



CSR IMPACT ASSESSMENT REPORT FARMER CAPACITY BUILDING PROGRAM

Implementing partner: Under the Mango Tree Society (UTMTS)



SOULACE CONSULTING PVT. LTD.

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01. ABBREVIATIONS

BRC	Beekeeping Resource Center
COVID	Coronavirus disease
CSR	Corporate social responsibility
FAO	Food and Agriculture Organization
MEG	Micro Enterprise Group
MEP	Micro-Enterprise Program
NCT	Naturi Colony Transfer
SDG	Sustainable Development Goals
FPO	Farmer producer company
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

02. EXECUTIVE SUMMARY

Project Background

Approximately half of India's population remains reliant on agriculture, with 84% of farmers practising agriculture being small and marginal. The Director-General of the Food and Agriculture Organization (FAO) of the United Nations recently underscored the significance of pollination services as an essential "agricultural input." He emphasised that all farmers, particularly smallholders, derive benefits from these services, and enhancing pollinator density directly contributes to improved crop yields, fostering food and nutrition security. This is crucial for achieving Sustainable Development Goals and aiding family farmers in adapting to climate change.

Pollinators play a vital role in ecosystems, with 70% of the plants we consume, including fruits, vegetables, nuts, oilseeds, honey and 90% of wildflowers depending on them (IPBES, 2016). However, a recent IPBES report highlights the threat and decline of pollinators in many parts of the world, impacting food security, especially for smallholders. In this context, the importance of beekeeping as a tool to enhance the profitability of smallholder agriculture becomes evident. The project aimed to contribute to better food security, diversified livelihoods, and increased income for tribal families in backward districts of Maharashtra and Gujarat.

Beekeeping has demonstrated significant potential in the past to enhance yields of fruits and vegetables for small farmers. It successfully generated larger marketable surpluses and increased incomes for those who previously had no produce to sell.

Project Activities



Provide basic beekeeping training to farmers using indigenous bee species - Apis Cerana and Trigona (Stingless bee).



Generate alternate income for 928 tribal farmers through beekeeping activities.



Conduct community awareness sessions on the significance of bees for agriculture and the benefits of Bee-keeping to reduce honey hunting and protect bee habitats.



Enhance green cover in the project area by distributing bee-friendly flora.



Establish an additional source of income through the sale of bee-friendly flora.



Project Year

FY 2019 - 2020

FY 2020-2021

FY 2021-2022



Beneficiaries

3,429 farmers



NGO Partner

Under the Mango Tree Society (UTMTS)



Project location

Gujarat: Valsad (Dharampur and Kaprada Blocks).

Maharashtra: Palghar (Talasari Block).

Madhya Pradesh: Chindwara district



Budget

₹2,83,51,838/-



SDG Goals



SDG Goal 1: No Poverty.

SDG Goal 2: No hunger.

SDG Goal 8: Decent Work and Economic Growth.

SDG Goal 15: Life on Land.

Key Outcome



100.0%

of the respondents attended the awareness program.



99.2%

of the respondents expressed satisfaction with the information of awareness program.



100.0%

of the respondents mentioned attending beekeeping training programs.



All respondents reported an increase in the level of knowledge and confidence.

Key Impact



99.1%

of respondents experienced a significant increase in income levels through beekeeping.



96.0%

of respondents successfully performed Nuri Colony Transfer (NCT).



90.3%

of the respondents were able to do the colony division successfully.



Respondents reported an average annual income increase of Rs. 27,355 through pollination activities.

Key Stakeholders



Master Trainers



Technical assistants



Beekeeping women group



Unnati Krishi group member

Research Techniques



Quantitative techniques

A structured interview schedule served as the instrument to gauge the effectiveness of diverse CSR initiatives. This method facilitated the collection of measurable data, allowing for a quantitative assessment of the initiatives.



Qualitative techniques

To garner a comprehensive understanding of the initiative, interviews were conducted with key project stakeholders. This qualitative approach delved into the perspectives and insights of those involved, providing a nuanced and qualitative assessment of the CSR initiatives.

Research Design



Geography covered

Gujarat and Maharashtra



Direct beneficiaries covered

928 farmers



Sampling technique

Purposive and Stratified random sampling



Implemented in tribal communities across Gujarat (Valsad - Dharampur and Kaprada Blocks) and Maharashtra (Palghar - Talasari Block), the community-centric program strategically focused on key areas—poverty reduction, skilling, livelihood enhancement, and environmental sustainability. Through initiatives like basic beekeeping training, the program contributed to promoting economic empowerment and ecological balance.



Geographical Coverage

- **Gujarat:** Valsad (Dharampur and Kaprada Blocks)
- **Maharashtra:** Palghar (Talasari Block)
- **Madhya Pradesh:** Chindwara district



Outreach and Inclusivity

DHARAMPUR AND KAPRADA BLOCK

are in the Valsad district of Gujarat, and Talasari block is in the Palghar district of Maharashtra.

Key Inclusion Metrics:

Small and marginal tribal farmers

CHAPTER 3

INTRODUCTION



The beekeeping initiative funded by RBL and executed by Under the Tree Mango Society empowered tribal households in disadvantaged areas of Maharashtra and Gujarat. With a focus on improving food security and livelihoods, the program was built on the success of a previous three-year CSR collaboration with RBL by expanding geographically to include new villages in the same blocks and districts across three states.

Beekeeping emerged as a critical component, with the potential to transform small-scale agriculture by significantly enhancing fruit and vegetable production. It not only generated marketable surpluses but also increased incomes for individuals who had previously been unable to sell their agricultural produce.

The program represented a strategic planning approach, engaging the entire family universe inside the targeted blocks and intending to expand the intervention to neighbourhoods.

The program did not simply educate the farmers about the fundamentals of beekeeping, but it also aimed to advance the beekeeping value chain. Through collective efforts and a sustainable approach, the program introduced activities that gave higher incomes to farmers. The incorporation of collectivisation as a basic component ensured long-term sustainability.

The initiative envisioned a significant impact, with additional income from honey and beeswax resulting in enhanced food security, diversified livelihoods, and an increase in income ranging from 30% to 50% for participant families by the completion of the project. This multidimensional approach of the programs was aligned in line with the broader goals and objectives of poverty reduction and environmental sustainability.

About the RBL

RBL Bank, formerly known as Ratnakar Bank, is an Indian private sector bank headquartered in Mumbai and founded in 1943. It offers services across six verticals: corporate and institutional banking, commercial banking, branch and business banking, retail assets, development banking and financial inclusion, treasury and financial market operations.

About the NGO

The Mango Tree Society (UTMTS) was founded in 2009. The Mango Tree Society (UTMTS) is a not-for-profit organisation that promotes Bee-keeping with the indigenous bee *Apis cerana indica* to increase agricultural productivity, enhance incomes and improve the livelihoods of marginal farmers in India. Through its work with indigenous bees, UTMTS also seeks to improve biodiversity management and ecosystem services for smallholders, seen as a highly cost-effective way to adapt to climate change. About half of India's population still relies on agriculture with 84% of farmers practicing agriculture being small and marginal farmers. Bee-keeping with the local indigenous bee, *A. cerana* is well-suited to the diversified farming systems in tribal communities. Input costs are low because the bee is locally available (wild hives are domesticated) and resilient (there is little need for antibiotics). Since the bees are well adapted to the local environment, they subsist on existing flora without migrating the boxes. *A. cerana* is less productive in making honey than its European cousin, but it is an excellent pollinator. UTMTS is not only committed to improving the lives of marginal farmers but also advancing sustainable community-based beekeeping with the indigenous bee. Inspired by the first National Commission on Agriculture's (1976) recognition of the impact beekeeping has on increasing agricultural productivity, the UTMTS team researches the role of indigenous beekeeping in crop production.

Through community outreach programs, advocacy and policy recommendations, UTMTS reaches out to citizens and politicians to ensure the prosperity of farmers and the ecosystem.



CHAPTER 4

RESEARCH METHODOLOGY



Research Design



Name of the project

Farmer Capacity Building Program



Implementing agency

Under the Mango Tree Society (UTMTS)



Research Design Used

Descriptive research design



Sampling Technique

Purposive and stratified random sampling



Sample Size

350



Qualitative Methods Used

Focus group discussions, key informant interviews, stakeholder engagement and testimonials

Study Tools



Questionnaire for Primary Beneficiaries:

Structured questionnaires were developed aligned with project details and predefined indicators for comprehensive insights.



Questionnaires for stakeholders:

Designed semi-structured questionnaires for diverse stakeholder types, conducting one-on-one and focus group discussions to gather nuanced perspectives and prepare impactful testimonials.

COMMITMENT TO RESEARCH ETHICS



Informed Consent

A commitment was maintained to secure informed consent from all research participants. Prior to engagement, individuals received comprehensive information regarding the study's purpose, procedures, risks, and benefits. Their voluntary agreement was obtained, ensuring a clear understanding of the research objectives.



Voluntary Participation

The principle of voluntary participation was strictly adhered to, allowing individuals to join the research without coercion. Participants retained the right to withdraw at any stage without facing consequences, and their decisions were respected, having no impact on their relationship with the researchers or affiliated organisations.



Confidentiality and Privacy

Utmost priority was given to maintaining the confidentiality and privacy of participants. All personal information collected during the research was treated with strict confidentiality. Identifiable data was securely stored and accessed only by authorised personnel, and any external data sharing was conducted in an aggregated and anonymised manner to protect individual privacy.



Ethical Treatment

A fundamental commitment to ethically treating research participants guided the study. Measures were implemented to minimise potential harm or discomfort, integrating ethical considerations into the study's design, implementation, and dissemination. These efforts were dedicated to safeguarding the well-being and rights of all individuals involved.

This table provides a comprehensive breakdown of RBL-supported program activities across different states, illustrating the scale and distribution of efforts. It highlights the number of new farmer training sessions conducted, the support provided to established farmers, and ecosystem development initiatives such as Naturi Colony Transfer (NCT) spotting and the involvement of carpenters in crafting bee boxes.

DETAIL	STATE(s)		TOTAL
	Maharashtra	Gujarat	
1 Beekeepers			
1.A. New farmer training	300	450	750
1.B. Handholding to the old farmer	150	0	150
12 Ecosystem development			
2.A. NCT spotter	3	20	23
2.B. Carpenters making bee boxes	0	5	5
		Total	928

Objectives of the Study



To measure the effectiveness of basic beekeeping training for farmers involving indigenous bee species, including *Apis Cerana* and *Trigona* (Stingless bee).



To assess the impact of beekeeping activities in diversifying income streams for 1143 tribal farmers.



To ascertain the effectiveness of community awareness sessions in communicating the importance of bees in agriculture and the benefits of beekeeping.



To analyse the outcomes of bee-friendly flora distribution in augmenting green-cover within the project area.



To review the sustainability aspects of the program model and formulate strategic recommendations.

“

Ravindrabhai Kashirambhai Dhoom, 24, of Ranpada village in Dang district, Gujarat, attended beekeeping training led by a UTMMS Master Trainer. Pollination indirectly increased his pulse yield from 15 kg to 20-25 kg. He began beekeeping and now owns three bee boxes and sells honey and bee colonies for increased income. Last year, he earned Rs. 8,500 by selling 7 kg of honey from two bee boxes.

In the rainy season, Ravindrabhai cultivates little millets in half an acre, yielding around 250-275 kg and earning Rs. 15000-20000. Winter brings chickpeas and peas cultivation, which added Rs. 10,000-12,000 to his income.

The RBL program significantly uplifted his family's total income from Rs. 35000-40000 to Rs. 50000-60000.

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CHAPTER 5

MAJOR FINDINGS



Scaling up Bees for Poverty Reduction programme

This section of the report delves into the primary findings derived from the impact assessment study conducted across the project locations. The focus is on highlighting key outcomes and the significant impact generated by the program.



DEMOGRAPHY OF BENEFICIARY POPULATION

CHART 1: AGE-WISE DISTRIBUTION

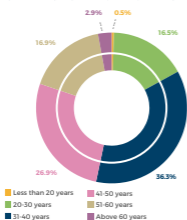


CHART 2: GENDER-WISE DISTRIBUTION

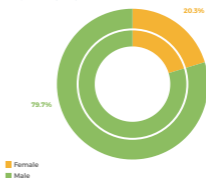
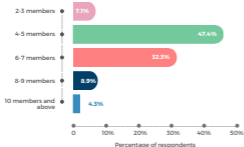
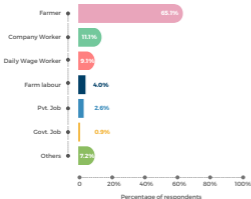
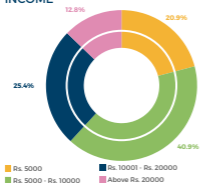
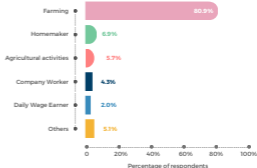


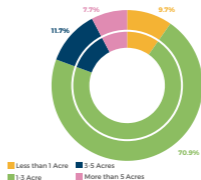
CHART 3: FAMILY SIZE DISTRIBUTION**CHART 4: OCCUPATION OF THE HEAD OF THE FAMILY****CHART 5: MONTHLY HOUSEHOLD INCOME**

- The majority of respondents belonged to the age group of 31-40 years.
- 79.7% of the respondents were males and 20.3% were females.
- The most common family size was 4-5 members.
- A significant portion of respondents identified as farmers for the head of the family's occupation.

- The majority of households had a monthly income ranging from Rs. 5000 to Rs. 10000.








PRE-INTERVENTION STATUS*Face-to-face interaction with respondents***CHART 6: LIVELIHOOD ACTIVITIES CARRIED OUT BEFORE BEEKEEPING**




The majority of responders worked in agriculture before starting beekeeping. Other common pre-beekeeping activities included household duties, various agricultural tasks, company work, and daily wage labour.

CHART 7: SIZE OF LAND OWNED

Respondents owned land ranging from 1 to 3 acres, with a smaller percentage holding less than 1 acre, 3 to 5 acres, or more than 5 acres.

Key Input Program and Activities

PROGRAM PHASE	INPUT REQUIRED	OUTCOME	MEASUREMENT OF INDICATORS
 <p>Preliminary Assessment</p>	<p>Conducted a preliminary village visit to assess flora, bee populations, and farmers' needs through interactive methods, including focused group discussions. Utilised AV materials, pamphlets, and photos for effective communication.</p>	<p>Village and farmers were selected for beekeeping activity</p>	<p>a) Due to the presence of abundant bee flora in the village, bee absconding was minimised.</p> <p>b) The engagement of interested farmers resulted in a lower dropout rate.</p>
 <p>Awareness about Beekeeping</p>	<p>Visited villages for focused group discussions and night movie screenings to raise awareness about the importance of bees and beekeeping.</p>	<p>a) Reduced Honey hunting which improved ecological cover for the community.</p> <p>b) Improved forage for bees, and flora cover for the area.</p>	<p>a) Improved colony spotting and relocation of hives into bee-boxes.</p>
 <p>Skill-based training</p>	<p>Conducted local-level beekeeping training sessions, encompassing both practical and theoretical components.</p>	<p>Trained beekeepers and handholding support</p>	<p>Increased yields/incomes of fruits, vegetables, oilseeds and pulses grown by participants due to better pollination.</p>
 <p>Ecosystem of livelihood and services</p>	<p>Training - Practical and theory session</p>	<p>Trained Master trainers and colony spotters</p>	<p>Achieved an elevated trained-to-beekeeper conversion ratio, resulting in increased incomes for Master Trainers and Colony spotters. Conducted assessments of Master Trainers, evaluating both practical and theoretical aspects through an exam. Distributed beekeeping kits to trained farmers.</p>
 <p>Value-chain development</p>	<p>Developed the beekeeping input and honey supply chain by providing training and support for procuring raw materials.</p>	<p>Carpenters were trained for crafting bee boxes, and farmers were engaged in the honey supply chain.</p>	<p>Carpenters earned income through the sale of bee boxes, and farmers earned income by collecting honey from beekeepers.</p>
 <p>Apiary development</p>	<p>Conducted advanced apiary management training sessions and distributed beekeeping starter kits.</p>	<p>Apiaries were established having bee boxes.</p>	<p>Increased income of beekeeper by sale of bee colonies and honey.</p>
 <p>Beekeeping Resource Centre</p>	<p>A centre easily accessible by beneficiaries of the project.</p>	<p>Established the Beekeeping Resource Centre (BRC) as a training and information hub for the entire community.</p>	<p>Experienced an increase in footfalls at the Beekeeping Resource Centre (BRC) on local haat days. The BRC was utilised for training sessions, farmer meetings, and addressing other beekeeping needs.</p>

PROGRAM PHASE	INPUT REQUIRED	OUTCOME	MEASUREMENT OF INDICATORS
 <p>Monitoring and MIS</p>	Established monthly targets and implemented the MIS format.	Data collected on beekeeping, bee flora and agriculture.	Monthly MIS reports were generated.
 <p>Micro-enterprise development</p>	Honey processing plant.	Honey from all the project areas was processed and bottled in the plant.	Employment was generated in the program locations.
 <p>Handholding support to already trained farmers</p>	Provided farmers with additional handholding support, fostering their independence as beekeepers.	Increased number of beekeepers and bee boxes.	Increased yields/income of the respondents due to better pollination.
 <p>Bee flora</p>	All beekeepers were provided with bee-friendly seeds and saplings.	Enhanced food sources for bees and increased green cover for the area.	Improved bee colony health, leading to enhanced colony multiplication and honey flow.

Key Findings

This part of the report presents the key findings, which are listed and discussed below:



Frequency of the awareness program

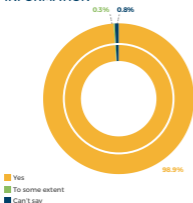


Increased knowledge and skills in beekeeping



Satisfaction with the information provided



CHART 8: FREQUENCY OF THE AWARENESS PROGRAM**CHART 9: SATISFACTION WITH INFORMATION**

- The findings during the field visits showed that all respondents attended the awareness program, which covered a variety of beekeeping-related topics.
- The program included basic beekeeping concepts such as the role of the Queen Bee, the importance of honey bees, and the significance of bees in pollination.
- The frequency of the awareness program varied, and the majority of the respondents attended between three and four sessions.
- Nearly all of the respondents were satisfied with the information provided in the awareness program.

**100.0%**

of the respondents attended the awareness program.

**99.2%**

of the respondents expressed satisfaction with the information of awareness program.



The awareness program significantly improved my knowledge and confidence in beekeeping. I gained good knowledge about the importance of bees and their role in pollination. This experience gave me the confidence and knowledge to pursue beekeeping, which helped me improve my livelihood.

-Ramesh Bhai Dhavdu, 45 years old, Nani Koval village, Dharampur Block

**BEEKEEPING RESOURCE CENTRE (BRC) IN ZARI VILLAGE, PALGHAR**

The BRC in Zari village served as a vital hub for beekeeping activities, acting as a central space for training, meetings, and information dissemination. It offered essential skills and knowledge to beekeepers, provided a centralised source for IEC materials, and ensured easy access to resources for beneficiaries. The BRC played a crucial role in supporting and sustaining beekeeping initiatives in the region.



“

During the focus group discussion, Master Trainers from Zari talked about their journey in the field of beekeeping. Initially, the master trainers were not aware of the beekeeping practices and related benefits. Then, later, group members attended three awareness sessions that helped farmers understand the important role of bees, particularly in pollination.

After intensive beekeeping training, farmers became Master Trainers and developed diverse skills such as bee box handling, maintenance, colony division, and Natural Colony Transfer (NCT). After going through an intensive three-month period, farmers mentioned that they became Junior master trainers. This development in knowledge led to a community-wide transformation that helped in fostering sustainable practices and economic empowerment.

Beyond training, Master Trainers also got engaged in Micro Enterprise Programs (MEP) and bee colony selling, contributing to both economic growth and self-sufficiency. Master trainers shared that UTMTS has also recognised their contributions with stipends and incentives and reflected the tangible impact on communities, including increased yields and elevated incomes.

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The Bee Boxes Making Group, established by UTMTS in 2014, comprises 7 skilled members proficient in crafting various types of Bee Boxes. The orders were facilitated by UTMTS; they produced 4 types of Bee Boxes, focusing on ISI Bee and Janta Hives. The transition from PVC to Janta Hives has improved maintainability, particularly during adverse weather. Members earn equitable profits, resulting in an annual income of 1.2-1.5 lakhs per person. The beekeeping program covered the transportation and raw material costs and supported empowering the group economically. The sustainable venture not only supports local livelihoods but also contributes to the success of the overall program. Feedback from members emphasises that there is a need for advanced equipment for making bee boxes, and the program should be continued.

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Key Findings

The key impacts of the program are listed and discussed below:



Increased income levels due to beekeeping



Micro Enterprise Setup

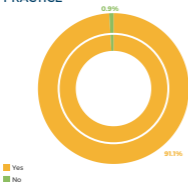


NCT - Naturi Colony Transfer



Colony division

CHART 10: INCREASED INCOME LEVELS DUE TO BEEKEEPING PRACTICE



Beekeeping resulted in a noticeable increase in income levels for the large majority of the respondents.



99.1%

of respondents experienced a significant increase in income levels through beekeeping.

“

Neelam Anil Kharpade, the president of Ganga Self Help Group in Zari, Palghar, shared that their group consists of three women and is engaged in the production of Swarm Bags, Veils, and Beekeeping hats. Initially, the group was supported by UTMTS with training and raw materials, and later on, they learned to make these products independently. The cost per set was Rs 125, and they sold each set for Rs 250. With an average annual order of 300 sets, the group distributed the profits among its members.

The program intervention not only facilitated the training but also assisted in sourcing raw materials at affordable rates and securing orders, which contributed to the success of the group.

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Kamlesh Deshmukh, a 30-year-old resident of Mahrai Chond village in Dang District, Gujarat, transformed his life through the UTMTS Beekeeping program. Kamlesh used to work as a farm labourer in Nashik, Maharashtra, where he used to earn 250 rupees per day, but later, he shifted from traditional farming to beekeeping. In 2019, he participated in a 2-day Beekeeping training with continuous support from UTMTS for two years. By 2021, Kamlesh became a Master Trainer, receiving 3 months of advanced training. Progressing to Junior Technical Assistant, he expanded his training to six villages.

UTMTS provided vegetable seeds, which led Kamlesh to diversify his farming practices. Now, cultivating various vegetables for self-consumption, he focused on selling Bitter Gourd, earning up to 1 lakh rupees in 3-4 months. Pollination significantly increased his pulses' yield from 50 kg to 100-150 kg and allowed him to sell pulses at a higher rate. Through honey and Bee Colony selling, Kamlesh earned Rs. 20000-25000 last year, contributing to his annual income of up to Rs. 2 lakhs. This substantial improvement showcased the program's impact on economic empowerment, agricultural diversification, and enhanced livelihoods.

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During the discussion with members of the Unnati Krishi Group in Modgaon Village, the impact of UTMTS's Beekeeping program on their agricultural practices and market linkages was evident. The 40-member strong group collectively grows Green Chillies, and with UTMTS's assistance, they established fruitful market connections.

The members shared that initially, they faced challenges selling their produce to a local dealer in Vapi, who offered lower prices, and there were additional transportation costs. However, after the implementation of UTMTS's Beekeeping program and the subsequent improvement in pollination, the production of Green Chillies substantially increased. One of the group members shared that his production increased from 3-3.5 tons to 5 tons, which significantly helped the economic growth. The new market linkage not only provided a higher rate of Rs 45 per kg but also spared them from bearing transportation costs. With the current yield, group members estimated an additional income of Rs 68,000 per ton, and that highlighted the positive impact of the program on their financial well-being.

The group members also expressed aspirations to initiate their Farmer Producer Organization (FPO) with the support of UTMTS, which showed their eagerness for further collaboration and growth. The discussion showed that the Beekeeping program has not only enhanced agricultural productivity but has also empowered local farmers by creating sustainable market opportunities.

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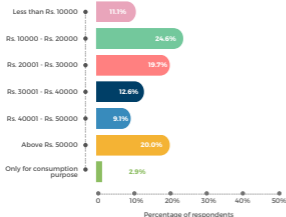


During the focus group discussion, members of Vandevi Honey and Agriculture Producer Company Limited reflected on their company's trajectory. The FPO was established in 2021 with support from NABARD and facilitated by UTMTS. FPO grew significantly, and the number of members increased from 250 to 729.

Members highlighted the multifaceted activities undertaken by the FPO, including the strategic purchase of bee colonies and subsequent sales to UTMTS and external customers. They emphasised their pivotal role in providing seeds to farmers at subsidised rates, which contributed to local agricultural sustainability. Additionally, the FPO actively engaged in community events, organising Mango Festivals and organising exhibitions to promote community development.

The FPO reported a commendable turnover of 96 lakhs in the financial year 2022-2023. The members expressed confidence and expected the turnover to go above one crore in the current financial year 2023-2024. This increase demonstrated not only the economic impact of FPO but also its role as a dynamic force for local development and community empowerment.



CHART 11: ANNUAL INCREASE IN INCOME LEVEL


A majority of respondents reported a substantial increase in their annual income as a result of beekeeping, with significant proportions having income levels ranging from Rs 10000 to above Rs 50000.



Respondents reported an average annual income increase of **Rs.27,355** through pollination activities.



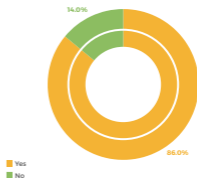
On average, they earned **Rs.3,490** through colony selling, reflecting the financial benefits reported by the surveyed beekeepers.

“

UTMTS has given me a new experience of economic empowerment. Their advice and support helped make possibilities a reality, and my income has increased by 1.5 - 2.5 times due to the program intervention.

-Veenu, Zari village, Palghar

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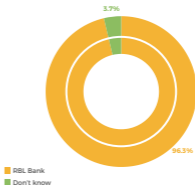
CHART 12: ESTABLISHMENT OF MEC


A significant number of respondents established a Micro Enterprise Group as part of their beekeeping activities, which indicated their widespread interest in entrepreneurship. The honey from the entire project area was processed and bottled in the plant, contributing to quality assurance and creating employment opportunities in the program locations. This reflected the realised impact of the Micro-enterprise development initiative.



86.0%

of the respondents reported establishing MEC.

CHART 13: NCT - NATURI COLONY TRANSFER


96.0%

of respondents successfully performed Naturi Colony Transfer (NCT).



The Focused Group Discussion (FGD) conducted in Zari Village, Palghar, Maharashtra, provided valuable insights into the impact of the beekeeping program, particularly within the Beekeeping Women's Group. All participants acknowledged their awareness of the program, having undergone training as part of its initiatives. The discussion unveiled a significant shift in farming practices, with members transitioning from traditional methods to a more diversified and sustainable approach. Farming frequency increased to twice a year, allowing the cultivation of a broader range of crops, including vegetables and pulses. The program's provision of fruit saplings and vegetable seeds contributed to this agricultural variety.

Economically, participants reported substantial income increases, particularly from high-demand crops such as Green Chillies. The introduction of beekeeping further contributed to enhanced income, with reported earnings ranging from 50,000 to 1.1 Lakhs INR. Training frequency played a crucial role, with participants receiving training three times before actively engaging in beekeeping. While most honey is currently sold in the local market, there is potential for expanding market access, including selling to the Farmer Producer Organization (FPO) of UTMTS, Vandevi, and UTMT Company.

The transformative impact of the program extended beyond economic aspects. Participants noted the positive influence of pollination on crop quality and size, reporting a 30% increase in fruits, vegetables, pulses, and oilseeds. This shift in agricultural practices and increased income underscores the success and positive outcomes of the program's intervention. The FGD emphasised a heightened community awareness of the program, indicating its penetration and impact within Zari Village.



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Laxman Dhakal Rabade, a 32-year-old resident of Bamanwada, Kaparda, Valsad district, started his Beekeeping journey with UTMTS in 2019. He learned quickly and became a Master Trainer by 2021 after undergoing advanced training. Initially receiving three bee boxes, Laxman's practical application of Beekeeping and Natural Colony Transfer techniques led to the expansion of his bee boxes. In 2021, Laxman established his Bee Apiary and created 16 bee boxes through Colony Division, followed by the addition of 10 more boxes in the subsequent year. Generously providing beehives from other boxes, he focused on collaborative honey production efforts.

He further developed his skills and pursued advanced Beekeeping training in Alakode, Kerala, mastering Honey Extraction, Queen Cage making, and beeswax product crafting. In 2023, he achieved the creation of 41 bee boxes, totalling 70, and sold 30 at 3000 rupees each, earning 90,000 rupees. Supplementing his income, Laxman sold 200 kg of honey, resulting in a cumulative income of around 1.8-2 lakhs rupees in 2023.

His journey encapsulated the transformative impact of UTMTS programs on individual skill development, entrepreneurship, and economic empowerment.

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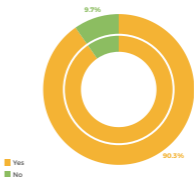
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After the program, our community saw a significant reduction in honey-hunting practices. The intervention provided us with knowledge that helped in promoting a more sustainable and responsible approach to beekeeping, which improved our environment and livelihoods.

-Vinod Devram, 25 years, Vari village, Kaparda Block

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CHART 14: COLONY DIVISION



Following the program intervention, a significant proportion of respondents demonstrated proficiency by successfully carrying out colony division in their beekeeping practices.



90.3%

of the respondents were able to do the colony division successfully.

“

Ashok Ladkya Gimbal, a farmer and Beekeeping Apiary participant, underwent Beekeeping training from UTMTS in 2017. Progressing from Jr Master Trainer to Master Trainer, he received advanced training for two months. Initially provided with two bee boxes, Ashok expanded his apiary to 20 boxes through Colony Division and other methods. Last year, he successfully sold 50 bee colonies at Rs 700 each and 15 kg of honey at Rs 1000 per kg, earning an annual income of Rs 40000-50000 from beekeeping and benefiting from increased yield due to pollination. Currently, Ashok works as a technical assistant at UTMTS and helps impart Beekeeping knowledge to other beneficiaries through training sessions and farm visits. His contribution to the program has earned him a monthly salary of 12k from UTMTS.

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The discussions with Master Trainers and Technical Assistants at Tutarkhed, Gujarat, showed the strong impact of the Beekeeping program. The program originated in Maharashtra and later expanded to Tutarkhed in 2019-20, and participants transitioned from learners to skilled practitioners. Detailed and comprehensive training covered aspects like management, honey extraction, and colony division, accompanied by essential resources. The awareness meetings conducted under the program intervention discouraged harmful practices like honey hunting. UTMTS facilitated market linkages, and the program enabled beekeepers to diversify their income by selling honey, wax, and even vegetables. This economic transformation highlighted the holistic impact of the beekeeping program on sustainable practices and economic empowerment.

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Overall Impact of the project



ENHANCED ENVIRONMENTAL IMPACT

The project contributed to environmental sustainability by promoting bee-friendly practices, increasing the area of green cover, and reducing honey-hunting practices, resulting in a positive impact on local ecosystems.



SUSTAINABLE AGRICULTURE PRACTICES

Through training and awareness sessions, the project encouraged the adoption of sustainable agriculture practices, emphasising the significance of bees for pollination, leading to improved crop yields and quality.



CREATION OF MICRO-ENTERPRISES

The establishment of micro-enterprises, such as honey processing units and bee box manufacturing, helped in generating employment and income opportunities for locals.



COMMUNITY DEVELOPMENT

The project positively impacted local communities and offered them a pathway to economic self-sufficiency, reducing dependency on traditional livelihoods and enhancing overall community well-being.



PROMOTION OF SUSTAINABLE BEEKEEPING

Sustainable beekeeping practices were promoted, emphasising ethical honey production, colony management, and ecosystem conservation, contributing to the overall health of bee colonies and surrounding flora.



MARKET LINKAGES AND INCOME DIVERSIFICATION

The establishment of market linkages and income diversification strategies allowed beneficiaries to explore new avenues for income generation, reducing vulnerability and promoting financial inclusivity.



EMPOWERED LOCAL STAKEHOLDERS

Local stakeholders, including master trainers, beekeeping groups, and women participants, were empowered with skills, knowledge, and resources, creating a lasting impact on their socio-economic status and community dynamics.

KEY STAKEHOLDER SATISFACTION



Master trainers

Excellent



Unnati Krishi Group members

Good



Bee box-making group members

Good



Beekeeping women group members

Excellent

Stakeholders expressed high satisfaction with the program and highlighted the significant role in skill development and income generation. They emphasised the positive outcomes achieved through the advanced training sessions, and continuous support contributed to their success as proficient beekeepers.

Stakeholders mentioned the importance of the beekeeping training they received, which played a crucial role in enhancing their agricultural practices. Additionally, the efforts of the program towards establishing market linkages were appreciated as they led to improved income opportunities for the group members.

Stakeholders highlighted the economic opportunities created through the group's activities and the support provided by the program. The collaborative effort in making different types of bee boxes and stands, along with the sustained demand for their products, contributed to the overall satisfaction of the group members.

Stakeholders from the Beekeeping women group showed satisfaction with the program and highlighted its positive impact on their livelihoods. The training they received empowered them to engage actively in beekeeping activities, which led to increased income and community well-being.

CHALLENGERS AND BARRIERS

Following are the challenges and barriers faced during the program:



COVID-19 Impact



Climatic conditions

COVID-19 IMPACT

The project faced a slowdown in 2020-2021 due to the COVID-19 pandemic, with Maharashtra, particularly Palghar, experiencing significant challenges due to frequent local lockdowns, leading to difficulties in maintaining the momentum of the program.

CLIMATIC CHALLENGES

Unseasonal changes in climatic conditions pose challenges to the beekeeping cycle, affecting bees sensitive to climate change.

Impact Created Across Multiple Levels



INDIVIDUAL LEVEL

- Improved income and livelihoods were achieved through beekeeping skills.
- Enhanced self-reliance and economic independence were observed.



FAMILY LEVEL

- Diversified income sources increased family stability.
- Improved food security was attained through sustainable agricultural practices.



COMMUNITY LEVEL

- Community bonds were strengthened and fostered shared economic growth.
- Vulnerability was reduced through collective beekeeping participation.



BLOCK LEVEL

- Micro-enterprise development positively impacted the local economy.
- Sustainable practices reduced dependence on traditional methods.



DISTRICT LEVEL

- Economic contributions were made through successful micro-enterprises.
- The transition toward eco-friendly practices in the district was initiated.



STATE LEVEL

- Socio-economic development was promoted through the widespread adoption of sustainable agriculture.
- Empowerment of local communities contributed to state progress.



NATIONAL LEVEL

- Successful models for nationwide sustainable development were demonstrated.
- Community-driven initiatives showcased the potential for national impact.

Sustainability



ECONOMIC SUSTAINABILITY

The program established Micro-Enterprise Development, which allowed beekeepers to generate stable income over time.



SKILL DEVELOPMENT INITIATIVES

Ongoing training programs were implemented to ensure that beekeepers continually improved their abilities and adapted to evolving challenges.



ENVIRONMENTAL OWNERSHIP

Beekeepers were encouraged to use sustainable practices that aligned with environmental conservation goals for long-term success.



MARKET INTEGRATION STRATEGIES

Effective market linkages were built and ensured the financial sustainability of beekeeping operations by connecting them to wider markets.



INTEGRATING SUSTAINABLE AGRICULTURE PRACTICES

The implementation of sustainable agriculture practices aligned with beekeeping programs showed the dedication of the program to overall sustainability.



06. OECD FRAMEWORK



Relevance

The program directly addressed the socio-economic needs of rural communities. The target community had a poor income structure, and their standard of living was low. Also, the people did not have any income opportunities locally and were suffering to even meet their fundamental needs. The program was highly relevant and focused on skill development in beekeeping, a sector appropriate for enhancing income and promoting sustainable agriculture.



Coherence

Aligned with SDCs 1, 2, and 8, the program contributed to poverty reduction, food security, and economic growth. Coherence was established with national policies like the National Mission for Sustainable Agriculture and the National Beekeeping and Honey Mission.



Effectiveness

The effectiveness of the program was evident in the increased income, improved livelihoods and community development. Skill-building initiatives such as conducting awareness sessions, training programs and market linkages contributed to the success of the program and addressed the specific needs of the target communities.



Efficiency

The program was very efficient in resource utilisation. Comprehensive training methodologies and strategic collaborations ensured that all the planned interventions were implemented in a timely and proper manner.



Impact

The program had a long-term impact on several levels, ranging from individual to national. Increased income, diverse livelihoods, and sustainable practices showed concrete benefits that impacted the socio-economic structure of the community.





Sustainability

Emphasising economic sustainability through micro-enterprise development and community ownership during the program intervention, the program laid a foundation for long-term impact. Continuous skill development and market integration strategies ensured the sustainability of positive outcomes beyond the duration of the program.



Relevance



Coherence



Effectiveness



Efficiency



Impact



Sustainability

CHAPTER 7

RECOMMENDATIONS



Provide advanced equipment to the Bee Boxes Making Group for enhanced productivity and quality.



Additional training on climate-adaptive beekeeping techniques can be provided to address critical and unseasonal climatic conditions.



Introducing advanced training modules to cover topics such as Artificial Feeding, Advanced Honey Extraction Methods, and Innovative Colony Division techniques. This will support equipping Beekeepers with contemporary practices and ultimately increasing their efficiency.



More frequent Colony Division (3-4 times a year) can be performed, and training on incorporating effective methods for multiple divisions can be conducted. This will maximise the productivity of bee colonies and subsequently increase honey production.



CHAPTER 8

CONCLUSION

The Beekeeping for Livelihoods program has been a transformative initiative, strategically addressing the socio-economic needs of tribal communities in Maharashtra and Gujarat. Key activities encompassed comprehensive beekeeping training, ecosystem development, and the establishment of a beekeeping resource centre. Through these interventions, the program not only equipped individuals and families with essential skills but also fostered a sense of community and collective responsibility.

The impacts of the beekeeping program supported by RBL have been very effective on a large scale. Increased income, diversified livelihoods, and enhanced food security were evident at the individual, family, and community levels. The sustainable adoption of beekeeping practices contributed to environmental conservation and resilience against climate change. Additionally, the success of the program resonated with national priorities such as poverty reduction, sustainable agriculture, and economic growth.

The Scaling up Bees for Poverty Reduction programme has not only empowered rural communities but has also laid the groundwork for sustainable and inclusive rural development. The journey from skill development to economic independence indicated the success of the program in creating lasting positive change among thousands of tribal households.