

IMPACT ASSESSMENT STUDY OF SCHAEFFLER'S JALSAHARA PROGRAM

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Acknowledgement

This report on the study of Impact Assessment of the 'Jalsahara program' in Maharashtra is undertaken by Sattva Consulting Pvt. Ltd. and commissioned by Schaeffler India.

The Impact Assessment study was exercised at Satara where the Jalsahara Program has been executed by Schaeffler India in collaboration with BAIF with an aim to enable better natural resource management, livelihood and education practices in the communities near its areas of operation.

We would like to extend our sincere gratitude to the Schaeffler India team including Mr Yogesh Kapse and all the other CSR team members who extended their great cooperation in accomplishing the study at various levels. Our team is immensely thankful for the valuable guidance and support extended by the Schaeffler India Team and BAIF team including Ms Sneha Shinde and the entire team, for their priceless cooperation and for offering valuable suggestions and inputs during fieldwork.

The study team extends its warm appreciation to all the primary and secondary stakeholders, who have shared their experiences, thoughts and suggestions and taken out their valuable time to aid us during the execution of the study.

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Abbreviations

DAC : Development Assistance Committee

FGD : Focus Group Discussion

HH : Household

M&E : Monitoring & Evaluation

OECD : Organization for Economic Cooperation and Development

SOP : Standard Operating Procedure

Executive Summary

In collaboration with BAIF; Schaeffler India, through its Jalsahara program aims to enable an improved quality of life in the Satara district of Maharashtra.

Schaeffler India has commissioned Sattva to conduct an impact assessment study of the Jalsahara program based in the Satara district of Maharashtra. The program focuses on :

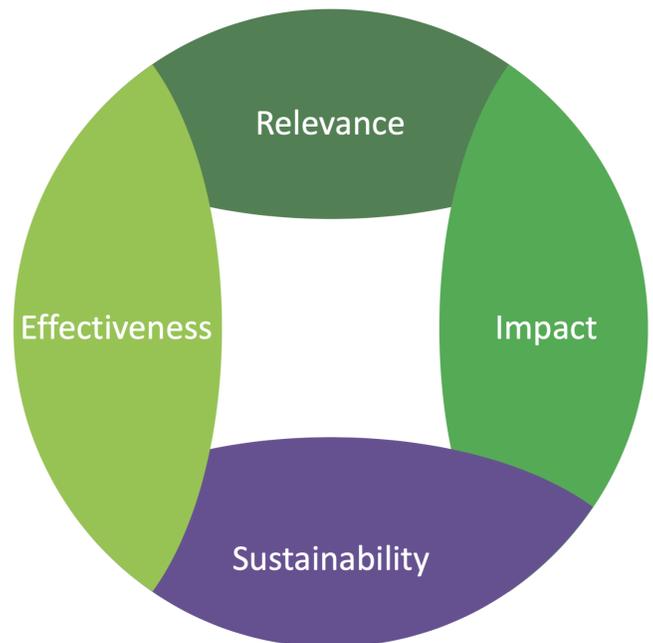
- implementation of soil and water conservation measures on the principles of watershed management
- strengthening of available natural resource base such as land, water, and vegetation for increasing ground water and productivity
- creation of awareness about good practices relating to agriculture and water
- strengthening of the livelihood of landless families
- providing various facilities in the local school to enable a quality education to students

The study was conducted at four levels to understand:

- The **relevance** of the program in assessing the extent to which the program is aligned to the needs of the community.
- The rigour of on-ground implementation, stakeholder involvement, and processes undertaken to ensure **operational effectiveness** of the program.
- The extent to which the intervention has **impacted** the lives of the beneficiaries.
- The ability of the beneficiaries to **sustain** the program financially, socially and, post the program intervention period.

The study also focuses on providing actionable recommendations to strengthen the program further.

The research design was based on a cross-sectional approach. Data was collected using a mixed method approach which included both qualitative and quantitative methods of research for data collection. For quantitative data, surveys were conducted for 191 households. For qualitative data collection, in addition to the FGDs and in-depth interviews for the Households, other stakeholders such as the Watershed Committee, Education Committee, Gram Panchayat, Anganwadi Sewika, Agricultural Officer, Krushi Sewak, BAIF's program team, and Schaeffler India CSR Team were interviewed.



Key insights from the Impact Assessment Study

Based on the data collected from different stakeholders across Tadwale village in Satara, Maharashtra, following key insights have been formulated :

The intervention through adoption of water recharge management practices has improved the availability and quality of water, which was a concern prior to the intervention.

- 88% respondents reported a perceived increase in groundwater levels by 1.47m and 65% respondents reported an increase in area under irrigation by 85 acres.
- 77% respondents have admitted to adopting afforestation in their practices in the community after the Jalsahara intervention.

The intervention has led to adoption of soil and water conservation practices, thereby improving the moisture retention in soil.

- 93% respondents have noticed an improvement in moisture retention of the soil.
- Respondents have also highlighted a boost in fertility levels of the soil, due to efficient farming practices (like fodder cultivation) and reducing the use of fertilisers.

Awareness of modern agricultural techniques and weather advisories, have resulted in a significant increase in cropping intensity and crop diversification

- 80% and 77% of the respondents adopted water use efficacy and fodder cultivation respectively, after the intervention, whereas, 63% of the farmers adopted crop diversification.
- Crop diversification initiative helped bring the number of crops grown up from 2 to 4 in Kharif and Rabi season each, after the intervention.
- Crops like french beans, chilli, sorghum, drumstick, sugarcane, peas, brinjal and methi were introduced by farmers into their farming produce.

Access to water, adoption of newer agricultural techniques has directly impacted crop yield and income of the farmers.

- 75% respondents have seen an increase in yield due to increased groundwater availability.
- The crop yield saw a steep rise (2x) before and after the program.
- The average annual income for the participating farmers increased by 73%.

Facilitation of various employment opportunities has led to an increase in the income levels among the landless farmers.

- Comprehensive training imparted by BAIF Team after understanding and mapping their interests have sensitized and helped the members in making choices to pursue various employment opportunities available to them in Tadwale.
- The annual incomes levels of landless have increased by 65% through the aid of Jalsahara initiatives.

Key recommendations



Sustainability of the intervention to be planned and executed in phases step-by-step through phased out institution and capacity building

The communities indicated that despite having the technical knowledge and the financial capabilities, they felt under-confident to execute the intervention independently.



Strengthen monitoring and evaluation metrics and processes at community and managerial levels

Since the community will be expected to independently execute the initiative, there still seems to be room to develop better data monitoring mechanisms.



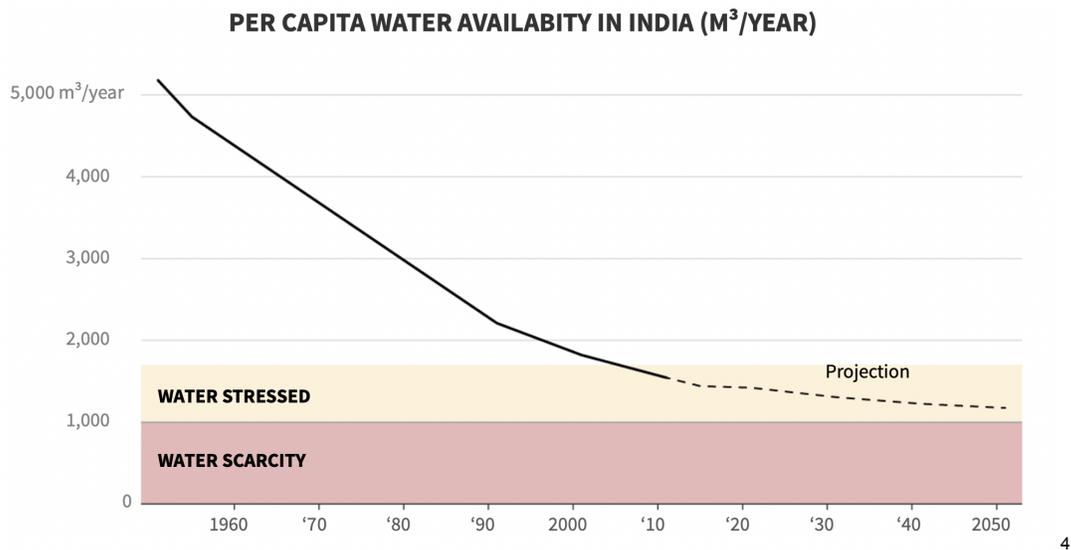
Strengthen the livelihoods program based on the market demand and demand of the community

The survey and qualitative observations have been indicative of the fact that the members of the community have aspirations of pursuing employment opportunities in the tertiary sector too.

Chapter 1 : Overview

Landscape of Water and Agriculture in India

India is home to 18 percent of the global population but has only 4 percent of the global water resources.¹ India has made significant progress in developing water resources and supporting infrastructure, yet, the water demand exceeds supply² (Cronin, Prakash, Priya and Coates, 2014). Countries with per-capita water availability less than 1700 m³ per year are categorized as water-stressed as per international standards. With per capita available water of 1545 m³ India is a water-stressed country³.



Agriculture makes 15.4% of India's GDP. It employs 45% of people in traditional farming and modern agriculture methods. Several studies undertaken recently in India, including the one on Doubling Farmers' Income (DFI) have brought out the problems afflicting the agriculture sector. The recommendations of these studies include, inter alia, ensuring timely availability of inputs, an increased focus on measures to enhance the productivity - especially of small and marginal farms, adoption of modern agricultural practices, optimal use of inputs, choice of the right crops through macro and micro-level planning, etc.⁵

Overview of Schaeffler India's Jalsahara Program

The Schaeffler India Group is a leading automobile supplier in India. Schaeffler India is actively engaged in innovating and shaping the global pace of change. With innovative technologies, products, and services for CO₂-efficient drives, electric mobility, Industry 4.0, digitalization, and renewable energies, the company is a reliable partner for making motion and mobility more efficient, intelligent, and sustainable.

Their CSR Policy aims at driving progress and improving standard of living while preserving the environment and supporting sustainability. The Jalsahara Project in association with BAIF Development Research Foundation

¹ [World Bank, "Helping India Overcome Its Water Woes", December 2019](#)

² [AA Cronin, "Water in India: Situation and Prospects", June 2014](#)

³ [Census, "India-WRIS wiki", 2011](#)

⁴ [Gurman Bhatia, "India is running out of water", September 2019](#)

⁵ [Government of India, "Consultation Paper on IDEA", June 2021](#)

is aimed at solving the issue of water scarcity. Under the initiative Jalsahara, Schaeffler India adopted Tadwale village in Koregaon block, Satara district.

Need for intervention

While India is home to 16% of the world's population, it receives only 4% of the total freshwater resources. The additional impact of climate change has resulted in a water crisis. As per the Central Ground Water(2017), as many as 256 of 700 districts have reported 'critical' or 'over-exploited' groundwater levels. (Nathan 2021). Maharashtra, in particular, has been experiencing increased water stress. Following years of drought, the rivers' currents have ebbed, water in dams and reservoirs has depleted and over-exploitation of groundwater has raised concerns over the long-term availability of water.⁶ In 2019, The state government had to deploy the highest number of water tankers around the most arid regions of the state. Owing to scanty rainfall since 2016, about 761 villages in Maharashtra have been facing acute water shortage.⁷ As per a survey by the Groundwater Survey and Development Agency, of Maharashtra's 353 Talukas 279 have experienced a depletion in groundwater levels. (Ashar and Chakravarty 2019)



Implementation partner - Bharatiya Agroindustries Foundation (BAIF)

BAIF is one of the largest non-profit organizations in India, working with local communities and stakeholders in over 85,000 villages in 13 states of India. For the past 53 years, it has been developing sustainable livelihoods by applying technology and research to farming and livestock to raise productivity, conserve natural resources and promote education and health. Dr. Manibhai Desai – the Founder of BAIF, was a close associate of Mahatma Gandhi. Hence the organizational values are strongly rooted in the Gandhian tradition.

BAIF had identified the need for the intervention in Tadwale village based on a participatory needs assessment exercise. It was found that the share of agriculture in farmer incomes was declining. However, the potential income gains from better agricultural management were found to be substantial in the location. It was also found that Immediate livelihood support to the landless was essential. To ensure sustenance, effective implementation and adoption of the initiative and at the community level, institution and capacity building of the community was considered as a strategic necessity.

⁶ [Sandeep A Ashar. "How severe is the water crisis in Maharashtra?". June 2019](#)

⁷ [Abhirupa Kundu. "How Two States Dealt With A Severe Water Crisis". March 2021](#)

Key Interventions

Schaeffler India within its Jalsahara Program has undertaken a host of activities within Tadwale. These activities focus on building rural livelihoods with a focus on:

Natural Resource Management



Livelihoods



Education



Natural Resource Management :

Natural resources are a source of livelihood in the Tadwale village. To strengthen the earnings of the populace as well as keeping in mind the goal of sustainable development, the following areas were concentrated upon:

Activities	Soil and Water Conservation Measures	Water Storage Measures	Agricultural Development
Objective	To improve the quality of soil and access to water resources.	To increase the storage of water.	To increase the incomes of farmers.
Key Interventions	Area Treatment	Recharge Ponds	Crop Diversification involving 330 participants
	Drainage Line Treatment	De-siltation/repair of old check dams	Water use efficiency measures for 330 acres
	Creating loose boulder structures and wall gabion structures	Nalla Deepening	Fodder Development for 330 acres

Livelihoods :

The landless persons were found to have the least income opportunities. Further, a large section of the population being dependent on agriculture for their livelihoods directly and indirectly, empowering them through training was also considered essential.

Activities	Livelihood Generation for Landless	Capacity Building of Community
Objective	To generate livelihood opportunities for the landless households.	To empower the community to identify and address their problems.
Key Interventions	Support to 50 landless households Training, value addition for landless employment	Exposure Visits Training Programme of Farmers Training to volunteers Capacity Building support for Watershed Committee

Education :

The future of a community is secured through the education of its next generation. The program for supporting education was initiated with this perspective in mind on a very small scale, as shown in the infographic below:

Activities	Support for Education
Objective	To increase the future earning potential and well-being of the members of the community.
Key Interventions	Digital School with provision of online tuitions and tutor for Science and Maths. Support for Anganwadi

Chapter 2 : Sattva's Approach and Methodology

Objectives of the Impact Assessment study

Between September and December 2021, Schaeffler India commissioned Sattva to conduct an Impact Assessment of its Jalsahara program across the village of Tadwale, Satara, Maharashtra to:

- Building a deeper understanding of the change in the quality of life of the target community through integrated natural resource management measures
- Promoting skill-based livelihood with the active participation of Capacity Building Organizations
- Taking measures to support quality of education at the school and Anganwadis.

Following were the objectives of the study :



Impact assessment of the interventions to evaluate:

- Extent of increased access to water on farms and within households
- Improvement in the standard of living for landless farmers
- Adoption of crop diversification
- Increasing the scope of future livelihoods through improved education and Anganwadi development
- Improvement of community institutions



Provide insights and recommendations on:

- Process re-engineering to increase the adoption of the programs and their efficiency
- Coherence of the intervention at BAIF and state and national level priorities and programmes
- Alignment of the need of the target group and project objectives to maximize impact
- The rigor of implementation on ground to bring the intended result on time, as well as risk mitigation strategies
- Provide actionable recommendations to fine-tune the program and maximize impact on ground

Study Design and Methodology

Sattva undertook a descriptive cross-sectional study where data has been collected from the beneficiaries around the previous and current status of outcome indicators to quantify the changes affected by the intervention.

Sattva conducted an impact assessment study for the Jalsahara program using a mixed-method approach consisting of quantitative techniques such as surveys, and qualitative research techniques such as focused

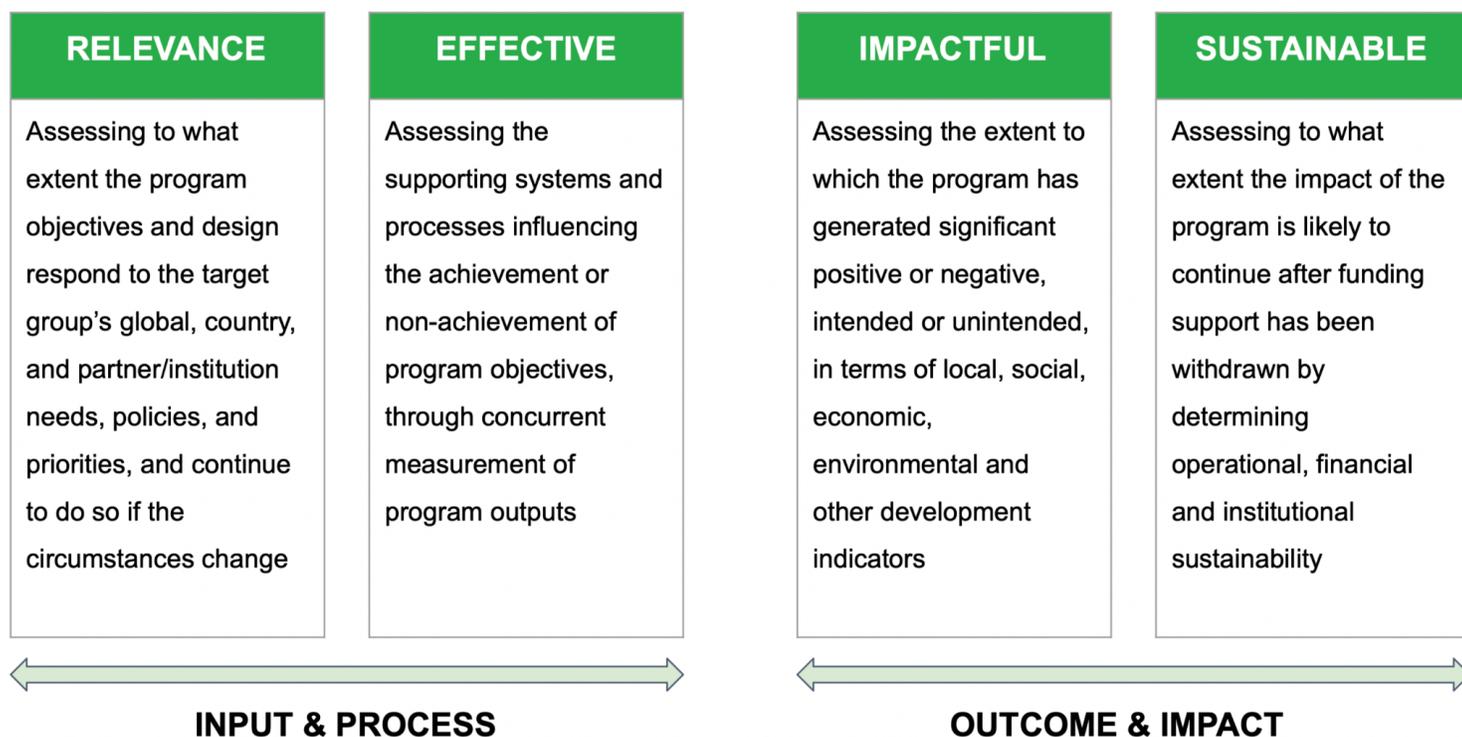
group discussions (FGDs), in-depth interviews (IDIs); both primary and secondary data collection methods were used.

This helped to gather valuable impact-related insights from a 360-degrees angle across the stakeholders involved and served as a fundamental resource for providing recommendations around ways to inform the program strategy for the future.

The methodology for the impact assessment exercise encompassed developing a set of research questions based on the DAC framework to draw evidence towards each program, which would help draw out a reasonable set of conclusions within the constraints of time, availability of information and depth of the research.

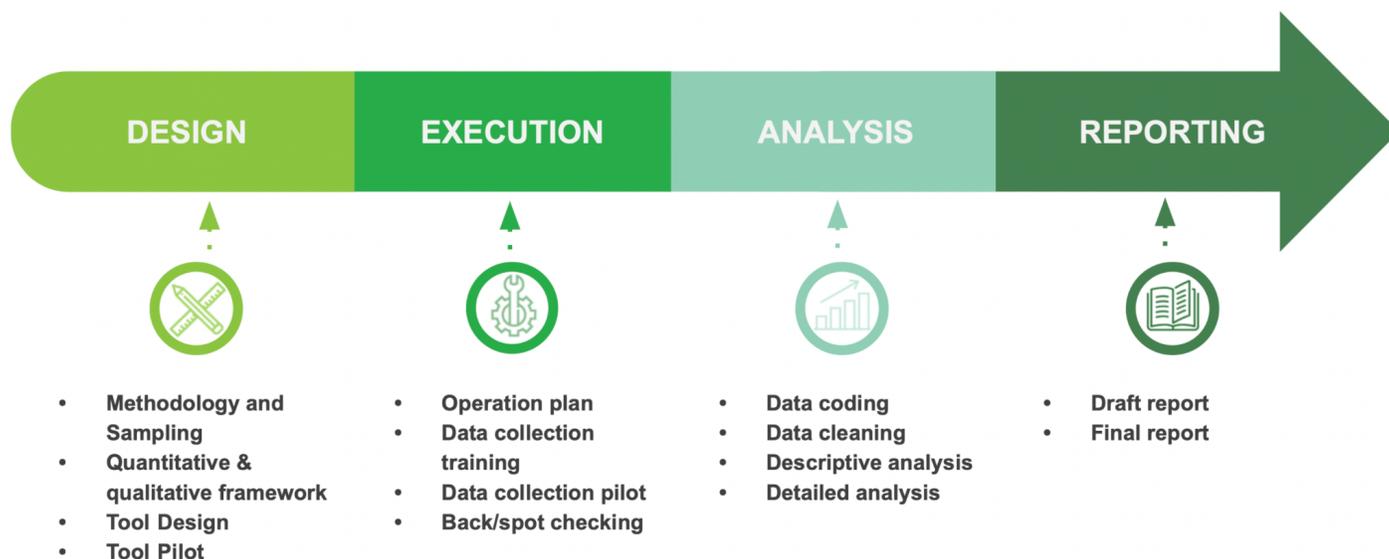
Framework

Sattva adopted the Development Assistance Committee's (DAC) framework developed by the Organization for Economic Cooperation and Development (OECD) as an anchor to conduct the impact assessment.



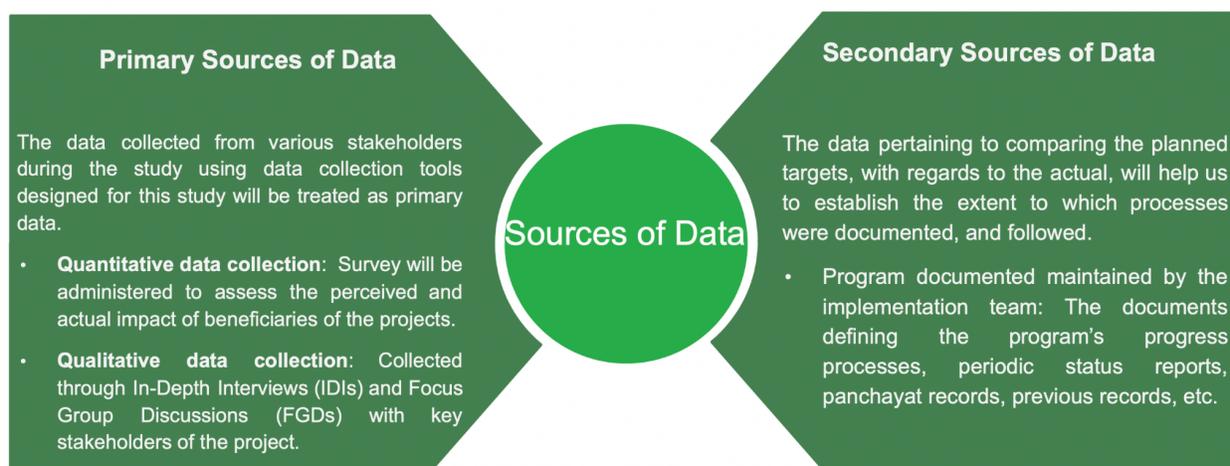
Approach for the Impact Assessment Study

Sattva conducted the impact assessment study in the following phases as mentioned below :



Data Sources

The study uses two kinds of data, primary and secondary. Primary data is collected via quantitative and qualitative methods of data collection. Secondary data is gathered from program documents and various reports.



Sampling and Outreach

Sattva adopted a **Stratified Random Sampling approach** to ensure the right representation of the population in the impact study across partner organizations for each of the interventions. The sample size was calculated using the population frame (all beneficiaries of the intervention) with 95% confidence level and 5% margin of error.

STAKEHOLDERS	Type of Data Collection	Planned	Actual
Households	Quantitative Survey	135	191
	Focus Group Discussion	1	1
Village Watershed Committee	Focus Group Discussion	1	1
Village Education Committee	Focus Group Discussion	1	1
Gram Panchayat	Focus Group Discussion	0	1
Schaeffler CSR Team(4-5 members)	Focus Group Discussion	1	1
BAIF Team(4-5 members)	Focus Group Discussion	1	1
Gram Panchayat Member	In-Depth Interview	1	1
Krushhi Sevak	In-Depth Interview	1	1
Agricultural Officer	In-Depth Interview	1	1
Anganwadi Sewika	In-Depth Interview	0	1
KVK/NABARD	In-Depth Interview	1	0
Total		144	201

Ethical considerations of the study

The assessment followed the ethical protocols in all aspects and at all stages of the engagement based on the discussion with the team :

- As part of data collection, team members followed ethical protocols by explaining the purpose of the study and ensured informed consent from the participants.
- The Interview sessions were conducted in an environment that ensured the privacy of respondents as per their convenience and comfort.
- The respondents were assured about the confidentiality of their personal information and the usage of data only for research purposes.
- The participation of respondents was ensured as being voluntary, and they were not compelled to answer any questions.

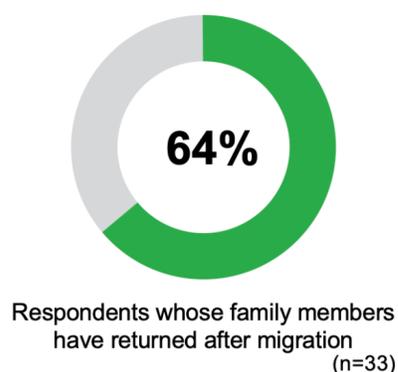
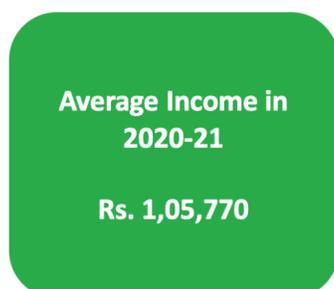
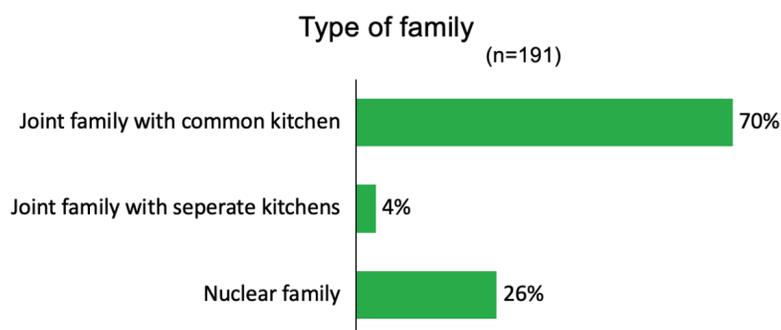
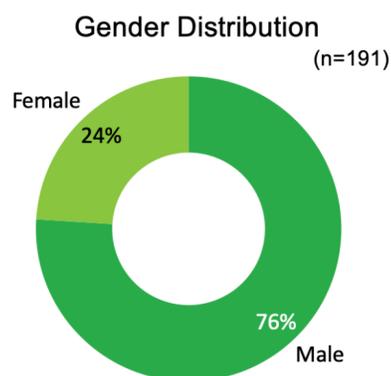
Limitations of the study

- **Partial qualitative data collection** process (in-depth interviews and FGDs) conducted during the study was **held virtually** due to unavailability of the personnel on field.
- Social Desirability & Conformity bias in regard to openly expressing non-conformity when asked to self-report their behavior, beliefs and opinions. In such cases, respondents will tend to provide a socially acceptable response (sometimes subconsciously) over their true feelings.

Chapter 3 : Findings of the Impact Assessment Study

The following section of the report details the key results and insights of the impact assessment study across the DAC standard parameters as outlined in the framework for the study. The insights have been drawn using the 360-degree approach of data collection by gathering data from qualitative and quantitative methods by engaging with different stakeholders of the program.

Demographics



Natural Resource Management

Natural resources are a major source of livelihood in the Tadwale village. The various interventions undertaken under natural resource management included setting up of soil and water conservation structures, aiding farmers with modern practices of farming and setting up of water storage structures to increase availability of water.

The following findings were observed during the impact assessment study :

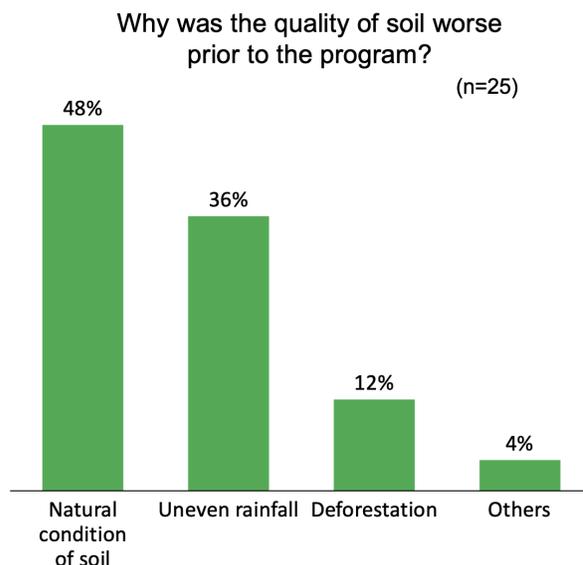
1. The soil was of poor quality due to less moisture content and droughts

- Over 43% of the respondents had suggested that the soil quality was a serious issue at their farms.

- Nitrogen levels in the soil were extremely low in the area - Cycle 1 saw 88.74% low nitrogen nutrient levels in the soil.⁸ The chemical analysis of the soil indicated that deficiency in fertility constituents such as nitrogen, organic carbon, phosphorus.⁹
- Uneven rainfall and the nature of the soil were identified as additional reasons for the poor quality by 36% and 48% of the respondents respectively.
- The Gram Panchayat also highlighted that the **soil was dry** and not fertile. The village watershed committee expressed that the soil was below standard due to droughts and **less moisture content**.



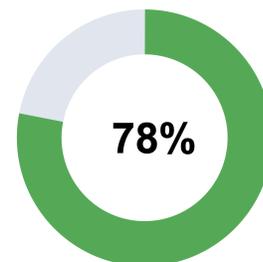
43% of the respondents rated the soil to be of serious condition at their farm (n=30)



2. Availability of water was a concern due to lack of rainfall

- 78% of respondents believed there was a lack of rainfall leading to concerns with the availability of water.
- The average rainfall of the district is lower than the state average and the variation in rainfall across different blocks within the district as well as over different years is one of the major constraints in the district's agriculture.¹⁰
- The Water Committee reported that though the quality of water was also a concern, **availability of water was a bigger problem**. The rainfall in the area was less - leading to a **drought condition**.

Respondents highlighting issue of less rainfall in the area (n=27)



3. Farmers were unable to deploy modern techniques due to lack of awareness and weather challenges

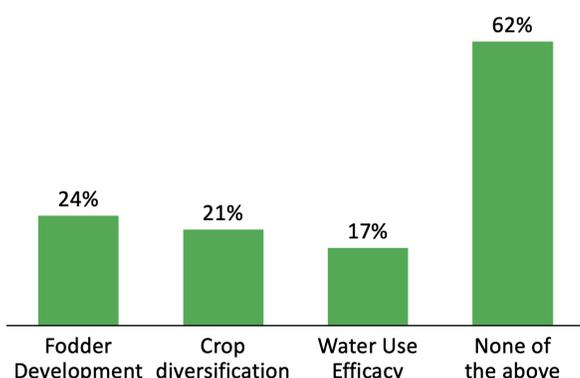
- Over 62% of the respondents reported that they were using none of modern agricultural techniques like crop diversification, fodder development, water use efficiency whereas 55% respondents reported not using modern irrigation techniques such as drip, sprinkler, flood or drum kit irrigation respectively.

⁸ [Department of Agriculture and Farmers Welfare. "Soil Health Card"](#)

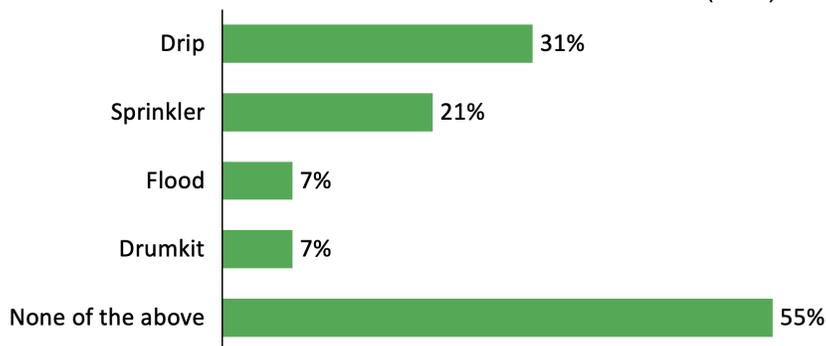
⁹ [The Gazette Department. "Agriculture and Irrigation"](#)

¹⁰ [KVK. "General Description of Satara"](#)

Which of these agricultural techniques were you using before the program?
(n=29)



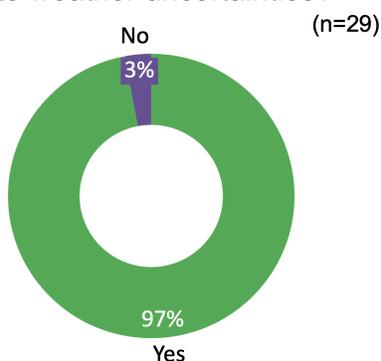
Which of these irrigation techniques were you using before the program?
(n=29)



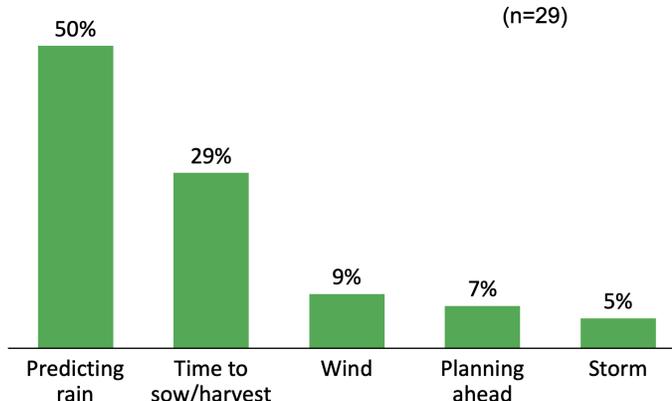
- Only 2 crops were grown on an average in the area in Kharif and Rabi season each prior to the intervention. Common crops grown were Rajma, Harbara, Dhaniya, Bajra and Maize.
- 97% farmers admitted to facing difficulties due to weather uncertainty. Out of the respondents that faced challenges with respect to weather, 50% of the respondents faced uncertainties due to rain and 39% of the respondents faced uncertainty about time to sow or harvest crops.
- During the qualitative interviews, it was mentioned by the households there was very **little knowledge** in the area about **efficient farming practices** prior to the intervention. Krushi Sevak suggested that due to less availability of water, most **farmers relied on rain** to irrigate their crops.
- As per KVK Satara, the share of agriculture in District Domestic Product is very low, despite 70 percent of the workforce in the district being engaged in this sector. There is a major need to increase productivity of crops and capitalize on price advantage so as to increase the contribution of this sector to the district domestic product.¹¹



Have you faced challenges in farming due to weather uncertainties?
(n=29)



What challenges did you face due to weather uncertainties?
(n=29)



¹¹ [KVK. "General Description of Satara"](#)

4. Comprehensive training imparted by well-qualified trainers helped community members in networking and understanding the use of resource

- Respondents rated ease of understanding, trainer's qualifications, benefit in networking as 5/5 and access to resources as 4/5.
- During the qualitative interviews, it was mentioned by the households that training was provided on experts on the matter and a field visit was taken to a research institution as well. They highlighted that a village gathering was organized to give out information regarding soil and water conservation once.

Average ratings on trainings provided (n=30)

Ease of understanding

5

Trainer's Qualifications

5

73.3%

People who attended trainings mentioned that they were helpful

Benefit in Networking

5

Access to resources

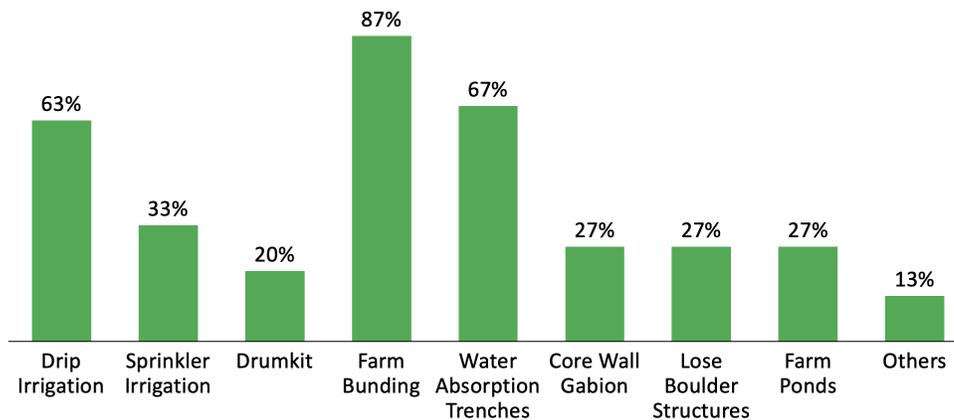
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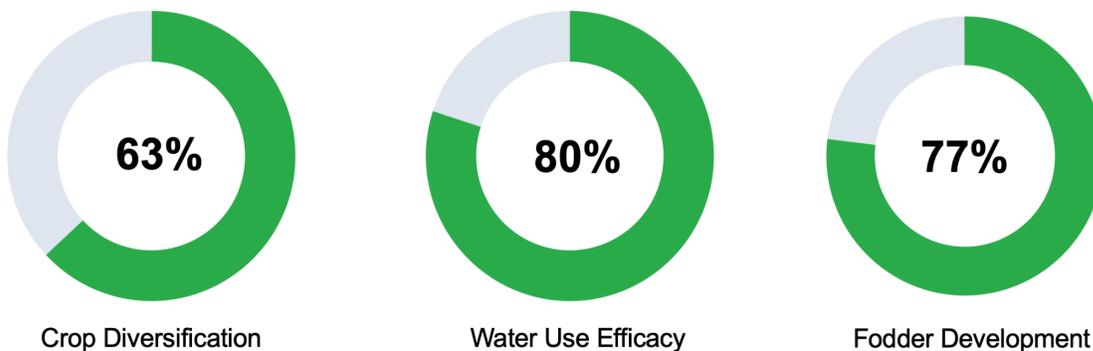
1. Adoption of interventions introduced

- There has been a good **adoption rate** of interventions introduced by the Jalsahara program. Under soil and water conservation initiatives with **87% farmers having adopted farm bunding**, 67% respondents having adopted water absorption trenches and 63% respondents have adopted drip irrigation as the major means of irrigation for their crops. A small portion of farmers have also adopted other techniques such as sprinkler and drum kit irrigation, farm ponds, loose boulder structures and core wall gabion.
- Under agricultural initiatives, 63% farmers have adopted crop diversification practices, 80% have adopted water use efficiency techniques and 77% farmers have adopted fodder cultivation.

Which of these initiatives have you adopted as a part of soil and water conservation? (n=28)



Adoption rate of agricultural techniques (n=29)



- In qualitative interviews, the Agricultural officer has suggested that on the contrary to before, **high yielding variety fodder** is grown now.

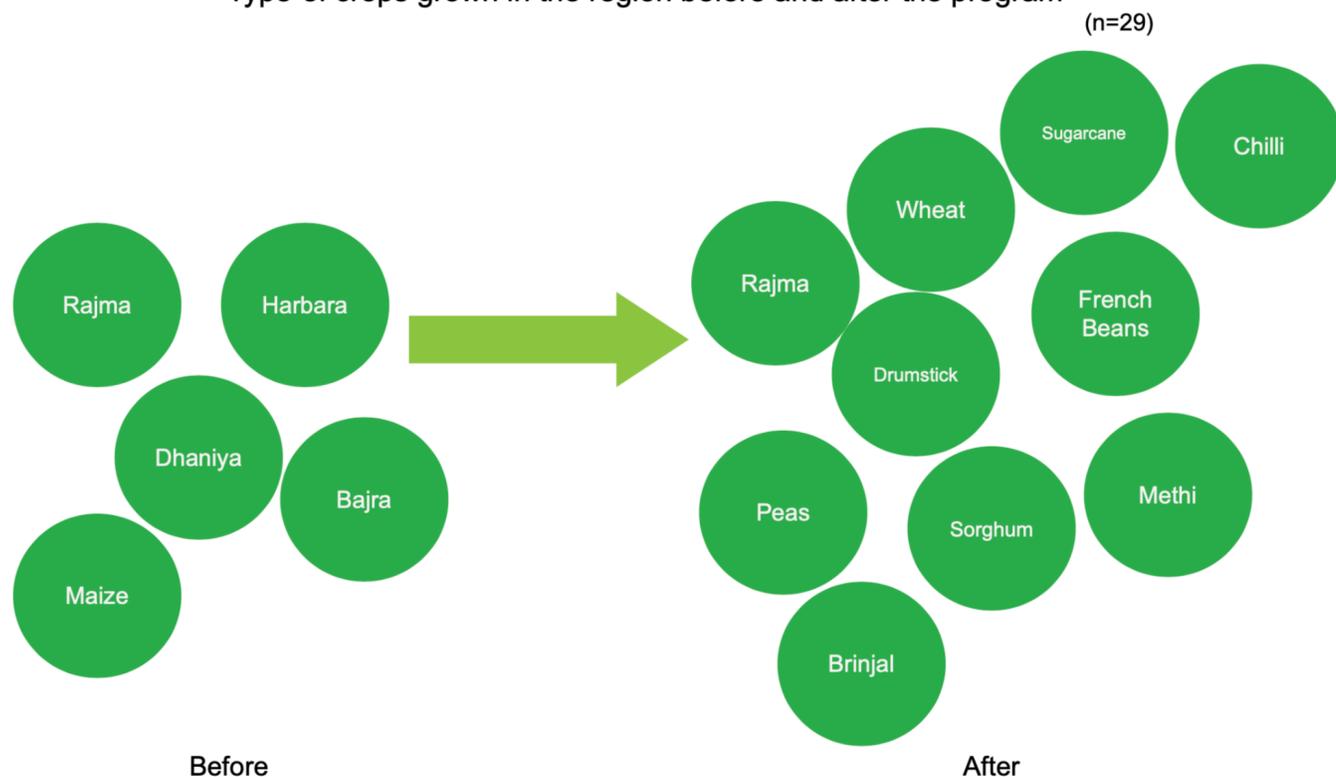
2. Due to adoption of soil and water conservation practices, there has been an improvement in moisture retention in soil

- 93% respondents highlighted that moisture retention in soil had improved
- Respondents have rated soil quality as % on an average after the intervention
- 93% respondents have noticed an improvement in moisture retention levels of the soil.
- During the qualitative interviews, The Gram Panchayat highlighted that now flowing water is captured in an efficient manner, leading to **improvement in water retention** of soil and making it more fertile. Agricultural officer, Suraj Patil highlighted that though it may take some years to see a proper change in soil quality, it seems very promising that the soil quality will improve due to the intervention. The agricultural officer also noted that good knowledge was given to farmers about fertilizers and practices to improve soil. He also highlighted that the community was keen to bring change, and were enthusiastic about the initiatives. The households suggested that now farmers are **using natural farming** and **avoiding fertilizers**.

3. After Jalsahara an increase in crop diversification was observed

- Crop diversification initiative helped increase the variety of crops down in the area - Average number of crops grown in the area went up from 2 to 4 in Kharif and Rabi season each, after the intervention.
- Crops like french beans, chilli, sorghum, drumstick, sugarcane, peas, brinjal, methi were introduced by farmers into their farming produce.
- On an average, farmers used **31%** of their yield for consumption and **68%** of their yield was used for selling.

Type of crops grown in the region before and after the program

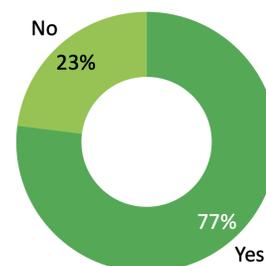


- During the qualitative interviews, Gram Panchayat helped highlight that due to **water availability and awareness, the variety of crops** grown in the area by farmers has **increased**. BAIF team described how the **farmers are motivated** and are approaching BAIF with ideas and started cactus fodder on their own.

4. Adoption of water recharge management practices has improved the availability and quality of water

- **88%** respondents reported perceived increase in groundwater levels.
- As per the BAIF Program team, the groundwater levels in wells have increased by 1.48 m despite a fall in rainfall level. **154 wells** have been **recharged**, 20 are monitored monthly. Nallas have also been deepened.
- 65% respondents reported an increase in area under irrigation.
- As part of the afforestation initiative, about 200 saplings were planted on common land owned by Gram Panchayat with a plant

Have you adopted the policy of afforestation after Jalsahara?
(n=48)

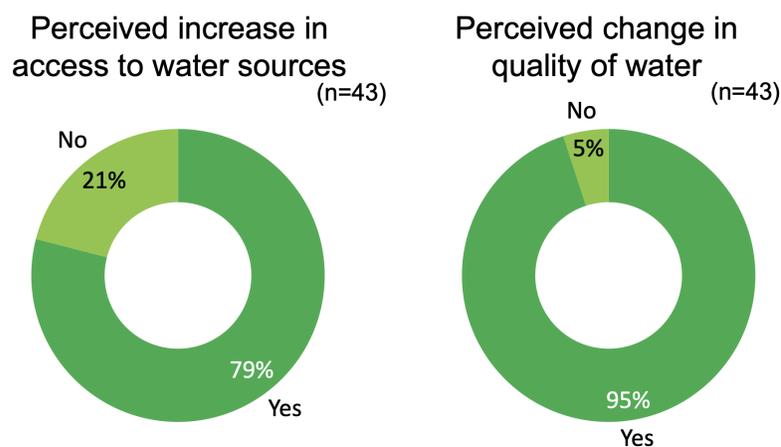


survival rate of around 90%.

- 77% respondents have admitted to adopting afforestation in their practices in the community after the Jalsahara intervention.
- The village watershed committee told how the water table has increased, providing **fresh drinking water**. The agricultural officer also highlighted how the groundwater levels have risen, and **farm ponds have helped improve water quality**.

Indicator	Baseline	Endline
Ground Water Levels	3.3m	4.77m
Area under Afforestation drive	10 ha under forestry plantation	200 ha under common & 400 ha under private land
Amount of water stored in Farm Ponds	0	30 TCM
Area de-silted	0	7.5 ha
Area under farm bunding	200 ha	948 ha
Number of Lose Boulder Structures created	0	123
Net Irrigation Water Available	12 acre	97 acre

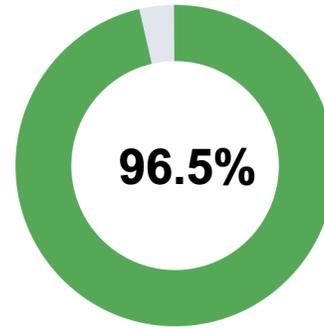
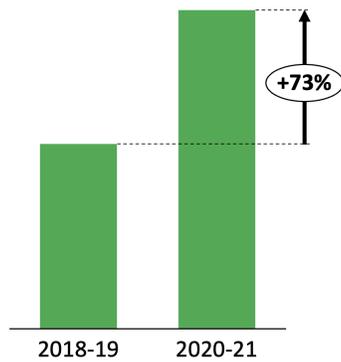
Source: BAIF Project Team



5. There has been a rise in income and yield of farmers due to initiatives introduced by Jalsahara

- The average annual income for the participating farmers increased by 73% from Rs. 75,598 in 2018-19 to Rs. 1,30,517 in 2020-21.
- To put this in context, the income levels more than tripled at a time when the economy was recording a contraction due to the adverse impact of COVID-19.

Change in income of farmers before and after Jalsahara (n=29)



Respondents who have seen an increase in yield after Jalsahara (n=29)

- 75% respondents have seen an increase in yield due to increased groundwater availability.
- The crop yield saw a steep rise (2x) before and after the program

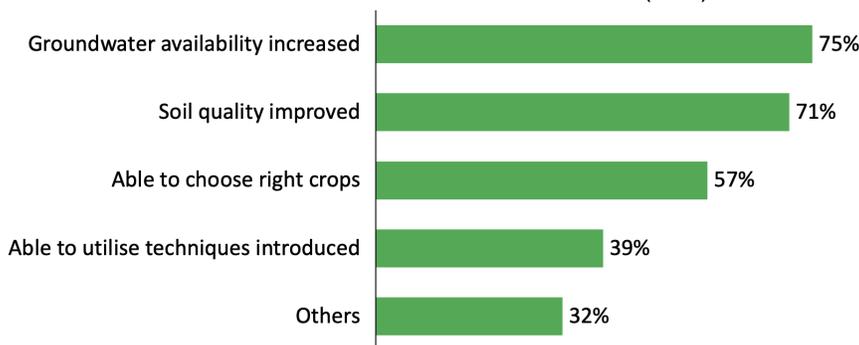
416
kg/acre



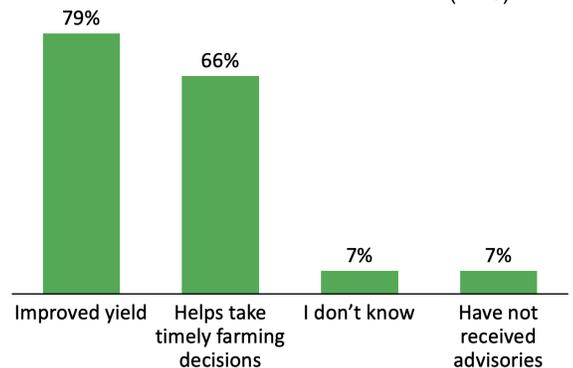
968
kg/acre

Average crop yield before and after the program (n=29)

What do you think is the main reason for increase in your yield? (n=28)



How have receiving weather advisories through Jalsahara helped you? (n=29)



- **During the qualitative interviews, Gram panchayat highlighted that yield per acre has increased multifolds due to more water availability and the use of improved seeds.**
- Households brought to light how farmers are now growing crops in kharif as well as rabi season. They also expressed that agricultural **initiatives helped tackle water challenges** which were an issue in the past. Gram sevak has highlighted availability of water, **training of farmers, awareness** on different types of seeds as reasons for improvement in yield. The agricultural officer brought to notice that farmers are now producing **high yielding varieties of crops** and fodder leading to an increase in yield and hence income.

Livelihoods

The landless persons were found to be the worst in terms of income opportunities. The various interventions undertaken were upskilling and upgrading landless people's livelihood activities and capability building of the community.

The following findings were observed during the study pertaining to livelihoods :

1. Comprehensive training imparted by BAIF Team helped community members understand relevant topics and the use of resources

- Respondents rated most of the aspects of training as 4.5+/5 on average
- Respondents rated 4.5+ for all aspects including relevance of topics, access to resources, content delivery, friendliness and knowledge

Average rating provided by community on training aspects

(n=30)

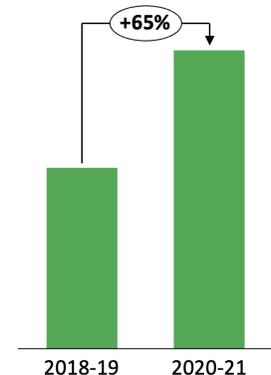


- During the qualitative interviews, the BAIF team highlighted that training was provided only for specific activities as per need. Training was majorly given on **management practices** to develop skills. **Major support** in training was provided for **goat rearing** activity.
- Households mentioned that they believe less agricultural activity in the area to be a major root cause of unemployment. Gram Sevak highlighted that agriculture in the area was less remunerative. It was also highlighted by the BAIF program team that the major employment type in the region was **seasonal unemployment** which affected about 30% of the population.

2. Adoption of various employment opportunities through BAIF'S facilitation led to increase in the income levels among the landless farmers

- Annual incomes levels of landless have **increased by 65%**; from **Rs. 43,467** average before the program to **Rs. 71,833** average after the program

Change in income of landless before and after Jalsahara (n=30)



- In the qualitative interviews, BAIF team expressed how the **standard of living** of the landless has been **enhanced** - levels of awareness on skills have increased, thinking has changed for the better in the community, value addition in kind of skills and material - all have led to an increase in income levels.

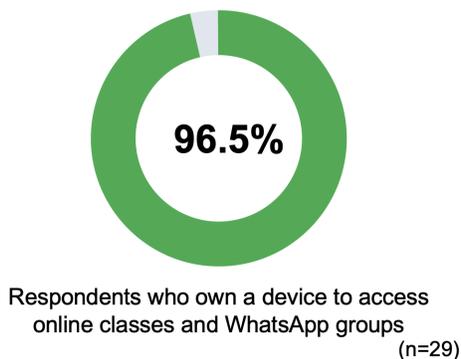
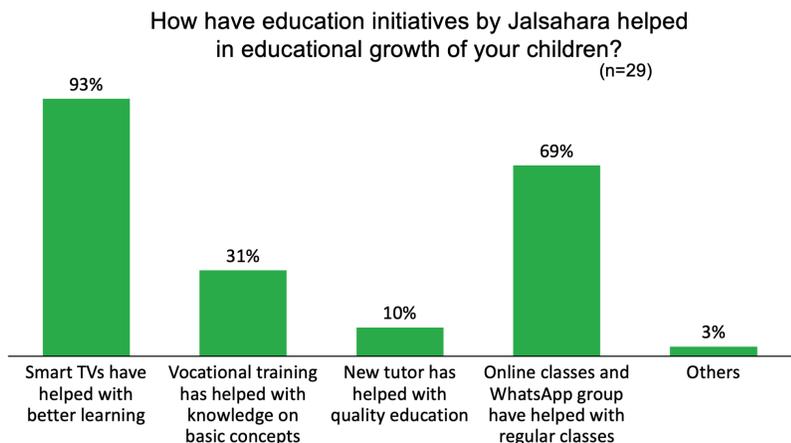
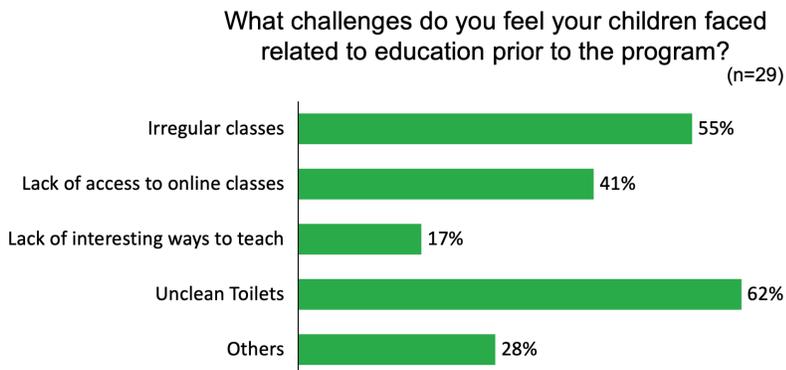
Education

The future of a community is secured through the education of its next generation. The various interventions undertaken to improve the quality of education involve setting up of smart TVs, whatsapp groups, hiring of the new tutor for science and mathematics along with vocational classes. The initiatives under Education have been undertaken on a small scale.

Since it was an intervention on a smaller scale when compared to the other thematic areas, insights are focused on perceived impact felt by the community. The following findings were observed during the impact assessment study, relating to education interventions :

1. The community perceives an improvement in the student attendance and confidence levels due to introduction of smart TVs and online methods of teaching and learning

- Irregular classes and unclean toilets were believed to be the major challenges faced in the education department by the children, prior to the program.
- 100% of parents said that the student attendance at the school has improved and that the initiatives have helped in their children’s educational growth.
- The community identifies the online classes as the primary cause of improvement in student attendance.
- 93% of parents believe that smart TVs have helped in the improvement of attendance rates.
- 93% and 69% respondents believe Smart TVs and Online classes & WhatsApp groups as a reason for improvement in educational growth respectively. However, only 10% of respondents felt that the presence of the new tutor helped improve the attendance rates of students. Hence, a behavioral change to realise the value of good teachers has not been affected yet.



- During qualitative interviews, the village education committee highlighted that due to installation of TV in the school and digital mode of education, **students participation has increased** a lot. The new mode of digital education through TV, in every class, is proving to make students understand concepts in the class. The committee believes digitalisation and new toilet facility to be a core reason for increase in attendance of students. Angandwadi Sewika helped highlight how students are **able to understand concepts** better due to Bolki Anganwadis and how the children are very excited to learn by this form of teaching.

Sustainability

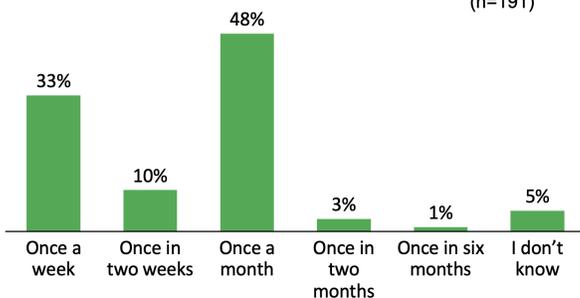
This section aims to understand if the community is well equipped to take ownership of the program and sustain the initiatives after the exit of the implementing team.

Below are the findings of the study with respect to organizational, economic, and operational sustainability :

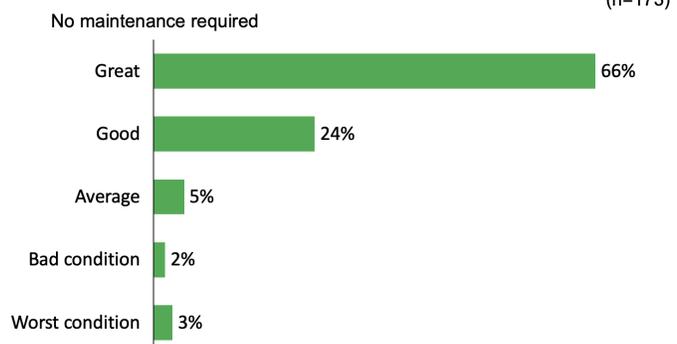
1. Community contribution towards the funding of the program makes it sustainable

- 90% of the respondents said that they were contributing towards the funding of the program.
- Though 59% of the respondents admitted that they contribute regularly (once a month) towards sustainability of the program, **54% of the respondents said there was no convergence with Govt. Schemes.**
- For the respondents who visited the water structures regularly, 90% said that the structure was in a good condition requiring very little or no maintenance. 58% respondents reported comfort with the maintenance of farm bunding. The number stood at 42% for water absorption trenches.

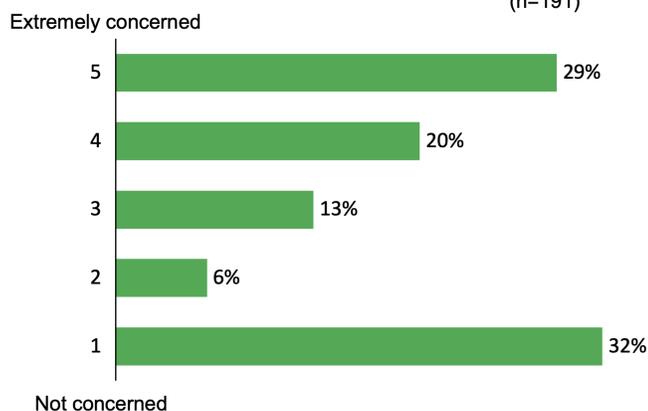
Frequency of contribution to the program (n=191)



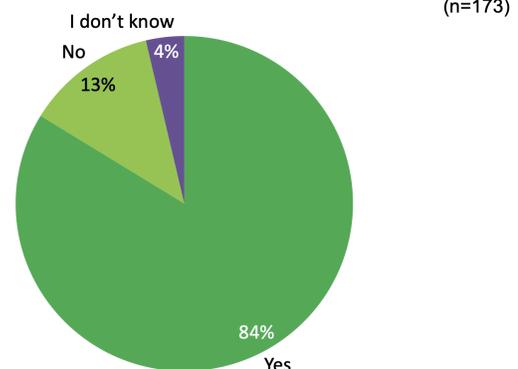
Perceived condition of water harvesting structures (n=173)



Rating of concerns about facing problems in future in interventions by Jalsahara (n=191)



Do you think any further interventions are required to ensure adequate water availability in the community? (n=173)



- It was highlighted in FGDs that the **committee meets every month** to discuss important issues. Gram Panchayat brought to notice that though they were aware of various government schemes, they were benefited more by Jalshara than the government initiatives.
- The Village watershed committee stressed that they want Jalsahara to go on for next 2 years at least in order to carry out deepening and widening of current water structures.
- It was hence found that the respondents **did not feel confident enough** to undertake the initiatives under the absence of BAIF. Households also called attention to the fact that there is a lot of scope for them to build more structures in the village, create more livelihood opportunities, depending on the well and water structures required.

Case studies

- **Vijaykumar Bhoite** is a 45-year-old farmer from Tadawale village. He lives with his wife and 2 kids. He comes from a traditional farmer's community. He owns 20 guntha of land and has been growing wheat and



other seasonal crops for many years. As a farmer he was always concerned about the limitations of farming in his village mainly due to the severe water scarcity and less fertile soil. But when BAIF came to their village and started their program to rejuvenate the ground water and educate farmers on efficient techniques to do farming, he was exhilarated. The BAIF team approached him and advised to grow drumsticks on his farm instead of wheat.

Vijaykumar immediately accepted this opportunity and started working as per their directions. He started with organic farming and also installed a

drum dip on the farm for irrigation.

But not everything was easy, he was mocked by the other farmers in the village for growing a crop which is not suitable to grow in these conditions, he was the only farmer in his and neighboring village who was solely doing drumstick farming,

but he put his faith in the BAIF team. Slowly the results started to show up, there was a good crop

Vijaykumar says, **“For the first time it feels that farming is a profitable business and I can support my family in a better way”**

of drumsticks for consecutive two years and his revenue increased by forty percent. He wants his kids to be engineering graduates. Vijaykumar is determined to increase per acre crop of drumstick in the coming two years and connect with the bigger APMC market outside the region too.

- **Rahul Raksha** is a 42-year-old native of Tadawale village. He lives with his parents, wife and a daughter. He runs a tailoring shop in the village. He comes from a traditional tailor community. His ancestral family has been into tailoring business for many years. He learnt the tailoring skills from his father and uncle. He says, “our ancestors never had any landholding, so the only livelihood options available for them was to either work as laborers on farm lands or own a business, they chose the latter and entered into tailoring”. According to Rahul, their tailoring shop is the oldest one in the village and has a good reputation for quality products. This is also evident from the enormous number of stitching orders laying down at his shop.

However, Rahul was still struggling with the business. For the past few years, the revenue has been stagnant and at times it has decreased too. Rahul says, “people nowadays prefer to buy readymade clothes”. Due to this, he was always in search of value addition to the business or shift to some other business but faced challenges to arrange the required funds. But then the BAIF team approached him. The Jalsahara program had a component of providing help to the landless people in the village by skilling them for better livelihood opportunities or providing financial support. Rahul asked BAIF for financial help to buy electrically run sewing machines. He was confident that these high-powered machines would speed up his work and bring more finesse to his products. BAIF approved his demand and provided one such machine. His productivity immediately improved, earlier he used to stitch 4-5 dresses per day but

that proliferated to 12-14 dresses per day.

His income amplified by twelve folds from two thousand per month to twenty-five

thousand per month. He started saving more money and bought another electrically run sewing machine in no time.

Rahul aims to open a big garment industry in the village and also provide jobs to many people. He has very high gratitude towards the BAIF team and the initiative undertaken by them and wants them to keep on providing support to the budding entrepreneurs in his village.



Rahul says, **“My confidence to expand this business has increased and I intend to broaden my products in future.”**

Chapter 4 : Key Recommendations

A thorough assessment of the impact that the program brought upon the community, it was found that there were several factors that stood out. However, there do remain areas of improvement. The following recommendations have been formulated keeping in mind the existing gaps and global best practices :



Sustainability of the intervention to be planned and executed in phases step-by-step through phased out institution and capacity building

Observation:

During the qualitative interviews the communities had indicated that despite having the technical knowledge and the financial capabilities (funded through monthly community contributions), they feel under-confident to execute the intervention independently.

Recommendation:

- A step-by-step phase out support plan with institution and capacity building initiatives will provide the confidence among the community to execute the intervention independently going forward.
- Efficient grievance redressal mechanisms through communities of practice could be developed during the phase of sustainability.



Enhance monitoring and evaluation metrics and processes at community and managerial levels to ensure periodic reviewing of the program, especially in the post implementation phase

Observation:

The on-field resource personnel appointed by BAIF records and reports the progress made through observations made in the visits. Though visit reports are analyzed and presented to the managers to enable course correction, since the community will be expected to independently execute the initiative, there still seems to be room to develop better data monitoring mechanisms.

Recommendation:

To build monitoring and evaluation metrics and processes at various levels viz.

- Community level: Sufficient training and hand holding on "how to record and read data " needs to be provided at the community level. This will help the implementers to develop a basic understanding of what data to collect, and how to enable course correction going forward.
- Managerial/Organizational level: Efficient monitoring methods and processes with a detailed SoP should be deployed on-ground to understand the process outcomes of the initiative and take necessary actions. Since the onus of the implementation lies in the hands of the community, the monitoring methods will have to be robust in tracking their activities in the absence of a resource person appointed by BAIF



Strengthen the livelihoods program based on the market demand and demand of the community

Observation:

Though the livelihoods initiative was successful in facilitating employment opportunities for the needy in Satara, the survey and qualitative observations have been indicative of the fact that the members of the community have aspirations of pursuing employment opportunities in the tertiary sector too.

Recommendation:

- Employment generation activities can be structured after understanding the market demand and the aspirations of the community.

Annexures

Annexure 1: Research Questions

Theme	Key Research Questions
<p>Relevance: The extent to which the intervention objectives and design respond to beneficiaries.</p>	<ul style="list-style-type: none"> • What are the needs of the target group that have been identified? • Are the program objectives and activities aligned to the needs identified for the target group? • Was a systematic method followed to select the target group to maximize the impact?
<p>Effectiveness: The extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.</p>	<ul style="list-style-type: none"> • Are the programs designed with defined processes & systems to bring the desired outcomes in a timely manner? • Are there processes to ensure delivery team is well equipped to achieve intended objectives? • Does the Project team have clear visibility of the key factors influencing the achievement or non-achievement of objectives? • Does the program include a monitoring and evaluation function/ team to measure the progress? • Is there a well-defined process to identify and document the key risks for the programs? • Are there risk mitigation strategies in place and documented? • Is there a well-defined and standardized process to take feedback from the beneficiaries during and after the program?

Theme	Key Research Questions
<p>Impact: The extent to which the intervention has generated or is expected to generate significant positive intended or unintended, higher-level effects.</p>	<ul style="list-style-type: none"> • Has there been an improvement in awareness regarding the importance of soil and water conservation and crop diversification and fodder development techniques amongst the community? • Has there been an improvement in awareness regarding the importance of capacity building of people and importance of education amongst the community? • Has there been an improvement in accessibility to water sources? • Has there been an improvement in accessibility to farm inputs and market linkages? • Has there been an enhanced livelihood generation opportunities by landless? • Has there been an improvement in attendance of classes? • Has there been an improvement in sense of ownership, belongingness, and confidence in the community members? • Has there been an improvement in the quality of soil and water? • Has there been an improvement in crop yield for farmers? • Has there been a change in income level , wealth and social status of HHs? • Has there been a change in student learning outcomes?
<p>Sustainability: The extent to which the net benefits of the intervention continue, or are likely to continue.</p>	<ul style="list-style-type: none"> • Are the programs operating in a financially sustainable manner? • Are the operations and maintenance roles defined and adhered to at community level? • Has the community gained ownership of project interventions and processes? • Has a clear strategy for operational, institutional and financial sustainability of the program been defined and incorporated in the program design

Annexure 2: Data policy

Sattva has in place internal security protocols to protect the privacy of all data collected from respondents, especially any personally identifiable information (PII). The set of protocols listed below may be revamped depending on the complete data flow process as decided for this program.

- **Data Storage and Access:** Any devices used for data collection are password-protected to prevent unauthorized access. Survey software with encryption features, such as Collect, will be used so that encryption occurs during data collection and transmission to a central server. Data with PII is shared only using encrypted files, unless being shared directly from Sattva's cloud storage. Access to data on Sattva's cloud storage may also be further limited to program team members who require access.
- **Data Retention:** Data with PII is only retained for pre-decided periods based on program requirements. Any data stored on data collection devices is removed after data collection for the program is complete, to minimize risk. Where possible, data stored on stolen/lost devices is remotely deleted.
- **Training:** Personnel are provided adequate training on maintaining privacy of data collected, including procedures for handling devices to maintain data security.
- **Removal of PII:** All PII is removed from the raw dataset and separated into an "Identifiers Dataset" and "Analysis Dataset". A common ID is generated to allow re-joining PII data if required. Access to "Identifiers Dataset" is limited to select personnel as required. Limited and necessary PII is re-shared with enumerators/field supervisors to allow for quality checking and back-checking of data as per program requirements.