,

o HHs using solar power

Further, 97 percent households had electricity connection. Among them (n=376), 11 percent stated that they used solar energy for electricity.

In terms of asset ownership, beneficiaries were asked about 13 different household items in functional condition that they may be possessing, they being: electric fan, cooler, refrigerator, TV, mobile phone/telephone, computer/laptop, internet connection (on mobile or computer/laptop), bicycle, motorcycle/scooter, car/jeep/van, tractor, thresher, harvester. Among them, the top 5 most commonly owned assets

were: electric fan (95%); mobile phone/ telephone (88%); motorcycle/ scooter (66%); internet connection (60%); cooler (52%). With respect to the ownership of large agricultural machines, tractor (10%) was most commonly owned by households, followed by thresher (4%) and harvester (1%). Overall, households owning only five assets or lesser constituted 68 percent.

3.2.2. AGRICULTURAL PROFILE

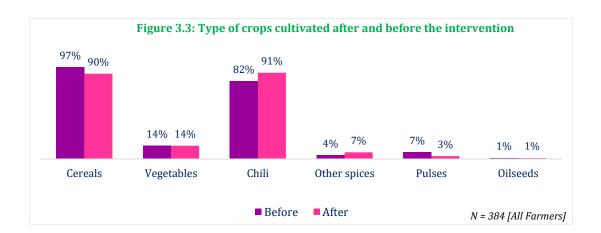
Agriculture is the primary occupation of the households, with 99 percent of them (N=384) confirming involvement in any cultivation of agricultural activity. Among the farmer households, 93 percent had their own land for cultivation, 3 percent had leased-in land while the rest 4 percent had both own and leased-in land.

Based on the size of the agricultural land that farmer households have, it is evidenced that the agricultural landscape of the project area primarily comprises of marginal (59%) and small (27%) farmers. Average agricultural land size in the area is 3.04 acres with 2.80 acres being currently used for cultivation purposes.

Figure 3.2: Type of Farmers and Average Land Size



Land	Land size
Total agricultural land	3.04 acres
Land cultivated currently	2.80 acres



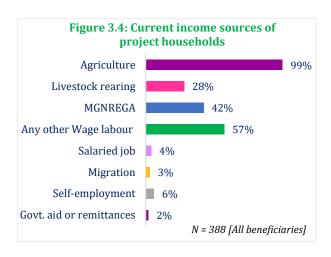
Cultivation of cereals and chili have been the major crops grown by farmer households in the project area. Further to the intervention, it is apparent that involvement of farmers in chili cultivation has increased. Earlier, 82 percent households undertook cultivation of chilli which increased to 91 percent post project implementation, an increase of 9 percentage points. Cultivation of other spices such as garlic and ginger also showed a marginal increase among farmer households. For other crops, be it cereals, vegetables or pulses, there has been a marginal decline in farmer households engaging in its cultivation.

3.2.3. CURRENT INCOME SOURCES

The current income sources of households mainly include agriculture, from which 79 percent of the project households surveyed derive their income from. Wage labour (agriculture or non-agriculture) other than MGNREGA serves as the current income source for 57 percent households while 42 percent derive their income from MGNREGA. Households currently earning from livestock rearing comprise 28 percent. Other

income sources are true for less than one-tenth households such as self-employment (6%), salaried job (4%), migration (3%) and government aid or remittances (2%).

Overall, the average annual household income post implementation of the FDP was Rs. 2,15,422/-.





PROJECT OUTCOME AND IMPACT

As outlined in the previous chapters, this particular FDP was focused on the 'promotion of livelihood' through agro-based livelihood opportunities, primarily involving support to producers in the cultivation of chilli, creation of Women Enterprise Groups (WEGs) for engaging in value addition of chili, thereby leading to collective processing, selling and marketing of the value-added products through the local FPO.

The current chapter analyses the key project impact achieved following our analytical framework described in section 2.5.1, assessing the same at the level of outcome level 1, outcome level 2 and impact.

4.1. FINDINGS PERTAINING TO PROJECT OUTCOME LEVEL 1

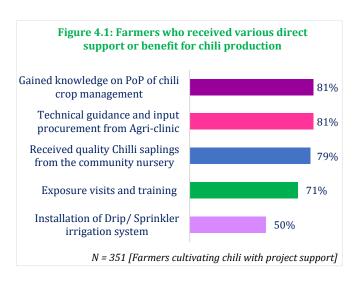
This section analyses the project outcomes at level 1 as outlined in Figure 2.1 of Chapter 2. These outcomes are the immediate outcomes observed as a result of implementation of the FDP.

4.1.1. FARMERS RECEIVING SUPPORT UNDER KEY PROJECT ACTIVITIES

Indicators assessed – Awareness, training and support received by farmers against key project activities.

Awareness and training were imparted to farmer producers to adopt improved and sustainable agricultural practices for cultivation of chilli with sessions also taken by agricultural experts for the staff of the

implementing partner. Figure 4.1 alongside shows the different training, support or benefit received by farmers under the project. As observed, about four-fifth beneficiaries confirmed to have received support or benefit in terms of knowledge gained on Package of Practices (PoP) of chili crop management technical (81%), guidance and input procurement (Seeds, Pesticides, nutrient, quality planting material etc.) from Agri-clinic (81%) and obtaining quality chilli saplings from the community nursery (79%). Having gone on exposure visits was reported by 71 percent beneficiaries. Those who benefitted from installation of drip/sprinkler irrigation system (50%) were comparatively lower.



As gathered from the qualitative assessment it was highlighted that meetings with farmers were conducted fortnightly. Farmers were given training in improved agricultural practices around ploughing, sowing of seeds, irrigation, usage of pesticides and fertilizers- especially organic, removal of undesirable weed and wild growth in the fields. These trainings were imparted with the goal of decreasing the input cost and substantially increasing the income. Many farmers narrated that they were initially unable to grasp the concept of the benefits of the project; hence, they were unable to join the project soon. By the time they gained an understanding of the scope and possible benefits of participation, the project duration was over. In some villages, farmers were acquainted about the setting up of agri-clinics, however, they were unaware about it being eventually formed.

"The organization came with preparation, but some farmers also didn't understand them. They kind of had doubt about their work. We didn't understand it in 2021 and in 2022 we got it, but till then they kind of slowed down the process."

-Chili farmer, Bangarda village

4.1.2. ENGAGEMENT IN CHILLI AND VEGETABLE CULTIVATION

Indicators assessed – Farmers engaging in chili cultivation; Land size brought under chili cultivation; Farmers engaging in vegetable cultivation; No. of months farmers engage in cultivation.

Overall, of the 384 beneficiaries who engaged in agriculture, 91 percent confirmed their engagement in chili cultivation. Moreover, of the total beneficiaries practicing agriculture, 9% were those who started cultivating chili only after involvement with the FDP. An increase in the area of land used for chili cultivation as a result of the project intervention was also reported.

Farmers engaging in chili cultivation

OVERALL - 91%

NEW - 9%

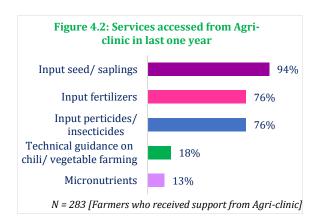
Land under chili cultivation

BEFORE - 0.68 acre

AFTER - 0.91 acre

Hence, while average land in which chili was cultivated before the intervention was 0.68 acre, this increased to 0.91 acre after the project support received by farmers. In terms of total land size under chili cultivation in the area, the increase was seen from 240 acres to 320 acres, an increase of 33 percent. Overall, farmer beneficiaries reported that post project implementation, they were able to engage in cultivation for 8 months in a year, as against 6 months prior to the intervention.

Engagement in chili cultivation was further supported through the Agri-clinic established under the FDP. Among farmers who received any support or benefit from the Agri-clinic, specific services accessed from it primarily pertained to input seed/ saplings as reported by almost all of them (94%). Obtaining fertilizers and pesticides was confirmed by three-fourth of the beneficiaries (76% each). Accessing services related to technical guidance in farming or obtaining micronutrients was far less common, true for less than one-fifth beneficiaries.



During the qualitative interviews, beneficiaries stated they were provided good quality seeds of chilli that

ensured better yield. Farmers also reported having received supplements for cultivation such as pesticides and fertilizers.

"Due to the project, farming of chilies increased. For instance, if someone was growing chillies in 1 acre of land, he used one and half acre land during that project because the seeds were provided by the NGO."

- VDC member, Sawalpur village

Among farmers who also engaged in cultivation of vegetables (N=55), 73 percent reported sourcing of their vegetable seedlings/ saplings from the community nursery. Vegetables so grown by using these saplings mainly included tomato (93%), cabbage (70%), brinjal (65%) and cauliflower (43%). This information is also supported by feedback received during FGDs that through the implementation of the project, nurseries were used for growing chilli, brinjal, corn and tomato. Though some farmers reported that the seeds of

bottle gourd, brinjal and tomato failed in some villages; while some farmers narrated that their corn crops were successful

An increase in the area of land brought under vegetable cultivation as a result of support from the project was also reported. Hence, while average land in which Vegetable farmers sourcing saplings from nursery

Tamburate Land under vegetable cultivation

BEFORE – 0.76 acre

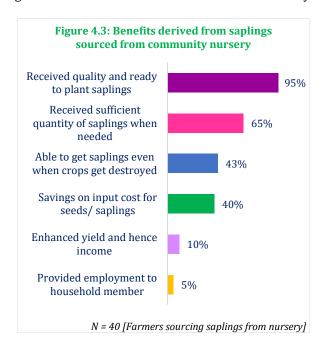
AFTER – 0.87 acre

vegetable cultivation was undertaken before the project was 0.76 acre, this increased to 0.87 acre after the project support received by farmers. In terms of total land size under vegetable cultivation in the area, the increase was seen from 30 acres to 35 acres, an increase of 17 percent.

Eliciting top of the mind recall with some probing, vegetable farmers were asked about the benefits they

derived from sourcing seedling/ saplings from the community nursery. The key benefit as reported by 95 percent farmers was receiving quality and ready to plant saplings. About two-third (65%) of them also stated receiving sufficient quantity of saplings when they needed. Another two-fifth vegetable farmers benefitted from their opportunity to get saplings even when their crops got destroyed due to pests, disease or natural calamities (43%) and in terms of savings on input cost (40%).

Further, of the remaining 27 percent vegetable farmers (n=15) who did not access the community nursery for saplings, reason for not accessing the same included: unaware about community nursery (60%), nursery very far off (47%), did not find saplings of very good quality (13%), did not get saplings in needed quantity (13%), and got seedlings at better rate elsewhere (13%).

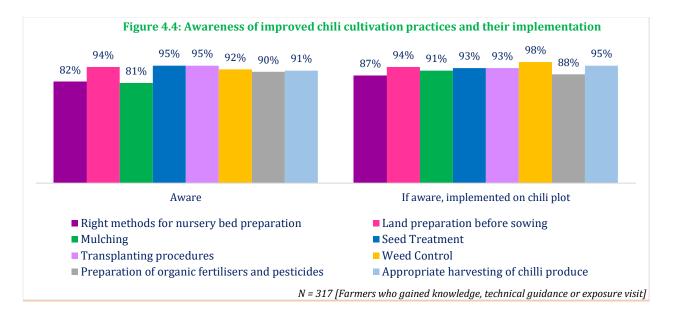


4.1.3. ADOPTION OF IMPROVED CHILI CULTIVATION METHODS

Indicators assessed – Adoption of various improved chili cultivation practices; Extent of benefit from use of organic fertilizers & pesticides; Farmers making use of solar irrigation.

Training and awareness programmes organized under the FDP were found to be useful in encouraging farmers to adopt improved chili cultivation practices. Among chili farmers who received support or benefit either in terms of knowledge around PoP of chili crop management or technical guidance from the Agriclinic or exposure visits or training (N=317; drawing from Figure 4.1), an assessment was made of the different improved practices that they were ultimately aware of and also used it on their own farmlands.

As observed from data presented in Figure 4.4 below, good awareness was seen with over 9 in 10 farmers reporting awareness of most of the improved chili cultivation practices such as seed treatment (95%), transplanting procedures (95%) land preparation before sowing (94%) etc. Marginally lesser awareness was reported for the practice of Right methods for nursery bed preparation/ rise bed sowing (82%) and mulching (81%). Among those aware, implementation of these improved practices on their own chili plots was also confirmed by about 9 in 10 farmers for most practices asked about.



The qualitative component of the assessment further provided insights as to how guidance under the FDP helped in bettering the methods of chilli cultivation. Farmers were trained to grow crops at a distance of 3 feet from each crop as compared to their earlier technique of 1 feet; this ensured production at a larger volume with lesser seeds. Few farmers talked about how they were taught to make plantation beds for cultivation; this too assisted them in increasing the yield of the crops. Farmers were also given training in practice of vermicomposting. Training in making pesticides with mixtures of buttermilk and thornapple (dhatura) along with pesticide made from neem was taught to the farmers. Additionally, making of a pesticide named Thaili was also taught to the farmers in the area; however, this was not effective in the field as pointed out by some farmers. In some villages, farmers stated that they did not get the relevant training of the usage of pesticides and fertilizers. Training in the correct usage of pesticides and fertilizers had decreased the input cost.

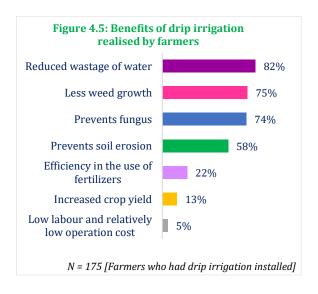
"They changed our techniques; earlier we used to give the gap of 1 feet but we started giving the gap of 3 feet after Udyogini told this to us. So now it has started giving more production than before in lesser seeds."

- WEG member, Sanwas village

"Your medicine benefitted us also, a medicine named "keetnashak", so we sprayed it on our crops. It gave 100% results."

-Chili farmer, Bangarda village

Through training and awareness, it was brought to the attention of farmers that drip irrigation would be an optimal method of irrigation; since chilli does not require much water and more water would damage the crop. In some villages, drip irrigation systems were taught to some farmers; this ensured the reduction in input cost and reduced labour required for irrigating fields. Among farmers who had drip irrigation installed on their farmlands (N=175), 82 percent expressed that they were benefitted from the reduced wastage of water. Less weed growth/ Reduced weeds (75%), prevention of fungus (74%) and prevention of soil erosion (54%) were other benefits that was agreed upon by majority farmers (Figure 4.5).



Farmers were motivated during training to increase the usage of organic fertilizers instead of chemical fertilizers; however, some farmers also claimed that this reduced the volume of the produce. It must be noted that farmers did not receive increased yield after the shift to organic farming as one year's time is insufficient to portray the benefits of organic farming. Training in tackling the issue of diseased chilli crops was also imparted to producers. For this, they were taught to plant flower saplings around the crops to reduce the pest or diseases from chili crops. To increase the survival of plants, farmers were encouraged to soak the saplings in milk. On being asked to what extent has support from the project helped and motivated farmers to make more & more use of organic fertilizers & pesticides, 38 percent agreed it to be to a considerable extent followed by another 50 percent for whom this was true to some extent. The rest 11 percent did not find it helpful, and 1 percent didn't know/ couldn't say.

About 18 percent farmers confirmed usage of solar irrigation.

Further, 29 percent or 112 farmers reported that sticky traps were installed in their farm plot to safeguard against pests that damage standing crops. A total of 1019 sticky traps were installed in the project, with an average of 9 traps per plot. Some farmers, during qualitative data collection, pointed out that stray animals and livestock did attack their farm causing destruction of their crops. Shock fencing was provided in some villages; while some villages still required the same.

4.1.4. TRAINED WEG MEMBERS

Indicators assessed – Beneficiaries who became WEG members; WEG members who received training; Recall of training topics.

No. of WEGs formed

17

% of WEG members among beneficiaries

75%

Keeping in focus the women beneficiaries in this FDP, the primary activity undertaken was formation of Women Enterprise Groups (WEG). A total of 17 WEGs were created as part of this FDP. Across all the project beneficiaries interviewed as part of the Impact Assessment survey, 75 percent women confirmed becoming member of a WEG

started under Project Sambal. Chili Processing Unit was the most popular type of WEG that women (75%) were involved in, followed by membership in Other Spice Processing Unit (13%). Membership in other WEG type included: Agri-clinic (7%), Tomato or other Vegetable Processing Unit (4%) and Milk Processing Unit (1%).

Women were motivated by members of implementing partner to join WEG groups for better benefits and enhanced income. Women had to submit Rs. 100 as membership fee for participation in WEG groups. It is to be noted that some women asked for a refund of their membership fee as they claimed to have not received any benefits under the project. After the completion of the project in 12 months, the WEGs in some villages have been dispersed while in some villages, women are still associated.

Certain women from each village were identified as BDSP/mobilizers to raise awareness on the work of Project Sambal and how it would be helpful to the beneficiaries. This was done to ensure increased participation of women to avail the benefits of the project. This also helped women gain the sense of financial empowerment to take initiatives. One of the WEG members pointed out that there were issues in ensuring participation of women. For participation, women were given Rs. 200-250 per day. Additionally, through this intervention women in some villages also formed SHGs. This was done to ensure that they do not have to take loans, when entrepreneurial activities would be initiated.

"They had chosen us for this work as BDSP (Business Development Service Providers). One woman from one village had to be chosen. So our work was to collect women in the village and talk to them about benefits of the project and participation. Also, we told women about the work and how can they move ahead and grow."

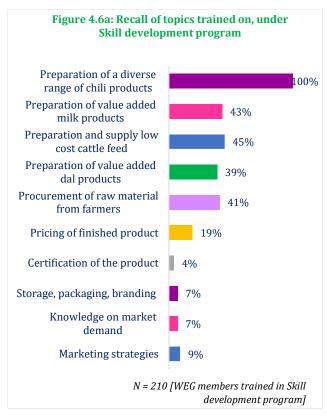
- VDC member, Fariya village

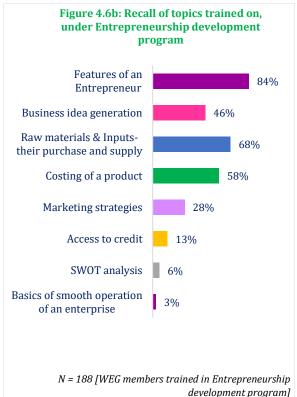
"Yes. In the beginning 2 to 3 women agreed to join but later they refused to join. I had to explain to them 4-5 times more and after that they joined."

- WEG Member, Goth Bihari village

As members of WEG, women were given training on value added products as part of the Skill development program. 72 percent of the WEG members confirmed having received this training. Further, training sessions were also taken around the theme of entrepreneurship and leadership skills as part of the Entrepreneurship development program. For this, 65 percent of the WEG members confirmed having received the training.







Data collected through top of the mind recall on the various topics on which training was received by WEG members, recall about skill training (Figure 4.6a) obtained on preparation of diverse range of chili products was 100 percent. Other training received for preparation of low-cost cattle feed (45%), milk products (43%) or dal products (39%) and procurement of raw material from farmers and its continued supply (41%) was agreed upon by two-fifth of the skill trained WEG members.

With respect to training received on entrepreneurship and leadership skills as part of the Entrepreneurship development program (Figure 4.6b), maximum recall was for the topic on features of an entrepreneur, by 84 percent WEG members trained under this program. Other popular topics that members recalled having got the training on, included Raw materials & Inputs-their purchase and supply (68%), costing of a product (58%) and business idea generation (46%).

Insights from qualitative data collection bring out that women in the project area were given training in making finished products of chilli such as pickles and dried powder. Training in making pickles of mangoes,

lemon, garlic, hog plum (amda), mixed vegetables; papads from lentils; turmeric powder were also imparted to women. In some villages, training of women in pickles was done for 2-5 days for 5 months. Trainers were brought from Udaipur to conduct the training; they were taught how to use the correct preservatives to ensure that the pickles last longer. A key informant pointed out that few women were reluctant towards attending trainings as they did not wish forgo their earning from daily wage labour work. Moreover, being busy with managing their household chores left them little time to commit to other business-related work. In addition to making pickles, women were also trained in packaging. Women in some villages expressed their concern that the trainings were only one day long and that no follow-up trainings were conducted after that.

"They (implementing partner) have given us the training on how to make chilly pickles for 2-3 days for 5 months............ They told us the preservative methods to store pickles for longer duration and told us how to sell pickles."

- VDC Member, Fariya village

"Whatever I learnt in the training was very good. They assured us that they will give raw material and get them sold further but it ended there itself. They didn't give any raw material.... After giving training they left. They stopped meeting and coming here. So, women left the organization.

- WEG Member, Goth Bihari village

4.1.5. PRODUCTION OF VALUE-ADDED CHILI PRODUCTS

Indicators assessed – Kinds of value-added chili products manufactured.

Chili pickles were made by the WEG groups. Additionally, seasonal pickles such as mangoes, hog plums (amda), lemons and mixed pickles were also made. Apart from pickles, initiatives of producing tomato chutney, sauce; guava jam and marmalade (murabba); animal fodder were taken. It is notable that the finished products made by the WEG under their brand name Chokaa, was AGMARK registered through FSSAI along with GST registration. Chilies were taken directly from the farmers.

Value-added products made by WEG members under the project

- Chili pickles
- Other seasonal pickles
- Tomato chutney
- · Tomato sauce
- Guava jam and marmalade

Manufacture of pickles and other products i.e. processing, packaging and bottling were done at a centralized level at the FPO to maintain the quality of the products. Women in some villages pointed out that they had decent storage facilities for raw materials and processed products. During the data collection for this assessment, attempt was made to gather information of the amount of production/ manufacture done at the WEG level and procurement done by the FPO. However, due to closure of project and absence of project staff who could provide the required details, this information could not be captured.

"Yes, we named our product Khud ka Chokha, which was later changed to Chokaa by deciding in a meeting among all the women."

- FPO Representative, Khandar

For WEG groups, machinery was also provided for making chilli powders and tomato chutney. Additionally the same grinding machines are used for removal of seeds during the manufacturing of guava jams; this was also provided through the project. Some WEG members pointed out that they did not receive raw materials for processing as they were told during the initiation of the project.

"They explained how to run those machineries, how to operate the machine, how to switch off the machine, how to grind etc."

- WEG Member, Sanwas village

4.1.6. FPO STRENGTHENING AND INCREASE IN FPO MEMBERSHIP

Indicators assessed - Membership in FPOs

Strengthening of FPO was another key activity undertaken under this FDP. The existing local FPO **Prawah Mahila Kisan Producer Company Ltd** which was started in 2020 in Khandar block, was further strengthened under this FDP by way of providing it support in adherence of all required statutory and legal compliances. Across all the project beneficiaries interviewed as part of the Impact Assessment survey, 81 percent respondents confirmed being a member of the FPO. The FPO

% of FPO members among beneficiaries

81%

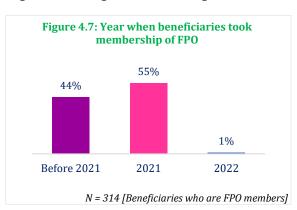
acted as a platform for supporting the work of the WEG members, not only in terms of infrastructural space where processing and packaging of chili products was undertaken through machinery and equipment so made available, but also in terms of providing forward market linkages.

The FPO has ensured to follow all the legal and statutory compliances. The legal requirement is to meet once in every quarter of the year (minimum 4 times a year). The FPO representative informed that board meetings were held every month; thus fulfilling and surpassing the requirement. It was also highlighted that other compliances such as appointment of auditor, filing of RoC, Income Tax Returns, GST returns, maintenance of registers etc.

Based on qualitative interviews with key informants, it was gathered that over 595 women are connected to the FPO Pravah Mahila Kisan Producer Company. Through the intervention of the project, the membership and connectivity of the FPO increased. Key Informants of the FPO noted that the field staff of the project helped in garnering more membership by visiting various villages and increasing awareness

about the benefits of the FPO. While many women were already connected to the FPO, the project helped in enrolling new women members.

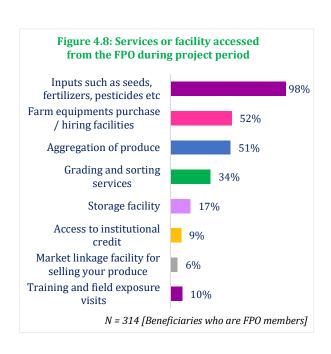
New memberships in the existing local FPO apparently peaked in 2021 (Figure 4.7), with 55 percent beneficiaries becoming its members in that period. Membership taken prior to 2021 was applicable for 44 percent farmers. The efforts and mobilization under Project Sambal during its project year of March 2021 – February 2022, therefore seem to have worked in favour of helping more people become shareholders of the FPO.



"We had field staff, so we went to the villages. We used to explain about the company and in that way people started joining."

- FPO Representative, Khandar

As shown in Figure 4.8, during the period of implementation of Project Sambal, beneficiaries primarily accessed the facility of obtaining inputs from it such as seeds, fertilizers, pesticides etc. This was reported by 98 percent of the beneficiaries. About half of the beneficiaries further confirmed access of services pertaining to farm equipment purchase/hire (52%) and aggregation of produce (51%). Grading and sorting services and storage facility were accessed by 34 percent and 17 percent of beneficiaries respectively. Access of services pertaining to market linkage for sale of produce was reported by only 6 percent beneficiaries.



4.1.7. BACKWARD MARKET LINKAGE FOR CHILI PRODUCERS

Indicators assessed – Channels of backward linkage.

That Community nursery and Agri-clinic have been of much support for the chili farmers is apparent from the data presented in the table alongside. As can be observed, prior to the FDP, farmers primarily procured their inputs from traders/ middlemen (36%), followed by authorized dealers (20%) and FPO (18%). With the establishment of the Community nursery and the Agri-Clinic under the FDP, the two units have been of primary importance for farmers, with 34 percent and 23 percent farmers respectively purchasing inputs from these after the implementation of the FDP.

Farmers were given ample support for good quality seeds and pesticides and fertilizers. This helped them in reducing the cost of input and increased the yield. However, qualitative data collected also revealed that access and benefits of

Table 4.1: Purchase of Chili related inputs before and after the intervention

Input purchased from	Before	After
Community nursery	5%	34%
Agri-clinic	6%	23%
FPO FPO	18%	8%
Traders/Middlemen	36%	14%
Authorized dealers	20%	20%
Government Agency/Dept	4%	1%
Others*	11%	0%
Did not cultivate chilli before	10%	

^{*} Note: Refers to sale to similar input support provided under another CSR partner of Udyogini prior to Project Sambal

N = 351 [Farmers cultivating chili with project support]

community nursery and agri-clinics could not be effectively brought into practice in all villages through the implementation period.

"We got chilly seeds from the NGO and then after that they gave us fertilizers and pesticides worth Rs. 12000."

-Chili farmer, Bajoli village

4.2. FINDINGS PERTAINING TO PROJECT OUTCOME LEVEL 2

Having discussed the immediate and first level outcome of the FDP, we now move towards analyses of the project outcomes at level 2 as outlined in Figure 2.1. These outcomes are the main project results or outcomes observed following the implementation of the FDP.

4.2.1. CHANGE IN INPUT COST INCURRED BY CHILI FARMERS

Indicators assessed – Change in various input cost incurred before and after the project; Benefits or support accessed; Farmers opinion on input rates, quality, quantity and receiving on time.

Data presented in Table 4.2 alongside shows, on an average, the various input cost incurred by chili farmers before and after the intervention. As observed, the decrease in input cost was seen notably in Transportation and marketing (12%), Pesticide/ Insecticide (8%), Seeds (6%), Storage /godown (5%), Fertilizers (1%) and Rent/ Hire of machinery (1%). These are also the very inputs for which support was provided under Project Sambal, and hence shows a clear impact of the project on reduction of these input costs. The procurement of produce by the WEG/ FPO locally or arranging of transportation for farmers to go to the market in effect meant a reduction in their cost of transportation. Training given to farmers on making their own pesticides or selling it to them at the right price as against commercial

Table 4.2: Average input cost incurred in chili cultivation before and after the intervention

Input	Before	After	Change
Seeds	Rs. 6749	Rs. 6363	-6%
Fertilizers	Rs. 4920	Rs. 4861	-1%
Manures	Rs. 5819	Rs. 6103	5%
Pesticide/ Insecticide	Rs. 10937	Rs. 10110	-8%
Irrigation	Rs. 5340	Rs. 5701	7%
Power/ Electricity	Rs. 7915	Rs. 7896	0%
Labour	Rs. 8807	Rs. 9548	8%
Rent/ Hire of machinery	Rs. 2237	Rs. 2204	-1%
Transportation and marketing	Rs. 2820	Rs. 2474	-12%
Storage/ Godown	Rs. 1085	Rs. 1033	-5%
Total	Rs. 56946	Rs. 56651	-1%

N = 351 [Farmers cultivating chili with project support]

shops helped them to reduce this cost as well. Provision of good quality seeds was another important support provided under the FDP leading to a 6 percent decrease in seed cost for farmers. Support with respect to storage facility and fertilizers was helped in decreasing farmers' costs so incurred before and after the project.

On the other hand, increase in input cost before and after the project intervention was observed with respect to labour (8%), irrigation (7%) and manures (5%). This increase in costs can be explained by the 33 percent increase in amount of land of brought under chili cultivation (as seen in Section 4.1.2), which thereby required use of more labour, irrigation (including electricity/diesel cost; maintenance cost & water purchase cost) and manures. The drip irrigation (as seen in Section 4.1.3) though installed for 50 percent of the chili farmers was likely more useful in helping reduce wastage of water and enhancing betterment of yield as compared to impacting a reduction in irrigation cost for its beneficiaries. The rest 50 percent did not have any irrigation support as such.

Overall, the change in total input cost before and after the project showed a 1 percent decrease, from Rs. 56,946/- before the project to Rs. 56,651/- after the project.

Insights from qualitative data collection suggest that farmers were provided with chili seeds from the implementing partner which were at subsidized rates of 10%. The seeds were provided at an instalment of 3 times. In some villages, seeds of Mahi Commander were distributed which proved to be effective and produced good yield. They were also provided pesticides and fertilizers for the usage in fields. Farmers

received tools and machinery for cultivation on time, thus reducing their input cost. A few farmers were provided with shock machines running on solar energy; however, some farmers also had to procure it through purchasing the same for around Rs. 5,000. This was installed to ensure protection against damage done by stray animals and livestock. In some villages, drip irrigation system was also installed for the practice of optimal irrigation methods.

"Earlier we used to irrigate the fields, if in a day the electricity comes for 6 hours only, then water would not get filled completely in the fields, and now because of drip we have to open the motor for 2 hours only. Also, only one person can come to switch it on and after 2 hour they can come to switch it off. Before, that 1 person would have to stand there the whole day, it saves our time and labour"

-WEG member, Sanwas village

Figure 4.9: Farmers feedback on input support received from project



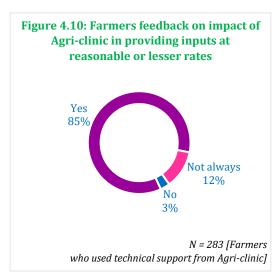
N = 351 [Farmers cultivating chili after project support]

With respect to farmers' feedback on the input support received under the FDP, majority farmers expressed favourable opinion. Considering the extent to which quality of inputs (Seed, Fertilizers, Pesticides, etc) purchased by farmers improved after support from the project intervention (Figure 4.9a), a cumulative of over 8 in 10 answered in the affirmative – 40 percent agreeing the improvement to be of considerable extent and 48 percent reporting it to be of some extent. For another 11 percent, there was no such improvement in quality of inputs which remained the same as before.

In terms of having received inputs in sufficient quantity as compared to earlier (Figure 4.9b), 70 percent chili farmers responded in agreement, while for 22 percent the case was not always true. For 8 percent farmers, inputs were not received in sufficient quantity.

Moreover, 68 percent chili farmers confirmed that they did receive inputs on time as compared to what it was earlier (Figure 4.9c). For another 22 percent it was not always that they got inputs timely as required, while for 10 percent timely input support was not there.

For farmers who specifically reported having accessed the Agri-clinic for technical and input support, 85 percent reported that they got the inputs at reasonable or lesser rates as compared to the before intervention period. Another 12 percent stated that they did not always get the



inputs at favourable rates while 3 percent gave the response in negative.

4.2.2. ENHANCED PRODUCTION

Indicators assessed – Change in amount of chili production and of vegetables

The production of chili in the project area as a result of the intervention led to a significant increase in the yield with total amount of cultivation increasing from 16,549 quintal before the intervention to 24,182 quintal after, an increase of 46 percent.

Like-wise, a 36 percent increase in the amount of vegetables produced, further to support & benefits received from the FDP,

Table 4.3: Total production of chili and vegetables before and after the intervention (in quintal)

Production	Before	After	Change
Total Production of chili	16,549	24,182	46%
Total Production of vegetables	1,601	2,185	36%

N = 351 [Farmers cultivating chili after project support]; N = 55 [Farmers cultivating vegetables]

was reported. Total production of vegetables hence increased from 1601 quintal prior to the project to 2185 quintal after it.

"I will tell the truth, that after I received pesticides and fertilizers through the project last year, I cultivated the produce worth Rs. 3.5 lakh, and this year I only cultivated produce worth Rs. 60,000-Rs.70,000."

-Chilli Farmer, Bajoli village

4.2.3.PRODUCERS' ACCESS TO MARKET, REDUCED DEPENDENCE ON MIDDLEMEN AND HIGHER NEGOTIATING POWER THROUGH COLLECTIVE SELLING

Indicators assessed – Forward market linkage for chili farmers; Amount of sale of chili and vegetables; Market channels through FPO; Extent of dependence on middlemen; producers negotiating power

In terms of sale of their produce, chili farmers primarily used to sell their produce to traders/ middlemen prior to the project with 68 percent farmers confirming to the same. With the initiation of Project Sambal,

while a 7- percentage point decrease was seen in sale of produce to middlemen, majority farmers (61%) continued to sell their produce to them. However, additional marketing support created under the FDP through WEG (24%) and FPO (11%) also served as the second and third most common marketing channel, indicating an increase in proportion of farmers selling through these as compared to earlier.

As explained by farmers during qualitative discussion, prior to the intervention, crops were sold through middlemen and agents who picked up the produce from farmers' home itself. This also inhibited farmers from getting optimum price for their produce. Additionally, they also received their payments only after 10 to 30 days. After the intervention of the

Table 4.4: Sale of chili produce before and after the intervention

Sale of produce to	Before	After
Women Enterprise Group (WEG)	15%*	24%
FPO	7%	11%
Retail marketing by self	3%	3%
Traders/Middlemen	68%	61%
APMC/Regular Market	2%	1%
Govt. on MSP	1%	<1%
Did not cultivate chili before	3%	

^{*} Note: Refers to sale to similar support group created under another CSR partner of Udyogini prior to Project Sambal

N = 351 [Farmers cultivating chili with project support]

project, the dependence on middlemen decreased as the crops were sold through the implementing partner/ FPO. Farmers were also able to get the optimal price by sale through the FPO, more than what the middlemen would pay; thus ensuring increased income for farmers. They were equipped with better negotiating skills and knowledge about market rates which ensured they were able to sell their produce at the optimal market rate with good quantities. Some farmers were engaged in marketing by arranging transportation by themselves. Farmers from Bajoli village added that they had sold their produce at Khandar market by arranging transportation by self, thus costing them an average of Rs. 4,000. This was a challenge for them and had also increased the input cost.

Additionally, farmers took their produce to Jaipur for sale through the transportation made available through the FPO; the collection and aggregation would happen at the village level thus saving the transportation cost. Direct retail marketing was also done through the FPO. However, it was also pointed out by farmers that the implementing partner could not buy the entire produce of the farmers; thus they had to rely on middlemen as well. Additionally, sale through implementing partner was done initially; though, this was discontinued later during the project. This led to the farmers relying on middlemen again.

"The work has been done sir for reducing dependence on middlemen. Farmers were themselves capacitated to arrange transportation for themselves for sale at the market. So there is no need for middlemen who would keep a share of the money for themselves and also buy the produce at a lower rate. Since farmers used to directly go to the market through the arranged vehicle, like if they were sent to Jaipur Mandi, they would directly go there and get the money.

- FPO representative, Khandar

Support in marketing so provided by the FDP helped in the increase in sales of chili farmers, from a total sale of 15,176 quintals before the project to 22,459 quintals after the intervention. This marked a 48 percent increase in sale amount as compared to earlier.

Increase in sales due to support from the FDP was also reported with respect to vegetables grown in the area. This increase

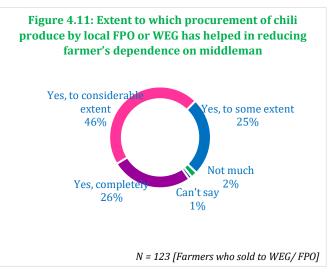
was 40 percent over time, from 1308 quintals to 1826 quintals.

Table 4.5: Total Sale of chili and vegetables before and after the intervention (in quintal)

Sale	Before	After	Change
Amount of Sale of chili	15,176	22,459	48%
Amount of Sale of vegetables	1,308	1,826	40%

N = 351 [Farmers cultivating chili with project support]; N = 55 [Farmers cultivating vegetables]

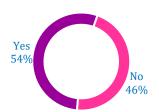
As gathered from the previous paragraphs, it is apparent that while the farmers did get support through the FDP towards sale of their produce, the marketing related challenges did at times push the beneficiaries to take recourse to sale of their produce through middlemen. Their dependence on middlemen though was not eliminated but was surely reduced. In this regard, almost all farmers who sold their produce to WEG/ FPO were helped in varying degrees (Figure 4.11), with 26 percent reporting reduction in their dependence on middlemen completely and for 46 percent to a considerable extent. For another 25 percent this dependence reduced to some extent. It was only for 2 percent farmers that reduction in dependence

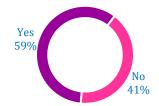


on middlemen was not much, while 1 percent responded as can't say.

Further on, for farmers who continued to sell their produce to middlemen both before and after the intervention, opinion was sought whether their dependence on middlemen decreased due to sale of produce to local FPO or WEG, as compared to earlier. Here, 54 percent beneficiaries responded in the affirmative (Figure 4.12a). Likewise, whether ability to negotiate with middlemen has increased as compared to earlier, given association with the local FPO or WEG (Figure 4.12b), 59 percent beneficiaries agreed to the same.

Figure 4.12: Opinion of chili farmers' who sell to middlemen on extent of dependence on middlemen and negotiating power with them





a) Whether dependence on middlemen decreased due to sale of produce to local FPO or WEG, as compared to earlier

b) Whether ability to negotiate with middlemen has increased as compared to earlier, given association with the local FPO or WEG

N = 182 [Farmers who sold to traders/ middlemen both before and after the project]

"When Udyogini bought 2-3 trucks of the produce and mediators got to know about this; then they also used to buy it in good amount"

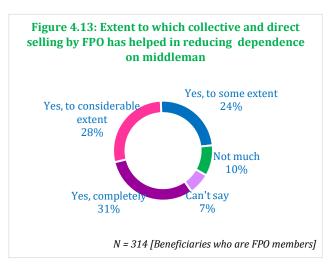
-WEG Member, Sanwas village

"This has happened that we can go to the market and tell our rates freely to the seller. We can say that this is the rate at which NGO is buying and so we can say our rate there."

-Chilli farmer, Bajoli village

Overall, a similar question asked to all beneficiaries who are FPO members (Figure 4.13) suggests that, for them, collective and direct selling by FPO helped in reducing their dependence on middleman completely for 31 percent, to a considerable extent for 28 percent and to some extent for 24 percent. For 10 percent FPO members that reduction in dependence on middlemen was not much, while 7 percent could not provide a decisive response.

Through the qualitative analysis, it can be seen that the objective of reducing the dependence on middlemen was fulfilled to an extent. Before the intervention, farmers were relying on middlemen



for sale of crop produce as they would pick up the produce from the village itself, saving transportation cost. As the role of the implementing partner increased during the intervention of the project, the farmers were provided transportation through the FPO for sale at local markets. At the beginning of the project intervention, the implementing partners were purchasing the produce. Narratives of farmers highlight that

this has ensured a correction in the price; middlemen also pay them the fair amount. However, towards the end of the project, they started to not purchase from them thus revitalizing the role of middlemen. The trend for reliance on middlemen for sale has returned; however, the correction in price has ensured that the farmers have a better sense of the market rates and equipped them with a better negotiating power.

With respect to sale of value-added products made by the WEG members, data so collected suggest that while sale was channelized through the FPO, this could not become the major marketing channel for the WEG members. An understanding developed from the quantitative data collected from WEG members suggests that not all of the products made by them was procured by the FPO. That is, according to WEG members across villages (N=291), about one-third (36%) agreed that all of their produce was procured by the FPO while for the rest two-third (64%) it was not. Given that a concrete estimate of the amount of procurement made by the FPO could not be gathered from any FPO personnel, either because personnel directly associated with Project Sambal were no longer available in the location or those that were could not provide the required details, the related information captured from the beneficiaries does provide us a sense of the situation. Similarly, beneficiaries who were WEG members shared that sale of products made by their WEG was mainly done through traders/ middlemen (68%), followed by sale to Wholesaler (42%), FPO (36%) and Own counter or own market platform (16%).

Qualitative data further highlight that products made by WEG were sold by the FPO at the nearby markets at Madhavpur and Gangapur. WEGs also sold daliya, millets and coriander powder through the FPOs. Qualitative findings also highlighted the anecdote of a woman who sold pickles of lemon worth Rs. 1000. VDC and SHG have also assisted the FPO in marketing. Women in SHGs bought the products from FPOs and sold them at retail. Farmers also sold sesame and mustard seeds through the FPO. However, women in some villages, pointed out a gap in sale of pickles and other finished products as it was not initiated in their villages, as shared during the FGDs conducted. This denotes a gap in the market linkages and ease of sale after the manufacture of finished products. Finished products such as pickles were sometimes also used for self-consumption by many women and households. Two women also took a self-initiative to sell their product by setting up a stall but had to be shut down in 15 days owing to minimal sale. A stakeholder pointed out the lack in capital in the FPO to conduct marketing activities; the need for specific allotted persons for conducting marketing activities was suggested.

In the KIIs done with personnel from the implementing partner and FPO, key challenges faced in marketing were pointed out. To begin with, they had limited knowledge with respect to the demand and the quality requirement of the value-added products. To tackle this, FPO members surveyed local brands and their approach towards packaging, branding and marketing. This helped them get insights on how to penetrate the retail market and also helped them improve their products. Additionally, they also faced tough competition from within the local market. Given that the WEG production volume was lower, their price for products was also more as compared to other similar products in the market. Given the rural/small town setting of the markets nearby, marketing avenues were neither much nor were the marketing system efficient enough. It was also pointed out during the interview that the limited range of their products also posed a challenge. A large variety of product range is required to be able to sell adequately through display in the market and other strategies, but given that the project was centred around only a particular product range, there were difficulties in expanding the sales as desired. Further, it was pointed out that one year is a very short time to establish a value chain given that that amount of time is required to make linkages and networking to form WEGs. At least 2-3 years are hence required for the value chain to be implemented effectively.

"We used to sell at the stores only because the volume was less so we have sold in Madhavpur and also to some stores of local market because of the less quantity and volume..... our volume and the product range were very less....... See, product development is the first stage and in first year we were at product development place. In the second- and third-year product marketing and selling takes place so at this time only the selling and marketing will takes place but everything was done at first stage only that's why we faced problem. Also, since our project lasted for one year only, the starting 6 months passed away in managing and coordinating with people for the project, so that is why a lot of problem was faced in marketing."

- Implementing partner representative, Khandar

"I learned to make pickles, then made them and sold the lemon pickles of Rs.1000."

-VDC Member, Pharia

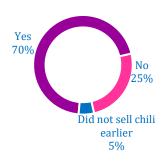
"A WEG meeting was conducted once regarding marketing, but no other meeting was held after that. So I sell where I used to sell earlier."

- WEG member, Bajori village

4.2.4. FAIR PRICE FOR PRODUCE

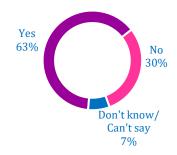
Given the FDP support to its beneficiaries through marketing channels and appropriate knowledge of the market and prices, an important expected outcome was producers' ability to get a fair price for their produce. For the chili farmers who received support under Project Sambal, 70 percent beneficiaries responded that they were able to get a fair price while 25 percent did not (Figure 4.13a). With respect to beneficiaries who were FPO members, those agreeing to getting a fair price for their produce/ products was 63 percent while another 30 percent stated that they did not get a fair price (Figure 4.13b).

Figure 4.14: Beneficiaries opinion on ability to get fair price for produce



a) Whether chili farmers able to get fair price for produce, as compared to earlier

N = 351 [Farmers cultivating chili with project support]



b) Whether FPO members able to get fair price for produce, as compared to earlier

N = 314 [Beneficiaries who are FPO members]

During the duration of the project, farmers were selling through the implementing partner/ FPO and hence were able to get a fair price for their crop produce even for the smallest amount of sale. Fair price was paid to every last 100 gms available from the produce, as pointed out by one of the chilli cultivation farmers. This has helped the farmers realise the correct price for the produce thus enabling them with the ability to negotiate at the markets. A few farmers also narrated that due to the correct prices offered by the implementing partner, there was an impact of correction of price with middlemen as well. At times, however, the impact of the COVID pandemic was also seen in the prices that the farmers received for the produce. Owing to situation during that time, farmers were unable get the optimal price for the produce, despite the good quality of produce.

"One good thing is that people of the NGO were great and our transport cost got saved. The cost for produce was paid fairly; at one quintal if it is was even 100g more, then they gave us money for that extra 100g. While the brokers cut money of 1 kg on 50kg."

-Chili farmer, Bajoli village

4.2.5. ENHANCED INCOME

An analysis of the change in income experienced by the beneficiaries as a result of the FDP shows a marked increase in their income before and after the project. Income earned through chili cultivation showed a 57 percent increase, with beneficiaries earning from Rs. 87,619/- from chili before the FDP to Rs. 1,37,841/- after receiving support from the FDP.

Increase in income from sale of vegetables was 35 percent.

Overall increase in agricultural income of farmers saw a 55 percent increase from Rs. 1,03,357/- from before the FDP to Rs. 1,60,498/- after.

Through the WEGs created under this project, the average earnings of its members was Rs. 21,852/-.

A 43 percent increase in overall household income of project beneficiaries was reported, from Rs. 1,50,404/- from before the FDP to Rs. 2,15,422/- after receiving support from the FDP.

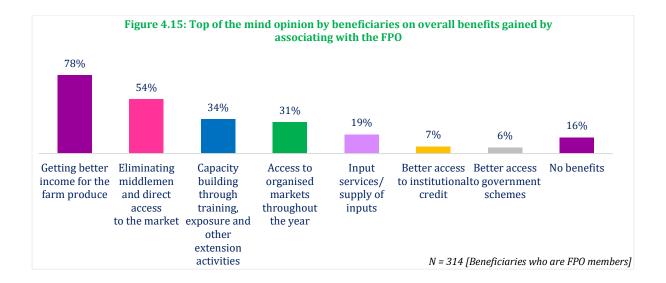
Sale of produce to **Before** After Change Rs. 87,619 Rs. 1,37,841 57% Income through chili cultivation Income through vegetable cultivation Rs. 41,936 Rs. 56,764 35% Overall Agricultural Income Rs. 1,03,357 Rs. 1.60.498 55% Rs. 21,852 Income through WEG Household Income Rs. 1,50,404 Rs. 2,15,422 43%

Table 4.6: Income earned before and after the intervention

N = 388 [All beneficiaries]

From the qualitative data collected, it was gathered that after the intervention of the project, farmers in some villages have reported an increased household income, ten times their previous incomes. However, members from some villages reported no enhanced income after the intervention of the project. They claimed this as they did not get the prior committed benefits from the projects and had to rely on middlemen for the sale of their produce.

Overall, a quick birds-eye view of the overall benefit received from this project can be gauged from the top of the mind opinion of the FPO members, among whom 78 percent stated that the FPO was able to help them get a better price of their (Figure 4.14). This was followed by the benefit reported by 54 percent FPO members in terms of elimination or reduction in dependence on middlemen and getting direct access to the market. These, in effect were the major program outcomes envisaged at the initiation of the FDP. Another one-third also stated that they were benefitted from capacity building through training, exposure and other extension services (34%) and access to organized markets throughout the year (31%).



4.3. FINDINGS PERTAINING TO IMPACT (LONG-TERM)

This section analyses the project impact as outlined in Figure 2.1. These impacts long-terms ultimate impacts as a result of implementation of the FDP.

4.3.1. CAPACITATED FARMERS AND WOMEN

Farmers feel capacitated and boosted in confidence to follow the cultivation methods taught during the intervention of the project to increase production. Through the training provided, farmers are better equipped with the knowledge to ensure better produce. After the intervention of the project, farmers are also better capacitated at negotiating higher prices for their crop produce in the market, especially with middlemen.

Through the project intervention, women have been capacitated to run enterprises through trainings imparted on the manufacture of chili based and other value added products. Apart from manufacture, women have also been equipped with knowledge on book-keeping and maintenance of ledgers. Through collectivization, women were also able to form SHGs to finance their entrepreneurial endeavors and would not have to take any loans. Women's involvement in the project has ensured reclamation of their agency. This has motivated women to participate more at collectives and empowered them to start enterprises, though it is only in some villages, where women have continued to prepare chili pickles even after project closure.

Taken together, the knowledge and self-confidence that the farmers and women learned and gained during this project can go a long way in helping them use their capacities for better livelihood opportunities and practices in future.

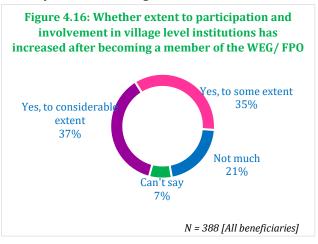
4.3.2. EMPOWERMENT OF WOMEN THROUGH SOCIAL PARTICIPATION

In the project area, women have historically been oppressed and do not have the proper access to resources. The project area is a largely patriarchal society where women do not have the agency to go out and participate freely in the society. After the intervention of the project and women's subsequent participation in it has led to their increased involvement and the agency to voice their opinions in relevant spaces. As shown in Figure 4.14, on being asked the extent to which women's participation and involvement in village level institutions has increased after becoming a member of the WEG/ FPO, 37 percent responded it be to a considerable extent and for 35 percent to some extent. Together this means that close to three-

fourth women feel that they have been positively impacted in terms of their participation and involvement in public spheres.

The intervention of the project has brought positive changes in women's agency. Women in groups proudly narrated a change in their positionality in the society; as they recounted changes in their communication.

After the intervention of the project, women claimed feeling empowered enough to make decisions. It is also notable that women felt a positive change in how they perceive their identity. This can also be noted as an impact of financial independence. It is imperative to highlight that economic independence is necessary to gain empowerment in other subsequent arenas in their lives. The intervention of the project and its subsequent impact on enhancing livelihood and economic opportunities for women has thus empowered them in other spheres as well. However, the effect of this was seen to be limited to only a few villages. Women also seemed much more confident and eager to earn money for the betterment of their income.



"As you know that patriarchy hierarchy is being followed and women are not allowed to even step out of their house. So there was problem to call women to the meetings. When our Udyogini NGO started working there for many years then women started feeling good and develops confidence and interest to do work to earn money. So for me that is the most important outcome for me in this project."

- Implementing partner representative, Khandar

"Here's the thing, women are not allowed to go out first. The biggest thing is that I have got a different identity of working, I have learnt how to work and the women got a chance to get out, so there has been an increase in income."

- FPO Leader, Khandar block

"We used to hesitate before. No, we don't hesitate now."

-WEG Member, Sanwas village



LOANS, FINANCIAL INCLUSION & GOVERNMENT SCHEMES

The present chapter presents findings pertaining to data collected on loans taken by beneficiaries households as also the various other insurances and government schemes availed.

5.1. LOANS

Data collected from the beneficiaries suggests that the loan uptake of households increased by 6 percentage points from 20 percent before the start of Project Sambal in March 2021, to 26 percent after the project started till the time of data collected for this study (Table 5.1). While the average number of loans taken by the household remained the same, at one, the average principal loan amount increased by about 11 percent, from Rs. 1,03,506/- to Rs. 1,14,467/-.

Table 5.1: Household loans taken over time, sources and purpose

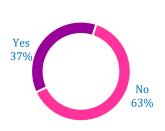
About Loans	Before	After
Proportion of HHs which too loan	20%	26%
Total no. of loans taken in project area by HHs	74	98
Average no. of loans taken	1	1
Average principal loan amount	Rs. 1,03,506/-	Rs. 1,14,467/-
Source of biggest loan taken by HH – Top 3	Bank - 54% KCC - 29% Cooperative society - 14%	Bank - 52% KCC - 41% Cooperative society – 3%
Purpose of biggest loan taken - Top 2 reasons	Agriculture - 92% Repayment of old debt – 3%	Agriculture - 92% Repayment of old debt – 5%

N = 388 [All beneficiaries]

Banks were the primary source from which the households availed their loan both before and after the FDP. However, taking loans through Kisan Credit Card showed an increase of 12-percentage point in the post project initiation period with a total of 41 percent beneficiaries reporting to have taken loan through it. On the other hand, loans taken from Cooperative society saw a similar decrease in the post project initiation period. It can be inferred that the support under Project Sambal provided the likely impetus for taking more loans to enable expansion of more chili cultivation and sale.

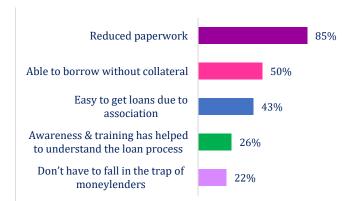
Moreover, on being asked whether taking loans from institutional sources like Banks, Cooperative society, Micro Finance Institution (MFI) became easier after being associated with WEG/ FPO (Figure 5.1), 37 percent beneficiaries who took loans both before and after Project Sambal responded in the affirmative. Among these, the reasons associated with their positive response included reduced paperwork (85%), ability to borrow without collateral (50%), Easy to get loans due to association with WEG/ FPO (43%), Awareness & training through WEG/FPO has helped to understand the loan process (26%) and Not having to fall in the trap of moneylenders and pay very high interest rates (22%).

Figure 5.1: Beneficiaries opinion on loans being easier to take due to association with WEG/FPO



a) Whether taking loans from institutional sources became easier after being associated with WEG/FPO

N = 333 [Beneficiaries who took loans both before and after Project Sambal]



b) Reasons for how taking loans became easier after being associated with WEG/ FPO

N = 123 [Beneficiaries who reported taking loans being easier after Project Sambal]

5.2. INSURANCES

With respect to the various insurances that beneficiaries were aware of and had also availed, life (58%) and health insurances (56%) were the primary insurance. For these, about three-fourth beneficiaries agreed to be aware of these insurances, with about a third of them even having availed it. Crop insurance followed next with 45 percent beneficiaries expressing awareness and 30 percent its availing. Awareness of livestock insurance and micro-enterprise insurance was further lower, at 27 percent and 16 percent respectively.

Table 5.2: Awareness & Availing of different insurances and loans by beneficiary HHs

Type of Insurance	Awareness	If aware, then availed or not
Life Insurance	58%	31%
Health Insurance	56%	33%
Crop Insurance	45%	30%
Livestock Insurance	27%	20%
Micro-Enterprise Insurance	16%	28%

N = 388 [All beneficiaries]

5.3. ACCESS TO GOVERNMENT SCHEMES

On being asked about the key government schemes that beneficiaries would have benefitted from in the last 2 years, majority, at 79 percent, mentioned about the LPG cylinder related PM Ujjwala scheme. The next scheme which beneficiaries benefitted from was reported to be the PM Kissan Samman Nidhi scheme (46%), followed by the PM Saubhagya Yojana, (36%) alternatively known as the Pradhan Mantri Sahaj Bijli Har Ghar Yojana. Benefits availed from health scheme followed next in line (Ayushman Bharat - 28%; State Health Scheme – 25%). Fewer beneficiaries reported availing of the PM Awas Yojana (20%) and CM Awas Yojana (8%).

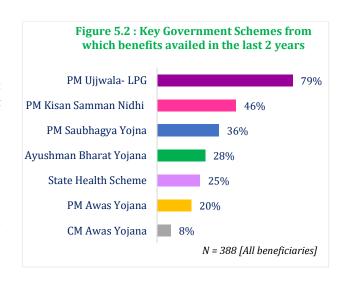
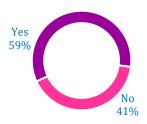
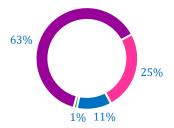


Figure 5.3: Beneficiaries opinion on access to government schemes due to association with WEG/FPO





N = 388 [All beneficiaries]



- Increase in awareness
- Gained confidence in applying & availing the benefits
- Got support from WEG/ FPO in case of any concern in receiving benefit
- Able to voice our concerns through village institutions

b) Reasons for how accessing government schemes became easier after being associated with WEG/FPO

N = 229 [Beneficiaries who reported benefitting more from government schemes]

Moreover, on being asked whether beneficiaries felt that they were able to benefit more from government schemes after being associated with WEG/ FPO (Figure 5.3), 59 percent beneficiaries responded in the affirmative. Among these, the top reason associated with their positive response included Increase in awareness due to association with WEG/FPO (63%). This was followed by other reasons such as Having gained confidence in applying & availing the benefits (25%); Got support from WEG/ FPO in case of any concern in receiving benefit (11%) and Able to voice their concerns through village institutions (1%).



EFFECTIVENESS, EFFICIENCY AND SUSTAINABILITY OF THE FDP

The present chapter discusses upon the program interventions against parameters of effectiveness, efficacy and sustainability.

6.1. EFFECTIVENESS

The FDP worked effectively to train farmers on agricultural knowledge and information; as narratives of trainings being easy to learn were reported. Additionally, the project staff were also given training on improved chili cultivation by subject matter experts to ensure hand-holding of the farmers throughout the duration of the project. Establishment of structures such as agri-clinic and community nursery added to the effectiveness of the project implementation through providing backward market linkage support to chili cultivators primarily for seeds, fertilizers and pesticides. The establishment of 17 WEGs in a span of 1-year was commendable. Though opinion on its effective working is at variance. The trainings given on manufacturing and entrepreneurial components were given to WEGs; however, its uniform provision across the beneficiaries was found wanting. Owing to the remote location of the project in a rural area, difficulty in finding & retaining adept human resources to execute the activities of the project in an adequate manner was expressed; therefore hindering the effective operation of the project. The effectiveness of the implementation could be seen diluted towards the end, as the support to beneficiaries was reduced.

FPO was envisaged to be the most crucial vehicle through which the farmers and WEG were to be supported, especially for marketing. Its strengthening was an essential objective for the effective functioning of the programme. This was achieved through legal and statutory compliances and working towards increasing membership of FPO during the project period. To accentuate forward marketing linkages, networking for partnership and collaborations was done through VDC and SHGs to some extent. Business Development Service Providers (BDSPs) were identified for working towards channelizing an effective link between beneficiaries and the FPO, by encouraging and motivating producers to join the project. Sale of produce was envisaged through FPO to strengthen access to market through collectivization. This did play out sufficiently well especially for farmers than for WEGs, with producers receiving a fair price as also a knowledge of the market and its systems. This led to reduced dependence on middlemen along with better negotiating power. However, FPO could not procure all the products which led to farmer's dependence on the market to be re-established. Establishing of channels for sale of value-added products was difficult and could not be effectively arranged as envisaged owing to numerous challenges of stiff market competition, limited product range and more product price than that for other similar products in market due to less volume of production.

6.2. EFFICIENCY

In terms of efficiency, the project and its activities have moderately achieved the objectives of the project through ensuring increased participation of women, capacitated farmers and women running enterprises, provision of farming inputs to beneficiaries and establishment of better forward market linkages. Funds for the project were deemed to be adequate. Owing to the efficient training and resources provided to farmers, there has been increased production and improved quality of produce; thus, subsequently causing an increase in income, for some farmers. The provision of machinery for producing and packaging value-added products further added to efficient manufacturing processes. In terms of forward market linkages, farmers have been efficiently trained in understanding the intricacies of the market with the help of collectivization through FPO causing reduced dependence of middlemen to an extent and better negotiating power.

Towards the end of the project, there was discontinued support from the implementing partner highlighting an inefficient exit strategy which left the beneficiaries in uncertainties of further support.

The efficiency of the project proved to be impacted by the short duration of the project. Beneficiaries claimed that it took them time to grasp the benefits of the project; hence, they were reluctant to join the project initially. It was also highlighted that one year is a small time to successfully initiate and run a new value chain with a new product.

6.3. SUSTAINABILITY OF FPO IN THE LONG RUN, WHICH IN TURN CAN SUPPORT WOMEN, THROUGH COLLECTIVE SELLING, PROCESSING AND MARKETING:

The sustainability of the project can be gauged through the functioning of the FPO and the WEGs to continue work after the conclusion of the project. The regular trainings that have been conducted have ensured increased knowledge for farmers and WEG members; thus ensuring their enhanced capacitation. It is to be noted that in some villages, WEGs are still functional while majority of the groups have been dispersed; women have also got their membership fee refunded to forgo their memberships. Some women are still involved in the manufacture of value-added products; the training have helped them in gaining the knowledge that they received, additionally, they have also retained the machinery that was provided to them.

Farmers' narratives of whether their involvement in the FPO shall be continued are of variance; as some farmers are eager to continue their involvement while the rest did not find it beneficial. Farmer's disinterest in pursuing their membership can be deduced from the quantitative questioning wherein 37 percent (N=115) said they may think of giving up their FPO membership in future. Further probing brought out the reasons as Village being far from FPO so not be able to access its service regularly (46%); Not satisfied with FPO's functioning (23%), Not able to get benefits as informed earlier (23%) and Getting better price for their produce elsewhere (6%). Currently, the FPO is functioning in a no profit-no loss mode; issues of managing the salaries of 3 persons has been listed as a challenge for the sustainability of the FPO.

The short duration of the project could not ensure maximum participation of people; it was also limited in terms of establishing a value chain. After the conclusion of the project, farmers have resorted to sale of produce through middlemen as the market linkages established were not sustainable. However, through FPOs and collectivisation farmers have gained higher negotiating power for their produce. Farmers have better negotiating power to navigate the market.

The intervention of the project has enabled women to negotiate with strong patriarchal structures present. Owing to increased participation of women, they feel confident in voicing their opinions. Women were motivated to understand the importance of economic empowerment and are eager towards making positive changes towards it. Women are capacitated to form collectives for financial assistance and loans.



SUMMARY AND CONCLUSION

The FDP P0383 with *Udyogini* as the implementing local NGO partner was designed with the key goal to improve the lives of 500 women farmers through improving their produces through collective selling, processing and marketing. The program also aimed to register producer groups to become part of the Farmer Producer Organization (FPO) to help gain direct benefit from the produces and reduce the involvement of middlemen for selling of produces. The project was named as *Project Sambal* with the meaning to work towards building confidence for women farmers to access markets.

Having analysed the data collected as part of the Impact Assessment in the previous chapter, a summary of this analysis is given in the table below against the key outcomes achieved.

Table 7.1: Summary of Project Outcomes achieved

Table 7.1: Summary of Project Outcomes achieved			
Theme	Outcome achieved		
	Quantitative	Qualitative	
Outcome Level 1			
Farmers receiving support under key activities	Gained knowledge on Package of Practices of chili crop management – 81%	A good proportion of farmers received support from the project primary among them being knowledge of better	
	Technical guidance and input procurement from Agri-clinic – 81%	chili cultivation practices through training and awareness along with	
	Received quality Chili saplings from the community nursery – 79%	good quality seeds and other technical support especially in the initial duration of the project.	
	Exposure visits and training on scientific practices of chili farming – 71%	duration of the project.	
	Installation of Drip/ Sprinkler irrigation system – 50%		
Engagement in chili and vegetable cultivation	Overall farmers engaging in chili cultivation in the project area – 91%		
	 New farmers started chili cultivation after project support – 9% 	The major outcome of the project was seen in increased area of land being brought under chili cultivation. Quality input support and technical guidance through Agri-clinic especially in the form of seeds, fertilizers and pesticides, served as a key contributor to this.	
	 Increase in total land size under chili cultivation – 33% 		
	Vegetable farmers (N=55) who sourced saplings from nursery – 73%		
	Increase in total land size under vegetable cultivation – 17%	served as a key contributor to this.	
Adoption of improved chili cultivation methods	Among farmers who had had training, knowledge gain or exposure visits, about 9 in 10 of them recalled awareness of different improved practices and even its adoption on their own farmland.	Training and awareness provided to farmers was well implemented by most of them on their own land and benefits in terms of higher yield with lesser input use was realized.	
	 Among farmers who had drip irrigation installed (N=175], reduced wastage of water was identified as the most common benefit as realized by 82% farmers. 	Drip irrigation could be installed for only half the beneficiaries which meant that the other half were unable to reap its benefits.	

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Trained WEG members	 No. of WEGs formed - 17 Proportion of WEG members among beneficiaries who were interviewed - 75% WEG members who received training on value added products - 72% WEG members who received training on entrepreneurship & leadership skills - 65% 	Majority women beneficiaries confirmed having received training as WEG members, primarily with respect to preparation of diverse range of chili products, their packaging and bottling. The women were appreciative of the knowledge gained by them through this training. However, there were few other women who shared that training was conducted only for a day or two with no follow-up later. There were others too who stated that even when they received the complete training, they were not provided with raw material for production as initially assured.
Production of value-added chili products		Value-added products made by WEG members included: Chili pickles; Other seasonal pickles such as mangoes, hog plums (amda), lemons and mixed pickles; Tomato chutney; Tomato sauce; Guava jam and marmalade. A commendable step was development of the finished product under the brand name Chokaa which was also AGMARK certified.
FPO strengthening and Increase in its membership	 Proportion of FPO members among beneficiaries who were interviewed – 81% FPO membership peaked in the project year 2021 with 55% beneficiaries interviewed becoming FPO members in that year. 44% had become members before 2021 and only 1% in 2022. 	Support provided under the FDP to the FPO helped in expanding its membership considerably. Helping the FPO to adhere to all necessary legal and statutory compliances further helped in its strengthening.
Backward market linkage for chili producers	Farmers reporting purchase of chili related inputs from community nursery and agri-clinic established under the FDP comprised 34% and 23%, respectively.	Farmers were given ample support for good quality seeds and pesticides and fertilizers. This helped them in reducing the cost of input and increased the yield. However, access and benefits from community nursery and agri-clinic could not be effectively brought into practice for few villages/ farmers.
Outcome Level 2		
Change in input cost incurred by chili farmers	 Decrease in input cost before and after the project seen for Transportation & marketing (by 12%) Pesticide/ Insecticide (by 8%), Seeds (by 6%), Storage /godown (by 5%), Fertilizers (1%) Rent/ Hire of machinery (by 1%). 	Substantial decrease in input cost incurred before and after the project was seen with regard to transportation & marketing, a decline by 12%. The procurement of produce by the WEG/FPO locally or arranging of transportation for farmers to go to the market in effect meant a reduction in their cost of transportation. Training given to farmers on making their own pesticides or selling it to them at the right price as against commercial shops helped them to reduce this cost as well,

Enhanced production Producers' Access to Market, Reduced Dependence on Middlemen and Higher Negotiating Power through Collective Selling	 Increase in total production of chili before and after the project – 46% Increase in total production of vegetables before and after the project – 36% Key channels of sale for chili farmers after project implementation WEG – 24% FPO – 11% Traders/middlemen – 61% Retail marketing by self – 3% Extent to which collective and direct selling by FPO helped in reducing their dependence on middleman: Yes, completely – 31% 	by 8%. Provision of seeds under the FDP helped decrease its cost by 6%. Increase in input cost before and after the project intervention was observed with respect to labour (8%), irrigation (7%) and manures (5%), which can be explained by the increased amount of cultivation that was undertaken. Overall input cost incurred by farmers hence showed a decline of only 1%. A considerable increase in production of chili was reported before and after the project, impact by increased area under cultivation along with quality inputs and technical guidance in terms of seeds and pesticides. WEG/FPO served as alternative marketing channels for the chili farmers. Collective selling, knowledge of market given by FPO and support received in marketing did positively impact farmers in the initial project duration. Their dependence on middlemen was minimized to an extent. Majority of those selling to middlemen
	 Yes, to a considerable extent – 28% Yes, to some extent – 24% Not much – 10% Can't say – 7% 	did agree to be now equipped with better negotiating skills and knowledge about market rates, and hence better negotiating power. For WEG members, while sale was channelized through the FPO, this could not become the major marketing channel for the WEG members due to various marketing related challenges.
Fair price for produce	 Whether chili farmers able to get fair price for produce, as compared to earlier: Yes – 70% No – 25% Did not cultivate chili earlier – 5% Whether FPO members able to get fair price for produce, as compared to earlier: Yes – 63% No – 30% Don't know/ Can't say – 7% 	Farmers were also able to get the optimal price by sale through the FPO, more than what the middlemen would pay. Due to the correct prices offered by the implementing partner, there was an impact of correction of price with middlemen as well.
Enhanced Income	 Increase in income through chili cultivation – 57% Increase in income through vegetable cultivation – 35% Increase in overall agricultural income – 55% Increase in overall household income – 43% 	A substantial increase was seen in the income earned by beneficiaries before and after the project.

Impact (Long-term)	
Capacitated farmers and	Farmers feel capacitated to follow the
women	right chili cultivation methods. They are better capacitated at negotiating higher prices for their crop produce.
	 Women part of WEGs gained knowledge of producing value added products and experience of working/running an enterprise.
Empowerment of women through social participation	 Working in WEG gave women the confidence to step out outside their homes and also voice their opinions in relevant spaces. Their participation and involvement in village level institutions also saw an increase, giving them confidence and making them feel empowered.

The project was started with a goal to improve the lives of 500 women farmers through collective selling, processing and marketing of their produce. Of the 398 complete beneficiary list provided by HDFC Bank CSR, little short of the 500 estimated initially, 388 were found in the project location and also interviewed as part of the Impact Assessment. Moreover, while females were the predominate (78%) beneficiaries of this FDP based on the list provided, few male beneficiaries (22%) were also there.

The project made use of various strategies towards achieving its goal primarily centred around expansion and strengthening of the existing livelihood option of chili cultivation in the area. In a nutshell, these strategies included training, awareness and capacity building of farmers for adoption of improved chili crop management practices, setting up of community nursery and agri-clinic for providing input support and technical guidance to farmers, establishing of women enterprise groups (WEG) to work towards production of value-added chili and other products from raw material procured from farmers, training and capacitating the WEG members towards this end and finally strengthening the existing local FPO not only to act as the anchor institution for channelizing the implementation of all these strategies but also to act as a platform for forward market linkage for the produce of farmers/ WEG members.

The high point of the project was the increase in overall household income by 43 percent from before the project and the increase in income through chili cultivation by 57 percent. Farmers were greatly benefitted by the training and exposure visits which encouraged them to adopt improved chili cultivation practices on their farmland, thereby increasing their quality, yield and hence income. They were appreciative of the input support given in the form of good quality of seeds and supplements at subsidized rates which not only helped to bring more land under chili cultivation but also ensured decrease in certain input costs. Support of the FPO in marketing of farmer's produce, be it in terms of providing linkage with local market or keeping farmers informed about correct market rates and systems or arranging for their transportation to the market, all worked towards helping farmers realise a better price for their produce. The role of middlemen in purchasing farmers' produce did seem to have lessened during the initial project period, with farmers benefitting from the collective aggregation and sale through the FPO. Farmers preference to sell through the FPO from where they always got a fixed and right price also resulted in price correction by middlemen/ other market players.

However, the limited duration of 1 year for a project of this nature, brought its own set of challenges. The farmers initially were unable to fully comprehend the activities and envisaged benefits from participation, and by the time they did, much of the project duration was over. Towards the end of the project there was dis-involvement of the implementing partner in providing technical guidance to farmers or purchase of their produce. On the marketing front, this made the farmers fall back on the middlemen again who still predominate as the primary channel of sale for farmers; however, the corrected price and an improved sense of the market has empowered farmers with better negotiating power for their produce.

Another main arm of the intervention was the creation of WEGs and their training and capacity building for producing value added chili and other products. 17 WEGs were formed, a good number for a 1-year project. The training provided was easy to grasp for the beneficiaries and helped enhance their knowledge systems and empowered them to start their small enterprises. Machinery for processing was also provided for them at the FPO. The FPO formed their own brand name for the sale of produce under one name-*Chokha*; this was also registered under FSSAI. Quality control was a major priority for which they ensured packaging and bottling at a centralized level.

While most women did express satisfaction with the training received for manufacturing value-added products, there were others who were unhappy that the training lasted only for a day with no follow-up or else that no provision of raw material was made by the FPO to make the products that they were provide training in. Average annual income earned by WEG members was also only around Rs. 22,000/- Further, the marketing channels for WEGs could not be as well established as initially envisaged owing to quite a few challenges. The primary challenge pertained to the limited project duration of 1 year which was not deemed enough for the creation of a new value chain with a new product. Also, given that the volume of production by the WEG was not as much as per market standards, they could only sell to local stores in the market. Lower volume also meant the FPO was unable to bring down their price to competitively match up pricing with other similar products in the market. Absence of effective marketing channel through the FPO meant that WEGs also at times had to rely on sale through middlemen/ traders or locally through retail sale. Production was apparently intermittent during the project duration and minimal post that. Some WEGs and few members are still functional owing to the support given to them in terms of knowledge and machinery, though many of the WEGs are now dismantled.

In the patriarchal setting of the project area, many women beneficiaries felt a shift in their agency through their participation in the project especially WEGs. They were able to ensure financial subsistence for themselves and the ability to voice their opinion wherever relevant.

Strengthening of the existing local FPO under the project did reflect in terms of enhanced membership, adherence to legal and statutory compliances and extent of support given to farmers and WEGs through it. The FPO continues to work today though in a no profit-no loss situation. They are involved in making marketing arrangements for pickles on their own and also the sale of animal feed by hiring of vehicles. But with only nascent development of the WEG marketing channels when the project was operational and many of the WEGS being dismantled by now, the competency of the FPO to scale up and manage the chili value chain on its own in this post project period seems challenging.

A quick snapshot of the overall strengths and shortcomings of the project are outline in the table below:

Table 7.2: Summary of Project Strengths and Challenges/ Shortcomings

Challenges/ Shortcomings Strengths Comprehensive training provided to farmers Challenges in finding adequately equipped along with exposure visits on improved human resource in rural areas for leading/ methods of chili cultivation, contributing to running a project such as this their knowledge building and awareness and Training given to WEGs were variable across an increased output. villages; for some women they were only conducted for 1-2 days and no follow-ups were Provision of good quality seeds and pesticides through community nursery and agri-clinic, in conducted turn helping in reduction of input cost. Women were reluctant in participating for training owing to the loss of their daily wage Training provided on making their own vermicomposting was effective in reducing Provision of drip irrigation was only limited to fertilizer cost and enhancing soil quality for half the farmers for the cultivation of chili crops greater production. Drip irrigation method introduced for about half the beneficiaries ensured optimal irrigation measures

Strengths Challenges/ Shortcomings Less involvement of implementing partner Easy to grasp training to WEG members for towards the end of the project; farmers were manufacturing of value-added chili products back to relying on middlemen for sale but it Quality of WEG manufactured products was ensured better negotiating power ensured through centralized packaging Duration of the project of 1 year was deemed to Registration of product-Chokha through FSSAI be limited for the creation of a new value chain With the knowledge enhancement through the with a new product. This meant marketing project intervention, some women in WEGs channels for the WEG products could only be have sustainably continued to make pickles nascently developed. Strengthening of FPO helped in adequately anchoring the execution of the FDP locally. Collective sale through the FPO helped reduce the role of middlemen in the initial project period; even producers who still had to sell to middlemen, were better equipped with the market knowledge and an ability to negotiate for the right price.

In sum, it can be said that the goal of the project seems to have been fulfilled to a considerable extent though not fully. The project did positively impact the farmers to a good extent and WEGs to some extent. The implementing partner was able to garner trust and support in the project area through its consistent effort in the initial period but owing to its challenges and less involvement towards the end of the project, few farmers and WEG members felt a disconnect with them. The 1-year duration of the project was deemed to be less against the activities planned especially with regard to marketing of value-added products. A more clearer exit strategy across villages and for all beneficiaries would have been helpful.

ANNEXURE

Annexure 1: List of FGDs and KIIs conducted

Focus Group Discussion

- 1. WEG members, Sanwas
- 2. WEG members, Sanwalpur
- 3. WEG members, Sonkachh
- 4. Famers, Bajoli
- 5. Famers, Bangarda

Key Informant Interviews

- 1. Udyogini personnel, Business Development Team- Shresth
- 2. FPO personnel/office bearer Dinesh
- 3. FPO personnel/ office bearer Pinky Birwa
- 4. WEG Member, Goth Bihari Reena Mali
- 5. WEG Member, Sonkachh Vimla Devi
- 6. WEG Member, Sanwas Reena Saini
- 7. WEG Member, Mei Kalan Gauri Devi
- 8. VDC Member, Sanwalpur Pradeep Bherwa
- 9. VDC Member, Sonkachh Vishnu Mali
- 10. VDC Member, Fariya Mamta Gautam