Concurrent Monitoring - Round 1 Report (as on 31st March 2019)

Monitoring and Evaluation for PoCRA in Marathwada Region, Maharashtra

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Project on Climate Resilient Agriculture (PoCRA)

Submitted By

SAMBODHI

In Association With

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Abbreviations

AA	Agriculture Assistant
ATMA	Agriculture Technology Management Agency
BBF	Broad Bed Furrow
CA	Cluster Assistant
CDC	Capacity Development & Coaching
DBT	Direct Beneficiary Transfer
DPA	Drought Prone Area
DPR	Detailed Project Report
FGD	Focus Group Discussion
FFS	Farmer Field School
FPO/ FPC	Farmer Producer Organization/ Farmer Producer Company
GHG	Green House Gas
GSD	Geological Survey Department
IDI	In-Depth Interview
IPM	Integrated Pest Management
MIS	Management Information System
NBFC	Non-Banking Financial Company
PDO	Project Development Objective
PMU	Project Management Unit
PoCRA	Project on Climate Resilient Agriculture
PS	Project Specialist
SDAO	Sub-divisional Agriculture Officer
VCRMC	Village Climate Resilient Management Committee
WB	World Bank

Executive Summary

Project on Climate Resilient Agriculture (PoCRA) is being implemented by Maharashtra government, in collaboration with the World Bank to enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra. The project is built around a comprehensive, multi sector approach that focuses specifically on building climate resilience in agriculture through scaling up tested technologies and practices. Sambodhi in partnership with TERI is conducting M&E of PoCRA in all eight districts of Marathwada region. As part of the monitoring and evaluation of the project, one of the key components is to conduct concurrent monitoring of the project, which will be conducted bi-annually for a period of six years. Concurrent monitoring aims at finding out what are the bottlenecks and their suggested solutions for each project component. It also aims to get beneficiary feedback on the key processes of the different project components. Further, concurrent monitoring also aims to assess the progress of the project on key results frame indicators which are measurable through concurrent monitoring rounds. The key components of the project that were assessed in the first round of concurrent process and progress monitoring are: Individual matching grants accessed using the use of Direct Beneficiary Transfer (DBT) application, Farmer field school for demonstration of climate-resilient and sustainable farming practices, construction of community assets which are aimed to benefit the farming community of the area. Also, feedback was taken on VCRMC functioning and the support received and expected by the FPOs/FPCs. The study area comprised of eight districts of Marathwada region of Maharashtra viz. Aurangabad, Beed, Nanded, Hingoli, Latur, Osmanabad, Parbhani and Jalna.

Mixed-methods approach has been adopted for concurrent monitoring as part of which we have interviewed respondents from project area and also from comparison areas where beneficiaries of similar interventions were interviewed. The concurrent monitoring survey was conducted in 20 project and 10 comparison villages with a total proposed sample of 150 individual intervention beneficiaries and 300 community intervention beneficiaries. The covered sample included 149 individual beneficiaries and 104 community beneficiaries. There was a shortfall in coverage of community beneficiaries as the community works under PoCRA had not been initiated in most of the sampled areas. Quantitative survey tool for the beneficiaries and checklists for the qualitative studies were finalized in discussion with PoCRA PMU team. The beneficiary survey tool was administered to understand the knowledge, practices and accessibility of the farmers to the intervention, while also learning about the on-ground reality of the processes of the intervention and how to make it better. Also, as part of qualitative component, 20 Focus Group Discussions with VCRMC members, eight with Project Specialists; and key-informant interviews of six SDAOs, 18 Cluster assistants, 19 Agriculture assistants, 12 DSAOs and 16 FPC/FPO members were conducted. These were administered to get their feedback on project implementation, understand the key challenges in project implementation and suggest appropriate solutions along with other key areas of interest.

Key Observations and Findings

97% of the respondent beneficiaries in project and 96% in comparison arm were Hindus, 56 % in project and 62 % in comparison arm were in the APL category, and 71% in project and 80% in comparison arm reported agriculture as their main occupation. The average income per annum, is observed to be INR 1,47,153 in project arm and INR 158799 in comparison arm. In addition, looking at the gender ratio, we found that in the project arm, 83% of the surveyed beneficiaries were male and 17% were females whereas in the comparison arm, 94% surveyed beneficiaries were male and 6% were female. The distribution of caste was almost similar across both the study arms with approximately 55% from the general category, 29% from Other Backward Class and the remaining from Scheduled caste and Scheduled tribe.

On assessment of cultivation practices of the beneficiary farmers it was observed that almost all the farmers (96% in project arm and 97% in comparison arm) owned land, with only 15% also leasing-in land. The major crops in Kharif reported are soybean (33%), cotton (21%) and pigeon pea (15%). However, only 55 % of the beneficiaries who had cultivated in Kharif season reported of growing crops in Rabi. The key crops cultivated in Rabi were chickpea (41%), sorghum (25%) and wheat (19%). 41% of the surveyed project beneficiaries and 25 % of the surveyed comparison beneficiaries reported of having access to irrigation facilities. Dug well and borewell were reported to the main sources of irrigation. For the beneficiary farmers with access to irrigation, during rabi season, around 73% of their cultivated land was under irrigation for both the study arms, while during kharif, more percentage of land under irrigation was reported for comparison arm. Almost 83 % in project area and 72% in comparison area was sown using certified seeds for soya bean, 76% in project and 39% in comparison for chickpea and 56% in project and 45% in comparison for pigeon pea.

On assessment of sources of information about PoCRA and similar benefits in comparison arm, project staff (34%), gram sabha (31%) and VRCMC (24%) were reported to be the key sources of information in the project arm. Though, gram sabha meetings (43 %), project staff (36%) and friends and relatives (13 %) were reported to be key source of information in comparison arm. With regard to use of DBT portal, the highest awareness was for the step *Registration on DBT portal* at 51% and *application for matching grant* at 58%. It can be observed that the awareness of the respondents in between individual steps was not very high, which was also highlighted in qualitative interviews as in most of the cases AA or CA said that they applied on behalf of the beneficiaries. On assessing the awareness of different benefits that can be accessed under PoCRA, the maximum awareness was for purchase of water pumps/pipes/drip irrigation systems or sprinklers (73 %) and for construction of artificial recharge of open well and bore wells (62 %). Awareness of other benefits under POCRA was observed to be low and needs to be focused during the further course of the project.

Out of the project arm beneficiaries who have registered or applied through DBT portal, 23% had only registered on the portal while 77% had applied for at least one individual grant benefit. Of the farmers who had not applied for any benefit, 23% of the respondents said the reasons for not applying lay in being unable to meet the conditions of the grant such the eligibility criteria, arranging required documents or arranging funds. Of the farmers who applied for a matching grant, open dug well and pipes at were most in demand in project arm at 21% and 22% respectively. The other popular benefits for which applications were received were drip irrigation, sprinkler irrigation, horticulture crops, water pumps and small ruminants. When the project arm applicants were asked about the status of their application, majority applications were reported to be in *Applied for Grant* (34%) *verification by CA (15%), Approval by VCRMC* (11 %) and *Spot Verification by AA* (14%) stage. The biggest motivators for applying for the different grants and benefits are the project staff (comprising of AA, CA and other project staff) in both comparison and project areas (comparison:39%, project:32%), followed by self-motivation of the farmers (project:17%, comparison:25%). In addition, VCRMC members in project villages also played a crucial role with 28% respondents saying that they were motivated by them to apply for individual benefits under PoCRA. The reason for applying mainly lay in increasing production or increasing water supply for cultivation. For farmers who had built assets, they either arranged for funds on their own or borrowed from friends and family. Within the project area, none of the farmers availed loans from any banking institution. The project arm respondents were enquired that who had supported them in applying for individual benefits through DBT application. VCRMC members (32%), AA (24%), were the key sources of support for application of individual grant. It was can be observed that only 7 % of the surveyed individual grant beneficiaries had applied on their own. Though it is heartening to find that only 22 % respondents in the project arm reported of facing any challenge in accessing project benefits. Delay in

sanction from project staff, problems in applying due to issues with internet were the key challenges reported by the respondents who acknowledged receiving challenges in the application process. When enquired if the respondents had to incur any cost in the application process, 50% of the project arm beneficiaries had to incur expenditure in accessing the project benefits as compared to which 76% in comparison arm had to incur expenditure in accessing the project benefits. When enquired if the timeline for completing the project activity or creating the asset is sufficient, 81% respondents from the project arm and 78% respondents from the comparison arm reported the timeline to be sufficient. During the physical verification which aimed to verify if the assets were created in actual, all 10 individual assets which were under implementation or in implemented stage were found during physical verification.

For the monitoring of the Farmer Field School component of PoCRA, we had a sample of 35 farmers which consists of almost equal sample of guest and host farmers. When enquired about the reasons for participating in FFS, 42% farmers participated in the demonstrations to learn new technologies in agriculture and 43% reported to participate to help increase their production. From the farmers who participated in the FFS demonstrations, 89% reported that they had attended all demonstration sessions. The reasons given by the remaining 11% farmers for not attending all FFS trainings are that they had personal work (75 %) or that they were unaware of the schedule of the FFS (25%). The climate resilient technologies, most frequently demonstrated as part of FFS, as reported by AA were Integrated Nutrient Management, Integrated Pest Management, organic farming, seed preparation, applying manure to fields, intercropping and Broad bed furrows. It is encouraging to observe that 90% of respondents reported that they feel they have benefitted by attending the FFS. Better use of inputs (21%), awareness of good agriculture practices (19%), better soil health (16%) and increase in yield (16%) are the key perceived benefits reported by the FFS participants. The effectiveness of the FFS was further measured against its perceived help in dealing with climatic vulnerability. 92% of the farmers perceive that the technologies demonstrated in FFS are useful in dealing with climate vulnerability. Use of improved seed varieties, seed treatment , use of climate resilient seed varieties, use of drip irrigation, INM , BBF and increasing water availability through farm pond and bore well were the measures which were reported to be adopted by farmers to mitigate the impact of climate change.

For the monitoring of community benefits, a total of 105 community beneficiaries have been surveyed, with 51 from the project area and 54 in comparison area. This sample covered is less than the targeted sample as the community works had only been initiated in Shelgi in Latur, Kawjawala and Deogaon Khawate in Jalna, Khamgaon and Bolegaon in Aurangabad and Bhandarwadi in Beed. On enquiring about the same during qualitative interviews with all relevant stakeholders , the delay was accounted to due to lag in preparation and acceptance of DPR, delay in cost estimation and e-tendering and halting work due to upcoming elections(as code of conduct due to elections was implemented at the time of survey). The community benefits implemented in project area were mainly graded bunding (59%), community farm ponds (31%) and earthen nala bunds (10%). When enquired about the stakeholders involved in decision making related to asset construction, VCRMC members (28 %) ,VCRMC plus farmer interest group members (26 %) and Gram Sabha members (20 %) were reported to be the key decision makers in the project area while Gram Sabha members (55 %) were also reported to be the key decision makers in the comparison areas . With regard to the quality of the asset constructed, it is encouraging to find that 93% respondents from project area were satisfied or very satisfied with the quality of the asset while 81% respondents from comparison area reported to be satisfied or very satisfied. Perception of usefulness of the community assets was found to be higher in project arm as 86% of the project arm respondents reported the community assets to be *very* useful as compared to 56% acknowledging the same in comparison arm. 98% beneficiaries from the project arm were aware of the asset construction in their village and the same percentage was also willing to contribute towards its maintenance. The

beneficiaries were mostly willing to provide support in the form of being the member of the structure maintenance committee (35%) or providing labour support (49%). Though, a low percentage of responds reported to be willing to pay for maintenance (16%) of the assets. During the physical verification which aimed to verify if the assets were created in actual, all 30 community assets which were under implementation or in implemented stage were found during physical verification.

Feedback of the beneficiaries was also taken on the micro planning process and also about different parameters related to implementation of PoCRA. 68% of the respondents were aware of microplanning done in their village and out of those who were aware, 79% reported that they or their family member had participated in the micro planning process. Also, encouragingly 91% respondents believe that VCRMC represented all sections of their society with 79% being satisfied with their work. 80% of project arm respondents also reported to be satisfied with the microplanning process that was adopted. With respect to satisfaction of the respondents on the support received from project staff, 83 % respondents in project arm and 84 % respondents in comparison arm were in the satisfied or very satisfied with the support received.

We further enquired into the functioning of the VCRMCs. As per the project guidelines, the VCRMC should comprise of 13 members, and the number of members required from different categories including gender, social categories, land holding is pre-defined. It was encouraging to find that 17 out of the 20 VCRMCs were found to be constituted as per the project guidelines. VCRMC meetings were mostly reported to be conducted once a month in most of the cases. It was found that on an average nine members attended the last VCRMC meeting. On enquiring about what additional trainings should be provided to VCRMC members, VCRMC members responded that they would want to receive refresher training on all project components, training to identify which benefit should be suggested to which respondent, and training on the agriculture technologies and benefits that are provided under PoCRA. Strategies adopted by the VCRMC to mobilize farmers were to inform informally, personally, through WhatsApp groups and in Gram Sabha meetings.

Another key component of PoCRA is to provided support to FPOs/FPCs for post-harvest management and value chain promotion. The surveyed FPO/FPC representatives shared that current activities done by their FPC/FPO is aggregation, cleaning, grading and sorting of the produce, and seed processing. Most of the FPC/FPO representatives reported that their application is currently under proposal development or in application stage and none of the surveyed FPO/FPCs had received grant at the time of the survey. The respondents reported they found the grant process to be simple and the project staff to be friendly and supportive. When asked what they would like to improve, the members responded that they should get facilitation support to get bank loan. They also felt that they required training and technical support to start new value addition activities, on running a business and to improve their market linkages. Further, they also asked for facilitating exposure visits to other FPO/FPCs or institutions which are successfully carrying out value addition activities and seed processing to learn through first-hand experience.

Awareness of stakeholders with regard to environmental safeguards was observed to be limited amongst all stakeholders. The most frequently reported environmental safeguard was that during asset construction, trees should not be cut, vegetation should not be damaged and soil erosion should be avoided. In case trees were cut, more should be planted at a nearby spot.

Key challenges and actions suggested by stakeholders

As a critical component of concurrent monitoring, the key project stakeholders were asked to highlight the key challenges and suggest solutions for the same. For individual matching grant component, difficulty in arranging funds by potential beneficiaries for upfront payment was reported to be a key challenge. As

a solution it was suggested to introduce mechanism through which bank loans can be facilitated for applicants who have received pre-sanction. Difficulty in application through DBT portal due to network issue was also reported as one of the key challenges. As a solution it was suggested that both online and offline application options should be provided specifically in areas which have poor network connectivity. Lack of information amongst many potential beneficiaries was also highlighted as a key challenge, for which more efforts are required to inform the potential beneficiaries about the project benefits.

For community intervention component, incorrect site selection was reported as a key challenge. As a solution, it was suggested that site selection should be done more diligently while ensuring the approval of beneficiaries in the catchment area. Improper micro planning done by non-technical staff was also reported as a key challenge. To address this, it was suggested that it should be ensured that technical staff should be involved in micro-planning.

The key challenge in the implementation of FFS were reported as lack of awareness and motivation amongst farmers to adopt new technologies. As a solution, it was suggested continuous efforts should be put to motivate farmers and explain them benefits of adopting improved agriculture technologies.

Additionally, a few challenges at an overall level were also reported. Shortage of manpower and high number of villages (6-10) assigned to each AA and CA was reported as a key challenge. It was also reported that workload of CAs and AAs had increased as the framers expected them to support for filling their forms. As a solution, it was suggested that the project staff should be increased and resources persons like Krushi Mitra should be engaged at the village level who can help farmers to apply through DBT portal.

1. Project Background

Having agriculture as the primary source of livelihood in the state, Maharashtra has 22.6 million hectares of land under cultivation (gross cropped area) and 5.21 million hectares under forest. About 84% of the total area under agriculture in the state is rainfed and is dependent only on monsoon[1]. 49% of the landholdings in the state falls in marginal category, with less than one ha land. Most of these poor farmers with small and unirrigated land holdings are vulnerable to climate shocks. Moving these farmers out of the current crisis of high production cost, low profitability due to low productivity, lack of market access is one of the biggest challenges for the state. Also, the critical issues related to water scarcity, degraded land resources, increased cost of cultivation and the impacts of climate change need to be addressed to reduce the vulnerability and improve profitability of the smallholder farmers.

To respond to the above-mentioned challenges, the Government of Maharashtra, in partnership with the World Bank, conceptualized the Project on Climate Resilient Agriculture (PoCRA) for 5142 villages in 15 districts of Maharashtra. This project attempts to bring transformational changes in the agriculture sector by scaling-up climate-smart technologies and practices at farm and (micro) watershed level, that would contribute to drought-proofing and management of lands in states' most drought and salinity/sodicity-affected villages. The project focuses on smallholders (farmers up to 2.0 ha of farmland) with particular focus on vulnerable population whose livelihood is impacted by changing climate conditions and climatic uncertainties. The project has been implemented in 15 districts in Maharashtra which include 8 districts of Marathwada (Aurangabad, Nanded, Latur, Parbhani, Jalna, Beed, Hingoli, Osmanabad), 6 districts of

[1] Source: PoCRA Project Implementation Plan (PIP) document

Vidarbha (Akola, Amravati, Buldana, Yavatmal, Washim, Wardha) , Jalgaon district of Nashik Division and approximately 932 salinity affected villages in the basin of Purna river spread across Akola, Amaravati, Buldana and Jalgaon districts[2]. The below figure highlights the villages where the project is implemented. This project will be implemented over a period of 6 years from 2018-2024.

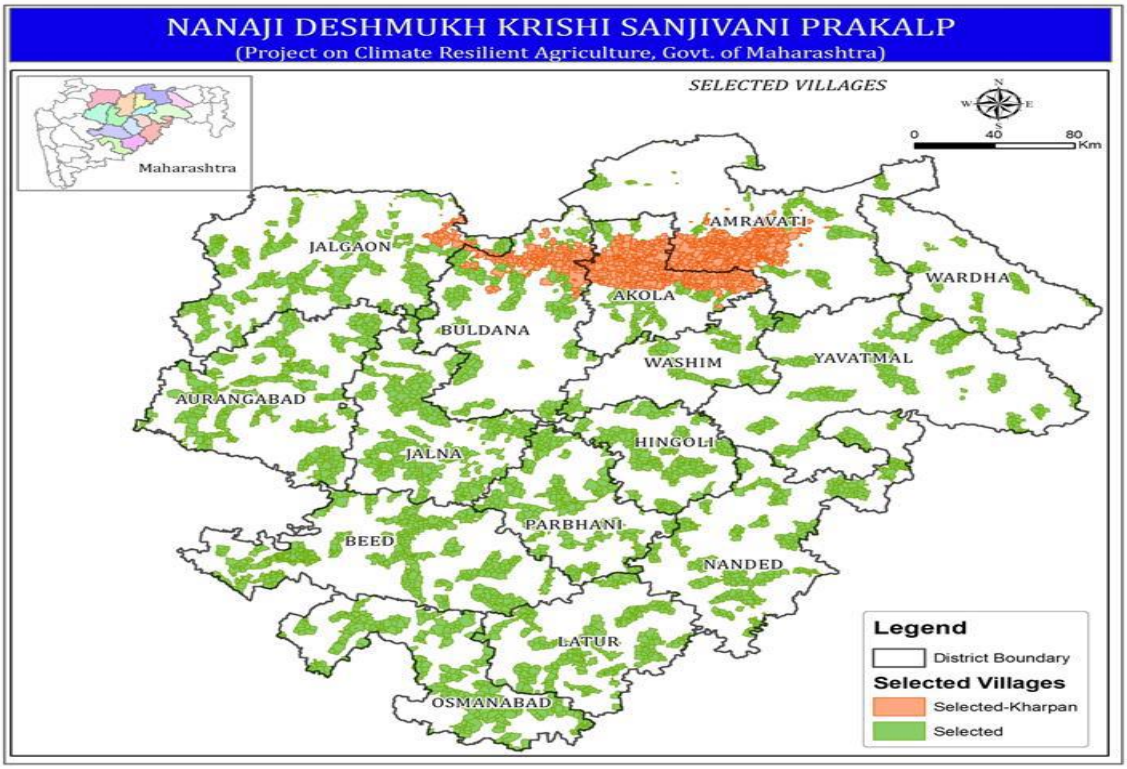

Figure1: PoCRA project area and villages

The Project Development Objective (PDO) of PoCRA is to enhance climate-resilience and profitability of smallholder farming systems in selected districts of Maharashtra. The project is built around a comprehensive, multi sector approach that focuses specifically on building climate resilience in agriculture through scaling up tested technologies and practices. The strategic overview, thematic linkages and expected achievements of the project are highlighted in the below schematic.

[2] Source: Terms of Reference

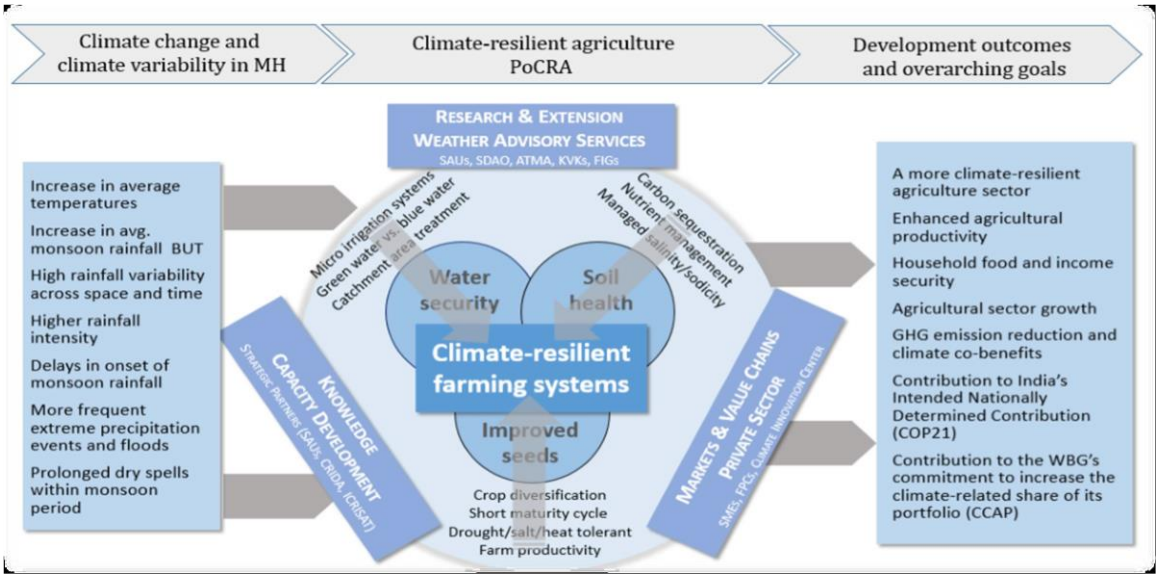

Figure 2: PoCRA strategic overview, thematic linkages and expected achievements

The overall project vision is to contribute towards three critical impact areas: a) Water Security b) Soil Health c) Farm Productivity and Crop Diversification. The need for intervention across these three areas in the region is evident given the type of agro-climatic attributes of the area.

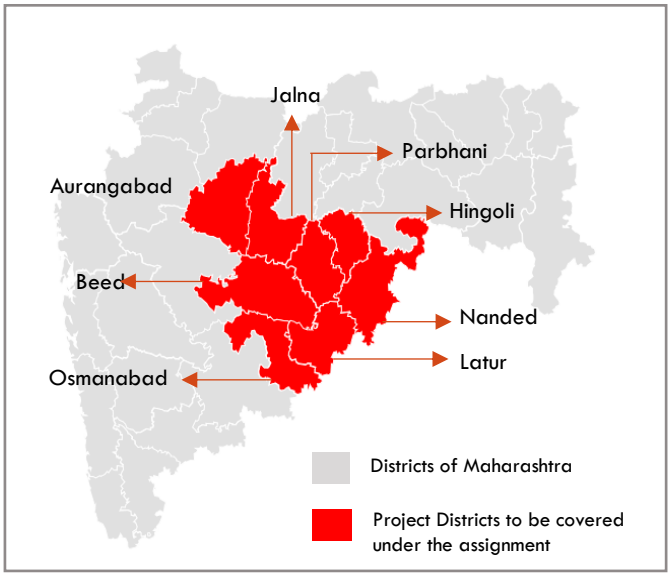

Figure 3: Project districts

Out of the 15 districts where PoCRA will be implemented, the current assignment is to be conducted in 8 districts of Marathwada region, covering 347 mini watershed clusters. The project will be implemented in a phased manner reaching out to 70 cluster in year I, 175 clusters in year II and 102 clusters in year III. The below table provides the detail of this phased implementation of the project in Marathwada region. The subsequent sections provide an overview of the demographic and agro-ecological attributes of this region while contextualizing the broader discourse of resilience.

1.1 Overview of the Study Area

About one-sixth of the total topographical region in India falls under the Drought Prone Area (DPA) and about 40% of the Maharashtra State falls under DPA, with less than 750mm of the annual average rainfall[3]. In Maharashtra, Marathwada region specifically has been floundering under drought condition since 2012 with the highest rainfall deficit in the country at 48% in 2014. Marathwada region coincides

[3] Hydrology and Water Resources Information System for India, National Institute of Hydrology, Roorkee
http://nihroorkee.gov.in/rbis/India_Information/draught.htm

with Aurangabad Division and consists of 8 districts namely; Aurangabad, Beed, Latur, Osmanabad, Parbhani, Jalna, Nanded and Hingoli.

The region has a population of about 1.87 Crores and a geographical area of 64.5 Thousand sq. kms[4]. Agriculture is the major source of income generation for over 64% of the state's population. However, given harsh weather conditions, the region's agricultural system has been depleting significantly. Jowar and Bajra, along with other kharif crops, were completely wiped out in 2012 when monsoon failed (Kumar, Mail Online India, 2013). Jalna district, famous for being the biggest producer of sweet lime, had been the worst hit in the drought. Two important cash crops in Marathwada namely cotton and sugarcane were also severely affected. The anticipated impact of climatic change as well as climate variability presumably lead to an increased pressure on already scarce water resources.

Starting 2014, the Jalyukt Shivar Abhiyaan, one of the state government schemes started its intervention to make the state drought-proof by 2019. It aimed to make 5,000 villages free of water scarcity every year through deepening and widening of streams, construction of cement and earthen stop dams, work on nullahs and digging of farm ponds. A total of 158,089 water management works were to be carried out under this project, of which 51,660 have been completed till April 2018. This demonstrates that there is a need of more concentrated efforts for mitigation and adaptation with an aim to reduce vulnerability of agriculture and making it more resilient.

Within this context, there is an urgent need for the farmers to enhance their resilience to the threats of climate variability. The fact that most of famers in the project region are small and marginal, their adaptive capacity is very limited hence economically viable and culturally acceptable adaptation techniques need to be developed and implemented. The Government of Maharashtra has realized the implications of building climate resilience in the agricultural sector and has developed a drought proofing and climate resilient strategy as a long-term and sustainable measure to address the likely impacts of climate change. With this backdrop, the Project on Climate Resilient Agriculture (PoCRA) has been formulated by the Government of Maharashtra with support from World Bank. This is the first large scale climate resilient agriculture project in India which aims to enhance climate-resilience in agricultural production systems through a series of activities at the farm level.

2. Objectives of Concurrent Monitoring of PoCRA

Along with evaluating the impact of PoCRA project, the other key objective of the assignment is to conduct concurrent monitoring of PoCRA project for its implementation in Marathwada Region. The objectives of concurrent monitoring are to find out, which are the key components of the intervention that are effective, what are the process bottlenecks or challenges in the implementation of the project and to get feedback of the key stakeholders on the implementation so that it can be improved during the course of the project implementation. Further, concurrent monitoring also aims to assess the progress of the project on key performance parameters.

[4] Census 2011, http://shodhganga.inflibnet.ac.in/bitstream/10603/152935/11/11_chapter%204.pdf

3. Overarching Monitoring Framework

The framework below presents the overarching approach that has been adopted for the concurrent monitoring of the PoCRA project:

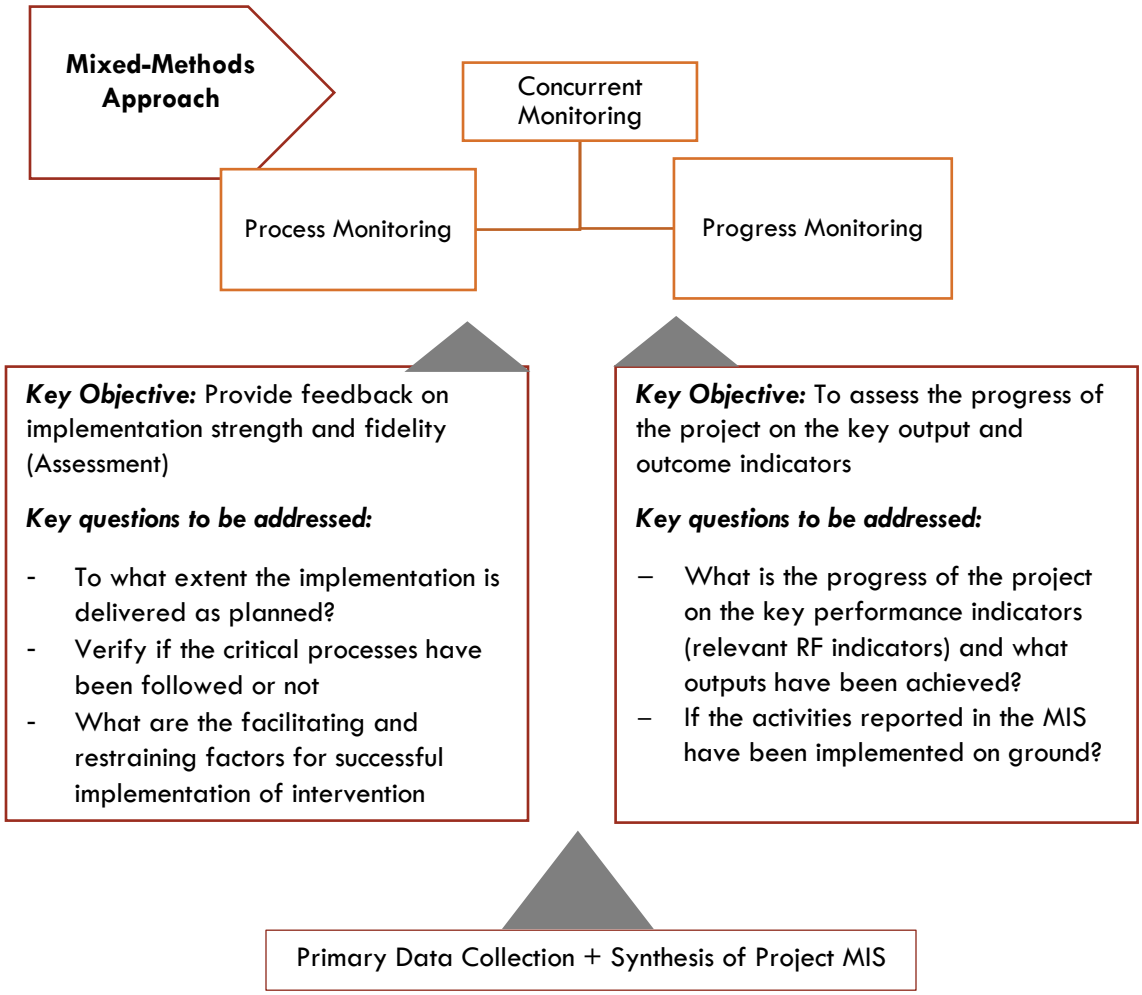

Figure 4: Overarching methodology

4. Methodology

The steps in the approach adopted for concurrent monitoring are as follows.

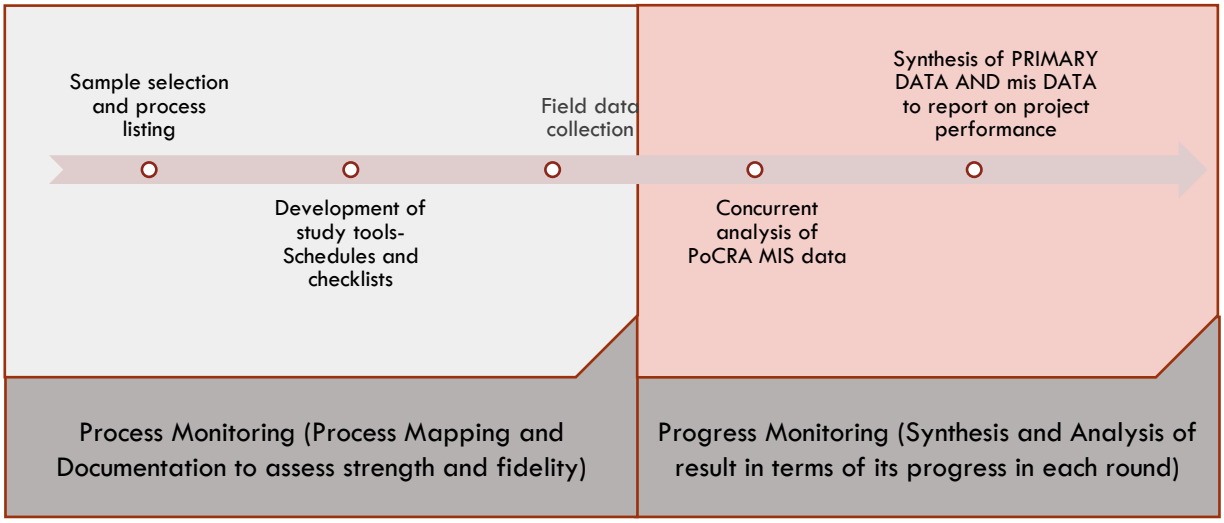

Figure 5: Concurrent monitoring methodology steps

A. Sample selection and process listing

ToR provides the project development objectives along with the list of activities planned to be conducted within the project areas. However, given the phased approach to implementation, it is expected that the activities will be carried out in phases, across districts and clusters. Therefore, as a first step, the sample for concurrent monitoring was selected (in line with the proposed sapling methodology). Subsequently the processes that are being implemented and would need to be monitored were listed. Discussion with PMU team and secondary literature review of relevant documents was done to understand these key processes.

Also, during the process listing, we interacted with PMU and other relevant stakeholders to list and understand the ongoing schemes or projects of similar nature in the comparison areas so that a premise for assessment could be built.

B. Development of study tools- Schedules and Checklists

After the identification of the processes to be monitored, the study tools i.e. schedules, and checklists were developed.

Table **1:***Study tools developed*

Structured Interview Schedule	Structured Interview schedule was developed for the beneficiary survey and which included questions relating to the access to intervention, processes, respondent's participation, perception and feedback on activities. As part of the beneficiary survey, physical observation of the in progress and completed activities was also done
Key-informant Interview Schedule	The project activities are being carried out at various levels, including individuals, community (village or cluster) as well as district level. Key informant interviews have been conducted with key stakeholders

	involved in implementation of the project to get their feedback on project implementation and for further improvement of the program.
Focus Group discussion schedule	Focus group discussions were conducted with VCRMC members and Project specialists of particular districts to investigate the current status of implementation of the project and get feedback on project implementation and further improvement of the program.

As part of the concurrent monitoring, the uptake of other similar existing government programmes was also assessed. Feedback on the capacity building initiatives was taken from the relevant project stakeholders.

C. Concurrent Analysis of PoCRA MIS Data

For monitoring the progress of the project, the MIS data which reports on the progress of activities and outputs was analysed to see if the project implementation is going on as per its planned pace. The project performance was assessed on the key performance indicators including the results framework indicators which are assessed on a semi-annual or annual basis. For this, the relevant indicators on which data is required was identified and the PMU MIS team and other relevant stakeholders were contacted to obtain this data.

D. Synthesis of MIS data with Primary data to report on project performance

As a last step, the MIS data on the project progress and the primary data on the quality of implementation (from process checklists and beneficiary interviews) was synthesized to report on the status of implementation of the project at that point of time. The concurrent monitoring reports highlight the activities/processes for which the implementation quality needs to be improved. It also aims to identify the challenges or bottlenecks in implementation. The overall objective of the bi-annual concurrent monitoring reports is to provide feedback to the PMU on the status of project implementation and provide recommendations for course correction.

4.1 Sampling Methodology

In line with the ToR, concurrent monitoring was conducted in both project and comparison areas. The rationale behind incorporating comparison areas was to highlight activities or implementation similar to that of project, which may have been implemented in the comparison and then assess their results. The ratio for project to comparison has been maintained at 2:1 (as given in the ToR).

The concurrent monitoring exercise intends to cover all 347 clusters across 8 districts over the period of 6 years. 12 concurrent monitoring rounds would be conducted over 6 years i.e. two in a year. Given phased approach to implementation, the implementation is planned to be done in 70 clusters in year I, 175 in year II and 102 in year III. Sampling strategy for concurrent monitoring is proposed likewise and as presented in the ToR. Number of clusters to be visited in each district in each round will be selected proportionately.

Distribution of sample is presented in the table below:

Table 2: Concurrent monitoring sample distribution

Sl. No	Districts	Round wise clusters to be covered												Total
		1	2	3	4	5	6	7	8	9	10	11	12	
1	Aurangabad	3	5	5										58
2	Beed	2	3	3										37
3	Jalna	3	4	5										54
4	Latur	2	3	4										42
5	Osmanabad	3	5	5										58
6	Nanded	2	3	3										34
7	Parbhani	2	3	3										39
8	Hingoli	1	2	2										25
Total Project		**20**	**27**	**30 (x10)**										**347**
Total Comparison		**10**	**14**	**15 (x10)**										**174**

The steps in sampling methodology that have been adopted for concurrent monitoring phase I, have been detailed below:

Selection of Project Clusters

In line with the ToR, 20 clusters were sampled for round 1 of concurrent monitoring. These 20 clusters were sampled proportionately from the 8 project districts, as presented above in the beneficiary sample distribution table.

The clusters required to be sampled from each district were sampled randomly from the total clusters in the district, in which the project has been implemented in Phase I. Following this approach, the 20 clusters for Round 1 of concurrent monitoring were selected.

Selection of comparison cluster and villages

A total of 10 comparison clusters were selected for the Round 1 of concurrent monitoring. Based on the discussions with the PMU team, the non-PoCRA watershed clusters were selected after matching them with PoCRA clusters based on climate vulnerability index score. It was ensured that a district wise 2:1 proportion is maintained while selecting comparison clusters. The steps followed to identify the comparison arm clusters have been detailed below:

1. The number of comparison clusters to be sampled per district were decided while maintaining 2:1 ratio in project and comparison clusters per district.
2. The comparison clusters in each district which had the closest climate vulnerability index score to the sampled project clusters in the corresponding district were selected.
3. Using this approach, a comparable non-PoCRA cluster was identified for every sampled PoCRA cluster.

4. Finally, 10 clusters were randomly selected from these 20 clusters, while ensuring that the district wise proportion of comparison clusters was maintained.

Selection of Respondents

In line with the ToR, a total of 15 beneficiaries were targeted to be surveyed from each sampled cluster/village. Out of these, five beneficiaries of individual interventions (e.g. individual farm ponds, individual drip irrigation systems) were sampled. Out of these five respondents, three respondents were chosen from list of DBT applicants and two respondents were chosen from list of farmer field school participants. Further out of these two respondents for FFS, one was a host farmer and one was guest farmer. These three and two DBT and FFS beneficiaries were randomly chosen from the list of beneficiaries in the sampled village. In case a sampled beneficiary was not available on the day of survey, replacement for the corresponding sample was identified randomly to ensure adequate sample coverage.

In case of community interventions, list of community interventions under implementation or implemented was requested from the project specialists or the respective SDAO office. In case this list was not shared by the district teams, AA of the specific village was also enquired about the community works under implementation or implemented in the sampled village. Further, beneficiaries or potential beneficiaries living in the catchment area of the community intervention were identified with the support of village level functionaries including Cluster Assistant, Agriculture Assistant or VCRMC members. The sample of ten beneficiary interviews was the divided equally amongst the community activities under implementation or being implemented in the village.

The final coverage of sample was based status of execution of individual and community activities in the sampled villages. In case of unavailability of ten beneficiaries of the required sample, the maximum available number of beneficiaries will be surveyed.

Apart from the quantitative interviews, qualitative interviews were also planned to be conducted with the key project stakeholders to get their feedback on the project implementation. The qualitative interviews that will be conducted along with the sample size has been presented in the below matrix

Table 3: Stakeholders and sample for qualitative interviews

Target Respondent	Sample	Enquiry Technique	Project Activity
VCRMC Representatives	1 discussion with VCRMC representatives per selected sample villages (in project clusters)	– Discussion with VCRMC Representatives	Feedback on all project activities implemented in their village (implementation, challenges, and suggestions for course correction)
Agriculture Assistant	IDI with AA of sampled project villages	– IDI with AA	Feedback on all project activities implemented in their district (implementation, challenges, and suggestions for course correction)

Target Respondent	Sample	Enquiry Technique	Project Activity
Cluster Assistant	IDI with CA of sampled project villages	– IDI with CA	Feedback on all project activities implemented in their district (implementation, challenges, and suggestions for course correction)
FPC Representatives	2 FPC Representative interviews per district	– IDI with FPC Representatives	Promotion of FPCs
Project Specialists (PS Agriculture, PS Agribusiness, PS HRD) PoCRA in district	Discussion with PSs of all eight districts in Marathwada	– Discussion with Project Specialists (with PSs implementing PoCRA at district level)	Feedback on all project activities implemented in their district (implementation, challenges, and suggestions for course correction)
SDAO	IDIs with SDAOs of sampled talukas	– IDI with SDAO	Feedback on all project activities implemented in their district (implementation, challenges, and suggestions for course correction)
DSAO /PD ATMA	IDIs with DSAOs of sampled talukas	– IDI with DSAO	Feedback on all project activities implemented in their district (implementation, challenges, and suggestions for course correction)

Key Processes covered under PoCRA

The key implementation processes which were observed covered during the concurrent monitoring have been mentioned below.

1. Individual Farmer Matching Grant
2. Farmer Field School
3. Community Interventions
4. Farmer Producer Organisation/ Farmer Producer Companies
5. VCRMC Functioning

5. Sample Coverage for Process Monitoring

1. Quantitative:

The sample was targeted based on the above-mentioned sampling approach. As mentioned above, the actual sample covered was dependent upon the implementation status of project interventions and the availability of beneficiaries in the sampled villages. A total quantitative sample of 254 was covered with a sample of 149 covered for individual interventions and 105 for community interventions. The targeted community sample could not be covered as community works under PoCRA had only been initiated (till the time of survey) in the villages as follows: Shelgi in Latur, Kawjawala and Deogaon Khawate in Jalna, Khamgaon and Bolegaon in Aurangabad and Bhandarwadi in Beed.

Table 4: Quantitative sample coverage

	Project	Comparison	Total
Individual	99	50	149
Community	51	54	105
Total	150	104	254

Table 5: District-wise quantitative sample coverage

	Project		Comparison	
	Proposed	Covered	Proposed	Covered
Aurangabad	45	32	30	12
Beed	45	25	15	5
Jalna	30	24	15	5
Latur	45	25	30	31
Osmanabad	45	14	15	15
Nanded	30	10	15	6
Parbhani	30	10	15	15
Hingoli	30	10	15	15
	300	150	150	104

2. Qualitative:

The above-mentioned key project stakeholders from the sampled area were reached out for qualitative interviews. The below table presents the sample which was covered. The sample shortfall in a few cases was due to unavailability of the stakeholders for the survey even after two follow-ups.

Table 6: Qualitative sample coverage

S.No	Research tool	Sample Covered
1	FGD VCRMC Members	20
2	IDI AA	19
3	IDI CA	18
4	IDI FPO	16
5	IDI DSAO/PD ATMA	6
6	IDI SDAO	12
7	FGD PSs	8

6. Findings - Concurrent Monitoring

This chapter presents the findings from the primary survey for the first round of Concurrent Monitoring. The findings for the concurrent monitoring of different project components like Individual Farmer Matching Grant, Community interventions, FFS etc are presented below in different sub chapters.

6.1 Respondent Profile

As part of the concurrent monitoring survey, the respondents were also enquired about various socio-demographic indicators like their religion, caste and income to get an idea about the demographic and socio- economic situation of the beneficiary group. A brief description of the socio-demographic profile of the respondents is presented below:

Religion

The religion profile of the respondents across both project and comparison areas is similar. The proportion of Hindus is highest with 97% and 96% of the respondents being Hindu respectively. The proportion of Muslims is only 2% in project area while none were part of the sample in the comparison area. The percentage of Buddhists was higher in comparison areas at 4% compared to project area (at 1%).

Social Category

As evident from the figure on the right, the percentage of project beneficiaries from APL category is relatively higher in comparison area (62 % vs 56 %). It can also be observed that a substantial percentage (42 %) of project beneficiaries are from BPL category.

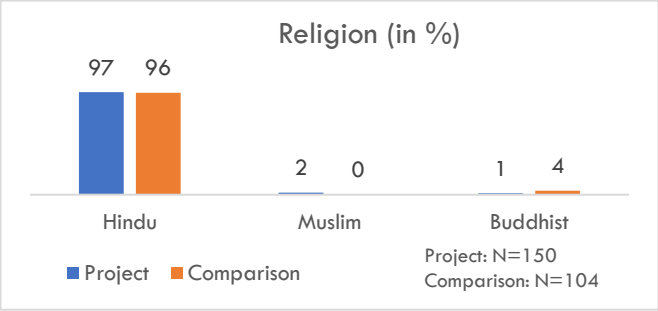

Figure 6: Religion of respondents

Family Characteristics

The average number of members in a household was observed to be 5 in project villages with the minimum number being reported as two members and maximum number of members as 20. The distribution of nuclear families was 41% and joint families was 59% among the 150 respondents.

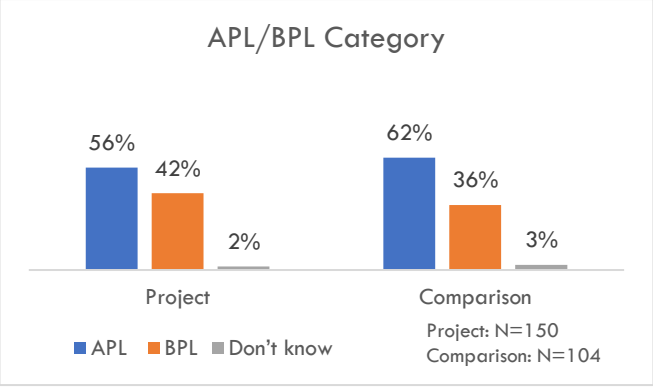

Figure 7: Social category of respondents

In the comparison area too, the family size was observed to be similar with average number of household members in a family observed to be 6 with minimum number of members as two and maximum number being reported as 19. The percentage of nuclear families was lower at 32% while joint families were 68% from among the 104 respondents.

Income

The main source of income across the study area is agriculture with 71% of the beneficiary respondents in project villages and 80% respondents in comparison villages acknowledging the same. Unskilled wage labour is the second most reported source of income at 18% and 12% respectively, with project villages

reporting higher proportions. Livestock and skilled work are practiced by a very minor percentage of population in the study area.

We see that the average annual income was relatively lower in project area at INR 1,47,513/- with the minimum being reported as INR 10,000 p.a. and maximum at INR 12,00,000 p.a. In contrast, the comparison areas reported an average annual income of INR 158799/- with the minimum recorded as INR 15000 p.a. and maximum at INR 10,00,000 p.a. It can be said that the beneficiaries in comparison areas are relatively better than those in project area.

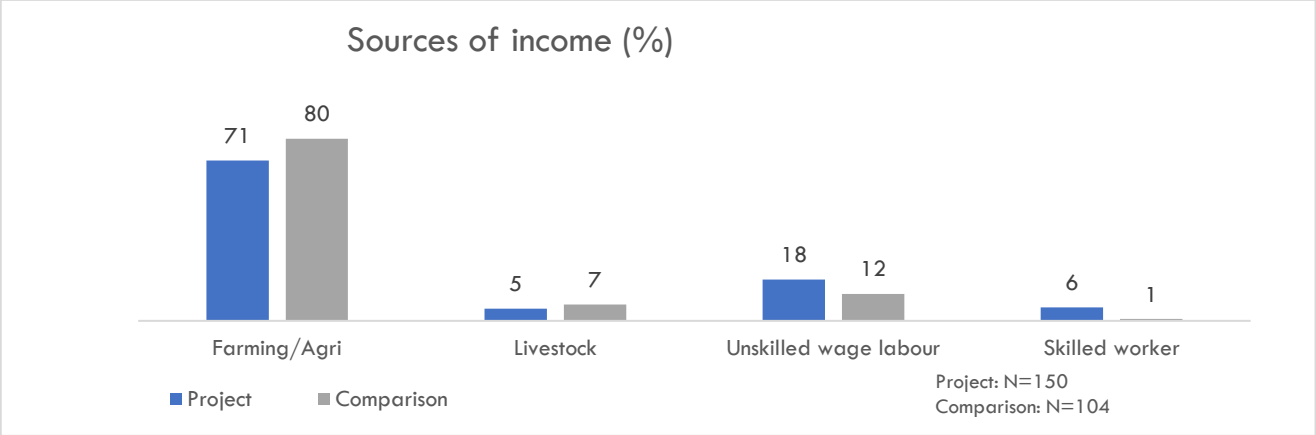

Figure 8: Sources of income in study area

6.2 Agriculture and cultivation Practices

The project beneficiaries and the comparison beneficiaries of similar interventions were also asked about their land ownership, cultivation practices, and irrigation practices for the last 12 months. This section presents the findings on the above listed areas of enquiry.

Land ownership

As farming is the main occupation (Figure 8), almost all the respondents in the study area owned land with 96 % in project area and 97 % in comparison area acknowledging that they own land. On an average, the average land holding of the beneficiary respondents in project area is 4.26 acres owned land and 0.65 acres leased land. Also, the average cultivable land area was reported to be 4.16 acres. The average land ownership of the beneficiaries in the comparison areas was slightly higher with average land-holding of 4.88 acres out which 4.71 acres was reported as cultivable. A very small size of only 0.14 acres was the average leased land size recorded. Overall, only 15% of all respondents reported leasing-in land for cultivation.

Irrigation Practices

The respondents were enquired if they had a source of irrigation on the land that they cultivated. 59 % of the project beneficiary respondents (N=150) acknowledged having a source of irrigation. In comparison, 75 % of the respondents in comparison area(N=104) had access to irrigation facility (Fig 9).

Furthermore, we asked those respondents who said they had a source of irrigation as to what were the sources of irrigation that they used to cultivate their land and multiple responses were noted for the same. It was found that dug-well and borewell found the highest percentage of users across both groups with

an average of 50% and 34% of the respondents acknowledging the same. When looking at the other sources, we found that 11% of comparison arm used the canal/river as a source of irrigation which is double that of project arm (5%). Earthen dam and check dam saw the least responses with only 6% of all respondents choosing it (Fig 10).

On further seasonal analysis of irrigation practices analyzing for seasonal irrigation practices of the area under study, in kharif season, 56 % of respondent beneficiaries in project area had access to irrigation facility while 68% of the beneficiary respondents had access to irrigation facility in the comparison area. Percentage of land under irrigation during Rabi season is almost equal across both the arms whereas it is higher in project arm during summer season (Fig 11).

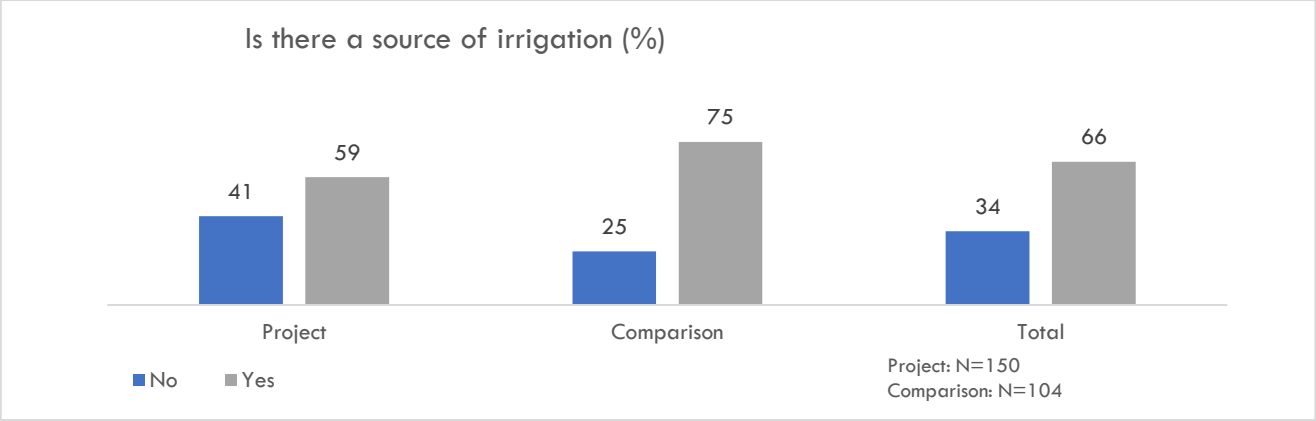

Figure 9: Respondents who have a source of irrigation

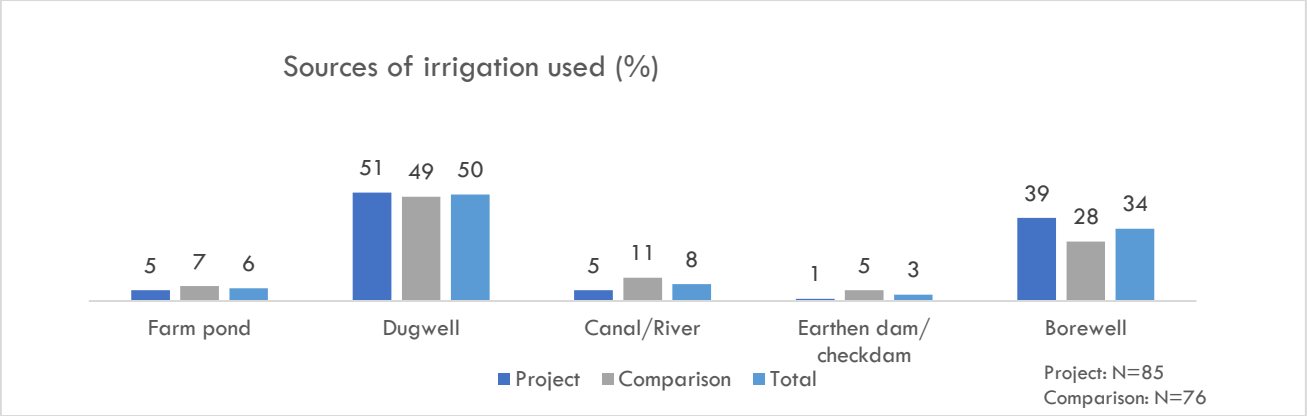

Figure 10: Sources of irrigation used

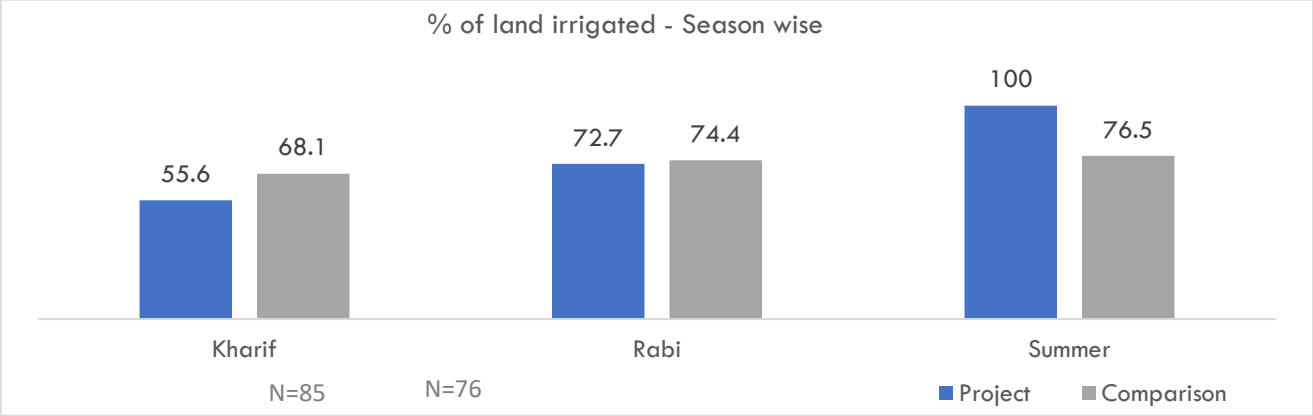

Figure 11: Percentage of land irrigated season-wise

Cultivation Practices

In Kharif season, the major crops grown are soybean (33%), cotton (21%) and pigeon pea (15%) reported by 245 respondents (Fig 12). However, only 55 % (i.e. 136 respondents) of the beneficiaries who had cultivated in Kharif season reported of practicing agriculture in Rabi season. Of the crops sown in Rabi, chickpea (41%), sorghum (25%) and wheat (19%) were the most commonly cultivated crops (Fig 13).

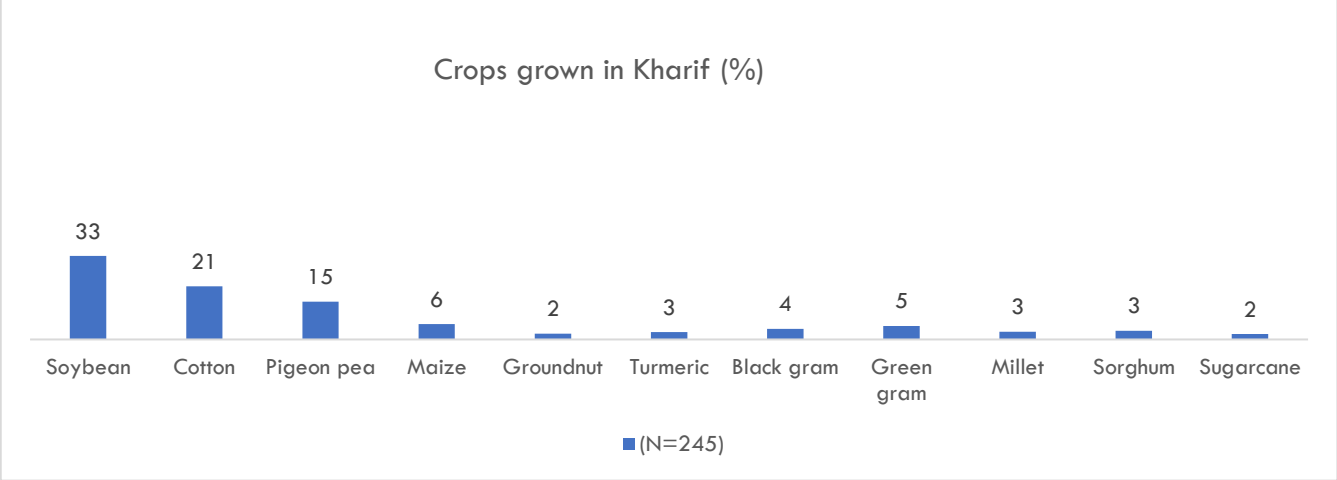

Figure 12: Kharif Crops

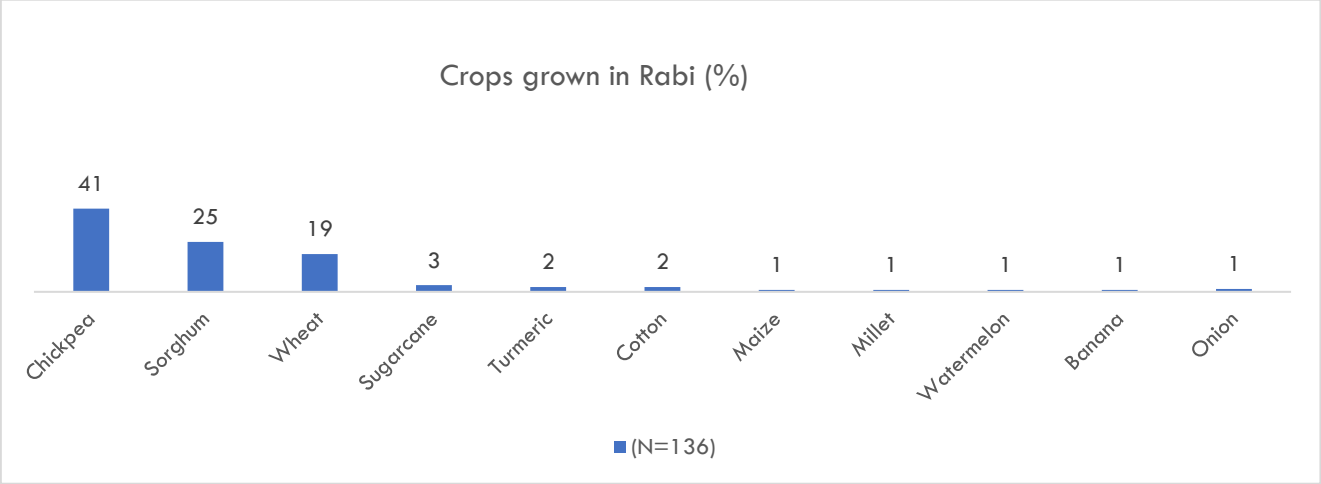

Figure 13: Rabi crops

When asked about cultivation of orchard, only a small percentage of beneficiary respondents (17 %) reported cultivating orchards. Total land under orchard cultivation was similar across both the arms at 40.5 acres for project arm and 43.5 acres for comparison arm. Lemon or lime and mango were the most cultivated crops at 47% and 29% respectively. Banana, grapes and guava were all cultivated by less than 15% of the total respondents.

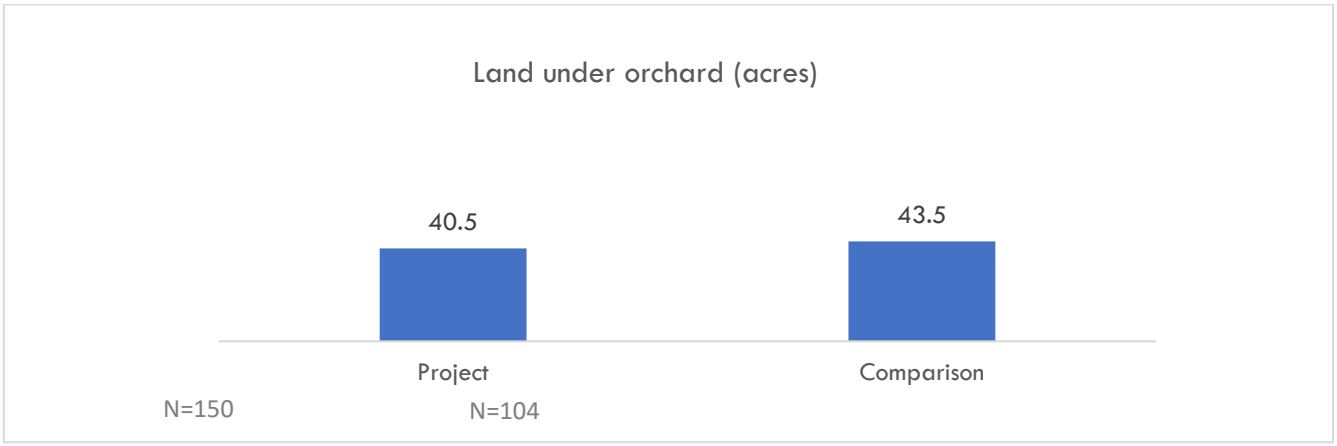

Figure 14: Land under orchard cultivation

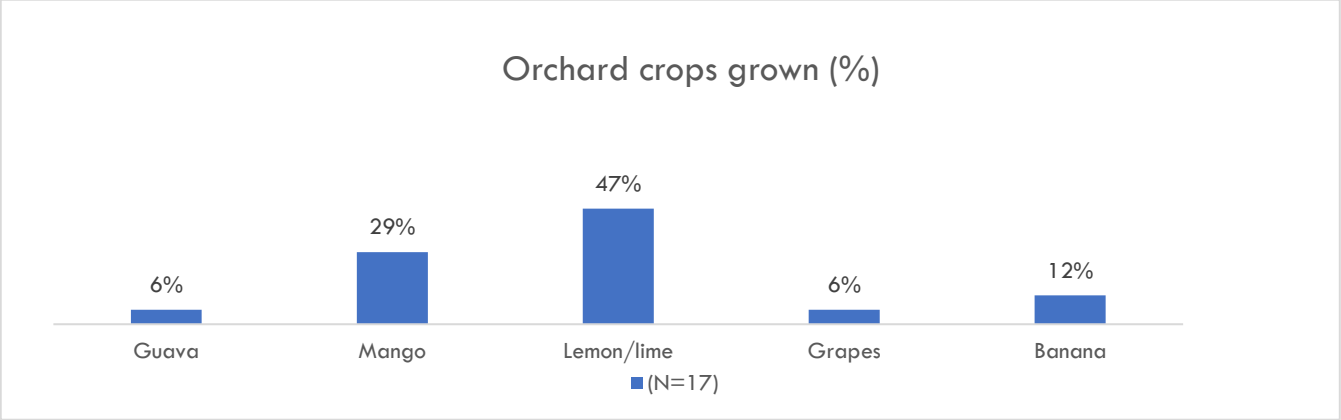

Figure 15: Crops under orchard cultivation

We also inquired what proportion of the total land cultivated by the farmers was sown using hybrid seed varieties. For cotton, it is observed that almost all the land was cultivated using hybrid variety. For chickpea, pigeon pea and wheat cultivation, approximately half of the land was under hybrid varieties while the rest was sown using local variety of seeds. Soybean saw the highest land under cultivation at 498 acres of which 386 acres was under hybrid seed cultivation and only about 100 acres was sown using local seed varieties.

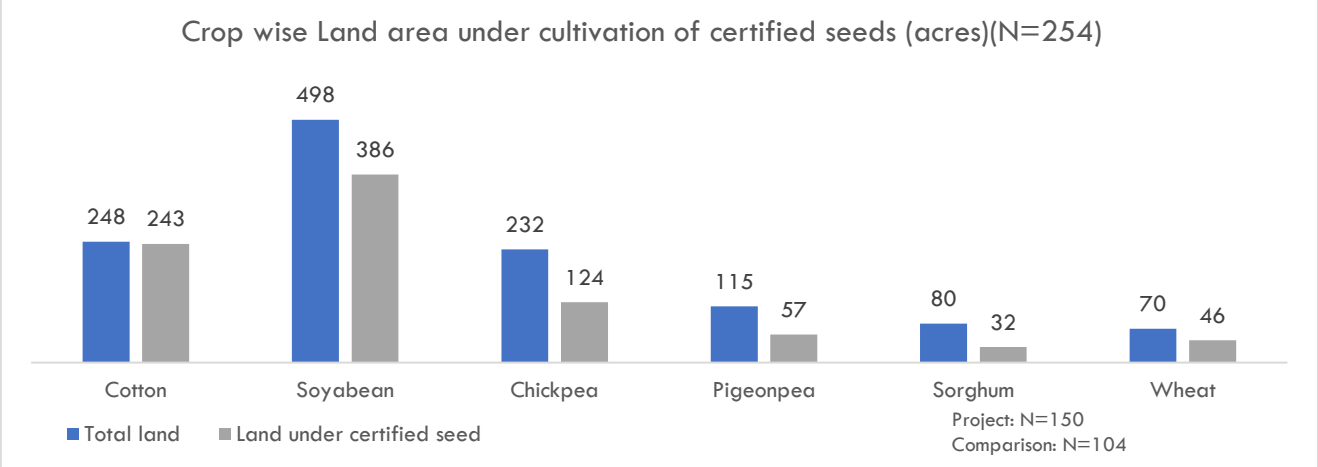

Figure 16: Land cultivated using certified seed varieties

The study also aimed to analyse the percentage of area cultivated by using certified seeds, specifically for soybean, pigeon pea and chickpea. Almost 83 % in project area and 72% in comparison area was sown using certified seeds for soya bean, 76% in project and 39% in comparison for chickpea and 56% in project and 45% in comparison for pigeon pea. For chickpea, the most popular variety was Vijay, with 50% of the respondents saying it was the certified variety they used. For millets, PKV-Tara and Vipula received more responses. For soybean, JS-335 was the most popular seed variety used. Similarly, for pigeon pea JS-335 and BDN-711 were sought after varieties. For cotton, Ajit and Mahamandal were the varieties preferred by the farmers.

6.3 Beneficiary Awareness about PoCRA

Source of Information

The source of information about PoCRA in project area and about similar interventions in comparison area was enquired to understand the most popular modes of information dissemination in the project beneficiaries. From the data, it was found that village-level mobilizers like project staff and VCRMC members are more effective than hoardings and advertisements. Among the project villages, 34% of the respondents were informed about the different schemes through the project staff like Agricultural Assistant and Community Assistant, 31% were informed through gram Sabha meetings and 24% through VCRMC members. The major chunk of information for comparison villages came from Gram Sabha meetings (43%), project staff (36%) and family and relatives (13%). Overall it can be said that role of friends and relatives and hoardings and advertisements is less in spreading awareness about the project benefits.

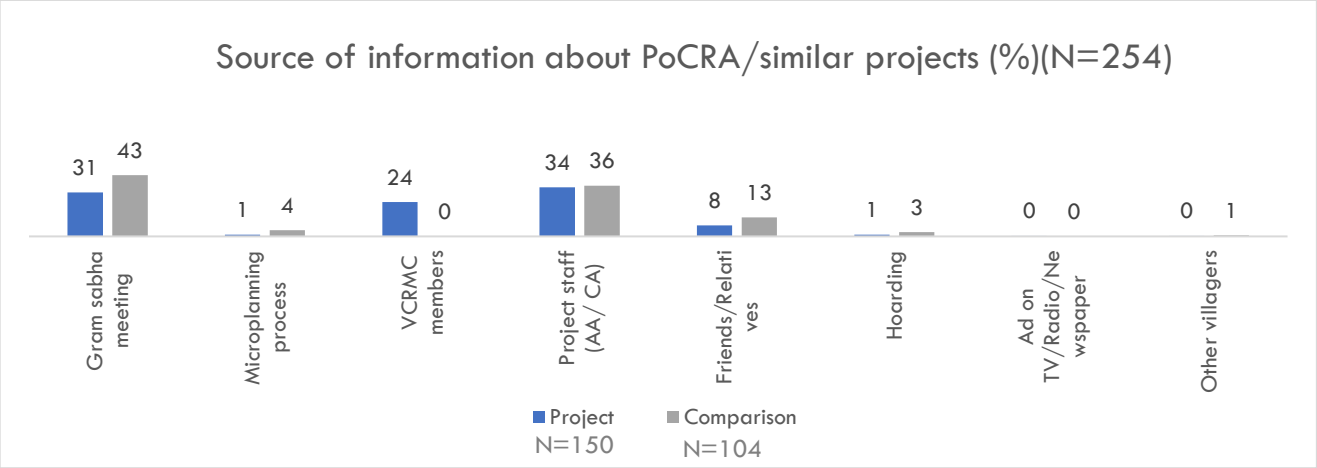

Figure 17: Percentage land sown under certified seeds

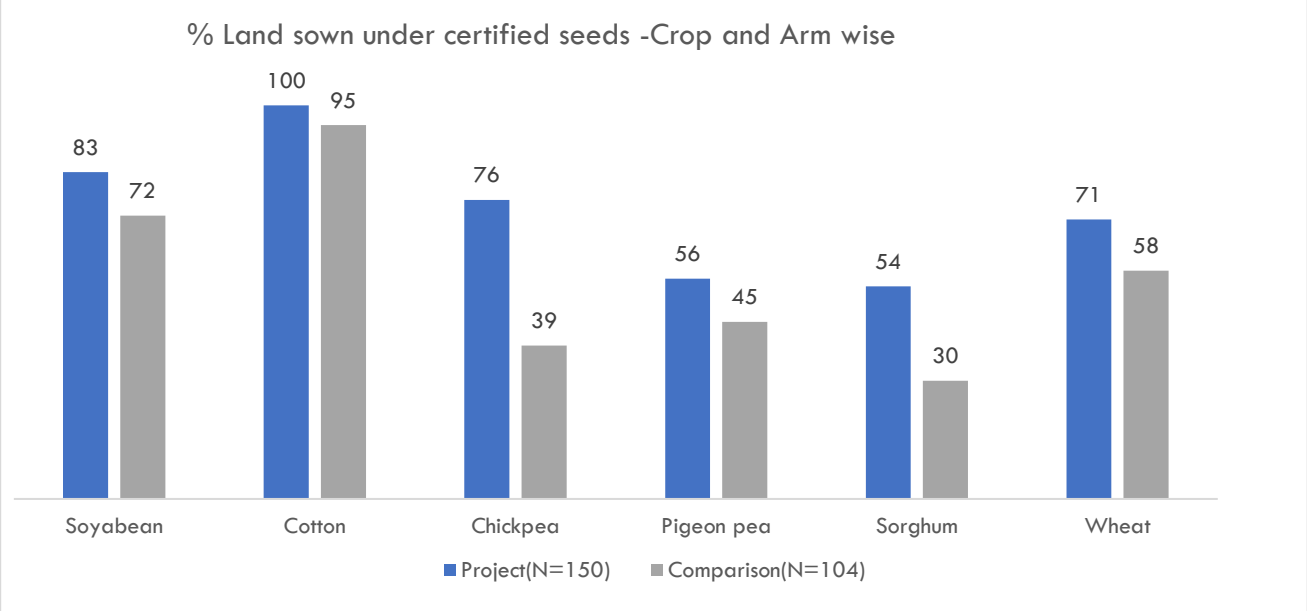

Figure 18: Source of information on PoCRA benefits

Awareness of application steps through DBT Application

Under the PoCRA project, online applications through the Direct Beneficiary Transfer (DBT) app are being promoted to ensure transparency in the application process. The project beneficiaries were enquired about their awareness on the steps in availing benefits from the DBT portal, starting right from registration on the portal to transfer of the matching grant into the beneficiaries account. The highest awareness was for *Registration on DBT portal* at 51% and *application for matching grant* at 58%. It can be observed that the awareness of the respondents about the in between individual steps of the DBT application process was not very high, as from the qualitative interviews too it was evident that in most of the cases AA or CA are applying on behalf of the beneficiaries.

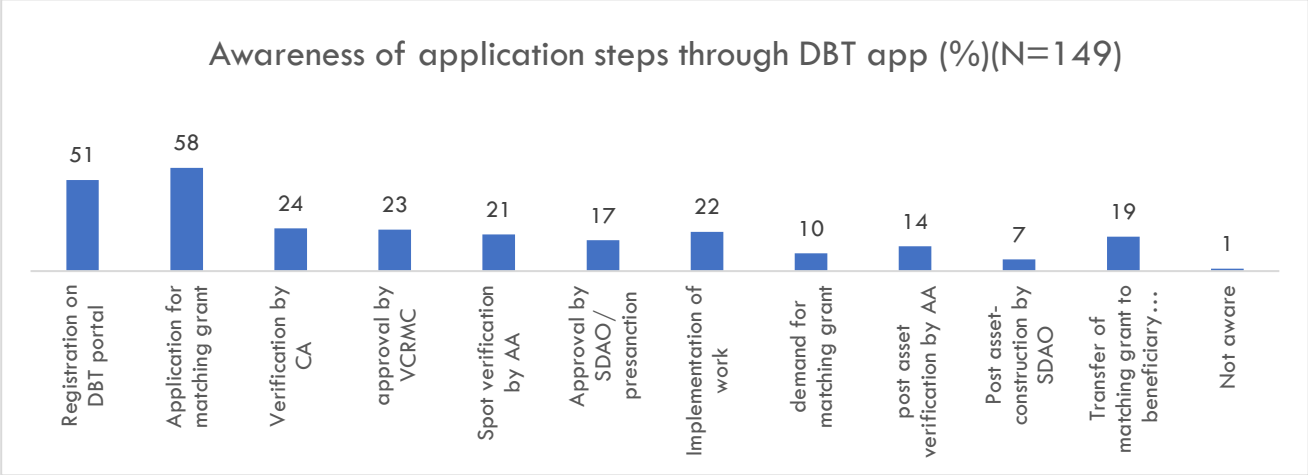

Figure 19: Awareness of respondents on application process through DBT portal

Awareness of different benefits that can be availed under PoCRA

The project arm beneficiaries were also enquired about their knowledge of the different benefits that can be availed as part of PoCRA. It is evident from the below graph that the maximum awareness amongst project beneficiaries was for *matching grant for purchase of water pumps/pipes/drip irrigation systems or sprinklers (73 %) and* for *construction of artificial recharge of open Well and bore wells (62 %)*. Very few beneficiaries were aware about community benefits under PoCRA like *Catchment area treatment using Continuous Contour Trenches (CCT) and Construction of Subsurface drainage wherever the land slope permits good drainage*. Beneficiary awareness for *matching grant for developing Seed Processing and Seed Testing Infrastructure* and *Production of foundation and certified seed of climate resilient varieties* was also observed to be low.

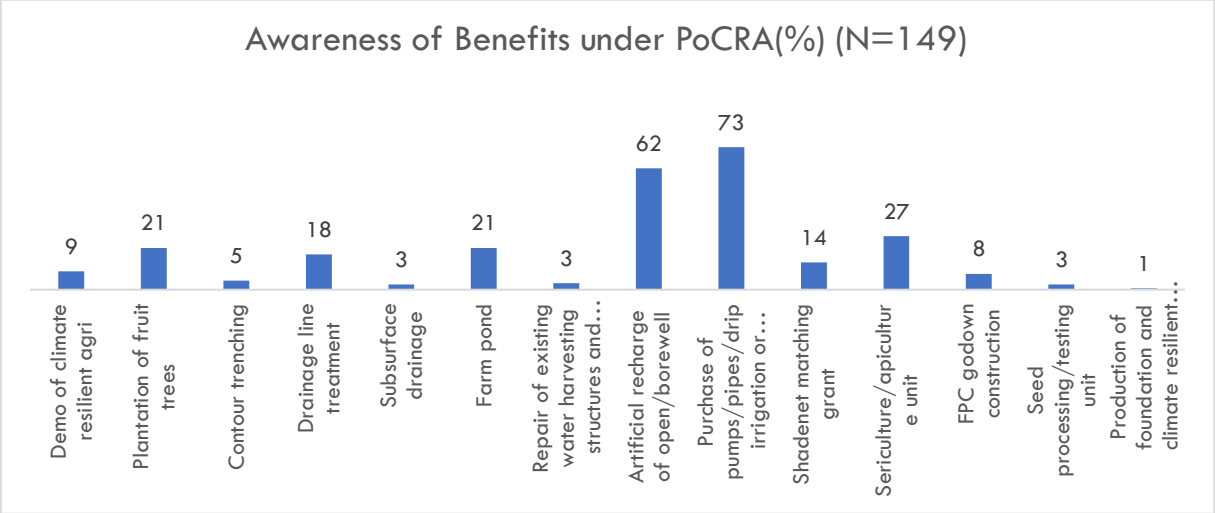

Figure 20: Awareness of respondents on benefits under PoCRA

6.4 Individual Farmer Matching Grant

This sub- section presents the findings from the concurrent monitoring of the Individual Farmer Matching Grant component based on the quantitative interviews with project beneficiaries and beneficiaries of similar benefits in comparison area and qualitative interviews with key project stakeholders.

6.2.1 Applications for individual benefits using DBT portal

As presented in the sample coverage section, out of the 149 respondents for individual components, 99 were from project arm. Out of the beneficiaries who have registered or applied through DBT portal, 23% had only registered on the portal while 77% had applied for at least one individual grant benefit.

The respondents who had only registered on DBT portal but had not applied or any benefits were probed about the reason for the same. Out of these, 72% said they would be applying soon. However, for approximately 23% of the respondents, the reasons for not applying lay in being unable to meet the conditions of the grant such the eligibility criteria, arranging required documents or arranging funds. Through the qualitative interviews, it was understood that a few beneficiaries did not have complete knowledge about PoCRA at the time of registration and later found out that they did not fit the eligibility criteria, for e.g. criteria of owning less than 5 acres of land (according to 8A form). Some did not have the required documents to apply and were trying to arrange for them, e.g. landless certificate is required to access the benefits targeted at landless people. After registering, when they understood the process, they realized they would need to invest upfront. Here, lack of funds in a few cases inhibited them from continuing with their application. Also, due to the timing of our study, we found applications had been stopped due to election code of conduct.

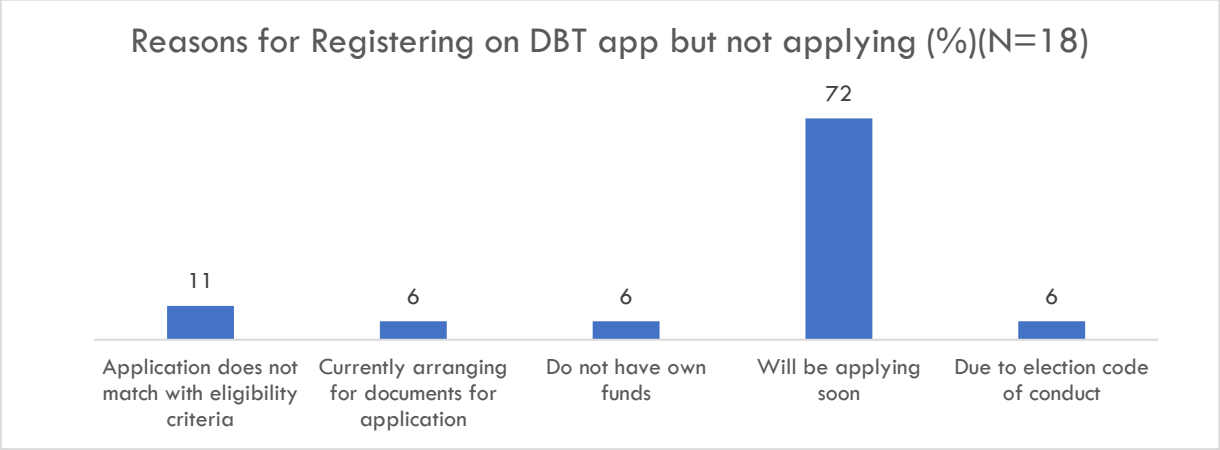

Figure 21: Reason for registering but not applying for benefit through DBT

Respondents who had applied for benefits (in both project and comparison arms) were enquired about the type of benefits they had applied. As evident from the below graph, it can be observed that open dug well were popular among both project and comparison regions as approximately 20% respondents have applied for it. Equally demanded benefit in the project area was pipes at 22%. The other in demand benefits in project arm were drip irrigation, sprinkler irrigation, horticulture crops water pumps and small ruminants. In comparison arm, it was observed that the other popular benefits were small ruminants, drip irrigation, farm pond lining and sprinkler irrigation

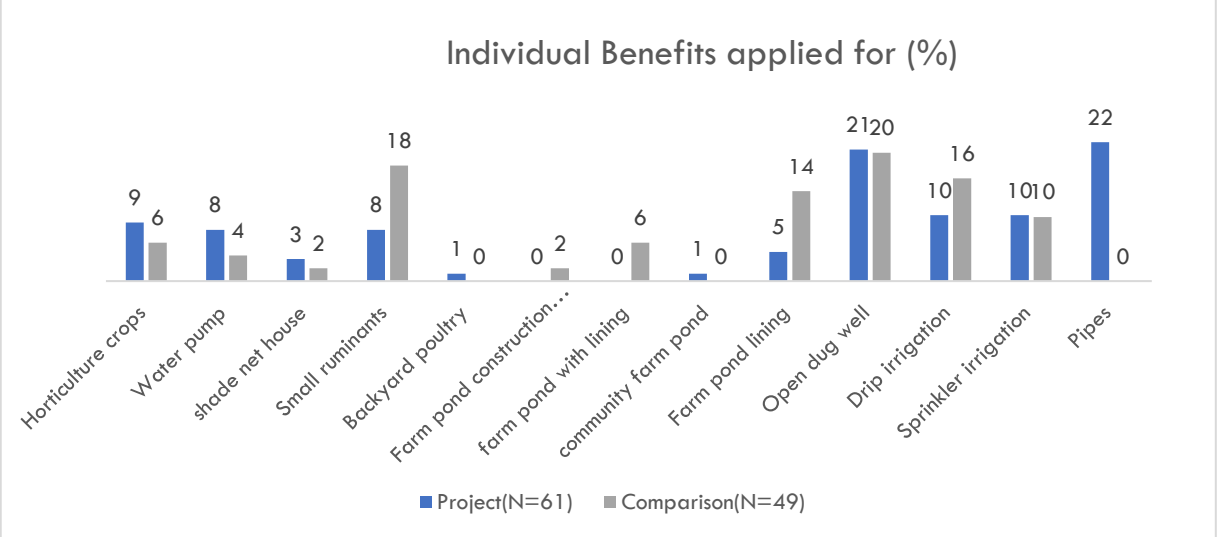

Figure 22: Benefits applied for by respondents under different schemes

The project arm respondents who had reported that they have applied for project benefits were also enquired the status of their application. Over a third of the applicants (34%) reported that have were still in the first step of having applied for a grant, 15% were awaiting approval by the cluster assistant, 11% were awaiting approval by VCRMC and 14% required spot verification by the agricultural assistant. Only 5 % had reported that they have received the matching grant in their account. Also, 8% of the respondents were not aware of the status of their own application.

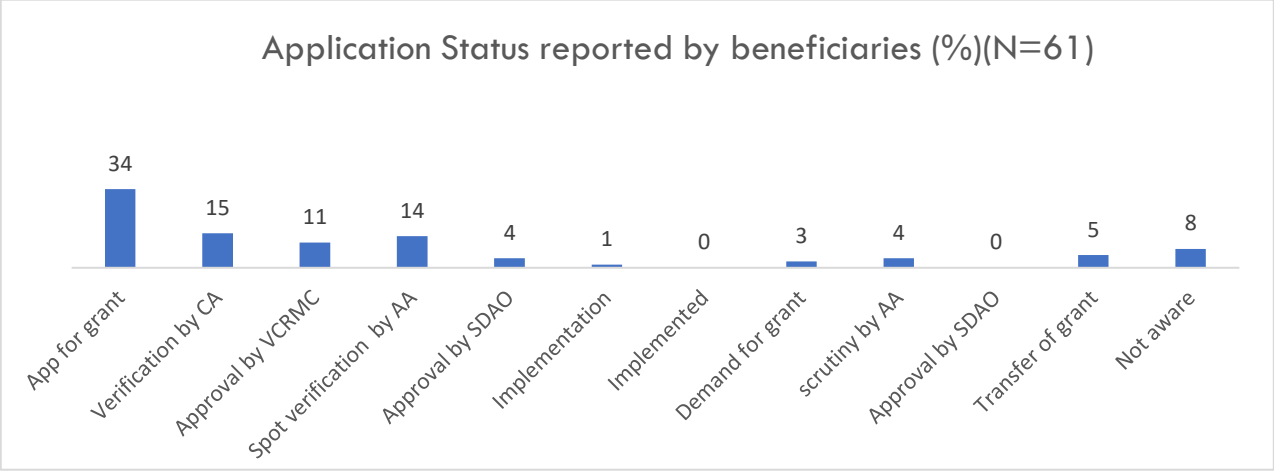

Figure 23: Status of DBT application as reported by beneficiaries

6.2.2 Feedback of Application Process

The surveyed beneficiaries across project and comparison were enquired that who had motivated them to apply for the different grant benefits. It can be observed that the biggest motivators for applying for the different grants and benefits are the project staff in both comparison and project areas (C:39%, P:32%). In addition, VCRMC members of the project areas also played a crucial role with 28% respondents saying that they were motivated by them. Also, 17 % respondents in project arm and 25 % respondents in comparison arm were self-motivated to apply for different benefits under the project. It can be observed that friends and neighbours, and family members have less influence on the motivation to apply. It can be said that it's mostly the project staff and the village level institution members who are motivating or pushing the beneficiaries to avail the project benefits.

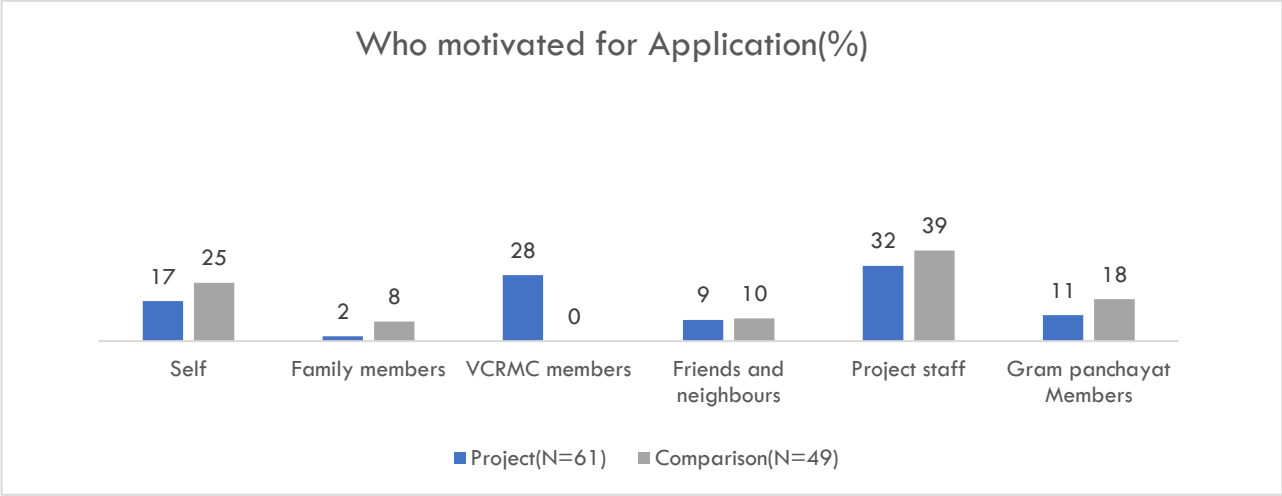

Figure 24: People who influenced decision to apply for benefits

The respondents were also enquired about their key reason for applying for the individual matching grants. As evident from the below graph, majority of the respondent beneficiaries has applied for these benefits either to increase their income or agriculture production or to increase their water supply. It is evident that climate-friendliness is not a major motivator, with only 9% of the respondents from both

project and comparison areas mentioning it. If more awareness is brought to the people, they could be motivated to choose benefits based on their climate-resilient properties too.

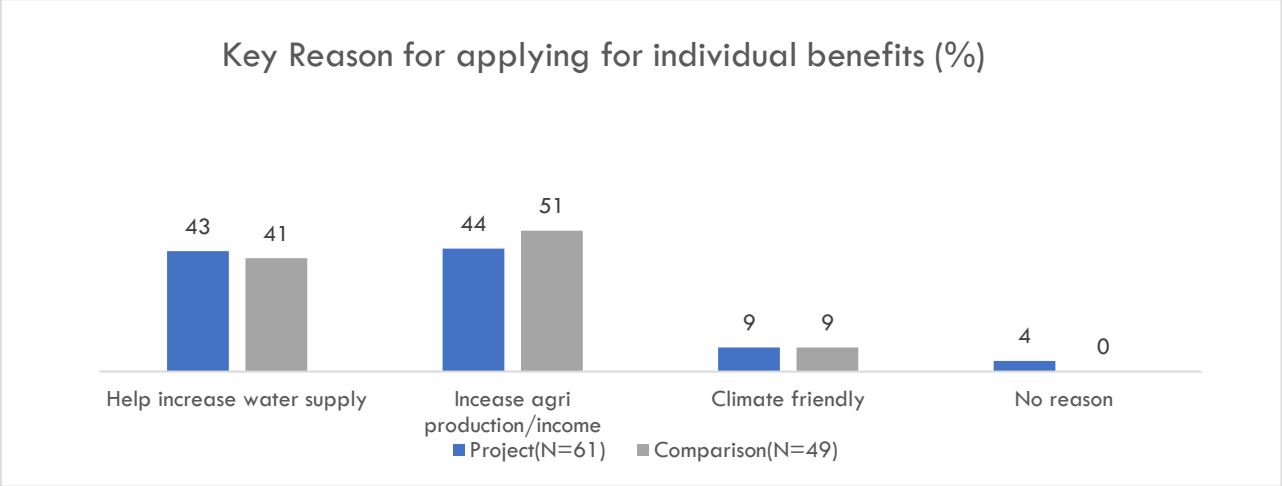

Figure 25: Reason for applying for benefits under different schemes

The beneficiaries who had reported their application is in asset construction or later stage were enquired about the sources from where they had arranged money to construct or purchase this asset. As evident from the below graph, majority of the respondents have arranged funds on their own (54% in project and 61 % in comparison) or from their friends or family (23% in project and 22 % in comparison). It is observed that no respondent availed loan from the bank or NBFC in the project arm. Strengthening loan availability from banks and microfinance companies could enable more farmers to benefit from the schemes. As PoCRA and most of the other schemes in comparison area too require upfront funds to build the asset, arranging funds for upfront payment is a major deterrent for potential beneficiaries in availing project benefits which also evident from the qualitative interviews with the project implementers.

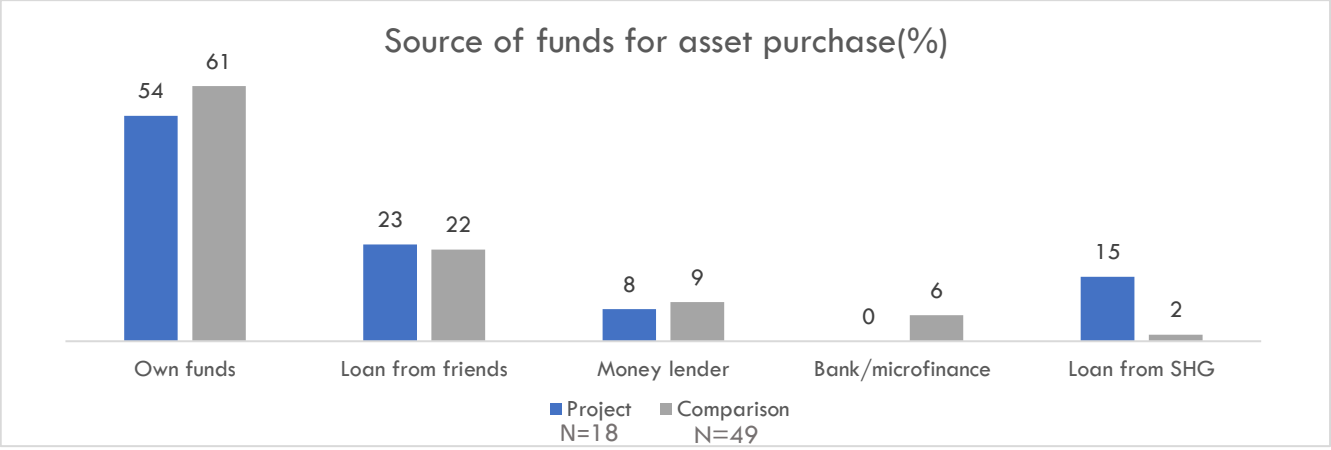

Figure 26: Source of fund for purchase of asset under scheme

The respondents were enquired that who had supported them in applying for these individual benefits. Since the application of schemes is through the online portal, the farmers usually require some support in applying for the benefits. In project areas, 32% of the respondent claimed to receive this support from VCRMC members, while 24% were assisted by Agricultural assistants. In comparison, 33% of the non-

project respondents had applied through e-Sewa kendra, 27% with support of agricultural assistant and 20% from gram panchayat. It can be observed that a very low percentage of beneficiaries had applied on their own or with the support of friends (7 % in project and 8 % in comparison) and neighbours is also very low, which shows that external support is required for application.

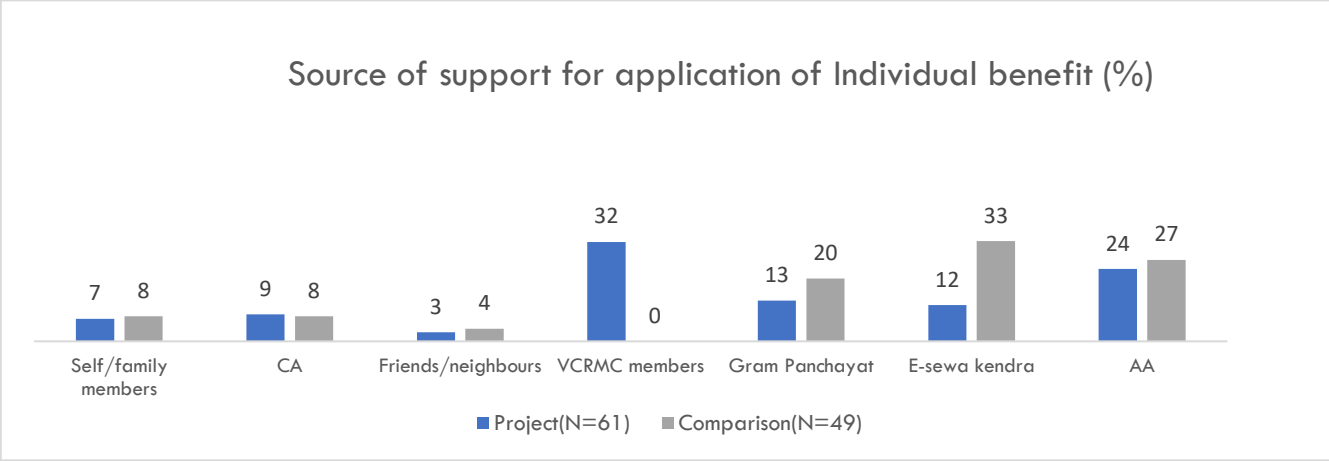

Figure 27: Person/group which supported in filling application for individual benefit

6.2.3 Challenges faced during application

The beneficiaries in both project and comparison arm were enquired if they had faced any challenge in accessing project benefits. Only 22% of respondents from project areas and 18% respondents from comparison areas stated that they faced issues while trying to access benefits under different schemes.

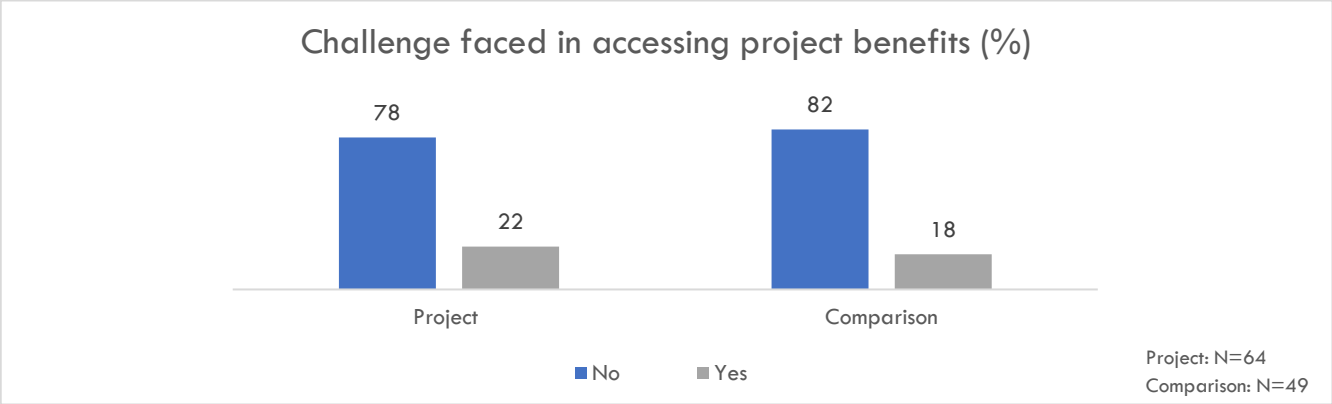

Figure 28: Respondents facing challenge in accessing project benefits

The beneficiaries who had acknowledged facing challenge in accessing project benefits, were further enquired about the type of challenge they had faced in accessing project benefits. In the project areas, delay in sanction from the project staff (38%) and problem in applying due to internet connectivity issues (33%) were the main challenges. In the comparison areas, lack of clear- cut guidelines (33%) and problem in applying due to internet connectivity issues (27%) were cited as the main problems. A few people had also pointed out lack of support in the registration and application process (10 % in project and 13 % in comparison) as one of the challenges in accessing project benefits.

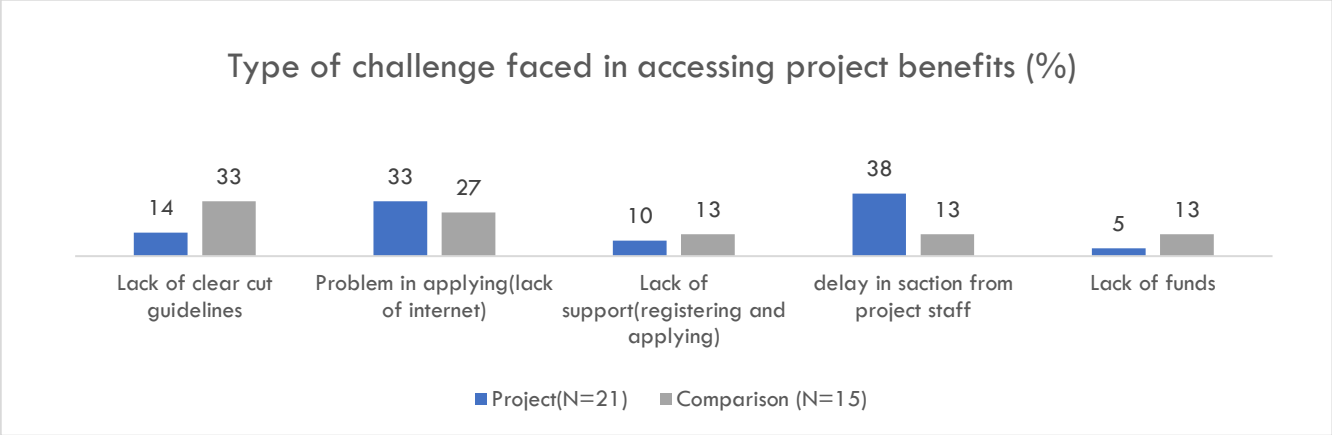

Figure 29: Challenges faced by the respondents in accessing benefits

The respondents were also asked if they had to incur any cost in accessing project benefits i.e. in the application process. In comparison areas, a higher percentage of beneficiaries reported of incurring cost in accessing benefits (76 % in comparison vs 50 % in project). These costs were majorly in terms of documentation costs (47% in both arms), followed by transportation costs and loss of wages due to the time spent on applications. The percentage of respondents who felt so was found to be similar in both areas. Amongst the beneficiaries who had incurred cost in the application process, the average cost in project arm lesser i.e. INR 282 as compared to INR 377 in comparison arm.

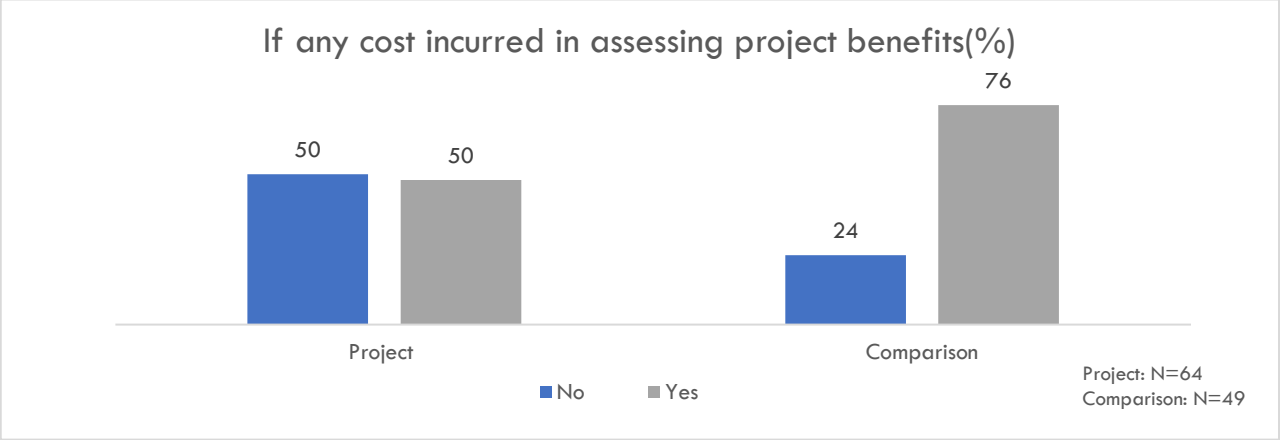

Figure 30: Any cost incurred in accessing project benefits

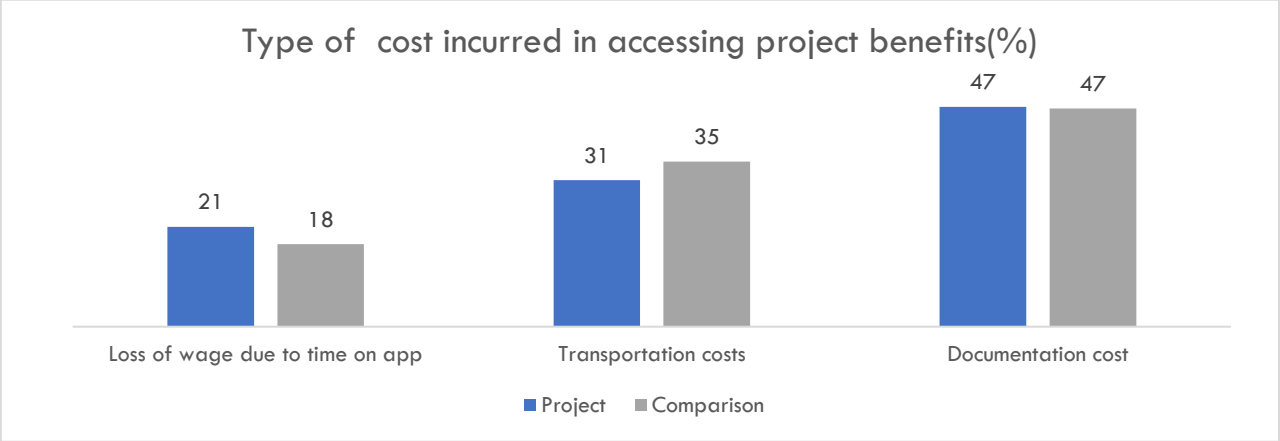

Figure 31: Type of cost incurred in accessing project benefits

The respondents were also asked if they thought the timeline for completing the asset construction activity was sufficient or not. We asked this across both project and comparison arm for benefits received from either PoCRA or other agricultural/ watershed/ husbandry projects.

In the project arm, 81 % of the beneficiary respondents acknowledged that the time available for completing the activity or creation of the asset is sufficient. In comparison arm, similar trend was observed as 78 % of the beneficiary respondents acknowledged that the time period for completing the asset was sufficient.

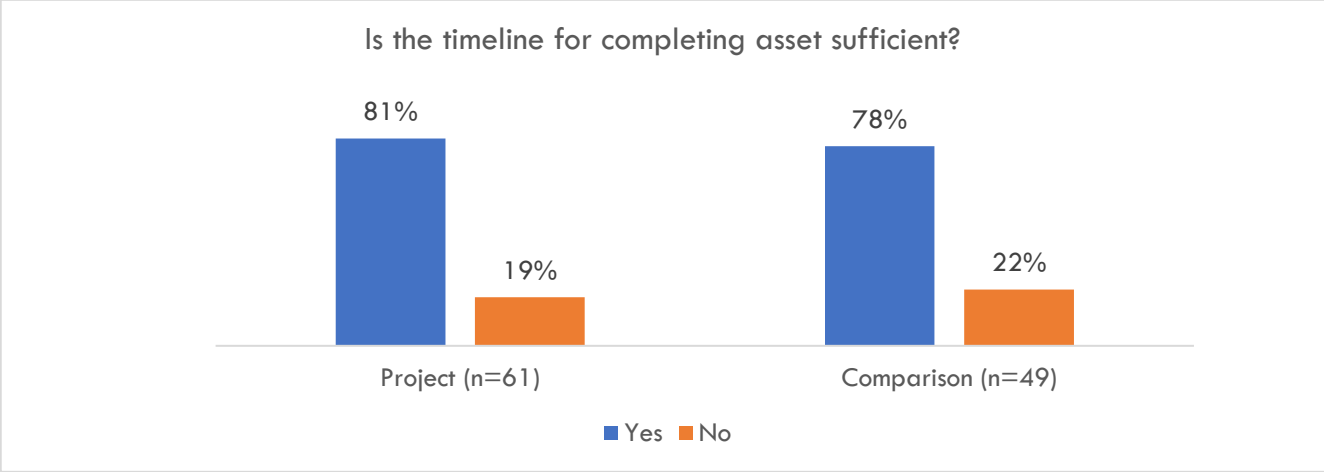

Figure 32: Sufficiency of timeline for asset construction activity

The assets in the project arm which were reported to be under implementation or implemented stage were also physically verified. It was observed that all 10 individual assets which were under implementation or implemented stage were found during physical verification. Few of the assets which were verified during the physical observations have been presented below:

Figures 33A & 33B: Sprinkler irrigation in field; Motor and pipe for pumping water from well


Figure 34A & 34B: Bore well and Pipe; Goat-farm received under PoCRA

6.2.4 Stakeholder Feedback

As mentioned above in the methodology section, feedback of the key project stakeholders including VCRMC members, Agriculture Assistant, Cluster Assistant, SDAO, DSAO/PD ATMA and Project Specialists was sought on PoCRA and on each project component including individual farmer matching grant. The area under study has seen water scarcity for the past few years. Thus, schemes related to water availability and irrigation such as pipes, wells, drip and sprinkler irrigation received maximum applications from farmers under individual grants benefits. The benefits cited by farmers with these schemes are increased water availability, increased crop production and better income. Landless beneficiaries applied for rearing small ruminants as it did not require land and provided an additional source of income. This feedback is in line with the MIS data as per which maximum benefits are received for pipes, water pumps, sprinkler irrigation, small ruminants, and farm ponds.

During the qualitative interviews with the key project stakeholders, the reasons for rejection and delay in individual grants were also enquired. Applications were rejected mainly when the applicants did not meet the eligibility criteria for the particular benefit they had applied for. For example, farmers without a water source had applied for drip and sprinkler irrigation. Similarly, some farmers with landholding of more than 5 acres had applied under PoCRA. Beside these, applications were also rejected due to inability

to provide landless certificate as required which needs to be provided by landless beneficiaries, inability to provide Aadhar linked bank account or land papers (7/12 document). Applications for wells get rejected if they are not per GSD Department guidelines (max eight wells in 1 km^2). Approval from the concerned department is required to process these applications.

The key reason for delay in accessing individual grants as reported by project stakeholders were also enquired. Majority of the stakeholders reported that internet connectivity issue specifically in the interior villages was a major bottleneck due to which potential beneficiaries are not able to apply. Shortage of manpower was also reported as a key cause for delays as each AA or CA has many villages (6-10) under him to cover. In addition to their specified role, the potential beneficiaries are dependent upon them to fill their application form on the DBT portal. This is because many farmers are not competent to apply through DBT portal, as is evident from Figure 28 above. This has further increased their workload and slowed down the application process. It was also reported that the multiple stages in the current application process leads to delay. One AA mentioned that approval at SDAO stage takes time. It was also reported that spot verification and measurement of assets like open dug wells also takes time. Also, it was found that initially in many villages, applications were received offline which were then required to be re-entered which had led to delay in the application process.

During the qualitative interviews, the surveyed stakeholders were also asked about the key challenges faced in the implementation of the individual farmer matching grant component. Further they were also asked about the proposed solutions for these challenges. The reported key challenges and their proposed solutions in the implementation of individual grant component have been presented below:

1. *Difficulty in arranging funds by the potential beneficiaries for upfront payment to purchase/ construct the assets. This is reported to be one of the biggest changes by all stakeholders*
   Facilitating bank loans for the applicants receiving pre sanction would help farmers arrange funds for purchasing or constructing the asset. Secondly, it was suggested that if feasible, mechanism should be developed by which the applicants need only need to pay the amount which excludes the grant/subsidy amount and the grant subsidy amount can be directly paid by the project.

2. *Many poor and marginal farmers feel that the current matching grant is less as they cannot afford the assets event with the current provided matching grant.*
   Matching grant could be increased for benefits which are high in demand by the poor and marginal farmers.

3. *Lack of capacity of farmers or potential beneficiaries to apply through DBT portal on their own.*
   One to two resource persons (e.g. Krushi Mirta) should be trained in each village who can help the potential beneficiaries apply through DBT portal. It was also suggested to conduct training sessions for potential beneficiaries to training them on the process to apply through DBT portal.

4. *Network problem is a key challenge, specifically in interior villages due to which potential beneficiaries are not able to apply online though the DBT application*
   It was suggested that DBT portal should have option to apply in offline mode too, especially in areas which have network connectivity issue.

5. *Lack of information amongst many potential beneficiaries regarding PoCRA and the benefits that can be availed under it.*
   It was suggested that regular efforts are required to identify potential beneficiaries who are not aware about PoCRA and then informing the about PoCRA and the benefits that they can avail through the project.

6. *Many poor and in need farmers are not able to avail project benefits as their total land holding is 5 acres of land even though their cultivable land is much less.*
   It was suggested that the eligibility criteria under PoCRA should also consider the cultivable land so that poor farmers with low cultivable land are also able to avail benefits under PoCRA.

7. *It was reported that farmers who have small landholding face difficulty in availing project benefits as they need to procure a minimum of 100 pipes to get matching grant under PoCRA.*
   It was suggested that customized scheme should be there for the farmers to purchase pipes as per the applicant's requirement.

8. *It was reported that farmers face issues in getting bills with GST hence in uploading their bills on DBT application.*
9. *As many eligible beneficiaries migrate and are not available in the villages for a substantial amount of time, therefore they are not available or interested to avail benefits of PoCRA project.*

6.3 Farmer Field School (FFS)

This sub- section presents the findings from the concurrent monitoring of the Farmer Field School component based on the quantitative interviews with project beneficiaries and beneficiaries of similar benefits in comparison area and qualitative interviews with key project stakeholders.

6.3.1 Farmer participation in FFS

As part of the concurrent monitoring, farmers who had participated in farmer field school were also surveyed. The FFS sample consists of 35 beneficiaries, out of which 33 farmers were from the project villages while 2 farmers were from comparison villages. Due to the small number of farmers from comparison villages, we have not distinguished between the two during analysis in the further sub-sections. Further in line with the sampling methodology, half were guest farmers (51%) while half were host farmers (49%).

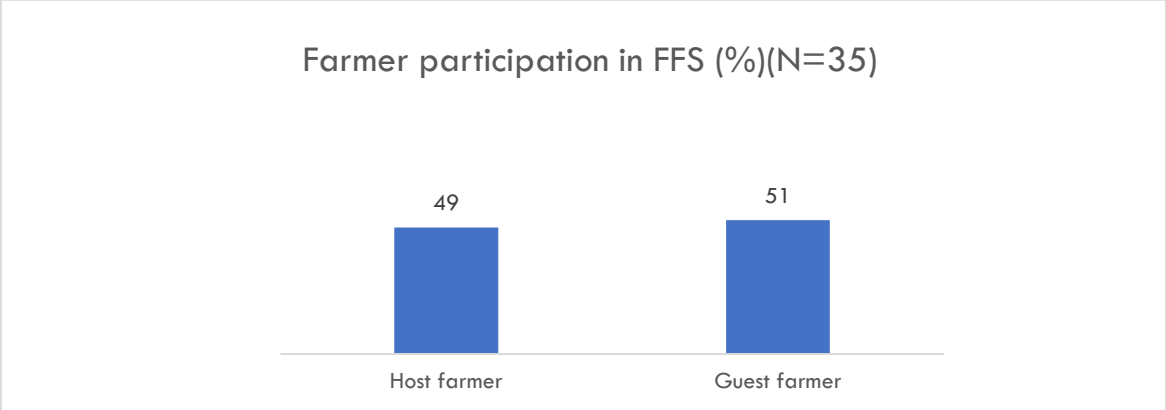

Figure 35: Farmer participation in FFS

The farmers who had participated in FFS were also asked about the reason for same. It is observed that almost an equal percentage of farmers (~42%) participated in the demonstrations to learn new technologies in agriculture and help increase their production. Though it can be observed that only 15% said that learning a climate-friendly technology was a motivator for them to take part in the FFS.

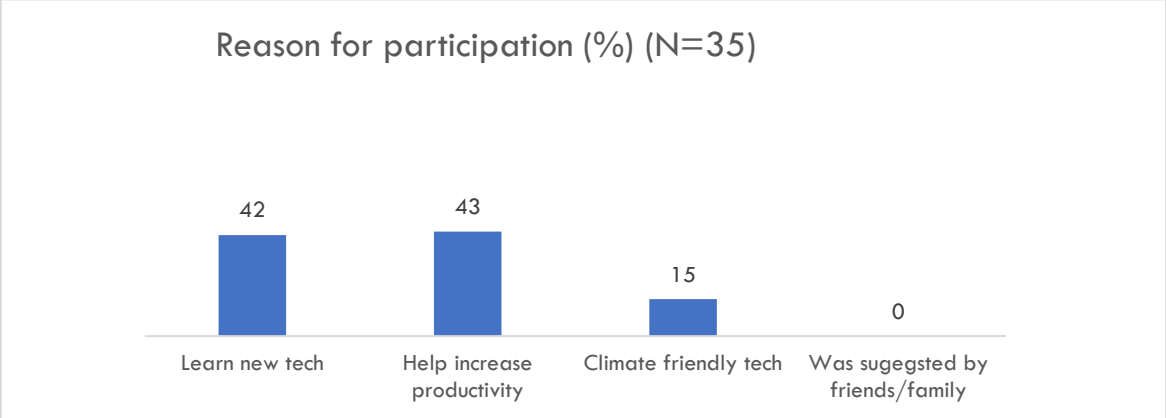

Figure 36: Reason given for participating in FFS

Feedback of AAs was sought through IDIs to understand the criteria that is followed to select a host farmer for the FFS session. It was reported that firstly the farmer should be interested in hosting FFS and should be a progressive farmer. Farmers having knowledge about the crops sown are preferred. Furthermore, the host farmer's farmland should be in the village or near the village. Road connectivity to his farm should be good so that the guest farmers can easily reach his farm. More importantly, the farmer should not have any issues with majority of farmers in the village and should get along well with them. He should be willing to associate with FFS for a period of two to three years and farmers who have hosted FFS in the past are preferred.

From the farmers who participated in the FFS demonstrations, 89% reported that they had attended all the demonstrations. The reasons given by the remaining 11% farmers for not attending all FFS trainings are that they had personal work (75 %) or that they were unaware of the schedule of the FFS (25%).

Strategies that are adopted to mobilized guest framers were also enquired through IDIs with AA. The key strategies which are adopted to mobilise these guest farmers are:

- The AA, CA and VCRMC members inform all the farmers informally about the FFS

- Through WhatsApp group of farmers of each village.
- Farmers are informed about the FFS and its benefits during Gram Sabha meeting
- Farmers who are self-motivated and progressive are asked to spread the word amongst other farmers.
- They are motivated by informing about the benefits of adopting new agriculture technologies

The climate resilient technologies, most frequently demonstrated as part of FFS, as reported by AA were Integrated Nutrient Management, Integrated Pest Management, organic farming, seed preparation, applying manure to fields, intercropping and BBF.

6.3.2 Benefits of FFS

The respondents were asked about what kind of benefits they think they have received by participating in FFS. It is encouraging to observe that 90% of respondents reported that they feel they have benefitted by attending the FFS. As evident from the below graph, better use of inputs (21%), awareness of good agriculture practices (19%), better soil health (16%) and increase in yield (16%) are the key perceived benefits reported by the FFS participants.

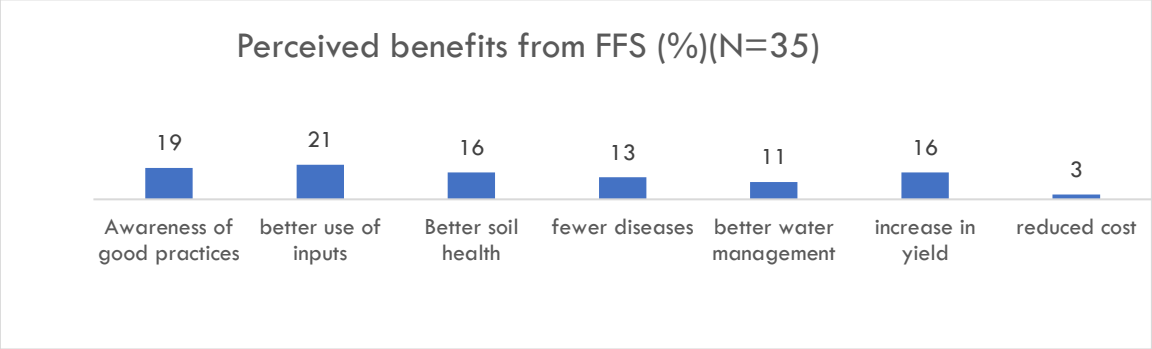

Figure 37: Perceived benefits of FFS

The reasons for the 10% farmers who did not perceive any benefits from the FFS trainings were that they felt the demonstration was not useful for them and they did not benefit from the technology adopted.

The effectiveness of the FFS was further measured against its perceived help in dealing with climatic vulnerability. 80% farmers said they have faced climate vulnerability (less rainfall, high temperature, dry spell, unseasonal rainfall) in the last one year. Of the farmers who attended FFS, only 8% did not find the technology useful or did not use it. 92% of the farmers found the technologies demonstrated in FFS trainings to be useful in dealing with climate vulnerability.

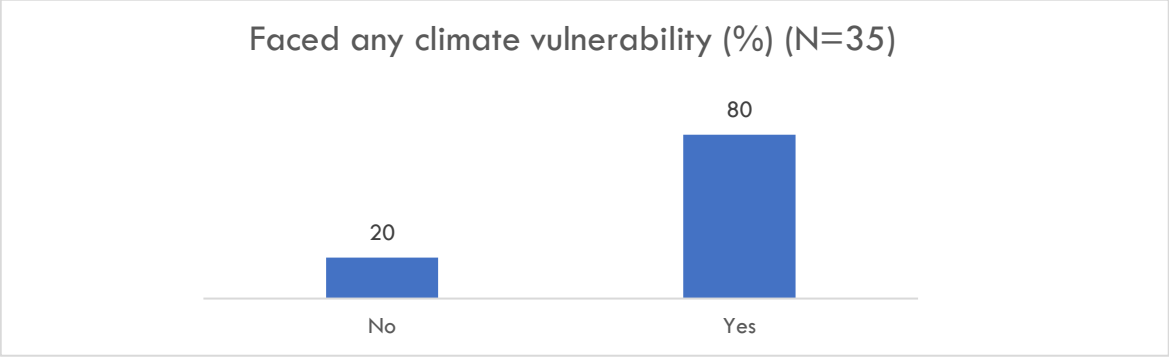

Figure 38: IF climate vulnerability faced by farmers in last one year

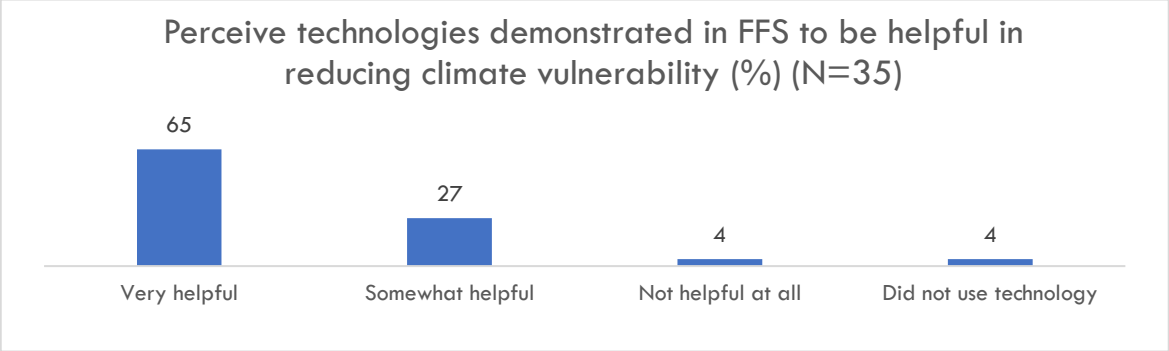

Figure 39: Demonstrated technologies help reduce climate vulnerability

Use of improved seed varieties, Seed treatment , use of climate resilient seed varieties, use of drip irrigation, INM , BBF and increasing water availability through farm pond and bore well were the measures which were reported to be adopted by farmers to mitigate the impact of climate change.

6.3.3 Adoption of Agriculture practices and climate resilient seed varieties

To assess if the surveyed beneficiaries in both project and comparison arm have received any training on climate resilient agriculture technology, all the respondents were enquired if they had ever received training on any agricultural technology. These also included technologies demonstrated under FFS (including BBF, seed treatment, INM, IPM etc), and technologies like shade net, poly house, rearing small ruminants, sericulture, planting citrus crops on broad ridges etc. It has been found that 79% of respondents from project area and 61% respondents from comparison area have reported to have received training on at least any one of these agriculture and allied technologies. In the project arm, 63 % respondents have received any training from sources other than PoCRA and 47 % have received training from PoCRA implemented FFS sessions. In the comparison area, 61 % of the respondents reported of receiving training from sources other than PoCRA.

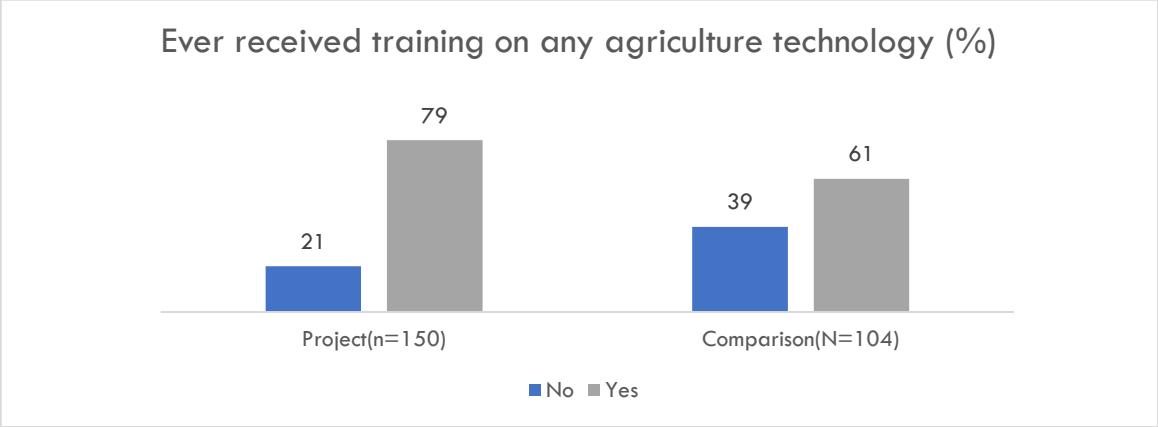

Figure 40: Received training on agricultural technology

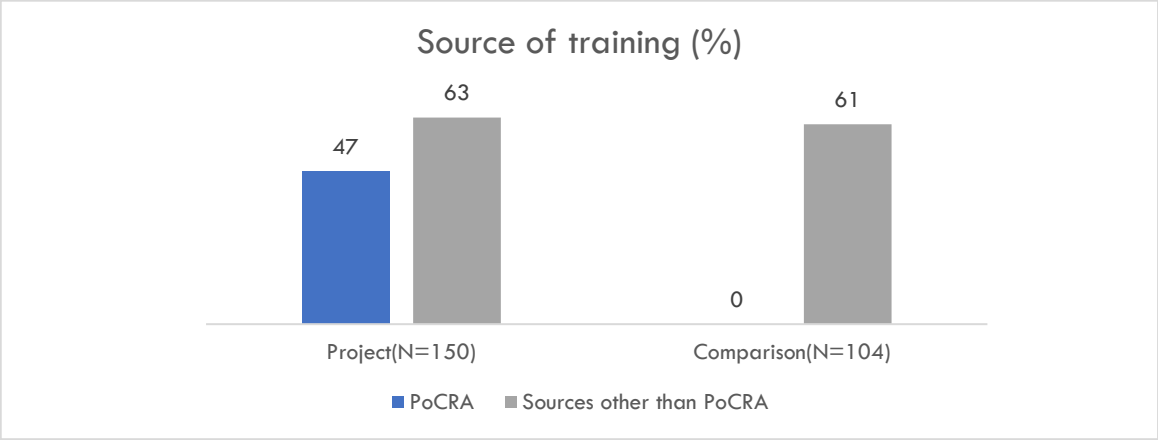

Figure 41: Agency which provided training

The technologies for which maximum respondents had received training are intercropping, improved seed varieties, biomass, seed treatment, IPM and rearing small ruminants (similar in project & comparison).

Further, for each technology, the study respondents were also asked if they had adopted that technology in the last one year. It has been found that about 97% respondents from both project and comparison villages said they had adopted some technology in agriculture. Of these, 88% had adopted any of these technologies even before receiving any training while 39% in project villages and 30% in comparison villages adopted the technology after receiving the specific training. Within project villages, it was found that a substantially higher percentage of people adopted the technology after receiving training from PoCRA as compared to other sources (59% vs. 46% respectively). This suggests that trainings by PoCRA are more effective.

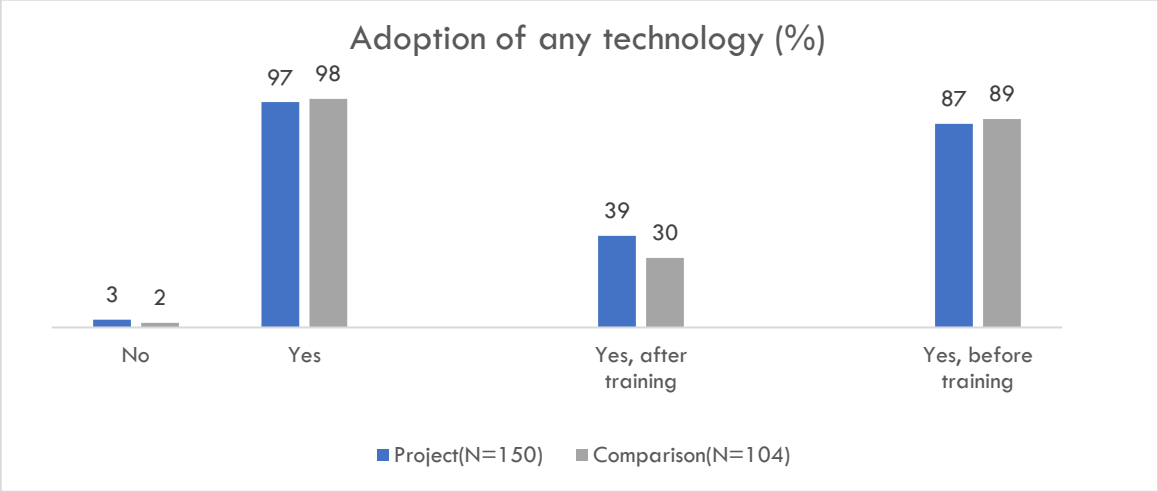

Figure 42: Beneficiaries who adopted any agriculture technology

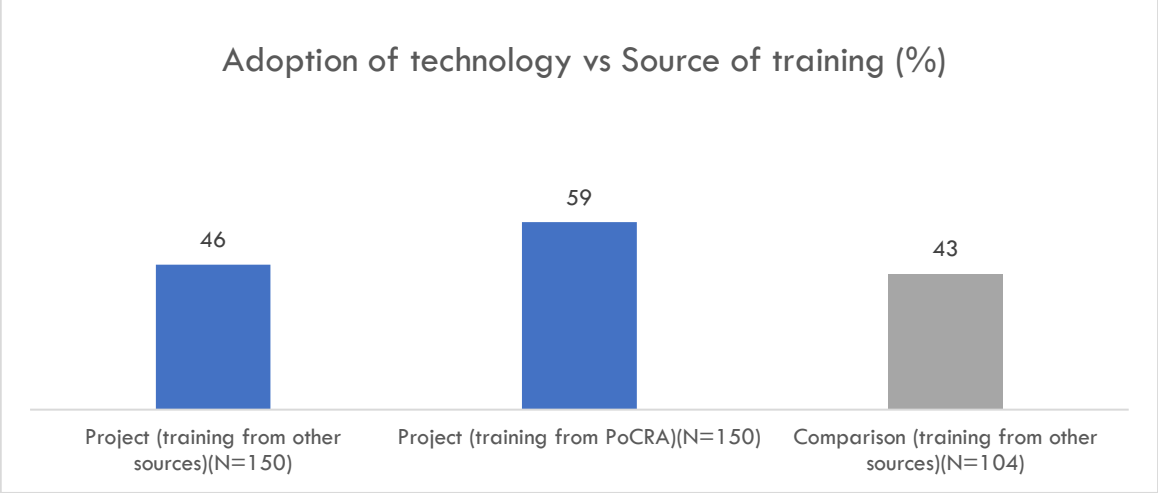

Figure 43: Likelihood of adopting a technology based on source of training

6.3.4 Feedback on FFS

Through the qualitative interviews, the reasons for low farmer turnout were also probed. Lack of interest or motivation amongst guest farmers was reported to be one of the major reasons for the low turnout. It was also reported that as FFS demonstration sessions coincided with the key stages of farming; some farmers do not attend the sessions as they get busy in their own farm work. Land of the host farmer being not easily accessible to guest farmers and not being aware about the session timings were also few other reported reasons which lead to low turnout of guest farmers.

The qualitative feedback also suggested that the technologies which have direct impact on the production and are not very expensive have shown higher adoption rate amongst farmers. E.g. Pest management, seed treatment/preparation, intercropping, use of manure and bio pesticides. Use of climate resilient crop varieties, broad bed furrow, sprinkler and drip irrigation were reported to be most frequently adopted by the farmers to reduce the impact of climate vulnerability, which is in line with the response from the beneficiary survey as reported above in this chapter.

The key challenge in the implementation of FFS were reported as lack of awareness and motivation amongst farmers to adopt new technologies. As a solution, it was suggested that more efforts are required to educate the farmers about the benefits of adopting new agriculture technologies. It was also suggested that if possible, tea and snacks should be provided to the FFS participants as it would help to motivate them to attend the FFS sessions. FFS facilitators not being of good quality and not having practical knowledge and experience was also reported in some cases.

6.4 Community Benefits

This sub- section presents the findings from the concurrent monitoring of the community interventions or benefits based on the quantitative interviews with project beneficiaries and beneficiaries of similar benefits in comparison area and also from the qualitative interviews with key project stakeholders.

6.4.1 Distribution of Community Benefits

As presented in the sample coverage section, a total of 105 community beneficiaries have been surveyed, with 51 from the project area and 54 in comparison area. This sample covered is less than the targeted sample as the community works had only been initiated in Shelgi in Latur, Kawjawala and Deogaon Khawate in Jalna, Khamgaon and Bolegaon in Aurangabad and Bhandarwadi in Beed. In the other sampled project villages, the respective AA confirmed that no community works have been initiated. Similarly, in many compassion villages too, no similar community works had been done.

As evident from the below graph, the community benefits found in the project arm were mainly of three types: Graded bunding (59%), community farm ponds (31%) and earthen nala bunds (10%). Through the qualitative interviews, it was found that community activities are under planning phase in most of the PoCRA villages. In some cases, the cost estimation is under progress by the AAs and in some cases micro planning DPR is under approval stage. In a few villages it was reported that e-tendering is under process and community work will be initiated after that.

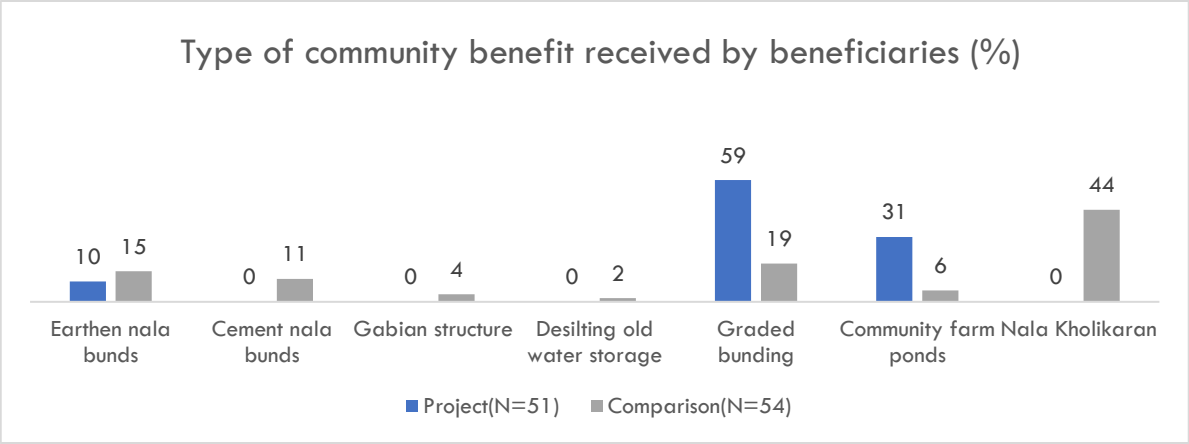

Figure 44: Type of community benefit received

The reasons found for delay reported in execution of the community assets in PoCRA villages were reported to be due to delay in preparation and acceptance of DPR and delay in cost estimation and e-tendering. It was also reported that at the time of the survey, work had been halted temporarily due to election code of conduct being in place.

6.4.2 Decision-making Process

The community beneficiaries were also enquired about the stakeholders who had bene involved in the decision making regarding the asset construction. As community benefits would affect the whole village, the more democratic the decision-making process is, the more effective the scheme would be. In this regard, involvement of village residents who live in the vicinity of the asset in both project and comparison areas was found to be identical as reported by 16% of the respondents from each arm. VCRMC members (28 %) ,VCRMC plus farmer interest group members(26 %) and Gram Sabha members (20 %) were reported to be the key decision makers in the project area, though it is to be noted that it is difficulty to clearly differentiate between them as some members like sarpanch and PRI members would be present in both VCRMC and Gram Sabha. Gram Sabha members (55 %) were reported to be the key decision makers in the comparison areas.

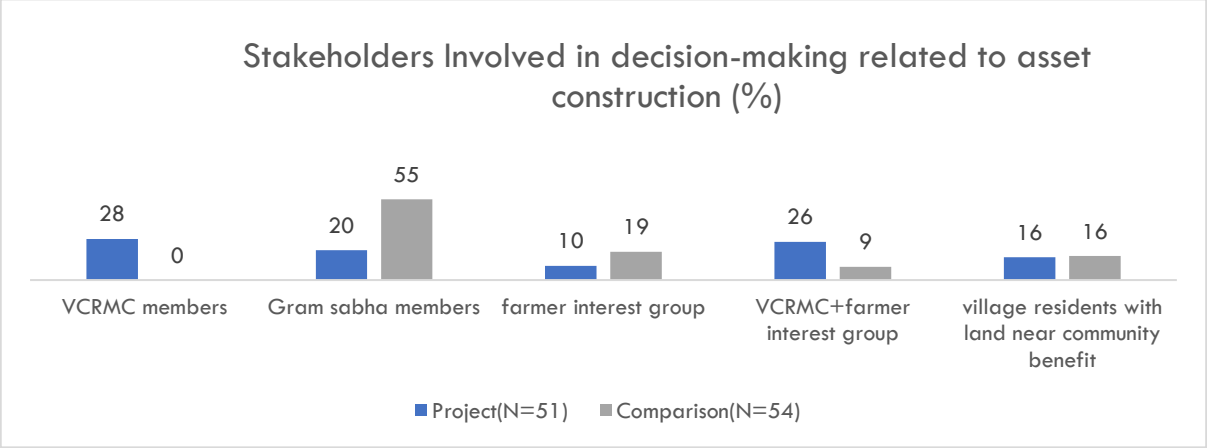

Figure 45: Stakeholders involved in decision-making related to asset construction

When we asked if the respondent's family was consulted regarding their need with regard to asset construction, favourable responses of 94% and 93% were reported from project and comparison villages respectively.

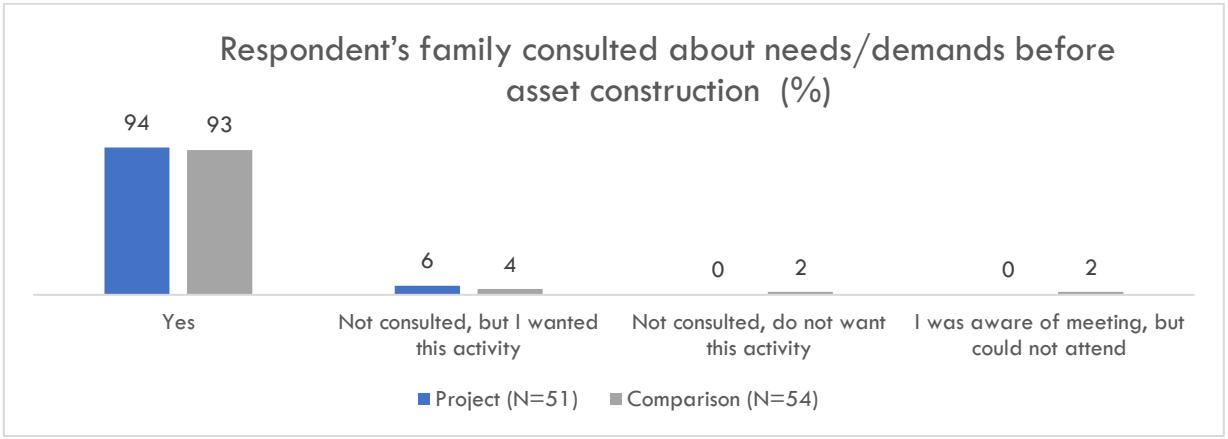

Figure 46: Family's which were consulted about their needs before asset construction

6.4.3 Perception of respondent

The beneficiaries of the community assets were also asked about their perception of the quality of the assets which were in constructed or under construction phase. Beneficiaries in both project and comparison arm reported the asset quality to be satisfactory, though the satisfaction was slightly higher in the project areas. 93% respondents were satisfied or very satisfied with the quality of the asset from project villages while 81% respondents from comparison areas said they were satisfied or very satisfied.

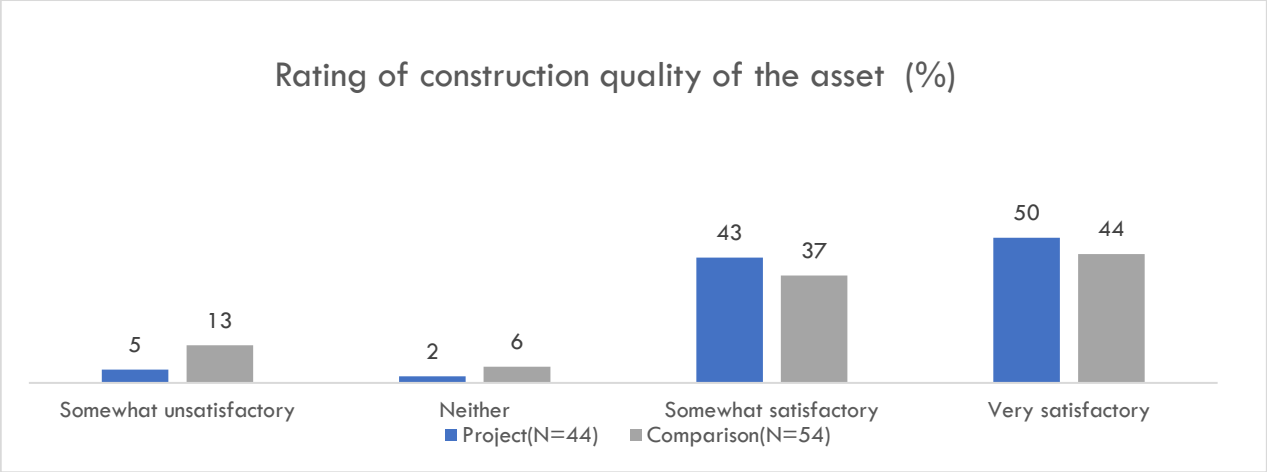

Figure 47: Rating of quality of construction of the asset

When asked about the usefulness of the community assets, the percent of affirmative responses were much higher for project than comparison areas, with 86% saying they found the asset to be very useful compared to 56%, respectively. From comparison areas, we also had 13% respondents saying that the asset was not useful at all while no such response was forthcoming from project villages. This points out that the planning for community works to be conducted is better in project area as compared to comparison area.

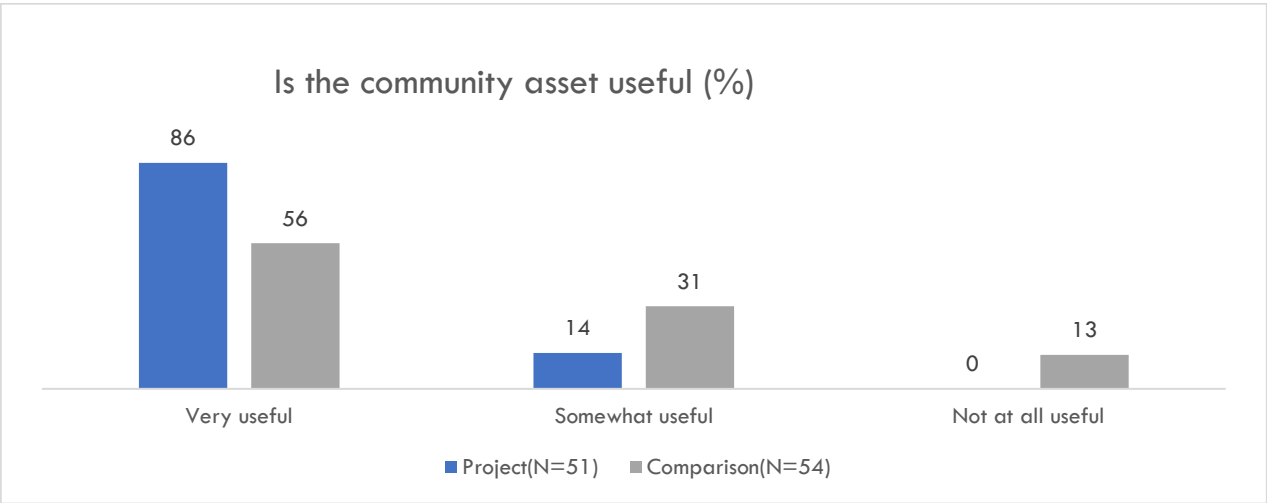

Figure 48: Usefulness of the community asset

98% beneficiaries from the project village were aware of the asset construction and were also willing to contribute towards its maintenance. As evident from the below graph, majority of the beneficiaries were willing to provide support in the form of being the member of the structure maintenance committee (35%) or providing labour support (49%). Though, a low percentage of responds reported to be willing to pay for maintenance (16%) of the assets.

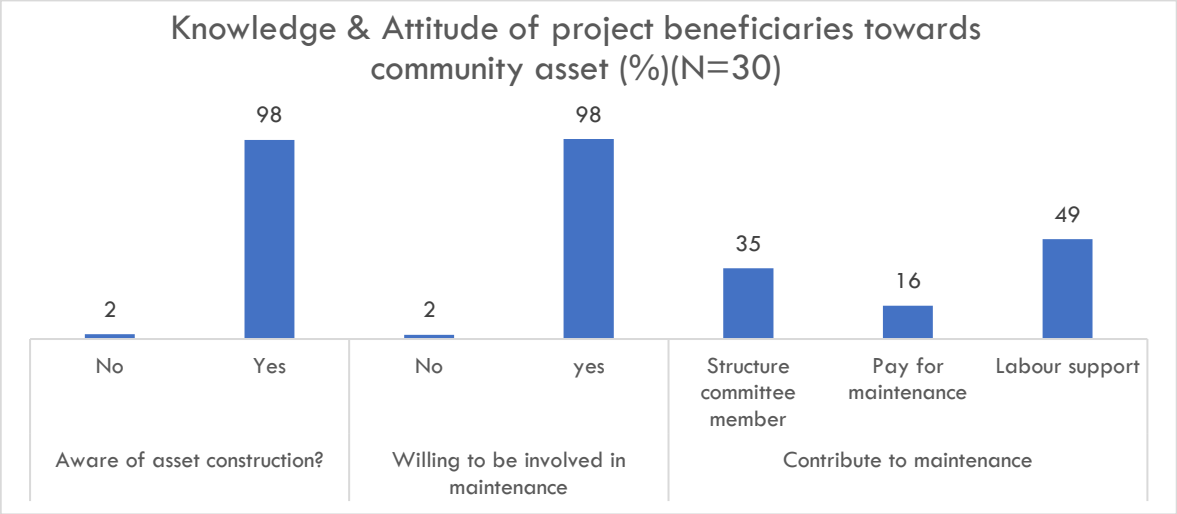

Figure 49: Knowledge and attitude of project beneficiaries towards community asset

In the comparison arm where all the assets were completed, only 20% of the beneficiaries reported to be involved in maintenance of the asset. However, when we compare the willingness of the respondents in project areas to what is in practice in comparison arm, we found the attitude quite similar. In the comparison arm, from the respondents who acknowledged to be involved in the maintenance of the assets, 40% of the respondents are part of the structure maintenance committee and 60% contributed in the form of labour. There are no responses recorded for any type of monetary support provided.

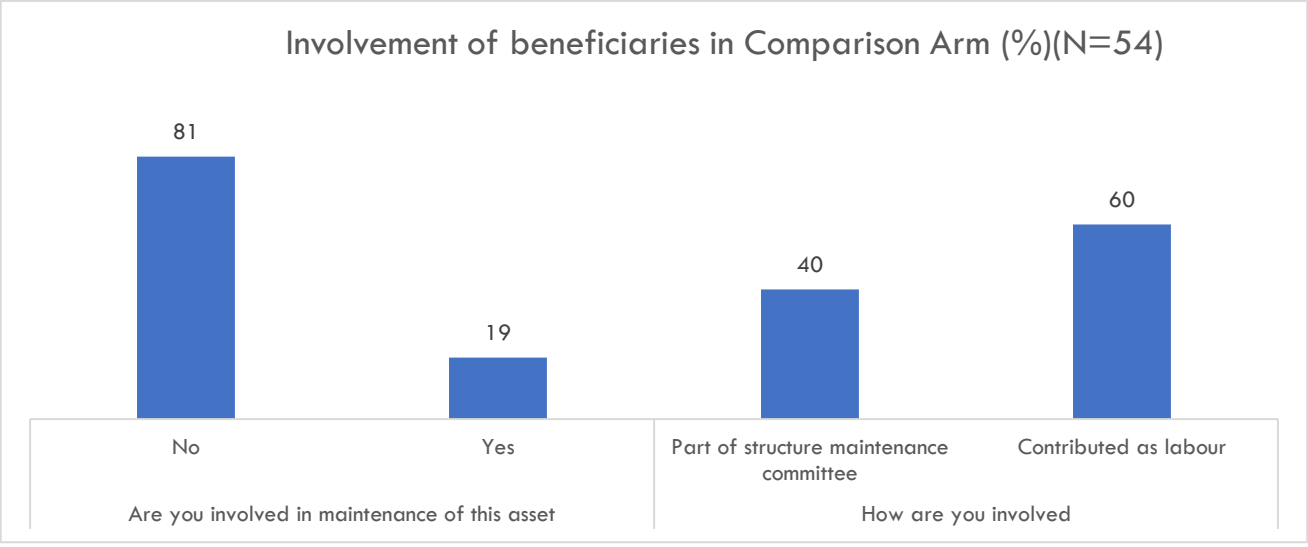

Figure 50: Involvement of beneficiaries in asset maintenance

The assets in the project arm which were reported to be under construction or constructed stage were also physically verified. It was observed that all community assets that were reported to be in construction or under construction stage (reported by 30 community intervention beneficiaries) were found during physical verification. Few of the assets which were verified during the physical observations have been presented below:

Figure 51A & 51B: Graded bund; Farm pond

Figure 52: Nala bund

6.4.4 Feedback of respondents

The qualitative interviews also aimed to get the feedback of the key project stakeholders on the challenges and their possible solutions in the implementation of the community interventions under PoCRA. These have been listed below:

1. *Incorrect site selection during micro planning stage was reported as a major challenge in smooth and timely execution of community works.*
   As a solution it was suggested that that site selection should be done carefully while ensuring agreement of all farmers in the vicinity of the community asset.

2. *In many cases, farmers (specifically the ones who have lesser land holding) don't allow community works to be conducted on their land. A few stakeholders also reported that the demarcation and border of farms is not clear in a few cases.*
   As a solution to this, it was suggested that site selection should be done carefully while ensuring that all farmers in its vicinity are fine with development of community asset

3. *Lack of awareness about benefits of community works amongst the potential beneficiaries was reported to be a key challenge in execution of community works.*
   It was suggested that more efforts should be put by the project to explain to the farmers about benefits of these community works and how they would contribute in increasing the water level in their vicinity.

4. *Lack of coherence/agreement amongst farmers in implementation of community works was also reported as a bottleneck in the smooth execution of community works.*
   It was suggested that more efforts are required to explain farmers about benefits of the community works and how they contribute in increasing the water level in their vicinity

5. *Ensuring quality of the community assets built is also a key challenge to be addressed. Farm bund in one village was observed not to have any sort of compaction and dressing post work.* As a solution, the quality of community works needs to be improved with strict monitoring being carried out to ensure their quality.

6. *In a particular case, issue was reported between village residents and contractors for award of tender. In one sample village, it was reported that residents believe that they should be awarded the tender for execution of community works, but they do not have the capacity to file e-tenders, leading to conflict with contractors*
   Continuous efforts are required to educate farmers and explain them benefits of quality work for better sustainability of any water harvesting structure.

7. *Process adherence needs to be ensured. In one sample village, during discussions with Agricultural Assistant, it was found that eight community farm ponds were constructed without pre –sanction of SDAO.*
   As a solution, strict process adherence should be ensured

8. *Lack of information amongst the project staff regarding the community works conducted under previous NRM schemes. In on sample village, compartment bunding work is done as per records (under Jalyukt Shiwar) but the AA was not aware of the work is done. This could lead to duplication of efforts in developing water harvesting structure.*
   To avoid this, the AA should have data base of works for the previous community works from last five years to avoid duplication of work.

6.5 Satisfaction on different parameters

This sub-chapter presents the findings of the feedback of the beneficiaries on the micro planning process and also the perception of the beneficiaries about different parameters related to implementation of PoCRA. We included this section to get more insights into how the beneficiaries feel about the different projects under PoCRA, process of getting benefits under PoCRA, satisfaction from the support received from VCRMC members and also satisfaction from the support received by project staff.

6.5.1 Beneficiary Participation in Project planning

In the project arm, 68% of the respondents were aware of microplanning done in their village. Of those who were aware, 79% of the surveyed beneficiaries reported that they or their family member had participated in the micro planning process. Also, it is encouraging to find that 91% of the respondents believe that the VCRMC in their village represents all sections of society, which points towards a more democratic form of governance.

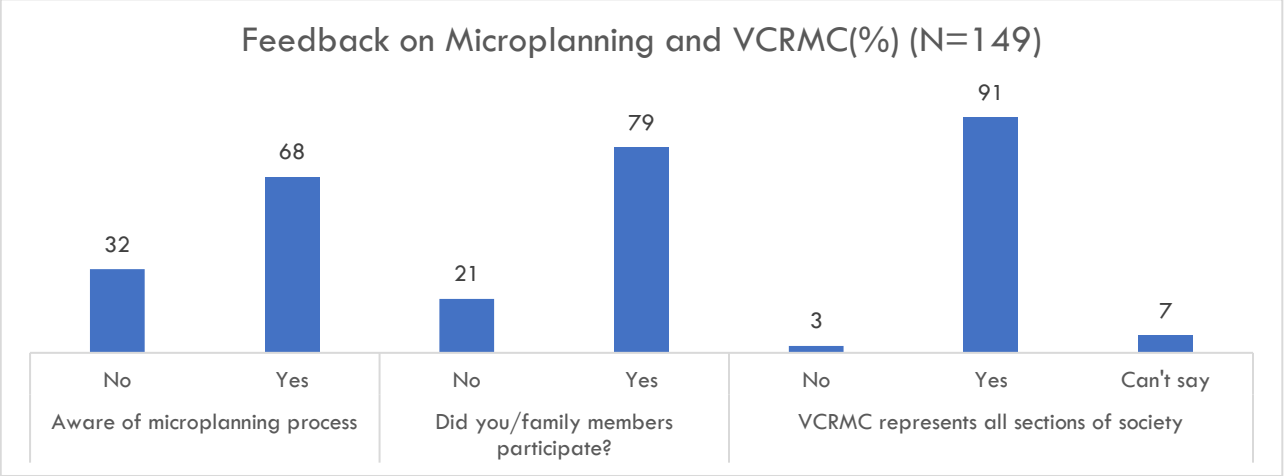

Figure 53: Feedback on microplanning and VCRMC

6.5.2 Satisfaction with Microplanning

Overall, 80% of respondents from project villages were satisfied with the microplanning process with 50% of the respondents somewhat satisfied and 30% of the respondents very satisfied with the microplanning process conducted in their village.

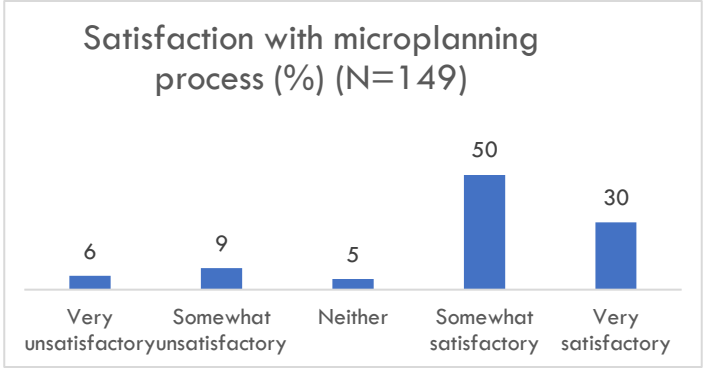

Figure 54: Satisfaction with microplanning

The percent of responses unsatisfied with the microplanning process are 15%. 5% of the respondents were indifferent either way.

6.5.3 Satisfaction with VCRMC

In the project villages, 79% respondents were satisfied with the work done by their respective VCRMCs, with 32% being very satisfied. However, there were also 17% respondents who were dissatisfied with VCRMC's work.

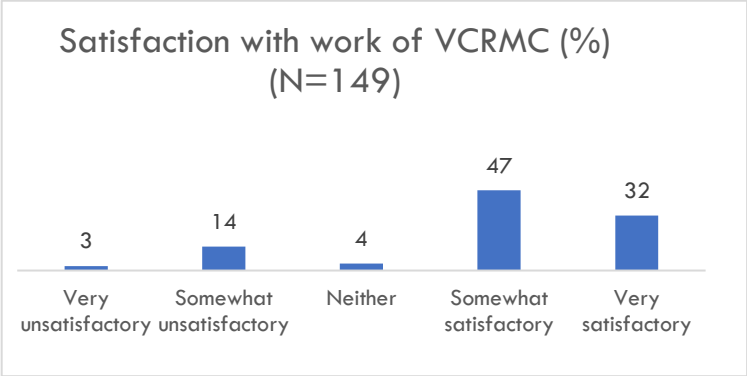

Figure 55: Satisfaction with VCRMC work

6.5.4 Satisfaction with the process

We compared the satisfaction of beneficiaries with the process followed for accessing benefits for both project and comparison arms. The results were found to be similar for both the arms, as is shown in the graph below. Percent of respondents satisfied with the process followed is 80% and 84% respectively for project and comparison arms.

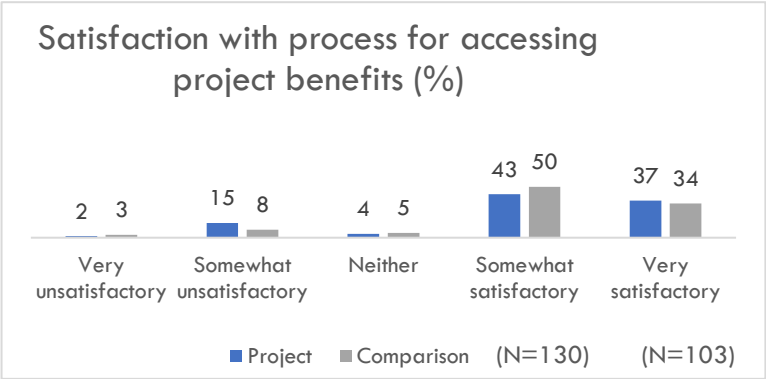

Figure 56: Satisfaction with process

6.5.5 Satisfaction with Support from Project Staff

We asked the respondents how satisfied they were with the support provided by the project staff in application process and availing benefits from the project. The project staff included agriculture assistants, cluster assistant, FSS facilitator, SDAO and project specialist. Again, the satisfaction from the project staff was observed to be somewhat similar with 83 % respondents in project arm and 84 % respondents in comparison arm were in the satisfied or very satisfied category.

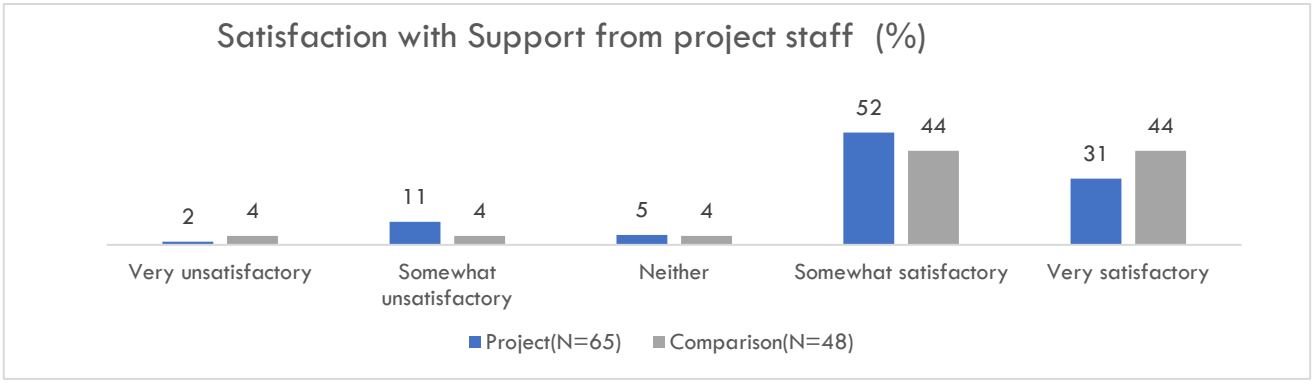

Figure 57: Satisfaction with support provided by project staff

6.5.6 Other Government Schemes

The beneficiary respondents across project and comparison arms were also enquired if they had benefitted from any similar government scheme. Pradhan Mantri Fasal Bima Yojana was the scheme from which maximum respondents had reported to benefit with 33% and 32% beneficiaries in project and comparison arm respectively. The below graph presents, the percent of beneficiaries who had reported of receiving benefits from other government schemes across both project and comparison arms.

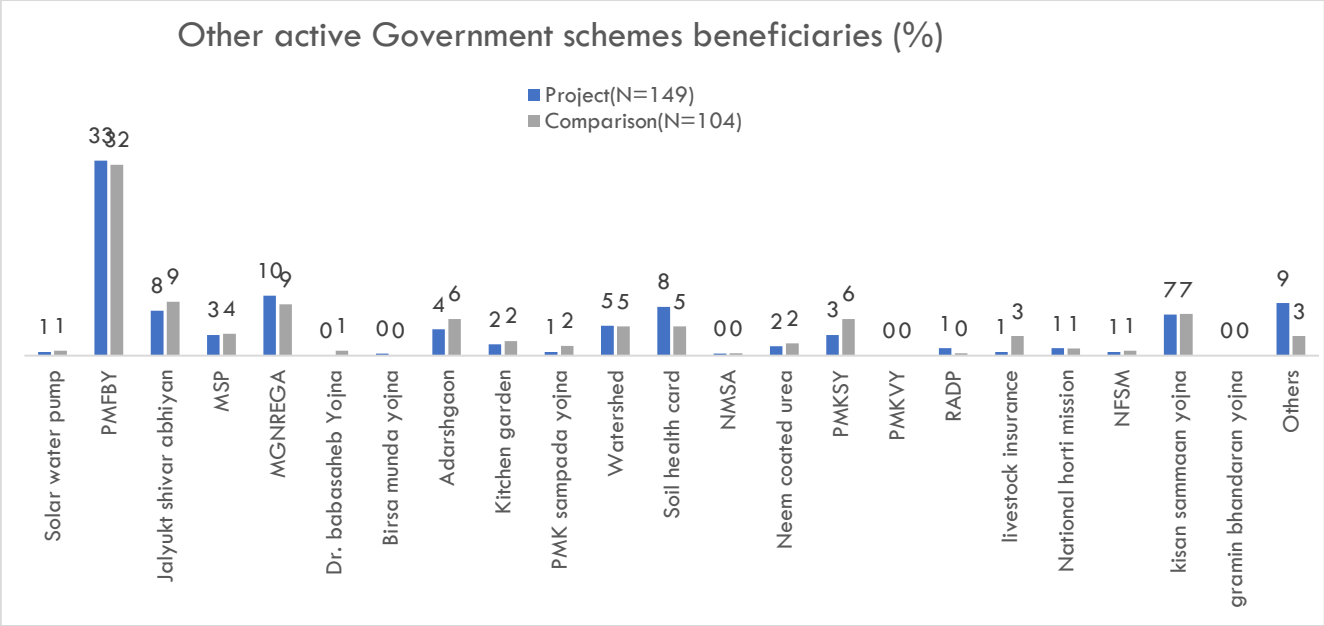

Figure 58: Beneficiaries of other Government schemes

6.5.7 PoCRA Beneficiaries from an Inclusivity Lens

Analysis was also done to access the surveyed beneficiaries from an inclusivity lens. In the project arm, 83% of the participants were male and 17% were females whereas in the comparison arm, 94% participants were male and 6% were female. The distribution of caste was almost similar across both the study arms.

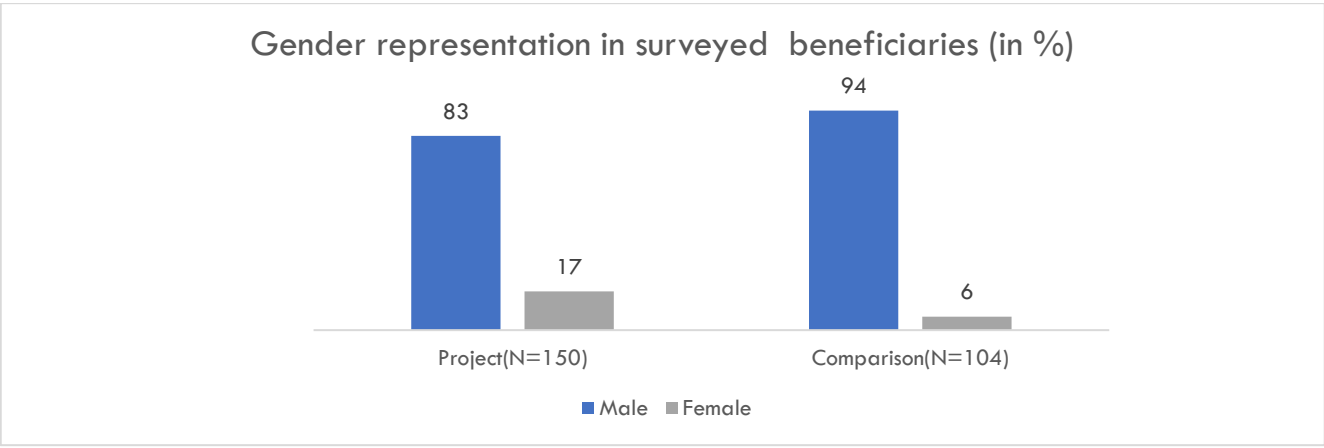

Figure 59: Gender of respondents

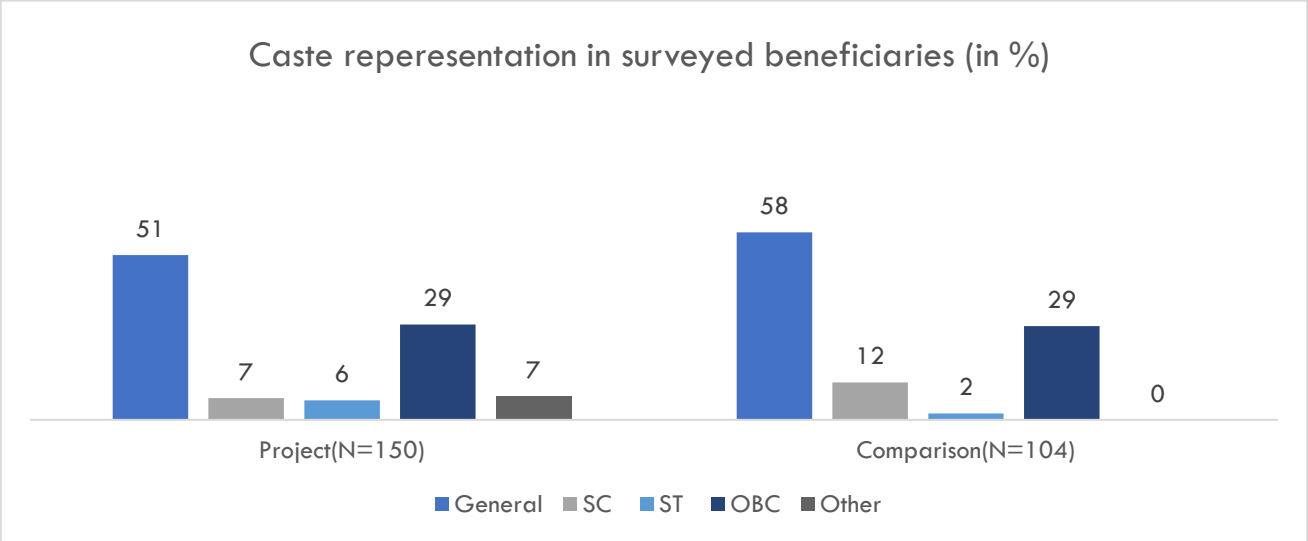

Figure 60: Caste of respondents

Respondents across study arms were also asked if they or their family members belonged to one of the social groups listed. 39% respondents from project arm and 38% from comparison arm acknowledged that they or their family member were members of SHG. Only 15 % respondents in project area reported that they or their family members were members of VCRMC committee. Almost none of the respondents or their family member across arm were member of district/block level Panchayati Raj Institution or market committee or agriculture produce market committee.

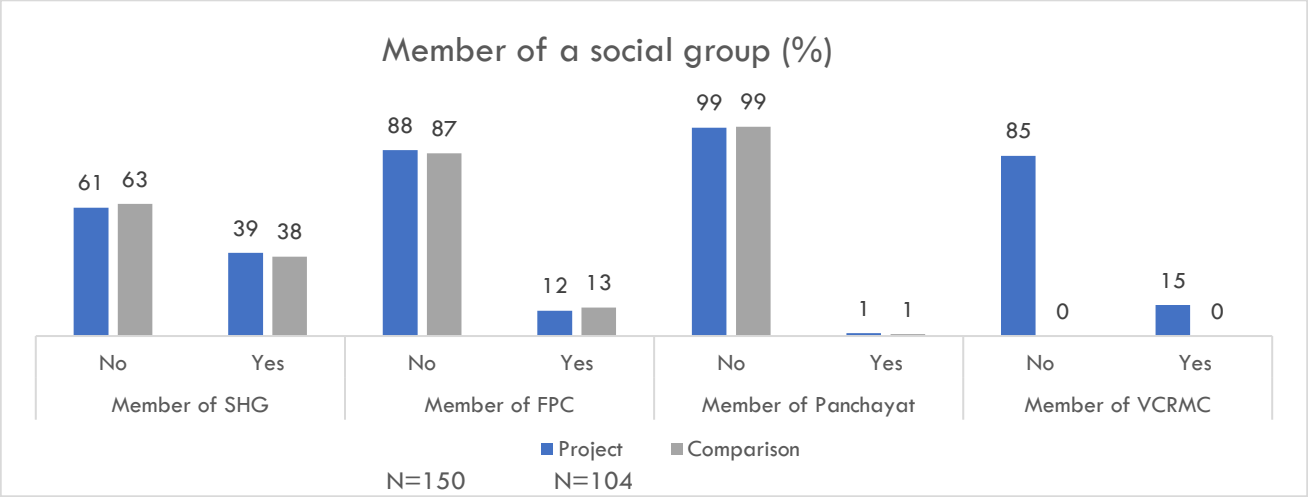

Figure 61: Beneficiaries who were members of any social groups

The percent of people with no schooling is relatively higher in project than comparison arm. On the other hand, there are more respondents with higher education levels in the comparison area which points that people with lower education level are able to access the benefits in PoCRA as compared to other similar.

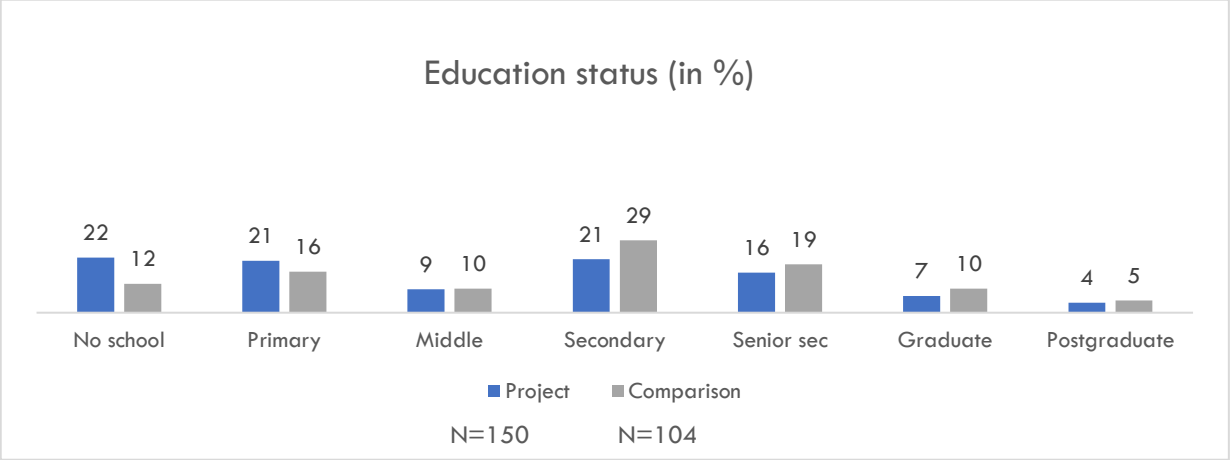

Figure 62: Education level of beneficiaries

6.6 Findings on VCRMC Functioning

As part of the concurrent monitoring, focus group discussions were conducted with the members of the VCRMCs from the sampled project villages to get their feedback on project implementation and also to comment on its formation and functioning.

As per the project guidelines, the VCRMC should comprise of 13 members, and the number of members required from different categories including gender, social categories, land holding is pre-defined. It was encouraging to find that 17 out of the 20 VCRMCs were found to be constituted as per the project guidelines. Reason given for variation in the remaining three VCRMCs was difficulty to get farmers to fill the category of 'Progressive farmer NT'. This led to less members or members from other gender or category taking the seat.

VCRMC meetings were mostly reported to be conducted once a month. There were a few cases where meetings were conducted twice in a month. It was found that on an average nine members attended the last VCRMC meeting. VCRMC meeting date for the next meeting was usually decided in the current meeting. In case it could not be decided, the meeting date was relayed to all members either telephonically, through WhatsApp groups, or personally.

The VCRMC members were asked what additional trainings should be provided so that they can implement the project activities more effectively. The VCRMC members responded that they would want to receive refresher training on all project components, training to identify which benefit should be suggested to which respondent, and training on the agriculture technologies and benefits that are provided under PoCRA.

"*More training sessions are required so that we can tell others clearly about the different schemes available.*" –FGD, VCRMC members

Key documents maintained by VCRMC as mentioned by them are meeting/proceeding book (most common), cash book (mentioned in a few cases) and documents related to individual applications. Documents are mostly updated by CA/AA or by VCRMC members. During physical observation it was found that in many cases, the meeting resolution and agenda was not written the book, only signatures of those present were taken.

Strategies adopted by the VCRMC to mobilize farmers were to informally inform, personally inform farmers, inform through WhatsApp groups and in Gram Sabha meetings. An initial announcement was done at village level to inform everyone about benefits that can be availed under PoCRA. VCRMC members reported widows, landless farmers, women, disabled, SC/ST are given priority for accessing individual grants.

"*We have to think of poor, marginal farmers- who needs which benefits as quickly as possible. We should understand the requirements of the landless people and give them grants accordingly*". –FGD, VCRMC members

The feedback received from VCRMC on improvement of micro planning, if conducted again in the future, were to involve more technical staff in the microplanning process and apply more effort to inform as many people as possible about PoCRA during microplanning. They feel that a lot of potential beneficiaries are still not aware about PoCRA, and measures need to be taken to fill this gap.

6.7 Feedback on FPO/FPC Support under PoCRA

Another key component of POCRA is to provided support to FPOs/FPCs for post-harvest management and value chain promotion. The surveyed FPO/FPC representatives shared that current activities done by their FPC/FPO is providing support in aggregation, cleaning, grading and sorting of the produce, and seed processing. Most of the FPO/FPC plan to expand their business activities with the PoCRA grant support by infrastructure development, machinery for purchase of grading, sorting and value addition.

When enquired about the current status of their application, most of the applications were reported are currently under proposal development or in application stage. None of the surveyed FPO/FPCs had received grant at the time of the survey.

When asked how the experience with the application process was, most respondents reported the grant process to be simple. They reported receiving technical support from project staff while preparing the project proposal and applying for benefits. Majority of respondents reported that the PoCRA staff was friendly and supportive, providing handholding support in applying for the grant.

"The PoCRA process for application is much easier than the other processes. PoCRA process is also cost effective. To do the same process without PoCRA, it takes 50,000/- to 60,000/- rupees, but using PoCRA, it is done in only 6000 rupees."- FPC representative

The FPO/FPC representatives were also asked about the further support they expect from PoCRA which can help to strengthen their organization. Many representatives said that process of getting bank loan and matching grant should be expedited. Updates on application status to be shared regularly with them.

"*We have been in operation for almost ten years. We needed a loan, but banks didn't provide.*" - FPC Representative

Respondents also reported that they should get facilitation support to get bank loan. One FPO mentioned that it's been four months since the application process started, and it was yet to be completed and submitted.

In addition to the activities being carried out, the respondents felt that they required training and technical support to start new value addition activities, on running a business and to improve their market linkages. They also asked for facilitating exposure visits to other FPO/FPCs or institutions which are successfully carrying out value addition activities and seed processing to learn through first-hand experience.

"*There are challenges to start and run this business. First and the main challenge is the finance problem and transporting of seeds from one place to another place. Marketing is another challenge for any new business.*" – FPC Representative

6.8 Awareness of Environmental Safeguards

All the project stakeholders (DSAOs , SDAOs, Project Specialists, Agriculture Assistants, Cluster Assistants, VCRMC members and FPC/FPO representatives) were also enquired about their awareness on environmental safeguards. Awareness of stakeholders with regard to environmental safeguards was observed to be limited amongst all stakeholders. The most frequently reported environmental safeguard was that during asset construction, trees should not be cut, vegetation should not be damaged and soil erosion should be avoided. In case trees were cut, more should be planted at a nearby spot.

Other specific environmental safeguards reported by a few respondents were planting trees near the bunds and dams. Some also mentioned that a minimum distance of 150 metres should be maintained between the construction of any two dug wells. It was also mentioned that existing water harvesting structures should not be harmed during construction of new structures.

During an in-depth interview of an FPC representative, the respondent mentioned that the FPO/FPC proposals are checked to ensure that the planned activities do not violate any environment norm. One respondent also shared that as part of the environmental safeguards, agriculture waste should not be burnt, and proposed community structures should be at a distance from each other. Some other specific environmental safeguards reported are also presented below

"*Bund plantation should be made compulsory for availing benefits with well recharge, more storage in farm pond makes more evaporation. The agroforestry model must be made compulsory in orchard plantation*" - Interviewed SDAO

When asked if these compliances are followed in their area of operation, most of the stakeholders reported that these compliances are followed. It was reported that in rare cases when vegetation or trees are required to be cut for project activities, new plantations are done in the nearby area.

7. Key Observations, Challenges and Actions suggested by stakeholders

The summary of the key observations from the concurrent monitoring survey have been listed below

1. Uptake of individual benefits amongst potential beneficiaries is found to be encouraging as substantial number of eligible beneficiaries are applying for individual grant through DBT portal.
2. Beneficiary satisfaction with the support from PoCRA staff is observed to be high as high percentage of beneficiaries have reported to be satisfied with the support from project staff, functioning of VCRMC members, and with the process of accessing project benefits.
3. Individual grant components which address the issue of water accessibility and availability were in high demand among the project beneficiaries. Specifically, we found that open dug wells, pipes, sprinklers and drip irrigation were perceived as more beneficial by the farmers and also saw the highest number of applications. For landless and marginal farmers, rearing small ruminants saw an additional income source.
4. All the individual and community benefit assets in construction/ post phase were found during physical verification. The satisfaction of beneficiaries of quality of the constructed community assets was found to be high.
5. Overall, the awareness of environment safeguards among stakeholders and project impact on climate resilience in beneficiaries needs attention. The interviewees were aware of adverse effects of deforestation. The primary response was to be careful while selecting site for asset construction so that no vegetation needs to be cleared. Apart from this, climate resilience sensitization and awareness amongst the beneficiaries needs attention was low, with farmers adopting technologies based on how it improved their yield and income. Very few farmers said they attended FFS to learn about climate resilient technologies. Adoption of technology reflects this perception.
6. The community works and FPO/FPC interventions under PoCRA are mostly in their initial stages i.e. under planning stage at the ground level.
7. The online DBT portal has helped increase in transparency in the complete application process. However, certain issues exist within this. Firstly, awareness of beneficiaries about the DBT application process and different benefits that can be availed under PoCRA needs attention. Also, lack of good network connectivity causes delays in the application process. For areas with very bad connectivity, filling this online application is a big challenge. Secondly, the farmers are unequipped to fill the application for on the DBT portal themselves and require the assistance of the AA or CA for the same. This increases the workload on these community workers.
8. Farmer field schools are being implemented on ground and were reported to be effective as they enable two-way communication. It provides a platform where community experience sharing can happen between the farmers and technical knowledge is shared by the facilitators. But farmers tend

to adopt only those technologies which are easily and cheaply available. More concerted efforts will be required to improve farmers' participation in the demonstrations and their subsequent adoption of the technologies.

9. Majority of the VCRMCs set up as part of the project are formed as per the project guidelines. and they meet regularly to discharge the project mandate. Though the capacities of VCRMCs may be enhanced with special focus on documentation.

The key challenges that were reported by the project stakeholders and their suggested solutions have also been summarized in the below table:

Table 7: Summary of identified issues and proposed solutions

S.No.	Challenge	Action Suggested
1	Difficulty in arranging funds by the potential or interested beneficiaries for upfront payment to purchase/ construct the assets.	• Facilitate bank loans to the applicants receiving pre sanction. • Develop mechanism by which applicants need to pay the amount excluding the matching grant amount.
2	Shortage of manpower for project implementation • Reported by all stakeholders ranging from DSAO, SDAO, CA and AA • Same staff works on multiple schemes • Each CA, AA has 6-10 villages on average • Increased workload due to farmers expecting CA and AA to fill their forms • SDAO has to directly co-ordinate with AA, CA and there is no level in between	• Manpower for implementation of the project should be reassessed and increased if required. • Having resource persons (e.g. Krushi Mitra) at village level who can support farmers in DBT application. • Involving Taluka Officers in project implementation who can act as a layer between SDAO and AAs.
3	Difficulty in application through DBT portal due to network issues	Both online and offline application options should be provided specifically in areas which have poor network connectivity.
4	Incorrect site selection for community works leading to delay in community works	Site selection should be done diligently while ensuring approval of beneficiaries in its catchment
5	Lack of information amongst many (potential) beneficiaries	Regular efforts need to be made to identify such people and to inform them about PoCRA
6	Many poor and marginal farmers feel that the current subsidy/matching grant is less as they cannot afford the assets with the current subsidy too.	Matching grant should be increased for priority benefits and the benefits which are high in demand by the poor and marginal farmers
7	Lack of motivation in farmers to attend FFS sessions	Continuous efforts are required to motivate farmers and explain them benefits of adopting improved agriculture technologies

S.No.	Challenge	Action Suggested
8	Delay in execution of community works and in FPO/FPC support	Efforts need to be increased to speed up execution of community works and FPO/FPC support
9	Improper micro-planning and commitments given by the non-technical staff of Micro Planning agencies leading to poor community work planning	Involvement of technical staff along with agency for site selection of structures like check dams and earthen nala bund.
10.	Lack of access of application stage information to AA. AA is unaware about status of pre-sanction which is only communicated to beneficiary through SMS. Access to this information can enable the AA to speed to follow up with the beneficiary.	AA and CA should have access and login to all desks until the payment is finally done to beneficiary, this will help in faster and smoother execution
11.	The account officers return the uploaded bill in case they are not able to understand any activity for which the bill is uploaded without consulting to technical staff, this leads to delay in payments also there is no timeline for the account officers to accept the bill.	Technical training and orientation (with field exposure) of project activities should be provided to account officers. The timeline should be fixed for the returning the bill and approving the uploaded bill.
12	Challenges in accessing bank loans by FPOs/FPCs Banks do not give loan to FPOs/FPCs whose members have defaulted loans in the past.	Rules for bank loan to the FPOs/FPCs can be re-assessed, if possible
13	Challenges in commute of project specialists and role of supervisor in the project PSs are eligible for vehicle as per guidelines, but it was reported that they are not provided vehicles in few cases.	PSs must be provided access to vehicle as per project policy.
14.	In one interview, the CA had complaining of not receiving salary on time from HR Agency	This matter should be probed to ensure CAs receive salary on time

8. Progress Monitoring Based on Results Framework Indicators

As part of the concurrent monitoring, progress monitoring has been done by tracking the progress of the Results Framework indicators that need to be tracked on semi-annual basis. The below table presents the progress on these results framework indicators at the time of first round of concurrent monitoring.

Table **8:***Progress monitoring based on RF indicators*

Indicator Number as per PoCRA Results Framework	Indicator	Measurement technique and data source	Progress at CM Round 1
5	*Number of farmers reached with agricultural assets or services (% of female)*	The data of number of farmers reached with assets or services has been collected from the project MIS, associated applications and relevant project personnel from PMU. The number of direct beneficiaries of the PoCRA include	Total number of framers/beneficiaries reached through the project till 31st March 2019 is 60171. (20% females) The breakup of the same has been shared below:
		1. The data on individual grant beneficiaries has been taken from DBT portal	Total Disbursement online- 674 males and 187 females
		2. The data of beneficiaries of FFS has been taken from FFS application	Total guest farmers- 15196 (Male- 14848, Female- 345, Others- 3). Host farmers total -1230 (Male 1186, Female- 44)
		4. People who have availed trainings under the program.	VCRMC orientation training - 21442 (approximately 9896 males and 11546 females) Exposure visits to villagers- 335 villagers in total (Male- 192, Female- 143) from Aurangabad and Hingoli districts only).
6	*Farmers adopting improved agricultural technology promoted (% of female)*	This indicator has been tracked based on the beneficiary survey conducted as part of the concurrent monitoring. The surveyed beneficiaries will be enquired if they were adopting atleast any of the improved agriculture technology which is promoted under the project.	Adoption of any agriculture technology was observed to be 97 % in beneficiary respondents in project arm and 98 % in beneficiary respondents in comparison arm. Though it is to be noted that the sample frame for concurrent monitoring are the farmers who have benefitted from PoCRA and similar schemes in comparison area. This would not be comparable with the sample in the evaluation surveys i.e. baseline, midline and endline. Also, the sample

Indicator Number as per PoCRA Results Framework	Indicator	Measurement technique and data source	Progress at CM Round 1
			size covered in concurrent monitoring is very less as that compared to evaluation surveys.
7	*Area provided with new/improved irrigation or drainage services (in ha)*	The data of area with new or improved irrigation services and drainage services through individual activities under the project has been taken from DBT portal report. The data of community level new/improved irrigation services has been taken from Project Specialists of the project districts. Total area under Irrigation Projects= IP (Irrigation Project)$_1$*Area under irrigation project+ IP (Irrigation Project)$_2$*Area under irrigation project+ IP (Irrigation Project) $_n$*Area under irrigation project	Area provided with 1. Sprinkler and Pump together- 20 Ha, 2. With water pumps only - 104 Ha, 3. with only pipes is 305 Ha. 4. Sprinklers area covered- 96.8Ha 5. drip area - 11.48 Ha Total Area - 537.28 ha
8	*Surface water storage capacity from new farm and community ponds (in 1,000 m3)*	The data of individual level farm ponds will be taken from DBT portal report. The data of community farm ponds has been taken from PMU team. Total Water storage capacities of new Farm Ponds = FP (Farm Pond) $_1$*Storage capacity of FP+ FP $_2$*Storage capacity of FP+……+ FP $_n$*Storage capacity of FP Total Water storage capacities of new Community Ponds = CP (Community Pond) $_1$*Storage capacity of CP+ CP $_2$*Storage capacity of CP+……+ CP $_n$*Storage capacity of CP	312680 *m3*
10	*Oilseeds (soybean), Pulses (pigeon, chickpea) production area under cultivation w/ certified seeds of improved varieties (share in %)*	The percentage area under cultivation for oilseeds (soybean) and pulses (pigeon, chickpea) *using certified seeds of improved varieties has been assessed based on the beneficiary survey as part of concurrent monitoring.*	Percentage of total area cultivated for soybean, pigeon pea and chickpea under certified seeds is 77% in project and 60% in comparison % of area under cultivated using certified seeds – • Soybean : 83 % in Project and 72% in comparison • Chickpea: 76% in project and 39% in comparison

Indicator Number as per PoCRA Results Framework	Indicator	Measurement technique and data source	Progress at CM Round 1
			• Pigeon pea : 56% in project and 45% in comparison Though it is to be noted that the sample frame for concurrent monitoring are the farmers who have benefitted from PoCRA and similar schemes in comparison area. This would not be comparable with the sample in the evaluation surveys i.e. baseline, midline and endline. Also, the sample size covered in concurrent monitoring is very less as that compared to evaluation surveys.
14	*Number of approved participatory mini watershed plans implemented / under implementation*	This indicator will be reported as an absolute number of participatory mini watershed plans approved by Gram sabha. The information is collected by the microplanning agencies from the offices of the SDAOs. The microplanning agencies submit the validated mini-watershed plans to the PMU where the data is recorded by the M&E specialist.	Number of approved participatory mini watershed plans implemented / under implementation are 44 till 31st March 2019 out of 139 clusters in year 1

9. Analysis of MIS data of DBT Applicants

This section presents the analysis of the DBT applicants data who had applied from the start of the project till 31st March 2019.

As per the DBT application MIS data at total of 94,777 applications have been received till 31st March 2019. The below chart presents the district wise distribution of the applicants. It can be observed that the majority of the applicants i.e. 42 % are from Aurangabad district. This is followed by Jalna with 12 % and Parbhani with 9 % of total applications. Beed and Nanded have the least applications with 7 % and 6% applications respectively.

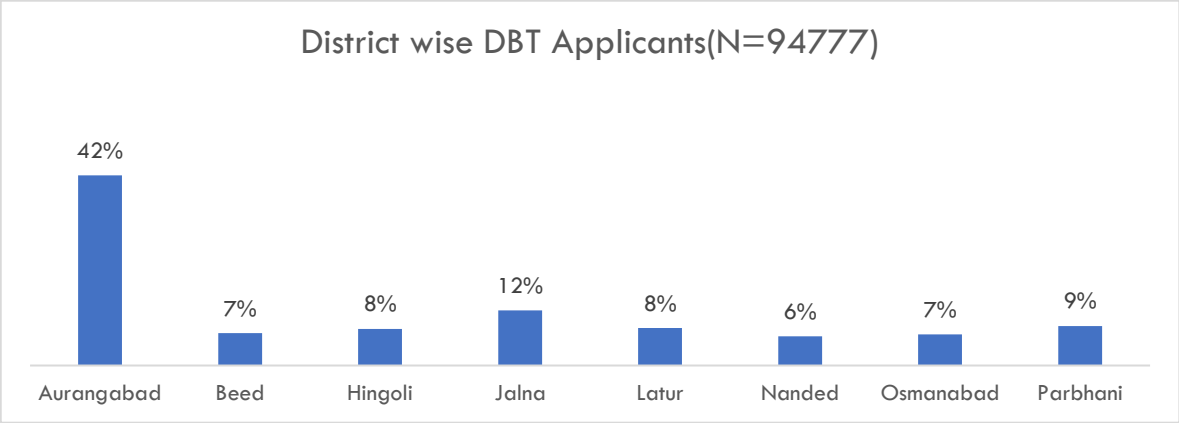

Figure 63: District wise DBT – applications

The below figure presents the gender distribution of the DBT applicants till 31st March 2019. It can be observed that approximately 22 % applicants were female and approximately 77 % of the applicants are males. .3% of farmers were in others category and for .04 % cases the gender was not recorded in the project MIS.

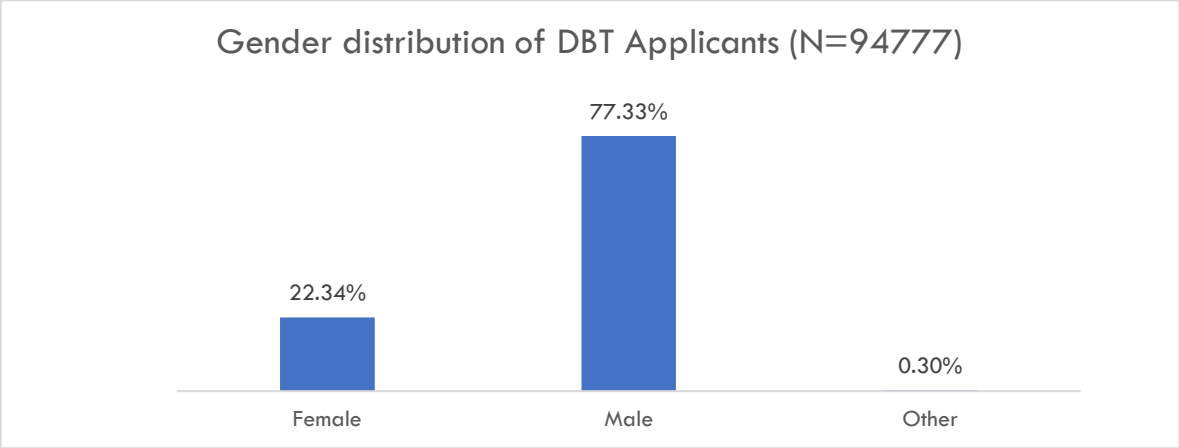

Figure 64: Gender distribution of DBT applicants

The below table presents the priority category wise number of applicants in the above mentioned period. The maximum number of applicants are in general male (70.49 %) and general female (20.29%). SC Male are 4.6%, SC females are 1.83%, ST males are 1.72% and ST females are .44%. The number of applicants in other priority categories can be seen from the below table.

Table 9: Priority category wise number of applicants

Priority Category	Number of Applications	Percentage of Total Applications
General Female	19229	20.29%
General Female with disability	65	0.07%
General Male	66813	70.49%
General Male with disability	413	0.44%
Others	36	0.04%
SC Female	1730	1.83%
SC Female with disability	10	0.01%
SC Male	4361	4.60%
SC Male with disability	63	0.07%
ST Female	417	0.44%
ST Female with disability	4	0.00%
ST Male	1629	1.72%
ST Male with disability	7	0.01%
Grand Total	**94777**	**100.00%**

The below graph presents the beneficiary landholding wise number of applicants. As evident from the below graph, 44% of the applicants ae small farmers and 36 % of the farmers are marginal farmers. Also, around 10% of the applicants are landless and for 9% of the applications their category is not specified in the DBT MIS.

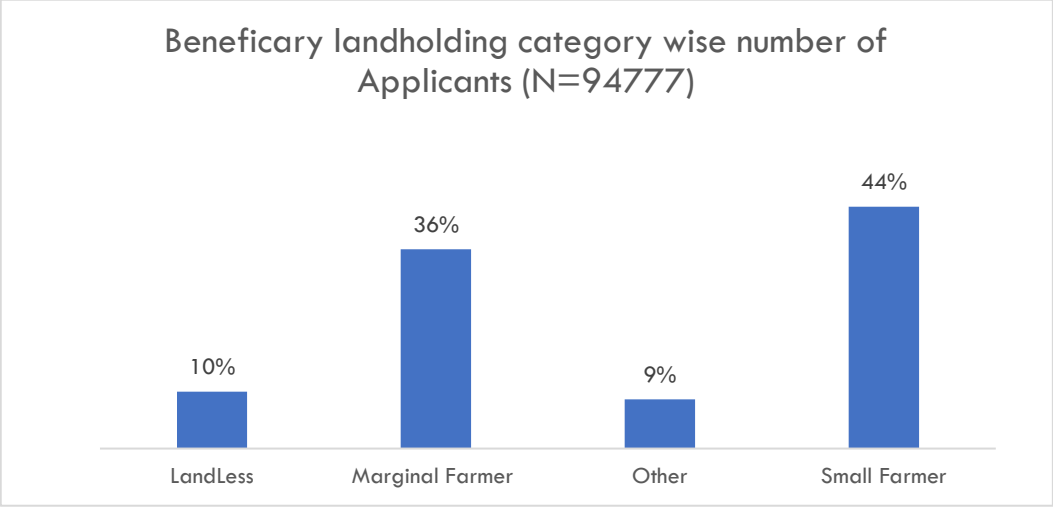

Figure 65:Beneficiary landholding wise number of applicants

The below table presents the district wise distribution of the beneficiaries as per the different landholding category.

Table 10: District and farmer land category wise applications

District	Farmer Category	Number of Applicants	% of Applicants
Aurangabad	Landless	4048	4.3%
Aurangabad	Marginal	15783	16.7%
Aurangabad	Other	3650	3.9%
Aurangabad	Small	16572	17.5%
Aurangabad Total		**40053**	**42.3%**
Beed	Landless	891	0.9%
Beed	Marginal	2407	2.5%
Beed	Other	710	0.7%
Beed	Small	2656	2.8%
Beed Total		**6664**	**7.0%**
Hingoli	Landless	844	0.9%
Hingoli	Marginal	2702	2.9%
Hingoli	Other	843	0.9%
Hingoli	Small	3361	3.5%
Hingoli Total		**7750**	**8.2%**
Jalna	Landless	682	0.7%
Jalna	Marginal	3915	4.1%
Jalna	Other	1102	1.2%
Jalna	Small	5930	6.3%
Jalna Total		**11629**	**12.3%**

District	Farmer Category	Number of Applicants	% of Applicants
Latur	Landless	715	0.8%
Latur	Marginal	2717	2.9%
Latur	Other	464	0.5%
Latur	Small	3834	4.0%
Latur Total		**7730**	**8.2%**
Nanded	Landless	691	0.7%
Nanded	Marginal	2402	2.5%
Nanded	Other	465	0.5%
Nanded	Small	2657	2.8%
Nanded Total		**6215**	**6.6%**
Osmanabad	Landless	1032	1.1%
Osmanabad	Marginal	1879	2.0%
Osmanabad	Other	450	0.5%
Osmanabad	Small	3010	3.2%
Osmanabad Total		**6371**	**6.7%**
Parbhani	Landless	934	1.0%
Parbhani	Marginal	2715	2.9%
Parbhani	Other	815	0.9%
Parbhani	Small	3901	4.1%
Parbhani Total		**8365**	**8.8%**
Grand Total		**94777**	**100.0%**

In line with the project components, there are different activities and sub-components under which the potential beneficiaries can apply for matching grant benefits. The below table summarizes the subcomponent wise applications done till 31st Match 2019 through the DBT portal

Table 11: POCRA Project sub-component wise applications

Project Sub-Component	Number	Percentage of Applications
Protective Irrigation	23225	25%
Construction of new water harvesting structures	19736	21%
Micro irrigation systems	15126	16%
Integrated Farming Systems	14158	15%
Enhancement in Carbon Sequestration	10178	11%
Improvement of saline and sodic lands	6612	7%
Protected Cultivation	1684	2%
Rejuvenation or desilting of existing water harvest	1486	2%

Project Sub-Component	Number	Percentage of Applications
Construction of groundwater recharge structures	1101	1%
Soil Health Improvement	921	1%
Production of foundation certified seed	235	0%
On-farm water security	220	0%
Demonstration of climate smart agronomic practices	66	0%
Establishment of Custom Hiring Centers	12	0%
Support to Business plans appraised by Financial I	9	0%
Development of Seed hub infrastructure support	7	0%
Support to existing FPCs/FPO/FPCs	1	0%
Grand Total	94777	100%

The DBT applications goes through various stages before the beneficiary gets the matching grant. The below graph presents the stage wise status of the applications received till 31st March 2019. It can be seen that 65 % of the applications are in Pre-Sanction or desk 1 stage . Also, 16 % applications each are in document preparing and sharing and Pre sanction Desk 2 stage. It can be seen that only 1 % of the applications are in Pre sanction desk 3 stage and only 2 % of the applications are sanctioned (are in Sanctioned-Desk 4 stage) till now.

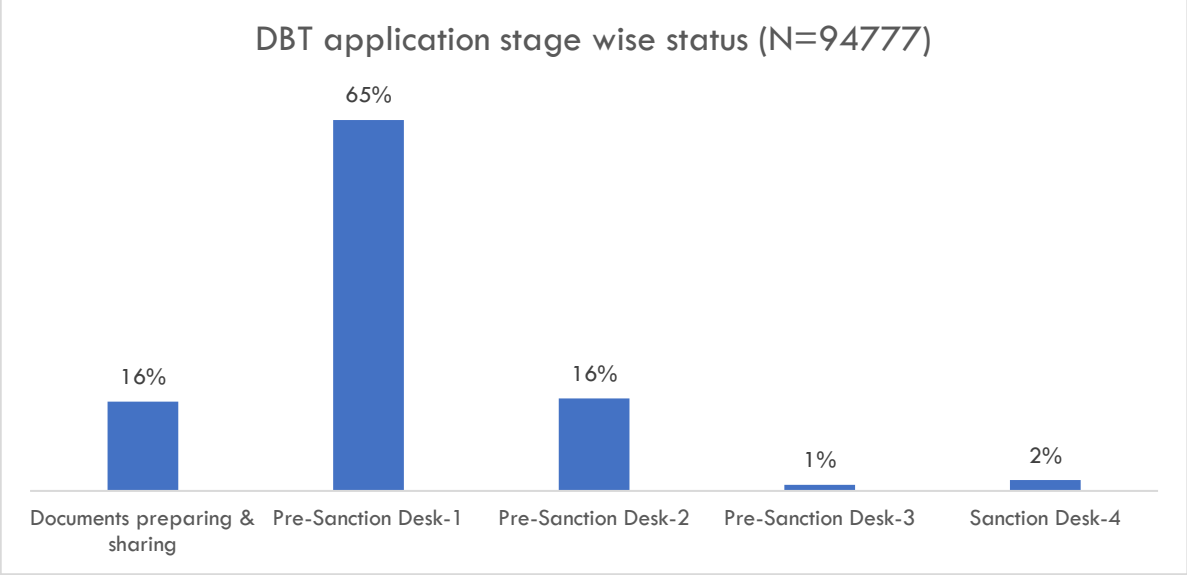

Figure 66:DBT application stage wise status

10. District wise Physical and Financial Progress report

The below table presents the summary of district wise financial and physical progress data as also published on the PoCRA website.

Table **12:***District wise physical and financial progress*

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
			Physical	Financial (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)	Phy	Fin (Rs Lakhs)
	Farmer Field school	No.	170.0	28.3	116.0	9.8	201.0	16.8	257.0	25.3	138.0	3.5	133.0	23.9	229.0	19.5	117.0	8.8
I	Encouragement to climate resilient farming techniques																	
1	Enhancement of carbon sequestration in the soil																	
	1. Adoption of Agro Forestry																	
1	First Year	No. of Beneficiaries																
1	Total Agroforestry	No. of Beneficiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2. Horticulture Plantation																	
1.2.1	Mango (5x5)																3.0	1.4
1.2.2	Citrus	No. of Beneficiaries	16.0	3.5													11.0	4.2
1.2.3	Custard Apple	No. of Beneficiaries															3.0	0.9

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
1.2.4	Guava	No. of Beneficiaries															5.0	4.1
1.2.5	Aonla	No. of Beneficiaries																
1.2.6	Pomegranate	No. of Beneficiaries	4.0	1.1														
	Horticultural Plantation	No. of Beneficiaries	20.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	9.2
2	**Management of saline and sodic Lands (Kharpan Villages)**																	
2.1	Farmer Field school	No.																
2.2	Sub surface drainage	Area																
2.3	Farm pond with inlet and outlet with grass plantation in outlet	No. of Beneficiaries																
2.4	Water lifting devices (pump set)	No. of Beneficiaries																
2.5	Sprinkler irrigation	No. of Beneficiaries																
	Total Saline and sodic soil management		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	**Protected cultivation**																	
3.1	Shadenet house (GI/MS Pipes) (1000 Sq. M)	No. of Beneficiaries	1.0	7.1														

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
3.2	Shadenet house (Bamboo) (1000 Sq. M)	No. of Beneficiaries																
3.3	Poly house (Natural ventilation) (1000 Sq. M)	No. of Beneficiaries																
3.4	Poly tunnel (1000 Sq. M)	No. of Beneficiaries																
3.5	Planting material Shadenet house/Polyhouse Flower crop plantation/ Vegetable plantation	No. of Beneficiaries																
3.6	Planting material Poly Tunnel Flower crop plantation/ Vegetable plantation	No. of Beneficiaries																
	Total Protected Cultivation	No. of Beneficiaries	1.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	**Integrated Farming System**																	
4.1	Small ruminants/goat farming	No. of Beneficiaries	25.0	8.2							33.0	11.4					2.0	0.9
4.2	Backyard poultry	No. of Beneficiaries																
4.3	Sericulture	No. of Beneficiaries																
4.4	Apiculture	No. of Beneficiaries																

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
4.5	Inland Fisheries	No. of Beneficiaries																
4.6	Other Agro Based Activities	No. of Beneficiaries																
	Total Integrated Farming System	No. of Beneficiaries	25.0	8.2	0.0	0.0	0.0	0.0	0.0	0.0	33.0	11.4	0.0	0.0	0.0	0.0	2.0	0.9
5	**Soil health Enhancement**																	
5.1	Production of organic inputs through NADEP and Vemi Compost	No. of Beneficiaries																
5.2	Organic fertilizer Production unit	No. of Beneficiaries																
	Total Soil health Enhancement	No. of Beneficiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
II	**Promoting an efficient and sustainable use of water for Agriculture**																	
1	**Area Treatment**																	
1.1	Continuous Contour trenches Model 5-8 (0.30 m)	Survey No.																
1.2	Continuous Contour trenches Model 5-8 (0.45 m)	Survey No.			105.0	5.6												
1.3	Deep Continuous Contour trenches (CCT)	Survey No.																
2	**Drainage Line Treatment**																	

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
2.1	Construction of Loose bolder Structures	Number																
2.2	Gabian Structure	Number																
2.3	Construction of Earthen Nala Bunds	Number			6.0	16.4												
2.4	Construction of Cement Nala Bunds	Number																
3	**Construction of new water harvesting structures**																	
3.1	Community farm pond with lining (100x100x3 m)	Number																
3.2	Community farm pond with lining (34x34x4.7 m)	Number	2.0	3.3														
3.3	Community farm pond without lining(100x100x3 m)	Number																
3.4	Farm pond with lining (30x30x3 m)	Number	76.0	50.6			11.0	7.3										
3.5	Farm pond without lining (30x30x3 m)	Number	31.0	15.4														
3.6	Strengthening of farm pond (lining)	Number	65.0	44.7														
3.7	Wells	Number																
4	**Rejuvenation or desilting of existing water harvesting Structure**	Number																
5	**Groundwater Recharge**																	

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
5.1	Well Recharge	Number																
	Total Promoting an efficient and sustainable use of water for Agriculture		**174.0**	**114.0**	**111.0**	**22.0**	**11.0**	**7.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
6	**In-situ Water Conservation**																	
6.1	Compartment Bunding/Graded Bunding	Survey Number	252.0	0.0	294.0	20.6												
7	**Micro irrigation System**																	
7.1	Drip Irrigation	No. of Beneficiaries	10.0	4.7					4.0	1.1								
7.2	Sprinkler irrigation	No. of Beneficiaries	20.0	2.5	1.0	0.1			19.0	2.3								
	Total Micro Irrigation System	No. of Beneficiaries	30.0	7.2	1.0	0.1	0.0	0.0	23.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	**Protected Irrigation System**																	
8.1	Water lifting Devices (Pump set)	No. of Beneficiaries	44.0	4.4	1.0	0.1	3.0	0.3	19.0	1.9								
8.2	Pipe (HDPE/PVC)	No. of Beneficiaries	98.0	12.9	4.0	0.5	2.0	0.3	34.0	4.9								
	Total Protected Irrigation System	No. of Beneficiaries	142.0	17.3	5.0	0.6	5.0	0.6	53.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
III	**Post-Harvest Management and strengthening of climate resilient value chain**																	

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
1	**Creation of basic infrastructure facilities**																	
1.1	SHG/FIG - Proposal	No.					1.0	0.0										
1.2	FPC/FPO- Proposal	No.																
	Total Creation of basic infrastructure facilities	No.	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	**Custom Hiring Center - Facilitation and Production**						2.0	0.0										
2.1	SHG/FIG - Proposal	No.																
2.2	FPC/FPO- Proposal	No.																
	Total Custom Hiring Center - Facilitation and Production	No.	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	**Production of foundation & certified seeds of climate resilient varieties**	No. of Beneficiaries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	**Seed Hub- Development of basic Infrastructure Facilities**																	
4.1	SHG/FIG - Proposal	No.																
4.2	FPC/FPO- Proposal	No.					1.0	0.0										
	Total seed Hub- Development of basic	No.	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

S.No	Component, Sub-Component and Activities	Unit	Aurangabad		Beed		Jalana		Latur		Osmanabad		Nanded		Parbhani		Hingoli	
	Infrastructure Facilities																	
	Total Financial			186.6		53.0		24.7		35.5		14.9		23.9		19.5		18.9

Annexure

List of Sample Villages

Project Villages List:

S.No	District	Subdivision	Taluka	Cluster code	Village Census code	Village Name
1	Nanded	Nanded	Kandhar	511_gv-106_01	545367	Mangal Sangvi
2	Nanded	Kinwat	Kinwat	511_npg-16_02	544209	Unakdeo
3	Hingoli	Hingoli	Aundha Nagnath	512_gp-52_03	545996	Bhosi
4	Hingoli	Hingoli	Hingoli	512_ppg-6_02	545917	Koyali
5	Parbhani	Parbhani	Sailu	513_gp-50_02	546468	Kupta
6	Parbhani	Parbhani	Gangakhed	513_gv-97_01	547031	Dhebewadi (Thagyachiwadi)
7	Jalna	Partur	Partur	514_gp-35_03	548026	Kawjawala
8	Jalna	Partur	Mantha	514_gp-41a_03	548160	Deogaon Khawate
9	Aurangabad	Sillod	Kannad	515_gv-39_02	548370	Khamgaon
10	Aurangabad	Vaijapur	Gangapur	515_gv-42_04	549338	Bolegaon
11	Aurangabad	Aurangabad	Paithan	515_gv-53_05	549544	Dera
12	Bid	Bid	Beed	523_gv-73_01	559661	Bhandarwadi
13	Bid	Manjlegaon	Wadwani	523_gv-78_02	559437	Sonnakhota
14	Bid	Manjlegaon	Dharur	523_gv-87_01	559854	Aswala
15	Latur	Udgir	Ahmadpur	524_mr-37_01	560346	Chilkha
16	Latur	Latur	Shirur	524_mr-41_01	560574	Halki
17	Latur	Latur	Nilanga	524_mr-45_04	560819	Shelgi
18	Osmanabad	Osmanabad	Tuljapur	525_bm-1a_02	561540	Khandala
19	Osmanabad	Bhum	Paranda	525_sa-24_08	561094	Deogaon kh.
20	Osmanabad	Bhum	Washi	525_sa-26_04	561280	Wadji

Comparison Villages List:

S.No	District	Sub-Division	Taluka	Cluster code	Village Census code	Village Name

1	Aurangabad	Sillod	Kannad	515_gv-39_03	548373	Dhangarwadi
2	Aurangabad	Sillod	Soegoan	515_te-15a_03	548498	Chondeshwar
3	Bid	Manjlegaon	Georai	523_gv-61_02	559120	Gangawadi
4	Hingoli	Hingoli	Basnath	512_gv-100_01	546392	Khajamapur
5	Jalna	Partur	Gahansawangi	514_gp-37_03	547935	Masegaon
6	Latur	Latur	Ausa	524_mr-28_02	560629	Shivani Bk.
7	Latur	Latur	Shirur	524_mr-41_01	560589	Ankulga (Rani)
8	Nanded	Deglur	Biloli	511_mr-59_02	545095	Takli Kh
9	Osmanabad	Bhum	Kalamb	525_mr-12_01	561362	Haladgaon
10	Parbhani	Parbhani	Palam	513_gv-96_02	547154	Pokharni Devi