

Ambuja Cements Limited

May 2025

Price Waterhouse Chartered Accountants LLP

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List of abbreviations

ACL	_	Ambuja Cements Limited
AF	_	Ambuja Foundation
BCI	_	Better Cotton Initiative
CL	-	Confidence Level
CSR	_	Corporate Social Responsibility
FGD	-	Focus Group Discussion
FP	_	Financial Proxy
FPC	_	Farmer Producer Company
FY	_	Financial Year
IDI	_	In Depth Interview
IGA	-	Income Generation Activity
INM	-	Integrated Nutrient Management
INR	-	Indian National Rupee
IPM	-	Integrated Pest Management
IRECS	-	Inclusiveness, Relevance, Effectiveness, Convergence, Sustainability
KII	_	Key Informant Interview
KPI	_	Key Performance Indicator
KVK	_	Krishi Vigyan Kendra
MGNREGA	_	Mahatma Gandhi National Rural Employment Guarantee Act
MoE	-	Margin of Error
NABARD	-	National Bank for Agriculture and Rural Development
NPV	-	Net Present Value
NSDC	-	National Skill Development Corporation
OBC	-	Other Backward Class
PKVY	-	Paramparagat Krishi Vikas Yojana
PMKSY	-	Pradhan Mantri Krishi Sinchayee Yojana

PWCALLP/ PW	- Price Waterhouse Chartered Accountants LLP
RKVY	- Rashtriya Krishi Vikas Yojana
SEDI	- Skill & Entrepreneurship Development Institute
SHG	- Self Help Group
SROI	- Social Return on Investment

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- We assume no responsibility for any user of the report, other than Ambuja Cements Limited. Any person who chooses to rely on the report shall do so at their own risk.
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- PW performed and prepared the Information at client's direction and exclusively for client's sole benefit and use pursuant to its client agreement. Our report is based on the completeness and accuracy of the above stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.
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Executive Summary (1/2)

About the Project: Ambuja Cements Limited (ACL) implemented the project Initiatives for Promotion of Livelihood in Marwar Mundwa, Rajasthan' to meet the unique needs and challenges of the region and enhance the socio-economic well-being of local communities. The following are the key focus areas of the project:



Water resource management



Training on Goatery



Skill Development



Promotion of sustainable agriculture practices



Promotion of Federation & SHG

Scope of Work: It included reviewing the Key Performance Indicators (KPIs) as defined by the Management of the Client under the framework for implementing the Project for the outputs, outcomes and impact of the Project. Framework adopted was Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability Framework (the 'IRECS') and Social Return on Investment (the 'SROI') and recommendations were provided on the Project's performance for their further evaluation and consideration.

Quantitative Sampling Plan

Activities	Estimated sample size	Final coverage (based on the support confirmed by community members during survey)
Sustainable Agriculture	184	226
Water Resource Management	83	154
Goatery	44	63
Skill Training to Rural Youth	114	144
Promotion of Federation & SHG	20	32
Total	445	610

Qualitative Sampling Plan

5 FGDs

12 IDIs

3 KIIs



Implementing Partner

Ambuja Foundation



FY 2021-22 to 2022-23



Location

Nagaur, Rajasthan



Beneficiaries

3,784 local community members

Sample size

445 respondents



Research framework

IRECS + SROI



Socio-demographic profile of respondents

- ☐ Among the 445 respondents surveyed, 70% were males while rest of the respondents were females.
- □ Almost 30% of the total respondents under this project are illiterate. 18% of the respondents had completed their graduation while 27% of the respondents had either studied till 10th or 12th standard.
- ☐ Most of the respondents in the project are in the age group of 18-25 years and 41-50 years (23% each). While 21% of the respondents belong to age group of 31-40 years. The average age of the respondents assessed is approximately 40 years.
- ☐ Majority of the community members (76%) belong to the OBC (Other Backward classes) social category who may have faced social disadvantages that affect their access to education, employment, and other resources.
- ☐ Out of the community members surveyed, approx. 66% reported that they are the chief breadwinners of their families.
- \square 69% reported agriculture and allied activities as their primary income source.
- □ 63% respondents reported that they have more than 1 income sources.
- □ 89% indicated that they are engaged in animal husbandry, particularly goat rearing, as a secondary activity.

Executive Summary (2/2)

Key findings under each intervention



Water resource management



Promotion of Sustainable Agriculture Practices



Training on Goatery



Promotion of Federation & SHG



Skilling for Youth

- Introduction of drip and sprinkler methods were crucial in reducing water usage by approximately 70%, leading to decrease in irrigation costs and enhancing crop yields.
- Moreover, soil conservation initiatives such as farm bunding contributed to a 20-25% increase in crop yield, effectively reducing soil erosion and maintaining soil fertility.
- Among the respondents, 90% reported increased cropping intensity, as improved water management enabled them to cultivate multiple crops annually.
- These interventions expanded land area under cultivation by 7%, from an average of 10.70 acres to 11.47 acres, by making previously uncultivable land viable.

- The project prioritized sustainable agriculture by providing comprehensive training in integrated crop management to 85% of respondents.
- This training was instrumental in increasing crop yield by 84% while reducing chemical fertilizer usage by 47%.
- Furthermore, 78% of farmers gained access to modern agricultural tools, leading to an 82% reduction in cultivation costs and an 83% decrease in dependence on manual labor.
- The training on sustainable cotton farming increased yields from 750 to 875 kg per acre, significantly boosting farmers' annual income and ensuring sustainable and efficient farming practices.

- The goatery initiative focused on improving various aspects of goat rearing, including castration, feed management, health management, and breed improvement.
- The interventions in goat farming led to a 33% reduction in goat mortality and increased herd sizes by 19%, attributed to enhancements in breeding and health management.
- Additionally, a 59% reduction in rearing costs and an 18% increase in productivity demonstrated the project's effectiveness in improving economic returns from goat farming, making it a more viable livelihood option for beneficiaries.

- The formation of Self-Help Groups (SHGs) under the project played a critical role in empowering local communities financially.
- Self-Help Groups (SHGs) enabled access to low-interest loans, allowing 63% of members to establish alternative income sources, with 84% reporting increased household income.
- Training focused on financial management and entrepreneurship empowered members, resulting in a 30% increase in annual household income.
- Engaging in activities such as spice trading diversified income streams, bolstering community economic growth and resilience.

- Skill development initiatives were geared towards increasing employability and entrepreneurship among rural youth.
- The skill development initiatives significantly increased post-training employment among participants from 21% to 69%, equipping them with diverse skills needed in various trades.
- For previously employed individuals, the average income improved from INR 5,833 to INR 13,214 post-training.
- Those who were unemployed before intervention now earn an average income of INR 13,363, illustrating how skill development has enhanced employability and economic prospects for rural youth.

Recommendations for management's consideration

- Extending CSR activities to neighboring areas could broaden the reach.
- Conducting a needs assessment could help identify priority areas for future interventions.
- Participation in national and international CSR forums and awards can help enhance brand visibility.
- Producing and disseminating quality videos and case repositories in public domain can enhance visibility and impact.

Refer to Section 7: Recommendations in the report for theme-wise recommendations.

SROI Value*

7.83

*SROI value of 7.83 indicates that an investment for every INR 1 invested in the project, a social value of INR 7.83 is generated.



About Ambuja Cements Limited and its CSR

Ambuja Cements Limited (ACL/ Ambuja), a player in the Indian cement industry, has been demonstrating commitment to sustainable development and community welfare through its Corporate Social Responsibility (CSR) initiatives. ACL, through its CSR arm, Ambuja Foundation, has been implementing community development programs aimed at enhancing the livelihoods of rural communities, particularly in regions surrounding its plant sites (depicted below).

CSR at ACL

ACL has long recognized the importance of engaging with and supporting the communities in which it operates. The company views these communities as primary stakeholders and is dedicated to ensuring their prosperity.

Through the Ambuja Foundation, ACL has been channeling its efforts towards creating prosperous rural communities by tapping into the vast, untapped potential of these areas.

Ambuja Foundation's approach is holistic, focusing on key areas such as water management, agriculture, skills development, women's empowerment, health, and education.

By partnering with governments, and local bodies, Ambuja Foundation works collaboratively with local communities. Over nearly three decades, it has witnessed many transformations in the remote geographies where it operates, driven by the empowerment of local people.

Overview of ACL's CSR Initiatives in Marwar Mundwa, Rajasthan

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1. Water Conservation

The initiatives in Marwar Mundwa aimed to enhance local community incomes and improve water resource management. By implementing innovative farming techniques, such as drip and sprinkler irrigation, water usage was optimized. the project aimed increase agricultural productivity among the local farmers.

2. Agriculture and Goatery

ACL has promoted sustainable agricultural practices along with training community members on goatery enabling community members to realize more profits through animal husbandry.

3. Enterprise Promotion

The project has also worked towards women empowerment through promotion of federation and SHGs and creation of enterprises to further strengthen the participation of women at community level.

4. Skill Development

ACL has worked towards capacity building of the community through training youth at its Skills and Entrepreneurship Development Institute (SEDI).

Source: Annual Report and Website

About the Project

ACL has embarked on an initiative to enhance livelihood promotion through a range of activities in Marwar Mundwa region of Rajasthan, aimed at fostering sustainable development and enhancing the socio-economic well-being of local communities. This initiative on 'Promotion of Livelihoods in Marwar Mundwa, Rajasthan' is strategically designed to address critical areas such as women empowerment through Self-Help Groups (SHGs) promotion, sustainable agriculture, water conservation, and livelihood enhancement. By leveraging CSR framework, Ambuja Cements Limited has implemented a series of impactful interventions that are tailored to the unique needs and challenges of the region.

Overview of the project 'Initiatives for Promotion of Livelihood'

Objective: Livelihood generation and community awareness activities with community members.



Geographical coverage: Marwar Mundwa, Rajasthan





Implementing Partner: Ambuja Foundation (CSR Arm of ACL)

Project Focus

sustainable Promote agricultural practices, water infrastructure skill development, development and strategic market linkages to bolster economic growth and community resilience.



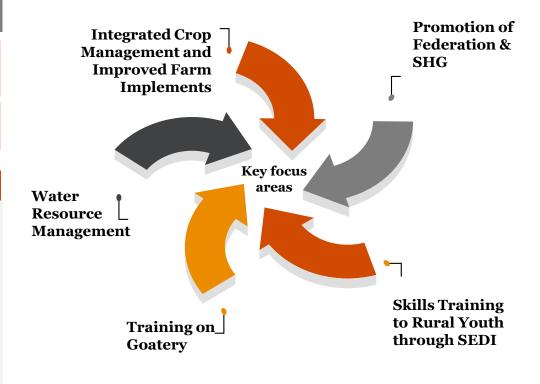
Project Integration

Formation and support of collective forums such as SHGs, Water User Committees, FPOs/FPCs, VDCs, etc. which serve as a catalyst for livelihood enhancement of local community.



Project Collaboration

Through collaboration diverse with stakeholders, ACL is committed to creating a sustainable and inclusive growth model that empowers the local communities and contributes to their longterm prosperity.



Source: Project documents shared by Ambuja

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Scope of Work

The scope of work included reviewing the Key performance indicators (KPIs) as defined by the Management of the Client under the framework for implementing the Project for the outputs, outcomes and impact of the Project. Framework adopted was Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability Framework (the 'IRECS') and Social Return on Investment (the 'SROI') and recommendations were provided on the Project's performance for their further evaluation and consideration. The approach included the below:

Approach for the Impact assessment study (IRECS and SROI basis):

- Understood the scope and boundary of the project to be evaluated and the assistance to be provided. Conducted a desk review of the documentation provided by the company and consulted with their CSR team and Ambuja Foundation, which was the implementing partner, and agreed with the management on the parameters to be assessed for the SROI study.
- Stakeholder mapping was carried out for the ACL to identify key stakeholder groups to be interacted with during the assessment.
- A mixed method comprising quantitative and qualitative research was adopted for carrying out the impact assessment study.
- Based on the above, quantitative and qualitative questionnaires (as relevant) were developed to be used during the assessment for conducting in-depth interviews, interactions, and meetings with the stakeholders and community members of the CSR project through field visits to project locations (Marwar Mundwa region of Rajasthan). For this impact assessment study, a minimum quantitative sample of 433 was to be covered.
- Data collection was conducted through virtual and in-person interactions based on the questionnaires developed and consultations done.
- Based on the field visits and interactions and discussions, the information was analyzed, and the assessment of outcome and impact was conducted. The list of technical and socio-economic benefit indicators was identified, and information collected from the community members and stakeholders was recorded.
- A customized Excel-based SROI data sheet was developed for capturing the quantitative benefits of the project, and the analysis of the SROI was conducted based on assumptions, financial proxies, and references.
- SROI ratio was calculated to understand the value of the impact/benefit generated from each rupee of investment and report developed based on the overall findings including the recommendations for management's consideration.
- Report was developed based on the overall findings including the recommendations for Management's consideration.



Overall approach

The overall methodology adopted for conducting the impact assessment study can be categorized into four stages as illustrated below:

Stage 1: Desk review

- Inception meeting was done with the Ambuja team to get a detailed understanding of the interventions.
- Built consensus on scope of work and understanding ACL and ACF's expectations
- Desk review of project documents was done.
- Based on the desk review and preliminary interactions with key stakeholders from ACL, mapping of project stakeholders was done in consultation with ACL team for interaction purpose.

Stage 2: Planning and tool preparation

- The data collection plan was finalised in consultation with the ACL team.
- Key indicators, research tools were also shared and finalised post incorporation of feedback from ACL team
- A draft impact map for SRoI was also created and finalised in consultation with ACL team.
- Digitization and translation of the developed tools to local languages was undertaken
- ACL team was then apprised about the data collection plan for the field visit

Stage 3: Data collection & field visit

- The field team was trained on the data collection tools
- The field data collection process was initiated
- Quantitative survey with project community members was undertaken to record their feedback
- In-depth Interviews (IDIs) with community members, Ambuja Team, Panchayat members, and Block Officials were conducted
- Focus Group Discussion (FGD) with farmers, local youth and SHG members were undertaken to gauge their views on the project

Stage 4: Data analysis and report writing

- Assimilated the key findings to better analyse the data
- Conducted SROI analysis using primary and secondary data
- Prepared the draft of the impact assessment report to ACL team
- Obtained and incorporated feedback received from ACL
- Prepared and submitted final impact assessment report to ACL

Method of Impact Assessment (1/2)

The project's impact was evaluated using a mixed research methodology, which involved both qualitative and quantitative techniques to gain comprehensive insights. As part of the quantitative approach, a well-structured sampling plan was implemented, involving a survey with a sample size of 445 community members.

As a part of the **mixed research methodology**, the study involved interactions with various stakeholders including project community members, local community leaders, Government stakeholders, etc. In this case, mixed research methodology approach was instrumental in evaluating the comprehensive benefits/ impact perceived and in-depth insights into the perspectives key project stakeholders.

- Quantitative survey* with a sample of **349 community members was** estimated at 95% confidence level and 5% margin of error by considering the total number of community members covered under the project as the universe. The estimated sample size was then proportionately distributed amongst the various activities as per coverage of community members under each activity.
- However, the sample size for activities having relatively lower coverage was coming out to be too low and hence, to ensure a minimum coverage across all activities in order to maintain statistical significance, booster samples were added suitably. Taking these considerations, the **estimated sample size comes to be 433.**
- During the field visit, a sample of 445 community members was covered to negate any non-response error and the analysis of the key findings (in later sections) is also done basis the responses of 445 respondents. Thus, **in total**, **445 unique community members were covered** under the study.
- However, as the project community members received multiple thematic benefits under the project, the number of respondents for each theme exceeded the initial estimates made at the study's inception.
- The below table showcases the estimated and final coverage of respondents across the various thematic areas.

Quantitative sampling plan						
Sl. No.	Activities	Community coverage	Sample size using 95% CL and 5% MoE	Booster samples	Estimated sample size	Final coverage (based on the support confirmed by community members during survey)
1	Sustainable Agriculture	1,844	170	14	184	226
2	Water Resource Management	292	27	7 56	83	154
3	Goatery	473	44	. o	44	63
4	Skill Training to Rural Youth	1,109	102	. 12	114	144
5	SHGs with Promotion of Federation	66	6	14	20	32
6	Total	3,784	349	84	445	619

Source: Project documents shared by Ambuja

Method of Impact Assessment (2/2)

As a part of the qualitative assessment, the following interactions including In-depth interviews (IDIs), Focus Group Discussions (FGDs) as well as Key Informant Interviews (KIIs) of were also conducted to ensure holistic feedback on the project activities from the stakeholders:

Documents received from Ambuja Cements Limited

1. List of project activities

2. Datasets of community members:

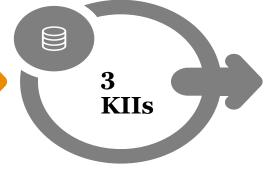
- Integrated Crop Management
- Better Cotton Project
- Improved Farm Implements
- Water Resource Management
- Animal Husbandry
- Skills training to rural youth through SEDI
- Promotion of Federation and SHGs

3. Year-wise budget allocation









- FGD with SHG representatives of Marushree Mahila Vikas Samiti (SHG Federation)
- FGD with Farmers, Mundwa Village
- FGD with Farmers, Dedhiya Kalan Village
- FGD with Members of Green Desert Farmer Producer Company
- FGD with youth trained under the SEDI programme

- 3 IDIs with farmers from Inana, Mundwa and Dedhiya Kalan
- 2 IDIs with SHG Members and entrepreneurs (project community members)
- 1 IDI with beneficiary of goatery training
- 1 IDI with representative from Better Cotton Initiative (BCI)
- 4 IDIs with PRI members
- 1 IDI with representative from Ambuja Foundation

- KII with representative from Department of Agriculture
- KII with Tehsildar, Marwar Mundwa Tehsil
- KII with representative from Department of Horticulture

IRECS Framework for impact assessment

The impact of the project was assessed using the IRECS framework which provided an overall feedback on the efficacy of implementation as well, as its efficiency in terms of achievement of the desired project outputs with reference to inputs. IRECS framework measured the performance of programme on five parameters - Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability.

Inclusiveness

Ability of different stakeholders, particularly poorest and most marginalised - to access the benefits of activities

Relevance

Are the services /inputs in the project able to meet community priorities? How was the planning done? Was it participatory? How were the success indicators developed? Was the community involved in development of project indicators?

Effectiveness (& Efficiency)

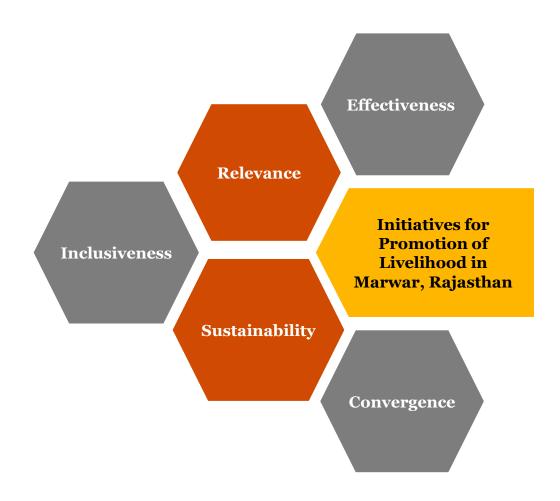
Have the activities been able to effectively address community expectations? How efficiently have the resources been deployed, monitored and utilised?

Convergence

Degree of convergence with government/other partnerships; relationship between individuals, community, institutions and other stakeholders

Sustainability

Do communities feel ownership over the assets created by the activities and/or will the Project initiated community interventions sustain even after the exit of the funding agency. Has an exit strategy been drafted?



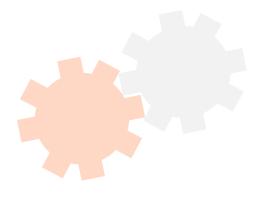
Social Return on Investment Framework- An overview

Assessment of impact of the 'Initiatives for Promotion of Livelihood in Marwar Mundwa, Rajasthan' project was done basis the Social Return on Investment framework which will help in measure and account for value in a broad sense. In essence, there are many costs and benefits we overlook because their impacts are not upfront or visible in nature. This framework allows us to improve well-being by incorporating social, economic and environmental costs and benefits with an aim to reduce economic inequality and environmental degradation. SROI Framework of analysis serves as a tool for strategic planning, in order to maximize the social value of a programme that is brought into implementation.

SROI: Approach and Principles

Since approach to SROI originates from social-accounting and cost-benefit analysis, its principles involve:

- ☐ Stakeholder's involvements
- Understanding what is getting impacted through a programme
- ☐ Value things that matter
- ☐ Valuating what is in material sense
- Pragmatic estimation
- ☐ Transparency and Result Verification



SROI: Purposes

- ☐ To target appropriate resources to manage unexpected outcomes and externalities, both positive and negative.
- ☐ To identify common ground between what an organisation wants to achieve and what its stakeholders want to achieve, helping to maximise social value through a programme.
- ☐ To create a formal dialogue with the stakeholders thus enabling them to hold the service to account and involving them meaningfully in service design.

Assumptions and limitations

General assumptions:

- The information transmitted, including any attachments, are intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination, copying, paraphrasing, reproduction, or distribution in any manner or form, whether by photocopying, electronically, by internet, within another document or otherwise; or other use of or taking of any action in reliance upon this information by persons or entities other than the intended recipient or for purposes other than as stated in the LoE, is prohibited. Further, any quotation, citation, or attribution of this publication, or any extract from it to any third party unless expressly agreed in the LoE is strictly prohibited. PW makes no representations or warranties regarding the information and expressly disclaims any contractual or other duty, responsibility or liability to any person or entity other than its client in accordance with the agreed terms of engagement.
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- Our scope of work, including any advice / assistance, was limited to the scope of services specifically defined in the Letter. We were not responsible for the implementation of our recommendations.
- By giving our consent to the publication of our report and opinion on the Company's website ('your website') we do not accept any duty of care and deny any liability.
- You are responsible for the controls over and the security of your website and, where applicable, for establishing and controlling the process for electronically distributing Impact Assessment Report. We remind you that the examination of controls over the maintenance and integrity of your website is beyond the scope of our examination. Accordingly, we accept no responsibility for the completeness and accuracy of the Impact Assessment Report as they appear on your website.

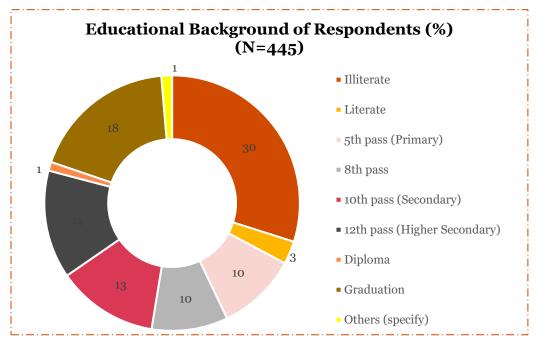
Assumptions pertaining to this report:

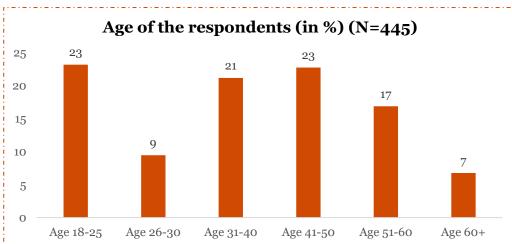
- The report prepared by the PW is based upon the (a) information/ documents provided by Ambuja Cements Limited and its implementing partner i.e., Ambuja Foundation and (b) data collected during the field visit to the project location by the PW team. PW performed and prepared the Information at the client's direction and exclusively for the client's sole benefit and use pursuant to its client agreement. Our report is based on the completeness and accuracy of the above-stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.
- PW's work was limited to the samples/specific procedures described in this report and were based only on the information and analysis of the data obtained through interviews of community members supported under the programme, selected as respondents. Accordingly, changes in circumstances/samples/ procedures or information available could affect the findings outlined in this report.
- For SROI based study:
 - · The method has high data dependency, and the results may impact if the correct data is not available/ provided.
 - For a strong SROI study, the use of factual, documented & time bound data is essential. For the same, robust data processes and M&E framework (or result based framework) is required.
 - · Specific areas such as deadweight, attribution and drop off has considerable subjectivity.
 - · Since outputs and outcomes are valued at each level of stakeholder engagement, it is difficult to capture all aspects and arrive at holistic results.
 - · Inflation rates and depreciation of assets, natural resources are difficult to measure if the duration of the Project is long.
- The calculations to estimate the SROI value of the project have made use of either the extrapolation of the quantitative survey results on the total population or the data on the project reach or benefits provided by ACL as part of its monitoring reports. The exact number of community members or the entire quantum of benefits has not been validated or verified independently on-ground.
- The proxy values for the calculations have been referred to from quantitative results of the study and information shared by key stakeholders during the interactions. PW does not claim the responsibility for the correctness of data shared by the stakeholders..

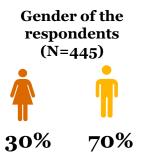




Profile of the respondents (1/2)







- ☐ **Gender Distribution:** Among the 445 respondents surveyed, 70% were males while rest of the respondents were females. This distribution underscores efforts to promote women's involvement in project activities in challenging areas such as Marwar Mundwa, where women's participation in such initiatives is not commonly encouraged.
- **Educational Background:** Almost 30% of the total respondents under this project are illiterate. 18% of the respondents had completed their graduation while 27% of the respondents had either studied till 10th or 12th standard.
- The educational demographic underscores that the project is dedicated to training and creating opportunities for community members without formal educational qualifications, empowering them to earn livelihoods through relevant income-generating activities.
- ☐ Age Group: The survey data shows that most of the respondents in the project are in the age group of 18-25 years and 41-50 years (23% each). While 21% of the respondents belong to age group of 31-40 years. The average age of the respondents assessed is approximately 40 years.

Note: A person who can read and write a simple message in any language with understanding is considered literate. Source: MoSPI report

Profile of the respondents (2/2)

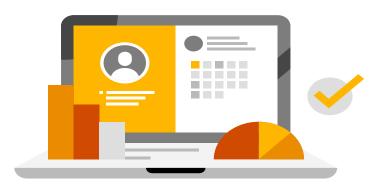
Primary sources of income (N=445)

Agriculture & allied	69%	Animal husbandry	9%
Micro enterprises	7%	Salaried/ pension	7%
Non-farm labour	5%	Farm labour	1%
● ● ● Other		2%	

63%

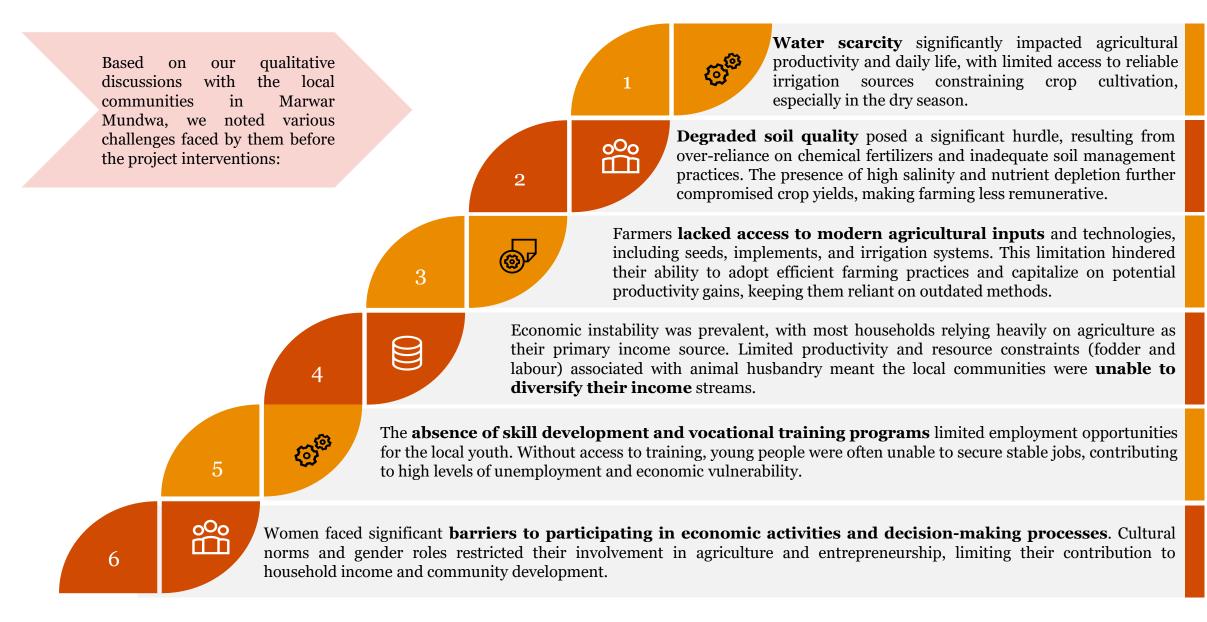
Respondents (i.e., 280) reported that they have more than 1 income sources.

Secondary Income: A significant proportion of respondents, accounting for 89% (N=280), indicated that they are engaged in animal husbandry, particularly goat rearing, as a secondary activity. Additionally, 6% of these respondents reported earning supplementary income through farm labor, while 4% mentioned involvement in micro-enterprises, such as running small shops. This diversification of income sources reflects the community's efforts to enhance financial stability and resilience.



- The livelihood profile of the respondents reveals a diverse engagement in various sectors, reflecting the community's attempts to bolster financial stability through multiple income streams.
- Majority of the community members (76%) belong to the OBC (Other Backward classes) social category who may have faced social disadvantages that affect their access to education, employment, and other resources.
- Approximately 84% of the respondents surveyed were married whereas only 16% were single or unmarried. This suggests that they have higher income needs due to additional household responsibilities, such as supporting a spouse and children. This finding was further corroborated by the responses from the community members as approximately 90% of whom had one or more children. The majority of these respondents fall within the age bracket of 26-50 years.
- Out of the community members surveyed, approx. 66% reported that they are the chief breadwinners of their families.

Challenges faced by local communities before the project



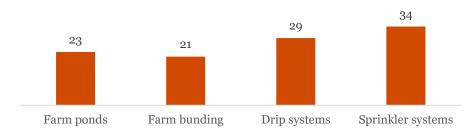


Type of support provided under the project

In the arid and semi-arid regions of Marwar Mundwa, Rajasthan, water scarcity and soil degradation posed challenges to sustainable agriculture and rural livelihoods. Recognizing these issues, ACL in collaboration with local communities and other stakeholders, implemented a series of targeted interventions aimed at enhancing water and soil management. These initiatives were part of a holistic approach to promote sustainable agricultural practices and improve the resilience of local communities against environmental adversities such as low and erratic rainfall, high temperatures, and frequent droughts. By focusing on efficient water management and soil conservation techniques, the project aimed to optimize resource use, increase agricultural productivity, and ensure long-term environmental sustainability.

This section presents the findings from 154 respondents, representing 35% of the total participants, and is further supplemented by qualitative insights and information received from Ambuja Foundation. Below graph outlines the percentage of respondents who received various forms of support related to water and soil conservation under the project.

Support received by the respondents (in %)



01 Farm Pond Construction

02 Farm Bunding

03 Solar Irrigation

04 Drip Systems

05 Sprinkler Systems A total of **37 farm ponds** were constructed on individual farmers' fields, enhancing water conservation capacity by 65,780.63 cubic meters in the project area. The **project covered approximately 15%** of the total pond costs, with farmers contributing the remaining cost.

A total of **157 farmers** benefitted in the farm bunding initiative, which resulted in the construction of **106,607.92 cubic meters** of bunding. The **project contributed** approximately ₹1,599,121.95 towards the total cost of ₹13,984,265.42, i.e., **11%**, with the remaining expenses covered by the farmers themselves.

Two farmers benefited from the solar irrigation initiative, which involved the installation of 7.5 HP pumps covering a total area of 9.27 hectares. The project provided support amounting to ₹20,000 **for each farmer**, facilitating improved irrigation efficiency

Under the drip systems initiative, a total of **47 farmers** benefitted, covering an area of 69.56 cubic meter. The **project contributed around 16%**, while the government (Department of Agriculture) provided ~56% as subsidy, and the individual farmers contributed the remaining 28%.

49 farmers benefitted under the sprinkler systems initiative, covering a total area of 51 hectares. The **project contributed 17%** of the costs, the Department of Agriculture provided around 40-50% as subsidy, and the individual farmers contributed the remaining.

^{* 2} respondents reported that they have received support on solar irrigation Final Impact Assessment Report | Price Waterhouse Chartered Accountants LLP

Overview of the impact created on the local communities

Based on the responses from 154 respondents, this section analyzes the benefits experienced by local communities from the project's support. The percentages below indicates the % of respondents reporting the various impacts.



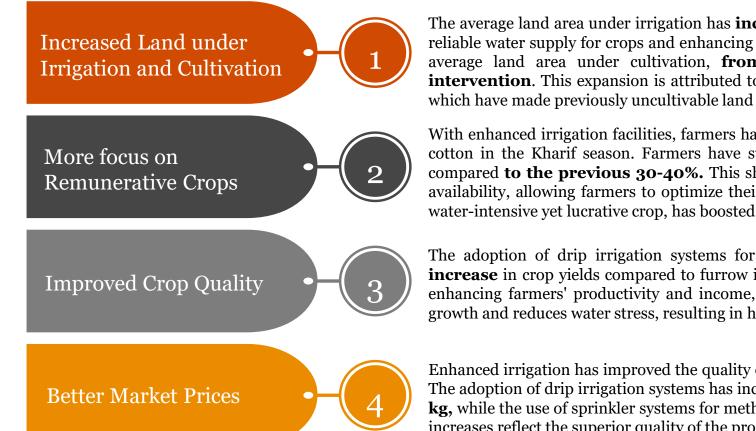
- This is a multiple-choice question, and the total may not add exactly to 100%.
- □ Above data indicates that the project has had a positive impact on the local communities, particularly in terms of improving agricultural efficiency and productivity. Qualitative findings further corroborated these benefits, revealing that the interventions have transformed daily agricultural practices and community livelihoods. Farmers have reported a newfound confidence in their ability to manage water resources more effectively, due to the introduction of efficient irrigation systems like drip and sprinkler systems and water conservation techniques like farm pond construction and farm bunding. This has not only **reduced irrigation costs (56%)** and **effort required for irrigation (73%)** but also allowed for more strategic use of water, leading to **improved crop yields (63%)** and **increased cropping intensity (90%)**.
- □ Community members have shared that the project has enabled them to cultivate a **greater variety of crops (56%)**, thereby enhancing food security and providing additional income streams. The increased cropping intensity has allowed farmers to maximize land use, growing multiple crops per year, which was previously unattainable due to water scarcity and soil degradation. The qualitative insights also highlight a shift in community dynamics, with farmers collaborating more closely to share knowledge and resources, fostering a sense of collective responsibility towards sustainable agricultural practices.
- ☐ Moreover, the absence of respondents reporting no benefit underscores the project's overall success in delivering tangible improvements to the community members. This success is reflected in the enhanced resilience of local communities against environmental adversities, as they are now better equipped to handle challenges such as erratic rainfall and droughts. The project's impact extends beyond immediate agricultural gains, contributing to long-term environmental sustainability and economic stability in the region. Through a combination of traditional practices and innovative solutions, the project has set a precedent for sustainable water and soil management that can be replicated in similar contexts across the region. The impact of the project on the local communities is discussed in detail in the next slides.

Previously, water scarcity restricted me to cultivating just 2 acres of my land," he shared. "But now, I've expanded to 3 acres. The creation of a new farm pond in my land has been a real blessing. With increased water availability, I've even begun experimenting with growing vegetables in addition to cotton, moong, cumin, and methi, something that was unimaginable before.

- A local farmer from Inana village

Detailed impact of the project activities (1/2)

The implementation of water and soil conservation activities in Marwar Mundwa has yielded several benefits for local farmers, enhancing agricultural productivity and economic returns. These interventions have enabled more efficient and sustainable agricultural practices. The key impact of the project activities as shared by farmers are discussed below:



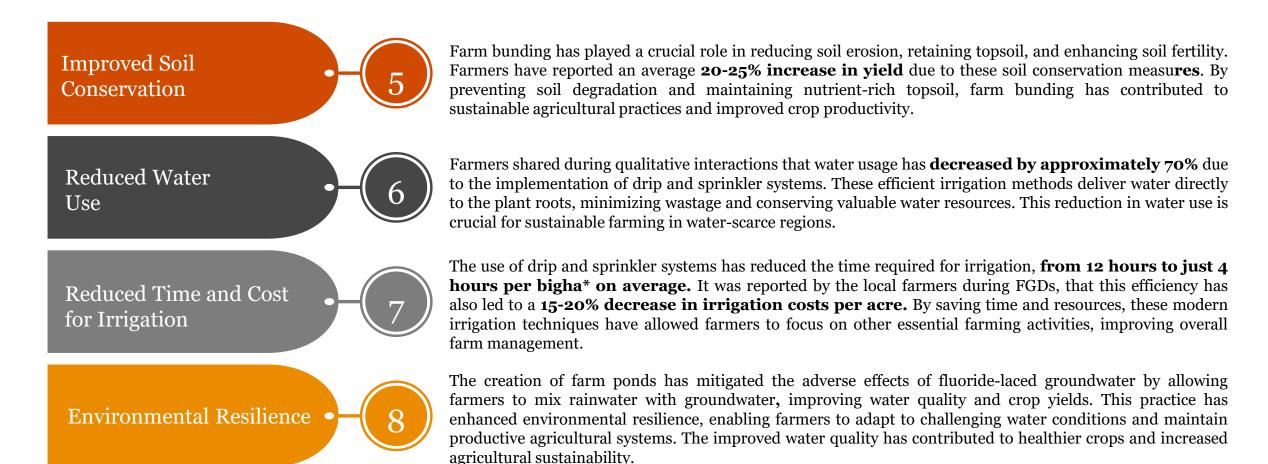
The average land area under irrigation has **increased by 7%**, **from 9.75 acres to 10.46 acres**, because of reliable water supply for crops and enhancing yields. The interventions have also led to a **7% increase** in the average land area under cultivation, **from 10.70 acres pre-intervention to 11.47 acres post-intervention**. This expansion is attributed to improved water management and soil conservation practices, which have made previously uncultivable land viable for agriculture.

With enhanced irrigation facilities, farmers have shifted their focus from food crops like millets and pulses to cotton in the Kharif season. Farmers have started dedicating **50-60%** of their land to cotton cultivation, compared **to the previous 30-40%**. This shift towards more profitable crops is facilitated by better water availability, allowing farmers to optimize their land use for higher returns. The increased focus on cotton, a water-intensive yet lucrative crop, has boosted farmers' income potential.

The adoption of drip irrigation systems for cotton, cumin, and isabgol has led to an average **40-50% increase** in crop yields compared to furrow irrigation. This improvement in crop quality has contributed to enhancing farmers' productivity and income, as the precise water delivery of drip systems optimizes plant growth and reduces water stress, resulting in healthier and more abundant harvests.

Enhanced irrigation has improved the quality of produce, allowing farmers to command higher market prices. The adoption of drip irrigation systems has increased the market value of cumin and isabgol by **INR 5-10 per kg**, while the use of sprinkler systems for methicultivation has raised its price by **INR 10 per kg**. These price increases reflect the superior quality of the produce, benefiting farmers economically.

Detailed impact of the project activities (2/2)



Among the respondents (n=64) reporting improvement in groundwater levels, it was seen that there has been slight improvements to the tune of 10-20 feet. However, Mundwa block being declared as 'Over exploited' by NABARD* in terms of groundwater availability, any improvement seen in groundwater levels can be considered as a significant impact. Overall, the water and soil conservation activities have empowered farmers in Marwar Mundwa, providing them with the tools and resources needed to optimize land use, improve crop production, and achieve economic resilience.

^{* 1} Acre = 2.5 Bigha in project geography



Type of support provided under the project

The project in Marwar Mundwa was initiated to address critical challenges faced by the agricultural community, including inefficient farming practices, low crop yields, and limited access to modern agricultural tools. The region's reliance on traditional farming methods, coupled with environmental challenges such as water scarcity and soil degradation, necessitated targeted interventions to enhance agricultural productivity and sustainability. The following section discusses the type of support provided to the local farmers under the project which is based on the findings emerged from our analysis of responses received from 226 respondents.

Integrated crop management

Recognizing improved need for agricultural practices, the project provided comprehensive support in integrated crop management to 85% of respondents. This support included training on the use of micronutrients, bio-agents, and best practices essential for boosting crop yields and Additionally, the sustainability. project offered training in integrated pesticide management (IPM), seed treatment, and integrated nutrient management (INM) to reduce dependency on chemical inputs. also received Farmers gypsum Trichoderma viride for seed treatment, along with decomposers to enhance soil health and productivity.

Training on better cotton practices

To promote sustainable cotton farming, the project delivered training on better cotton practices to 73% of respondents. This training focused on soil health, pesticide reduction, and capacity building, aligning with the project's goal to improve cotton cultivation methods and increase profitability.

By adopting improved packages of practices for cotton, farmers were equipped to enhance cotton yield and quality, contributing to more sustainable and efficient farming operations.

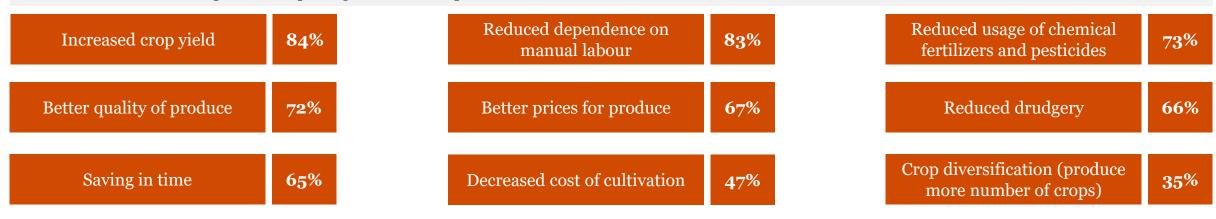
The project recognized the importance of

Improved farm implements/ tools

modernizing agricultural tools and equipment to enhance farming efficiency. As a result, 78% of respondents received support in acquiring improved farm implements. Financial assistance from ACL was provided to help farmers purchase essential tools such as reapers, lawn mowers, automatic disc ploughs, and solar fencing. The project contributed 15% of the total cost of the implements while the remaining cost for the implements was matched by government subsidies and farmers' own contributions.

Overview of the impact created on the local communities

This section further analyses the responses of 226 respondents to evaluate the benefits experienced by local communities due to the project's support. The percentages below indicates the % of respondents reporting the various impacts.



This is a multiple-choice question, and the total may not add exactly to 100%.

- The most significant impact was an **84% increase in crop yield**, highlighting the effectiveness of the interventions. This was followed by **83% of respondents** reporting reduced dependence on manual labour due to adoption of farm implements.
- The project promoted sustainable practices, with 73% respondents reporting reduced chemical input usage, benefiting both the environment and cost savings.
- A notable **72% of farmers** observed better quality produce, reflecting successful integrated crop management. This also led to improved selling prices for the farmers. Better market prices for produce were reported **by 67% of respondents**.
- Time savings were noted by 65% of respondents, attributed to modern farming techniques and improved farm implements, allowing more efficient farm management. This also led reduced drudgery which was experienced by 66% of farmers.
- Decreased cultivation costs were reported by 47%. While the project has enabled **35% of farmers to diversify crops**, enhancing food security and reducing economic risk.
- This project has positively impacted farming practices, as evident in the quantitative and qualitative findings with only 4% of respondents reported no impact, indicating largely positive changes.

98% respondents reported that their income from agriculture has increased.



Adoption of INM and IPM practices have helped me reduce cost of cultivation for cotton. Earlier, I used to spend over INR 20,000 per acre as I had to spend a lot on chemical pesticides. Now, with the use of biopesticides which I make on my farm, I only need to spend INR 16,000 per acre for cultivating cotton.

A local farmer from Mundwa village

Findings related to various agriculture value chain stages

Pre-production



- Sustainable Practices and Resource Management: The project encouraged sustainable practices and efficient resource management, equipping farmers with the necessary training and tools.
- Advanced Farming Techniques: Farmers adopted advanced techniques such as integrated pest management (IPM) and soil health improvement using Trichoderma, reducing chemical input reliance and costs.
- Precision Irrigation Systems: The introduction of systems like drip irrigation optimized water use, conserving resources and lowering electricity expenses.
- Seed Treatment Practices: Enhanced germination rates and plant vigor were achieved, boosting crop resilience and reducing input costs.

Production



- **Yield Improvement:** Techniques like drip irrigation and integrated crop management led to increased yields for crops such as cumin, methi, and cotton.
- **Cost Efficiency:** Efficient resource management and sustainable practices reduced cultivation costs, enhancing overall farming efficiency.
- Mechanized Harvesting: The use of reapers and lawn mowers reduced labor costs and ensured timely crop collection, improving productivity and profitability.

Post-harvest



Post-Harvest Management **Practices:** It was understood from the discussions with farmers that there is potential to further improve their income capacity. Adoption of proper post-harvest management practices like drying and grading can further increase selling prices. Although, the project did not place much emphasis on post-harvest management practices. Promotion of effective post-harvest strategies, such as proper storage, handling, and processing, can enhance the market value and shelf life of crops. By integrating comprehensive postmanagement practices, harvest farmers can also reduce losses, product quality, improve increase their competitiveness in the market.

Marketing



- Market Competitiveness: Enhanced crop quality enabled farmers to secure better market prices for crops like cumin, methi, and cotton.
- Farmer Producer Company: The creation of the Green Desert Farmer Producer Company supported collective procurement efforts and strategic diversification, promoting efficient governance and transparent operations.
- Market Linkages with Spice Companies: It was understood from discussion with officials from Dept. of Agriculture that establishing strong market linkages with spice companies can provide farmers with reliable outlets for their produce, ensuring consistent demand and fair pricing.

Crop-wise impact of the project activities

The strategic interventions under the project have led to notable improvements in crop yields, income, and cost efficiency across various crops, including Moong, Cumin, Methi, Isabgol, and Bajra. By adopting advanced farming techniques and sustainable practices, farmers have experienced increased income and market prices. The below table provides a comparison of pre- and post-intervention metrics, highlighting the positive changes in average yield, average income, and average cultivation costs, underscoring the project's success in transforming the agricultural landscape in the region. Please refer to next slide for Cotton related information.

Crop	Yield and Income Enhancement*	Cost Reduction and Efficiency	Change in Market Prices*
Cumin	The project increased cumin yield from 375 to 500 kg per acre by adopting modern techniques like drip irrigation and integrated crop management. Consequently, farmers' average annual income rose from INR 154,387/- to INR 380,100/- .	Efficient resource management and sustainable practices, including Trichoderma for seed treatment and decomposers for soil health, reduced average cultivation costs from INR 25,651/- to INR 22,533/- per acre, lowering input costs and enhancing crop resilience.	The quality of cumin produce has improved, allowing farmers to command higher market prices. The average price per kg of cumin has increased from INR 115/- to INR 210/ Farmers are able to sell at a premium of around INR 5-10 per kg more than the market prices.
Methi	Methi yield increased from 1,200 to 1,500 kg per acre due to techniques like drip irrigation, boosting average annual income from INR 515,520/- to INR 814,500/	Average cultivation costs dropped from INR 48,850/- to INR 33,825/- per acre due to adoption of efficient resource management and sustainable practices.	Improved methi quality raised average prices from INR 120/- to INR 150/- per kg. Farmers are now able to command INR 10-15 per kg more than the normal market prices.
Isabgol	Isabgol yield increased from 500 to 625 kg per acre , boosting average annual income from INR 89,500/- to INR 147,062/	Average cultivation costs decreased from INR 12,100/- to INR 9,400/- per acre by adopting efficient resource management and sustainable practices like IPM and INM.	Improved Isabgol quality raised average prices from INR 100/- to INR 130/- per kg . Similar to cumin, farmers are able to sell at a premium of around INR 5-10 per kg more than the market prices.
Moong	Moong yield increased from 350 to 375 kg per acre , boosting farmers' average annual income from INR 33,831/- to INR 50,906/- , also driven by natural increase in market rates.	Average cultivation costs decreased from INR 7,800/- to INR 5,400/- per acre largely due to adoption of IPM and INM practices in addition to seed treatment measures.	Moong average prices rose from INR 54 to INR 75 per kg , aligning with the local mandi rates. Farmers have not reported receiving any additional premium.
Bajra	Although Bajra yield remained at 750 kg/acre , the project increased farmers' average annual income from INR 26,850/- to INR 38,010/-, driven by improved market conditions and enhanced crop management practices.	Average cultivation costs per acre decreased from INR 10,000/- to INR 8,086/- due to adoption seed treatment and sustainable nutrient and pest management practices.	Bajra average prices rose from INR 20/- to INR 28/- per kg. Similar to Moong, farmers don't receive any additional premium for Bajra.

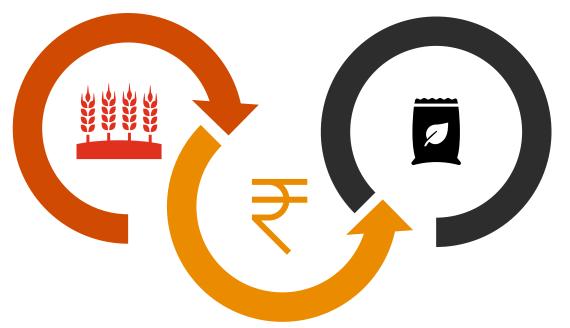
^{*} The rise in income is partly due to the natural increase in agricultural commodity prices. The market prices listed in the table have been verified with the local mandi rates in Nagaur using the Agmarknet portal. The project has contributed significantly by enabling many farmers to sell their produce at market rates, whereas previously, they had to accept lower prices due to the inferior quality of their produce.

Impact of the project activities on Cotton farmers

The Better Cotton Initiative through multiple funding avenues (including ACL) has helped in transforming local cotton farming by promoting sustainable agricultural practices and economic growth. This initiative equipped farmers with essential knowledge and tools to adopt advanced farming techniques, enhancing productivity and profitability. By focusing on sustainable practices like efficient water use, integrated pest management, and soil health improvement, this initiative aimed to reduce environmental impact (decline in use of chemical inputs) while boosting cotton yield and quality. The project emphasized capacity building, offering training and resources to empower farmers in implementing these modern techniques effectively. As a result, farmers saw notable improvements in yield, cost efficiency, and market prices received by farmers. Below Figure provides an overview of key impact created by this activity:

1. Yield and Income Enhancement

- The project has successfully increased cotton yield from 750 kg to 875 kg
 on an average per acre. This improvement is attributed to the adoption of advanced farming practices and better market conditions.
- As a result, the average annual income for cotton farmers has increased from INR 184,594/- to INR 285,075/-.
- This boost in income has provided farmers with greater financial security and the ability to invest in further improvements to their farming operations.



Cost Reduction and Efficiency The project has effectively reduce

- The project has effectively reduced the cost of cultivation per acre from INR 19,681/- to INR 17,069/- on an average.
- This reduction is achieved through efficient resource management and the adoption of sustainable farming practices, which have lowered input costs and improved overall farming efficiency.
- By minimizing expenses on farm inputs, farmers can allocate resources more effectively, enhancing their ability to sustain and grow their agricultural activities.

3. Change in Market Price*

- The price of cotton has increased from INR 55/- to INR 72/- per kg on an average, significantly enhancing farmers' market competitiveness and income potential.
- Farmers stated that they are now able to sell their produce at market-level prices, unlike before when they received lower prices.

^{*} Increase in income is also due to natural increase in price of agri-commodities. The market price mentioned here has been crosschecked with the local mandi rates in Nagaur through the Agmarknet portal. The project's role has been in enabling many farmers to sell their produce at market rates, whereas previously, they had to accept prices lower than the market due to the inferior quality of their produce.



Section: Training on Goatery

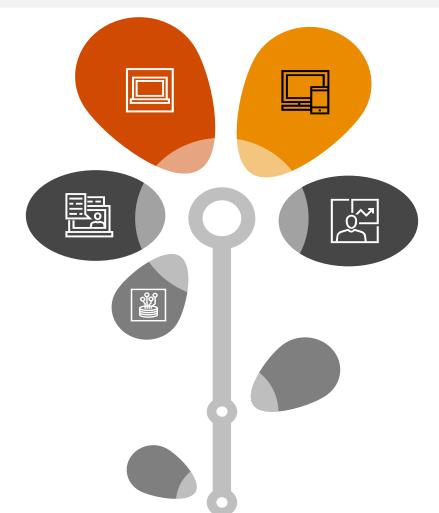
Type of support provided under the project

This project supported 473 households across 13 villages through its goatery initiative. This initiative focused on enhancing goat rearing practices by providing support and resources in key areas important for sustainable goat farming. By addressing both the technical and commercial aspects (discussed below) of goat rearing, the project aimed to create alternative livelihood sources for the local farmers and ensure long-term economic benefits. Out of the total respondents of the study, 63 respondents (14%) reported that they have received training on goatery under the project. Below figure provides an overview of the type of support provided under this project:

Feed and Fodder Management: Farmers received guidance on optimizing feed resources, including local fodder production, to ensure balanced nutrition and support goat health and growth.

Health Management: Veterinary camps and health check-ups were facilitated to prevent diseases and maintain the well-being of the goat population.

Breed Improvement: The project introduced selective breeding programs aimed at enhancing genetic traits, resulting in more productive goat breeds.



Castration: Training sessions were conducted to educate farmers on proper castration techniques, necessary for controlling breeding and managing the goat herds.

Marketing Support: Farmers received training in effective marketing practices, such as timing of sale of their goats and researching current market prices before selling.

Overview of the impact created on the local communities

By addressing areas such as castration, feed management, marketing strategies, health management, and breed improvement, the project sought to improve goat rearing practices among the local farmers. The benefits experienced by the local community basis the response of 63 respondents due to the project's role are discussed below.

Increase in Number of Animals: 19% of respondents indicated an increase in the number of animals. This growth is due to improved breeding practices and health management, leading to larger herds and the potential for increased income.

Improvement in Animal Health: All respondents (100%) specified improved animal health, due to regular veterinary camps and health check-ups. Better health management practices have made goats more resistant to diseases, resulting in healthier herds and increased productivity.

Decrease in Cost of Production: 59% of samples reported a reduction in production costs. Efficient feed and fodder management have optimized resource use, lowering overall expenses and improving profitability for farmers.

3

Reduction in Mortality: A reduction in mortality was observed, with **63% of samples** noting improvements. This reflects the effectiveness of health management strategies and better care practices, which have minimized losses and improved herd stability.

Increase in Productivity: 81% of samples reported increase in productivity. The effects of breed improvement, better nutrition, and health management have led to higher yields, providing farmers with greater output and economic benefits.

5

Switching to Sirohi goats through the goatery intervention transformed my livelihood. With double the reproductive rate and higher market value than Marwari goats, my herd expanded, and income increased. Despite similar fodder needs, this shift enhanced community interaction and strengthened my household contributions, empowering my role within the village.

- A female goat rearer from Mundwa village

This is a multiple-choice question, and the total may not add exactly to 100%.

Section: Training on Goatery

Detailed impact of the project activities

The project's goatery interventions has created positive change in local communities, advancing goat rearing practices and boosting the economic well-being of participating households. By addressing both technical and commercial dimensions of goat farming, the project has achieved positive outcomes, as evidenced by key metrics evaluated before and after its implementation.

1. Increase in Number of Animals

A key success of the project is the increase in the number of goats per household, rising from an average of 14 to 17 goats, marking a **21% increase**. This growth is attributed to improved breeding strategies and health management. The project introduced Sirohi breed of goats among the local farmers which has higher resilience that enhanced genetic traits, resulting in more robust and productive goats.

2. Reduction in Rearing Cost

The project achieved a **4% reduction in rearing costs**, decreasing from INR 22,270/- to INR 21,332/- per household per annum. This savings resulted from efficient feed and fodder management. Farmers were trained to optimize local resources and implement cost-effective feeding strategies, reducing reliance on expensive commercial feeds.

3. Reduction in Mortality

Mortality rates fell by 33%, from 3 to 2 animals per household on average per year, largely due to effective health management strategies, such as regular veterinary camps and health check-ups. These interventions ensured timely medical attention, preventing diseases and improving overall herd health.

4. Increase in Productivity

Productivity witnessed **18% increase**, rising **from INR 44,650/- to INR 52,718/-** per household per annum on average. This improvement is a testament to the project's holistic approach, integrating breed improvement, enhanced nutrition, and comprehensive health management. The introduction of superior breeds and better feeding practices led to more productive goats (more weight) and increased survival rates, resulting in higher yield of meat.

<u>Comparison of Desi (Marwari) Breed and Sirohi</u> <u>Breed</u>

Desi (Marwari) Breed

- **Reproductive Cycle**: Typically gives birth once a year to a single progeny.
- **Growth and Market Value**: In six months, a Marwari goat generally weighs less compared to its Sirohi goat and is sold for approximately INR 6,000/- to INR 7,000/-.
- **Fodder Requirement**: The fodder requirement for Marwari goats is similar to that of Sirohi goats, despite differences in growth rates and reproduction.

Sirohi Breed

- **Reproductive Cycle**: Known for its higher reproductive efficiency, the Sirohi breed gives birth to two progeny each time, twice a year, offering a significant advantage in herd expansion.
- Growth and Market Value: A six-month-old Sirohi goat typically weighs around 25 kg and can be sold for approximately INR 12,000/-, reflecting its higher growth rate and market value.
- Fodder Requirement: Despite the Sirohi breed's superior growth and reproductive traits, its fodder requirement remains the same as the Marwari breed.



Type of support provided under the project

The activity on "Promotion of Income Generation Activities through Self-Help Groups (SHGs)" under the Project was designed to empower communities by encouraging sustainable economic practices and enhancing financial literacy among its members. The project promoted **66 SHGs covering 747 members in 6 core villages in the period between 2021-23**. Below Figure provides an overview of nature of support provided under this project:



Capacity Building and Training

- **Regular Meetings**: SHG members were encouraged to participate in regular meetings to discuss progress, challenges, and opportunities. These meetings served as a platform for knowledge exchange and collective decision-making.
- **Financial Literacy**: Training sessions were conducted to improve financial literacy, covering topics such as savings, interloaning, and financial management.



Ensuring Accountability and Transparency

- **Timely Repayment:** Emphasis was placed on the timely repayment of loans, fostering a culture of responsibility and trust within the group.
- **Up-to-Date Books of Accounts:** The maintenance of accurate and current financial records was promoted to ensure transparency and accountability within the SHG.



Financial Management

- Regular Savings: Members were motivated to save regularly, creating a financial safety net and a pool of funds that could be used for collective benefits.
- **Inter-Loaning:** The project facilitated a system of interloaning, allowing members to borrow from the pooled savings for personal or business needs, thereby promoting financial independence.

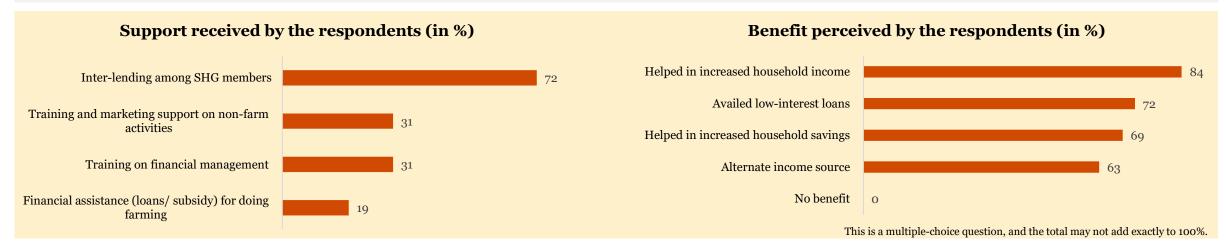


Promotion of Income Generating Activities

- **Creation of a federation:** A federation comprising 10-15 members from various SHGs was established to undertake collective as well as individual income-generating activities.
- Marketing support: The federation engaged in activities such as spice trading, which provided an additional source of income and economic diversification for the members.

Overview of the impact created on the local communities

The project through the Self-Help Groups (SHGs) have provided multifaceted support to members, supporting them in enhancing their livelihoods. This section delves into the various forms of assistance received, showcasing how training, financial aid, and intra-group cooperation have empowered individuals and fostered economic growth within the community. The below findings are based on the responses of 32 respondents who reported the were part of SHGs promoted under the project.



- SHGs have enhanced the livelihoods of their members through diverse forms of support and benefits. A notable feature of SHG support is the strong intra-group financial cooperation, with 72% of respondents participating in inter-lending. This practice reflects the robust financial support network within the groups, enabling members to access funds for various needs. 31% of respondents benefiting from skills that aid in managing personal and business finances effectively. Additionally, 19% of respondents have received financial assistance for farming, boosting agricultural productivity. Training and marketing support for non-farm activities (such as opening grocery shops, traditional apparel manufacturing, spice trading, etc.) have also been provided to 31% of respondents, facilitating income diversification beyond traditional farming.
- The benefits of SHG participation are substantial as evident in the above right-sided figure. Low-interest loans have been availed by 72% of respondents, alleviating financial burdens and allowing for investments in both personal and business ventures. Importantly, **63% of respondents have established alternate income sources**, diversifying their economic activities and reducing reliance on single income streams.
- The economic impact of SHG involvement is underscored by 84% of respondents reporting increased household income. Additionally, 69% have improved their household savings, leading to greater financial stability and resilience. None of the respondents reported no benefit from SHG participation, indicating a universally positive impact on their livelihoods. Through these initiatives, SHGs have successfully empowered individuals and fostered economic growth within the community.

Detailed impact of the project activities

- Since 2006, the project has been instrumental in promoting economic empowerment among local women through the establishment and support of Self-Help Groups (SHGs). The Marushree Federation, which is an apex body of SHGs encompassing 70 SHGs and 787 members (including SHGs formed before the project intervention), provides microloans at a nominal interest rate of 1% per month, enabling women to access funds for both personal needs and revenue-generating activities. It was reported during the qualitative discussions that many members have achieved financial independence by starting their own small business with the help of an SHG loan.
- Regular savings and income-generating activities form the backbone of the federation's financial strategy, promoting sustained economic growth. Meetings are held regularly to discuss financial matters, ensuring transparency and accountability through meticulous record-keeping.
- SHGs have effectively addressed financial barriers, with approximately **70%** (**n=23**) of loans directed towards profit-making activities, such as opening shops or small businesses, and the remaining **30%** covering personal needs like education and healthcare. The Tulsi SHG has significantly increased its annual profits from INR 4-5 lakhs to INR 15-20 lakhs, demonstrating the success of microfinance and community-driven initiatives in economic development.
- Training programs have been pivotal in empowering women by enhancing their skills in financial management, business operations, and marketing. These initiatives have not only increased the confidence and capabilities of female members but have also contributed to broader social changes, such as gender equality and community empowerment. As a result, there has been increase in household income of 84% of the respondents since the project inception. On an average, there has been a 30% increase in the annual household income of participants, from INR 164,583/- to INR 214,583/-, marking a significant improvement in their economic standing.
- Despite these successes, challenge related to marketing of the SHG-made products persists. SHG members are unable to reach remunerative markets for selling their produce and are largely restricted to Mundwa village and Ambuja sponsored events. The federation is proactively seeking partnerships and exploring new strategies to overcome these obstacles, aiming for continued growth and sustainability.
- In conclusion, the project's SHG initiatives have had a positive impact on the economic and social fabric of the community, particularly among local women. By fostering financial independence, enhancing skills, and promoting entrepreneurship, the project has contributed to improved livelihoods and community development. Continued support and strategic planning are essential to sustain these gains and address emerging challenges.
- The initiative have been recognized by the Government (Department of Women and Child Development) and District Administration of Mundwa for their contribution towards women empowerment and overall social development.

Joining the Self-Help Group has allowed me to change my circumstances dramatically. I took a loan of INR 50,000 to open a grocery shop in my village, and now I earn INR 5-6k per month. This has enabled me to contribute to my family's income, significantly increasing my stature both in my family and within the village community. Previously, I was confined to the four walls of my household, but now my role has expanded as I go to the market and interact with other villagers, fostering a sense of independence and connection that I never experienced before.

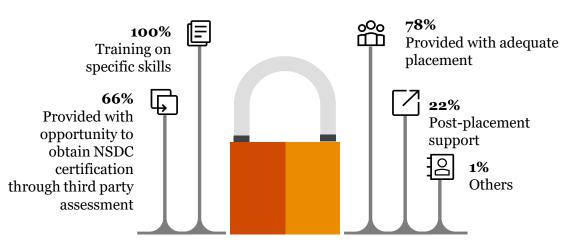
A SHG member from Mundwa village



Support provided under the project activity

The project trained 1,109 youths in total with 482 youths trained during FY 2021-22 and 627 trained in 22-23. This section presents the findings from 144 respondents trained (sample) at Skill and Entrepreneurship Development Institute (SEDI)*, representing 32% of the total survey respondents, and is further supplemented by qualitative insights and information received from Ambuja Foundation and interactions with community members.

Responses on support received under the project (N-144)



This is a multiple-choice question, and the total may not add exactly to 100%.

The data presented is a mix of information sourced through sample survey as well as project documents provided by ACL.

Courses Offered: Courses such as Accounts Executive (Accounts Payables and Receivables), Assistant Beauty Therapist, Assistant Electrician, Food and Beverage Service, Lead Courier, Office Assistant, Retail Sales Associate, Business Correspondent/Business Facilitator, Domestic Data Entry Operator, Unarmed Security Guard, etc. were offered to the community members for specialised training.

*SEDI- Skill & Entrepreneurship Development Institute is an initiative of Ambuja Foundation. It aims to provide youth with training, employment and business opportunities to help them achieve their aspirations and lift their families out of poverty.

Key aspects of training programs at SEDI:



Vocational Training

Offered courses in various trades, community members demand at a token contribution of INR 1,000 from the community members for the whole programme. The training fee was reported to be around INR 25,000 per community member.



Entrepreneurship Development

Provided guidance and handholding support to community members interested in starting their own businesses, including business planning, management skills and access to loans to start their businesses like beauty parlour.



Job Placement Assistance

Helped trainees find employment opportunities by connecting them with local businesses and industries. As per information shared by ACF, 865 trainees out of 1,109 got placed after the training.



Post-placement Support

Following placement, supported the community members by providing guidance, counseling, and support to help them traverse through their careers.



Transportation Support

The project also provided transportation support to the students from the 11 project villages. Each community member received INR 3,000 as transportation support after ensuring 90% attendance rate during the training.

Section: Skill development

Course-wise enrollment and placement achieved

This slide presents a data-driven overview of trainee placements across various courses for 2021-22 and 2022-23, highlighting significant improvements in placement rates. Noteworthy courses include Assistant Beauty Therapist and Retail Sales Associate, consistently achieving high placement percentages illustrating project effectiveness.

Details of trainees enrolled and placed-2021-22

Course name	No. of trainees enrolled in 2021-22	No. of trainees placed in 2021- 22	% placement in 2021-22
Accounts Executive	117	80	68%
Assistant Beauty Therapist	40	35	88%
Assistant Electrician	60	46	77%
Food & Beverage Service - Associate	82	60	73%
Lead Courier	71	41	. 58%
Office Assistant	23	18	78%
Retail Sales Associate	65	57	88%
Unarmed Security Guard	24	11	46%
Total	482	348	72%

Details of trainees enrolled and placed-2022-23

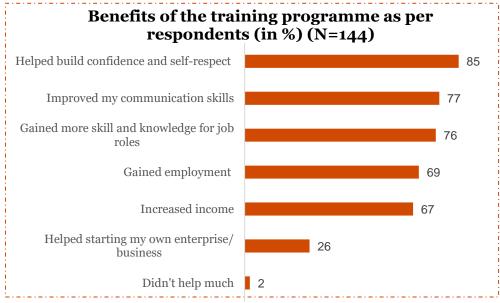
Course name	No. of trainees enrolled in 2022-23	No. of trainees placed in 2022-23	% placement in 2022-23
Accounts Executive	132	111	84%
Assistant Beauty Therapist	54	. 48	89%
Assistant Electrician	44	. 31	70%
Business Correspondent / Facilitator	153	131	ı 86%
Domestic Data entry Operator	93	72	77%
Food & Beverage Service - Associate	64	55	86%
Retail Sales Associate	25	22	88%
Unarmed Security Guard	62	47	76%
Total	627	517	82%

Source of data for both years: Documents shared by ACF

☐ For the 2021-22 batches, the highest placement percentage was observed in the Assistant Beauty Therapist and Retail Sales Associate courses ,	both at 88%.	The Lead
Courier course saw a relatively lower placement rate of 58%, with Unarmed Security Guard being the lowest at 46%.		

- ☐ In 2022-23, all courses saw an improvement in placement rates compared to the previous year, except for Assistant Electrician, which dropped to 70%. The highest placement rates were again found in the Assistant Beauty Therapist course at 89%, and Retail Sales Associate maintained its high placement rate at 88%.
- ☐ The overall placement rate **increased by 10%** compared to 2021-22, indicating enhanced effectiveness of the program or external factors that improved job placements.
- ☐ The total number of trainees enrolled increased by 145 from 482 in 2021-22 to 627 in 2022-23.
- ☐ The overall placement rate improved from **72% to 82% year-over-year**, suggesting a more effective placement strategy or an improved job market.
- ☐ The data indicates strong performance in placements across both years, with certain courses showing consistency in high placement rates, particularly in Assistant Beauty Therapist and Retail Sales Associate courses.

Detailed impact of the project activities



This is a multiple-choice question, and the total may not add exactly to 100%.

The data presented is a mix of information sourced through sample survey as well as project documents provided by ACL.

Despite facing hearing and speech disabilities, I was determined to find a sustainable livelihood to support myself and my family. I enrolled in SEDI's Assistant Electrician course, which proved to be a pivotal decision. After completing the program, I began offering electrical repair services within my local community. Additionally, I discovered that some of the skills I learned could be applied to plumbing jobs, so I expanded my services to include those as well. Before this training, I had no source of income, but now I am able to earn INR 15,000 per month.

- A trainee from Nagaur

- □ Increased Employment: Before the intervention, only 21% of community members were employed. Post-training, 69% of the surveyed community members are employed, indicating a significant increase in employment opportunities due to the skill development programs.
- □ Income Growth: The average monthly income of previously employed respondents increased from INR 5,833 to INR 13,214 after the training. For those who were unemployed pre-intervention, the average monthly income post-training is INR 13,363.
- □ **Entrepreneurial Ventures**: It was reported by respondents during qualitative interactions that earlier, local youths of the project villages didn't know how to incubate new business endeavors due to lack of guidance and confidence. Post the training, some of the community members have started their own businesses such as shops, electrical repairs, beauty parlours etc. instead of seeking employment in organizations, showcasing the program's success in fostering entrepreneurship.
- □ **Comprehensive Support**: The program provided various forms of support, including vocational training, job placement assistance, and opportunities for obtaining certification. This holistic approach ensures well-rounded personal and professional development.
- □ **Community Engagement**: The program worked closely with local communities to tailor training according to their needs, ensuring that the skills taught were relevant and in demand.
- ☐ The training has helped them improve their employability and income, contributing to their socio-economic upliftment.
- □ Apart from this, community members accorded value to the development in their soft skills and communication skills which helped them gain confidence and self-respect required for taking their professional journeys forward.
- □ **Local Economic Impact**: By equipping youth with skills and encouraging entrepreneurship, the program contributes to local economic growth and reduces the need for migration to urban centers.

Overview of the impact created on the local communities



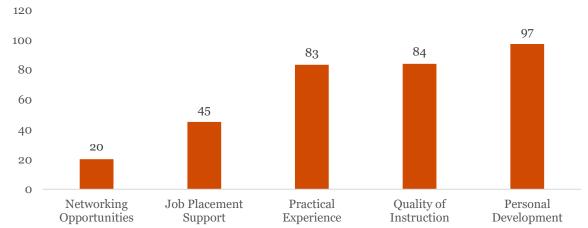
Before the intervention: Only 21% of the community members were employed.



Post the intervention: 69% of the community members surveyed are currently employed either with their original recruiter or some other employer.*

*Through the qualitative interactions, it was found out that among the trainees who are not currently employed (31%), some of them have started their own entrepreneurial ventures while others have opted to remain engaged in farming.

Most valuable aspect of the training programme as per respondents (in %) (N=144)



This is a multiple-choice question, and the total may not add exactly to 100%.

- ☐ Female trainees made up 28% of participants, promoting gender inclusivity and empowerment in skill development.
- □ 70% of respondents were aged 20 to 25, targeting young adults for enhanced employability skills.
- ☐ The project mobilized community members in Nagaur district through targeted social media ads and networking efforts, focusing on individuals from low socio-economic backgrounds in various local regions in Rajasthan.
- ☐ The community members of the project predominantly come from low socioeconomic backgrounds, from different regions of Nagaur district in Rajasthan.
- □ At the time of enrollment, **most were unemployed (79%)** and actively seeking opportunities to generate income. A significant portion of the students hailed from rural areas, where access to employment is even more restricted.
- ☐ Those who had been working prior to joining the training were seeking upskilling opportunities to increase their employability in an increasingly competitive labor market.
- □ community members received training in specialized courses aimed at local demands, entrepreneurial guidance, and essential technical skills, including software applications like MS Word and MS Excel, enhancing their employability.
- ☐ The project provided comprehensive support, including vocational training, entrepreneurship development, job placement assistance, post-placement guidance, and transportation support, equipping trainees with resources necessary for successful career advancement.



SROI estimation – Establishing the Impact

This study also includes the estimation of SROI for the project. As described earlier, the Social Return on Investment (SROI) Framework design helps us measure and account for value in a broad sense. The overall impact and the subsequent calculation of the return was done after preparing an impact map for the programme. Thereafter, the cumulative benefit was derived after adjusting the deadweight, displacement, attribution (by others) and dropoff factors from the year wise benefits. These factors are defined in detail as follows:

Deadweight

Deadweight is the estimation of the benefits which would have occurred even in the absence of the programme. For the benefits attributable to this project, **deadweight has been considered to be between 20% to 80%** based on the interaction with the stakeholders on-ground.

Displacement

Displacement is the component which informs the assessor on how much one outcome of the project may influence any other outcome. During the assessment for this project, there was no evidence of any displacement noted or reported. Hence, the **displacement factor is taken to be 0-10%** for the calculations based on the interaction with the stakeholders on-ground.

Attribution (by others)

Attribution (by others) is an estimate of what proportion of the impact may be attributed to the efforts of other stakeholders involved. During the assessment and the survey, it was found that for benefits from this project, **attribution** (by others) can be set between 0% to 85%.

Dropoff

Dropoff is factored in as in the subsequent years, the benefit or the impact would be slightly less than the previous year. During the qualitative interactions it was found that around 10-30% of the community members have either stopped practicing/ using the trainings/ supports promoted under the project. Accordingly, a **dropoff of 10-30% has been considered** for calculations.

SROI estimation – Impact Map (1/2)

Activities	Stakeholders	Output Indicators	Outcome Indicators	Impact Indicators
Integrated Crop Management	Farmers	 Number of training sessions conducted Number of farmers trained Number of demonstration plots established Types of crop management techniques introduced 	 Percentage increase in crop yield per hectare Adoption rate of new crop management techniques Reduction in the use of chemical fertilizers and pesticides 	Increase in farm income per community member Reduction in cost of cultivation per acre
Better Cotton	Farmers	Area of land managed under Better Cotton practices Number of farmers adopting Better Cotton standards Volume of cotton produced under Better Cotton certification	 Improvement in cotton yield (kg/hectare) Reduction in water usage per hectare Improved quality of cotton (fiber strength and length) 	Increase in income per farmer from cotton sales Reduction in cost of cultivation per acre
Improved Farm Implement	Farmers	 Number of implements distributed Number of training sessions on implement usage Types of implements introduced 	 Reduction in labor time for farming activities Increase in efficiency and effectiveness of farm operations Decrease in physical strain on farmers 	1. Long-term cost savings for farmers 2. Number of hours saved per crop cycle due to adoption of farm implements 3. Cost saved on reduced number of accidents/ health issues due to reduced drudgery
Water Resource Management	Farmers		 Reduction in time spent on manual irrigation Increase in water availability during dry seasons Increase in water retention in fields Improvement in soil moisture levels Reduction in energy costs for irrigation Increase in water use efficiency Improvement in crop yield per hectare Reduction in weed growth due to targeted irrigation Increase in cropping intensity Increase in number of irrigations per season 	1. Increase in income per acre 2. Decrease in cost of irrigation and overall cost of cultivation 3. Reduced carbon emissions from switching to solar irrigation and efficient irrigation practices 4. Time saved per irrigation due to adoption of efficient irrigation practices

SROI estimation – Impact Map (2/2)

Activities	Stakeholders	Output Indicators	Outcome Indicators	Impact Indicators
Goatery	Farmers	1. Number of training sessions on goat rearing	 Increase in number of goats per household Increase in milk and meat production 	 Increase income from goatery Reduced cost of feed, shelter and veterinary care
Skill Training to Rural Youth through SEDI	Local youth	 Number of youth trained Number of training programs conducted Types of skills and trades covered in training 	 Increase in job placements or entrepreneurial ventures Improvement in skill levels and employability Increase in self-confidence and aspirations among youth 	1. Increase in household income due to improved employability 2. Savings made on admission and logistics to attain similar skill trainings
Promotion of Federation and SHG		 Number of Self-Help Groups (SHGs) formed Number of members joining SHGs Amount of collective savings generated 	 Increase in financial literacy and savings among members Increase in income from income generation activities Increase in access to credit and financial services 	 Increase in household income due to SHG-led income generating activities Savings made on interest payment due to getting low-interest loans from SHGs

- During the primary data collection process, which included both quantitative and qualitative methods, it became evident that certain benefits associated with the project could not be realized for some of the indicators we had initially included in the impact map. Specifically, the baseline values for the following indicators were reported as zero by the respondents:
 - 1. Cost savings from a reduced number of accidents and health issues due to decreased drudgery.
 - 2. Savings on interest payments resulting from receiving low-interest loans from Self-Help Groups (SHGs).

Respondents indicated that instances of accidents were minimal even prior to the adoption of farm implements, and the SHG women members had not availed themselves of any loans for income-generating activities before the project's implementation. Hence, these 2 indicators are not made part of SROI analysis.

- As highlighted in slide 11, the respondents experienced a range of benefits from the project, which were designed to address various aspects of their needs and improve their overall quality of life. To evaluate the effectiveness of these benefits, we performed a Social Return on Investment (SROI) analysis focusing on the distinct thematic benefits associated with the project. This analysis was undertaken using information provided directly by the respondents, concentrating on each individual thematic area. By isolating the analysis to specific thematic benefits, we aimed to maintain the integrity of the findings and avoid double counting benefits that may arise from overlapping support initiatives. This approach is crucial because different forms of thematic assistance can yield similar positive outcomes for the community members. For instance, both the increased adoption of integrated crop management practices and improved access to irrigation facilities can lead to a significant rise in agricultural income. By recognizing these nuances, we ensured that the analysis accurately reflected the unique contributions of each thematic area while avoiding the risk of inflating the reported benefits.
- The SROI value reflects the skill development intervention's impact in creating formal employment opportunities. Moreover, some trainees have opted for higher education and self-employment (such as farming), which were not captured in the SROI analysis due to mobilization challenges and unavailability of such trainees.

SROI estimation – Calculating the Impact

The impact of the project has been arrived at based on the following calculations:

- **Impact Value for the first year:** Quantity of change or Number of community members or Number of benefit units x Financial Proxy (FP) value x (1-deadweight) x (1-displacement) x (1-attribution)
- **Impact value for subsequent years:** Quantity of change or Number of community members or Number of benefit units x Financial Proxy (FP) value x (1-deadweight) x (1-displacement) x (1-attribution) + [impact of previous year] x (1-drop off)]

Based on the above calculations, the cumulative benefit or impact generated by the project from the year 2021-22 till the end of the financial year 2024-25 comes out to be INR ₹ 182,560,755 /-. The detailed calculations and year-wise values can be referenced from the upcoming slide.

Calculating SROI value:

The SROI value is expressed as a ratio of the return and is calculated by dividing the net present value of total Impact value (or cumulative benefit) created under the project divided by the net present value of the total investment or funds utilized for the project.

Net Present value of total impact value (or cumulative benefit) is ₹172,675,156 /- whereas the net present value of Total Utilization or Investment # (till the time of survey) is ₹22,058,383 /-.

Now, to calculate the SROI following formula has been used:

SROI = Net Present value of benefits/ Net Present Value of Investment

Net Present Value can be calculated using the below formula:

Net Present Value of benefits = Cumulative benefits*POWER ((1+r) time) where 'r' has been taken as per the yearly CPI inflation rate during the project period.

#The data on project investment is as shared by the ACL team. PW has not verified the investment figures independently.

SROI	<u>Net Present value of benefits</u> Net Present Value of Investment
NPV of benefits	INR 172,675,156 /-
NPV of Investment	INR 22,058,383 /-
SROI Value*	7.83

^{*}SROI value of 7.83 indicates that an investment for every INR 1 invested in the project, a social value of INR 7.83 is generated.

Theme-wise SROI

The research team has also calculated theme-wise SROI values based on similar assumptions (Shared separately with ACF team). The values are as follows:

- 1. Theme: Livelihood promotion^ 15.08
- 2. Theme: Skill development 2.47

[^]This includes water resource management, sustainable agriculture (incl. better cotton), goatery and promotion of IGAs through SHGs.

SROI estimation – Impact Values

S. No.	Stakeholder	Project Activity	Benefits	Deadweight	Displacement	Attribution (by others)	rop-off	created between	created between	Total value to be created between 2023-2024	Total value to be created between 2024-2025
1		integrated crop	Increase in farm income per community member	80%	10%	60%	25%	32,365,751	24,274,313	18,205,735	13,654,301
2		Management	Reduction in cost of cultivation per farmer	20%	0%	60%	25%	8,436,871	6,327,654	4,745,740	3,559,305
3			Increase in income per farmer from cotton sales	55%	10%	75%	25%	5,084,274	8,987,378	6,740,533	5,055,400
4		Better Cotton	Reduction in cost of cultivation per farmer	30%	0%	75%	25%	444,554	785,830	589,372	442,029
5		Improved Farm	Long-term cost savings for farmers	20%	10%	0%	10%	68,843	280,574	252,517	227,265
6	Farmers		Number of hours saved per crop cycle due to adoption of farm implements	20%	10%	0%	10%	97,838	479,405	431,464	388,318
7			Increase in income per acre	50%	0%	85%	10%	105,249	247,665	222,898	200,609
8			Decrease in cost of irrigation and overall cost of cultivation	50%	0%	85%	10%	180,058	377,310	339,579	305,621
9		Management	Reduced carbon emissions from switching to solar irrigation and efficient irrigation practices	50%	0%	85%	10%	_	2,389	2,150	1,935
10			Time saved per irrigation due to adoption of efficient irrigation practices	50%	0%	85%	10%	4,568	9,57	8,614	7,753
11			Increase income from goatery	50%	0%	50%	25%	381,807	686,344	514,758	386,068
12		Goatery	Reduced cost of feed, shelter and veterinary care	50%	0%	50%	25%	31,814	57,189	42,892	32,169
13			Increase in household income due to improved employability (respondents with no prior income)	80%	0%	50%	30%	3,971,929	7,947,154	5,563,008	3,894,106
14	Local Youth	Rural Youth	Increase in household income due to improved employability (respondents with prior income)	80%	0%	50%	30%	889,411	1,779,559	1,245,691	871,984
15			Savings made on admission and logistics to attain similar skill trainings	80%	0%	50%	30%	1,301,400	2,603,880	1,822,716	1,275,901
16	Women members	Hadaration and	Increase in household income due to SHG-led income generating activities	20%	0%	50%	10%	732,102	954,848	859,363	773,427
17	7 Total benefit created						54,096,469	55,801,063	41,587,032	31,076,191	

SROI estimation – Financial Proxies

S. No.	Stakeholder	Project Activity	Benefits	Financial proxy estimation method
1			member	Farmers benefit from increased income due to enhanced cultivation practices. The formula to calculate this involves the average change in land area under cultivation, yield per acre, and price per kilogram for key crops like Cumin, Methi, Isabgol, Bajra, and Moong. Data for these calculations were derived from quantitative data and focus group discussions (FGDs) with farmers.
2			Reduction in cost of cultivation per farmer	By optimizing cultivation methods, farmers experience a reduction in costs associated with each crop. This is calculated by looking at the change in cost per acre and average land area under each crop. The information was sourced from quantitative data and qualitative discussions.
3		Better Cotton	sales	Similar calculations were used for cotton, considering changes in land area, yield, price, and cost of cultivation, with data gathered from quantitative sources and FGDs.
4			Reduction in cost of cultivation per farmer	
5		improved Farm	Long-term cost savings for farmers	These implements significantly reduce costs and save time. For instance, using a reaper saves ₹3,200 per acre, a lawn mower saves ₹2,500 per acre, and a disc plough saves ₹1,280 per acre. These savings are calculated based on the area of land each implement is used on.
6	Farmers	Implement	adoption of farm implements	These implements also save hours per crop cycle, reducing labor costs. For example, using a reaper saves 4 hours per harvest, and a lawn mower saves 12 hours per harvest. The labor cost savings are calculated at ₹300 per 8 hours.
7			Increase in income per acre	New irrigation methods expand land area under cultivation and increase the number of crops grown, leading to higher income. The changes are quantified using the total acres covered by new irrigation facilities.
8		Matan Dagayana	of cultivation	New methods reduce overall cultivation costs. The reduced cost per acre is multiplied by the average total land area covered per farmer.
9		Water Resource		Switching from diesel to solar pumps reduces carbon emissions. The diesel saved is calculated using DEFRA emission factors and a social cost of carbon.
10			Time saved per irrigation due to adoption of efficient irrigation practices	The reduced time (in hours) per acre is multiplied by the average total land area per farmer
11		Contomy	increase income from goatery	There's an increase in household income from goatery, calculated by comparing pre- and post-intervention annual income, sourced from quantitative interviews.
12			Reduced cost of feed, shelter and veterinary care	Costs related to feed, shelter, and veterinary care have decreased, also calculated from quantitative data.
13		Skill Training to	income)	community members with no prior income now earn an average annual income used as a proxy. For those with prior income, the increase is calculated by comparing current and pre-intervention income levels.
14	Local Youth	SEDI	Increase in household income due to improved employability (respondents with prior income)	80%
15			Savings made on admission and logistics to attain similar skill trainings	community members save on admission and logistics costs for skill training, calculated from quantitative surveys.
16	Women members		Increase in household income due to SHG-led income generating activities	Income from Self-Help Group (SHG) initiatives is calculated by comparing current and pre-intervention income levels.



IRECS analysis (1/2)

Parameter	Assessment from study
Inclusiveness	 Gender Inclusion: The project achieved a 30% female participation rate among respondents, demonstrating efforts to include women in project activities, especially in areas where female participation is traditionally discouraged. Youth Engagement: A notable proportion (23%) of community members were young individuals in the 15-25 age group, emphasizing the project's focus on empowering the youth.
Relevance	■ The project tackled key local challenges by addressing water scarcity and high fluoride levels, while also enhancing economic opportunities. It tailored skill development programs to meet local job market demands, fostering entrepreneurship. Additionally, SHGs and skill initiatives aligned with community economic goals, supporting financial empowerment and income diversification.
Effectiveness	 Water and Soil Conservation Activities The project introduced efficient irrigation systems such as drip and sprinkler methods, which reduced water usage by approximately 70%, minimized irrigation costs, and improved crop yields. Soil conservation methods like farm bunding contributed to a 20-25% increase in crop yield by reducing erosion and maintaining soil fertility. 90% of respondents reported increased cropping intensity, with farmers now able to cultivate multiple crops per year due to improved water management. The interventions led to a 7% increase in land area under cultivation, from 10.70 to 11.47 acres on average, making previously uncultivable land viable. Farmers diversified into more profitable crops like cotton, resulting in higher income potential and market competitiveness. Promotion of Sustainable Agricultural Practices 85% of respondents received training in integrated crop management, leading to increase in crop yield (84%) and reduced chemical fertilizer usage (47%). 78% of farmers benefited from modern agricultural tools, which reduced cultivation costs by 82% and manual labor reliance by 83%. Training on sustainable cotton farming increased cotton yield from 750 to 875 kg per acre, boosting annual income of farmers. Training on Goatery The project's interventions resulted in a 33% reduction in goat mortality and a 19% increase in herd size due to better breeding and health management. A 59% reduction in rearing costs and an 18% increase in productivity were reported, illustrating enhanced economic returns from goat farming.

IRECS analysis (2/2)

Parameter	Assessment from study
Effectiveness	 Promotion of Income Generation Activities through SHGs SHGs facilitated access to low-interest loans, with 63% of members establishing alternative income sources and 84% seeing an increase in household income. Training in financial management and entrepreneurship empowered members, resulting in a 30% increase in annual household income for participants. SHGs engaged in activities like spice trading, which diversified income streams and supported economic growth. Skilling for Youth For the 2021-22 trainees, the highest placement percentage was observed in the Assistant Beauty Therapist and Retail Sales Associate courses, both at 88%. The Lead Courier course saw a relatively lower placement rate of 58%, with Unarmed Security Guard being the lowest at 46%. In 2022-23, all courses saw an improvement in placement rates compared to the previous year, except for Assistant Electrician, which dropped to 70%. The highest placement rates were again found in the Assistant Beauty Therapist course at 89%, and Retail Sales Associate at 88%. Post-training employment rose from 21% to 69%, with community members gaining skills in various trades. The average income of previously employed respondents increased from INR 5,833 to INR 13,214 after the training. For those who were unemployed before the intervention, the average income post-training is INR 13,363. SROI (Social Return on Investment) The project achieved a SROI value of 7.83, indicating that for every INR 1 invested, a social value of INR 7.83 was generated.
Convergence	• The project's alignment with government schemes for water management and agricultural equipment facilitated a holistic approach to community development. By establishing strong relationships with Panchayati Raj Institutions (PRIs) and local government bodies, the project ensured efficient implementation. To further enhance impact, expanding partnerships with a broader range of organizations, including private sector entities (especially food companies), could offer additional resources and expertise.
Sustainability	• The project has fostered sustainability by creating community institutions such as the SHG Federation and Farmer Producer Companies (FPCs), which ensure the continuity of promoted activities. For enhanced sustainability, establishing direct market linkages between farmer institutions and private agricultural companies is crucial. Additionally, exploring contract farming models with spice companies can further support sustainable agricultural practices. These initiatives, alongside efficient irrigation, soil conservation, and diverse income strategies, not only bolster environmental health but also strengthen economic resilience and social empowerment, ensuring that participants continue to benefit from improved farming techniques and financial literacy.



Water management and Sustainable agriculture

Water Conservation

Promotion of local biodiversity:

Collaborating with Krishi Vigyan Kendras (KVKs) and the horticultural department to promote **agroforestry using locally adaptable tree species lile Khejri, Ber, Babul, etc. and native tree species like Aonla, Subabul, Karanj, Kachnar, Jungle Jalebi, etc.** can greatly benefit the environment (improved groundwater water cycle and increase in local flora and fauna) and local economies. This initiative not only improves soil health through organic matter enhancement but also provides additional income sources for farmers, as well as biodiversity benefits that strengthen the ecosystem.

Implement Soil Moisture Conservation Techniques:

Introduce soil moisture conservation practices such as mulching, contour farming, and cover cropping. Training programs can emphasize these techniques' role in retaining soil moisture, minimizing evaporation, and enhancing water infiltration, ultimately leading to improved crop resilience.

Soil Health Monitoring:

While the project has promoted regular soil health monitoring through soil tests, it's crucial to train farmers on understanding and utilizing the soil test reports. Regular assessments provide valuable insights into nutrient levels and soil composition, enabling targeted interventions that sustain long-term fertility and productivity of agricultural lands.

Community Training Programs:

To facilitate practical learning and empower farmers, it is important to promote **demo-plots/ biodiversity plots** at progressive farmers' fields and establish **farmer field/ agroforestry schools**. These initiatives will encourage widespread adoption of sustainable practices and help farmers manage their natural resources effectively, ultimately leading to improved agricultural productivity and resilience.

Sustainable Agriculture

Establish Weather Information Systems:

Create localized weather information systems to provide timely forecasts and alerts for farming communities. Also, ensure proper dissemination of weather advisory to farmers through SMS alerts and WhatsApp notifications.

Promotion of Effective Post-harvest Management Practice: solar drying

Effective post-harvest management practices are crucial for enhancing farmers' incomes from crops like cumin, fenugreek, and cotton. Establishment of Community Warehouses and use of innovative solutions like Solar Dryer can help improve product quality. Also, training programs can focus on optimal handling, drying, grading, and storage techniques, improving product quality and market value, while minimizing spoilage and losses.

Establishment of Bio-Resource Centers:

Setting up bio-resource centers as community-run enterprises that produce and sell locally made bio-inputs can greatly benefit farmers. These centers will provide sustainable inputs, helping reduce costs and enabling farmers to embrace eco-friendly practices while ensuring economic viability.

Linkages with Farmer Producer Companies (FPCs) and Private Companies:

Developing direct linkages between farmers and FPCs, as well as private companies in agri-inputs and food processing, can enhance farmers' access to quality inputs and marketing opportunities. These connections will strengthen the supply chain and provide farmers with better avenues to sell their produce.

Explore Contract Farming Models for Spice Farmers:

Explore the potential of establishing contract farming models specifically for spice farmers. This could offer guaranteed markets and prices, reducing uncertainty and encouraging the cultivation of high-value spice crops.

Animal husbandry, Skill development and Women-led enterprises

Animal husbandry

Establish Farmer Cooperatives for Goat Rearing:

Encourage the formation of cooperatives to promote collective purchasing of feed, veterinary services, and marketing of goats. This will enhance bargaining power, reduce costs, and facilitate resource sharing among farmers.

Breeding Programs:

Continued support for and expansion of selective breeding programs are essential for improving the genetic quality and productivity of goat herds. Enhancing herd genetics contributes to better growth rates, improved health, and increased economic returns for goat farmers.

Develop Mobile Veterinary Services:

Establish mobile veterinary units to provide onsite health checks and treatments, particularly in remote areas. This would ensure that farmers have timely access to veterinary care and reduce mortality rates in goat herds.

Skill development

Expand Technical Vocational Training Programs:

Introduce a wider range of vocational training programs that cater to local market needs, such as hospitality, construction, and textile manufacturing. Collaborate with local industries to develop courses and carry out exposure visits for the participants to gain hands-on experience that are relevant and in high demand, ensuring that participants are equipped with practical skills that enhance their employability.

Develop Entrepreneurship Training Initiatives:

Currently, the courses taught at SEDI largely focuses on improving employability with some focus on entrepreneurship. Dedicated focus can be given to promote local entrepreneurship like masonry, businesses around local handicrafts, etc. by creating tailored training programs on locally feasible enterprises to support aspiring business owners. These programs can cover business planning, marketing strategies, and operational management. Furthermore, womenpreferred business activities can also be included as part of the SEDI courses to promote women entrepreneurs.

Strengthen Post-Training Support:

Although the project is already supporting trainees with post-placement support, but his can be further enhanced by providing mentorship programs and business incubation services, to aid integration of trainees in jobs and entrepreneurial success for participants.

Women-led enterprises

Diversify Income Sources:

Although the project has already supported SHG members in selling their products through multiple platforms, offering additional support to enable their participation in other state and national-level events, such as SARAS Mela, Pushkar Fair, and State-level Trade Fairs, would be beneficial in broadening their market reach.

Develop Training and Capacity Building Programs for Sustainable Packaging:

Empower women-led enterprises by enhancing their skills and knowledge through dedicated training and capacity-building programs focused on sustainable packaging solutions. By adopting advanced technologies like Vacuum Packaging and Biodegradable Packaging, these enterprises can significantly boost product preservation and environmental sustainability.

Facilitate Market Connections:

Developing direct connections for women-led enterprises with broader markets and corporate buyers can improve sales and profitability. Initiate strategic partnerships between the Marushree Federation and larger corporate buyers through networking events, trade shows, and collaborative ventures. Establish an online platform where women-led businesses can prominently display their products, thereby increasing visibility and sales potential.

Moreover, facilitate the sale of Self-Help Group (SHG) products during company-wide events organized by Adani companies to further strengthen market presence and outreach.

Other recommendations

Expand CSR Initiatives Beyond Core Villages

While ACL has made positive impact in 11 core villages, there is potential to amplify these benefits by extending CSR activities to neighboring regions/ villages. Before expansion into newer geographies, it is suggested that a needs assessment is conducted in these areas to help identify priority interventions that can promote broader community welfare and sustainable development.

The successful beneficiaries from current efforts can be utilized as Changemakers to inspire local communities in the new villages, serving as a source of motivation for positive change.

Undertake Capital Expenditure Projects

It was reported by the local communities that there is need for improved access to safe drinking water and infrastructures related to storage of agricultural produce.

Capital projects that can have long-term benefits for the community, such as establishing water purification systems or building community warehouses can be implemented to mitigate these challenges existing among the local community. These initiatives should be complemented by robust branding efforts, for example, signage and communication materials that highlight ACL's contribution to infrastructure development.

Enhance Brand Visibility and Reputation

Although local communities shared positive response to ACL's CSR efforts, further enhancing brand visibility can solidify ACL's reputation both nationally and internationally. Participating in CSR forums and awards (national and international) will position ACL as a leader in responsible business practices. Additionally, developing high-quality videos and case studies and distributing them through public forums such as vendor meets, internal townhalls, etc. will showcase successful initiatives and communicate ACL's impact effectively.

Innovative Branding Strategies

Campaigns that highlight ACL's commitment to sustainability and community empowerment can be developed. For example, sponsor community events or collaborate with local artists to produce community murals that tell the story of progress facilitated by ACL's initiatives.

Additionally, consideration of digital campaigns that reach broader audiences through social media can further strengthen ACL's brand presence.

Leverage ICT for Training and Education

Information and Communication Technology (ICT) tools can be used to train beneficiaries on critical areas such as water management, sustainable agriculture, enterprise planning, and financial literacy. This will empower community members with the knowledge and skills needed for sustainable livelihood improvement.

For example, videos can be made on best practices around water management and showcased in community events through large projectors to build general awareness and increase the chances of adoption among local community.





Stories of change (1/2)

Change Story 1: Pathway to Profitable Agriculture

Raman (named changed to maintain anonymity), a 35-year-old farmer from Marwar Mundwa village in Nagaur district of Rajasthan, lives with his extended family of seven, including his wife, elderly parents, and three school-going children. Despite owning 12 acres of land, Raman's farming potential was curtailed by inadequate irrigation. Before the project intervention in 2022, he could only cultivate 8 acres during the Rabi season, as water scarcity was a significant hurdle. The hard water from his groundlevel sources was another issue, leading to poor soil health and reduced crop vield.

The project introduced Raman to the concept of a farm pond—a simple yet effective solution to his water woes. With guidance and support, Raman dug a pond on his land, which became a reservoir of water collected during the rainy season. This newfound water source allowed him to irrigate his entire 12 acres, boosting his ability to grow crops throughout the year. Raman embraced crop diversification, growing vegetables and spices alongside traditional cereal crops, which not only improved his income but also contributed to soil health.

The increased access to water resulted in a dramatic rise in crop yield and farm productivity. His annual income soared from INR 5-6 lakhs to INR 7-8 lakhs. This financial upliftment enabled Raman to invest in better education for his children and improve the family's living conditions. Raman also shared his success story with fellow farmers and became a community leader, advocating for sustainable water management practices. His optimism about the future is evident in his plans to introduce modern farming techniques and expand his agricultural operations, ensuring long-term prosperity for his family and community.

Change Story 2: Ensuring Cost-Effective and Eco-**Friendly Farming**

Santosh (named changed), a 42-year-old farmer, resides in Inana village with his wife and three children. Owning 15 acres of land, Ratan was caught in a cycle of high expenditure on chemical fertilizers and pesticides. His reliance on these inputs for his cotton crop led to cultivation costs of approximately INR 22,000 per acre, yet the yield remained unsatisfactory, causing financial strain and soil degradation.

The project offered Ratan a new perspective through training sessions on integrated crop management. He learned about alternative farming methods, including the judicious use of chemical fertilizers and the production of biopesticides. With these newfound skills, Ratan reduced his cultivation costs to INR 18,000 per acre. Moreover, the shift towards sustainable practices led to a 10-15% improvement in his crop yield.

The transition not only enhanced Ratan's economic returns but also contributed to environmental conservation by reducing chemical runoff into the ecosystem. Inspired by his results, Ratan adopted crop rotation and organic farming practices, which further enriched the soil and sustained high productivity levels. The project's influence extended beyond his farm as Ratan began conducting discussions in his village, sharing knowledge on sustainable agriculture and inspiring others to follow suit.

Ratan's journey underscores the importance of education in empowering farmers to adopt eco-friendly practices. He is now more confident in his ability to manage his farm efficiently and is committed to securing a sustainable future for his family. The positive changes in Ratan's farming methods have not only improved his financial stability but also set an example for the community.



Stories of change (2/2)

Story 3: Journey from a Home-Based Entrepreneur to a Successful Businesswoman"

Vasundhara (name changed) is a resident of Marwar Mundwa, running her own entrepreneurial venture from her home where she lives in a joint-family setup. Vasundhara's entrepreneurial journey is a testament to smart financial management, and the power of community support.

As a dedicated member of the Tulsi Self-Help Group (SHG) under the Marushree Mahila Federation, Vasundhara embarked on her business venture around 6-7 years ago by opening a safa (traditional turban) shop. With strategic use of loans from her SHG, she was able to purchase essential machines and raw materials, expanding her production capabilities without succumbing to the high-interest rates of traditional lenders.

Withing a few years, her business generated an annual profit of 4-5 lakhs with a daily production of about 150 safas. However, her commitment and strategic investments led to a significant increase in profits, now reaching 15-20 lakhs annually, with daily sales climbing to 200-250 safas spread across 13-14 districts in her state. Each safa, retailing at INR 550 and costing INR 400 to produce, yields a profit of INR 150 per unit.

Vasundhara's success did not stop there; she diversified her product line to include bridegroom accessories like Sherwanis and talwars. She also ventured into the production and sale of plastic toys, stabilizing her income streams and broadening her market reach.

Transforming Change Story **Challenges Opportunities**

Charan (name changed), a resident of Nagaur, despite facing hearing and speech disabilities, successfully built a sustainable livelihood through skill development and determination.

Enrolling in the Assistant Electrician course at SEDI provided comprehensive knowledge and practical skills in electrical repair, with a curriculum designed to accommodate various learning needs. This inclusive approach allowed the participant to gain confidence and proficiency in electrical work. Upon completing the course, Santosh began offering electrical repair services within the local community. Recognizing the potential to diversify income streams, the skills acquired during the training were also applied to plumbing jobs, increasing the range of services offered and enhancing earning potential.

Before undergoing training at SEDI, Charan had no stable source of income. However, by leveraging the skills acquired through the program, it became possible to earn a sustainable income of INR 15,000 per month. This financial independence marked a significant milestone, improving the individual's standard of living and providing support for the family. This underscores the transformative power of skill development program in empowering individuals with disabilities to overcome challenges and achieve economic independence.



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