



Impact Assessment Study Report

Key Projects of MakeMyTrip Foundation

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List of Abbreviations

Abbreviation	Full Form
DC	District Collector
DTD	Door-To-Door
DWCC	Dry Waste Collection Centre
FGD	Focus Group Discussion
GVC	Gram Vikas Committee
GVK	Gram Vikas Kosh
GS	Gram Samuh
HH	Household
HP	Himachal Pradesh
IDI	In Depth Interview
IGFRI	Indian Grassland and Fodder Research Institute
INR	Indian Rupee
IRECS	Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability
KAPB	Knowledge, Attitudes, Practices and Behaviours
KG	Kilogram
KM	Kilometre
KPI	Key Performance Indicator
MGNREGA	Mahatma Gandhi National Rural Employment Generation Act
MMT Foundation	MakeMyTrip Foundation
MRF	Material Recovery Facility
NABARD	National Bank for Agriculture and Rural Development
NOC	No Objection Certificate
PCU	Public Convenience Unit
PRI	Panchayat Raj Institution

PW	Price Waterhouse
PWCALLP	Price Waterhouse Chartered Accountants LLP
PWD	Public Works Department
RADHA	Rural Association for Development and Helpful Assistance
RO	Reverse Osmosis
SDM	Sub-Divisional Magistrate
SUP	Single Use Plastics
SWM	Solid Waste Management
WWS	Waste Warriors Society
ZP	Zilla Parishad



1. Executive Summary

Background

MakeMyTrip Foundation (MMT Foundation) has an unwavering commitment to climate action and community empowerment and has directly impacted over a million lives across 13 Indian states.¹ PW has been engaged by MMT Foundation to provide support and assistance in conducting an independent review and impact assessment of its multiple projects as identified by the management.

A study was commissioned to carry out an **impact assessment of 4 projects** implemented by MMT Foundation across India to understand the direct and indirect impacts of their interventions on the community and the findings are presented in this report. The scope of work includes a review of the following projects:

- Project 1: Himachal Pradesh Flood Relief Work
- Project 2: Integrated Development Project, Neil Island
- Project 3: Offsetting Carbon Footprint through Afforestation
- Project 4: Zero-Waste Tourist Destination: Sahastradhara

This includes a review of the Key Performance Indicators (KPIs) as defined by the management under the framework for implementing the projects for the outputs, outcomes, and impact of the projects. The framework used is the Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability Framework ('IRECS') and with the objective of providing recommendations on the performance of the projects for further evaluation and consideration by the management.

This impact assessment study was conducted using either a mixed-method or qualitative approach for primary data collection (as relevant for each individual project) along with a desk review of project documents. The team conducted qualitative and/or quantitative interactions (virtual and on-field) with project beneficiaries and other relevant stakeholders based on the customised research tools prepared for each project.

¹ https://www.makemytrip.com/csr/mmt_foundation.html

Overall Findings and Impact

A snapshot of the impact created by the four projects followed by detailed project-wise findings is shared below:

- Distributed 600 ration kits (75 Kgs each) reaching 1,800 people
- Construction of Bailey bridges in Sainj valley reconnected 4,000 households with the supply of goods & services
- Aid reached out to the local community, old age home and orphanage within 15 days of floods
- With equipment support, the rescue team executed 15 rescue operations

Himachal Pradesh Flood Relief Work



- A safe, clean and accessible Public Convenience Unit, serving 200-250 tourists daily
- Functional water ATMs providing affordable and clean water, reducing the purchase of bottled water
- 200-300 kgs of waste cleaned each month at Bharatpur Beach
- Employment generated for locals as operators and cleaners
- Awareness generated through signage and clean-up drives

Integrated Development, Neil Island



- 77% of the respondents can access fodder easily
- 61 hectares of land reclaimed from encroachers due to community and Panchayat efforts
- Beneficiaries save at least INR 1,000 on monthly basis and 2 hours of time on daily basis due to availability of surplus fodder post-intervention
- 85% support the participation of women in restoration and 88% believe there has been a positive impact on the status of women
- 83% believe that equitable social relations have been attained

Offsetting Carbon Footprint through Afforestation, Udaipur



- Multiple awareness and engagement sessions led to an 86% increase in knowledge about waste segregation
- More than 80% of the locals segregate their waste, compost biodegradable waste, and throw waste in designated bins
- Green workers collect 500 kg of waste monthly from households and businesses, and earn a sustainable income
- 88% of the locals reported reduced incidence of illness due to improved hygiene
- Dry Waste Collection Centre set up and processes 15 tonnes of waste monthly

Zero Waste Tourist Destination, Sahastradhara



Project Wise Findings:

Project 1: Himachal Pradesh Flood Relief Work

MMT Foundation initiated the discussions with the District Collector, Kullu, to extend support to the community in several parts of Himachal Pradesh which was affected by flash floods in the month of July 2023. The heavy rains resulted in widespread flooding, landslides, and significant damage to infrastructure, including the washing away of roads and bridges. There was a loss of agricultural and horticultural lands due to hazardous landslides and flooding in Sainj valley, Banjar valley and Spiti valley. As a result, basic amenities such as water, food and electricity could not be provided in the affected areas. Both locals and tourists were displaced and needed support. Given this scenario, MakeMyTrip Foundation (MMT Foundation) took the initiative of extending support in the form of relief and rehabilitation activities for the flood affected areas in and around Manali city, Sainj valley, Banjar valley and Spiti valley. The project was initiated in July 2023 and various interventions were directly carried out with the help of the local administration (Sub-Divisional Magistrate (SDM), Manali), who in turn introduced them to the Rotary Club, Manali, Adventure Tour Operator Association – Rescue Wing, and so on. The activities included the distribution of dry ration, provision of tentages and bedding sets, construction of boundary wall of an orphanage and provision of rescue equipment. Another intervention, the construction of a new school building, is currently being implemented.

PW team worked on the development of a **structured qualitative methodology** for evaluating the project.

Key Findings:

Impact Areas	Assessment from the Study
Timely support provision as per the needs of the community	<ul style="list-style-type: none"> The SDM Manali stated that the floods impacted government, commercial and residential properties, followed by agricultural and horticultural produce in Manali and resulted in the washing away of various parts of national highway connecting to the city and washing away of bailey bridges in Sainj valley. As a result, communication lines and electricity were hindered for almost three days and almost 40,000 tourists along with the locals were trapped. In this context, MMT Foundation approached and extended support within a 15-day time frame to those in need. MMT Foundation leveraged their existing local sales and marketing teams, who were sent on a reconnaissance mission (recce) to understand the nature of support required, identify those who were severely impacted and avoid duplication of efforts.
Provision of Dry Ration Kits specific to needs of the affected communities	<ul style="list-style-type: none"> MMT Foundation leveraged the help of Rotary club, Manali city and through a group of young volunteers (Rotaract Club members), ensured timely disbursement of dry ration kits to 300 HHs in 3 villages of Banjar valley followed by another 300 HHs in Manali city. MMT Foundation also supported an Old Age Home with dry rations and reimbursed their bills against the ration and groceries procured by the institute locally. The Old Age Home highlighted on the feasibility of support shown as they were able to continue feeding eighty residents without any restriction. MMT Foundation also donated twenty-one bedding sets (mattresses and bedsheets) as some of the residents were bed ridden and

Impact Areas	Assessment from the Study
	<p>it was difficult to manage during nights, as mentioned by the President (Old Age Home).</p>
<p>Provision of Bailey Bridges in Sainj & Banjar Valley</p>	<ul style="list-style-type: none"> MMT Foundation supported the Public Works Department (PWD) by providing them the construction material required for development of four Bailey bridges in the vicinity of Banjar and Sainj valley. Two out of four bridges were already functional at the time of the study visit that benefitted 4,000 households in Nivli and other villages that were routed via Nivli. The intervention enabled re-establishment of services in the affected villages and access to healthcare, educational services, supply of food items was made possible.
<p>Provision of rescue equipment to Adventure Tour Operator Association – rescue wing</p>	<ul style="list-style-type: none"> MMT Foundation supported Adventure Tour Operator Association – rescue wing with specialised equipment used in rescue operations. The rescue team added that till date (the day of visit) they were able to execute fifteen rescue operations for people stuck in the mountains using the equipment arranged by MMT Foundation. The rescue team reported that MMT Foundation procured materials with highest quality and is useful in all sorts of rescue operation such as Cliff rescue, River Rescue, Rock Rescue, Mountain Rescue (river, Ice and Glacier) and with an average usage of minimum 15 years
<p>Provision of Tentages in Manali City, wall construction in an Orphanage and Planning of constructing a government school</p>	<ul style="list-style-type: none"> MMT Foundation supported fifteen displaced families (due to the floods) with Tentages in Maheli village (Manali) within a period of 15 to 20 days. Support was provided to an Orphanage (Rural Association for Development and Helpful Assistance – RADHA) with construction of a boundary wall. This institute is home to ten girls who stay full time followed by other four to five students (who comes to the institute on day care basis). Due to continuous rainfall the boundary wall of the institute washed away and as the building was just next to the road, hence there was a high chance of intrusion from anti-social element of the society. The institute head added that within 10 days of contact with MMT Foundation, the wall construction started and that the quality of work was adequate and the current construction is firm enough to endure any such floods in the future. The floods also impacted a government high school in Manali city where the entire building collapsed. In such a scenario, the classes have been temporarily shifted to a government owned crop market building which is not child friendly. Post necessary local administration approvals the construction of new school building work would be handed over to MMT Foundation to provide an adequate child friendly infrastructural set up in future.

Key Impact Areas:

- Distributed 600 ration kits (75 kgs each) reaching 1,800 people
- Construction of Bailey bridges in Sainj valley reconnected 4,000 households with the supply of goods and services

- Aid reached out to the community, old age home and orphanage within 15 days of floods
- With equipment support, the rescue team executed 15 rescue operations

Suggestions:

- As suggested by the Adventure Tour Operator Association, MMT Foundation should also focus on development of a disaster mitigation plan in consultation with local administration along with ensuring capacity building exercises and develop a local workforce of trained rescuers who can respond on immediate basis to any such natural calamity that shall augment the local administration to curb damages and ensure saving human lives in the future.
- Bailey bridges in Sainj valley (Nivli village) were designed, prepared, and approved by the government department, which ensured transportation of goods and services in the valley. However, as suggested by the village Pradhan that the height of newly constructed bridges should be much higher to get less impacted due to debris flow or landslides in the region again. MMT Foundation should consider view of the locals or seek further community views while planning support for such kind of projects and communicate the same to the government during any future funding of such similar interventions.

Project 2: Integrated Development, Neil Island

MakeMyTrip Foundation set up an Integrated Development Project in Neil Island in February 2020 to make it a sustainable tourist destination by reducing single-use plastics on the island and providing alternatives. **Phase-I of the project, which ran from February 2020 to July 2023**, was launched with awareness campaigns and clean-up drives involving various sections of the local community. A Public Convenience Unit (PCU), which included multiple facilities such as toilets, shower cubicles, feeding station, changing areas, etc, was set up on Bharatpur Beach, which is a popular tourist location. Three Water ATM kiosks were installed at different locations – Bharatpur Beach, the jetty and the natural bridge – to provide safe drinking water to tourists. Reusable water bottles were distributed through the hotels for tourists to carry around to reduce their need to purchase bottled water. Segregated waste bins were set up at Bharatpur Beach and staff were employed to clean it.

Based on the learnings that emerged from Phase-I, key improvements were brought into **Phase-II of the project, which began in August 2023**. An agreement was signed with Kachrewaale Foundation, a local partner, with the aim of recovering marine litter, raising awareness, managing waste and contributing to policy recommendations, through effective liaising with the government and other stakeholders, monitoring of project activities, and ensuring adequate documentation.²

This report focuses on the impact assessment of Phase-I of the project. A **structured qualitative methodology** was developed for evaluating the project during this phase.

Key Findings:

Impact Areas	Assessment from the Study
Provision and access to an affordable Public Convenience Unit (PCU) for tourists	<ul style="list-style-type: none"> MMT Foundation renovated containers and created a public facility for tourists on Bharatpur Beach, that includes showers, washrooms, changing rooms, lockers, a feeding station, and a sanitary pad incinerator. As there is no sewerage system on the island, an effluent treatment plant was set up behind the PCU and the sludge is treated and put under the ground. The charges for tourists who use the PCU range between INR 10 and 20, and locals are allowed to use the facilities free of charge. The revenue generated by the PCU during the tourist season was approximately INR 2,000 per day and the operators were paid a combined monthly salary of INR 25,000-30,000. The daily footfall at the PCU is between 200-250 users. Feedback obtained from the users suggest that they found it affordable, useful and convenient and they were not aware of other better alternatives in Bharatpur Beach. The PCU was rated as safe, accessible and moderately clean. As a result of the PCU, the practices of open defecation and urination have discontinued, and the beach has become clean. The PCU has also generated employment for the local community and the operators are able to earn a sustainable income. The cleanliness was rated as moderate by all users, as the high footfall during the season meant that the operators were busy with collecting user fees and manning the entry and exit and could not clean the facilities during the day.
Availability of safe drinking	<ul style="list-style-type: none"> MMT Foundation designed and constructed water ATM kiosks in 2020, with the goal of minimising the usage of Single-Use Plastic bottles by tourists on Neil Island. Three water ATMs were set up at Bharatpur Beach, the jetty, and

² Source: As per the Grant Agreement between MMT Foundation and Kachrewaale Foundation in phase II

Impact Areas	Assessment from the Study
water at Water ATMs	<p>the natural bridge, which are heavy tourist spots. Alongside, MMT Foundation distributed reusable bottles as a complimentary souvenir to tourists with the support of hoteliers so that they would have an option to fill water from the water ATMs.</p> <ul style="list-style-type: none"> ▪ The availability of the water ATMs has reduced the purchase of bottled water, as reported by the hotel owner and the water ATM operator. The ATM allows tourists to save money spent on buying 2 litre bottles, which cost INR 40, while the safe drinking water they source from these ATMs is much cheaper. The operators of the water ATM are employed from the local community and their income is the revenue earned from sale of water. As this tends to fluctuate, MMT Foundation faced difficulty in retaining staff in Phase-I of the project. In Phase-II, the operators are offered a fixed monthly income in addition to the revenue from sale of water. ▪ According to the MMT Foundation, the Bharatpur ATM received 10-15 users daily during the tourist season. The local community does not use the water ATM as they are used to the taste of water treated by Reversed Osmosis (R.O.) at the government plants and these ATMs use UV filtration techniques. ▪ A rapid survey of users of the ATM revealed that this is a useful and essential service, conveniently located, with high quality water offered at an extremely affordable price.
Awareness creation on waste management and improved cleanliness on the island	<ul style="list-style-type: none"> ▪ When the project was initiated, MMT Foundation organised a major clean-up drive across the island, involving school children, local government representatives, police, hoteliers, and so on, collecting 500 kilos of waste. Signboards were installed in Bharatpur Beach to educate tourists on the dos and don'ts of waste disposal. MMT Foundation set up segregated waste bins at the location. They also employed staff from the local community to clean the beach on a regular basis. ▪ The staff collected approximately 200-300 kilos of waste each month during the tourist season. However, the lack of a local presence to monitor their activities in Phase-I of the project resulted in frequent absenteeism and turnover. In Phase-II, the local partner plays an active role in ensuring regular attendance of the staff and this has helped maintain cleanliness in the Bharatpur Beach premises. The Pradhan of the Gram Panchayat impressed upon the need for MMT Foundation to focus more on Information Education and Communication (IEC) activities and clean-up drives and support them in waste collection and segregation activities.

Key Impact Areas:

- A safe, clean and accessible Public Convenience Unit, serving 200-250 tourists daily
- Functional water ATMs providing affordable and clean water, reducing the purchase of bottled water
- 200-300 kgs of waste cleaned each month at Bharatpur Beach
- Employment generated for locals as operators and cleaners
- Awareness generated through signage and clean-up drives

Suggestions:

- A needs assessment study could be conducted in the geographic area in which the interventions are planned in alignment with the attitudes and needs of the community and the priorities of the government. The study will help form the basis for designing projects which complement the existing facilities and initiatives being undertaken by the government and other stakeholders to bring in greater synergy. This will not only help build greater community ownership from the start, but also ensure that all stakeholders are supportive of and contribute towards meeting project outcomes.

Project 3: Offsetting Carbon Footprint through Afforestation

MMT Foundation supported a community-based afforestation programme “Offsetting Carbon Footprint through Afforestation” in collaboration with Seva Mandir (implementation partner) in Udaipur and Rajsamand districts to ensure a self-sustaining solution to fight against the harsh climatic conditions. The project was implemented for a period of 5 years (January 2019 to December 2023), where a total of 73 pasturelands covering an area of 1,258 Hectares of land were restored with 3.20 Lacs saplings planted in the region benefitting around 7,400 households. Under this initiative, plantation of native species of saplings and seeds were undertaken in common and farmer’s individual pasturelands which are identified in collaboration with the local gram panchayat. The villagers form a group called Gram Samuh and a governing committee (Gram Vikas Committee) which is responsible for maintenance of these pasturelands and manages the fund collated by the Gram Samuh members.

A mixed method research design was adopted to conduct an impact assessment where quantitative sample of 107 beneficiaries were covered, and qualitative in-person interactions (in-depth interviews & Focus Group Discussions) were conducted with key stakeholders to understand the impact created by the intervention.

Key Findings:

Impact Areas	Assessment from the Study
Restoration of pasturelands in the project villages	<ul style="list-style-type: none"> MMT Foundation supported project villages with seeds, saplings, maintenance, operational costs to build and develop the land, and paid for labour charges, etc. enabling individual GVKs to accumulate sufficient funds during the project period All beneficiaries highlighted their agreement of identifying more common lands in their villages, as 77% reported ease of access to fodder, 72% reported increase in their savings, followed by saving of time in collection and fetching up of fodder (63%) In collaboration with Panchayat Raj Institution (PRI) members, around 61 Hectares of land was secured & adopted under afforestation programme from encroachers
Fodder harvested from restored pasturelands	<ul style="list-style-type: none"> Intervention has helped the beneficiaries to fill in the shortage of fodder that they had to procure from the markets earlier which would cost them between INR 10 to 20 per bundle. However, post intervention every household on an average get around 246 bundles (each weighing 2-3 Kgs) from the pasturelands (filling up the shortage) at a much lesser cost. Among the beneficiaries who reaped fodder from the pastureland on an average are now able to save at least INR 1,000 on monthly basis and almost 2 hours of their time on daily basis. 87% of the respondents are now able to utilise the saved amount in other monthly household expenses. Whereas 37% are spending towards education of their children. Because of the intervention, 90% of the beneficiaries are now able to utilise the time saved in childcare and 61% towards alternative livelihood generation activities.

Impact Areas	Assessment from the Study
Social change due to the afforestation programme	<ul style="list-style-type: none"> ▪ During the intervention period, the local community was engaged as wage labourers for boundary wall, trenches and check dam construction, etc. generating about 1,11,967 labour days out of which 70% of labour days were contributed by women labourers³. ▪ A village sarpanch shared that men and women could sit together and discuss on a common forum else this was not the case before this intervention. ▪ 85% of respondents supported participation of women in pastureland restoration efforts and 88% believed that there is a positive impact in status of women. ▪ Pastureland is common source of fodder for all. As a result, the intervention has brought the different social groups to come together and work on shared values, creating social cohesion towards adoption and restoration of pastureland. ▪ Sarpanch of Tasol village added that due to the combined efforts of the community to liaison with Gram Panchayat and Tehsildar a marble extraction mine that was under their common pastureland was closed and was brought under restoration.

Key Impact Areas:

- 77% of respondents now have ease in accessing fodder due to afforestation
- 61 Hectares of land secured from encroachers due to community and PRI efforts
- Beneficiaries are now able to save at least INR 1,000 on monthly basis and 2 Hours of their time on daily basis, due to availability of surplus fodder post intervention
- 85% respondents support the participation of women in restoration efforts and 88% foresee a positive impact in status of women
- 83% believed that equitable social relations have now been attained

Suggestions:

- Although the pasturelands are protected by a boundary wall, MMT Foundation should additionally focus on providing tree protection cover for saplings in the initial stages of plantation to avoid potential damage by animals (both livestock and wildlife).
- As the programme involves planting of trees and reaping fodder from these pasturelands, MMT Foundation should also focus on convergence with various government agencies such as Indian Grassland and Fodder Research Institute (IGFRI) or National Bank for Agriculture and Rural Development (NABARD) on alignment of the intervention with National Afforestation Programme and also to brainstorm on use of high yielding hybrid fodder seeds and native trees that can survive the harsh climatic conditions in Udaipur and Rajsamand districts.

³ Source: As per the programme closure report shared by MMT Foundation

- With respect to operationality and execution, current intervention model relies completely on the discretion of Gram Samuh and Gram Vikas Committee on identification of pastureland, liasoning with gram Panchayat and tehsildar on NOC for a new pastureland, collection and usage of funds collected in GVK, etc. As a result, the processes may differ from one village to another. MMT Foundation should intervene with the implementation partner to devise a mechanism to bring in uniformities across different Gram Samuh's and that will again benefit in identifying best practices and exceptions if any.

Project 4: Zero Waste Destination, Sahastradhara

MakeMyTrip Foundation, along with Waste Warriors Society (WWS) as the implementing partner, initiated a project to “support and empower the local community to alleviate environmental issues and social stigmas caused by mismanaged solid waste” in the territory of Sahastradhara. This project aimed to engage and empower households, businesses and tourists through: awareness raising and community engagement; waste segregation at source and door-to-door waste collection from households and businesses in the area; setting up and operating a Dry Waste Collection Centre (DWCC) to process and recycle waste; improving the welfare of informal waste pickers; using digital media to highlight their activities; and liaising with the government to improve project outcomes. The project was carried out over 3 years, from July 2019 to June 2022, reaching out to 322 businesses and 185 households in Sahastradhara.

A mixed methodology was adopted to evaluate the project, where quantitative surveys was administered to 84 businesses and 75 households along with In-Depth Interviews and Focus Group Discussions with key stakeholders to develop a holistic understanding of the project.

Key Findings:

Impact Areas	Assessment from the Study
Improved awareness and community participation in waste management	<ul style="list-style-type: none"> Awareness sessions and community engagement activities focused on the importance of waste segregation, composting and recycling and the health risks associated with littering and burning. Clean-up drives, rallies and campaigns, training workshops, competitions and events, installation of high visibility murals, signboards and anti-littering placards and door-to-door drives were undertaken, as recalled by respondents. 86% of the respondents felt that these sessions resulted in greater knowledge about waste segregation, 10% stated that it reduced the practices of littering and burning of waste (10%) and 4% felt it improved health (4%). Exposure visits were organised to Harrawala, a DWCC so that community members could understand how dry waste is processed and this played an important role in convincing them about the need to segregate, compost and recycle waste.
Established a waste collection system and empowered Green Workers to collect waste	<ul style="list-style-type: none"> Along with installing 50 waste bins in Sahastradhara, MMT Foundation distributed sacks to all households and businesses to collect dry waste. Green Workers visited households thrice a week to collect dry waste, charging a monthly user fee of INR 50. Shops were visited every day and both wet and dry waste was collected – there was no user fee charged to businesses for the first two years of the intervention. The project provided Green Workers with a dignified livelihoods opportunity, and they were given a uniform, ID card, gloves and shoes and earned a monthly salary in addition to health insurance, social security benefits and free medicines. 62% of the businesses felt that Green Workers always collected waste on time, and 53% of the households felt that Green Workers sometimes collect waste on time. When questioned about the user fee, 64% of the households felt the charges were nominal.

Impact Areas	Assessment from the Study
Set up a Dry Waste Collection Centre (DWCC) to locally to process dry waste	<ul style="list-style-type: none"> ▪ MMT Foundation established a DWCC in Sahastradhara, through convergence with the government, to enable optimal recycling and upcycling of dry waste. ▪ Due to administrative delays and political changes, the facility was set up only in the last quarter of the project intervention. Until this time, MMT Foundation covered the cost of transporting waste to the DWCC in Harrawala. The Zilla Parishad member played a key role by allocating the land and electricity connection for the DWCC in Sahastradhara and laying a road so that transport vehicles could access it easily. The DWCC has a capacity of processing 15 tonnes of waste and can support the waste management activities of up to 35 panchayats on a monthly basis.
Changes in the overall perception about waste and in the Knowledge, Attitudes, Practices and Behaviours (KAPB) of the community	<ul style="list-style-type: none"> ▪ 94% of the respondents were extremely satisfied with the project and 88% reported a reduced incidence of illness in the area because of greater cleanliness and hygiene. Nearly every business reported that footfall had increased because of the intervention and median sales revenue increased from INR 15,000 monthly to INR 20,000. ▪ 77% of households and 85% of businesses used to burn waste before the intervention as against 40% of the households and 21% of the businesses continue to burn waste. ▪ Knowledge, Attitude, Behaviours and Practices (KAPB) analysis revealed that: <ul style="list-style-type: none"> - In terms of knowledge, 88% agreed with the statement ‘waste should be segregated before being discarded’, 80% agreed that ‘waste should not be thrown in the open’ and 91% agreeing that wet waste can be composted. - Attitudes of respondents showed that 90% agreed with the statement ‘bio-degradable waste can be composted’, 87% with the statement ‘everyone should segregate waste’ and 78% with ‘burning waste and littering is unacceptable’. - In terms of behaviours, 93% agreed that they teach family members about the importance of waste segregation and 90% agreed that they actively encourage family and community members to use separate bins to dispose waste. - Practices relating to waste management were highly positive, with 90% agreeing that they always segregate waste before disposing, 84% agreeing that they compost biodegradable waste, and 85% agreeing that they throw waste in designated bins.
Strengthened community ownership to sustain the intervention	<ul style="list-style-type: none"> ▪ There was a high level of government support – officials and elected representatives regularly attended meetings and events, participated in clean-up drives and exposure visits and convinced community members to support the initiative. ▪ While the Zilla Parishad member believed that the project would sustain and could be expanded to include more panchayats, the community felt that external support was required to help manage waste collection efforts and keep up community engagement. The President of the Business Association also felt that it would be hard to convince businesses to pay a user fee for services that had thus far been rendered free, given that income is seasonal in Sahastradhara.

Key Impact Areas:

- Multiple awareness and engagement sessions led to an 86% increase in knowledge about waste segregation
- More than 80% of the locals segregate their waste, compost biodegradable waste, and throw waste in designated bins
- Green workers collect almost 500 kg of waste a month from households and businesses, and earn a sustainable income
- 88% of the locals reported reduced incidence of illness due to improved hygiene
- Dry Waste Collection Centre was set up that can process 15 tonnes of waste monthly

Suggestions:

- The assessment revealed that the community was unaware that MMT Foundation would exit the project after 3 years and were unsure whether waste management practices would sustain without external support. MMT Foundation should ensure that once community involvement is secured, the exit strategy is clearly communicated to them, and their ownership of the project is strengthened. This will enable them to confidently sustain the intervention once the project period ends.
- MMT Foundation did not charge a user fee to businesses in order to secure their cooperation in waste management activities. However, it meant that some businesses were unwilling to pay a user fee for services to continue from the third year onwards, even though these businesses were actively involved in the programme and claimed to receive higher footfall as a result of the intervention. It may be more effective to charge a nominal user fee from the start and gradually increase it to make the programme financially viable.
- As mindset and behaviour changes are hard to bring about in interventions, there should be mechanisms for awareness raising and community engagement even after the project period ends to ensure that the community does not go back to its old ways. Swachhta Ke Sipahi or active citizens could have been empowered to become community leaders so that they continue to motivate community members beyond the project period and the outcomes of the programme are sustained.

1.1. Background and Context

About MakeMyTrip Foundation⁴

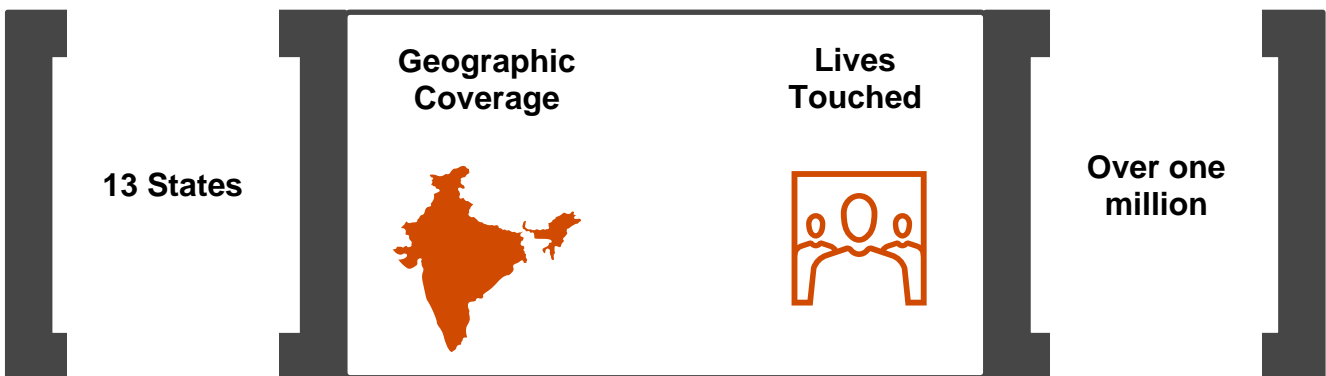
MakeMyTrip Foundation also known as MMT Foundation is a public charitable trust set up in 2015 with the aim of working with key stakeholders and implementation partners to improve the state of tourist destinations and elevate awareness amongst travellers. It has directly impacted over a million lives across 13 states in India. Driven by an unwavering commitment to climate action and community empowerment, its vision is mentioned below:

Vision of MMT Foundation



To make tourist destinations in India resilient & sustainable through the twin pillars of climate action and community empowerment.

Reach of MMT Foundation



Support is provided across the following pillars of MakeMyTrip Foundation's Charter:



⁴ This section draws from the MMT Foundation website: https://www.makemytrip.com/csr/mmt_foundation.html (as retrieved on 20 March 2024) and MMT Foundation Annual Journal 2022-23 <https://jsak.mmtcdn.com/seo/cms-staticpages/flipbook/2022-23.html#page/11>

1.2. About the Projects under Review

PW has been engaged by MMT Foundation to provide support and assistance for an independent review and impact assessment of its multiple projects as identified by the management. This report highlights the findings of the project, where the study was commissioned to carry out **Impact Assessment of 4 projects** implemented by MMT Foundation across project locations to understand the direct and indirect impacts of their interventions on the communities.

The following table depicts the overview of the 4 projects which were covered under the impact assessment study in this phase:

Table 1: List of Projects Under Assessment

No.	Sector	Project name and location	Review period	Mode of Implementation	Project Reach ⁵
1.	Disaster Relief	Himachal Pradesh Flood Relief Work – Manali and Spiti Valley	July 2023 to Dec 2023	Direct Implementation	600 Families (ration kits) reaching 1,800 people & 15 households (tentages) Old Age Home residents (rations & 21 bedding sets) Orphanage (boundary wall construction) Community & Tourists (rescue) Farmers community (Spiti)
2.	Responsible Tourism	Integrated Development Project – Neil Island, Andaman & Nicobar Islands	Mar 2020 to July 2023	Direct Implementation	Local community and tourists
3.	Afforestation	Offsetting Carbon Footprint through Afforestation, Udaipur and Rajsamand districts, Rajasthan	Jan 2019 to Dec 2023	Implementation Partner – Seva Mandir	60 village pasture lands & 13 individual farmers' lands
4.	Waste Management	Zero Waste Destination – Sahasthradhara, Uttarakhand	July 2019 to June 2022	Implementation Partner – Waste Warrior Society	322 shopkeepers, 185 households, tourists

The above projects are discussed in detail in the respective project sections.

⁵ Source: As per reports shared by MMT Foundation and/or implementing partners for all 4 projects. No validation has been done of project reach as part of the study.



2. Approach and Methodology

2.1. Scope of work

PW was engaged to conduct an independent impact assessment study of the 4 projects mentioned in the above section. The scope of work included a review of the impact created by MMT Foundation's HP Flood Relief, Neil Island Integrated Development, Offsetting Carbon Footprint through Afforestation, and Zero Waste Destination Sahastradhara projects. Key performance indicators (KPIs) as defined by the management were reviewed under the framework for implementing the projects for the outputs, outcomes and impact of the projects. The Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability ('IRECS') Framework was used and recommendations on project performance were provided for further evaluation and consideration by the management.

This report intends to provide findings and recommendations and to assess the impact from assessments conducted by PW for four projects covered under the study.

2.2. Overall study limitations

The study undertaken has some limitations with regard to interaction with stakeholders and data collection. Based on the type of project, comparative analysis could not be done due to the unavailability of baseline data. However, to the extent possible, we have used retrospective indicators for the same. The limitations specific to each of the projects are stated below:

In Project 1 (Himachal Pradesh Flood Relief Work), due to severe snowfall and extreme climatic conditions in Rohtang Pass, it was difficult to observe the interventions related to the restoration of the irrigation system and conduct discussions with the community on the supply of dry rations and compressed fodder for livestock in Spiti valley. Hence, these could not be covered as part of the impact assessment study.

In Project 2 (Integrated Development Project, Neil Island), the lack of documentation on the intervention hampered a comprehensive desk review from being undertaken, which would have provided a clear understanding of the activities undertaken, stakeholders involved in the initiative, and progress made during the assessment period. Further, the impact assessment was carried out after MMT Foundation entered Phase-II of the project in partnership with a local organisation. The changes in the focus areas and the method of running of the interventions in Phase-II mean that not all the responses on the project impact can be attributed to the activities undertaken in Phase-I, which was the assessment period.

In Project 3 (Offsetting Carbon Footprint through Afforestation), an evident limitation was in assessing the viewpoint of the beneficiaries on the saplings planted. The plants are currently in pre-maturity stage and have not yielded any output as per full growth potential such that they may be used by beneficiaries in any form. Hence, limited impact could be captured from this aspect of the intervention.

In Project 4 (Zero Waste Destination, Sahastradhara), MMT Foundation completed the project in July 2022, after which a new funding organisation has taken over. The new funder has brought in certain changes in the design of the project and so, some respondents were unclear about which project period was being referred to during the quantitative study. The enumerators repeatedly clarified that they were studying the impact of MMT Foundation interventions in the specific period of July 2019 to June 2022. Further, as the assessment was conducted during the period of execution by the new funder, responses relating to the project impact and community perceptions cannot be entirely attributed to the efforts of MMT Foundation. Additionally, there have been changes in the staff of the implementation agency and not all those who were interviewed for this study were part of the team who initiated the project, even though they were aware of the activities undertaken. Finally, the Pradhan of the Gram Panchayat, who was a key stakeholder in driving the project, was unavailable during the field visit.

The study has been conducted based on the time mentioned and agreed as period of assessment for the respective project consultation with MMT Foundation and the impact assessed is for the said period only.

2.3. The IRECS framework

The impact of the projects was assessed using the IRECS framework. The study focused on gaining understanding on whether:

- the projects were able to reach all sections of the target population,
- the projects were able to meet community needs and expectations satisfactorily, and
- the intended inputs were facilitated in such a manner that the communities receive sustainable benefits.

The impact of the projects was assessed using the IRECS framework. IRECS is geared to provide overall feedback on the efficacy of implementation as well, in terms of the efficiency of achievement of the desired project outputs with reference to inputs.

The IRECS framework measured the performance of the projects along five parameters – Inclusiveness, Relevance, Effectiveness, Convergence and Sustainability.

An overview of the areas assessed under each of these five parameters is provided below:

Key Evaluation Parameters under IRECS				
Inclusiveness	Relevance	Effectiveness	Convergence	Sustainability
Ability of different stakeholders (particularly the poorest and most marginalised) to access the benefits of activities and derive equitable benefits from assets created.	Are the services/ inputs/ institutions facilitated in the project able to meet community priorities? Are the services provided needed by beneficiaries?	How effectively have the activities been able to manage / mitigate community expectations? How efficiently have the resources been deployed, monitored, and utilised?	Degree of convergence with government/ other partnerships; relationship between individuals, community, institutions, and other stakeholders	How will the projects help beneficiaries sustain in the long run?

2.4. Overall methodology

The impact assessment study used the integrated and cohesive approach to assess the social impact of **4 projects** implemented by MMT Foundation. Following a step-by-step approach enabled the research team to evaluate the direct impact on the lives of project beneficiaries. An outline of the methodology adopted for the impact assessment of the projects is highlighted in the following steps.

Step 1: Engagement kick-off



The impact assessment was initiated with a kick-off meeting with MMT Foundation and the respective implementation partners. The meeting was conducted to discuss **the overall scope of work, gain alignment on the expectations** of the client from the assessment and develop a **detailed understanding** of each of the projects.

Post the meeting, the team prepared a list of documents required for initiating the impact assessment and shared it with the MMT Foundation team. Once the documents were received from MMT Foundation, the PW team initiated a **desk review** of the project documents. Preliminary queries were discussed to strengthen the understanding of the projects. MMT Foundation team was aligned on the overall approach for undertaking the assessment study.

The research team from PW reviewed and understood **the monitoring and implementation processes** of all projects. The documents available with MMT Foundation (e.g.: Memorandum of Understanding, project closure report, progress reports, etc.) and the other relevant documents available with the implementation partners (e.g., beneficiary listing) were shared and PW team carried out a desk review of the project documents.

Step 2: Planning and tool preparation



Based on the **desk review** and interactions with MMT Foundation and implementation partners the **stakeholders were mapped** for the study. The team then developed the **tools for data collection** in consultation with MMT Foundation. Post finalising the **assessment framework**, mapping of the stakeholders was carried out to draw the sample size of the projects with a quantitative component for impact assessment. Key stakeholder groups were identified for each of the projects to undertake quantitative and qualitative interactions (basis the nature of study) with them.

For two projects that had a quantitative component, the sample size was estimated at a **95% confidence level and 10% margin of error** for the population universe. Interactions were planned for all projects based on the study methodology after mapping the key stakeholders with whom the focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted. Refer to the table below for the details.

Table 2 : Sampling, Methodology and Stakeholder Mapping for Data Collection

#	Project under Evaluation	Theme	Methodology & Sample Size	Stakeholders Covered under Qualitative interaction
1.	Himachal Pradesh Flood Relief Work – Manali and Spiti Valley	Disaster Relief	Qualitative	<ul style="list-style-type: none"> ▪ IDI with Sub-Divisional Magistrate, Manali ▪ IDI with orphanage administration ▪ IDI with Old Age Home administration ▪ IDI with Tour Operator – Rescue Wing ▪ FGD with three village Pradhans in Banjar & Sainj Valley ▪ FGD with Rotary Club, Manali ▪ IDI with MMT Foundation Programme Team
2.	Integrated Development Project – Neil Island, Andaman and Nicobar Islands	Sustainable Tourism	Qualitative	<ul style="list-style-type: none"> ▪ Interaction with Gram Panchayat Pradhan ▪ IDI with Owner and Manager, Sea Shell Hotel Resorts and Spa ▪ IDI with PCU operator ▪ IDI with water ATM operator ▪ IDI with MMT Foundation Programme Team ▪ Rapid feedback surveys from 10 users each of the PCU and water ATM
3.	Offsetting Carbon footprint through Afforestation, Udaipur & Rajsamand districts (Rajasthan)	Climate Action	Mixed approach (Qualitative + Quantitative – 107beneficiaries)	<ul style="list-style-type: none"> ▪ IDI with Seva Mandir Programme Team ▪ IDI with village Sarpanch (Tasol Village) & government teacher (Shobhavaton ki Bhagal village) ▪ IDI with Gram Vikas Committee Members (all four villages) ▪ FGD with community members (all four villages)
4.	Zero Waste Destination – Sahastradhara, Uttarakhand	Sustainable Tourism	Mixed approach (Qualitative + Quantitative – 75 households and 84 businesses)	<ul style="list-style-type: none"> ▪ IDI with Waste Warriors programme team ▪ IDI with Zilla Parishad member ▪ IDI with Green Workers ▪ IDI with Swachhta Ke Sipahi (active citizen) ▪ IDI with President of the Business Association ▪ FGD with community members

Step 3: Data collection and field visit



On finalisation of the research tools for each project (after incorporating feedback from MMT Foundation), a **field implementation plan** containing the number of interactions and type of stakeholders was shared with the respective implementation partners for stakeholder mobilisation.

Based on the agreed approach between PW and MMT Foundation team, interactions with the stakeholders were conducted via in-person visits. The field team **collected data from beneficiaries** and other stakeholders. Interaction with the implementation partners, beneficiaries and other project stakeholders were held for understanding the projects' impact as well as the long-term benefits of the projects. Post the data collection phase, the qualitative interactions were transcribed and the quantitative raw data was synthesised into clean datasheets.

Step 4: Data analysis and report writing



After data entry and data cleaning, analysis was carried out to arrive at overarching findings and insights for each of the projects. The **draft report was prepared** accordingly and shared with MMT Foundation for their review and feedback. Post incorporating the feedback **finalisation of report** was done.

2.5. Notice to the Reader

- This report has been prepared solely for “**MakeMyTrip Foundation**” being the express addressee to this report as “Client” or “**MakeMyTrip Foundation**”. Price Waterhouse Chartered Accountants LLP (“PWCALLP”, “PW”) does not accept or assume any liability, responsibility or duty of care for any use of or reliance on this report by anyone, other than (i) our Client, to the extent agreed in the relevant contract for the matter to which this report relates (if any), or (ii) as expressly agreed by PW at its sole discretion in writing in advance.
- 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. This report by its very nature involves numerous assumptions, inherent risks, and uncertainties, both general and specific. The conclusions drawn are based on the information available with us at the time of writing this report. PW does not make any representation or warranty, express or implied, with respect to the information contained in this report. The information contained in this report is selective and is subject to updating, expansion, revision, and amendment. It does not purport to contain all the information that a recipient may require.
- PW’s deliverable in no way should be construed as an opinion, attestation, certification, or other form of assurance. We have not performed any procedure which can be constituted as an examination or a review in accordance with generally accepted auditing standards or attestation standards. Further, comments in our report are not intended, nor should they be interpreted to be legal advice or opinion. MakeMyTrip Foundation shall be fully and solely responsible for applying independent judgement, with respect to the findings included in this report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from decisions based on information included in the report.
- While information obtained (if any) from the public domain or external sources has not been verified for authenticity, accuracy, or completeness, we have obtained information, as far as possible, from sources generally considered to be reliable. However, it must be noted that some of these websites may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.
- 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 beneficiaries supported under the project, selected as sample respondents. Accordingly, changes in circumstances/samples/ procedures or information available could affect the findings outlined in this report.
- PW assumes no responsibility for any user of the report, other than MakeMyTrip Foundation management. Any person who chooses to rely on the report shall do so at their own risk.
- PW’s observations represent PW’s understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders. The recommendations provided may not be exhaustive from the perspective of bringing about improvements in the programme and additional steps/efforts may be required on the part of the management to address the same.
- 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.
- By reading this report a person/ entity accepts and agrees to the following terms:

- a. The reader of this report understands that the work performed by PW was performed in accordance with instructions provided by MakeMyTrip Foundation and was performed exclusively for MakeMyTrip Foundation sole benefit and use.
 - b. The reader of this report acknowledges that this report was prepared at the direction of MakeMyTrip Foundation and may not include all procedures deemed necessary for the purposes of the reader.
 - c. The reader agrees that PW, its partners, directors, principals, employees and agents neither owe nor accept any duty or responsibility to it, whether in contract or in tort (including without limitation, negligence and breach of statutory duty), and shall not be liable in respect of any loss, damage or expense of whatsoever nature which is caused by any use the reader may choose to make of this report, or which is otherwise consequent upon the gaining of access to the report by the reader. Further, the reader agrees that this report is not to be referred to or quoted, in whole or in part, in any prospectus, registration statement, offering circular, public filing, loan, other agreement or document and not to distribute the report without PW's prior written consent.
- In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.



3. Project Wise Impact Assessment

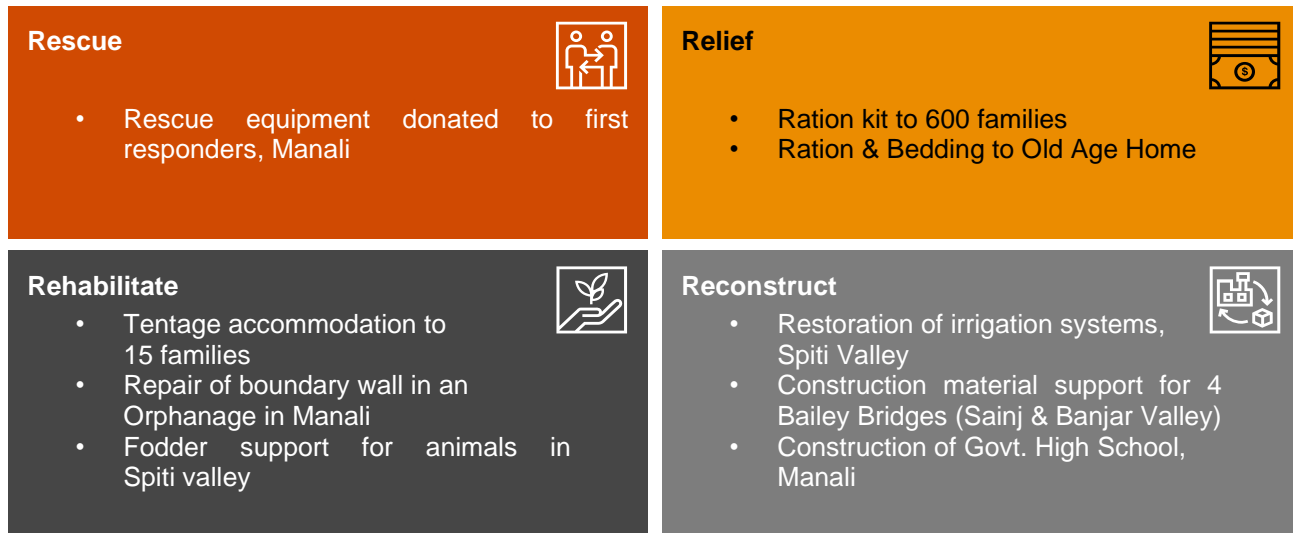
3.1. Project 1: Himachal Pradesh Flood Relief Work

About the Project⁶

The monsoon season in Himachal Pradesh commenced in June 2023 and the rainfall was initially light. However, the rainfall intensified from the second week of July due to multiple cloudbursts in several pockets across the state. The heavy rains resulted in widespread flooding, landslides, and significant damage to infrastructure, including the washing away of roads and bridges. There was loss of agricultural and horticultural land due to hazardous landslides and flooding in areas such as of Sainj valley, Banjar valley and Spiti valley. Public infrastructure in rural areas, district state roadways and national highways were significantly damaged. The Kiratpur-Manali four lane highway from Mandi to Manali and the Kalka-Shimla four lane highway from Parwanoo to Solan were washed away in many places. Many irrigation and water supply schemes were also washed away. Critical buildings and public utility buildings like schools were damaged. The storm water washed away several parts of major connecting roads in Manali city, and being a hilly terrain, resulted in landslides which destroyed bridges in Sainj and Banjar valley near Aut.

As a result, there was a shortage of basic amenities such as water, food and electricity in the affected areas. Tourists along with the locals were displaced and needed support. Given this scenario, MakeMyTrip Foundation (MMT Foundation) extended support towards relief and rehabilitation activities in flood affected areas in and around Manali city, Sainj valley, Banjar valley and Spiti Valley. The project review period was from July 2023 to December 2023, during which time most interventions were carried out. However, the construction of the government high school building in Manali and two remaining Bailey bridges are still in progress, and accordingly, the impact of these activities could not be assessed as part of this study.

Figure 1: Key Activities undertaken by MMT Foundation



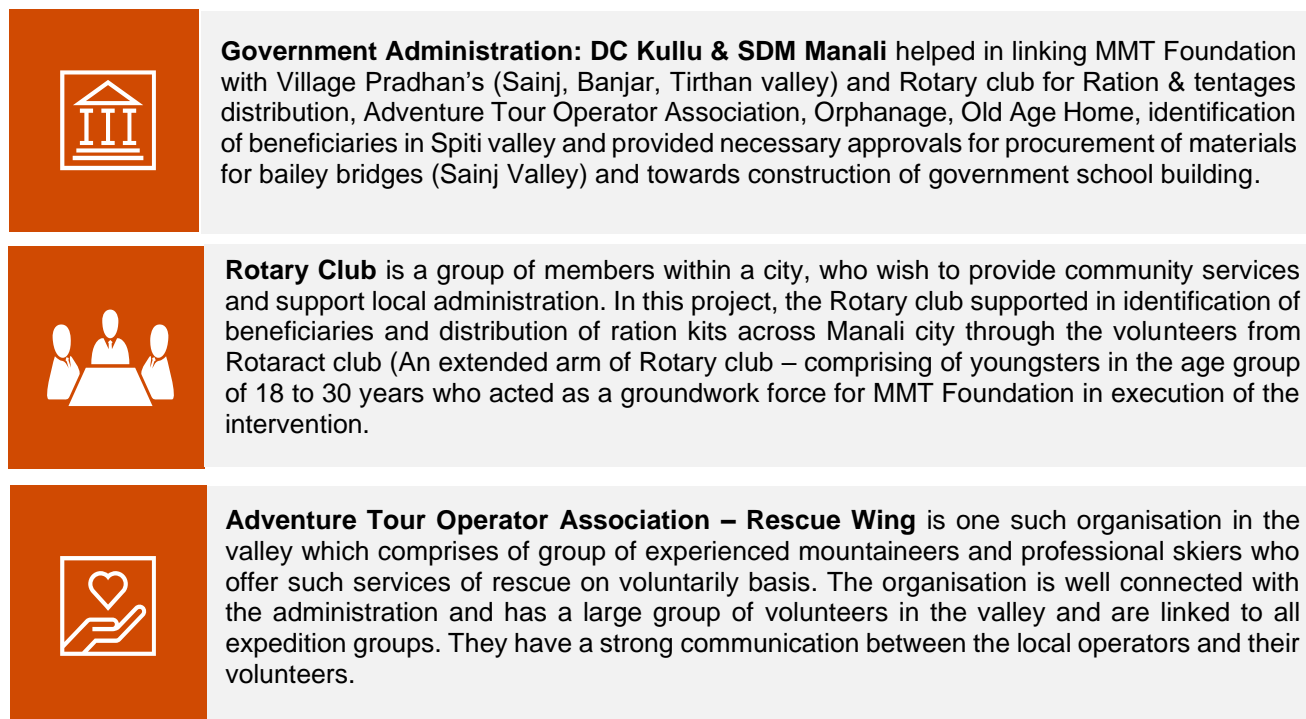
About Stakeholders' Involvement

MMT Foundation has prior experience in disaster management and in providing support to the local administration and beneficiaries during natural calamities. The same experience was leveraged in the Himachal Pradesh Flood Relief programme. MMT Foundation executed the listed interventions directly with the help of the local administration (Sub-Divisional Magistrate (SDM), Manali), who in turn introduced them to Rotary Club, Manali, Adventure Tour Operator Association – Rescue Wing, etc. for the distribution of dry rations, provision of tentages and bedding sets, construction of the boundary wall

⁶ Source: As per the information shared by MMT Foundation

of an orphanage and provision of rescue equipment. The description of the stakeholders who helped in execution of this intervention is shared below:⁷

Figure 2: Description of stakeholders involved in project execution



Method of Impact Assessment

The impact assessment study was carried out by PW to assess the impact that has occurred since the project was implemented. Prior to initiating the study, PW conducted an inception meeting with MMT Foundation team to understand the project and discuss further requirements. Post the meeting, a list of required documents was shared with the MMT Foundation team. Basis the information received PW team initiated the desk review to develop more understanding about the project.⁸ Accordingly, a mixed method research design was adopted for the study. The key stakeholders of project were identified and mapped so that their opinions and feedback could be captured.

PW team worked on the development of a **structured qualitative methodology** for evaluating the project. All interactions (**In-Depth Interviews (IDIs)** and **Focus Group Discussion (FGD)**) were carried out via in-person visits with the identified stakeholders, as illustrated (figure 3) below:

⁷ Source: Based on the interaction with MMT Foundation Team

⁸Project details shared by MMT Foundation team.

Figure 3 : Type of Stakeholders interacted with



IDI with government representative – Sub-Divisional Magistrate (SDM) Manali



IDI with Local Orphanage (Rural Association for Development & Helpful Assistance); Sahara Old Age Home (Manali); Adventure Tour Operator Association – Rescue wing; MMT Foundation Programme Team



FGD with the Pradhan of three villages (Shilhi, Pekhari, Sharchi) in Banjar valley and Sainj valley; FGD with Rotary Club members

Summary of Impact Created

▪ Timely support provision as per the needs of the community

As per discussion with various stakeholders, it was highlighted that MMT Foundation was among the first organisations who contacted the District Collector (DC) Kullu (at the time) to provide immediate support to flood victims in the affected areas. The SDM, Manali, shared their experience of the calamity that hit the city and nearby areas **from 9th to 11th July 2023, where most of the roads and various private and public properties took a hit from flash floods and multiple cloudbursts.**

The major impact was seen in areas near Nehrukund, a natural spring located on the Manali-Rohtang Pass Highway, which destroyed government, commercial and residential properties as well as agricultural produce (wheat, barley, maize, beans) and horticultural produce (apples, apricots, pears, plums, persimmons in Manali. Due to the floods, **communication lines and electricity was hindered for almost three days and almost 40,000 tourists along with the locals were trapped.** Various parts of the city such as Sainj valley reported washing away of bridges which connect approximately four thousand households (HHs) to the nearest city, Aut.

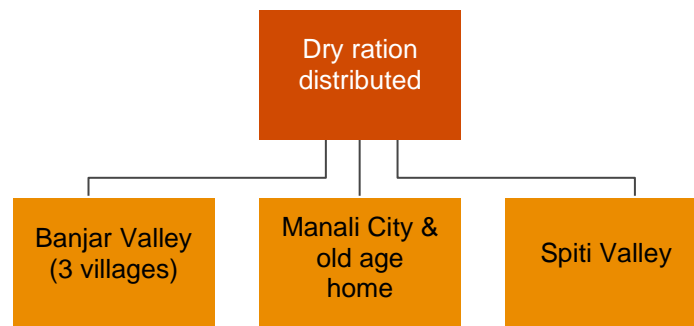
Due to limited communication, contact with the district administration was not established and for the first few days, there was chaos in the flood affected areas. SDM, Manali, reported that in such a condition, MMT Foundation approached the administration, and were immediately linked with local frontline workers who were on the ground and knew which interventions were required.

MMT Foundation, as per the guidance of District Collector, Manali, (at the time) established contacts with Rotary Club in Manali city and the Pradhans of affected villages. The District Collector provided guidance in terms of the activities to be conducted at the time of the calamity, as reported by MMT Foundation programme team. Without any delay, **MMT Foundation leveraged their existing local sales and marketing team**, who were already present in the region **and were sent on a reconnaissance mission (recce) to understand the nature of support** specified by the counterparts (local administration, Rotary Club, village Pradhan, etc.). This exercise was undertaken with an intention of identifying the severely impacted population from the households list shared by village Pradhans to avoid duplication of efforts and to further ensure that the aid reaches to those who needed immediate support.

▪ Provision of dry ration kits specific to needs of the affected communities

MMT Foundation, with prior experience of providing support in disaster-stressed conditions, focused on meeting the basic needs of the end beneficiaries and supplied dry ration kits in Banjar valley, Sainj valley and Manali city. They also helped an old age home that was serving eighty individuals at the time of the floods.

Figure 4: Places of ration distribution



The Pradhans from Shilhi, Pekhari and Sharchi villages reported that majority of the population relies on agricultural and horticultural activities followed by animal husbandry, and the average land holding is two acres or less. The flash floods affected the livelihoods of every household in the valley as July is the time of reaping the produce, and as many farmers had not yet reaped their produce, they faced huge losses. Further, the roads were destroyed **due to landslides** and as a result **farmers were not able to transport their reaped produce** to the district farmers market in Kullu.

Village Pradhans further added that most of the population are marginal farmers and daily wage workers, who faced a monetary crisis as they did not have the basic financial means to buy food or groceries for their households due limited and/or no earning opportunities.

MMT Foundation, in coordination with DC Kullu, reached out to these villages and established contact with the Pradhans, who prepared a list of severely impacted households. **The list of three hundred such households (75 HHs in Shilhi village, 75 HHs in Pekhari Village and 150 HHs in Sharchi village) were provided immediate support.**

MMT Foundation with help of their local team cross verified the list of households shared by village Pradhan and **mobilised relief kits within 15 days from first time of contact.**

MMT Foundation leveraged the help of the Rotary Club in Manali city and through a group of young volunteers (Rotaract Club) **ensured timely disbursement of dry ration kits to identified households in Banjar valley.** Similar nature of **support was provided in Manali city as well** where, with the support of the Rotary Club, **almost three hundred additional beneficiaries were identified and supplied with ration kits.**

Spiti Valley was a victim of flash floods and suffered losses in terms of washed away agricultural lands and disrupted irrigation systems, which resulted in the disruption of the earning opportunities of locals in the area. As reported by the Pradhans of three villages in Banjar Valley, MMT Foundation **supported households with dry ration kits of 75 kgs each in the region, which was sufficient to feed a**

“

I am a marginal farmer with a landholding of 1.5 acres in Banjar Valley, my farming land was near to the ridge and was severely impacted by the flash floods. I have a family of five members, and I am the primary bread earner. We were helpless and did not have much of cash savings at that time, ration was less, and we were not having any communication system in place. The village Pradhan proactively approached us and assessed our condition. Within 15 days, we received a ration kit with sufficient supply, enough for our entire family. I was really worried on how to arrange food for the children but because of the support, I was finally able to think of alternate livelihood generation options for time being as the necessity was met.

”

One of the beneficiaries (Banjar Valley)

family of five for at least 2 to 3 months. The contents of a typical ration kit provided is illustrated below:⁹

Figure 5: Contents of a Ration Kit Provided

1	Grocery Kit	Rice 25 KG, Atta 20 KG, 5 types of pulses 1 KG each, Refined Oil 2 Liters, Salt 1 KG, Turmeric powder 250 Grams, Sugar 5 KG, Tea 1 KG
2	Utensil Kit	5 Liter Cooker, 4 Plates, 4 Glasses, 4 Bowls, 1 Indian Frying Pan (Tawa), 1 Large flat plate (Prat), 1 Pot (Patila), 1 Wok (Kadai), 2 Ladles
3	Bedding Sets	Blanket, Mattress, Pillow with cover, Bed Sheet
4	Sanitary Kits	Sanitary Pads, Washing Soaps, Detergent, Dental Kits, Slippers

Figure 6: Image of the Sahara Old Age Home



The local administration connected MMT Foundation with Sahara Old Age home in the lower grounds of Manali, which was impacted due to the flash floods. The president of the old age home shared that the centre was flooded with water and all their rations including vegetables, pulses, groceries, utensils, etc. were either spoiled or washed away. At that time, there were eighty senior citizens residing in the centre. As soon as the news spread, the residents were shifted to another facility nearby. The representative from the old age home added that there was no option of

channelising rations from any other external source or location as roads were washed away. Hence, MMT Foundation offered a solution whereby the Old Age Home could procure rations from local grocery stores and provide bills for reimbursement. The president of Sahara Old Age Home highlighted the feasibility of support given by MMT Foundation at the time of need, which allowed them to continue feeding eighty residents without any disruption. The president shared that they were given free hand in terms of the amount of rations to be procured as per their requirement and bills were directly submitted from the vendor to the Foundation. Along with dry rations, MMT Foundation donated twenty-one bedding sets (mattresses and bedsheets) to this institute as the rooms were filled with debris and many of the commodities were washed away. The president of the Old Age Home shared that some of the residents were bed ridden and it was difficult to manage during nighttime, which was why the residents needed mattresses.

⁹ Source: As provided by MMT Foundation

▪ Provision of Bailey Bridges in Sainj & Banjar Valley

Figure 7: First Bailey Bridge in Nivli village



As reported by the village Pradhans and MMT Foundation, Manali being a hilly terrain and home to various springs, there were many small and medium level landslides that washed away roads and the natural and manmade bridges that connected smaller villages to the main state and national highways.

The Pradhan of Nivli village in Sainj valley shared that almost four thousand households were disconnected from the mainstream (these included extended interior villages whose routes were via Nivli village). The Pradhan added that the

flood was accompanied with debris flows (fast moving landslides) that took away the bridges, and as a result, the village population was stranded. The villagers had to physically cross the river which was risky and dangerous.

Figure 8: Second Bailey Bridge in Nivli Village, Sainj Valley



MMT Foundation intervened and proposed to support the Public Works Department (PWD) by providing them the material required for the construction of four Bailey bridges in the vicinity of Banjar and Sainj valley. **Two out of four bridges were already functional at the time of the field visit and were benefitting 4,000 households in Nivli and other interior villages.** These areas were found to be secluded and the only mode of transportation for heavy vehicles was via these bridges. Hence, this support helped villagers commute safely.

The Pradhan of Nivli village in Sainj valley reported that the villagers had installed temporary bridges made of wood and timber to commute. The prompt support from MMT Foundation facilitated **the immediate procurement of raw materials and by October 2023, two of the four Bailey bridges were functional**, due to which **access to healthcare, educational services and supply of food items were made possible**. However, the village Pradhan also shared concern relating to height of the two bridges constructed thus far, adding that the PWD should have **increased the height of the newly constructed bridges as they currently hang close to the river and might be impacted in case of any natural disasters in the future.**

- **Provision of rescue equipment to Adventure Tour Operator Association – Rescue Wing**

Figure 9: High tensile strength ropes for rescue operations



The weather conditions in Manali are harsh due to snowfall, rains, landslides and debris flow. Many experienced as well as in-experienced tourists get stuck due to sudden changes in climatic conditions. As a result, the requirement for immediate evacuation support is both imperative and recurring in nature.

Representatives from the Rescue Wing shared that rescue operations on a hilly terrain are subject to timeliness in response as the disaster may worsen as time goes by and accordingly, the number of casualties may increase. Hence, they need to respond

as soon as they get to know of any such condition. However, due to the lack of equipment to scale mountains, volunteers in the Rescue Wing need to first arrange for it from their local sources or from the administration, which delays their response. A typical rescue operation is carried out with the help of an **advanced team** (who respond as and when the information is received) and a **backup team** (who packs all the supplies, along with food and required equipment for those stuck in the mountain and to sustain the rescue team).

Figure 10: Locking Carabiner (small & large)



MMT Foundation shared that this group has helped significantly during the floods of July 2023 and linkages with them were established with the help of local administration. The Rescue Wing expressed the need for specialised equipment required for a timely response and consequently MMT Foundation procured it for them. The **representatives from the Rescue Team added that till date, they were able to execute fifteen such rescue operations for people stuck in the mountains using the equipment arranged by MMT Foundation.**

The list of the equipment is shared below:

Table 3: List of Equipment provided by MMT Foundation to the Rescue Wing¹⁰

S. No	Particulars	Quantity Received	S. No.	Particulars	Quantity Received
1.	Descender	10	11.	Jacket Compсор	12
2.	Riverso (ATC)	3	12.	Trouser Sagarmatha	10
3.	Tandem Speed Pulley	2	13.	Rope 12.5 mm (one hundred Meters)	2
4.	Micro Traction	3	14.	Rope 10.5 mm (one hundred Meters)	2
5.	Gri	2	15.	Rope Mambo 10.1 mm (50 Meters)	4
6.	Ascender	2 Pairs	16.	Rope Mambo 10.1 mm (60 Meters)	5
7.	Head Light Tekena	10	17.	Gloves 5 + 5	10
8.	Locking Carabiner (15 small + 10 big)	25	18.	Rope semi static 10.5 mm (one hundred Meters)	1
9.	Seat Harness	10	19.	Quechua Shoes	10 Pairs
10.	Helmet Borneo	10	20.	Starcher Light Plastic	1

The Rescue Team reported that MMT Foundation procured highest quality materials that met the requirement. They further added that **the equipment listed above is useful in all kinds of rescue operations such as cliff rescue, river rescue, rock rescue, mountain rescue (river, ice and glacier), and can last for a minimum of 15 years.**

The team also shared **their need for satellite phones and stretchers that can be used in rescue operations** and suggested the **development of a risk mitigation plan** in consultation with local administration and the police department **to be ready for any such unforeseen circumstances in the future.**

▪ **Provision of Tentages in Manali City, wall construction in an orphanage and planned construction of a government school**

MMT Foundation responded to all the leads that were shared with them by the local administration. Among those was the requirement of tentages along with dry rations to those families displaced by the floods and the accompanying debris flow. **Within a period of 15 to 20 days, MMT Foundation supported fifteen such families with tentages in Maheli village, Manali.**

Another form of support was provided to an Orphanage - Rural Association for Development and Helpful Assistance – RADHA. **This institute is home to ten girls who stay full time in the institute** followed by four to five girls who comes to the institute on day care basis as their parents cannot afford to feed or educate them. The head of the institute shared that due to continuous rainfall, the boundary wall of the institute was washed away, and as the building was just next to the road, there was a high risk of intrusion from outsiders. The security of the girl children became an issue of great concern. The institute shared that **within 10 days of contact with MMT Foundation, the wall construction started** and that the quality of work was adequate. They highlighted that earlier, the boundary wall was weak and low in height, but the **current construction is firm enough to withstand floods in the future.**

The floods impacted a government high school in Manali city, where the entire building collapsed when hit by debris (river of rocks and mud saturated with water). In such a scenario, classes have been

¹⁰ Source: Receipt of equipment as shared by representatives of Rescue wing during the interactions

temporarily shifted to a government-owned crop market building. The current setup has limited resources and is not child friendly. Realising the problems faced by the students, SDM Manali shared that MMT Foundation has shown interest in the construction of a new school building and after necessary approvals at local administration level, land will be handed over to the Foundation for construction purposes. The new school building will help in continuing the schooling of children in the area in an adequate and child-friendly infrastructural set up.

IRECS Analysis

Basis the interactions with key stakeholders and a desk review of the documents, the impact of the project has been evaluated along the IRECS framework. The IRECS analysis summary has been presented in the table below:

Table 4 : IRECS Analysis: Himachal Pradesh Flood Relief Work Project

Parameter	Assessment from study
Inclusiveness	<p>The project primarily provided customised support as per the need of target beneficiaries. The flood destroyed households, sources of income and other private and public properties.</p> <p>Through this intervention, MMT Foundation supported individual households (HHs) and senior citizens with dry ration, connected approximately 4,000 HHs in Nivli village (Sainj Valley) through Bailey bridges, provided mattresses and constructed the boundary wall of an orphanage, and restored irrigation systems in Spiti Valley, with a common intention to rescue, rehabilitate, reconstruct, and provide relief to those affected, irrespective of their socio-economic status. Hence, the project is inclusive in nature.</p>
Relevance	<p>Multiple cloud bursts and flashfloods filled with debris destroyed most parts of the national highway and the bridges that connected smaller secluded villages with the urban areas. As a result, communication lines and electricity were hindered for almost three days and around 40,000 tourists and locals were trapped at the time of floods. Various parts of the city such as Sainj valley reported washing away of bridges which connected approximately four thousand households (HHs) to the nearest city, Aut. The food and rations were limited and due to destruction of roads as well as agricultural and horticultural produce, the population in the villages and the city faced scarcity of dry rations as reported by SDM Manali.</p> <p>In such a condition, the project provided dry ration kits to the community, infrastructural support (materials required for bridge construction and boundary wall construction, etc.) in coordination with local administration.</p> <p>The support provided to the authorities and the community to ensure efficient relief and rehabilitation of those affected was extremely relevant. Same was reiterated by village Pradhans and representatives of the Orphanage and Old Age Home during interactions. The stakeholders found the project relevant as there was a need for support of such nature.</p>
Effectiveness	<p>During any natural disaster it is essential to provide timely support to the affected population. As corroborated by all the stakeholders, support came in on timely basis and no follow-ups were required. MMT Foundation had prior experience of providing support in similar natural disasters, which was leveraged here. This ensured timely identification of vendors for dry rations and procurement of tentages and rescue equipment to reach the populations in the valley.</p> <p>The representatives from the Rescue Team added that till date, they were able to execute fifteen such rescue operations for people stuck in the mountains using the equipment arranged by MMT Foundation.</p>

Parameter	Assessment from study
	<p>Moreover, the Foundation leveraged their local marketing and sales team to verify the need specified by the local administration in providing dry ration kits to six hundred HHs, which helped avoid overlap and duplication of efforts and extended support to those who needed the most. The Foundation ensured timeliness in the relief work, hence making the intervention effective.</p>
Convergence	<p>The purpose of this intervention was to cater the needs of the community and to extend support to those deprived of access to food and shelter and to augment the administration's efforts towards relief and rehabilitation work. Linkages with Pradhans of Shilhi village, Pekhari village and Sharchi village for distribution of dry ration in Banjar valley and for identifying the specific needs of the Orphanage and Old Age Home were made possible through the office of the DC, Kullu and SDM, Manali.</p> <p>Apart from the support to the target audience mentioned above, the Foundation also supported in procurement of materials for Bailey bridges as per the requirement quoted by PWD and volunteered to construct a government high school in the future, with an intention of reducing the load of the local administration to some extent. Hence, making the intervention convergent in nature.</p>
Sustainability	<p>MMT Foundation has taken up multiple interventions that are and shall prove to be sustainable for the community, and each is shared below:</p> <p>Support to the Rescue Wing of Adventure Tour Operator Association in terms of adequate amount of equipment to carry out rescue operation has made the team ready for any future natural calamities.</p> <p>As shared by the Pradhan of Nivli village in Sainj valley, the two Bailey bridges constructed have proved to be beneficial for the community, as it has linked the villages which were disconnected earlier. Access to the outer areas has helped them with continuous and uninterrupted supply of goods and services.</p> <p>Of all the interventions undertaken, two activities are yet to be provided and could also have a sustainable impact on the community in the future - the construction of the government high school building and rest of the Bailey bridges. However, both the interventions are dependent on timely approvals and support of government counterparts such as local administration and PWD. Currently, sustainability cannot be assessed due to the stage at which the activities are.</p> <p>MMT Foundation's project aimed to provide long-term support to the beneficiaries and the community in large, making the intervention sustainable.</p>

Suggestions

- As suggested by the Adventure Tour Operator Association, MMT Foundation should also focus on the development of a disaster mitigation plan in consultation with the local administration. Ensuring capacity building exercises and developing a local workforce of trained rescuers who can respond on an immediate basis to any such natural calamity will augment the local administration's efforts to reduce damage and save more lives in the future.

- Bailey bridges in Sainj valley (Nivli village) were designed, prepared, and approved by the government department, which ensured transportation of goods and services in the valley. However, as suggested by the village Pradhan, the height of newly constructed bridges should be increased to reduce the impact of debris flow or landslides in the future. MMT Foundation should consider view of the locals or seek further community views while planning support for such kind of projects and communicate the same to the government during any future funding of such similar interventions.

Limitations

- Due to severe snowfall and extreme climatic conditions in Rohtang Pass, it was difficult to observe interventions related to the restoration of the irrigation system and carry out discussion with the community on the supply of dry rations and compressed fodder for livestock in Spiti valley. Hence, this could not be covered as part of the impact assessment study.

3.2. Project 2: Integrated Development Project, Neil Island

About the Project¹¹

Neil Island (known as Shaheed Dweep) is located in the South Andamans district and covers an area of 13.7 square kilometres. The island faces major environmental problems arising from marine and fishing debris found along the coast as well as increased use of plastics generated by the growing tourism industry.

Figure 11: Neil Island Jetty



As Neil Island did not have a water source, the government set up Reversed Osmosis (RO) water treatment plants through which the local community accesses water. However, tourists found it difficult to source drinking water and had to buy packaged water bottles when they visited the island. Despite being an emerging tourist spot, public conveniences in terms of toilets and changing areas were either inconveniently located or poorly maintained. There was limited awareness and practice of waste management among those involved in the tourism industry and no system of waste collection or treatment on the island.

MakeMyTrip Foundation (MMT Foundation) has undertaken projects in the field of sustainable tourism, driven by its focus on climate action and community empowerment. In the context of Neil Island, MMT Foundation set up an **Integrated Development Project in February 2020** to make it a **sustainable tourist destination** by reducing single-use plastics on the island and providing alternatives.

Phase-I of the project, which ran from February 2020 to July 2023, was launched with awareness campaigns and clean up drives involving various sections of the local community. A Public Convenience Unit, which included multiple facilities such as toilets, shower cubicles, feeding station, etc. was set up on Bharatpur Beach, which is a popular tourist location. Three Water ATM kiosks were installed at different locations to provide safe drinking water to tourists and reusable water bottles were distributed through the hotels for tourists to carry around. Segregated waste bins were set up at Bharatpur Beach and staff were employed to clean it. These are summarised in Figure 12.

Based on the learnings that emerged from Phase-I (discussed later in the report), certain **key improvements were brought into Phase-II of the project, which began in August 2023**. The absence of a local presence on-the-ground throughout Phase-I of the project led to lack of ownership from stakeholders and hindered the effectiveness of the intervention. So, MMT Foundation signed an agreement with Kachrewaale Foundation, a **local partner** in Phase-II, to help effectively liaise with the government and other relevant stakeholders, periodically **monitor the activities** and impact of the facilities provided and ensure greater convergence in the intervention. Further, the limited written documentation about the project and its progress in Phase-I has been addressed in Phase-II, and the local partner submits **regular updates and quarterly reports** on the intervention.

In Phase-II, the activities include beach and underwater clean ups to **recover marine litter** and a variety of workshops, activities, competitions, and outdoor sessions to raise awareness among

¹¹ Sources: MMT Foundation website: (https://www.makemytrip.com/csr/mmt_foundation.html), interactions and details shared by MMT Foundation, and the grant agreement signed with Kachrewaale Foundation in Phase-II.

children, youth, fisherfolk, tourists, hotels and the local community on the impact of plastic pollution, littering, use of plastic water bottles and other Single-Use Plastics (SUPs) and dumping of unsegregated waste. The goal of these activities is to improve **knowledge on these issues, create greater ownership and participation among stakeholders, increase the practice of waste segregation and reduce the use of plastics**. Additionally, the local organisation will monitor and evaluate activities, showcase data and contribute towards policy recommendations on these issues in national platforms. These are summarised in Figure 13.

Figure 12: Key Activities Undertaken – Phase-I

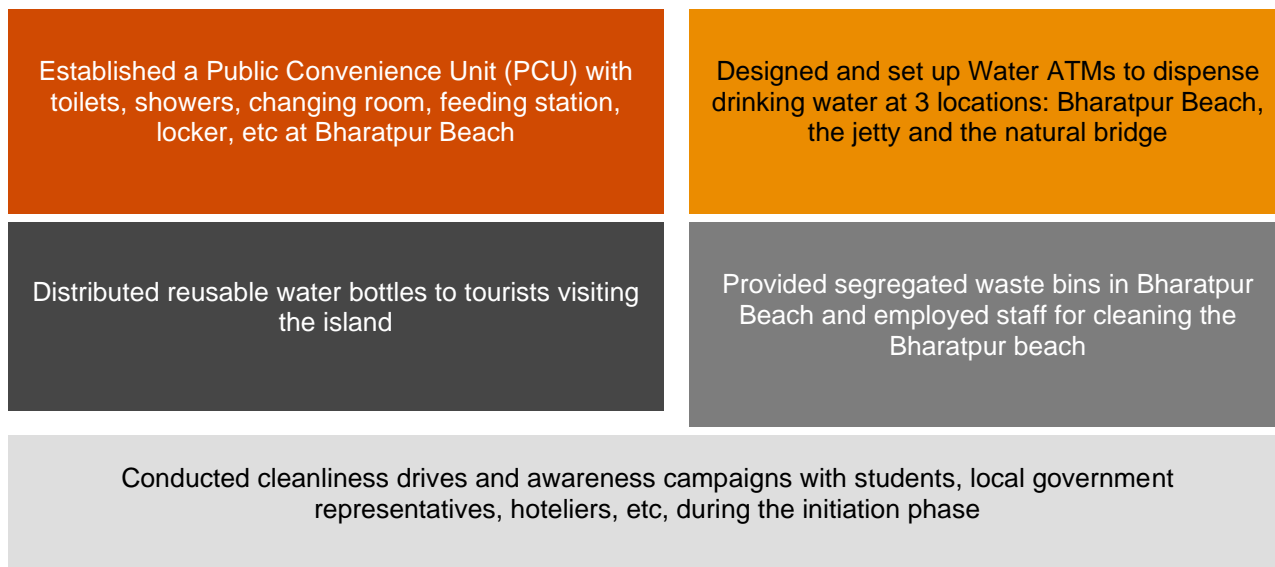


Figure 13: Key Activities Undertaken–Phase-II



This report focuses on the **impact assessment of Phase-I of the project**, which was between February 2020 and July 2023.

About Stakeholder Involvement¹²

MMT Foundation executed the listed activities in Neil Island directly, with the support of the local administration (the Pradhan of the Gram Panchayat), hoteliers (in particular, the owner of Sea Shell Hotel Resort and Spa, who motivated other hotels to participate) and Saraplast, a company that built the Public Convenience Unit container and installed the sewage treatment plant. The roles of the stakeholders engaged each of the interventions is presented below in Table 5.

Table 5: Nature of Stakeholder Involvement in Phase-I

Activity/ Facility	MMT Foundation's role	Stakeholders and their role
Public Convenience Unit	Provided the capital expenditure for the PCU; overall monitoring of the facility; supports the cost of major repairs or renovations.	Saraplast: designed and assembled the container for the PCU; installed a sewage treatment plant to treat waste; manages the finances and day-to-day operations of the PCU. Panchayat: provided the land for the PCU in Bharatpur Beach
Water ATMs	Provided the capital expenditure; designed and installed the Water ATMs in 3 locations; hired and trained operators to run the ATMs and pays their monthly salaries	Hoteliers: promoted the use of water ATMs among tourists Panchayat: provided the land for the water ATMs in Bharatpur Beach, the jetty and the natural bridge
Reusable water bottles	Distributed reusable water bottles to tourists in 2020	Hoteliers: supported in the water bottle distribution; encouraged tourists to carry these bottles; and set up recharge stations on their premises
Segregated bins and cleaning at Bharatpur Beach	Installed the waste bins, hires staff to clean the beach and pays their wages	Hoteliers: The owner of Sea Shell Hotel helped monitor the cleaning staff
Awareness campaigns and cleanliness drives	Conducted cleanliness drives, campaigns, and workshops at the initiation of the project	Hoteliers, Panchayat, students, police and other community members: participated in these activities

Method of Impact Assessment

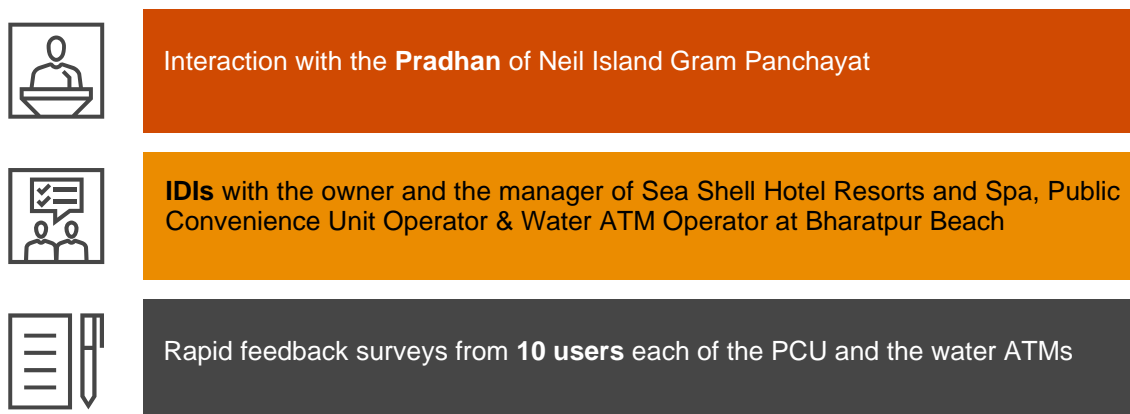
PW carried out a study to assess the impact of the intervention in the **first phase of the project, i.e., March 2020 to July 2023**. An inception meeting was held with the MakeMyTrip Foundation team to understand the background of the project and the activities undertaken during the assessment period. As there was limited documentation of the project, PW utilised the details provided by the MMT Foundation team and information available on their website and annual reports to develop a comprehensive understanding of the project.

A structured **qualitative methodology** was adopted for evaluating the project in consultation with MMT Foundation. **Key stakeholders** were mapped basis discussions with MMT Foundation team, and accordingly, tools were developed to capture the perspectives and feedback of the stakeholders. **In-Depth Interviews (IDIs), interactions and rapid user surveys** were conducted during an in-person visit to the island.

¹² Source: Interactions with the MMT Foundation Team

The qualitative study was carried out with the following stakeholders:

Figure 14: Qualitative Interactions for this Project



In addition, a **virtual interview** with the MMT Foundation team was undertaken to develop a holistic understanding of the project impact.

Summary of Impact Created

- **Provision and access to an affordable Public Convenience Unit (PCU) for tourists**

The discussion with the hotel owner revealed that prior to this intervention, there were no functional toilets and changing areas at Bharatpur Beach. The area used to be messy due to open defecation and urination. There was no privacy for tourists to change when they visited the beach. Although government operates toilet blocks in Bharatpur Beach, these often lack running water, sufficient lighting, and proper maintenance.

MMT Foundation obtained land from the government to set up a Public Convenience Unit in Bharatpur Beach. They renovated containers and created a public facility, including showers, washrooms, changing rooms, lockers, a feeding station and a sanitary pad incinerator. As there is no sewerage system on the island, an effluent treatment plant was set up behind the PCU and the sludge is treated and put under the ground. The plant is powered through solar energy. The container is designed to be a sustainable, reliable, self-contained model with maximum conveniences and minimal impact on the environment. The following table details the list of facilities provided as part of the PCU, ensuring that it is used adequately.

Table 6: List of Facilities Available in the Public Convenience Unit

S. No	Particulars	S. No.	Particulars
1.	Shower cubicles	6.	Lockers
2.	Toilets	7.	Sanitary Pad Incinerator
3.	Urinals	8.	Mobile charging facility
4.	Changing cubicles	9.	Shop selling toiletries
5.	Hand wash facility	10.	Baby feeding station

Figure 15: PCU Entrance at Bharatpur Beach



The PCU began operation in February 2020, but it functioned intermittently during the pandemic and resumed operations in 2023. As reported by the PCU operator, the charges for the use of various facilities mentioned in Table 6 are between **INR 10 and 20** which is collected from the tourists who visit the PCU. The local community is allowed to use the services free of charge.

As informed by MMT Foundation, the PCU is run by Saraplast, which manages the finances and day-to-day operations through the operators. The revenue generated by the PCU during the tourist season in Phase-I was approximately **INR 2,000 per day** (or approximately INR 60,000 per month). After paying for repairs and maintenance (which is approximately INR 25,000-30,000 per month), the remaining revenue of **approximately INR 25,000-30,000 was given to the operators as their income**. In Phase-II, the PCU operators reported that the current daily revenue is between INR 3,000-4,000.

The operators are from the local community and work for 10-12 hours a day during the tourist season. Their roles include collecting user fees and cleaning and maintaining the PCU. According to the PCU operators, the **daily footfall is between 200-250 users** during the season, and the most popular facilities are the shower and changing rooms.

“

Bharatpur has seen a change for the better. There were no toilets or changing rooms earlier. When there are no proper facilities, people start making it messy. It was very bad. Now, the area has become clean. Open defecation and urination have completely stopped. There is a spic-and-span, neat facility that anyone can use.

”

Owner, Sea Shell Resorts

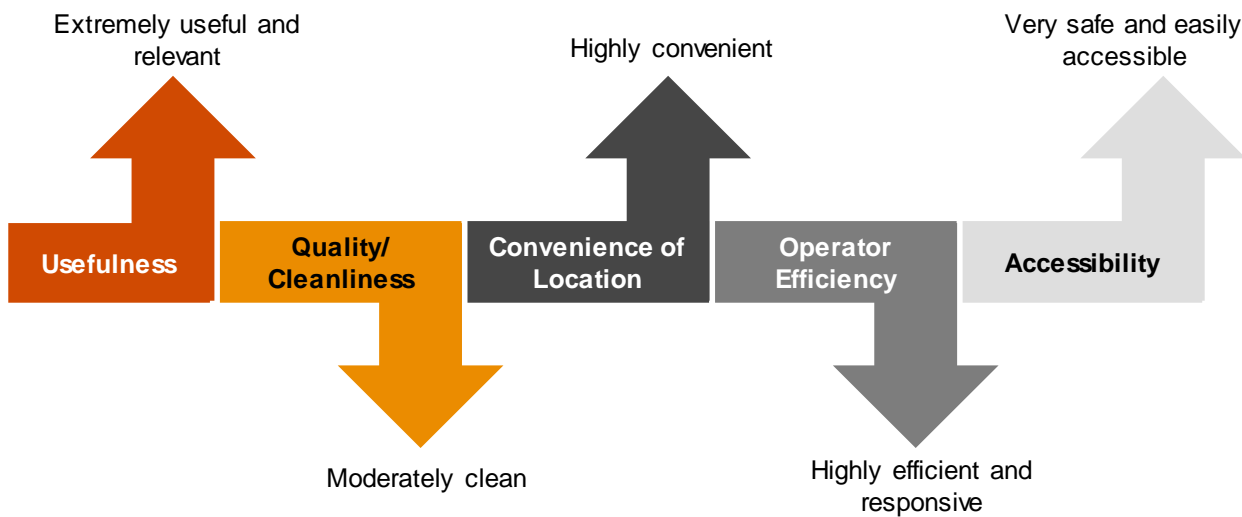
The PCU has resulted in multiple benefits. All stakeholders reported that **Bharatpur Beach is clean** and the centre is run well due to periodic upkeep and maintenance. The operators shared that while there are private changing facilities in the vicinity, tourists prefer to use the PCU because it is **well maintained**, has **unique conveniences** like a locker, and **is centrally located**.

From the operators' point of view, the PCU allows them to earn **a sustainable livelihood**. This was echoed by the Panchayat representative, who felt that

the PCU **has helped generate employment for the local community**. She pointed out that the government also runs pay-and-use toilet facilities in the area, but the PCU **is more modern** than the government facilities and is set up in a strategic location that allows it to receive higher footfall. As Laxmanpur and Sitapur Beaches are also becoming popular tourist spots, she suggested that MMT Foundation can consider setting up PCUs in these areas as well for the convenience of tourists.

A rapid survey to obtain feedback from tourists, who used the shower facilities, locker, changing room and toilets, was positive. This is presented below in Figure 16.

Figure 16: Visitor Feedback on the PCU



As shown in Figure 16, the tourists who visited the PCU found it **useful and convenient**, as they were not aware of **other better alternatives** in Bharatpur Beach. The general perception on user charges was that it is **affordable**, although some users have questioned the operators on why an organisation like MMT Foundation needed to collect user fees from the public. The centre is considered safe and accessible. The **cleanliness was rated as moderate** by all users, as the high footfall during the season meant that the operators were busy with collecting user fees and manning the entry and exit and could not clean the facilities during the day.

▪ **Availability of safe drinking water at Water ATMs**

The increased plastic pollution resulting from the purchase of bottled water by tourists led the government to ban the sale of plastic bottles below 2 litres capacity in 2019. Tourists could still purchase bottled water in smaller capacities.

With the goal of **minimising the usage of single-use plastic bottles**, MakeMyTrip Foundation designed and constructed water ATM kiosks in 2020. They were meant to provide a **viable and convenient alternative for tourists**. Three water ATMs were set up at Bharatpur Beach, the jetty, and the natural bridge, which are heavy tourist spots. The water dispensed by the ATMs are in the quantities of ½, 1 and 2 litres, costing INR 1, 2 and 5 respectively, as seen in Figure 17.

Figure 17: Water ATM Locations and Services



Alongside, MMT Foundation **distributed reusable bottles to tourists with the support of hotel representatives** and it was given as a complimentary souvenir so that tourists would have an option to fill water from the Water ATM. Hotels were requested to encourage tourists to use these bottles and to set up recharge stations on their premises to augment the convenience of refilling the bottles.

“

Every tourist appreciated these bottles that they could take as a souvenir and use in their day-to-day life. So, the immediate impact was that there was no need to buy the two-litre bottle. Earlier, everyone would rush to a shop and buy water. The guests were happy!

”

Owner, Sea Shell Resorts

The water ATMs at Bharatpur Beach and the jetty continue to function, while the water ATM near the natural bridge has been **shut down due to low tourist footfall** in the location. Furthermore, a change in the location of the entrance of the jetty by the local administration had **reduced the visibility** of the water ATM established there, and as a result, the footfall had greatly reduced over the course of the intervention.

Figure 18: Tourists using the Water ATM at Bharatpur Beach



The local community is used to the taste of water from the government R.O. plants and they **have not patronised the water ATMs provided as part of this project**, which use regular UV filtration methods. The Pradhan of the Gram Panchayat highlighted that there is limited relevance of water ATMs on the island, as the government has existing water treatment plants which provides safe drinking water. Further, she also shared that the taste of the water is not favoured by locals. Initially, shopkeepers in the vicinity of the water ATMs discouraged tourists from using them by **spreading rumours about the safety** of the water dispensed as they were dissatisfied with the loss of revenue that could have been obtained from sale of bottled water. MMT Foundation, along with the management of Sea Shell Hotel shared that this challenge was addressed by **conducting sessions with the shop keepers** to explain why this was an important facility on the island.

The ATMs **generate employment for the local community**, who are given training on operating it and allowed to keep the revenue earned as their income. A challenge reported by various stakeholders was in retaining operators for the Water ATMs because the revenue obtained from selling water was too small an amount to be a sustainable income source for them.¹³ There was also variation in revenue between the tourist season and the non-tourist season.

¹³ In Phase-II of the project, MMT Foundation paid the water ATM operators a fixed monthly income and the revenue generated from the sale of water was additional income for the operators.

“

It would be difficult to get drinking water at Bharatpur without buying bottled water. Tourists say that it is good that such a useful facility is available, and they do not have to buy water. If they bought it at a shop, they would have to pay INR 40. Here it is only INR 2 or 5. Their expenses are reduced. They can buy water at any time, which is convenient for them.

”

Water ATM Operator

The operator of the water ATM at Bharatpur Beach reported that there has been a **decline in the purchase of bottled water** and the dumping of plastic bottles by tourists due to the presence of the Water ATM. The ATM allows tourists to **save money** spent on buying 2 litre bottles, which cost INR 40 while the safe drinking water they source from these ATMs are much cheaper.

According to MMT Foundation team, the Bharatpur Beach ATM drew **10-15 tourists daily** during the season in Phase-I, **dispensing 7-10 litres** of water on average.¹⁴ Tourists tend to buy a 2-litre bottle and refill it at the ATM, rather than bring their own bottle along.

The successes and challenges relating to the water ATMs have been summarised in Table 7.

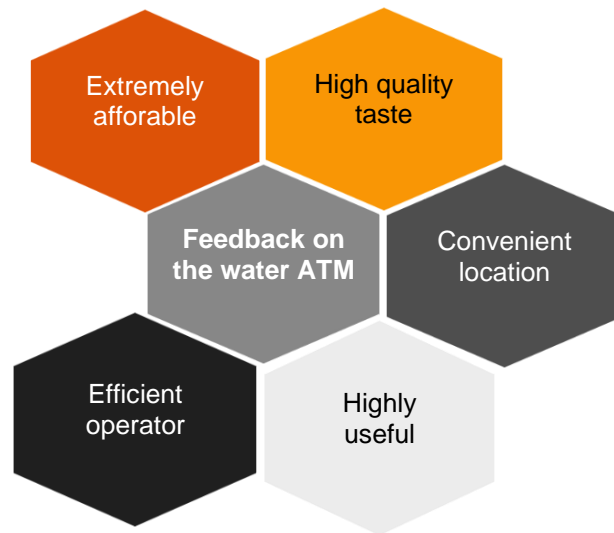
Table 7: Successes and Challenges of the Water ATMs in Neil Island

Successes	Challenges
<ul style="list-style-type: none"> ▪ Decline in the purchase of single-use plastics on the island ▪ Generated livelihood opportunities for locals ▪ Reduced expenditure for tourists on bottled water 	<ul style="list-style-type: none"> ▪ Locals did not use the water ATMs as the taste was not favoured by them ▪ Initially, there were concerns around the safety of the water due to rumours spread by shopkeepers ▪ Low footfall in two ATMs due to their location

A rapid survey of users of the ATM revealed that this is a **useful and essential service, conveniently located, with high quality water offered at an extremely affordable price**. Additional feedback given by a tourist was that the procedure to use the ATM during the non-working hours of the operator was unclear, and so, step-by-step instructions are needed so that the service can be used at any time of the day. The feedback is summarised in Figure 19.

¹⁴ At the time of visit, the Water ATM operator reported that the footfall is currently 35-40 tourists daily during the season, dispensing 15-20 litres per day.

Figure 19: Visitor Feedback on the Water ATM



- **Awareness creation on waste management and improved cleanliness on the island**

Figure 20: Signage & Waste Bins at Bharatpur Beach



When the project was launched, MMT Foundation organised a **major clean-up drive** across the island, involving school children, local government representatives, police, hoteliers, and so on, and **five hundred kilos of waste was collected**.¹⁵ In addition, a session was held for more than 160 cab drivers, tour guides and others involved in tourism, titled 'Atithi Devo Bhavo: A Customer Service Workshop', on hospitality and etiquette, guest safety, plastic waste management, etc., which created high motivation around the issue among the participants.¹⁶ **Signboards were installed** in Bharatpur Beach to educate tourists on the dos and don'ts of waste disposal.

Upon request from the Pradhan of the Panchayat at the time, **segregated waste bins were placed** on the beach to encourage tourists to dispose their trash responsibly. To **support local employment**, two staff members from the local community were employed on daily wage basis by MMT Foundation to clean Bharatpur Beach. On average, they collected **200-300 kilos of waste** each month in Phase-I of the project. While the owner of Sea Shell Hotel helped MMT Foundation with monitoring the staff, the absence of a sustained local presence resulted in frequent absenteeism and

turnover issues. During the field visit, it was observed that the beach premises were clean and there was no trash lying around.¹⁷

¹⁵ MakeMyTrip Foundation Annual Journal 2021-22, accessible here: <https://jsak.mmtcdn.com/seo/cms-staticpages/flipbook/index.html#page/1>

¹⁶ MakeMyTrip Foundation website: https://www.makemytrip.com/csr/mmt_foundation.html#ourProject

¹⁷ Data on waste collected in 2024 reveals that on average, 700-100 kilos of waste are collected by staff members each month. The increased quantity of waste collected is due to frequent monitoring by the local partner in Phase-II.

MakeMyTrip Foundation recognised that while these efforts helped build their presence on the island and **initiate the dialogue on waste management and sustainability**, it would have been more effective if they had got directly involved in waste management activities. MMT Foundation acknowledged that this was not possible as they did not have an on-the-ground team in Neil Island nor was there was a local partner who would drive such efforts for them. They carried out the activities through support of local stakeholders (like the hoteliers).

The Pradhan of the Gram Panchayat impressed upon the need for MMT Foundation to focus more on Information Education and Communication (IEC) activities and clean-up drives and support them in waste collection and segregation activities. The owner of Sea Shells Resort highlighted the contribution made by MMT Foundation in Phase-I, which helped increase sustainability on the island, and suggested that investment from such organisations can be critical in creating the infrastructure needed to tackle waste on the island, such as by setting up dry waste processing centres.

IRECS Analysis

Basis the interactions with key stakeholders and a desk review of the documents, the impact of the project has been evaluated along the IRECS framework. The IRECS analysis summary has been presented in the table below:

Table 8: IRECS Analysis: Phase-I of the Integrated Development Project, Neil Island

Parameter	Assessment from study
Inclusiveness	The project actively involved the local community in awareness generation activities and clean-up drives. Locals are allowed to use the ATM and PCU services for free. The beach clean-up staff and operators of the ATMs and PCU are selected from the local community and include women operators. The water ATMs and PCU are designed to be accessible to those with special needs and were perceived to be safe by the users surveyed. The tourists perceived the charges as nominal , making them affordable to all users.
Relevance	Neil Island is an emerging tourist destination, and the signage and waste bins provided by MMT Foundation are important steps to reduce the negative impact of tourism by reducing use of plastics and encouraging responsible disposal of waste. The PCU and Water ATM are centrally located in Bharatpur Beach. The Gram Panchayat Pradhan highlighted that drinking water and toilet facilities are provided by the government across the island. However, all stakeholders interviewed felt that the PCU is modern, well-maintained, clean and offers a range of facilities. The tourists surveyed believed there was no other alternative and this one is useful and convenient. The water ATM allows tourists to easily refill their water bottles at a nominal cost and given that plastic bottles are banned on the island, this facility is also seen as relevant.
Effectiveness	The users, operators and hotel representatives believe that these interventions have been effective in generating awareness around waste management and providing convenient and viable alternatives. The hotel owner mentioned that the practice of open defecation has ended, and the area is clean because of the PCU. The absence of an on-the-ground team or implementation partners on the island has limited the effectiveness of the interventions as there was no local presence to drive the activities, liaison with the local government and hoteliers, monitor the usage of the PCU and Water ATM facilities, and handle problems that arose over the course of the project.
Convergence	Convergence with hotel owners was achieved to some extent. The owner of Sea Shells played an instrumental role in mediating with other hotel owners and securing their cooperation in distributing reusable bottles, encouraging tourists to use these bottles, setting up recharge facilities on their premises and participate in waste management. The Sports Associations were involved in a limited manner and their buy-in extended to keeping the area in front of their businesses clean. MMT Foundation attempted to collaborate with the local government by involving the Panchayat representatives in awareness campaigns and clean-up drives and setting up waste bins on Bharatpur Beach at the behest of the government. The land on which the PCU and water ATMs were set up was provided by the government, who expressed the need for similar PCU facilities in

Parameter	Assessment from study
	other beaches as well. The government expects MMT Foundation to support them in waste management interventions, which needs to be incorporated in Phase-II of the project.
Sustainability	MMT Foundation believed that the goal of the project was to create awareness and initiate dialogue on environmental sustainability. They are working in a challenging location, and so, long-term partnerships are required with multiple stakeholders to create a self-sustaining model. They believe that the first phase of the project has been successful in building alignment with the local community, and in the next phase (initiated from August 2023), they will ramp up efforts through periodic IEC activities with school children fisherfolk, shopkeepers, diver, local guides and hoteliers; stronger local partnerships with other organisations; and with a specific exit plan for sustainability in this area.

Suggestions

- A needs assessment study could be conducted in the geographic area in which the interventions are planned in alignment with the attitudes and needs of the community and the priorities of the government. The study will help form the basis for designing projects which complement the existing facilities and initiatives being undertaken by the government and other stakeholders to bring in greater synergy. This will not only help build greater community ownership from the start, but also ensure that all stakeholders are supportive of and contribute towards meeting project outcomes.

Limitations

- The lack of documentation on the intervention hampered a comprehensive desk review from being undertaken, which would have provided a clear understanding of the activities undertaken, stakeholders involved in the initiative, and progress made during the assessment period.
- The impact assessment was carried out after MMT Foundation entered Phase-II of the project in partnership with a local organisation. The changes in the focus areas and the method of running of the interventions in Phase-II mean that not all the responses on the project impact can be attributed to the activities undertaken in Phase-I, which was the assessment period.

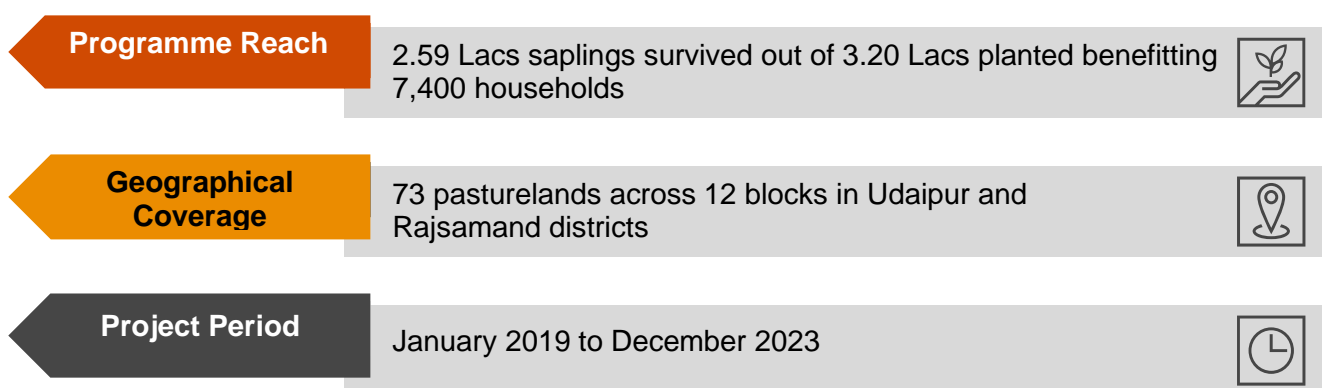
3.3. Project 3: Offsetting Carbon Footprint through Afforestation

About the Project¹⁸

Rajasthan is situated in western India and is classified as an arid or semi-arid region as it faces severe water scarcity and poor rainfall. Where the economy is mostly dependent on rain-fed agriculture, a cascading effect is seen in the form of reduced agricultural production, reduced availability and growth of feed and fodder in pasturelands, fewer employment opportunities in the community and greater migration. However, modernisation has led to the introduction of advanced cropping and safe water harvesting techniques to hold soil moisture. In addition, government schemes have provided relief through the supply of water, subsidies on fodder resources, wage employment through the Mahatma Gandhi National Rural Employment Generation (MGNREGA) Act, and the restoration of pastureland, which help local communities withstand the harsh conditions in the area.

MMT Foundation supported a community-based afforestation programme “Offsetting Carbon Footprint through Plantation” in collaboration with Seva Mandir (implementation partner) in Udaipur and Rajsamand districts to ensure a self-sustaining solution to fight against the harsh climatic conditions. Under this initiative, ecological restoration was undertaken by plantation of native species of saplings and seeds in individual and common pasturelands identified in collaboration with the local Gram Panchayat. The saplings were procured from the local forest department nurseries by Seva Mandir. The list of saplings planted in the pasturelands can be accessed in Annexure I.¹⁹

Figure 21: Project Reach



The project was initiated in January 2019 and 73 pasturelands were restored across two districts (Udaipur & Rajsamand). 3.20 lacs saplings were planted until December 2023, benefitting 7,400 households in the region as illustrated in Figure 21.²⁰ However, as shared by the Seva Mandir team, the saplings planted during the project period are currently in the form of plants and have not reached their full growth potential and therefore, may not be able to generate significant yield.

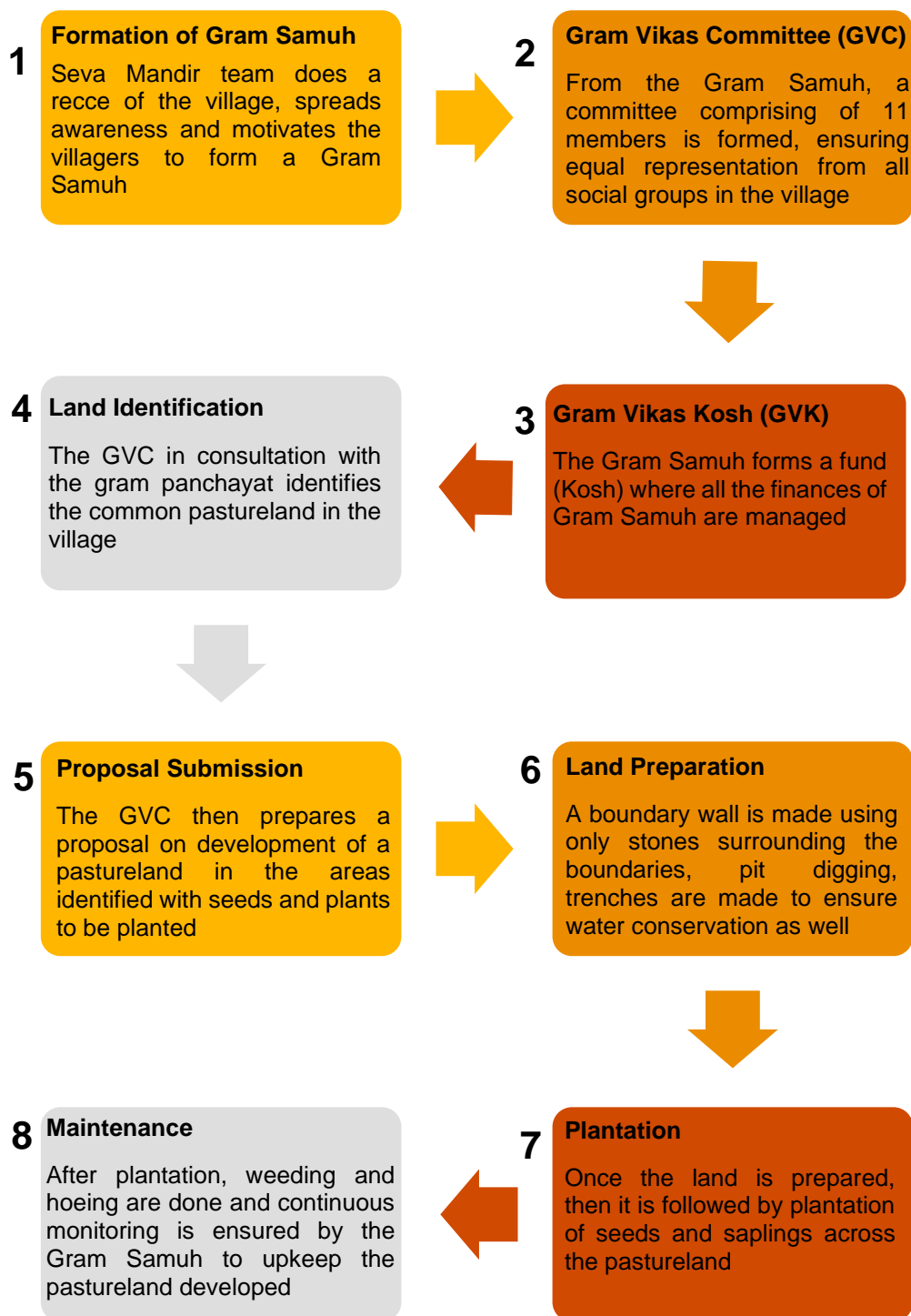
Under this project, Seva Mandir, supported by MMT Foundation, oriented villagers to adopt common pasturelands, construct contour trenches and check dams to retain moisture and a boundary wall to protect it from wildlife intrusion. Considering that this is a semi-arid region with erratic climatic conditions and the pasturelands face the risk of invasion of livestock and wildlife, **the survival rate of the saplings is estimated at approximately 70%, as per the project closure report.** Further, only those saplings/seeds are planted that can survive and withstand in the region and are native to Udaipur and Rajsamand districts. The project encompasses the entire lifecycle for rejuvenation of the land, as illustrated below:

¹⁸ Source: As per the MoU and project closure report

¹⁹ Source: As per the information shared by implementation partner.

²⁰ Source: As per the project closure report

Figure 22: Restoration of a Pastureland



About the implementing agency

Seva Mandir is a non-profit organisation based in Udaipur, Rajasthan, which supports cohesive and inclusive communities through the creation of democratic forums spanning gender, socio-economic divides and castes to encourage self-governance. Seva Mandir believes in long term and sustainable social transformation. Seva Mandir aims to improve lives and strengthen communities by engaging all members of a village in the process of self-governance, including decisions relating to, and the management of, development projects. The organisation has been working for almost 56 years and

has reached 5,00,000 people across 1,500 rural villages in four districts (Udaipur, Salumber, Sirohi and Rajsamand).

Method of impact assessment

A **mixed methodology-based** impact assessment study was conducted for the project in consultation with MMT Foundation. An inception meeting with MMT Foundation and the implementation partner was conducted to seek a detailed understanding of the project implemented. A list of requisite documents was shared with the MMT Foundation team, and a review of the documents shared by MMT Foundation was conducted.

Based on the desk review and discussions carried out, the **key stakeholders of project were identified and mapped** for capturing their opinion and feedback. The **mixed method research design** adopted for the study included **quantitative survey** of beneficiaries and **qualitative in-person/ virtual interactions** (In-depth interviews) for other identified key stakeholders.

A sample of **96 beneficiaries (72 Females and 24 Males)** was estimated at a **95% confidence level and 5% margin of error**. As the beneficiaries mobilised was higher across few locations, it was ensured that opinions of all the beneficiaries is captured hence, **a total sample of 107 beneficiaries (82 Females and 25 Males) were covered in the survey ensuring equal representation across the 2 districts**. One village from each of the two selected blocks were covered. The location covered are as follows:

Table 9: List of selected villages covered in the quantitative survey

S. No	District	Block Name	Village Name
1	Udaipur	Kherwara	Khuntwada
2	Udaipur	Badgaon	Patiya
3	Rajsamand	Kumbhalgarh	Shobhavaton ki Bhagal
4	Rajsamand	Kankroli	Tasol

The **key stakeholders covered** were directly managing or involved in the implementation:

Figure 23: List of stakeholders interviewed



Key findings

This section of the report highlights the key findings of the impact assessment study of Offsetting Carbon Footprints through plantation project as per each of the activities and interventions. It provides a basis for IRECS analysis and recommendations for the project.

▪ Respondents Profile

A total of 107 beneficiaries were surveyed during quantitative interactions, ensuring almost equal distribution in Udaipur (n=56) and Rajsamand (n=51). As **the programme was centric towards women empowerment, hence 77% (n=107) of the total respondents covered were women followed by 23% men.** 67% of the total respondents were in the age group of 25 to 50 years. Around two-third of the total respondents (62%) received no formal education and across four sampled villages only 7% (n=107) of the respondents studied beyond high school (figure 26).

Figure 24: Gender of the respondents



Figure 25: Social category of the respondents (n=107)

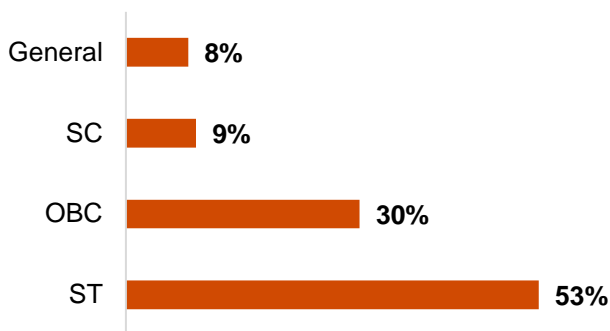
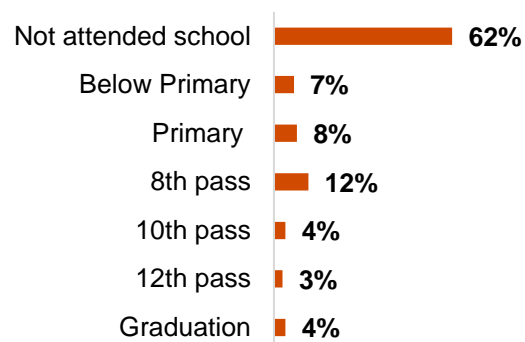
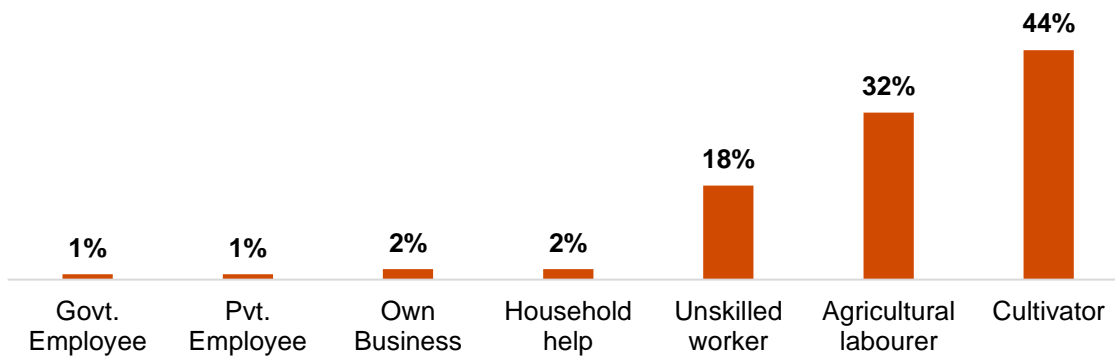


Figure 26: Respondents education level (n=107)



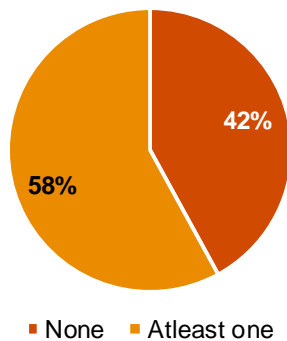
As shown in figure 25, more than half of the respondents interviewed belongs to Scheduled Tribes (53%) followed by Other Backward Classes (30%). **The respondents belonged to lower income groups as on an average the monthly income of the entire household was reported to be INR 15,000. Moreover, the average monthly income of the individuals interviewed was INR 4,500 (n=107) which resonates with the combined household income.** As depicted in figure 27 below, half (50%) of the **respondent's major source of income was from being a labourer** (agricultural and unskilled labour) followed by farming (44%) and only a handful of them were working in private or government jobs.

Figure 27: Primary source of income (n=107)



Among those who were interviewed, the average **land holding size was of 2.23 acres which is in concurrence with the lower earning level** shared above. Due to different socio-economic indicators such as lower education rate, monthly household income, less produce due to harsh climatic conditions and land ownership among those interviewed, **almost two-third (58%) of the respondents have reported that at least one person from their household had to migrate on temporary basis every year in search for alternative livelihood options** (figure 28).

Figure 28: Migration in search of alternative livelihood (n=107)



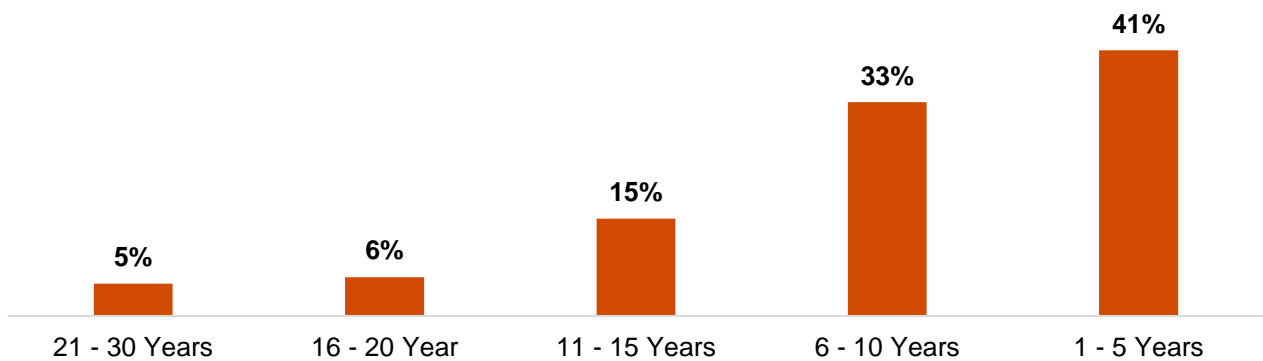
Representatives from Seva Mandir team also discussed that due to harsh climatic conditions in the sampled region, men in most of the households opt for temporary migration each year and the elderlies and women in the household are left behind for maintenance of the agricultural land (if owned any). As a result, most of the direct beneficiary in the intervention has been women who is actively involved during the monthly intervention meetings.

▪ Key activities undertaken and programme knowledge among beneficiaries

Seva Mandir has been working in the regions of Udaipur and Rajsamand districts for more than 5 decades and have been applying the same model of reviving various other pasturelands in the project villages. Under this intervention, 73 new pasturelands (60 village and 13 individual farmers land) were identified for restoration and maintenance²¹. As a result, all the villagers who were interviewed, reported to be knowing the programme and are active members of a Gram Samuh in their respective villages even before this intervention initiated. **The average years of membership in a Gram Samuh was reported to be around 8.5 years among the beneficiaries interviewed.** Moreover, some of them were part of a Gram Samuh for last 30 years, as illustrated in the figure below. This helped Seva Mandir in implementing its activities further in these villages effectively through these Gram Samuh set ups.

²¹ Source: As per the closure report shared by Seva Mandir

Figure 29: Years of association with Gram Samuh (n=107)

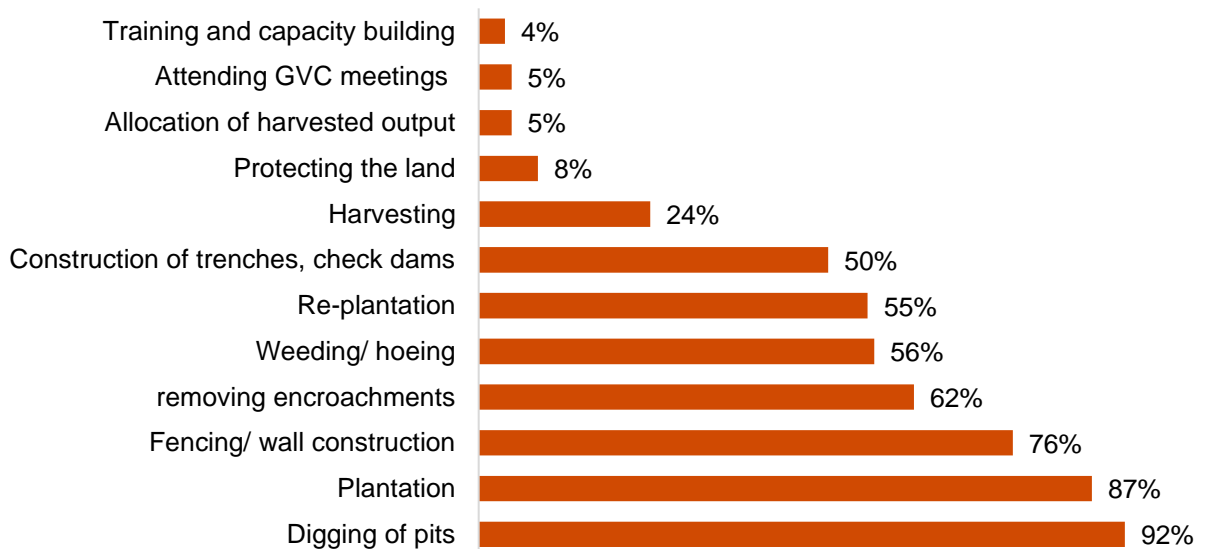


Most of the beneficiaries during the interactions reported that they came to know about this programme by Seva Mandir from their neighboring villages who already had a pastureland restored under other plantation projects conducted by Seva Mandir. MMT Foundation team added that the villagers were self-aware of the drought prone and arid climatic conditions in their respective villages as they have been struggling with less productivity in agricultural lands and subsequently surviving through shortage of fodder for livestock.

As a result, almost all the beneficiaries were well versed with the activities undertaken by the implementation partner and the Gram Samuh towards restoration of the pasturelands in their villages. The beneficiaries during the interaction, reported about the aggravated affects such as soil erosion, dry land, lesser fertility, etc. that has caused because of subsequent number of droughts and scanty rainfalls in their region leading to loss of soil and water regime in the areas further lowering the net groundwater levels, translating to low availability of fodder, fuelwood and other forest produces.

Considering the awareness of beneficiaries towards the root cause of lesser productivity in the region, they were found to be aware of almost all the activities involved in the afforestation programme as illustrated below.

Figure 30: Activities undertaken in Afforestation Programme (n=107) *



*Multiple Choice Question, Responses may add up to more than 100%

Figure 31: Check dams in the pastureland, along with stone boundary wall



When enquired about the activities involved in restoration of a pastureland (n=107), 92% of beneficiaries shared that it involved digging of pits, 87% reported plantation, 76% agreed to construction of a stone wall, whereas 62% reported removing encroachments followed by weeding/hoeing and replantation of sapling by 56% & 55% of respondents respectively.

During community interactions, beneficiaries also shared their knowledge on technicalities involved in the restoration process, **where they plant two saplings at a distance of at least 3 meters apart for**

proper growth followed by preparation of check dams and trenches that will enable the soil to hold moisture to an extent that will in turn flourish the flora fauna around them. Beneficiaries further share that **they periodically maintain the pastureland with weeding and hoeing of the unwanted invasive species that may not allow the native species planted in the pastureland** followed by replantation of those saplings which didn't survive either due to climatic conditions or due to intrusion of wildlife and livestock.

The model adopted by the implementation partner was to engage the community members in restoration of the land by involving them through Shramdaan (each member contributing a day of labour towards maintenance and repair of pastureland) or by involving them on daily wage basis. Under this intervention, the **MMT Foundation highlighted that they supported the labour costs involved in repair and maintenance of all the pasture lands and none of the beneficiary had to opt for Shramdaan during the entire duration of the project period.**

Figure 32: Plants of Baans and Palaash in a pastureland



The Seva Mandir team iterated that the intervention is centric towards the community and hence all the activities are guided as per the decisions taken by Gram Vikas Committee (GVC) in concurrence with the Gram Samuh members. This committee is elected from within the members of Gram Samuh, comprising of 7 males and 4 female members. The selection of these members is critical in nature as equal representation from all the socio-economic groups in that village is ensured. **The GVC members are responsible for maintaining the Gram Vikas Kosh (GVK – a fund created for maintaining the pastureland)** and to

decide the amount of contribution that shall be given by each household against reaping of fodder or from the amount received against the labour given to the beneficiaries each year). The amount that must be contributed back by the beneficiaries in GVK is decided by the members of GVC itself and which may differ from village to village as per the discretion of GVC, as reported by beneficiaries and implementation partner team.

Beneficiaries also discussed on the type of saplings that are planted in the region. Considering the harsh climatic conditions, only such saplings were procured from the local forest department nurseries that are generally found in the region and are known to locals already.

Summary of Impact Created

▪ Impact of restoration of pasturelands in the project villages

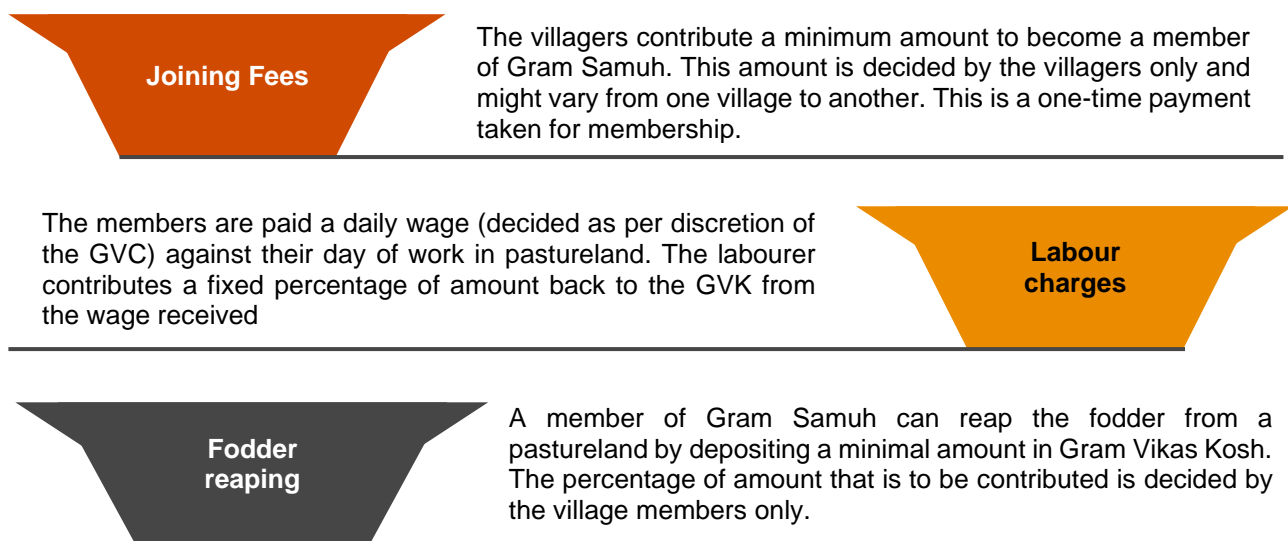
MMT Foundation with the vision of ensuring ecological conservation, climate action and empowerment of the community supported the implementation partner with afforestation programme in 73 pasturelands across Udaipur and Rajsamand districts. This initiative helped in flourishing and reinstating the flora fauna of project villages.

Beneficiaries shared that due to the intervention they were able to observe positive changes in the adopted pasturelands in their region. Activities such as building up of boundary wall, trenches, check dams addressed the issue of soil erosion as the sapling roots which **were planted was able to bind the soil together, and promotes the formation of stable soil aggregates which enhanced water holding capacity of soil.** Consequently, increasing the water holding capacity of the land as the rainwater infiltrates through the land and recharges the ground water level, restoring nutrients and **making the land fertile.**

The GVC members also added that the afforestation programme **helped in establishing forested habitats for various species of fodder and animals** through pollinators which resulted in wildlife and livestock population recovery. As the pastureland started flourishing, community was able to get an evident amount of yield in terms of fodder out of them. There was a need of an inherent management system to manage the distribution of fodder among the villagers and hence a Gram Vikas Kosh was established which benefitted the villagers economically.

Economic Benefit: The implementation partner introduced the model of a community driven intervention, making the village committee and the beneficiaries responsible for the maintenance of identified pasturelands in their vicinity. Provision of Gram Vikas Kosh (GVK) that is maintained by the Gram Vikas Samiti which is accumulated from the funds contributed by villagers (refer figure 33).

Figure 33: Sources of funding for Gram Vikas Kosh (GVK)

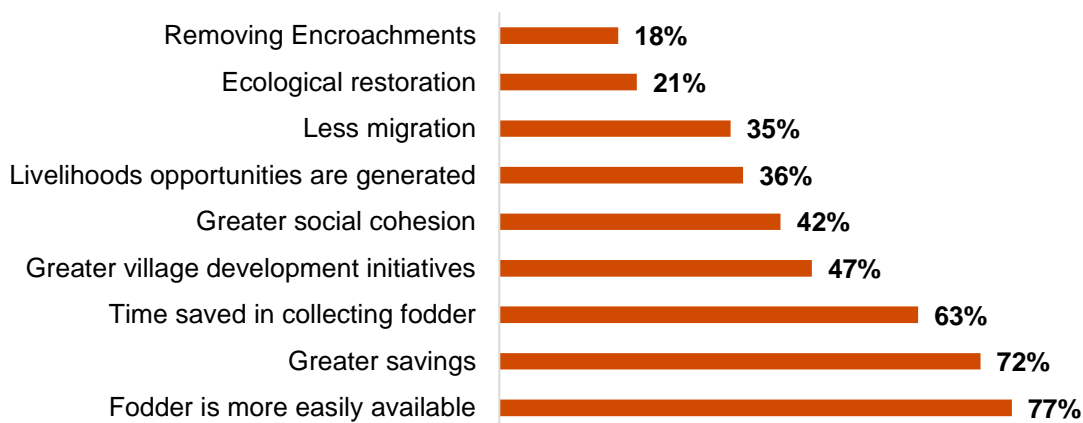


The members from Gram Vikas Committee shared that the **funds from GVK shall be used for maintenance and repair work of the pasturelands.** They understand the need to maintain these pasturelands for sustaining the saplings planted which in turn shall provide positive outcomes in the

years to come. During the project period, **MMT Foundation supported these villages with seeds, saplings, maintenance, operational costs to build and develop the land, and paid for labour charges, etc.** In this way, each of the **GVK was able to accumulate sufficient funds** from January 2019 to December 2023.

Among the villages surveyed, beneficiaries were asked about the impact generated from the intervention (n=107), 77% agreed that it resulted in easy access of fodder, 72% reported an increase in their savings, followed by saving of time in collection and fetching up of fodder (63%) from distant location (from other city mandi at times). During interactions with the community, all highlighted their agreement of identifying more common lands in their villages that can be adopted by the Gram Samuh for developing pasturelands.

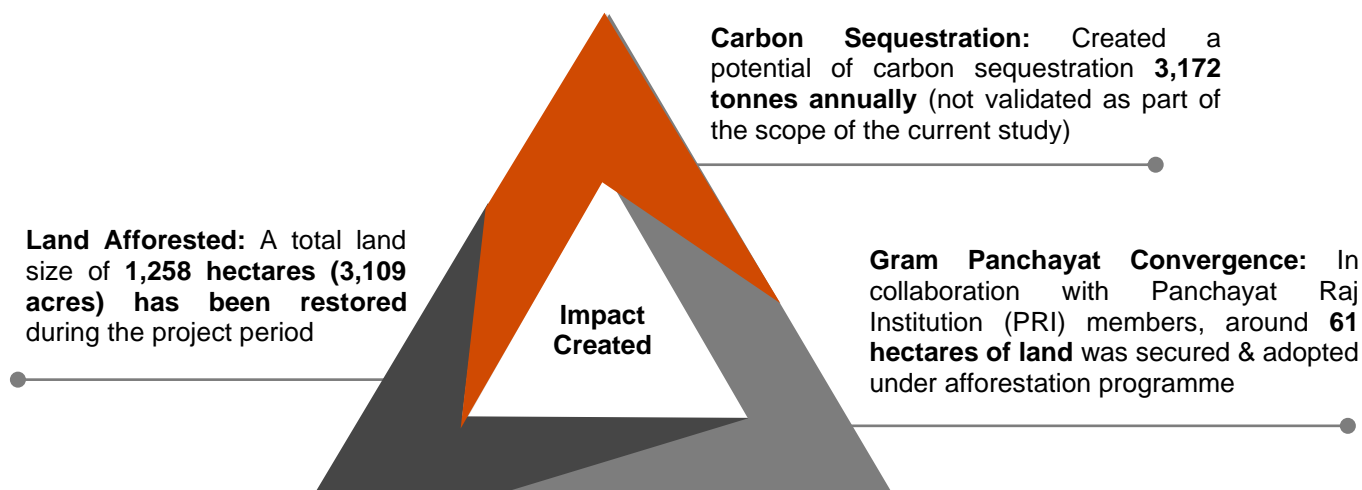
Figure 34: Overall impact from the afforestation programme (n=107) *



*Multiple Choice Question, Responses may add up to more than 100%

The implementation partner also shared insights on the positive effects of afforestation programme, where the Gram Vikas Committee with the support of local administration were able to remove encroachments from the land occupied illegally. **Seva Mandir team helped the village population realise the importance of pasturelands and benefits associated** with it which motivated the Gram Vikas Committee to initiate a dialogue with Gram Panchayat on identification and adoption of common pastures.

Figure 35: Impact of the Afforestation Programme



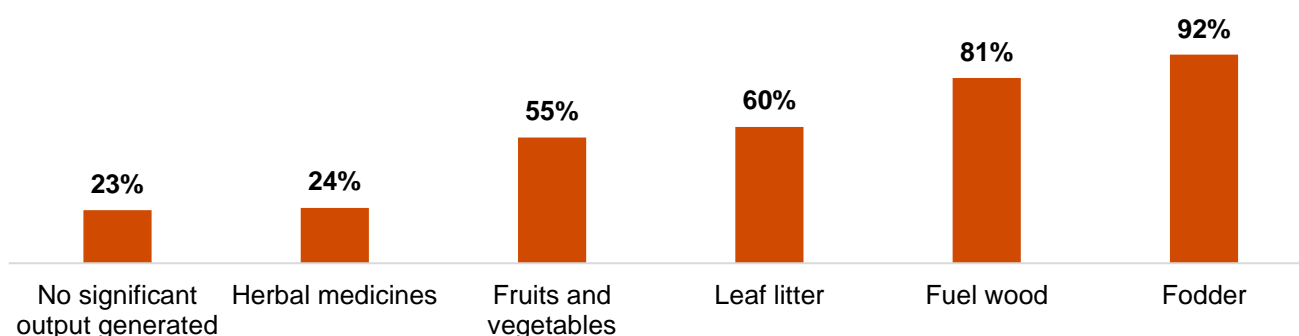
Due to the continuous effort, the intervention was able to create an impact on the community as reported by Seva Mandir team and based on the Carbon Sequestration Assessment Study supported by MMT Foundation (illustrated above – figure 35²²). However, validation of the above is not covered as part of scope of this study.

▪ **Impact of fodder harvesting from restored pasturelands**

Pasturelands before the intervention was barren and did not have much of the grass for grazing of the animals. The intervention villages are in the remote areas and the population belonged from lower weaker economic section of the society, as described by the MMT Foundation team. The nutritional status of livestock is dependent on fodder and the requirement of feed in livestock in the project villages is largely met from crop residues and by-products like grasses, weeds, tree leaves gathered from cultivated and uncultivated lands, grazing on common lands harvested fields. Livestock feed is generally classified into green fodder and dry fodder. Green fodder is cultivated and harvested for feeding the animals in form of forage (cut green and fed fresh) and dry fodder consisting of hay (dehydrated green fodder – so that it can be stored safely without undergoing fermentation or becoming moldy).

Shortage of fodder is chronic in the areas who observe scanty rainfalls and comparatively had a larger livestock. Among the beneficiaries interviewed (n=107), **almost everyone had 2 buffaloes, 2 goats and 1 cow in their household on an average across 4 sampled locations.** The beneficiaries further added that **before intervention, the fodder was available mostly in the monsoon season but was not enough for an entire year** even when combined from all the sources (crop residue from own farming land, common grazing lands, etc.) **and had to buy the additional fodder which proved to be expensive and was an extra burden on the yearly income of the household.** On an average, **a beneficiary had to travel a minimum of 5 Kms in search of fodder from their village.** The GVC member from Khutwara Village added that **it would cost them anywhere between 10 to 20 INR per bundle** which weighs roughly around 1-2 Kilograms. Considering the average number of livestock owned, **a household may require at least 400 such bundles (as reported by Seva Mandir team) on an average per year creating a financial burden on them.**

Figure 36: Type of outputs generated in the pastureland (n=107) *



*Multiple choice question, responses may add up to be more than 100%

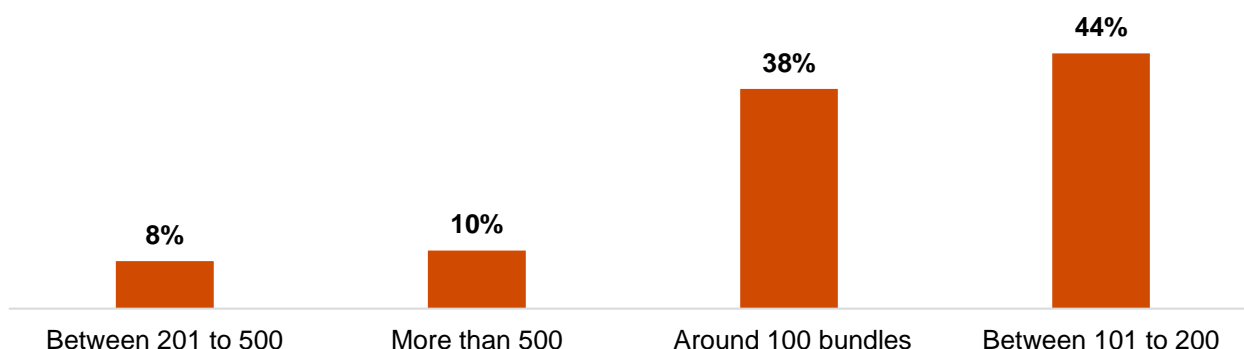
When enquired with the beneficiaries, 92% (n=107) of them reported to have gained access to fodder, followed by fuelwood (81%) and leaf litter (60%), which has been possible due to the construction of stone boundary walls, trenches and check dams. On the contrary, Seva Mandir team added that the saplings planted in the last two years of the project may not be able to generate significant yield as per its full growth potential.

²² Source: As per Carbon Sequestration Assessment Study supported by MakeMyTrip Foundation quoted in the closure report shared by MMT Foundation

Among those who reported to have gained access to fodder from the pasturelands (92%), reported that they were contributing to Gram Vikas Kosh on an average a minimal amount of 35 INR only in a year per household to reap the fodder they required yearly. This helped the beneficiaries to save a significant amount of money when compared to procuring of the fodder directly from the marketplace.

Among the beneficiaries who reaped fodder from the pasturelands (n=98), reported their satisfaction with the intervention of restoring the pasturelands as it has **helped them to fill in the shortage of fodder that they used to procure from the markets earlier**. The pasturelands now have been able to fill in that gap which in turn helps them to save money. It was reported by the implementation partner that in most of the villages, the reaping of fodder is done on an annual basis and the distribution happens equally and as per discretion of the Gram Vikas Committee of that village. As illustrated in figure 37, **around 44% of the beneficiaries were able to get between 100 to 200 bundles of fodder from the pasturelands each year**, followed by 10% of such beneficiaries who reported to receive more than 500 bundles each year. Every household on an average was able to get around **246 (each weighing 2-3 Kgs) bundles for their livestock (n=98)**.

Figure 37: Number of fodder bundles collected by beneficiaries in a year (n=98)



Out of the total beneficiaries who were asked about the impact created by the afforestation programme, 72% (n=107) reported to have been able to get greater income savings and 63% (n=107) were able to save time in collection of fodder. When enquired further, **these beneficiaries on an average were able to save at least INR 1,000 (n=77) on monthly basis and almost 2 Hours (n=67) of their time on daily basis** due to the availability of fodder in the pasturelands near to their villages respectively. As a result, they were able to **utilise the saved time and money in socio-economic upliftment activities** of their households such as in monthly expenses, in health or education, childcare and other leisure activities as illustrated in figure 38 and 39.

Figure 38: Utilising the time saved (n=67) *

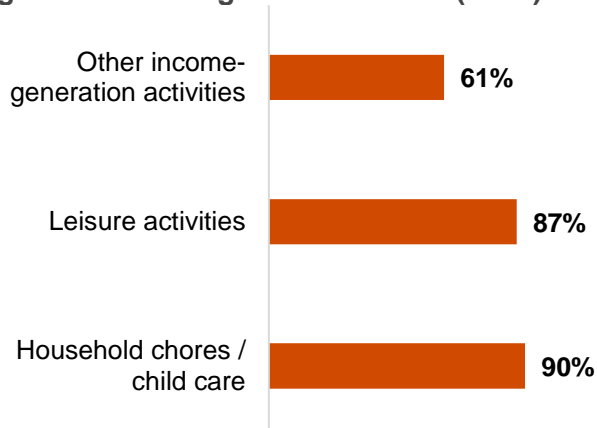
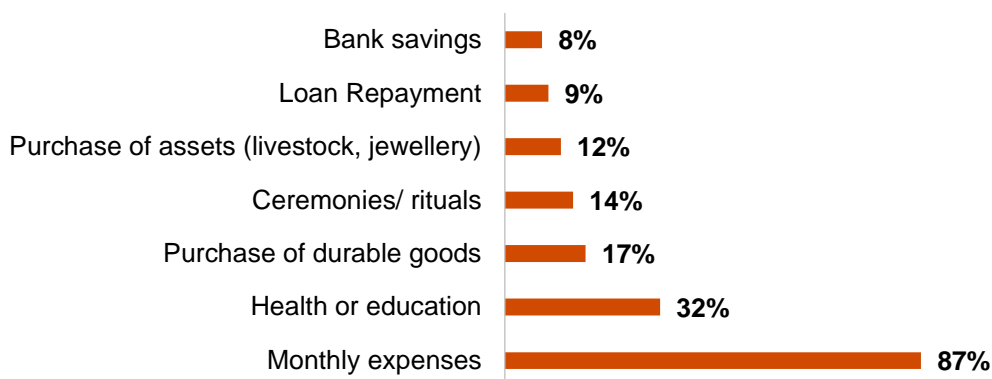


Figure 39: Utilising the saved money (n=77) *



*Multiple Choice Question, Responses may add up to more than 100%

Women during the interaction stated that due to poor economic conditions in their household, mostly the men migrate on temporarily basis every year. Consequently, **they are left responsible for managing all the household chores along with the responsibility of livestock and agricultural land (if any)**. Before the intervention, women were responsible for grazing of livestock which consumes time and energy and at the same time also poses risk of wildlife, as reported by GVC committee members. However, **due to the intervention they are now able to have ample amount of money saved, which they can utilise in monthly household expenses (87%), followed by spending towards their well-being and in education of their children (32%)**. As reported earlier, on an average beneficiary were able to save approximately 2 hours on daily basis which they utilise in childcare (90%) and in alternative livelihood generation activities, as reported by 61% of respondents (n=67).

▪ **Social change due to the afforestation programme**

Figure 40: Women beneficiaries of Tasol Village participating in FGD



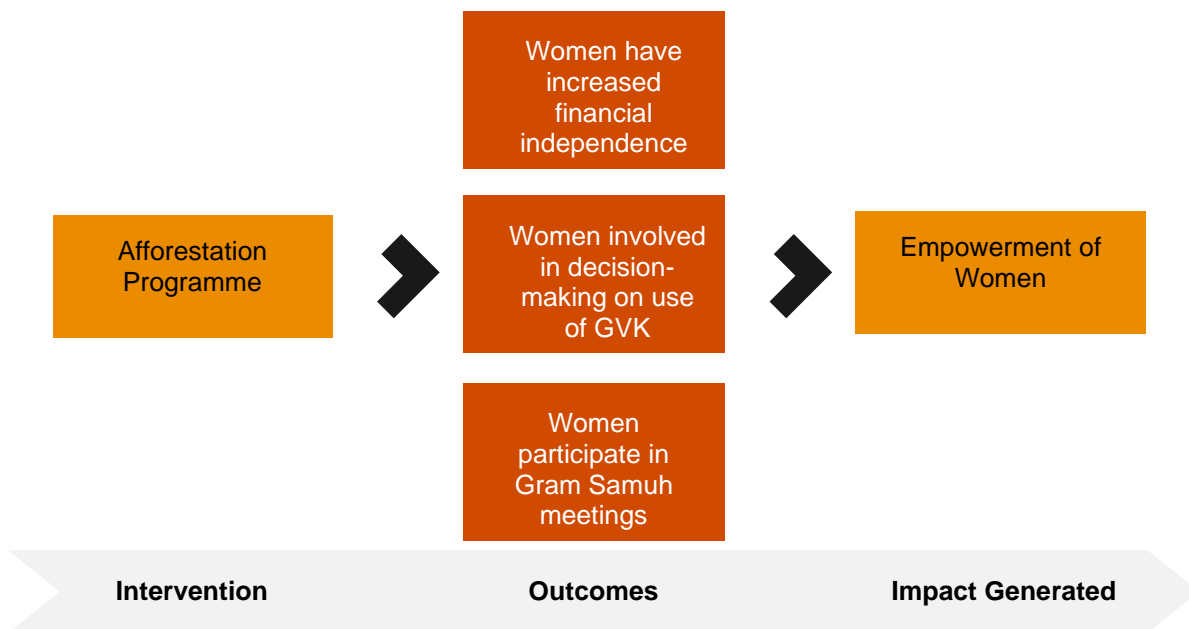
Women Empowerment: Gender inequality has been a pressing issue in Indian society caused due to poverty, patriarchal setup, illiteracy, social customs, beliefs, practices and due to lack of earning opportunities. Women in the rural setups generally are limited to household chores and are often left unheard and uninvited in social gatherings in the villages. As a result, there is almost no opportunities for them to come forward or gain confidence and be financially independent.

MMT Foundation and Seva Mandir team added that though their intervention was to

support afforestation in the project villages but has indirectly impacted in empowerment of women in the project villages. Residents during the interactions have acknowledged that due to the intervention there is a change in their socio-economic status as they are now able to save some time and money, especially the women beneficiaries. Women in the project villages, became one of the major stakeholders in the intervention as most of the males in the household were migrating to cities in search of alternative sources of income.

This intervention ensured involvement of women as the Gram Vikas Committee itself comprises minimum of 4 female and 7 male members (11 members total) across all villages, as reported by implementation partner. **During community interaction, majority of women in the villages were aware of all the activities involved with respect to restoration of pastureland.** During the intervention period, **the local community was engaged as wage labourers** for boundary wall, trenches and check dam construction, etc. **generating about 1,11,967 labour days out of which 70% of labour days were contributed by women labourers.**²³ The figure below, illustrates how the intervention has aided in women empowerment.

Figure 41: Achieving women empowerment through afforestation programme



Most of the males in the community during the interaction also supported on involvement of women in decision making related to pastureland restoration. The village sarpanch in Shobhavaton Ki Bhagal village also added that it's because of the intervention it would have been possible that people have now more open-minded approach that men and women could sit together and discuss on a common forum else this was not the case before intervention in our community. In coherence to which, 85% of respondents agrees to the participation of women in pastureland restoration efforts and 88% believed that there is a positive impact in status of women.

Figure 42: Improvement in status of women (n=107)

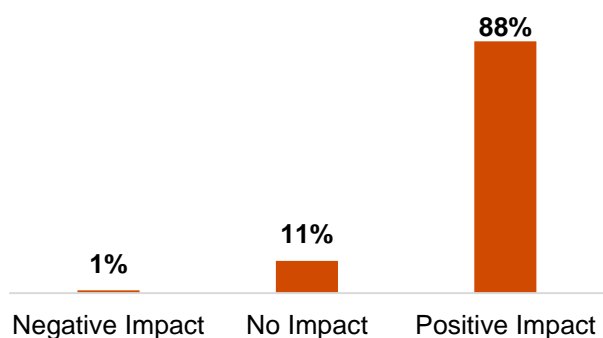
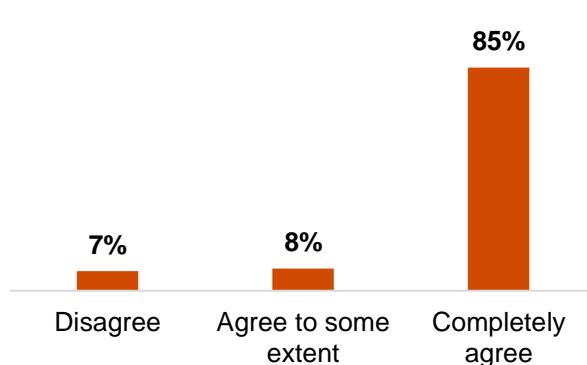


Figure 43: Women should participate in pastureland restoration (n=107)



²³ Source: As per the programme closure report shared by MMT Foundation

Social Cohesion: Among the sampled locations almost 2/3rd of the total respondents (62%) belonged to scheduled caste and scheduled tribes and as evident in the findings most of the respondents had marginal land holdings and largely worked as agricultural labourers. **Seva Mandir team added that these communities are generally victims of inequality and discrimination.** One of the GVC member added that pastureland is common to all which act as a source of fodder for the community and therefore is an area of common interest. As a result, **the intervention has brought the different social groups to come together and work on shared values towards adoption and restoration of pastureland.**

The Sarpanch of Tasol village added that the pastureland that was restored in their village under MMT Foundation was earlier used as marble extraction mines, but the villagers came in together and due to continuous liasoning with Gram Panchayat and Tehsildar the mine was closed, and the land was brought under restoration.

Figure 44: Equitable social relation developed among communities (n=107)

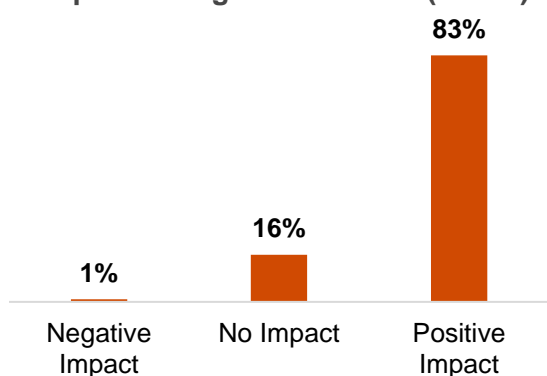
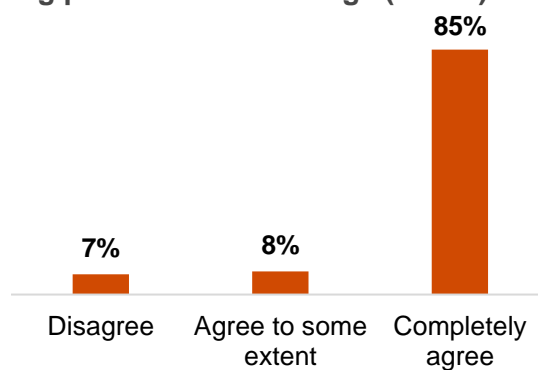


Figure 45: Collective action is essential to bring positive social change (n=107)



Around 83% of the respondent believed that because of participating in this programme, there has been more equitable social relations among different communities. Whereas 84% were in complete agreement that collective action is essential to bring about positive social and environmental changes.

IRECS Analysis

Basis the interactions with key stakeholders and a desk review of the documents, the impact of the project has been evaluated along the IRECS framework. The IRECS analysis summary has been presented in the table below:

Table 10 : IRECS Analysis: Offsetting Carbon Footprint through Afforestation Project

Parameter	Assessment from study
Inclusiveness	<p>The intervention is meant for all the households in the villages and ensure equal representation from different communities in the village to form a Gram Vikas Committee. The Gram Vikas Committee also comprises of women representatives that ensure their involvement as well for any decision making involved for the use of Gram Vikas Kosh in management of pasturelands. Most of the beneficiaries have marginal land holdings, and the distribution of fodder from the pasturelands is kept autonomous and is as per the discretion of Gram Vikas Committee of that village. The intervention is serving everyone in the community irrespective of their socio-economic conditions.</p>
Relevance	<p>The intervention regions of Udaipur and Rajsamand districts is prone to drought and scanty rainfall. Due to limited water availability and marginal land holdings, the villagers were not able to meet the demand of fodder for their livestock on yearly basis. Shortfall of fodder was earlier met by procurement from the city, which would cost them anywhere between 10 to 20 INR per bundle. However, post restoration of the pasturelands, every household was able to get around an average of 246 bundles (each weighing 2-3 Kgs) for their livestock (n=107) against a marginal cost of INR 35 (on an average) that must be submitted by a household in GVK for reaping the fodder.</p> <p>The intervention helped in restoration of pasturelands through the construction of check dams and trenches that are used to hold the moisture in the soil. Creating an environment that can support flora and fauna of these pasturelands and areas around it, making the intervention relevant for the community.</p>
Effectiveness	<p>Afforestation programme was introduced with the intention of ensuring enough fodder for the beneficiaries. In comparison to previous conditions that on an average a beneficiary had to travel at least for 5 km in search of fodder earlier.</p> <p>However, the intervention now has been able to fill the shortage in a year. On an average, against a nominal cost of INR 35 incurred on an average by a household in a year to reap the fodder, these beneficiaries were able to save at least 1000 INR (n=77) on monthly basis and almost 2 hours (n=67) of their time on daily basis due to the availability of fodder in the pasturelands near to their villages. As a result, they were able to utilise the saved time and money in socio-economic upliftment of their households.</p> <p>The beneficiaries during the interaction reported about the aggravated affects such as soil erosion, dry land, lesser fertility, etc. that has caused because of subsequent number of droughts and scanty rainfalls in their region leading to loss of soil and water regime in the areas further lowering the net groundwater levels, translating to low availability of fodder, fuelwood and other forest produces. Due to the arid climatic region, the vegetation in the area is largely dependent on rain falls only and with no measures in place the villagers were not able to store the rainwater earlier. However, due to intervention like preparation of check dams, contouring and trenches in the pastureland, helped in restoring the ground</p>

Parameter	Assessment from study
	water levels to an extent that it can support the growth of saplings and fodder in the region. Subsequently aiding the community in large.
Convergence	<p>The programme was able to converge with Gram Panchayat and Tehsildar for obtaining the land from encroachments. Around 61 hectares of such land was obtained from encroachers, as per the implementation partner. The Sarpanch of Tasol village shared that due to their perseverance and because of the support shown by PRI members they were able to put an end to the marble mine that was in their pastureland.</p> <p>All the saplings of native varieties that were able to withstand with the harsh climatic conditions for the pasturelands were procured from local forest department nurseries.</p>
Sustainability	<p>The intervention has been able to develop the intent among the community to continue supporting the Gram Vikas Kosh either through contribution from the daily wages earned in the pasturelands or through some amount charged to avail the facility of reaping the fodder for their livestock. Hence enabling the community to maintain a self-sustaining fund management system for years to come.</p> <p>MMT Foundation through this intervention, supported 73 pasturelands with maintenance, labour wages, saplings procurement and repair costs for the entire project period of 5 years, enabling the GVK fund corpus to grow and sustain for future repair and maintenance cost.</p> <p>The pasturelands have been equipped with trenches and check dams to hold moisture in the land, saplings planted are able to prevent soil erosion that has aided in restoring underground water levels. As a result, there is enough amount of fodder available for the livestock to reap within the implementation period, followed by the produce that shall be obtained from the trees planted shall ensure the sustainability of the intervention in future. Considering the nature of intervention, survival rate of the plants will be a crucial factor as it is subject to rainfall in the region and due to intrusion caused by wildlife.</p>

Suggestions

- Although the pasturelands are protected by a boundary wall, MMT Foundation should additionally focus on providing tree protection cover for saplings in the initial stages of plantation to avoid potential damage by animals (both livestock and wildlife).
- As the programme involves planting of trees and reaping fodder from these pasturelands, MMT Foundation should also focus on convergence with various government agencies such as Indian Grassland and Fodder Research Institute (IGFRI) or National Bank for Agriculture and Rural Development (NABARD) on alignment of the intervention with National Afforestation Programme and also to brainstorm on use of high yielding hybrid fodder seeds and native trees that can survive the harsh climatic conditions in Udaipur and Rajsamand districts.
- With respect to operationality and execution, current intervention model relies completely on the discretion of Gram Samuh and Gram Vikas Committee on identification of pastureland, liaisoning with gram Panchayat and tehsildar on NOC for a new pastureland, collection and usage of funds collected in GVK, etc. As a result, the processes may differ from one village to another. MMT

Foundation should intervene with the implementation partner to devise a mechanism to bring in uniformities across different Gram Samuh's and that will again benefit in identifying best practices and exceptions if any.

Limitations

- An evident limitation was to assess the viewpoint of beneficiaries on the saplings planted. As the plants are currently at pre-mature stage and have not yielded any output as per its full growth potential that may be used by beneficiaries in any form. Hence, limited impact areas could be captured from this aspect of the intervention.

3.4. Project 4: Zero-Waste Tourist Destination: Sahastradhara

About the Project²⁴

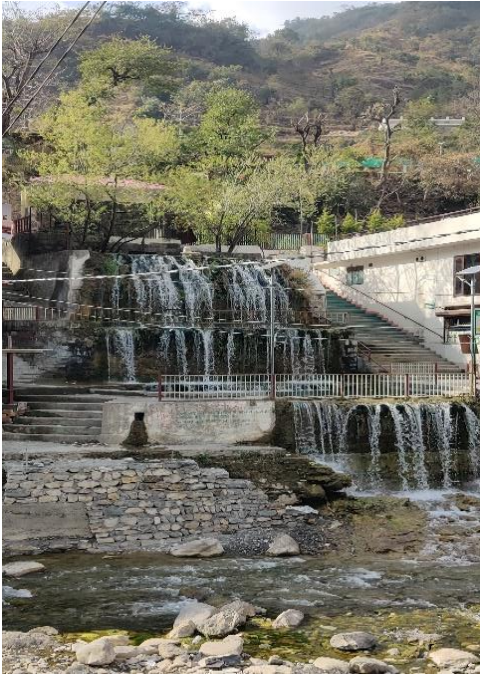


Figure 46: Sahastradhara Falls

Fifteen kilometres from Dehradun in the state of Uttarakhand, Sahastradhara, meaning ‘thousand-fold spring’, is a scenic waterfall. From March to July every year, it attracts tourists for a variety of reasons – its beauty makes it a popular picnic spot; the sulphur waters are believed to be therapeutic and cure skin ailments; and the temples draw religious communities.

The growing tourist population over the years created an enormous problem of pollution and degradation of natural resources in the area. Tourists would throw trash along the roads, into the forest area, and in the river. There were pockets of trash everywhere, including glass bottles, plastic bags, disposable containers, and food waste, leading to a monkey menace.

The market area is filled with shops, both permanent and temporary that sell food, beverages, groceries, clothes, and religious and handicraft items. During the tourist season, there are more than 300 shops, including mobile push carts.

Restaurants would sell food in plastic containers and plates, which were inexpensive and convenient. Businesses had no facility to manage their waste, and would **either dump it in the market itself, burn it, or dispose it in the river or nearby forests**. This led to the **emergence of ‘black spots’** in different sections of the market, where 10-12 shops would dump their waste in an empty area and tourists would add their trash to these piles of waste.

Households in the area also largely burnt their waste, which was **a risky practice as the region is hilly and there is the danger of setting off forest fires**. Animals would rummage through the trash dumped in fields and there was often a **bad odour emanating from the accumulated waste**. People had limited understanding of waste management and the effects of dumping of waste in open areas.

A tractor would carry the trash to a dump site every month. The market area would become increasingly filthy with the higher volumes of waste until the monsoons would arrive each year and the river would flow with great force, carrying with it all the plastic bags, packets, and glass bottles to the neighbouring state of Uttar Pradesh.

In this context, MakeMyTrip Foundation, along with Waste Warriors Society (WWS) as the implementing partner, initiated a project to **“support and empower the local community to alleviate environmental issues and social stigmas caused by mismanagement of solid waste in the territory of Sahastradhara.”**²⁵ Through their efforts, they wanted to make Sahastradhara a clean location that would enhance the tourist experience, and further, get the local community to realise the difference they could bring about by managing their waste responsibly.

²⁴ Based on interactions with the MMT Foundation Team and Waste Warriors Society (WWS) Programme Team and from the MoU signed between MMT Foundation and WWS in July 2019.

²⁵ From the MoU signed between MMT Foundation and Waste WWS in July 2019.

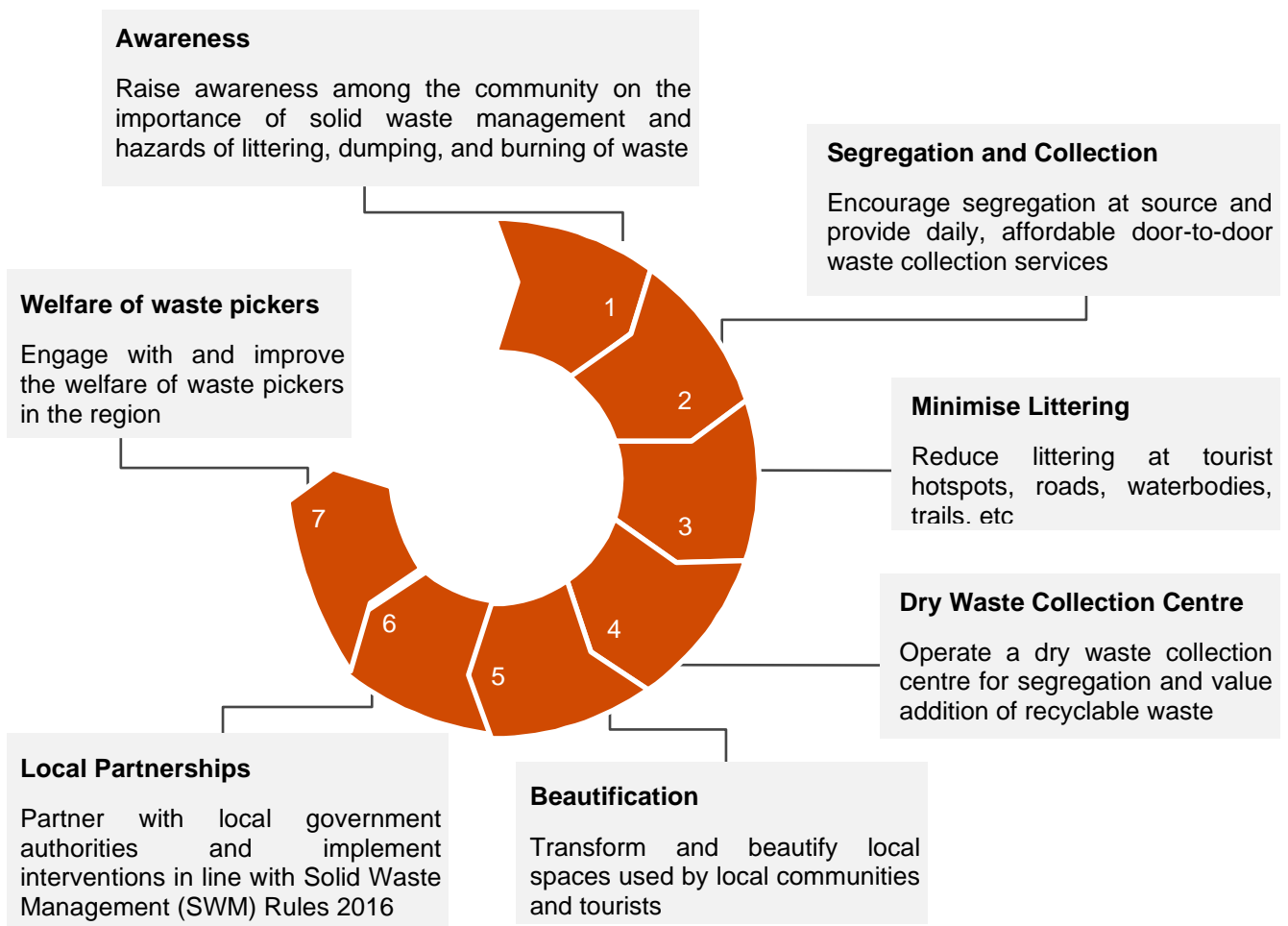
A three-year project was envisaged, from **July 2019 to June 2022**, and was executed **in alignment with the Destination Management Committees** of Uttarakhand, a government initiative to boost tourism in locations such as Sahastradhara.²⁶

Figure 47: Zero Waste Destination – About the Project



The main objectives of the project are presented in Figure 48.²⁷

Figure 48: Key Project Objectives



²⁶ From the MoU signed between MMT Foundation and WWS in July 2019.

²⁷ From the MoU signed between MMT Foundation and WWS in July 2019.

About the Implementation Partner

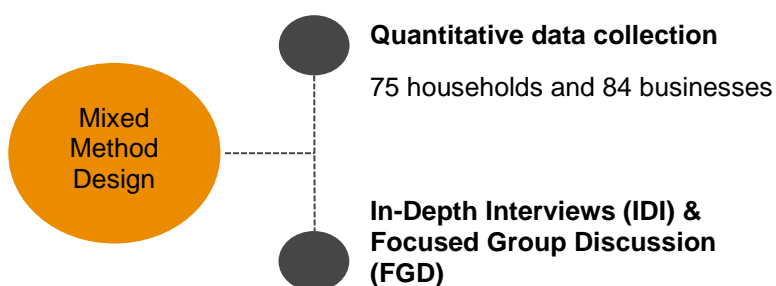
Waste Warrior Society (WWS) is a non-governmental organisation founded in 2012 that works on **solid waste management** through direct action, awareness generation, community engagement programmes, policy advocacy and long-term collaboration with the government.²⁸ **Headquartered in Dehradun**, they work to bring about systemic change to solve the waste management crisis in the Indian Himalayan Region.

Method of Impact Assessment

PW carried out an impact study to gauge the impact of the intervention on the area and the community from July 2019, when the project was initiated, to June 2022, when it ended. An **inception meeting** was held with the MakeMyTrip Foundation team to understand the background of the project and the activities undertaken during the assessment period. Post the meeting, a **list of requisite documents for desk review** was shared with the MMT Foundation team. Basis the documents received²⁹, the team carried out the desk review.

The PW team worked on the development of a **mixed methodology** for evaluating the project, which included a desk review and qualitative and quantitative methods for **capturing stakeholder opinion and feedback** through pre-approved tools.

Figure 49: Methodology for Impact Assessment



Out of total of 322 businesses and 185 households who participated in the programme across Raipur block, a **quantitative survey was conducted with 84 businesses and 75 households** covering all project activities in the intervention areas. The overall sample was estimated at a **95% confidence level** and a **10% margin of error**. Simple random sampling was used for selection of sample beneficiaries. The same was discussed and agreed with the MMT Foundation Team.

A plan was developed for **interactions with the mapped stakeholders**. As depicted in Figure 50 below, **In-Depth Interviews (IDIs)** were conducted with the Waste Warriors Society programme team, a member of the Zilla Panchayat, the President of the Business Association of Sahastradhara, Green Workers, and an active citizen ('Swachhta Ke Sipahi'). A **Focused Group Discussion (FGD)** was conducted with some members of households of Dhanaula. PW's team physically visited Sahastradhara to conduct interactions with these stakeholders. In addition, a **virtual interview** with the MakeMyTrip Foundation team was undertaken to develop a holistic understanding of the project impact.

²⁸ From the MoU signed between MMT Foundation and Waste Warriors Society in 2019 and WWS website: www.wastewarriors.org

²⁹ These include the agreement between MMT Foundation and Waste Warriors Society, Waste Warrior Society Project Reports 2020-21 and 2021-22 and an impact study undertaken in April 2023 by White Kettle Consulting Pvt. Ltd.

Figure 50: Stakeholder Interactions for the Study



Key Findings

Profile of the Participants

To understand the impact of the project interventions, 159 respondents were surveyed. They include 75 households and 84 businesses, who run permanent shops, and fixed and mobile push carts (thelas), as seen in Figure 51. Of the 84 businesses, **over one-third (36%) are restaurants, 15% are grocery stores or beverage stalls and 11% are clothing or religious artifact stores.** A small percentage of the businesses sell hardware, electrical goods, toys and fruits or run salon/ space services.

Figure 51: Type of establishment (n=159) **Figure 52: Type of Business (n=84)**

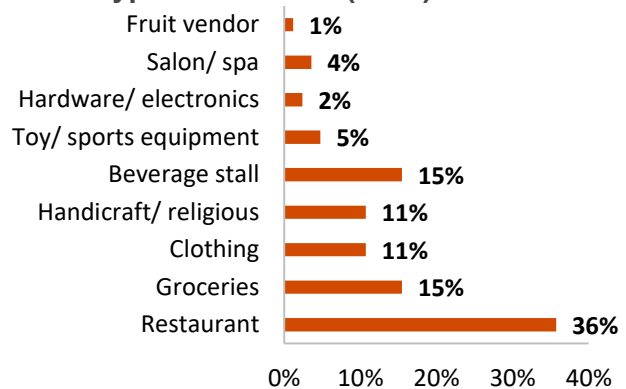
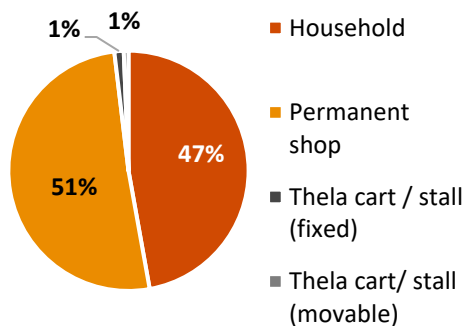
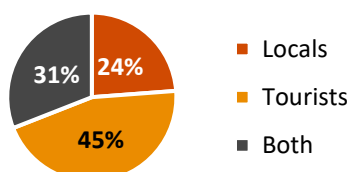


Figure 53: Main Clientele for Businesses (n=84)



All 84 businesses reported the income earned from the establishment to be their **primary source** of income.

While 24% of the businesses cater primarily to the local community and 45% to tourists, the remaining 31% reported that they cater to both groups of people, as shown in Figure 53.

Respondents were asked to provide a division of the total waste they generate, according to these categories:

- Dry waste – paper, cardboard, plastic, glass, metal, cans, etc.
- Wet waste – kitchen waste, food waste, tissue papers and leaf litter
- Hazardous waste – which includes sanitary waste like diapers and sanitary napkins; e-waste like tube lights, bulbs and batteries; and other hazardous wastes like cans of old paints, used oil, cleaning solution, etc.

Figure 54: Division of waste into different categories for households (n=75)

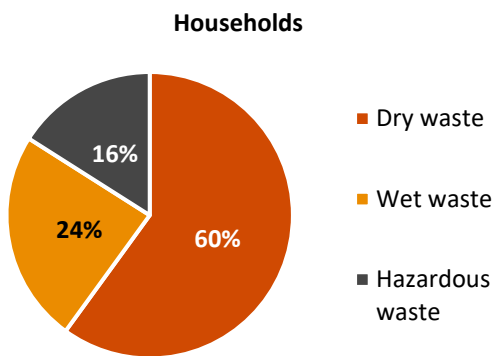
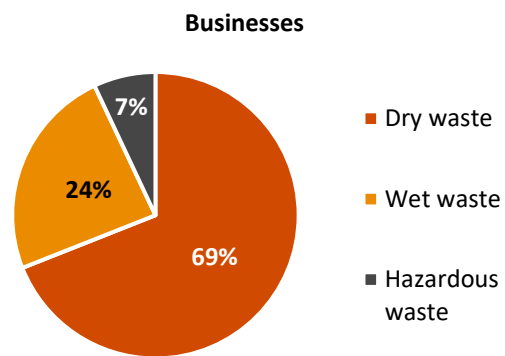
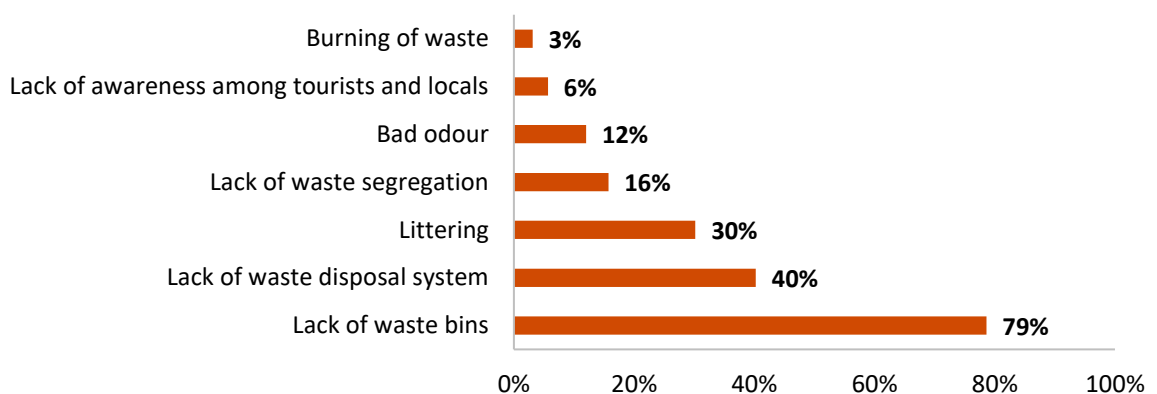


Figure 55: Division of waste into different categories for businesses (n=84)



As seen in figures 54 and 55, for households, the **proportion of dry waste is 60%**, wet waste is 24% and hazardous waste is 16%. For businesses, **69% of their total waste is dry waste**, 24% is wet waste and 7% is hazardous waste.

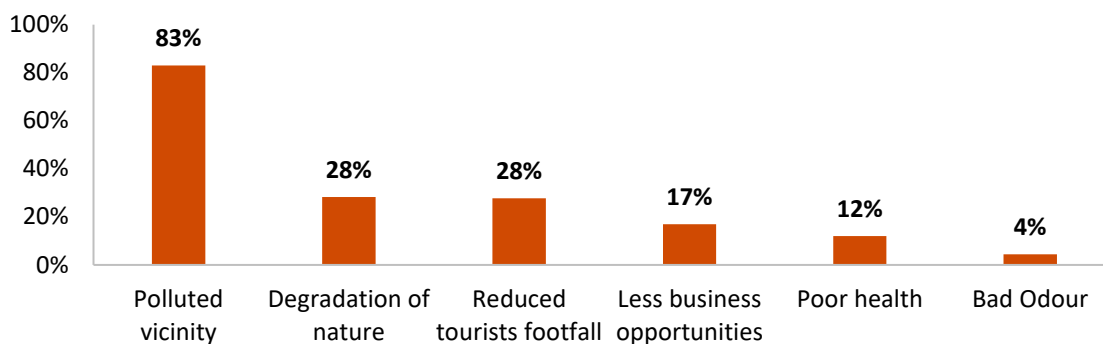
Figure 56: Condition in Sahastradhara before the intervention (n=159)



*Multiple Choice Question, responses may add up to more than 100

When asked to recall the situation in Sahastradhara before the intervention began in July 2019, a large percentage of the respondents recollected the absence of waste bins in the area (79%), absence of waste disposal systems (40%), lack of waste segregation practices (16%), and the lack of awareness among the community about waste management itself (6%). 30% recalled the practice of littering, 12% the presence of a bad odour and 3% recalled that waste was burnt. This is shown in Figure 56.

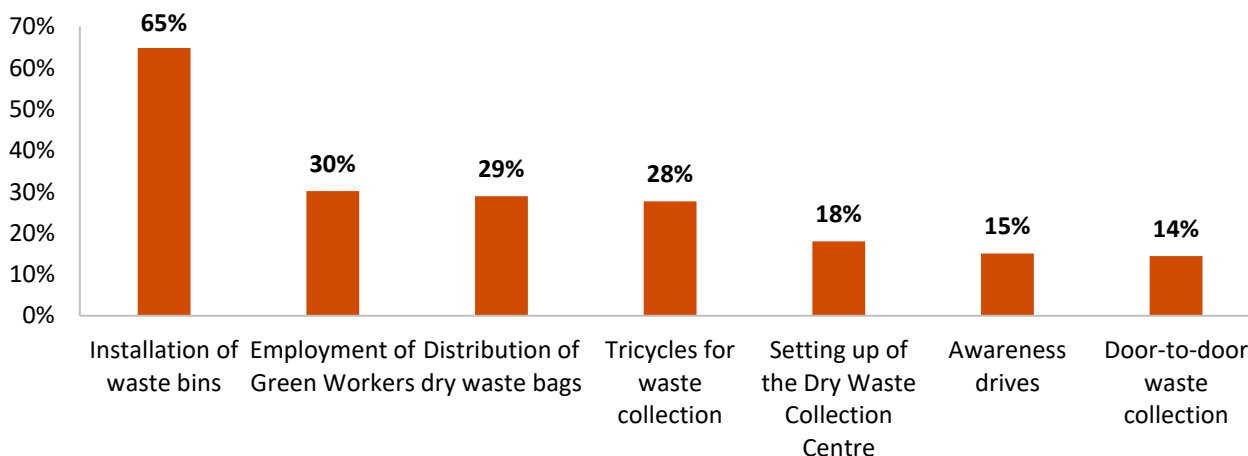
Figure 57: Effects of littering, dumping and burning of waste (n=159)



*Multiple Choice Question, responses may add up to more than 100

Due to the lack of awareness, waste bins, segregation and disposal systems prior to the intervention, **there was a high degree of pollution in the vicinity, as stated by 83% of the respondents.** The degradation of natural resources in the region was cited as an environmental impact by 28%. In terms of the economic impact, **28% felt that there was reduced tourist footfall and 17% felt that business opportunities were reduced.** Poor health was also cited by 12% of the respondents.

Figure 58: Components of the project intervention (n=159)



* Multiple Choice Question, responses may add up to more than 100

Figure 58 reflects the components of the intervention recalled by the respondents. Almost two-thirds (65%) recalled the **installation of waste bins**. Nearly one-third recollected **the employment of Green Workers to collect waste (30%)** along with the **distribution of waste bags** to households and businesses to segregate waste (29%) and use of **tricycles for waste collection (28%)**. The dry waste collection centre, which was set up in the last quarter of the intervention period was recollected by 18%.

Summary of Impact Created

- **Improved awareness and community participation through awareness sessions and engagement activities on waste management**

Respondents were asked how they heard about and got involved in the intervention set up by MMT Foundation and Waste Warriors Society. They were able to recall a wide variety of strategies adopted for awareness generation and community engagement. The most common method, as seen in Figure

60, was through the **clean-up drives (67%)** organised at the initiation of the project. **Signboards (42%)**, high visibility **murals and art structures (21%)** and **placards (9%)** were also important components in generating awareness. **Rallies, campaigns, and training sessions** held periodically with the business association, active citizens, and other civil society organisations, were a method of engagement reported by 25% of the respondents. **Swachhta Ke Sipahi**, or active citizen of the community played an important role in spreading information about the programme (11%).

Figure 59: Types of community engagement and awareness raising sessions recalled (n=159)

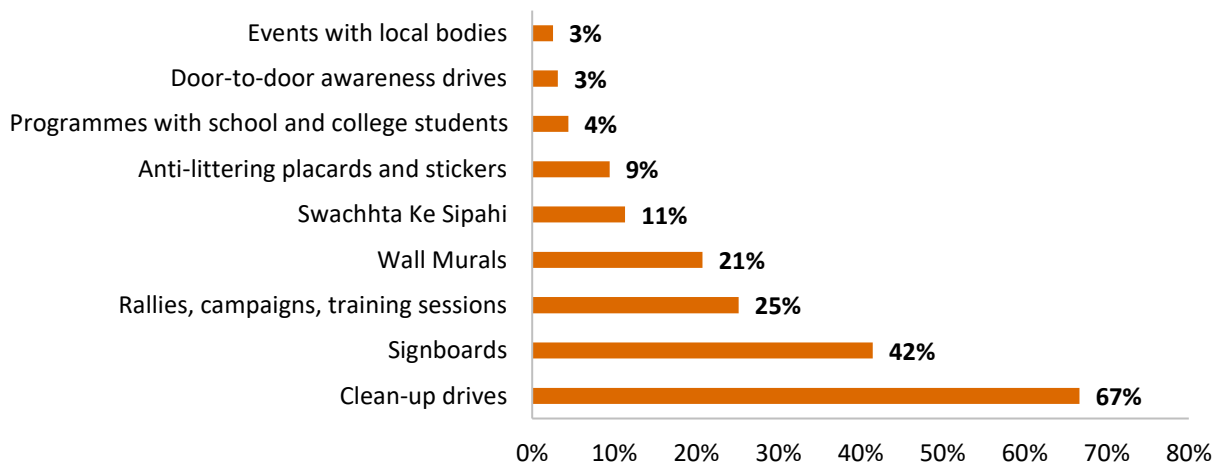


Figure 60: Signage installed by MMT Foundation



According to MMT Foundation, the project was initiated with an inaugural event that was presided over by government representatives including the Sub-District Magistrate, the District Tourism Officer, representatives from the irrigation department, etc., and attended by the local businesses, who pledged their support towards sustainable waste management. Following this, a **clean-up drive was organised to clear out waste from two existing dump sites that had piled up over twenty years** and the local community participated in this drive.

MMT Foundation and its implementation partner went **door-to-door and talked to every household and business about the project** and why their participation was important, and alongside, distributed sacks for collecting their dry waste. Different sections of the community were engaged through meetings, clean-up drives, games and events, and the importance of waste management was emphasised. Women’s Self-Help Groups were made aware about hazardous waste like sanitary napkins and diapers. Clubs were initiated in schools and competitions were held for students. MMT Foundation also launched a **Clean Business Programme where they featured businesses that were following waste management norms** on their social media page.

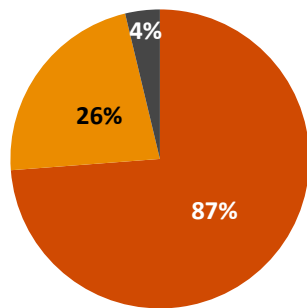
Figure 61: High visibility murals at the marketplace



A **wall mural painting competition** was held for children, who painted thought provoking messages on the protection of the environment. The President of the Business Association recollected that the involvement of school children had a major effect on his participation and made him realise his responsibility in waste management. The business association took it one step further and made it a point **to educate new businesses about the programme** and the importance of segregating waste. He also created a criterion for **membership in the union**, requiring members to segregate their waste

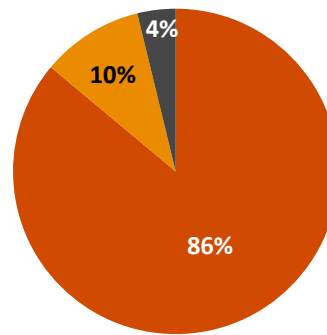
and contribute towards cleanliness initiatives.

Figure 62: Focus of awareness programmes (n=159)



- Importance of waste segregation
- Importance of composting and recycling
- Health risks from littering & burning waste

Figure 63: Benefits of awareness programmes (n=159)



- Increased knowledge of waste segregation
- Reduced littering & burning of waste
- Improved health and reduced frequency of illness

* Multiple Choice Question, responses may add up to more than 100

As raising awareness was an important component of the intervention, respondents were asked about the focus of the awareness sessions and community engagement activities. As seen in Figure 62, 87% of the respondents stated that the sessions focused on the **importance of waste segregation** and the effects of dumping and littering. The importance of **composting of wet waste and recycling of dry waste** was seen as a focus area for 26% of the respondents and the **health risks** associated with the burning of waste by 4%.

Alongside the focus areas, respondents were also asked what they perceived to be the benefits of the awareness sessions and community engagement activities (Figure 63). While majority of the respondents – **86%** – stated that **there was greater knowledge about waste segregation**, the rest stated that reduction in the practices of littering and burning of waste (10%) and improved health (4%) were the main benefits.

In addition to holding sessions on composting wet waste, the implementation partner also organised **exposure visits to Harrawala, a material recovery facility** located 25 kms from Sahastradhara, so

that community members could understand how dry waste is processed. They felt that such practical demonstrations were important in convincing them on the need for waste segregation.

One of the Swachhta Ke Sipahis (active citizens) shared that initially, community members were unwilling to participate in meetings and would not show up when meetings were organised. He needed to personally rally members of the community to attend and send messages

“

They made us aware that what we consider as waste can be used for many different purposes. This helped us realise why we need to separate wet and dry waste.

”

Swachhta Ke Sipahi

“

If they just explained it to us, we would not be convinced. When we saw what happens, we realised why dry waste needs to be recycled/upcycled.

”

Community member

through WhatsApp groups. However, once they attended, they were drawn by the **engaging manner in which activities were conducted and concepts were explained** by the implementation partner – this, according to him, was key in motivating people to participate and changing their mindset. Every respondent agreed that the awareness and community engagement activities were useful in achieving programme objectives.

▪ **Established a waste collection system and empowered Green Workers to collect waste**

MMT Foundation set up 50 dustbins in different areas of Sahastradhara and distributed 600 reusable sacks for dry waste disposal. As explained by the implementation partner, **the segregated waste was collected every day from businesses in Sahastradhara Market and thrice a week from households**, as the former generated a higher volume of waste and had limited options to store waste until pick up. Further, shopkeepers and hotels gave both wet and dry waste as they did not have the facility to compost wet waste and were used to the practice of burning it. Households were only allowed to give dry waste and were expected to feed wet waste to livestock or compost it. The waste was transported by truck to the segregation and processing facility.

Green Workers were employed to facilitate the waste collection and their role involved daily collection of waste as well as cleaning of the surroundings. Mostly members of the waste picker community, the project aimed at **providing them with a dignified livelihood opportunity**. They were given a uniform, ID card, gloves, shoes, and other safety measures, and earned a monthly salary in addition to insurance and other benefits. Members of the community would hand over their segregated waste to the Green Worker. Initial challenges in terms of lack of cooperation or timely handing over of waste were addressed by securing the cooperation of key persons, including the Pradhan of the Gram Panchayat of Dhanaula and a Zilla Parishad member.

“

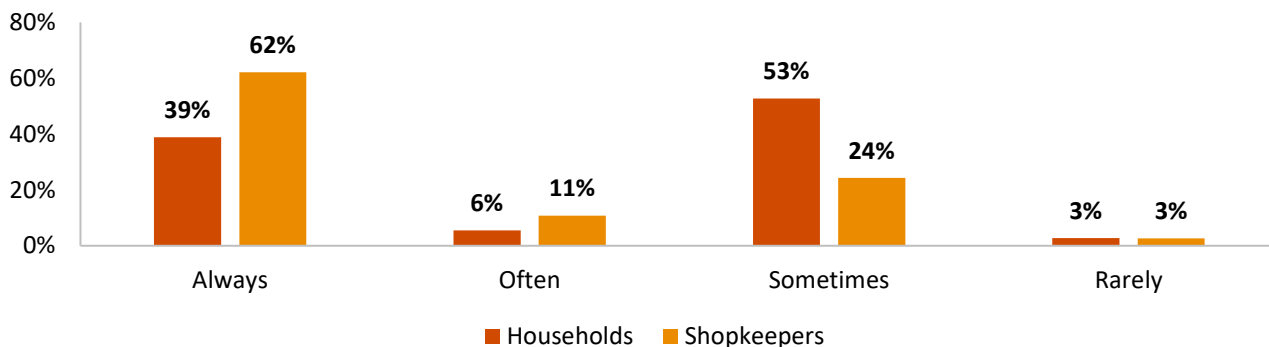
Now, people understand that they must segregate waste and store it until the Green Worker comes to pick it up. They know what happens to several types of waste and which kind can be recycled. Earlier, they only knew that they could burn their waste. This is a positive behavioural change.

”

Implementation Partner Team

One of the Swachhta Ke Sipahis shared that he repeatedly explained the value of this intervention and offered to pay the user fees on behalf of those who were not convinced. Eventually, most members of the community began to segregate their waste.

Figure 64: Response on timely collection of waste by Green Workers (n=79 households, 84 businesses)



As seen in Figure 64 above, the response on whether Green Workers collect waste in a timely manner varied between households and businesses. While 62% of the businesses believed **Green Workers always collected waste on time**, only 39% of the households felt the same. On the other hand, more than half of the households (53%) believed that Green Workers are sometimes frequent, whereas the same for businesses was under a quarter of the respondents (24%). This could be attributed to the design of the project, where waste collection from businesses was planned as a daily activity and was undertaken 2-3 times a week from households.³⁰

THE STORY OF A GREEN WORKER

Rajesh* has been involved with the project for the last 5 years. Initially, he did not know much about waste segregation but learned about how different objects are to be segregated and recycled when he was employed as a Green Worker. He went on to explain this to households and businesses when he collected waste as part of the project intervention. Some members were supportive while others refused to cooperate. Some would even get angry about needing to handle their own waste. **He had to repeatedly explain why they needed to segregate waste and that there would be no filth or odour if they did so.** Eventually, people understood.

MMT Foundation and WWS have supported Rajesh by providing **uniforms, gloves, and shoes. In addition to his monthly salary, he gets health insurance, social security benefits, and free medicines for his health treatment.**

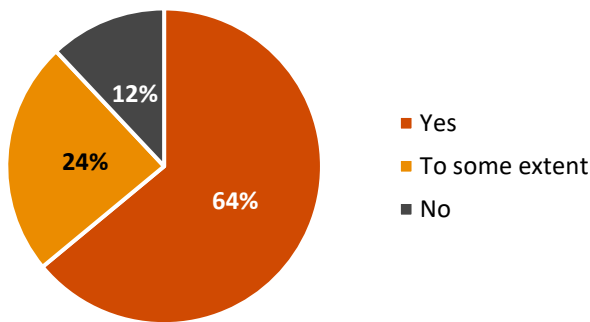
Rajesh works from 8am until 6pm. He drives a vehicle that **covers 200 households and businesses** every day and during the season, **collects approximately 5 quintals or 500 kgs of waste daily.** He observes that earlier, there would be a mountain of trash in Sahastradhara and pollution resulting from the dumping and burning of waste. Now, it has reduced. Rajesh concludes:

“ It feels good when I go out and everything looks neat and clean. People say that I am doing an excellent job! If we all work together, the outcome will be even better. ”

* Name changed

³⁰ At the time of data collection, Green Workers were picking up waste from households twice a week, rather than the earlier thrice a week. Although households were asked to respond with reference to the project period, it is likely that some households had the current system in mind while responding to this question.

Figure 65: Observation on whether charges are nominal (n=75)



During the project period, there **were no user charges levied on business establishments** for waste collection. According to MMT Foundation this was done so that it would be easier to secure their cooperation and get them engaged in the intervention. Households, which were geographically more spread out and required more time to reach were charged a fee of INR 50 per month.

When asked if they believed the charges were nominal, almost two-third, or **64% of the households reported that the charges were nominal** and 24% reported that they were nominal to some extent. A small proportion of 12% felt that the charges were not nominal.

In the final year of the intervention, businesses were also requested to pay a user fee for the collection of waste as MMT Foundation wanted to bring about financial sustainability before they exited the project. The monthly charges were fixed at INR 200 for small shops, INR 500 for restaurants and INR 1,000 for hotels. While MMT Foundation believes that the model needs to be financially sustainable so that the programme costs are supported through user fees, the businesses, **who were used to services being provided free of charge, were resistant to pay**. The President of the Business Association was in the process of negotiating with the union and the implementation partner on an optimal way forward.



We felt that a monthly user fee of INR 50 was affordable. Some were skeptical initially, but we thought it is better to have the vehicle come all the way to our doorstep to collect waste. Active members in our village convinced those who could not attend the initial meetings, and everyone was supportive.



Community member

▪ **Set up a Dry Waste Collection Centre (DWCC) or Material Recovery Facility (MRF) locally to process dry waste**

Before the intervention, unsegregated waste from more than a hundred municipalities would be transported to a dumping yard in Dehradun. Once the waste collection system was initiated, there was still no option to process the dry waste locally, and it had to be transported to an MRF in Harrawala, located 25 km away. MMT Foundation envisaged that once the community was made aware about segregation and began participating in the process, an **MRF would be set up in Sahastradhara itself, through convergence with the government, to enable optimal recycling and upcycling of dry waste.**

However, there were challenges in setting up this facility. The land was to be allocated by the government, but political changes and administrative issues resulted in delays. Additionally, the community was highly resistant to such a facility being set up locally, as they believed it would generate filth and stench.

MMT Foundation persisted with the government on obtaining land, and in the meantime, **covered the cost of transporting waste to the existing facility at Harrawala.** This was necessary because there was a high volume of waste generated daily, especially during the tourist season. The Green Workers

shared that had the waste not been transported to Harrawala in a timely manner, it would have attracted animals that would scatter the waste and create a mess.

Figure 66: Segregated dry waste at the MRF in Sahastradhara



Community resistance was overcome by organising exposure visits for local government representatives, influential persons, shopkeepers and household members to Harrawala, to help them understand that such a facility could be maintained well. The President of the Business Association recalled that contrary to his expectations, the MRF at Harrawala was extremely well run and there were no issues relating to filth, stench or pests. His views were echoed by the Zilla Parishad member and community members, who began to support the initiative post the exposure visit.

The MRF was set up in the last quarter of the project intervention period. The Zilla Parishad member played a key role by allocating the land and electricity connection and laying a road so that transport vehicles could access it easily. He takes pride in the fact that a model MRF exists in

Sahastradhara, where dry waste is sorted, compacted, baled, and then sent to companies based on their requirements. Although the establishment of this facility was delayed, MMT Foundation articulated that the project outcomes were not compromised in any manner, as they covered the cost of transporting the dry waste to Harrawala and actively worked on securing the cooperation of the community on setting up this facility locally. This MRF was set up to handle the waste collected from 6 panchayats that were a part of the intervention, but the implementation partner pointed out that with a monthly processing capacity of 15 tonnes, it could support the waste management activities of up to 35 panchayats.

- **Brought about changes in overall perceptions about waste and in the Knowledge, Attitude, Practices & Behavior (KAPB) of the community**

MMT Foundation believed that the intervention was able to make a notable change in the mindset of the community – their sustained efforts to mobilise and engage the community resulted in a change from a widespread belief that waste could be disposed by dumping or burning to a high degree of ownership and responsibility in waste management in Sahastradhara. As a result of the project, businesses willingly participated and led clean-up drives, organised events, motivated each other to follow norms, and brainstormed collectively on waste management solutions. This is echoed by the Green Worker, who shared that the change in the community's practices resulted in less waste going to the dump sites:

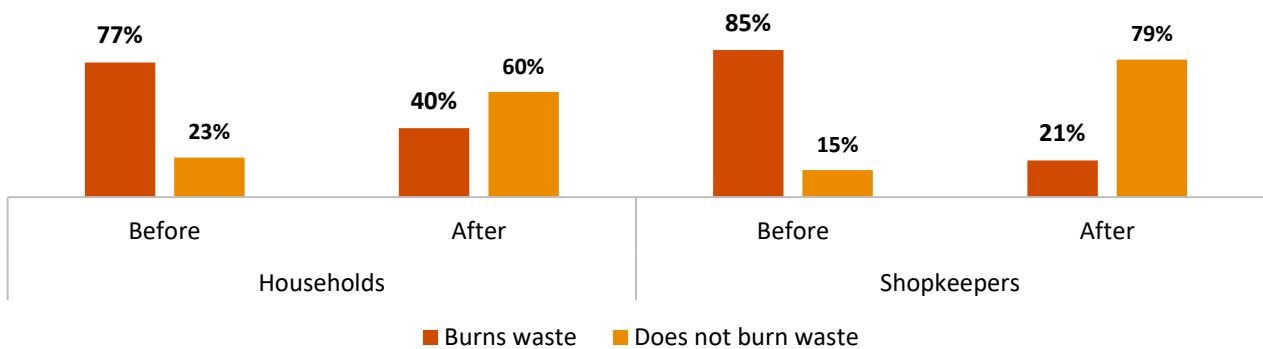


In the beginning, everything would end up in the dumpsite. Now, my vehicle dumps only those materials that are meant to be trashed. Before, I had to drive my vehicle every single day to the dump site. Now, I just go once a week because there has been such a major change in the waste segregation practices and a drastic reduction in waste disposal.



Green Worker

Figure 67: Reduction in the practice of burning waste (n=75 households, 84 businesses)



Prior to the intervention, a considerable proportion of the waste was burnt by households and businesses. The main reason they engaged in this practice was because **they did not have alternate options to dispose waste**. Some respondents were also unaware of the harmful effects of burning waste. As revealed in the survey, 77% of the households and 81% of the businesses used to burn their waste before the intervention. On average, households burnt 26 kgs of waste every month and businesses burnt 24 kgs of waste. **This significantly reduced post intervention, with 40% of the households continuing to burn waste and 21% of the businesses burning waste.** According to the implementation partner, the practice of burning waste still exists among households because some members are not ready to store their dry waste until it is picked up by Green Workers 2-3 times a week. However, as waste is collected daily from businesses, they have reduced the practice of burning waste to a greater extent.

Figure 68: Overall satisfaction with the intervention (n=159)

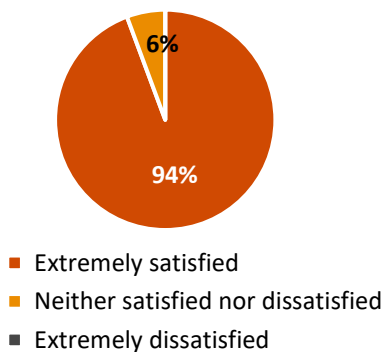
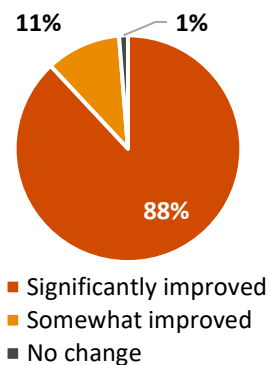


Figure 69: Change in incidence of illness in the community (n=159)



Overall, the community expressed a high degree of satisfaction with the intervention, with 94% stating that they were extremely satisfied and only 6% stating that they were neutral about the programme. A high proportion, 88%, reported there was significant improvement in their households and communities in terms of the incidence of illnesses in the past two years, as a result of the intervention and the improved management of waste.

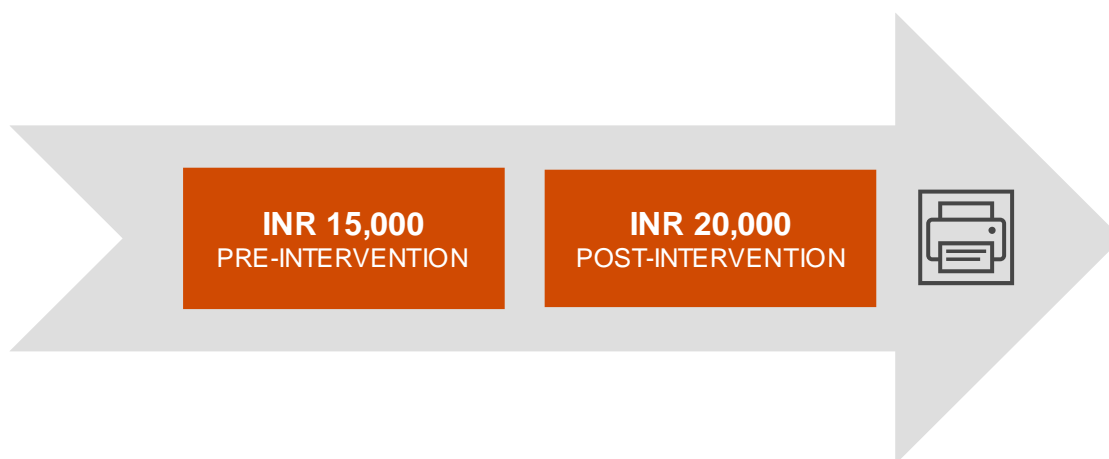
“

Health and hygiene standards have improved because there is no filth and monkeys do not make a mess anymore. Earlier, we had to clean picnic spots so that tourists could enjoy them. Now, these areas are so clean, we do not need to do anything.

”

Implementation Partner Team

Figure 70: Change in median sales revenue of businesses pre- and post-intervention (n=84)



Businesses were asked whether the customer footfall had changed as a result of the intervention by MMT Foundation. All except one articulated that their footfall had increased. In terms of median monthly sales, as shown in Figure 71, the revenue generated was INR 15,000 before the programme and was INR 20,000 post intervention, which is a **33 percent increase in monthly sales revenue**. While some this increase can be attributed to the increase in tourism itself post-pandemic, the President of the Business Association supported the finding by stating **that tourist footfall had increased because Sahastradhara became cleaner**. Online and digital media campaigns conducted by MMT Foundation in high footfall areas had generated greater awareness among tourists about the beauty and cleanliness of Sahastradhara, leading to higher footfall and therefore, higher revenue for businesses.

“

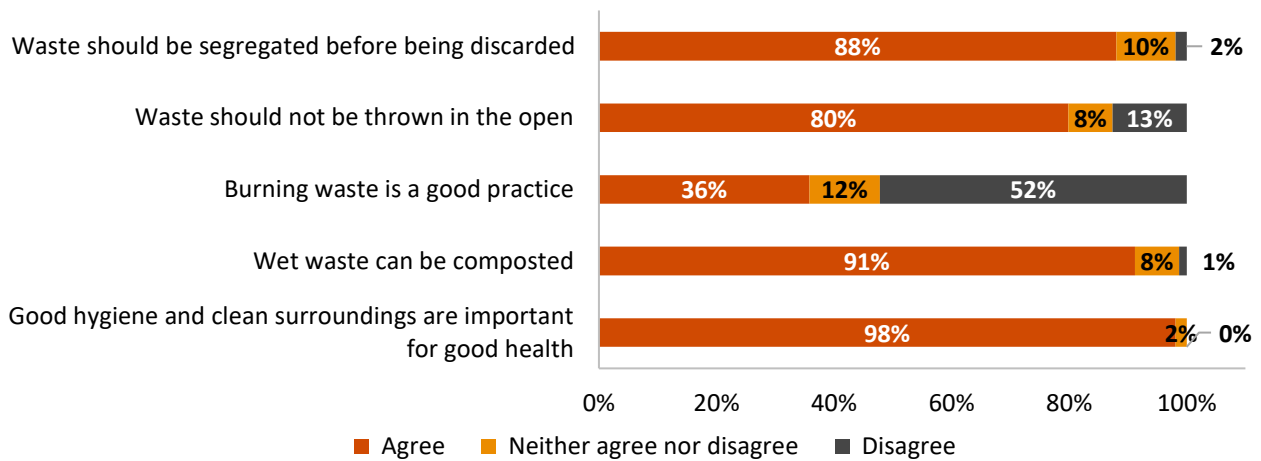
No one will want to visit if it is dirty. Now, we not only educate new business owners but also tourists. We keep this place neat and tidy and so tourist footfall has increased.

”

President of the Business Association

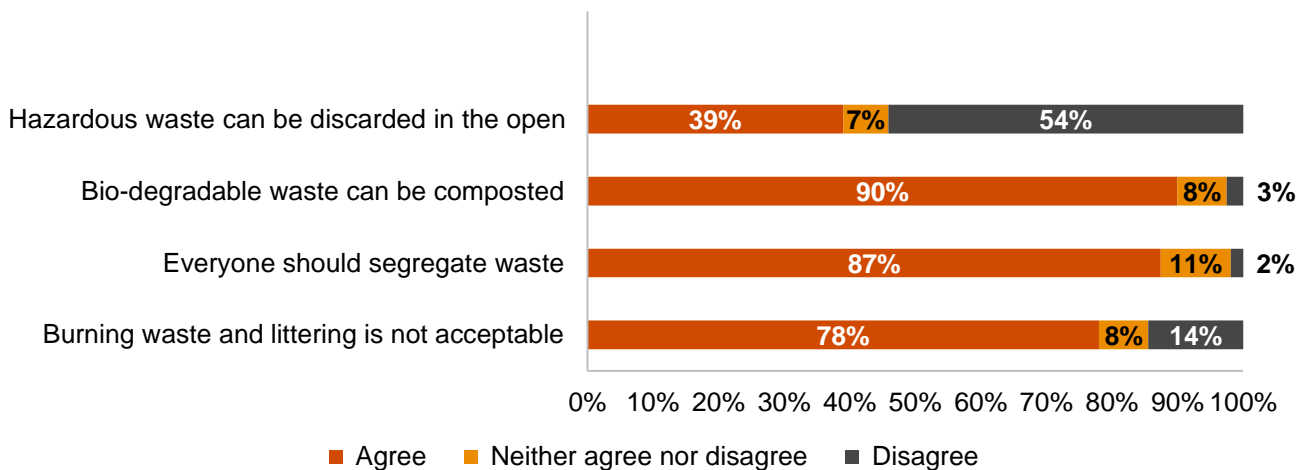
KAPB Analysis: Respondents were asked whether they agree, neither agree nor disagree, or disagree with various statements. These statements were meant to reveal their knowledge, attitudes, behaviour and practices relating to waste management. The findings are presented in Figures 71-74.

Figure 71: KAPB Analysis – Knowledge (n=159)



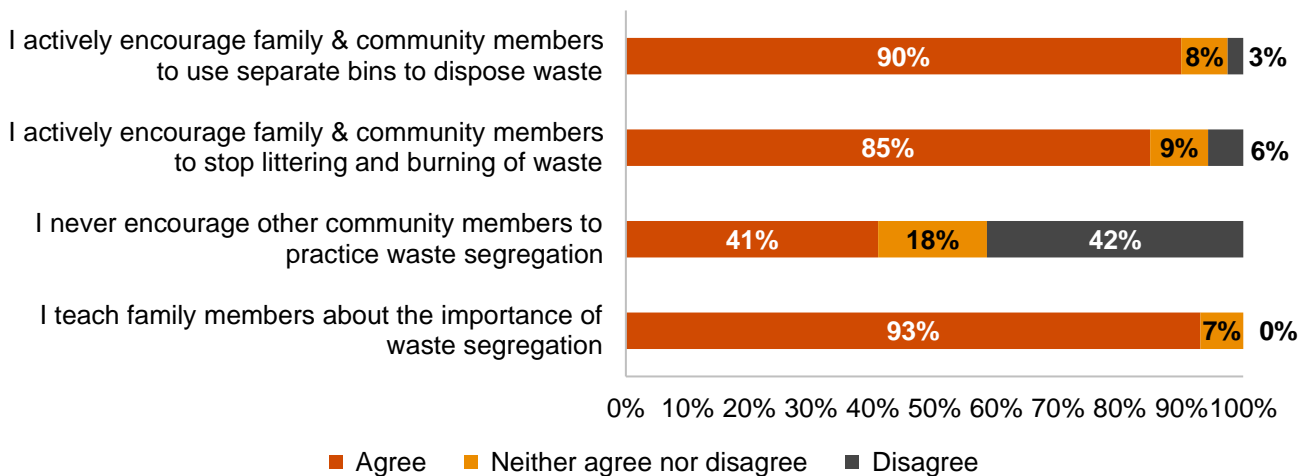
- Overall, there was a high degree of knowledge among the respondents about waste management.
- 88% agreeing with the statement ‘waste should be segregated before being discarded’, 80% agreeing with ‘waste should not be thrown in the open’, 91% agreeing that wet waste can be composted and 98% with good hygiene and cleanliness are important for good health’.
- Only 32% agreed that burning of waste is a good practice and more than half, 52%, disagreed with this statement.

Figure 72: KAPB Analysis – Attitudes (n=159)



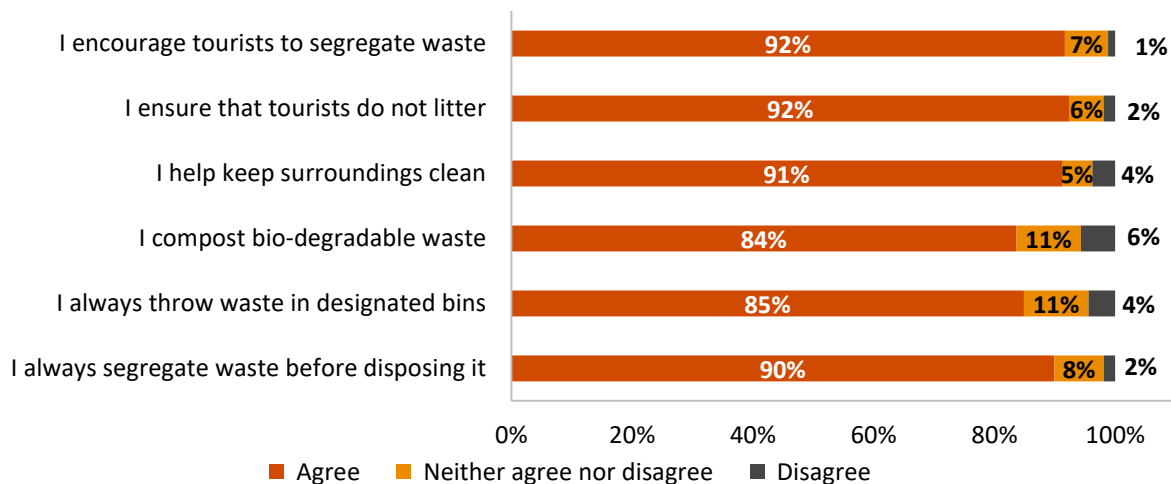
- The responses reveal a positive attitude in relation to waste management.
- Only 38% of the respondents agreed that ‘hazardous waste can be discarded in the open’ and more than half disagreed with this statement.
- 90% agreed with the statement ‘bio-degradable waste can be composted’, 87% with the statement ‘everyone should segregate waste’ and 78% with ‘burning waste and littering is unacceptable’.

Figure 73: KAPB Analysis – Behaviour (n=159)



- The responses indicate favourable behaviour regarding waste management.
- A significant proportion – 90% - agreed with the statement ‘I actively encourage family and community members to use separate bins to dispose waste’ and 93% agreed that they ‘teach family members about the importance of waste segregation’.
- Roughly the same percentage both agreed and disagreed with the statement that they ‘never encourage other community members to practice waste segregation’.

Figure 74: KAPB Analysis – Practices (n=159)



- Practices relating to waste management are highly positive, with over four-fifths of the respondents agreeing to all the statements.
- 84% agreed that they compost biodegradable waste, 85% agreed that they throw waste in designated bins, 90% agreed that they always segregate waste before disposing, 91% that they help keep surroundings clean, 92% that they encourage tourists to segregate waste and ensure tourists do not litter.

▪ Strengthened community ownership to sustain the intervention

As the project intervention was planned for 3 years, from July 2019 to June 2022, MMT Foundation believed that it was **important to have an exit strategy in mind from the outset**. The activities were carried out with the aim of building community ownership, such that the community would not get too dependent and would be empowered to take on waste management. A significant step in this direction was strengthening government involvement in the intervention, systematic liaising, and utilising government funds to support project components, such as the MRF facility, which was built on land provided by the government.

The implementation partner noted that there was a high level of government support – every government official was aware of the project and would attend events to show their support. The Zilla Parishad member and the Gram Panchayat Pradhan attending meetings, participated in clean-up drives and exposure visits, and convinced community members to cooperate with the Green Workers. The Zilla Parishad member was not only forthcoming in segregating waste in his household, but also offered to pay the user fees for those households who could not afford INR 50 per month. According to the implementation partner, these efforts helped strengthen the programme such that the MRF at Sahastradhara is now a model centre and any officer or politician who visits this area makes it a point to visit the MRF facility and learn about the programme.

“

Sahastradhara is clean now. People have become aware. Now, thanks to this project, tourism has increased as tourists have a pleasant experience. We need to sustain this effort.

”

Zilla Parishad Member

The government representatives believed that the project could be sustained even after MMT Foundation support ended and could in fact be expanded to include more panchayats. However, the community felt that programme **would not sustain as they could not undertake waste collection and processing by themselves and awareness would reduce over time, which may lead to households**

dropping out of the programme. They felt that continued meetings need to be held to sustain participation and an external organisation is needed to drive the process of waste collection. Further, **any increase in the user fees collected would result in a loss of support from households**, who may not see the value of the initiative. A similar sentiment was expressed by the President of the Business Association, who felt that the income generated by businesses is seasonal and so, the user fee they contribute would not be sufficient to cover the costs of salaries, vehicles, fuel, electricity and so on. While recognising that they cannot be forever dependent on MMT Foundation for their support, he also felt it would be hard to convince businesses to change their mindset after being used to availing waste management services free of charge.

MMT Foundation felt that while mindsets were not fully changed and the practices of dumping and burning still exist, the community now had a platform to understand that they can keep their surroundings clean. The project had succeeded in **building acceptance and changing attitudes and behaviours towards waste** and these had resulted in community ownership of the intervention.

IRECS Analysis

Basis the interactions with key stakeholders and a desk review of the documents, the impact of the project has been evaluated along the IRECS framework. The IRECS analysis summary has been presented in the table below:

Table 11: IRECS Analysis: Zero Waste Tourist Destination Project

Parameter	Assessment from study
Inclusiveness	<p>The project drew in the participation of a wide variety of stakeholders, including children, SHG women and community members. The Swachhta Ke Sipahi played an active role in sharing information with those members who could not attend sessions and door-to-door collection by Green Workers meant that no one was excluded from the project. Every business was included, whether they ran self-owned or rented shops and whether the shops were permanent structures of mobile push carts.</p> <p>Although there was a user fee of INR 50 per month for households, 64% felt that this was affordable, and where households could not afford to pay, the government representative and Swachhta Ke Sipahi paid on their behalf.</p>
Relevance	<p>Sahastradhara is a tourist destination that has faced problems from increasing littering and dumping of waste over the years. The intervention, with its twin focus on awareness generation and waste collection, was able to not only educate locals and tourists on the nature of the problem but also build their understanding that they were responsible for maintaining the area through responsible waste management processes. In terms of improved health and sanitation, 88%, reported a reduction in the incidence of illnesses among their family members and community. Given that the closest MRF was in Harrawala, 25 kms away, the establishment of a facility in Sahastradhara was relevant in reducing the cost of transportation of dry waste and ensuring greater recycling and upcycling.</p>
Effectiveness	<p>94% of the respondents stating that they were extremely satisfied with the programme, 91% agreeing that they help keep surroundings clean and 92% agreeing that they encourage tourists to segregate waste and ensure tourists do not litter.</p> <p>The awareness programmes were seen as beneficial by every respondent, and 86% felt it helped build their knowledge about waste segregation. Where the frequency of waste pick-up by the Green Workers were concerned, the respondents varied in terms of their perception, with 62% of the businesses believed Green Workers always collected waste on time and only 39% of the households feeling the same. The intervention was able to reduce the practice of burning waste from 77% to 40% by households and 85% to 21% by businesses.</p>
Convergence	<p>The implementation agency highlighted that government officials and local representatives were involved in various activities, from the inauguration to the clean-up drives, awareness meetings and exposure visits. The MRF facility was set up on land provided by the government and the electricity charges and road access were paid for by the Zilla Parishad. To ensure every business participated in the programme, the President of the Business Association took an active role, ensuring that waste segregation was practiced by all union</p>

Parameter	Assessment from study
	members and new businesses were informed about the waste management system.
Sustainability	<p>The project generated widespread awareness on the importance of waste management and the need to segregate waste.</p> <p>While MMT Foundation had planned their exit strategy from the start and accordingly strengthened the involvement and participation of the government, not all community members felt that the project could sustain without external support. Businesses felt that their income was seasonal, and they could not pay user fees sufficient to cover costs of the project. Some community members felt that although awareness has been generated, repeated meetings and sessions are required to sustain project outcomes. The Zilla Parishad member believed that outcomes could be sustained and moving ahead, more villages could be included.</p>

Suggestions

- The assessment revealed that the community was unaware that MMT Foundation would exit the project after 3 years and were unsure whether waste management practices would sustain without external support. MMT Foundation should ensure that once community involvement is secured, the exit strategy is clearly communicated to them, and their ownership of the project is strengthened. This will enable them to confidently sustain the intervention once the project period ends.
- MMT Foundation did not charge a user fee to businesses in order to secure their cooperation in waste management activities. However, it meant that some businesses were unwilling to pay a user fee for services to continue from the third year onwards, even though these businesses were actively involved in the programme and claimed to receive higher footfall as a result of the intervention. It may be more effective to charge a nominal user fee from the start and gradually increase it to make the programme financially viable.
- As mindset and behaviour changes are hard to bring about in interventions, there should be mechanisms for awareness raising and community engagement even after the project period ends to ensure that the community does not go back to its old ways. Swachhta Ke Sipahis or active citizens could have been empowered to become community leaders so that they continue to motivate community members beyond the project period and the outcomes of the programme are sustained.

Limitations

- MMT Foundation completed the project in July 2022, after **which a new funding organisation has taken over**. The new funder has brought in certain changes in the design of the project and so, some respondents were unclear about which project period was being referred to during the quantitative study. The enumerators repeatedly clarified that they were studying the impact of MMT Foundation interventions in the specific period of July 2019 to June 2022. Further, as the assessment was conducted during the period of execution by the new funder, responses relating to the project impact and community perceptions **cannot be entirely attributed to the efforts of MMT Foundation**.
- There have been **changes in the staff of the implementation agency** and not all those who were interviewed for this study were part of the team who initiated the project, even though they were aware of the activities undertaken. Also, the Pradhan of the Gram Panchayat, who was a key stakeholder in driving the project, was unavailable during the field visit.



4. Annexures



4.1. ANNEXURE I

Saplings – Type of Trees/Shrubs/Herbs & Climbers/Grass planted			
S. No.	Local Name	Scientific Name	Properties / Usage
1.	Aritha	Sapindus trifoliatus	Soap nut medicinal tree - ripe fruits are used for hair wash as shampoo
2.	Baans	Dendrocalamus strictus	Largest grass - having timber value for domestic use; protect soil erosion in gullies, nallah/stream bank, etc.
3.	Baheda	Terminalia belerica	Medicinal tree - fruits an ingredient of 'TRIPHALA'
4.	Ber	Zizyphus mauritioana	Wild fruits are edible; leaves are having fodder value
5.	Bilb	Aegle marmelos	Medicinal tree - ecologically hardy species to survive in dry / rocky places. Wild fruits and leaves are having medicinal value.
6.	Gorakh aml / Jangal Jalebi	Pithecellobium dulce	Good fodder value for small ruminant
7.	Havan	Gmelina arborea	Medicinal tree - Timber value tree having medicinal value too.
8.	Imlee	Tamarindus indica	Wild fruit tree, having commercial value of its fruits and seeds.
9.	Jamun	Syzygium cumini	Medicinal wild fruit tree - Good commercial value of its fruits, seeds.
10.	Kala siras	Albizzia odoratissima	Good fodder and timber value, bark having medicinal value
11.	Kanjdee	Holoptelea intergrifolia	Timber tree for domestic use. And bark is having medicinal value
12.	Karanj	Pongamia pita	Bio-diesel tree - Good commercial value of its seeds for oil extraction promoting for bio-diesel source.
13.	Karmala	Cassia fistula	Medicinal tree - fruit pulp used as medicines
14.	Khakhro / Palaash	Butea monosperma	Multi-value tree of its leaves, bark and flowers for fodder, medicines, and other domestic uses.
15.	Kher	Acacia catechu	Medicinal tree - Known as 'KATTHA' gum and bark as medicines; having fodder and timber value.
16.	Khrini	Wrightia tinctoria	Good wood for handicrafts, toys and leaves are having fodder value and bark used as medicines.

Saplings – Type of Trees/Shrubs/Herbs & Climbers/Grass planted

17.	Kumtha	Acacia senegal	Medicinal tree - having commercial value of gum known as 'Kino' and its tender pods used as desert vegetable. Leaves are as fodder
18.	Mahudo	Madhua indica	Livelihood tree known as MAHUA for its flowers and seeds having high commercial value.
19.	Neem	Azadirachta indica	Multi-value tree of its leaves, bark, flowers, fruits, seeds for fodder, medicines, and other domestic uses.
20.	Renjwa/Ronjh	Acacia leucophloea	Fodder and timber value tree
21.	Sahejan	Moringa oleifera	Multi-value tree known as 'Drumstick' having good commercial value of its tender fruits, leaves seeds, and bark for medicinal and nutritional purposes.
22.	Shisham	Dalbergia sisso	High timber value tree having high medicinal usage as well
23.	Sitafal	Annona squamosa	wild fruit tree known as 'Custard apple' is edible and high economic value; ecologically hardy species to survive in dry / rocky sites and not grazed by animals
24.	Tendu	Diospyros melanoxylon	Known as BIDI PATTA or 'Tendu patta'; having good fodder and leaves has commercial value to make Bidi.
25.	Saagwaan	Tectona Grandis	High timber value tree
26.	Ratanjyot	Jatropha curcas	Bio-diesel source of its seeds - used as bio fencing and in gullies to protect bank erosion. Medicinal value of its roots, fruits, and latex.



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