

Impact Assessment Report

Sightsavers Truckers Eye Health Project- Phase V

Implemented by-



Supported by-



Submitted by -

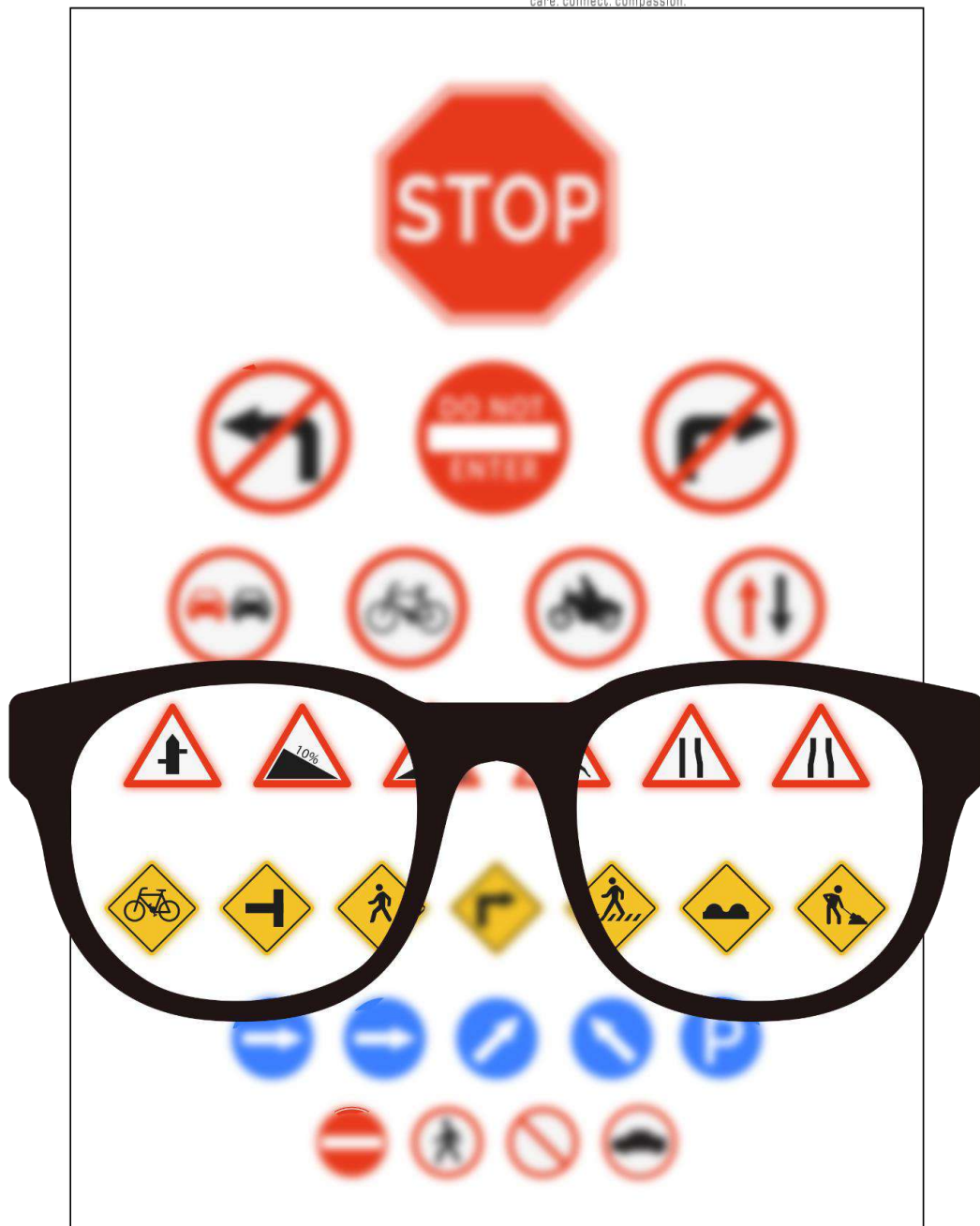


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We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the “Truckers Eye Health Program - Phase-V”.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment, and I am confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Sightsavers India is a non-profit organisation that has been working towards the elimination of avoidable blindness for over 70 years. Founded in 1966, Sightsavers India initially provided medical treatment and eye surgeries, but later expanded to include education and advocacy for the rights of people with disabilities. The organisation also works with governments and communities to raise awareness about the prevention of blindness and improve access to healthcare, education, and employment for people with disabilities.

Many truck drivers in India face visual challenges that can affect their ability to drive safely. Many drivers are not aware of the importance of regular eye check-ups, putting themselves and other road users at risk. Sightsavers India is a leading organisation in India working to eliminate preventable blindness and promote disability inclusion.

An Impact Assessment field visit was conducted in 5 centres - Raipur on 28th January, Kanpur on 13th February, Bangalore on 14th February, Kolkata on 14th February and Chennai on 14th February of 2023 to gauge the impact created by the CIFCL supported project. CIFCL supported more than 70,000 out-patient diagnoses and issued more than 28,000 spectacles for members of the trucking community (Commercial Vehicle Crew Members) through 11 different Raahi Static Vision Centres, camps held by these centres and 640 exclusive camps.

During the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, impact and sustainability.

During the impact assessment 125 truck drivers were interviewed who underwent eye check-ups in Phase-V of the project. 69.6% required corrective eyewear. Survey also found that accurate contact information and effective communication channels are crucial, as a significant number of attempted calls to beneficiaries were unsuccessful. Raahi Static Vision Centres were found to be effective in providing eyecare services to truck drivers, with 99 out of 125 beneficiaries reporting very good service, using well-equipped facilities and trained professionals. The program's efficiency is demonstrated by the process used by these centres, including registration and the involvement of field workers, vision technicians, and optometrists.

This program has reduced the likelihood of road accidents and has positively impacted beneficiaries' daily lives by improving their vision. It has also addressed economic constraints in achieving good health by providing free eye check-ups and spectacles. Follow-up services provided by Raahi Static Vision Centres have earned the trust of the truckers' community and are made easier through the use of paperless record-keeping and patient ID cards.

The program has been successful in providing accessible eye healthcare services to the trucking community, but there is a need for better monitoring and evaluation of beneficiary data. The report recommends that the program should continue with more thorough data monitoring systems to ensure that more needy people receive necessary care without obstacles.

2. Introduction

Royal Commonwealth Society for the Blind (commonly known as Sightsavers India), is a not-for-profit organisation, a Public Trust. It is a global development organisation that has been working towards the elimination of avoidable blindness for over 70 years. Founded in 1950, it was originally called the Royal Commonwealth Society for the Blind and was established in the United Kingdom. It was established with the mission to ensure that people with visual impairments or blindness have the opportunity to live healthy, productive lives. It operates in over 30 countries across the world, with a focus on low-income countries in Africa and Asia.

Sightsavers India was established in 1966, in response to the high incidence of blindness in India, particularly in the rural areas. The organisation initially focused on providing medical treatment, eye surgeries, and supporting eye care centres to address preventable blindness. As the organisation evolved, it expanded its work beyond eye care to include a wider range of programs and initiatives, such as education and advocacy for the rights of people with disabilities. Sightsavers India recognizes that poverty, poor health, and lack of access to education and basic resources such as clean water, are all factors that contribute to blindness and visual impairments.

In addition to providing eye care services and support, Sightsavers India also works with the government, other organisations, and communities to raise awareness about the prevention of blindness and the importance of inclusivity for people with disabilities. It also works to improve access to healthcare, education, and employment for people with disabilities.

3. Program Overview

3.1 Impact Assessment Background

The impact of vision deterioration extends beyond the individual experiencing it, affecting their families, friends, and society as a whole. It can be overwhelming and frightening, and unfortunately, many truck drivers are unaware of the causes of vision impairment. Many falsely believe that their eyesight will inevitably worsen with age. The consequences of vision loss are far-reaching and can greatly affect one's quality of life, independence, and mobility. In addition, research has linked vision loss to a range of negative outcomes, including falls, injuries, and diminished cognitive function, social engagement, and employment opportunities.

In India, over 55 million people are visually impaired, and about 75% of them have preventable blindness, according to the National Programme for Control of Blindness and Visual Impairment (NPCB&VI). Truck drivers in India face various visual challenges that can affect their ability to drive safely, such as driving at night, in low light conditions, fog, rain,



Figure - Truck driver at Raahi Static Vision centre after getting check-up and spectacles.

and bright sunlight or glare from oncoming traffic. Unfortunately, many truck drivers are not aware of the importance of regular eye check-ups, which puts both themselves and other road users at risk.

Sightsavers India is recognized as one of the leading organisations in the country working towards the elimination of preventable blindness and the inclusion of people with disabilities.

In 2017, Sightsavers India introduced the Raahi National Truckers' Eye Health Programme with the aim of eliminating avoidable blindness and creating a world where everyone has access to proper eye care. As of June 2022, the Raahi programme has provided eye screenings to a total of 540,166 beneficiaries. About 83.6% of those screened were from the trucking industry with 70% getting an eye check up for the first time ever.

The Raahi program operates through static vision centres, called the Raahi Static Vision Centres, and outreach camps. These centres and camps provide vision screening, refraction, blood pressure checks, body weight measurement, cataract check-ups, and eye-health counselling and referral advice. The program corrects most refractive errors on-the-spot by dispensing reading glasses, ready-to-clip glasses, and custom-made glasses, which are delivered to a location preferred by the drivers. The program



Figure - Spectacle power check-up at Kanpur centre

assures the quality of the spectacles by centralising the supplies through the eyeglasses partner for all sites. The program has achieved significant success by implementing innovative solutions at scale. By leveraging technology, such as Quick Response (QR) codes, the program has been able to link vision centres and camp locations with beneficiaries across India, leading to improved efficiency and integrity. Additionally, the program has utilised technology for robust data management and to enhance compliance by sending out reminder SMS messages and follow-up phone calls to truckers in their preferred language for the collection of eyeglasses. The program's success is further attributed to the involvement of a trans-disciplinary team and strategic collaborations with multiple stakeholders to create a comprehensive program.

The Raahi program plays a vital role in promoting the importance of regular eye check-ups among truck drivers. The program provides access to free eye care services and encourages drivers to prioritise their eye health, helping to reduce the risk of accidents on the road and improve the overall health and well-being of the workforce. By leveraging an integrated hub-and-spoke model, operating through static vision centres and outreach camp locations, the Raahi program provides essential eye care services, such as vision screening, refraction, and eye-health counselling, to truck drivers across India. The program also corrects most refractive errors on-the-spot, ensuring that

drivers receive prompt treatment, reducing the risk of accidents on the road.

3.2 Context

CIFCL Project details

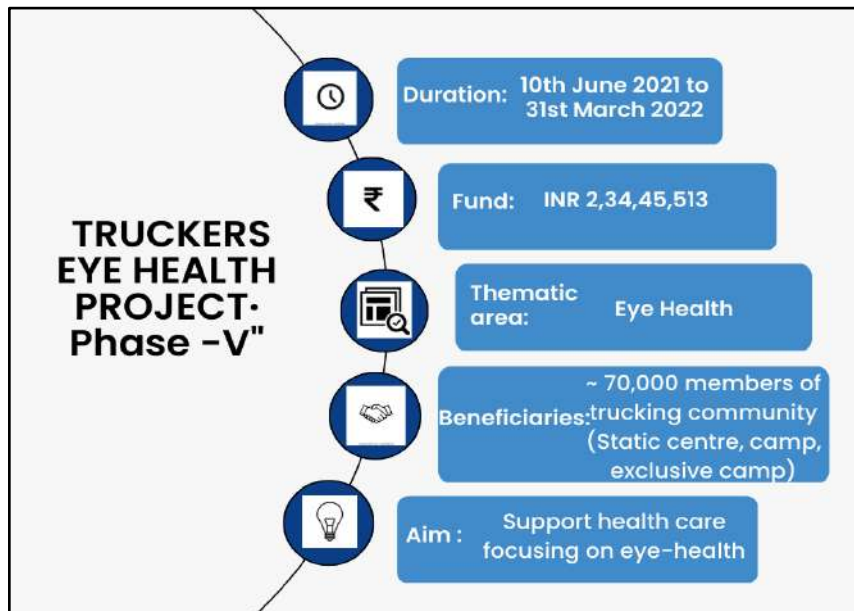


Figure - Project details of "Truckers Eye Health Project- Phase V"

Location: 11 Raahi static vision centres Bengaluru, Chennai, Raipur, Kanpur, Kolkata, Paradeep, Mumbai, Ludhiana, Ahmedabad, Indore, Vijayawada. *Jamshedpur and Motihari have been replaced by the Raipur and Vijayawada centres.

640 exclusive camps at Dhanbad, Bokaro, Kyonjhar, Muzaffarpur, Coimbatore, Gopalpur port, Satna, Gorakhpur, Jhansi, Jabalpur, Bardaman, Siliguri, Aurangabad, Ganjam, Allahabad, Durg/Bhilai, Bhopal, Vijayawada, Mumbai, Gandhi Nagar, Vadodara, Kochi and Goa.

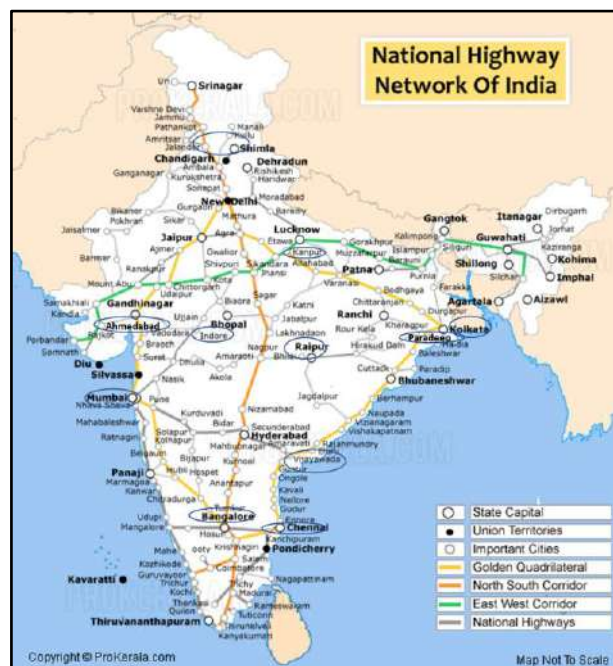
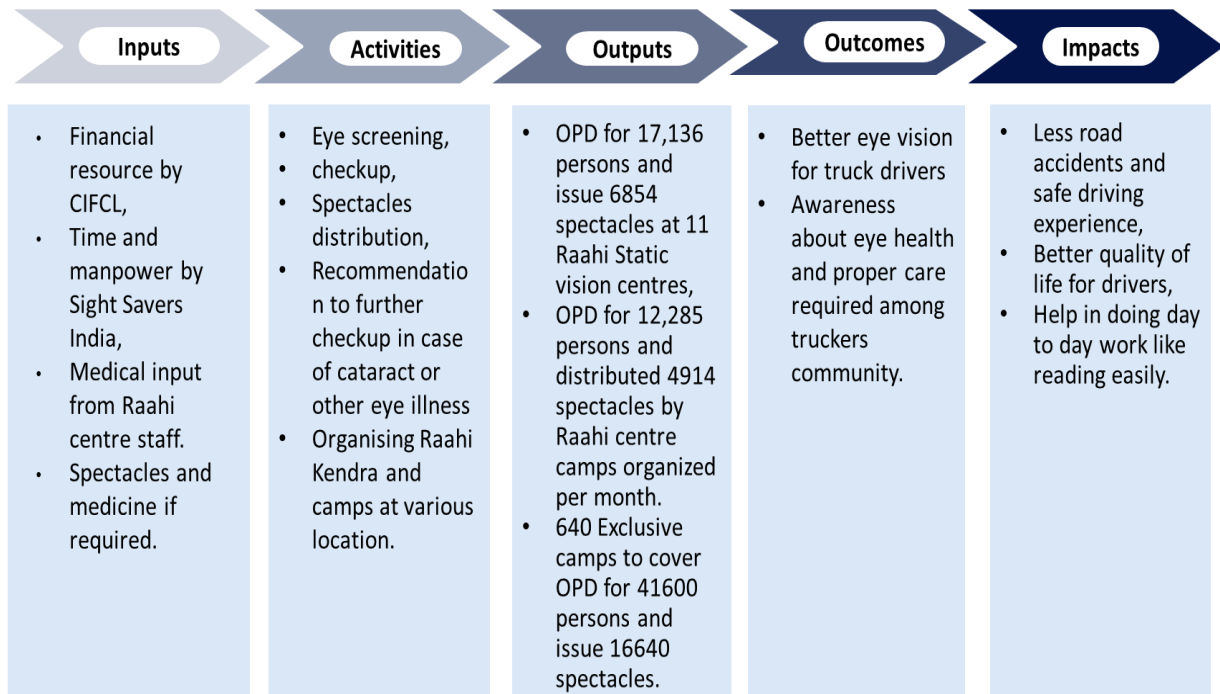


Figure - Location of 11 Raahi static vision centres

Objective of the project:

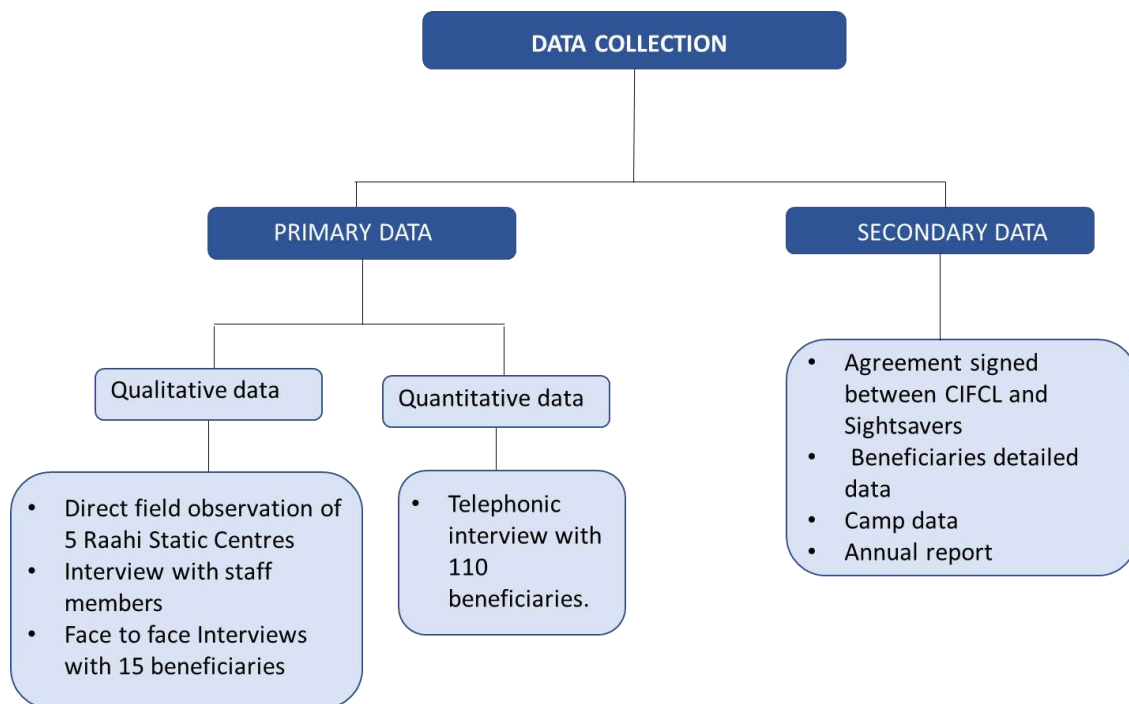
- Support Primarily the Commercial vehicle crew members (CVCM) with the health care focusing on eye-health.
- Improve the overall eye health of the trucking community.
- Promote awareness about the importance of regular eye checkups and timely treatment.

Impact Map:



4. Methodology

For the impact assessment study, an introductory meeting was scheduled with the concerned Implementing partner(Sightsavers, India) team. During the meeting, the coordinating manager provided an overview of the program, its objectives, target beneficiaries, and implementation challenges at the grassroots level. In order to gain a deeper understanding of the program, a list of prerequisite documents was requested and a desk review was conducted based on the received documents. The desk review helped the team identify key stakeholders and their perspectives on the program. To capture a comprehensive view, a mixed-method research design was adopted, which included both quantitative and qualitative research tools such as field observation, face-to-face interviews with beneficiaries and staff members, and telephonic interviews with beneficiaries. Beneficiaries were selected based on a random sampling method.



5. Analysis and Finding

Respondent Profile

As part of the survey administered to the beneficiaries with a random sampling approach, 110 beneficiaries were surveyed through telephonic interview and 15 beneficiaries were interviewed face to face at 5 different Raahi Static Vision Centres(Kanpur, Raipur, Kolkata, Bangalore, Chennai).

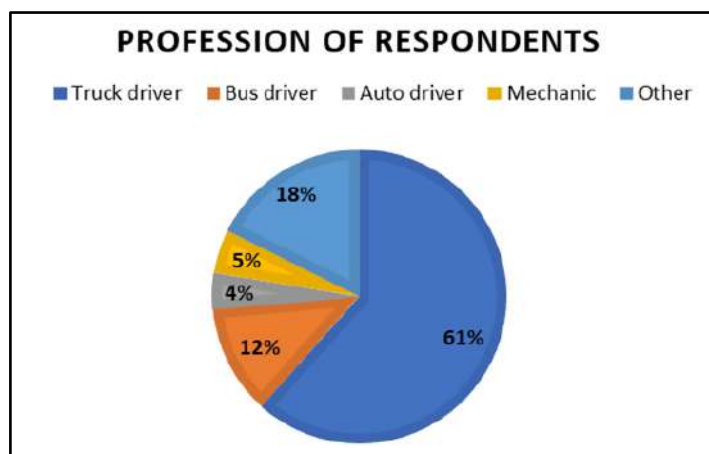


Figure - Profession of respondents

The surveyed individuals belong to the road transport sector and have diverse job roles, including truck drivers(77), bus drivers(15),

auto drivers(5), and mechanics(6). They represent a different age group, spanning from 19 to 67 years, and have been working in their respective professions for durations ranging from 1 year to over 40 years.

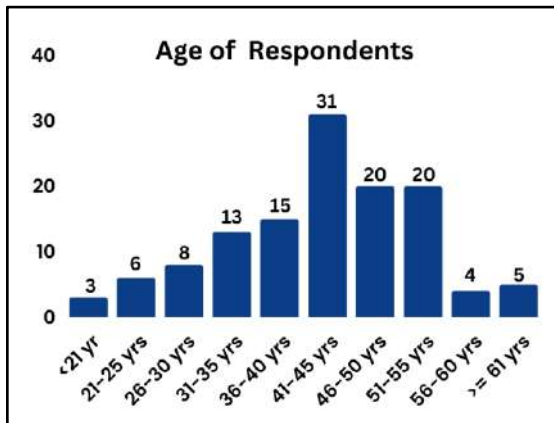


Figure - Age of respondents

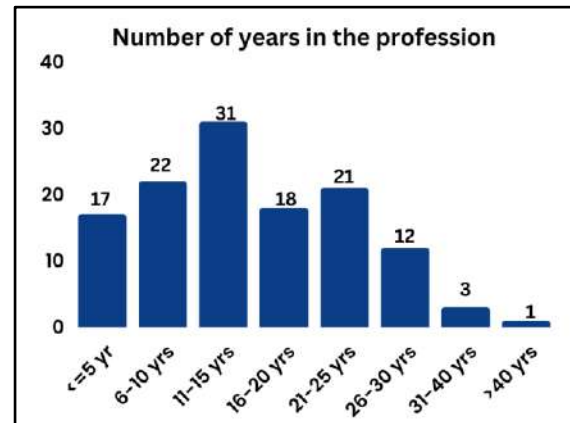


Figure - Years of professional experience of respondents

5.1 Relevance

Relevance will assess whether the “Truckers eye health program- phase V “ addresses an actual problem or need, and whether it is aligned with the requirements of the stakeholders.

In a person with intact eyesight, the primary sense used to navigate three-dimensional space is vision. Mobility is therefore greatly affected by vision loss, whether resulting from changes in visual acuity, visual fields. According to a study conducted by experts in Ludhiana, impaired vision among drivers is a major contributing factor to road accidents. The study, which included 395 commercial drivers in the age group of 22-68 years from Punjab's Ludhiana, found that 16% of the drivers surveyed had been involved in road accidents due to their impaired vision¹.



Figure - Beneficiares waiting for registration

The Sightsavers, India program has designed its program with careful consideration of the importance of proper vision for the trucking community. The program recognizes the significant contribution of the trucking community to the country's economy and the need to ensure their

¹ <https://indianexpress.com/article/cities/chandigarh/impaired-vision-of-drivers-a-major-cause-of-road-accidents-study-8374729/>

well-being. A recent study by ICARE Eye Hospital in Noida found that nearly half of all truck drivers in India experience vision-related issues while driving. Out of the 34,000 truck drivers who underwent eye tests as part of the study, 38% were diagnosed with near-vision problems, 8% with distance-vision problems, and 4% with both². These findings highlight the critical need for accessible and effective eye care services for the trucking community to ensure their safety on the road.

The survey conducted with 125 beneficiaries revealed that 119 respondents agreed that the Raahi Kendra and camps have significantly improved the accessibility and affordability of eye health services and other 6 believed that more centres are required or information about the camps should be shared. Many of the respondents believed that deteriorating eyesight is a natural process that occurs with age, and thus continued to work with poor vision, leading to hindrances in both their professional work and day-to-day lives. However, after receiving treatment from the Raahi Static Vision Centres/camp, they were educated on how to take better care of their eyes by incorporating healthy food items and practices into their daily routine to maintain their eye health in the long term.

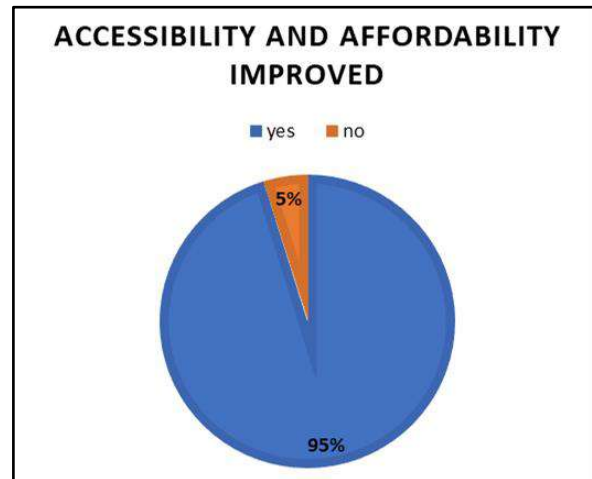


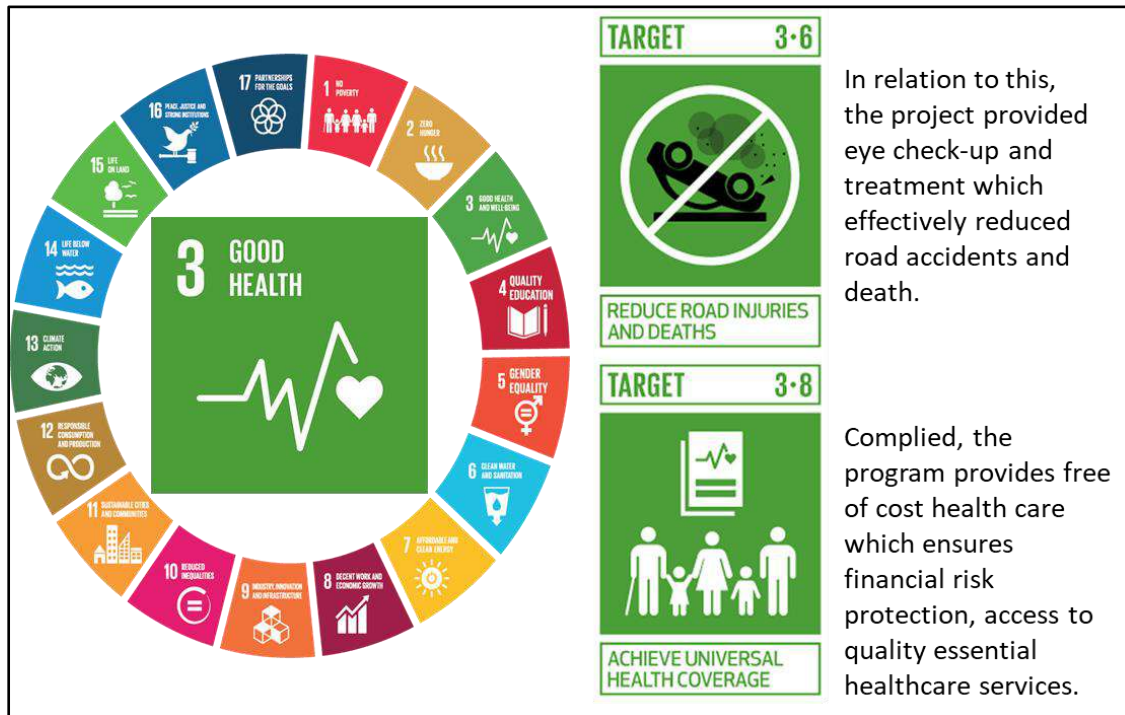
Figure - Accessibility and affordability improved

By providing access to eye care, the program addresses the specific needs of this community and contributes to their safety while driving. The provision of spectacles also enhances safety and reduces the risk of accidents on the road. The program's Raahi Static Vision Centres is an appropriate solution that addresses the challenges faced by the trucking community, such as the lack of accessibility to medical care due to their lifestyle. Overall, the Sightsavers India program is relevant and effective in addressing the specific needs of the trucking community, contributing to their safety and well-being.

Hiralal Paswan, 45 years old bus driver- “ Mujhe lagta tha ummra ke sath aankh kharab ho hi jati hai isliye kabhi dhyan nahi rakha, is kendra ne bahot acchi suvidha di hai jisse saaf dikhta hai ab.”

Linkage to Sustainable Development Goal-

² <https://www.livemint.com/news/india/around-50-of-all-indian-truck-drivers-suffer-from-vision-related-issues-report-11673957993130.html>



5.2 Effectiveness

Effectiveness provides insight into whether an intervention has attained its planned results, the process by which this was done, which factors were decisive in this process and whether there were any unintended effects.

Quantitative Evidence

Beneficiaries response

Telephonic and face to face interview was done with 125 trucker community people who underwent check-ups for their eyesight. Out of these respondents, 87 individuals (69.6%) were recommended to wear spectacles, while the remaining 32 individuals (25.6%) did not require any corrective eyewear. The diagnosis given during the check-up varied, with some (6) individuals being suggested for hospital check-up due to a more serious condition like cataract, glaucoma etc. Out of 87 respondents who required spectacle, 54 needed spectacles for short distance vision, and 32 needed spectacles for long distance vision and remaining 1 was suggested for hospital check-up after that specstable had to be provided.

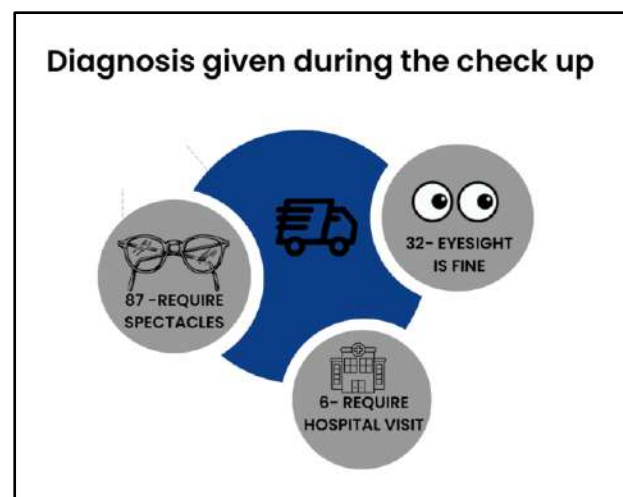


Figure - Diagnosis given during the check-up

Although some individuals reported experiencing both short and long distance vision issues, the diagnosis data provided by Sightsavers did not reflect this, it appears that there is a need for bifocal or progressive spectacles to improve vision for individuals who require both short and long distance correction. The data highlights the importance of regular eye check-ups, particularly for individuals who work in professions that require prolonged periods of driving or other activities that may affect their eyesight.

Ashok Kumar Mishra, 67 years old truck driver- “Easy to see signal and signboards and it is easy to drive with clear visibility”.

Attempts vs Connected

Data has been collected from 10 static centres and 2 exclusive camps, with 100 beneficiaries associated with each static centre and 50 beneficiaries from exclusive camps. Most of the beneficiaries were attempted to be contacted through phone calls, and the following is the outcome of the calling process:

Static Raahi centres

Calling attempts were made to 10 Raahi Static Vision Centres with a total of 378 attempted calls. Out of these, 91 calls were connected which amounted to only 24%, and 287 were not correct or failed to connect. The reasons for failed connections were various, including wrong numbers, switched off phones, temporarily out of service, and numbers not reachable.

It is to be noted that, few respondents from some centres like Kanpur(10), Chennai(5), and Ahmedabad reported that they had not received any eye check-up.

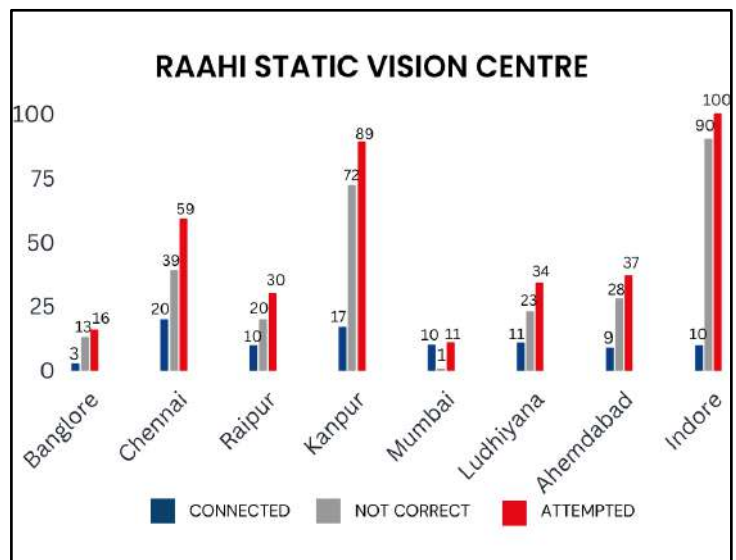


Figure - Number of calls attempted, connected and not connected to raahi static vision centres beneficiaries

Exclusive Camps

Calling attempts were made for two exclusive camps, namely Aurangabad and Dewas. Out of these, the Aurangabad camp had 17 connected calls, 35 incorrect calls, and a total of 52 attempted calls.

On the other hand, the Dewas camp had 0 connected calls, 53 incorrect calls, and a total of 53 attempted calls.

In the case of Dewas, all the numbers provided were either incorrect or out of service, whereas in Aurangabad, there were multiple reasons for not being able to connect with the beneficiaries including factors such as being out of reach, invalid numbers, switched off phones, and so on.

Despite several attempts, a significant number of beneficiaries were not reachable, and some phone numbers were incorrect. These findings highlight the importance of having accurate contact information and effective communication channels to ensure that beneficiaries can be reached and provided with the necessary care and support.

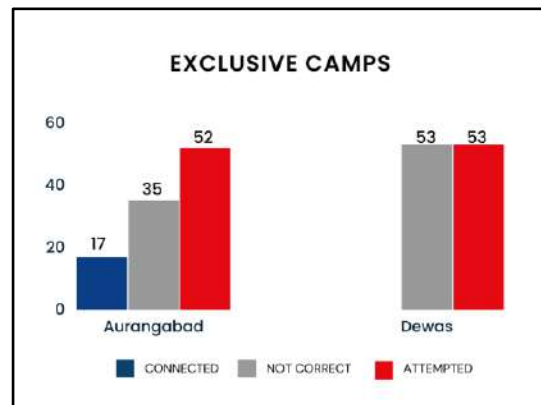


Figure - Number of calls attempted, connected and not connected to exclusive camps beneficiaries

Qualitative Evidence

Effectiveness in Providing Healthcare Services

Direct observation indicates that Raahi Static Vision Centres are established in strategic locations like transport nagar, they are equipped with medical facilities like Slit Lamp, Visiongram, Ishihara test, Retinoscope, Ophthalmoscope, Trial box and staffed with trained healthcare professionals.

Raahi Static Vision Centres follows a three-step process for truck drivers after they register for their services. Firstly, a manual checkup is conducted, followed by a checkup for any ailment using specialised equipment by an optometrist. Lastly, a power check is done through a trial box, and if needed, spectacles are provided to the drivers.

Sightsavers in collaboration with state governments, trucking associations, and other stakeholders, has been able to provide much-needed healthcare services and support to truck drivers across the country. Some of these Raahi Static Vision Centres

collaborate with truck driver's associations that provide multi health programs. By referring truck drivers to these organisations when necessary, these centres expand the reach of healthcare and ensure that drivers have access to a comprehensive range of healthcare services.



Figure - Equipment's used at Raahi centres

Nusrat Ullah khan, 55 years old mechanic- "Experiencing better eyesight after so many years. I use spectacles mainly while using my mobile phone and doing professional work like maintaining and repairing machinery for which I was earlier dependent on others."

Experience of beneficiaries during checkup

In telephonic interview and face to face interview 125 beneficiaries were connected out of which 99 respondents reported receiving very good service and were highly satisfied, 20 respondents reported satisfactory service, while 6 respondents were not happy with the service provided at the centres.



Figure - Experience during check-up

5.3 Efficiency

Efficiency is used to understand how well resources of the program are used and the extent to which the program delivers results in an economic and timely way.

Achievement of program Presented below are the goals of the program as envisaged at the start of the program and remarks on its achievement:

Goals	Remarks on Achievement
Continuing operations in the existing 11 Static Vision Centres located at Ahmedabad, Bengaluru, Chennai, Indore, Jamshedpur, Kanpur, Kolkata, Ludhiana, Motihari, Mumbai and Paradeep	After visiting 5 of the 11 Raahi Static Vision Centres, it was observed that the existing centres are functioning efficiently, with the exception of Jamshedpur and Motihari which have been replaced by the Raipur and Vijayawada centres.
11 centres to conduct outpatient diagnosis for 17,136 individuals and issued 6,854 spectacles over a 10-month period	As a sample check, we have looked at approximately 100 beneficiaries at 10 of the 11 centres.
Conducting at least 3 eye check-up camps at least per month in each of the eleven	As per the data shared by Sightsavers India

Centres to cover 12,285 people and issued 2,914 spectacles.	team, they conducted more than 880 camps between August 2021 and March 2022, including 640 exclusive camps held at a rate of 3 camps per month, by 11 static centres (Raashi Kendra).
To conduct 640 exclusive camps at Dhanbad, Bokaro, Khyonjhar, Muzaffarpur, Coimbatore, Gopalpur port, Satna, Gorakhpur, Jhansi, Jabalpur, Bardaman, Siliguri, Aurangabad, Ganjam, Allahabad, Durg/Bhilai, Bhopal, Vijayawada, Mumbai, Gandhi Nagar, Vadodara, Kochi and Goa in a year to cover 41,600 persons and issue 16,640 spectacles.	
To issue 40% of the patients with spectacles in all the above operations.	Out of 125 survey respondents 86 confirmed having received spectacles. This indicates that 68.8% of patients received spectacles.

Contribution of Raahi Static Vision Centres

Raahi Static Vision Centres has an efficient and effective process for providing comprehensive eye care to drivers and truckers. The responsibilities of each member of these Centres is explained below:



Figure - Kanpur team, Kolkata team, Bengaluru team

eye care, inform them about the impact of poor eye health, and coordinate with transport company coordinators. They also help in the registration process, which is completely online using an electronic tablet provided by Sight Savers. Personal details, including past experiences with eye health and general health issues (weight and height that indicate sugar or BP) that could impact eye health, are collected. Copies of Aadhar or driving licence of drivers are also collected.

2. Vision technician: The vision technician conducts a primary assessment for long or short distance vision issues using an eye chart and an Ishihara test for color blindness. If any issues are found, the patient is referred to an optometrist.
3. Optometrist: The optometrist conducts a detailed checkup of eye health using an ophthalmoscope and lensometer to assess the eye power. If required, the patient is referred to

the spectacles desk and given glasses ranging from (-0.75 to -3.5). For any other power, the patient is asked to collect it within 15 days from the centre. When required patients are also given general medicine for eye care. If any other problems like eye pain, water, glaucoma, cataract, etc. are detected, the patient is referred to the hospital coordinated by the program coordinator.

4. Program coordinator: The program coordinator cooperates with registration and coordinates with different organisations to provide facilities. They also coordinate with hospitals if the patient is referred for any surgery or other facilities and make sure that everything is done smoothly. Additionally, they collect feedback from hospitals.

Name and designation of staff members from 5 centres visited by Chrysalis Team:

Raahi Centre	Field Worker	Vision Technician/Ophthalmic assistant	Optometrist	Program Coordinator
Kanpur	Jatin Kanojiya	Umar Sharid	Ashutosh Tripathi	Virendra Pratap Yadav
Raipur	Vivek	Bhoj	Aakash Kashyap	Sewaram Sahu
Chennai	R.Suresh		S.Arivukanal	Sankar
Kolkata(Dhulagori)	Nayan Das	Tamala Karmakar and Rick Mondal	Sanjeev Kumar Singh	Dinesh Yadav
Banglore	Sangeeta	Sindhu	Sharat	Pawan Singh

Fund Utilisation

According to the coordinating manager of Sightsavers, the funds were allocated towards various vision care programs, such as the establishment of vision centres, organising camps and exclusive camps. A portion of the funds were also allocated towards the salaries of zonal and national coordinators, the purchase of electronic tablets, and the formation of teams responsible for ensuring the quality assurance and oversight of the programs. However, the utilisation certificate was not available for us to verify whether these expenses were in accordance with the agreement.

5.4 Impact

Impact helps in assessing the positive and negative effects of the program on beneficiaries in terms

of good health, ease in doing daily activities and professional work, larger impact on society and any unintended consequences.

Road accidents The Sightsavers program for truckers has emerged as a pivotal factor in minimising road accidents, according to a thorough analysis of collected data. This program's focus on improving vision for truck drivers has garnered widespread support, with a large majority of respondents believing that enhanced eyesight significantly reduces the likelihood of road accidents. Out of the 125 beneficiaries who were interviewed, 87 of them acknowledged that improved vision has reduced the likelihood of road accidents for them. They have reported being able to read signboards and see traffic clearly, which has increased their confidence while driving. Some also reported better visibility, clearer reading, and an overall improvement in eye-sight. This is a positive outcome as it not only benefits the individuals but also has wider implications for road safety.

Decrease in the probability of road accidents.



Figure - Decrease in the probability of road accidents

Kulwant Singh, 52 years old truck driver said that Life quality improved due to better vision. "Zindagi behtar ho gai hai saaf dekhne ki suvidha se"

Affordability of checkup: All of these beneficiaries are from marginalised sections of society. They often lack awareness about the importance of maintaining good eye health, and the impact that poor eye health can have on their lives. In addition, the cost of eye checkups and spectacles is a significant barrier to accessing proper eye care, with a single checkup costing up to Rs. 500 and spectacles costing more than Rs. 2000, making them unaffordable for many people.

This Sightsavers program bridged the gap of economic constraints and good health by providing free eye checkups, raising awareness about the importance of maintaining good eye health, and providing spectacles to those who needed them.

69% respondents reported that Raahi Static Vision Centre is the only centre from where they have got their eyes checked. Earlier either they were not aware or could not afford it. This indicates a significant impact on the majority of beneficiaries who have received proper eye care through the Sight Savers program.

Follow-up: Out of 125 respondents, 54% of the respondents prefer going to Raahi Static Vision Centres for follow-up if they ever face any issues with their eyes. This preference suggests that the services provided by these centres are of good quality and have earned the trust of the truckers community. The patients who are given spectacles are advised to come after six months for a review

check up and the cataract surgery patients are advised to come for a review checkup after seven days post surgery.

These centres adopted paperless record keeping (electronic tablet) and beneficiaries receive a certificate and patient ID card upon completion of the process, making follow-up visits easier. Additionally, they are provided with information on measures to maintain healthy eyes, optimising the impact of the program. They scan the barcode and track the patient details which make the process very efficient.



Figure - Beneficiary with patient ID card and certificate

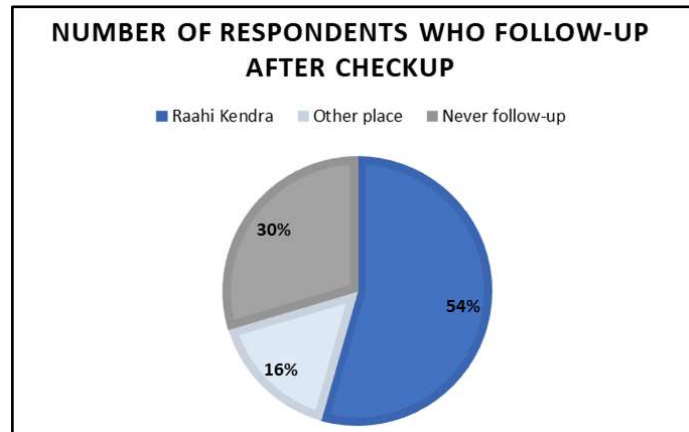


Figure - Number of respondents who follow-up after check up

Contribution towards national economy: In 2022, there were around 4 million truck drivers in India, and this number is expected to increase fourfold by 2050³. These drivers are supported by helpers, cleaners, mechanics, and other allied employees. In total, the trucking community represents a significant proportion (2.5% to 3%) of the labour force in India. These drivers are crucial to the country's supply chain. However, if blindness affects this community, it can have severe social and economic consequences. It can result in road accidents, delivery delays, loss of life and goods, and other issues. Therefore this program aims to help over 70,000 trucking community people(CVCM) and provide spectacles to 40% of them through the Raahi Static Vision Centre, along with three static centres camps per month and 640 exclusive camps. This program plays a crucial role in contributing to the welfare of the country as a whole.

5.5 Sustainability

Sustainability assesses whether the program can be sustained over the long term and does it take into account the role of multiple stakeholders.

³ <https://www.niti.gov.in/sites/default/files/2022-09/ZETReport09092022.pdf>

Sustainability is at the core of Sightsavers approach to promoting lasting change in the field of health care. They understand that strengthening existing health systems is crucial to achieving this goal. To this end, they work closely with governments, advocating for policies that prioritise the needs of the disabled and demonstrating best practices in the field. Sightsavers also collaborates with like-minded organisations to share ideas, advocate for the rights of the disabled and can approach different corporate grant-givers to support this program.

6. Conclusion

The Truckers Eye Health Program - Phase V aims to address the critical issue of poor eye health among truck drivers, which can negatively impact their personal and professional lives. With good vision being essential for safe driving, the program aims to ensure that more than 70,000 truck drivers can receive the necessary care and treatment to maintain good eye health. This initiative recognizes the fundamental right of every human being to good health and seeks to support individuals whose livelihoods depend on their physical abilities, such as truck drivers. By reducing the prevalence of poor eye health among truck drivers, this program can improve their overall well-being and contribute to safer roads for all.

Good Practices

- The use of an electronic tablet-based system for collecting beneficiary information enables comprehensive data collection and analysis to improve quality of services as well as follow-up and monitoring activities throughout India.
- It was observed that in some of the cases where the spectacles could not be provided immediately, they were sent to another Centre where the truck driver was likely to reach after a certain period of time. This helped by not having the driver come back to the Centre where he had had his checkup to collect the spectacles.
- Highly experienced optometrists are hired to ensure the quality services and collaboration of kendra's with the hospital make it more effective.
- Raahi s
- tatic vision centres are strategically located along the major highway corridors in India.

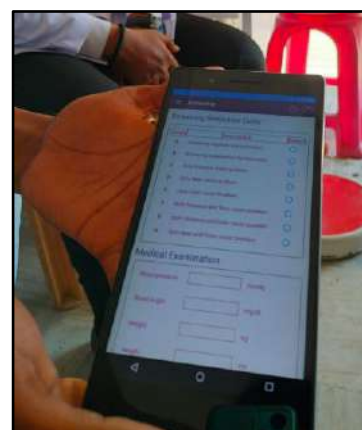


Figure - Electronic tablet used for collecting data

Challenges

- 22% respondents who received spectacles reported problems with their spectacles, such as low-quality lenses or frequent breakage, which made it difficult for them to use the same pair of glasses for an extended period.
- Despite having a well designed followup mechanism, there is a lack of awareness among many people regarding its necessity.

- Managing and storing large amounts of data pose significant challenges as the data volume grows, complexity also increases. Verifying the accuracy and reliability of the data can also become problematic.

7. Recommendations

The Truckers Eye Health Program Phase-V has successfully provided free eye checkups and spectacles to more than 70,000 truck drivers and members of the roadway community, promoting their basic right to live with dignity. To increase the outreach of the program and ensure that more truck drivers benefit from it, we have the following recommendations:

- It is recommended to provide progressive spectacles to the trucker community who suffer from both long and short vision distance challenges, as it will provide them with a single solution for both the problems.
- The monitoring and evaluation of beneficiaries data need to be performed more thoroughly with data management systems made more robust and reliable.
- Apart from eye care, some drivers asked to increase the services/treatment for other health related issues like backache, surgery in case of cataract and glaucoma. Sightsavers India may like to develop protocols along with other agencies for referrals to relevant healthcare institutes and hospitals.
- Awareness about the cause of poor vision and importance of regular eye check-ups needs to be spread among the trucker community.
- In India, only around 12.7% of truck drivers have health insurance policies. This highlights the need for Raahi Static Vision Centres to collaborate with insurance providers and offer health insurance benefits to drivers. Moreover, these centres can raise awareness about the Ayushman Bharat scheme and facilitate enrollment. This will ensure healthcare services in case of emergencies.
- The number of trucks on Indian roads is projected to increase from 4 million in 2022 to around 17 million by 2050, as per Niti Aayog. To tackle this situation, establishing more static Raahi Static Vision Centres in underserved regions, particularly in North East India and other states, is crucial.

Impact Assessment Report

The Gift of Life - Phase III & IV

Implemented by -



Supported by -



Submitted by -

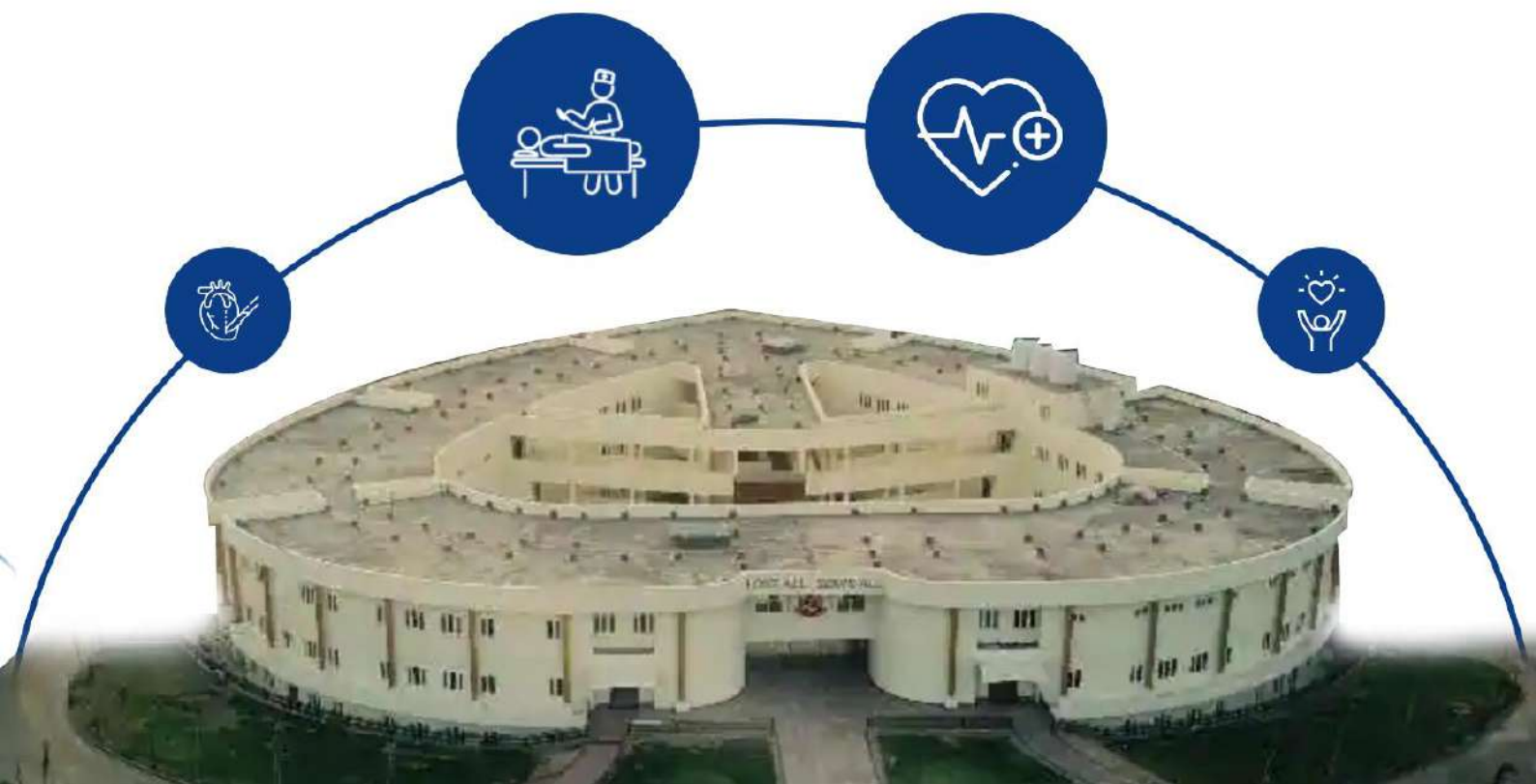


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Acknowledgement

We are thankful to the children's families, hospital staff and doctors of Sri Sathya Sai Sanjeevani Hospital who whole-heartedly shared their opinions and provided necessary information during the Impact Assessment process. Our hearty gratitude to the Sri Sathya Sai Sanjeevani Hospital representatives who organised all field visits as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the Gift of life Phase-III and Phase- IV project .

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment, and we are confident that its recommendations will lead to positive outcomes for all stakeholders involved

1. Executive Summary

The Sri Sathya Sai Health & Education Trust is a public charitable trust that has been providing exceptional healthcare and educational services to those in need since 1970. The Trust's core value is to provide free services without discrimination based on caste, religion, nationality, or financial status. The Trust established the Sri Sathya Sai Sanjeevani Centre for Child Heart Care hospitals at three locations Raipur, Chhattisgarh, Palwal District, Haryana, and Navi Mumbai, Maharashtra to offer free services to children suffering from Congenital Heart Disease (CHD).

In India, over 200,000 children are born with congenital heart disease each year. Many of them are unable to receive the necessary medical care due lack of resources, including financial constraints, insufficient care, and misdiagnosis. The cost of these surgeries is exorbitant, making it challenging for economically disadvantaged families to afford the necessary treatment while also meeting their basic needs. As a result, many children die due to a lack of access to proper care and delayed diagnosis. This project aims to provide free treatment to children suffering from congenital heart disease, thereby ensuring that every individual has the right to life without any barriers.

An Impact Assessment field visit was conducted on 28th January of 2023 to gauge the impact created by the CIFCL supported project. CIFCL supported the treatment of 160 children with Congenital Heart Disease from families connected to the Road Transport Industry. This project ensured free of cost treatment to these children right from diagnosis to open heart surgery, pre and post-operative care and diet. The duration of the project was from June 2021 to March 2022.

During the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, impact and sustainability.

The assessment has revealed that surgeries and CATH interventions performed by the medical facility achieved a success rate of 97%, indicating that the medical staff involved demonstrated a high level of proficiency and expertise in their field. Additionally, the survey of 42 patient families also indicates that a majority of the parents expressed total satisfaction with the services provided, indicating that the hospital or medical facility exceeded the expectations of the parents with regard to the quality of care, attention, and support provided to their children.

It also revealed that every beneficiary agreed that the program not only provided financial support but also ensured psychological support by saving the life of their child. This indicates that the medical facility provided comprehensive care to both the patients and their families, acknowledging the emotional impact that such procedures can have on families and ensuring that they were well-supported throughout the process.

These outcomes indicate that this program has been highly effective and efficient in providing treatment to every child without any barriers. Therefore, it is recommended that the program should be continued to ensure that more children receive the necessary treatment without any obstacles.

2. Introduction

Sri Sathya Sai Health & Education Trust is a public charitable trust established in May 1970. The Trust has a long-standing history of providing exceptional healthcare and educational services to those in need. One of the core values of the Trust is to provide services completely free of cost, without discrimination based on caste, religion, nationality, or financial status. Over the years, the Trust has established several nationally recognized healthcare institutions across the country, providing comprehensive medical care to millions of patients.

The Trust began its services with the Sri Sathya Sai General Hospital in Whitefield, Bengaluru, Karnataka in 1976. They have served over two million outpatients and performed over 20,000 surgeries across various specialties in many villages. To address the global burden of Congenital Heart Diseases, the Trust has since expanded its services through the Sri Sathya Sai Sanjeevani Centre for Child Heart Care.

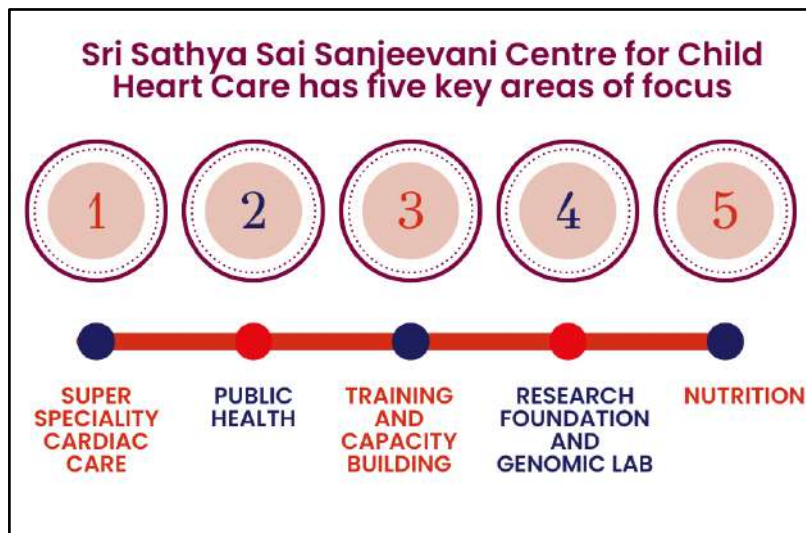


Figure 1 - Focus areas of Sri Sathya Sai Health and Education Trust

In 2012, the Sri Sathya Sai Sanjeevani Centre for Child Heart Care was established in Raipur, Chhattisgarh, offering completely free services to children suffering from heart disease. The success of this centre led to the establishment of a second centre in Baghola, Palwal District, Haryana in 2016. In 2018, the Sri Sathya Sai Sanjeevani Centre for Child Heart Care & Training in Pediatric Cardiac Skills opened in Kharghar, Navi Mumbai.

These three centres (Raipur, Palwal and Navi Mumbai) offer tertiary level interventions for paediatric heart disease, providing the below services free of charge to children between the ages of 0-18.

- A. Diagnostics: For the diagnosis of congenital heart disease, the centre offers various tests such as ECHO, ECG, X-Ray, Foetal Echocardiography, Diagnostic Angiography, and Medical Management.
- B. Interventional heart catheterization: Children with heart disease are referred for CATH intervention as needed. This section provides services such as PDA device closure, ASD device closure, Balloon dilations, VSD device closure, EP Study, and RF Ablations of SVTs.

3. Program Overview

3.1 Impact Assessment background

Congenital Heart Disease (CHD) refers to a group of structural heart conditions that are present at birth. CHD is one of the most frequently diagnosed congenital disorders afflicting approximately 0.8% to 1.2% of live births worldwide¹. In India, considering the birth prevalence of congenital heart disease as 9 out of 1000, the estimated number of children born with congenital heart disease is more than 2,00,000 per year. About one-fifth of these children are likely to have serious defects, requiring an intervention in the first year of life². CHD can range in severity, with some cases requiring only routine monitoring, while others may require surgical interventions. The causes of CHD are varied and can include genetic factors, environmental influences, and maternal health conditions such as diabetes and hypertension. Improper prenatal care and lack of access to healthcare resources can also increase the risk of CHD.



Figure 2 - Image of child in pre-operative care at Palwal centre

In India, the cost of treating CHD can be prohibitively high for many families, with surgical treatments costing upwards of several lakhs of rupees. This can lead to a delay in seeking treatment and can result in decreased health outcomes for CHD patients. Access to affordable healthcare is crucial for individuals with CHD in India. Only a small fraction of children with CHD in India receive the specialised care they need, leading to high mortality rates. It is essential to address this issue through a comprehensive program that focuses on increasing awareness, improving access to healthcare services, and providing financial assistance to families in need. This will not only improve health outcomes for individuals with CHD, but will also contribute to reducing the overall burden of disease in India.

Sri Sathya Sai Sanjeevani Centres for Child Heart Care run by the Trust addresses CHD by providing totally free of cost services to all. These hospitals are based in Raipur in Chhattisgarh, Palwal in Haryana and Navi Mumbai in Maharashtra. These hospitals have performed over 17200 Paediatric Cardiac Surgeries & CATH Interventions totally free of cost in the last 9 years. The support from corporates, individuals and philanthropic institutions has been instrumental in providing free of cost services to all.

¹

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7306355/#:~:text=Congenital%20heart%20disease%20\(CHD\)%20is%201%20of%20the%20most%20frequently,1.2%25%20of%20live%20births%20worldwide.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7306355/#:~:text=Congenital%20heart%20disease%20(CHD)%20is%201%20of%20the%20most%20frequently,1.2%25%20of%20live%20births%20worldwide.)

² <https://www.indianpediatrics.net/dec2018/dec-1075-1082.htm>

Cholamandalam Investment & Finance Company Limited (CIFCL), which is the financial services division of the Murugappa Group, has partnered with Sri Sathya Sai Sanjeevani Hospitals to offer cardiac treatment and care to children of truck drivers, cleaners, and mechanics from any part of the country. CIFCL has been supporting the surgical heart procedures for these children since 2019 and has assisted numerous children in four phases of the Gift of Life project. In Gift of life Phase-III and Phase-IV, CIFCL and Sri Sathya Sai Sanjeevani Hospital tried to bridge this gap and support the treatment of 80 children in each phase i.e 160 children with Congenital Heart Disease from families connected to the Road Transport Industry. They provide free of cost treatment to these children right from diagnostics to open heart surgery, post-operative care and diet.

CIFCL Project details

Thematic area:

Healthcare access and support for children with Congenital Heart Disease.

Objective of the project:

- Improved health and quality of life for children with CHD from Road Transport Industry families.
- Provide proper medical care and treatment to ensure that financial and resource barriers do not prevent anyone from attaining a healthy and long life.
- Increase the lifespan of children and improve their overall well-being.
- Create a positive impact on the Road Transport Industry Community.

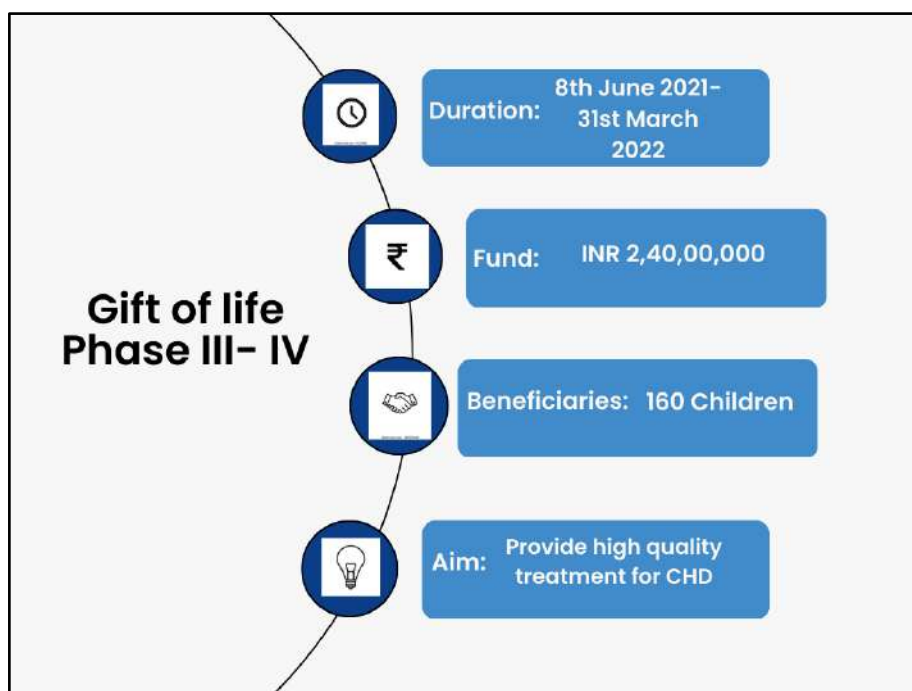


Figure 3 - Project details of Gift of Life Phase III-IV

Locations:

- 1) Sri Sathya Sai Sanjeevani Center for Child Heart Care Sector 2, Atal Nagar (Naya Raipur), Chhattisgarh
- 2) Sri Sathya Sai Sanjeevani International Centre for Child Heart Care & Research Baghola, NH-2, Delhi-Mathura Road, Palwal (District), Haryana
- 3) Sri Sathya Sai Sanjeevani Centre for Child Heart Care Training in Pediatric Cardiac Skills Plot No. 2 , Sector 38, Kharghar, Navi Mumbai, Maharashtra

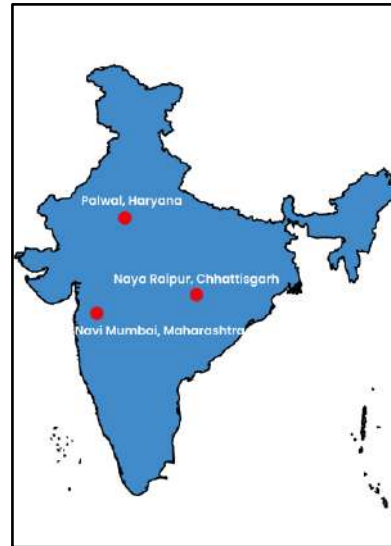
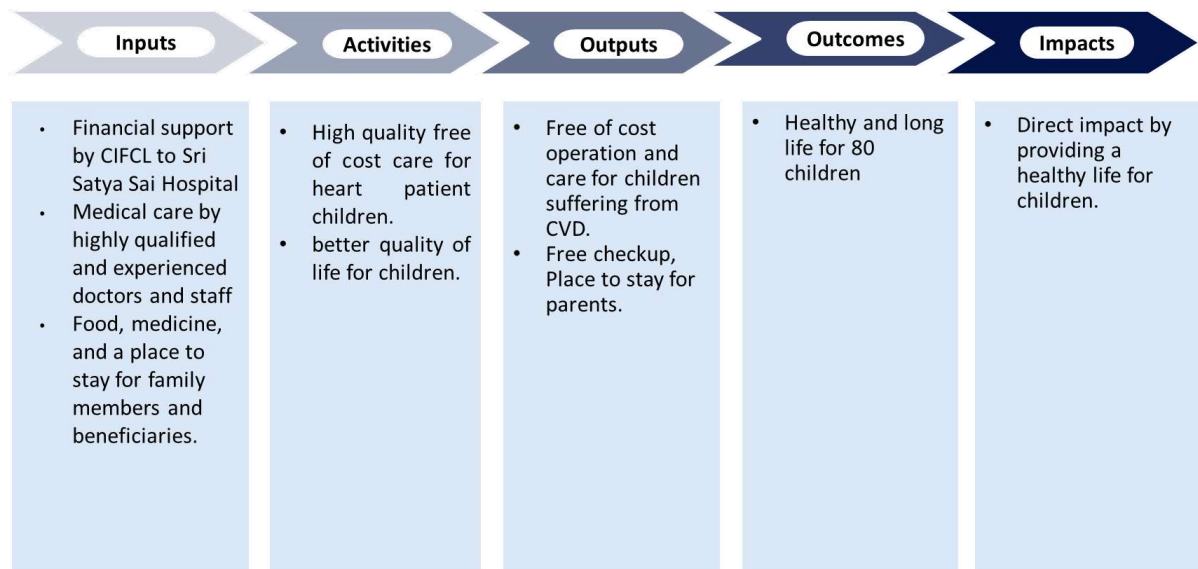


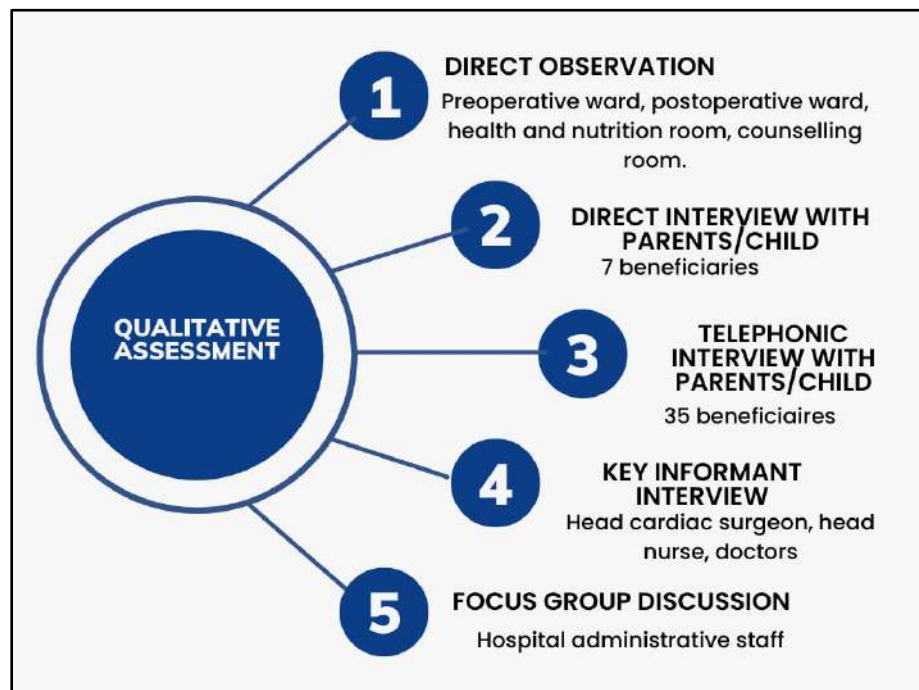
Figure 4 - Locations of Sri Sathya Sai Sanjeevani Hospitals

Project Impact map:



4. Methodology

According to the design of this impact assessment, a qualitative study was considered to map the impact of the project. As part of the field validation for the impact assessment, the following methodology was adopted:



5. Analysis and Finding

Respondents profile:

The CHD program provides support and care for children at different stages of development, ranging from early infancy to adolescence. The Chrysalis Team spoke with parents of 42 beneficiaries (respondents) who received treatment for various surgeries. These beneficiaries are from the children of the road transport community and are spread across India.

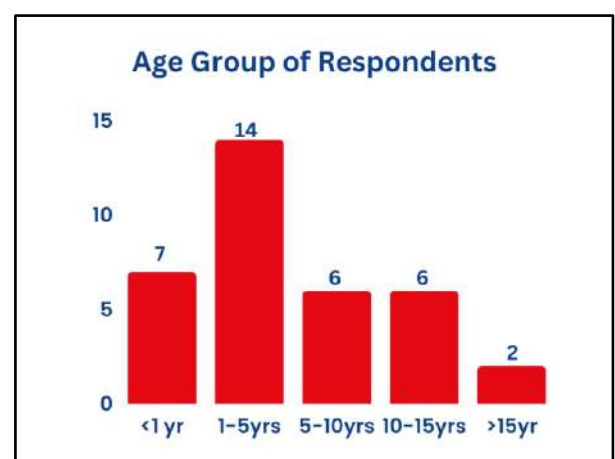


Figure 5 - Age group of Respondents

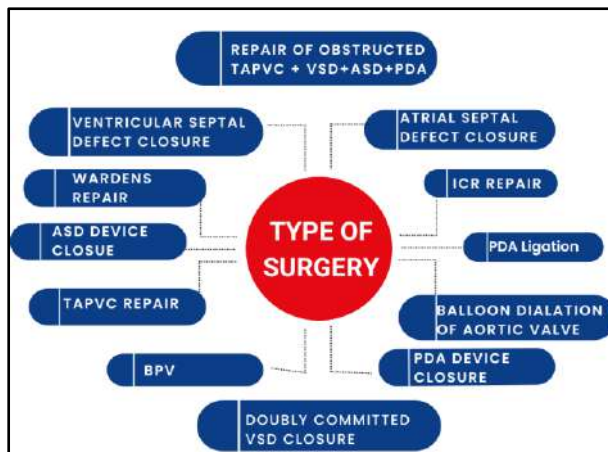


Figure 7 - Types of Surgeries provided at the Hospital

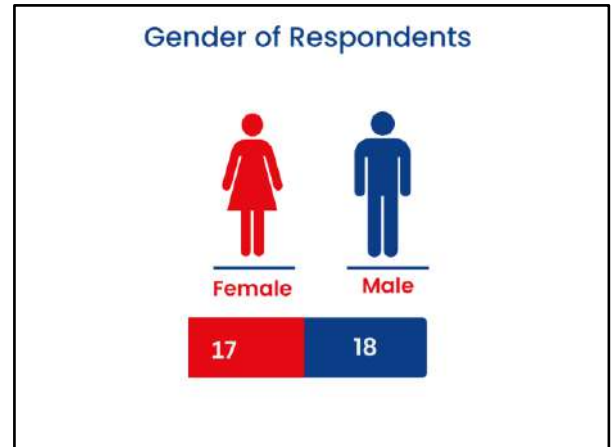


Figure 6 - Gender profile of Respondents

5.1 Relevance

The relevance determines the ability of the Gift of Life program to fulfil the needs and objectives of all stakeholders, including patients, families, healthcare providers, and funders. The program's significance is measured by how well it aligns with the larger goals of the country.

Need: The medical journal Indian Pediatrics³ reports that around nine out of 1,000 babies are born with Congenital Heart Diseases (CHDs) in India, resulting in approximately 2 lakh babies being born with this condition each year. Out of these babies about 1/5th are likely to have serious defects, requiring an early intervention in the first year but only few get it. This is largely due to the lack of awareness and high cost of surgery in India. Therefore, initiatives like the Gift of Life program are crucial in ensuring that every child in India has the basic right to live, by providing them with access to life-saving medical treatment for CHDs.



Figure 8 - Hospital staff with beneficiary in post-operative care

Accessibility to treatment: The Sri Satya Sai Hospital for child heart care is a vital program that addresses several issues faced by families connected to the road transport sector. Congenital Heart Disease is a serious and often life-threatening condition, and access to treatment can be challenging, particularly for low-income families. Treating congenital heart disease can be financially burdensome, with costs more than three lakhs-

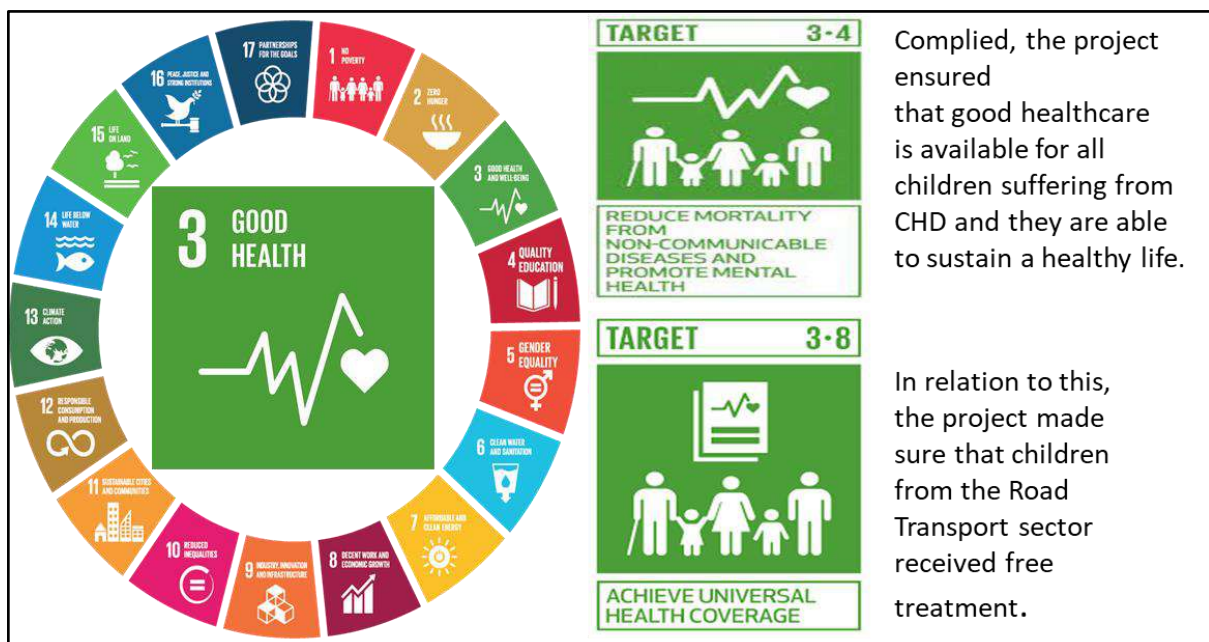
³ <https://www.indianpediatrics.net/dec2018/dec-1075-1082.htm>

⁴. An underprivileged family finds it difficult to afford such an operation and many times due to lack of financial resources for treatment, they lose their child.

The Gift of Life program offers a ray of hope to families with children suffering from CHD. This comprehensive program provides families with a range of essential services, including early detection of CHD, regular check-ups, medical treatment, careful supervision, nutritional support, and even accommodation for family members within the campus to promote hygiene and emotional support for the child. The program ensured to address the challenges faced by vulnerable communities and provides comprehensive care for many children.

Manish Yadav- Father of Harshit Yadav said: “Baccha ekdam tandarust hai”

Linkage to Sustainable Development Goals:



⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8730466/>

5.2 Effectiveness

Effectiveness is the evaluation of progress towards outcomes for children and their family and the validation of system robustness by resource utilisation assessment.

Target vs actual: The target of performing 160 surgeries for children with CHD, as per the agreement with CIFCL, has been successfully achieved through a comprehensive and cost-effective process.

In telephonic and face to face interviews, 96% of respondents reported significant improvement in their child's condition after surgery. Unfortunately, one child could not be saved due to complications, and three others required a second operation after showing no improvement.

The improvements reported included good growth, fast growth, improved movement, eating habits, activities, cough and cold symptoms, sitting and walking ability, and nutrition, as well as good health and growth. One respondent even reported their child being able to attend school and excel in sports and activities. Overall, the majority of respondents saw improvement in their child's condition after treatment.



Figure 9 - Mother and child after surgery

Cost effectiveness: 100% respondents received treatment for their children's heart conditions, including ventricular septal defect closure, warden's repair, ASD closure, TAPVC repair, BPV, balloon dilation of aortic valve, ASD device closure, and PDA device closure free of cost. The program provided free services to the families of children with CHD, which covers the cost of diagnosis, treatment, and post-operative care. As mentioned by the respondents, the financial support has been instrumental in reducing the financial burden on the families, who may not have the resources to afford the treatment otherwise.

Program reach: The program reached out to 160 children from across India. The Chrysalis Team interacted with 42 respondents from various states across India which include Uttar Pradesh, Maharashtra, Madhya Pradesh, Chhattisgarh, Haryana, Odisha, Rajasthan, Jharkhand, Punjab. This suggests that the program is highly effective in making an impact in different regions of the country.

Follow-up Process: The survey had found that the hospital ensures 3 follow up visits for each beneficiary after one month, second after six months and third after one year.



Figure 10 - Check-up done at the hospital

Response of beneficiaries indicate the average number of follow-up visits was 1.6 visits per patient, with most respondents having two or three follow-up visits. Sri Satya Sai Hospital had scheduled follow-up visits at specific intervals to ensure the effectiveness of the surgery. The doctors had kept a check on each child through these follow-ups, and in cases where a second operation was required, the hospital had provided the necessary support to ensure that children continued to receive the care they needed. Unfortunately, one respondent had reported that their child had passed away. It was essential to encourage follow-up visits and provide ongoing care to ensure the long-term health and well-being of patients, even after the initial operation.



Figure 11 - Certificate distribution at Raipur Hospital

Process Effectiveness: Sri Satya Sai hospitals at Raipur, Palwal and Navi-Mumbai have been highly effective in reaching out to children with Congenital Heart Disease (CHD) in areas with limited access to healthcare. They have adopted a comprehensive approach of outreach, detecting, treating CHD, and providing post operative care. The hospital provides preoperative and post-operative counselling and nutrition/diet information ensuring the child's well-being and recovery. Patients are presented with a certificate at the time of discharge that highlights the importance of the precious gift of life they have received from society.

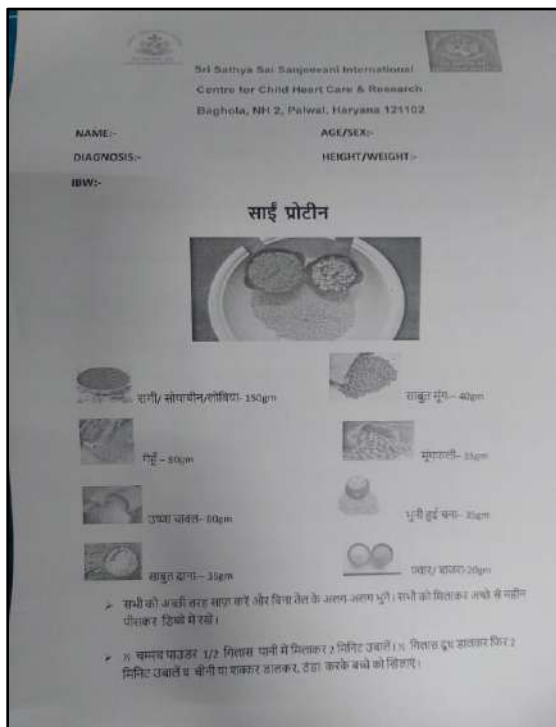


Figure 12 - Nutrition information given to each beneficiary



Figure 13 - Supplement given to children

Process followed by the hospital is given below

PROCESS FOLLOWED BY THE HOSPITAL

- Camps conducted by a team of one doctor and five to six nurses travels to various locations to check up on pregnant mothers and monitor children
- Beneficiaries are identified from all over India through referrals and awareness programs.



- If congenital heart disease is detected in the child, complete care along with delivery service is given to the mother and child.
- Family/child is given pre-operation counselling and nutritional information

- Based on complication child is treated for CHD with an open heart surgery or cath intervention.
- Pre-operative care and diet is ensured.
- Follow-up is scheduled at the interval of one month, six month and one year.
- Food and lodging for attendants is provided , to ensure their comfort in a critical situation.



- Child is kept under post-operative care.
- Counselling and dietician experts completely inform the parents about how to take care of their child and provide other nutritional requirements.

With these steps, the hospital ensures safe and healthy life for children suffering from CHD



5.3 Efficiency

Efficiency is used to understand how well resources of the program are used and the extent to which the program delivers or is likely to deliver results in an economic and timely way.

Overall experience: 97% respondents expressed satisfaction with the service provided by the hospital. Unfortunately 1 child could not be saved due to complications. It was found that each respondent had to stay in the hospital for an average of 14 days, during which they received complete care. Additionally, the hospital also provided a place for parents to stay, ensuring that hygiene standards were met during the patients recovery period. This indicates that the hospital has efficiently met the needs and expectations of its patients, and provided a comfortable and supportive environment for them to heal and recover.

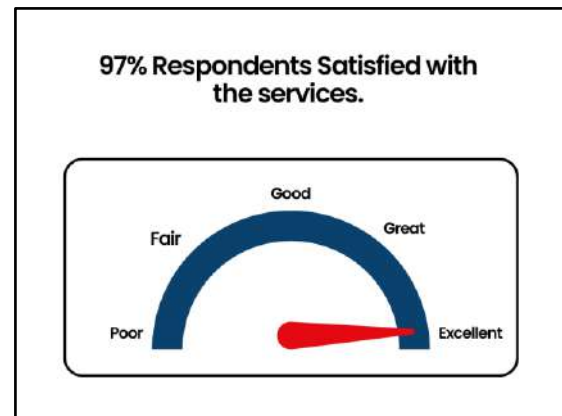


Figure 14 - Respondents satisfaction with the service

Hospital staff Palwal- Jaya Priya “ Free treatment enabled more children to access treatment as some are not even getting diagnosed and are not aware about the disease”.

Utilisation of budget:

The expenses incurred per beneficiary were well-managed. As discussed with the hospital management team, the consultant cost includes highly skilled professionals such as a surgeon, anesthesiologist, and cardiologist, amounting to around Rs 27,000. The OT and ward cost cover essential services such as ICU, pre-operation, and post-operation care, totaling around Rs 66,500. The cost of drugs and consumables was approximately Rs 40,500,

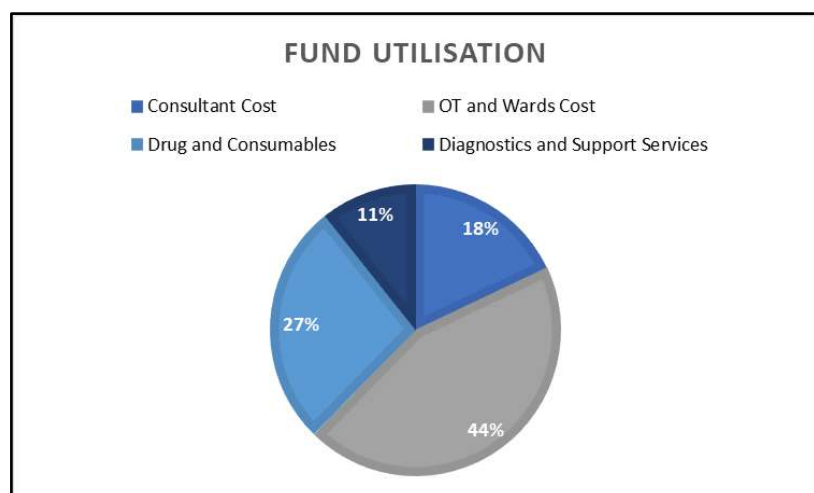


Figure 15 - Fund Utilisation

while the cost of diagnostics and support services, including imaging, lab investigations, blood products, patient diet, medical gases, and accommodation and food for attendants, was around Rs 16,000. All these expenses combined amount to approximately Rs 1,50,000 per beneficiary.

Project Execution as per Timelines: The program activities were executed efficiently and completed within the approved timelines of 4 months. This indicates that the program was well-planned, organised, and executed, with a clear understanding of the scope of work and timeline for completion. Timely execution also helped to avoid any delays or additional costs that may have arisen due to delays in the execution of the program activities.

5.4 Impact

Health, social and behavioural impact on child:

Majority of the children who received treatment at the hospital have experienced positive changes in their health and well-being. Many parents reported improvements in their child's growth and physical abilities, such as being able to attend school or play sports. Some parents also mentioned specific improvements, such as changes in their child's eating habits or being able to interact more easily with family members. However, some parents reported ongoing health issues, such as cough and cold, anger issues and nutrition problems.

Most parents reported positive social and behavioural changes in their children, such as increased interaction with others and improved relationships with siblings. Overall, the survey results indicate that the hospital's treatment program has had a positive impact on the health and well-being of the majority of the children who received treatment.

Jitendra Sahani- Father of beneficiary child Prince said: "Isse badhiya suvidha kya ho sakti hai, bacche ki jaan bachai hai."

Impact on family:

Program has provided emotional and financial support for their families as their child has received life-saving treatment that they could not afford otherwise. One respondent stated that the program has given life to their child and family, and that there is no greater benefit than this.

All of the respondents reported that the program had a positive impact on their financial situation, allowing them to invest in their children's education and healthier diets for their families. This has resulted in a positive impact on society.

Testimonial:

Anurag(Raipur)

Anurag, a 1.2-year-old boy, comes from a financially challenged family. His father Kisan works as a mechanic at Ashok Leyland, an automobile company, while his mother is a homemaker. When Anurag was 2 months old, he was diagnosed with congenital heart disease and the family was unable to afford the necessary care. His father has been working hard to treat his son's disease. But for the treatment of this condition requires 3 to 4 lakh rupees. Meanwhile, before the surgical intervention, Kisan spent around 2 lakh rupees on the treatment and medication of his son. He was



Figure 16 - Anurag (beneficiary of phase- IV)

financially burdened and also faced irregularity in work. At such a time, , they were directed to Sri Satya Sai Sanjeevani Hospital by local people where they received comprehensive support, including scanning, Balloon Pulmonary Valvuloplasty surgery, nutrition supplement, post-operative care and counselling. This program not only saved Anurag's life, but also provided financial and emotional support for the family to improve their lives.

Parshant Sharma(Palwal, Haryana)

Prashant Sharma, a 10-year-old boy, had a congenital heart disease since birth. His father Rajeev Sharma is a bus driver and mother is a nurse. Unfortunately, his parents were not aware of it. As a result, they used to spend a considerable amount of money on general treatments to manage his regular health issues, such as cold and fever, but without proper diagnosis. However, after receiving necessary medical support from the program, Prashant's health saw improvement in terms of height, weight, and academic performance. The program also helped him receive proper diagnosis, nutrition advice, and PAPVC Repair surgery, which resolved his ailment at no cost. During the treatment, Rajeev Sharma, his father, received free food and lodging from the centre where they stayed. After the successful surgery, the family was given appropriate information on care and precautions, as well as the next follow-up date.



Figure 17 - Prashant (beneficiary of phase - III)

Dr Ragini Pandey, Head Surgeon.

Paediatric Cardiologist, has been serving at the Sri Sathya Sai Sanjeevani Centre for 6 years. She travelled back from the UK to India to replicate the superior and accessible healthcare system that she witnessed in the UK. She stated that many children are suffering from congenital heart disease, and at the Sanjeevani Centre, they are providing timely treatment. Heart diseases are life-threatening if left untreated. At the Sanjeevani Centre, they offer free cardiac services to children between the ages of 0 and 18, a unique feature not offered by any other hospital. She has witnessed the transformation of hopeless parents to those filled with hope for their children after they received treatment at the hospital.



Figure 18 - Dr. Ragini Pandey, Head Surgeon

5.5 Sustainability

The program has been running for 10 years and has performed more than 17,400 open heart surgeries and cath interventions totally free of cost. This indicates that it is sustainable and has been able to garner the necessary support to continue its operations. The sustainability of the CHD program crucially depends on continued sponsorship from various stakeholders, including corporates, government programs like Aayushman Bharat, and philanthropic institutions. Sri Satya Sai Trust can approach different grant-givers to support similar programs. Additionally, NGOs supporting programs of a similar nature could be approached to collaborate with and follow the processes of the Sri Satya Sai Trust to enhance the effectiveness and sustainability of this initiative. By working together with various stakeholders, the Trust can create a sustainable healthcare system that provides essential health services to underserved children in the long run.

6. Conclusion

Access to quality healthcare is a fundamental right for all individuals, and this program has ensured that children suffering from CHD receive this right. By providing appropriate treatment and resources, the project has successfully improved healthcare outcomes for 160 children. Sri Sathya Sai hospitals are dedicated to ensuring that every child has the opportunity to live a healthy and fulfilling life. Through the use of funds, they have successfully provided treatment for these children, bringing them one step closer to a healthy and long life.

Good practices:

- Program emphasises raising awareness about the challenges faced by children and families affected by CHD.
- They provide nutrition and diet counselling both before and after operations to ensure optimal health outcomes for the child.
- Complete care is provided to the child and their family during their hospital stay to provide financial and psychological support.

Challenges:

- Program aims to provide healthcare services in rural and backward areas where doctors and staff are not readily available. Due to the lack of medical personnel, it is difficult to meet the requirements of the project.
- To create a larger impact and reach more children, additional funds are needed. With more funds, they can ensure that more children in these areas receive proper medical care and support.

7. Recommendations

The Gift of Life project for children suffering from (CHD) is crucial in providing lifesaving interventions and quality health care to children in need. Sri Sathya Sai Child Care Hospital helped to save countless lives and has given hope to families. To increase the outreach of the program and ensure that maximum people benefit from it, we have the following recommendations:

- Wider outreach- at present it appears to be people in areas around the hospital.
 - Use local language television and radio stations to publicise availability of such services.
- Develop relationships with corporates to fund doctors' salaries.
- Build relationships with Government agencies for registration of their patients for Govt. related schemes.
- Government departments periodically conduct health care camps in rural areas. SSSH could consider participating in these camps with their speciality.



Impact Assessment Report

Maternal Deliveries and Newborn Care

Implemented by -



Supported by -



Submitted by -



March 2023

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Acknowledgement

We are thankful to the beneficiary families, hospital staff and doctors of Sri Sathya Sai Sanjeevani Hospital who whole-heartedly shared their opinions and provided necessary information during the Impact Assessment process. Our hearty gratitude to the Sri Sathya Sai Sanjeevani Hospital representatives who organised all field visits as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the Maternal Deliveries and Newborn care project.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and we are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

The Sri Sathya Sai Health & Education Trust is a public charitable trust that has been providing healthcare and educational services to those in need since 1970. The Trust's core value is to provide free services without discrimination based on caste, religion, nationality, or financial status. In 2021, the Trust founded the Sri Sathya Sai Sanjeevani Centre for MOTHER AND CHILD hospitals (MAMATVA) in Raipur, specifically aimed at serving the underserved population of Chhattisgarh.

India currently experiences around 56,000 maternal deaths each year, with over 1.3 million infant deaths in their first year of life. Chhattisgarh, with a Maternal Mortality Rate (MMR) of 137, is particularly vulnerable to maternal and neonatal mortality due to inadequate healthcare, anaemia, and malnutrition. These issues are often exacerbated by a lack of awareness and financial constraints, leading to complex cases resulting in mortality. This project seeks to provide free care to mothers and children, ensuring that every individual has the right to life without barriers.

An Impact Assessment field visit was conducted on 28th January of 2023 to gauge the impact created by the CIFCL supported project. CIFCL supported 167 maternal deliveries and newborn care at Mamatva from families connected to the Road Transport Industry, rural areas, tribals who are below poverty line. This project ensured free of cost treatment from antenatal checkups, scans, nutrition support, institutional delivery and newborn care. The duration for the project was from December 2021 to March 2022.

During the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, impact and sustainability.

The assessment has revealed that the Sri Sathya Sai Maternal Deliveries and Newborn Care Program is a comprehensive initiative that guarantees safe deliveries and appropriate care for mothers and newborns. The program achieved a 100% success rate by delivering 167 healthy babies. The hospital demonstrated a high level of proficiency and expertise by handling complex cases effectively and providing C-section deliveries when necessary.

The results of the survey conducted on 25 patient families indicate that they were highly satisfied with comprehensive care provided by the hospital. Parents were more aware of safe and healthy pregnancy and child care due to the program. All beneficiaries agreed that the program not only provided financial support but also ensured psychological support by ensuring the good health of the mother and child, indicating that the hospital staff provided excellent support throughout the process.

The program's outcomes demonstrate its exceptional effectiveness and efficiency in providing unrestricted treatment to every mother and child. Therefore, it is recommended that the program should be continued to ensure that more families receive the necessary care without any obstacles.

2. Introduction

Sri Sathya Sai Health & Education Trust is a public charitable trust established in May 1970. The Trust has a long-standing history of providing exceptional healthcare and educational services to those in need. One of the core values of the trust is to provide services completely free of cost, without discrimination based on caste, religion, nationality, or financial status. Over the years, the Trust has established several nationally recognized healthcare institutions across the country, providing comprehensive medical care to millions of patients.

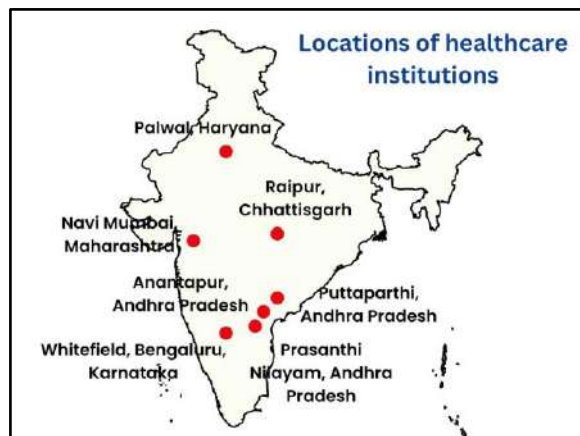


Figure 1 - Locations of Sri Sathya Sai Trust healthcare institution

The first healthcare institution established 1976 by the Trust was the Sri Sathya Sai General Hospital, which is located in Whitefield, rural Karnataka. This hospital has served over two million outpatients and has conducted over twenty thousand surgeries in all general specialties. The hospital caters to patients from over a thousand villages, providing high-quality medical care to those who otherwise may not have access to it. In 2012, the Trust embarked on a journey of addressing India's national problem- Congenital Heart Disease which is the largest cause of child mortality in the country by establishing Sri Sathya Sai Sanjeevani International Centres for Child Heart care. The Trust established Sri Sathya Sai Sanjeevani Mother & Child Hospital (Mamatva) in Raipur, Chhattisgarh in Sept 2021 because Chhattisgarh has a large tribal population with limited access to safe institutional deliveries exposing them to the risk of maternal and infant mortality.

3. Program Overview

3.1 Impact Assessment background

Maternal mortality has been an issue of concern in India for many years, and one of the country's endless endeavours has been to improve maternal health and bring down the Maternal Mortality Ratio (MMR). MMR is the number of maternal deaths during a given time period per 100,000 live births during the same time period. Many women in reproductive age-span die due to complications during and following pregnancy and childbirth or

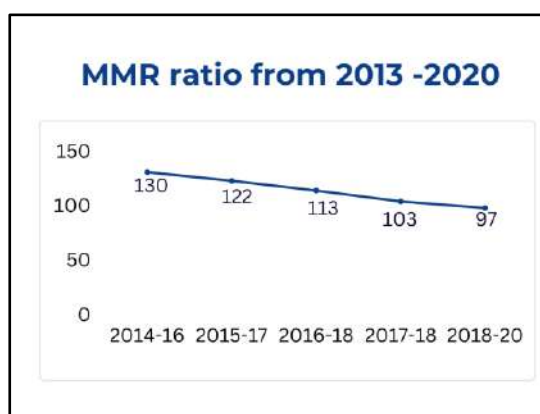


Figure 2 - Progressive decline in MMR ratio from 2013-2020

Strengthening the Maternal Health

abortion. India has improved its maternal mortality ratio (MMR) — number of deaths per 100,000 live births — to 97 deaths per lakh in 2018-2020 from 130 deaths per lakh in 2014-2016¹. However many states still have very high MMR which includes Chhattisgarh MMR-137².

The National Health Policy (NHP) 2017 laid down the target to bring the MMR in India below 100/lakh live births by 2020 and achieve the SDG target of MMR less than 70/ lakh live births by 2030. The project of Sri Sathya Sai Sanjeevani Mother & Child Hospital (Mamatva), Raipur, Chhattisgarh and CIFCL is in line with the national objectives.

The need for maternal health care in India, particularly in the road transport sector and rural/tribal families, is paramount. The road transport sector in India is particularly vulnerable to maternal mortality due to the largely underprivileged socio-economic profile of its workers. Road transport workers often come from rural or tribal backgrounds, and face additional barriers to accessing healthcare services due to limited financial resources, language barriers, and lack of awareness of child care and support services..

CIFCL partnered with Sri Sathya Sai Sanjeevani Mother & Child Hospital (Mamatva) in Raipur, Chhattisgarh, to support 167 maternal deliveries and newborn care for families associated with the Road Transport Sector or hailing from rural and tribal communities. Through this initiative, the hospital provided free-of-cost antenatal checkups, scans, nutrition, institutional deliveries (both C-section and normal), and postnatal care of exceptional quality. By prioritising maternal health, Sri Sathya Sai Sanjeevani Hospital aims to address the healthcare disparities that exist in Chhattisgarh and other developing regions of India.

The hospital provided services entirely free of cost, making it accessible to the most vulnerable sections of society. The hospital's team comprises experienced doctors, nurses, and other healthcare professionals who provide high-quality treatment with compassion and empathy. Their care model is founded on the belief that every patient deserves care and treatment that is delivered with love and kindness.



Figure 3 - Patient consulting doctor at Mamatva centre Raipur

This program will address the issue of maternal health care in the road transport sector. Positive impact would include improved maternal and child health outcomes, improved access to quality health care services. This would also help reduce poverty and improve living standards in the rural/tribal communities. In addition, by providing quality health care services to these families, the

¹

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1879912#:~:text=Significant%20Decline%20in%20the%20Maternal%20Mortality%20Ratio%20from%20130%20in,tremendously%20in%20bringing%20down%20MMR.>

² <https://www.aninews.in/news/national/general-news/maternal-mortality-rate-drops-from-159-to-137-in-chhattisgarh20221130152405/>

Strengthening the Maternal Health

hospitals would help to reduce the burden on public health care systems, thereby improving overall public health in the region.

CIFCL Project details

Thematic Areas Maternal deliveries & newborn care.

Objective

- Reducing the neonatal and newborn mortality rate.
- Reducing the mortality and morbidity rate of children under five.
- Reducing the maternal mortality and morbidity rate.
- Improving access to essential medical services.

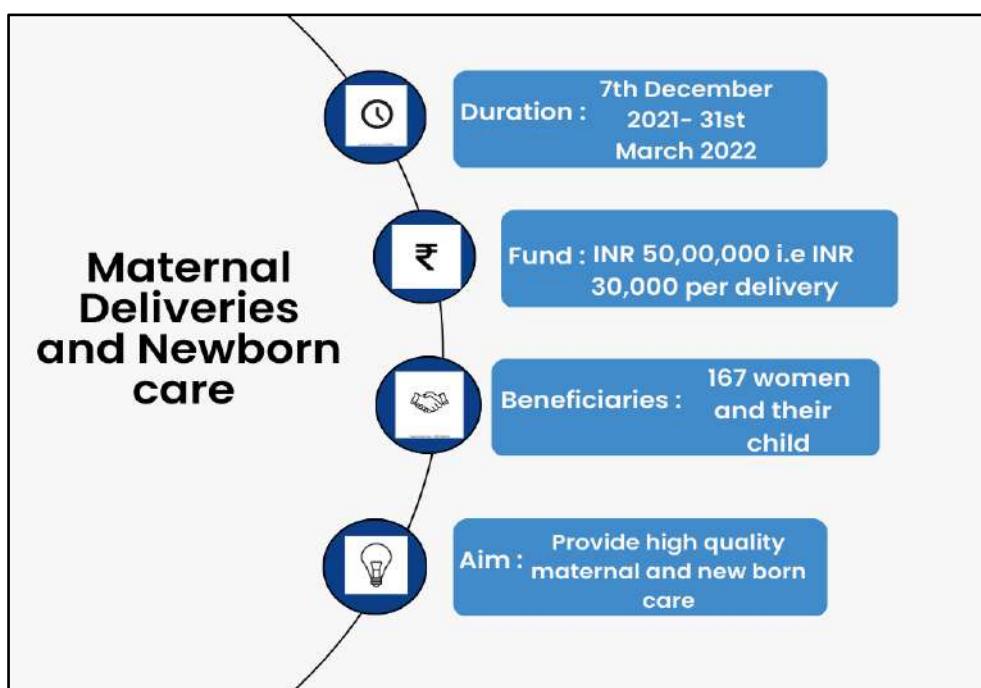


Figure 4 - Project details of Maternal Deliveries and Newborn care

Location

Sri Sathya Sai Sanjeevani Mother & Child Hospital (Mamatva), Raipur Chhattisgarh.



Figure 5 - Location of Sri Sathya Sai Sanjeevani Hospital Raipur

Strengthening the Maternal Health

Beneficiaries

A) Families of Road Transport community that comprises Truck Drivers, Mechanics, Single Truck owners (most often the driver themselves), Bus Drivers, Single Bus Owners, LCV Drivers, LCV Single or two vehicle owners, Goods Carrier Drivers and single vehicle owners (Tempo, Three wheelers), Ola/Uber Drivers only Owners who have taken car finance will be covered, Auto Drivers, Earth Moving Equipment Drivers (JCB, Tractors etc) helper (cleaners) and mechanics of trucks.

B) Rural/Tribal BPL Families.

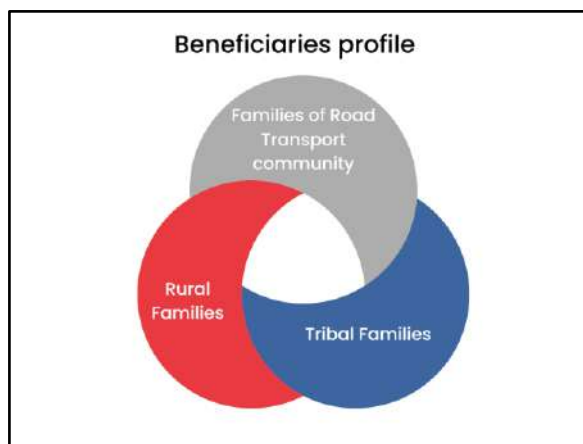


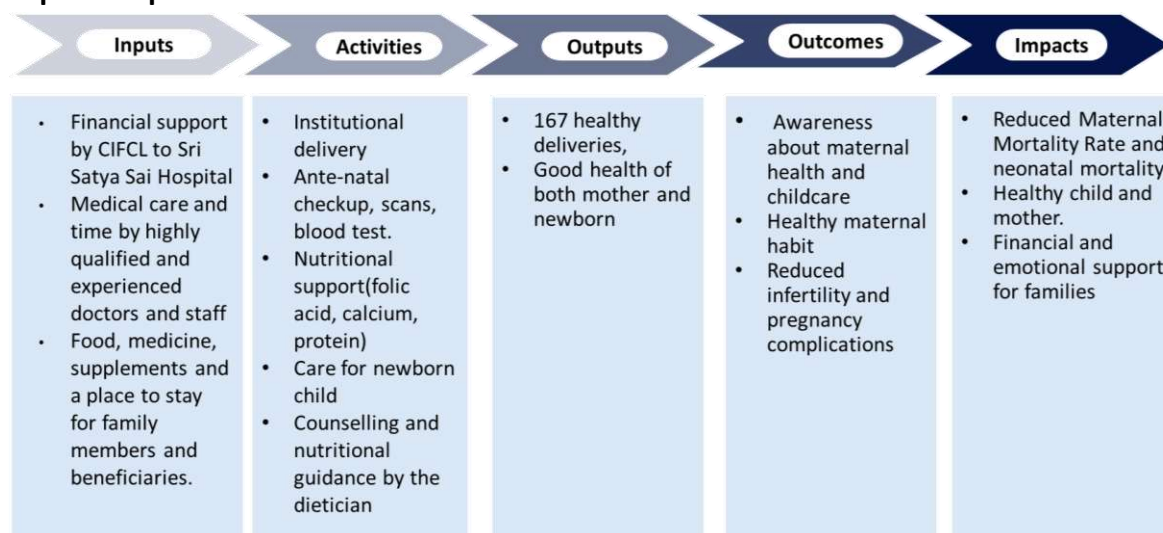
Figure 6 - Beneficiaries profile

3.2 Context

In India, pregnancy-related complications result in approximately 56,000 maternal deaths annually, and over 1.3 million infants die within the first year of birth. Alarming, two-thirds of these deaths occur within the first four weeks of life, with 75% of them taking place within a week of birth and the majority within the first two days.³

In order to reduce the maternal and infant mortality, Maternal Deliveries & Newborn Care program by Sri Sathya Sai Health & Education Trust is being implemented to promote institutional deliveries so that skilled attendance at birth is available and women and newborn can be saved from pregnancy related deaths.

Impact Map



³ <https://www.ijfcm.org/journal-article-file/6920>

4. Methodology

According to the design of this impact assessment, a qualitative study was considered to map the impact of the project. As part of the field validation for the impact assessment, the following methodology was adopted:



5. Analysis and Finding

Respondents profile

As part of the survey administered to the beneficiaries with a random sampling approach, 24 beneficiaries were surveyed through telephonic interview and 1 beneficiary was interviewed face to face in Sri Satya Sai Hospital, Raipur.

These respondents are from the rural area/tribal community and families of the road transport sector. All of them visited the hospital for treatment. Given figure indicates the social and economic profile of the respondents.

Among the 25 beneficiaries, a majority of 14 were experiencing motherhood for the first time, followed by 10 who were second-time mothers and only one who was a third-time mother. In terms of delivery method, 18 of the respondents underwent c-section while 7 had a normal delivery.

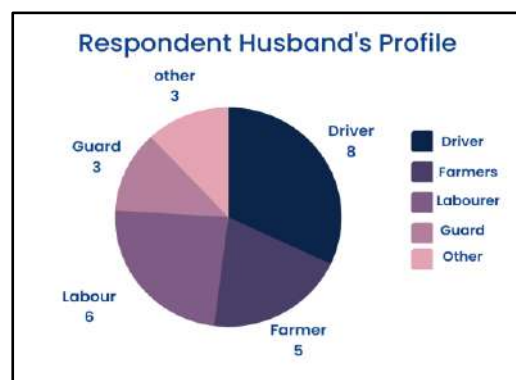


Figure 7 - Respondent husband's Profile

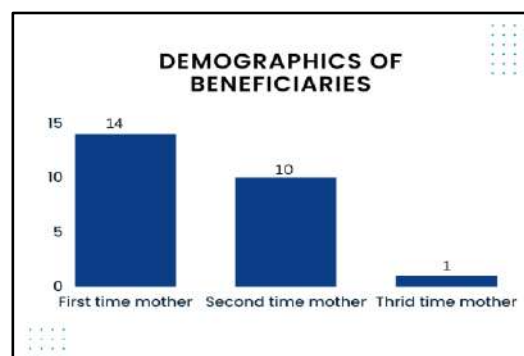


Figure 8 - Demographics of beneficiaries

Strengthening the Maternal Health

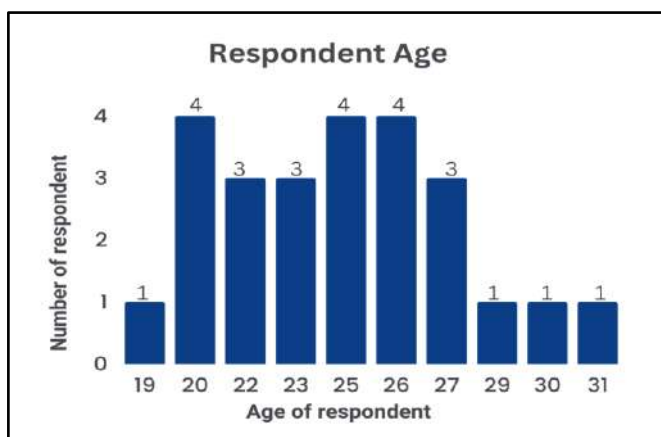


Figure 10 - Respondent age

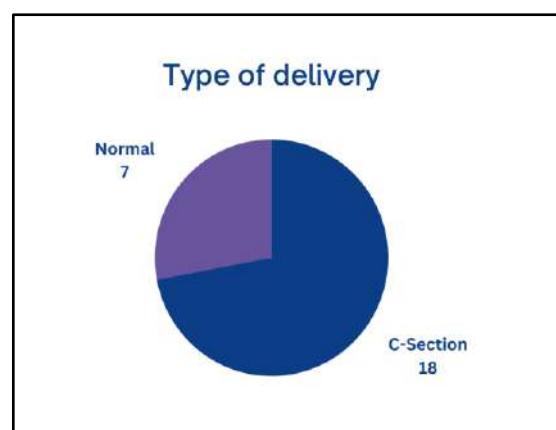


Figure 9 - Type of delivery provided

5.1 Relevance:

The most important element for analysing relevance is the assessment of the extent to which an intervention addresses beneficiaries' needs and priorities. In reference to the context, the Sri Satya Sai Hospital for Mother and Child Care is a vital program that addresses several issues faced by families connected to the road transport sector or from rural/tribal backgrounds. Before this program, these families often faced an affordability issue and had to rely on traditional midwives due to financial constraints and distance of quality hospital service. Apart from affordability, In socio-economically disadvantaged families, women's health is often overlooked, leading to multiple deficiencies and challenges during pregnancy, including complications and defects in children. Additionally, most of the women are first time mothers and due to lack of awareness about nutrition and health lead to anaemia, malnutrition, and low weight in pregnant women and mothers, resulting in malnourished, underweight, and wasted newborns. The Sri Satya

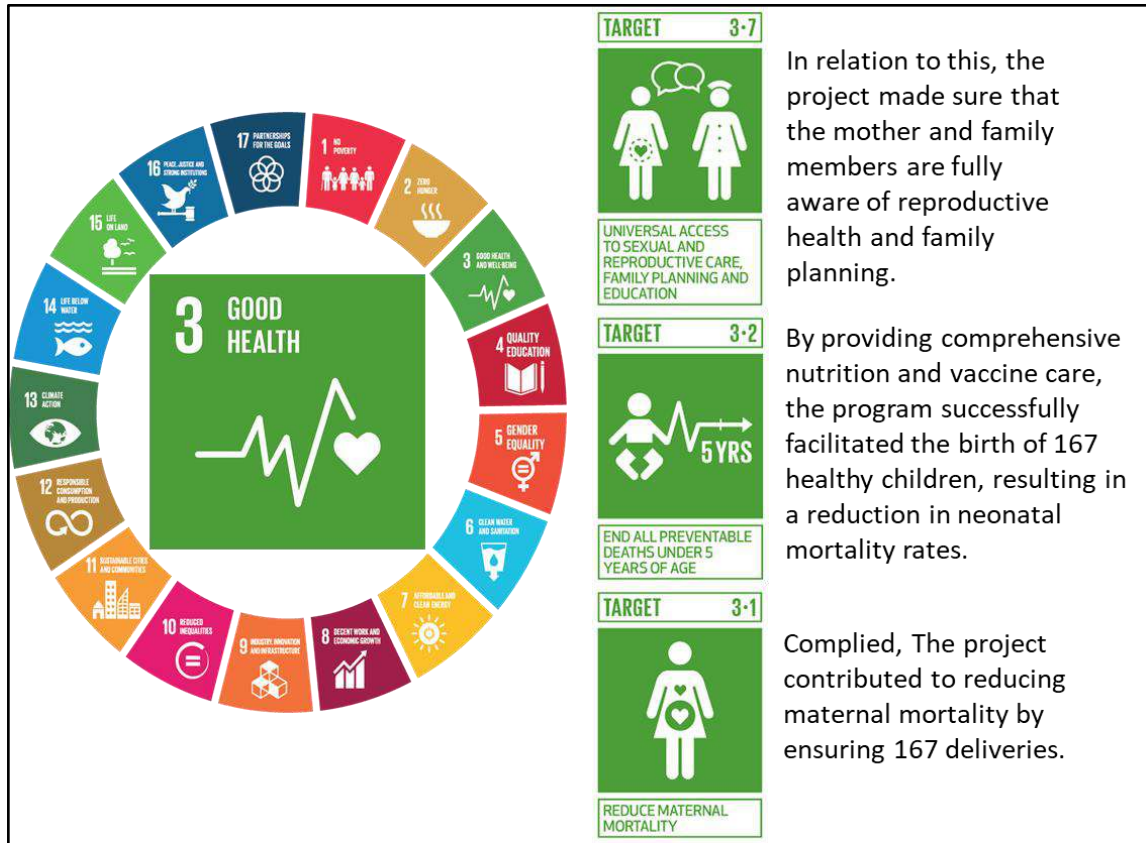


Figure 11 - Mother and new born child at Raipur centre

Sai Hospital provided comprehensive and end-to-end care, including medical screening, antenatal services, and nutrient support (Iron, Folic acid, Calcium tablets and protein supplements) to pregnant mothers. This program provided free institutional delivery, with focus on detection of 4D's i.e, Defects at birth, Deficiencies, Disease & Developmental delays and Disabilities and timely referrals to other specialty institutions for treatment in case of complications. By providing these services, the program ensured to address the challenges faced by vulnerable communities and provides comprehensive care for mothers and newborns.

Strengthening the Maternal Health

Linkage to Sustainable Development Goals



Strengthening the Maternal Health



5.2 Effectiveness

Effectiveness provides insight into whether an intervention has attained its planned results, the process by which this was done, which factors were decisive in this process and whether there were any unintended effects.

Target vs actual:

The Sri Sathya Sai Maternal deliveries and newborn Care Program has demonstrated a highly effective approach to safe deliveries, which is evident from the successful delivery of 167 healthy babies. The program employs a comprehensive approach that includes various stages, from creating awareness to post-delivery care, to ensure that pregnant women receive the best possible care.

During the program, pregnant women were provided with proper care and attention, starting from prenatal checkups to delivery. The program ensured that post-delivery, the newborn child received comprehensive care, including proper feeding and fulfilling the nutrient requirements. Additionally, the hospital made sure that the first vaccine was administered immediately after the birth of the child.



Figure 12 - Check-up of expecting mother at the hospital

Strengthening the Maternal Health

The program also focuses on ensuring the well-being of the mother, with counselling sessions provided to her to ensure postpartum health, child care, and dietary and nutrition requirements. Once the mother and child are deemed healthy, they are discharged from the hospital.

Complications:

Patients who were post-term (beyond 42 weeks), preterm (before 37 weeks), or had medical conditions such as severe oligohydramnios, fetal distress, CPD (cephalopelvic disproportion), IUGR (intrauterine growth restriction), or breech presentation had increased risk of complications but due to experienced doctors and nurses these cases were handled efficiently and healthy delivery was ensured. Of the 25 respondents, 2 faced complications of oligohydramnios and breech presentation and yet had a healthy delivery.

Process Effectiveness:

This program was highly effective in reducing the financial and psychological burden on families by providing free delivery services and other necessary support. The program consisted of four essential steps: awareness, hospital visits, admission and delivery, and post-operative care.

The hospital conducted daily awareness camps led by Doctor Shruti, who managed public health, along with five to six nurses and medical equipment. These camps were held in a vehicle that travelled to various locations to check up on pregnant mothers and monitor children. Early detection of any complications and awareness about the nutrient requirements of the mother and child were done from an early stage.

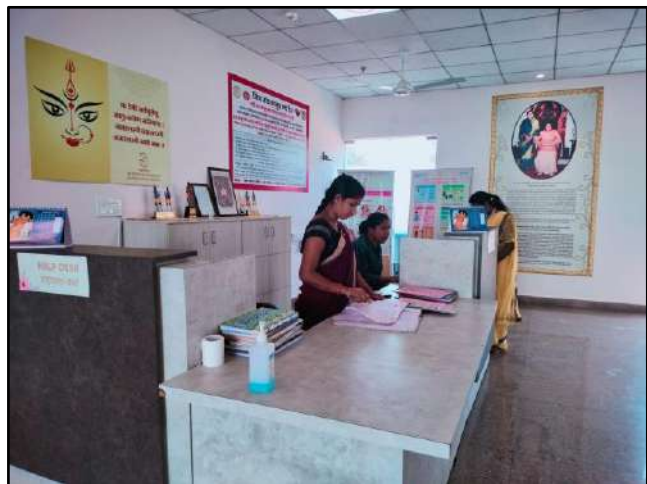


Figure 13 - Help desk at the Mamatva centre

The hospital has two doctors assigned for both morning and evening shifts to guarantee round-the-clock availability of staff. While the hospital aims to handle all cases, severely distressed children are referred to other medical facilities. To ensure proper monitoring of cases, the hospital confirms each beneficiary's registration with the government and Sanjeevani by verifying the card issued by PHC/CHC. This data is reported to the CMO every month. Mothers are then motivated to visit the hospital for regular antenatal check-ups, they are provided with all the necessary benefits including tests, nutrient and medicine support, delivery services, and other postnatal care.

According to the head nurse at the hospital, 60% of infertility cases result in successful motherhood and healthy delivery with the aid of healthy diets, counselling, and basic medication such as folic acid.

Strengthening the Maternal Health

Process followed by the hospital is given below:

PROCESS FOLLOWED BY THE HOSPITAL

- Hospital conducts visits in near by areas to educate pregnant women about the importance of institutional delivery and precautions required for mother and child's health
- Pregnant women are checked for their health and any complications that may arise during delivery



- Pregnant women are encouraged to visit the hospital for regular antenatal check-ups.
- The hospital conducts sonography and x-ray as per requirement and provides supplements like iron, folic acid and calcium to ensure the mother's and child's health.

- When delivery date is near, mother is admitted to the hospital with a female family member for psychological support
- The hospital provides lodging and food to ensure mother's comfort during the critical situation
- Delivery is performed either through C-section or normal delivery as per case's requirement



- After delivery, mother and child are kept under observation to monitor any complications and counselling and advice on nutrition is provided
- In case of any complications, patient is referred to a specialist hospital for effective treatment

With these steps, the hospital ensures safe and healthy delivery for both mother and child



Strengthening the Maternal Health

5.3 Efficiency

Efficiency is used to understand how well resources of the program are used and the extent to which the program delivers or is likely to deliver results in an economic and timely way.

Feedback from respondents:

Analysis Categories	Summary
Awareness and Source of Information	20 respondents learned about the Hospital services through local sources. Only 5 respondents learned about it through a Sanjeevani camp, indicating a need for more outreach and awareness programs.
Type of Delivery Service	Out of 25, 18 respondents underwent C-section delivery and 7 respondents had normal delivery. All the respondents of the survey are healthy due to proper antenatal and postnatal care.
Free Institutional Delivery and Newborn Care	All respondents received free institutional delivery and newborn care. Sanjeevani Hospital provides these services to the community free of cost, which is a significant benefit for low-income families.
Free Antenatal Checkups and Scans	All respondents received free antenatal checkups, sonography, x-ray and scans before their operation. The provision of free antenatal care helped to prevent maternal and neonatal complications and improve overall health outcomes.
Food, Nutrient Support, and Medicine	All respondents received food, nutrient support, and medicine free of cost. They also got information regarding the care and nutritional requirements of the child and mother. This indicates that the hospital provides comprehensive care to patients.
Overall experience	All respondents had a good experience in getting treated at Sanjeevani Hospital. They reported that the hospital provides good facilities and care to patients.

Strengthening the Maternal Health

Budget Utilisation:

The expenses incurred per beneficiary were well-managed. As discussed with the hospital management team, the consultant cost includes highly skilled professionals such as a gynaecologist and paediatrician, amounting to around Rs 10,000. The OT and ward cost cover essential services, totaling around Rs 10,000. The cost of drugs and consumables was approximately Rs 6,000, while the cost of diagnostics and support services, including scans, lab tests, blood components, and safe nutrition mix, was around Rs 4,000. All these expenses combined amount to approximately Rs 30,000 per beneficiary.

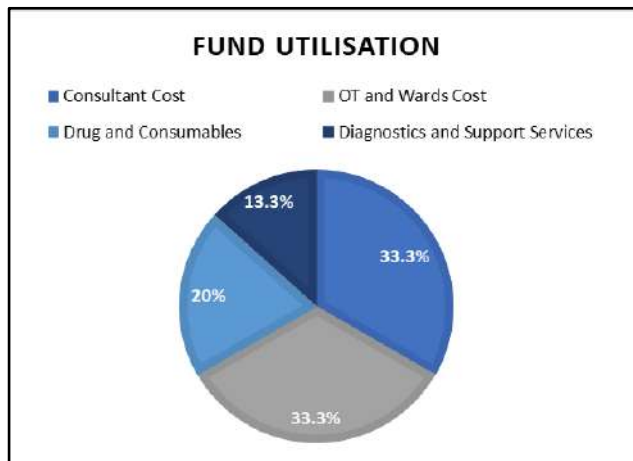


Figure 14 - Fund utilisation

Project Execution as per Timelines:

The program activities were executed efficiently and completed within the approved timelines of 4 months. This indicates that the program was well-planned, organised, and executed, with a clear understanding of the scope of work and timeline for completion. Timely execution also helped to avoid any delays or additional costs that may have arisen due to delays in the execution of the program activities.

5.4 Impact

Improved Maternal health:

All 25 respondent mothers and child are in good health post-delivery, and the respondents exhibit a high level of satisfaction with the service provided, with a clear understanding of the nutritional requirements.

Maternal mortality rate:

The program was successful in achieving better health outcomes for mothers and newborns, resulting in a decrease in maternal mortality rates and improved neonatal health outcomes. 100% respondents who received the program's services reported being satisfied with the care they received. In the event of complicated cases, the hospital was able to arrange c-section deliveries, which ultimately led to zero maternal deaths out



Figure 15 - Respondent satisfaction response

of 167 beneficiaries. This program has also helped India make progress towards achieving its Sustainable Development Goals related to maternal and child health.

Strengthening the Maternal Health

Impact on family: 72% respondents received free of cost delivery through C-sections. This had a significant impact on economically marginalised families. C-section is necessary for healthy delivery in case of fetal distress, prolonged labour, multiple pregnancies, or other complications. The average expenditure per child birth in case a mother undergoes C-section is nearly five times more than that in case of a normal delivery – it costs more than Rs 25,000.⁴ For these families, the cost of a C-section can be a major financial burden, especially if they lack health insurance or other means of financial assistance. By providing free C-sections, these families were able to access necessary medical care without incurring a large financial expense. This helped to alleviate financial stress and improve overall quality of life for economically marginalised families, who may otherwise struggle to make ends meet.

Testimonials:

Priti Yadu

She is a 25-year-old first-time mother from SEC-28 New Raipur. She was initially scared and unaware of her delivery condition and needs. Her husband works as a driver in Bayer, which puts a financial strain on their family. Fortunately, they learned about a program that could help them. The program provided Priti with prenatal care that included sonography, blood tests, and urine tests to ensure a healthy pregnancy. She was given supplements like protein powder, calcium, and folic acid to maintain proper nutrition. The doctors and staff nurses supported her with a calm and patient approach, educating her on the complete delivery process. Due to her complications, a C-section was performed, and a healthy delivery was ensured for both Priti and her child, Sadhbhavana. After birth, the baby was provided with necessary vaccines, and Priti received guidance from a nutritionist about complete care and precautions to be taken. As a result of the timely help of the program, Priti's daughter (now 12 months old) is in good health.



Figure 16 - Priti Yadu (beneficiary)

Narmada Vishwakarma

She is a 22-year-old mother. Her husband is a driver by profession. From the start she was facing some issues in her pregnancy and it was not easy for them to afford the cost of a necessary C-section surgery. However, Sri Sathya Sai Hospital provided complete information about the nutrients required for a healthy pregnancy and advised on how to take care of Narmada's health. The doctors and nurses ensured regular sonography and other tests, and even provided calcium tablets, folic acid, and protein powder.

They provided antenatal and postnatal care, including a C-section delivery on the day of delivery, considering the complication of oligohydramnios in Narmada's situation. After the successful delivery, nurses provided proper care and counselling for the child and mother, and ensured they were aware

⁴<https://www.hindustantimes.com/india-news/significant-rise-in-hospital-deliveries/story-kJBaAwYQo6Gc6rWz6RxZsM.html>

Strengthening the Maternal Health

of the nutritional requirements of both. The program ensured that financial constraints never became a barrier to attaining a healthy delivery and a good life for both mother and child.

5.5 Sustainability

The sustainability of the maternity care project crucially depends on continued sponsorship from various stakeholders, including corporates, government programs like Aayushman Bharat, and philanthropic institutions. The project's success in improving maternal and child health outcomes in underserved areas highlights the need for this initiative. Sri Satya Sai Trust can approach different grant-givers to support similar programs. Additionally, NGOs supporting programs of a similar nature could be approached to collaborate with and follow the processes of the Sri Satya Sai Trust to enhance the effectiveness and sustainability of this initiative. By working together with various stakeholders, the Trust can create a sustainable healthcare system that provides essential health services to underserved communities in the long run.

6. Conclusion

Good health is an inevitable portion of mother and child rights and is thus a fundamental right. The objective of the project to ensure the healthy life of mother and newborn child by providing free of cost ante-natal care and institutional delivery is successfully fulfilled. The fund has been utilised for the intended goal.

Good Practices

- To provide psychological support during critical times, family members of beneficiaries are given free accommodation and meals.
- The hospital maintains equality of service by not having a billing desk, ensuring all beneficiaries receive the same level of care.
- Digital recording of data ensures proper monitoring and follow-up of medicine and check-ups.
- Separate counselling and dietitian room for proper guidance and support of mother.
- A dairy within the campus provides high-quality milk for the nutrient support of mothers and children.



Figure 17 - Dietician and Counselling room

Challenges

- The beneficiaries have to travel a long distance to access the benefits, which highlights the need for a free ambulance service to support them.
- Despite conducting camps and awareness campaigns, the effectiveness of creating awareness about the free initiatives is limited, with most beneficiaries learning about them through word-of-mouth referrals.

7. Recommendations

The Maternal Deliveries and Newborn Care project provided free of cost treatment including antenatal checkups, scans, nutrition support, institutional delivery and newborn care to 167 mothers and infants. Mamatva supported families connected to the Road Transport Industry, rural areas, tribals who are below poverty line. To increase the outreach of the program and ensure that more people benefit from it, we have the following recommendations:

- Wider publicity - at present it appears to be people in areas around the hospital.
 - Use local language television and radio stations to publicise availability of such services.
 - The hospital would benefit from expanding its outreach programs/camps to increase awareness about its services and reach more people in the community.
- Build relationships with Government agencies for registration of their patients for Govt. related schemes.
- Develop programs along with government agencies to train midwives for safe deliveries in rural areas.
- Develop systems and infrastructure for handling complex cases.

Impact Assessment Report

ISHA Sadhanapada



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March 2023

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Acknowledgement

We would like to thank the respondents of the Sadhanapada program who have helped us with their valuable responses in a timely manner thereby helping us in the execution of the study. We would also like to thank the on-ground team of the Implementation partner, Isha Foundation, for facilitating these interactions with the beneficiaries.

We would also like to take this opportunity to extend our deepest gratitude to the leadership at Chola Mandalam Investment and Finance Company Limited (CIFCL) for giving us this Impact Assessment study and guiding us through all the initial discussions and design and methodology of the study. Thank you for your continuous encouragement and patience through the implementation of the study.

A special thanks to all the field investigators in the Chrysalis team who conducted the fieldwork in the manner required and with efficiency. Without their support and cooperation, collecting data at this scale would not have been possible.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Isha Foundation is a not-for-profit, spiritual organization founded in 1992. Sadhguru Jaggi Vasudev aka Sadhguru is the driving force behind the Foundation that is nestled in the foothills of the Velliangiri Mountains near Coimbatore, Tamil Nadu, India. The ashram hosts the Isha Yoga Centre, which offers various programs including the Isha Sadhanapada program.

As the world was coming out of the effects of the pandemic, people were seen struggling with health, emotional imbalance, anxiety, depression, and lack of clarity. Through the Sadhanapada program, the Foundation wanted to reach out and help the participants in overcoming these problems directly and also benefit those around them indirectly. Given the fact that the current Education system does not include mental/inner well-being as part of its curriculum, the need for mental/psychological and physical well-being was undervalued. When the coping mechanisms to deal with the disorder are not known, people develop physical and emotional suffering. Isha Foundation has opened up avenues for people to focus on inner well-being and health, and Sadhanapada is an important part of this initiative.

This report presents the results of an impact assessment study conducted for Isha Foundation's Sadhanapada program. As a part of its CSR efforts, CIFCL supported the Sadhanapada program by the Isha Foundation. This supported the expenses of 698 Indian nationals spread across India.

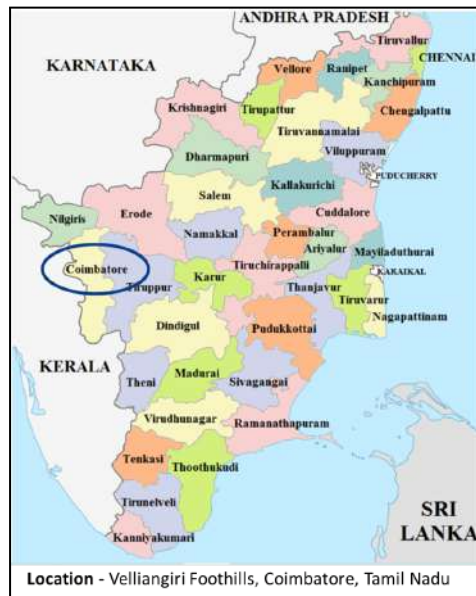
For the Impact assessment, the team chose a mixed-method research design which included the usage of quantitative and qualitative research tools (field observation, Focus Group Discussions, Semi-structured interviews, and beneficiary interviews). An Impact Assessment field visit to the Isha Yoga Centre was conducted on March 2nd and 3rd 2023. The objective was to understand the various factors such as inputs, outcomes, and outputs of the initiative and its contribution in terms of the impact it has shown on the beneficiaries involved. This CSR project is aligned with SDG goal 3 which targets to ensure healthy lives and promote well-being for all at all ages.

The program goals of 80% of the participants completing the course and 80% of the participants indicating improved physical/psychological health have been achieved as evidenced through discussions with the Program Team and from the survey responses. On multiple parameters such as improved physical health, mental well-being, sleep quality, energy levels, flexibility, etc. the respondents (177 responses) experienced significant improvement. The program in its current form and structure was found to be extremely relevant and efficient. Interactions with Sadhanapada participants sharing their experiences evidenced the effectiveness and the deep impact the program has had on them.

The gaining popularity of the program has made it challenging for the Program Team to scale up with the speed of its growing demand. To make the program more effective, it is recommended to conduct a detailed Baseline Survey at the start of the program on various parameters such as sleep quality, flexibility, psychological health, energy levels, etc. The baseline will serve as a reference point for tracking the progress of the participant and to measure the change at the end of the program.

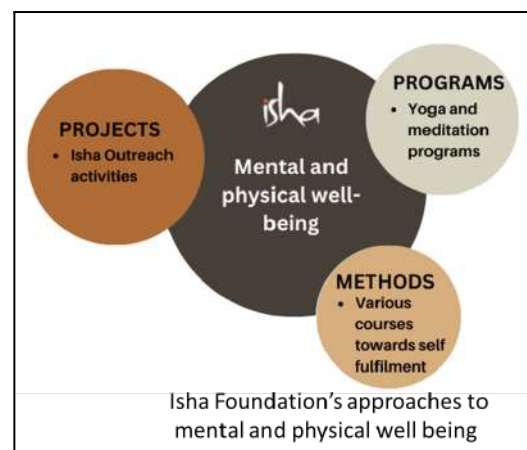
2. Introduction

Yoga offers physical and mental health benefits for people of all ages. Through illness, recovery of an illness or surgery, or living with a chronic condition, yoga can become an integral part of your treatment and potentially accelerate the healing. Yoga has been an integral part of India through its culture and heritage. In Sanskrit, yoga signifies ‘to unite’ or ‘to connect’. It describes a way to live a healthy life both physically and mentally. Yoga is believed to have originated in India about 5,000 years ago.



Registered as a public charitable Trust, Isha Foundation is a not-for-profit, spiritual organization founded in 1992. Sadhguru Jaggi Vasudev aka Sadhguru is the driving force behind the Foundation that is nestled in the foothills of the Velliangiri Mountains near Coimbatore, Tamil Nadu, India. The ashram hosts the Isha Yoga Centre, which offers various programs. The Foundation believes that volunteering is a way of life. Isha Yoga Center is a vibrant and powerful space for those seeking inner transformation and an established state of well-being.

The Foundation through ‘Isha Outreach’ has introduced many outreach projects such as Project GreenHands, Isha Vidhya, Action for Rural Rejuvenation, Rally for Rivers, and Cauvery Calling to name a few. Isha Outreach includes several path-breaking initiatives in various issues pertaining to the environment, education, health, and community revitalization efforts. They primarily work in South India. Supported by over 11 million volunteers in 300 centers worldwide, Isha Foundation's activities address all aspects of human well-being. The Foundation offers a variety of programs that provide methods for anyone to attain physical, mental, and psychological well-being. The programs that are offered range from beginner-level yoga programs, advanced programs, additional programs, children’s programs, and ‘become a teacher’ programs. Its offerings allow participants to deepen their experience of life, and reach their ultimate potential. From its powerful yoga programs for inner transformation to its inspiring projects for society, the environment, and education, Isha's activities are designed to create an inclusive culture that is the basis for global harmony and progress.



Their fundamental vision is to offer the science of inner well-being to every human being – a science that helps a person realize the ultimate potential within.

Aligned to Sustainable Development Goals (SDGs), the Foundation aims to cover a wide spectrum of SDG 3 of ensuring healthy lives and promoting well-being for all ages.

3. Program Overview

3.1 Impact Assessment background

Sadhanapada is a program designed for self-transformation. Curated by Sadhguru himself, this seven-month residential program starts from Guru Purnima, a tradition dedicated to all spiritual and academic gurus, and ends on Mahasivarathri, a notable festival in Hinduism.

During the course, the seeker aims for inner transformation through various activities thus building a strong foundation towards improved physical health, enhanced mental and psychological stability, and seeking overall personal growth. The activities include:

- **Inner Engineering and Advanced programs:** It is an inclusive course derived from the science of Yoga. The course aims for personal growth that brings about a shift in the way one perceives the experiences of life, work, and the world. Shoonya, Shakthi Chalana Kriya, and Samyama are advanced programs that are offered
- **Hatha Yoga Practices:**
 - Surya Kriyas: A powerful yogic practice of tremendous antiquity, designed as a holistic process for health, wellness, and complete inner well-being. Surya means Sun and Kriya means inner energy process.
 - Yoga Asanas: The participant indulges in innumerable asanas that a body can assume. 84 have been identified as Yoga Asanas, through which one can transform the body and mind into a possibility for ultimate well-being.
- **Volunteering (Seva):** Volunteers are assigned one of 100+ activities for supporting the day-to-day functioning of the Foundation.
- **Satvik food and guidance on conscious eating:** The food is prepared according to the yogic traditions, keeping in mind the nutritional needs of the participants.
- **Support groups and monitoring:** Self-help support groups are formed to provide continuous and constant support for all the participants of the program.

The inmates stay in the Yoga Centre during the said period. Accommodations and nutritious diet are provided free of cost.. Volunteering is mandatory during the duration of this stay. Isha Centre provides a conducive ambiance for the spiritual growth of each individual.

ISHA Sadhanapada Program

In the national context, as our country was coming out of the effects of the pandemic, people were seen struggling with health, emotional imbalance, anxiety, depression, and lack of clarity. Through the program, the Foundation wanted to reach out and help the participants in overcoming these problems directly and helps those around them indirectly. Given the fact that the Education system does not include mental/inner well-being as part of the curriculum, the need for mental/psychological and physical well-being was undervalued. When the coping mechanisms to deal with the disorder are not known, people develop physical and emotional suffering. Isha Foundation has opened up avenues for people to focus on inner well-being and health, and Sadhanapada is an important part of this initiative. The Education system's failure to incorporate mental and inner well-being into its curriculum has resulted in the undervaluation of the need for psychological and physical well-being. When individuals are unaware of coping mechanisms to deal with disorders, they may experience physical and emotional distress. As a solution, Isha Foundation has created programs for people to prioritize their inner well-being and health, with Sadhanapada being a crucial aspect of this initiative.

As a part of its CSR efforts, CIFCL supported the Sadhanapada program by the Isha Foundation. This supported the expenses of 698 Indian nationals spread across India. Through the Sadhanapada program, CIFCL and Isha Foundation tried to bridge the gap caused by physical and mental disconnects an individual faces and helped them attain physical and mental well-being.

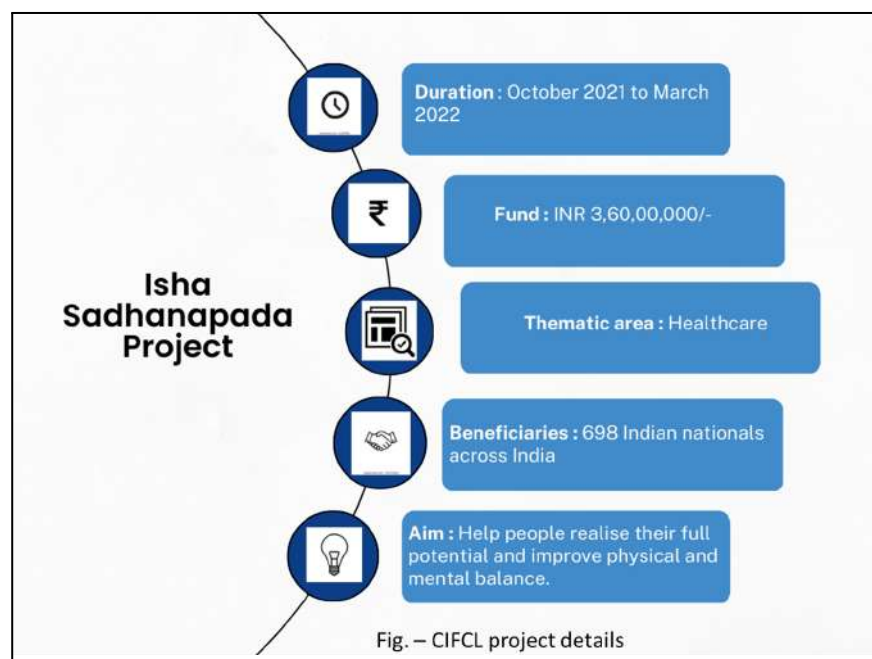
3.2. Context

CIFCL Project details - The project details are indicated in the image to the right.

Objective of the project:

- Improved physical health and psychological and mental health - 80% of participants indicate improved. physical and/or psychological health after completion of the program.

- 80% of the participants who enroll should complete the program.



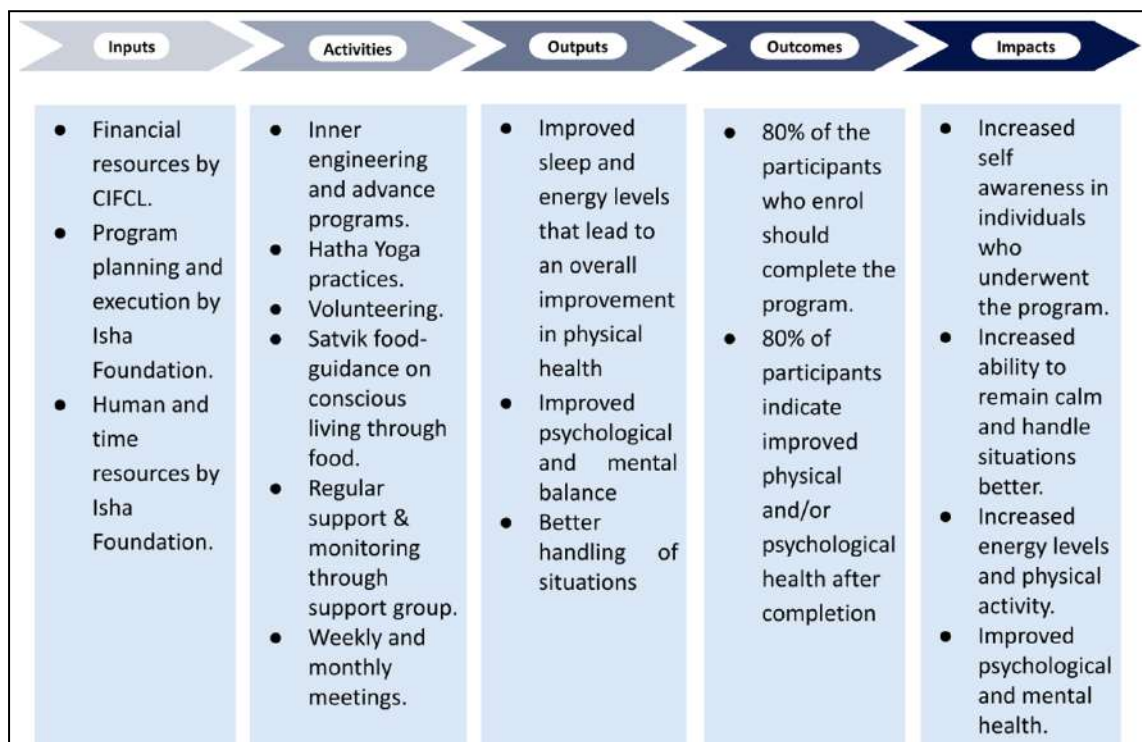
Beneficiaries profile

The direct beneficiaries of the program include 698 Indians from various sects in life. The mixed group included students, graduates, working professionals, householders, businessmen etc. The age category for individuals was also pre-determined as below,

Age Group	Count	Percent
18-25	258	37%
26-30	209	30%
31-35	119	17%
36-40	56	8%
41-50	56	8%

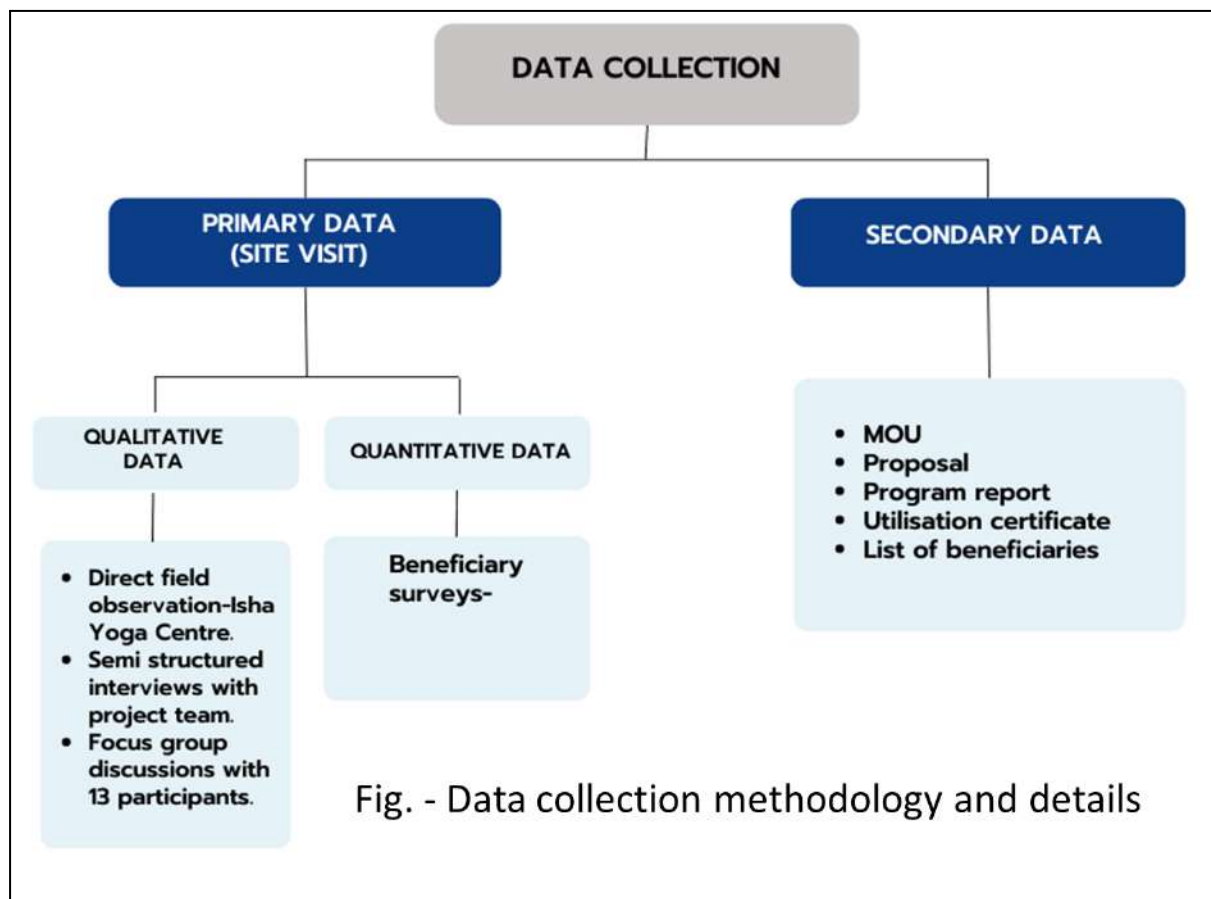
Based on the above data, a random sampling technique was considered for quantitative survey.

Impact Map



4. Methodology

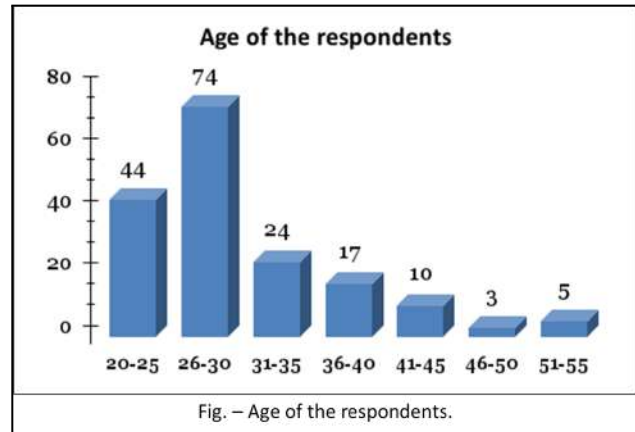
The impact assessment study was initiated by scheduling separate initial meetings with CIFCL and the concerned Implementing partner. While the meeting with CIFCL was to broadly understand their expectations and timelines, the meeting with the Implementing Partner was to understand the program, its objectives, the target beneficiaries involved, and the challenges faced in implementing the program at the grassroots. A list of pre-requisite documents was called for a deep understanding of the program. The desk review was initiated accordingly. Based on the documents received; the team started the desk review of project documents to develop more understanding of the programs and their interventions. Accordingly, the key stakeholders of the project were identified and mapped to capture their opinions and feedback and a mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools (field observation, Focus group discussions, Semi-structured interviews, and beneficiary interviews) for data collection as mentioned below:



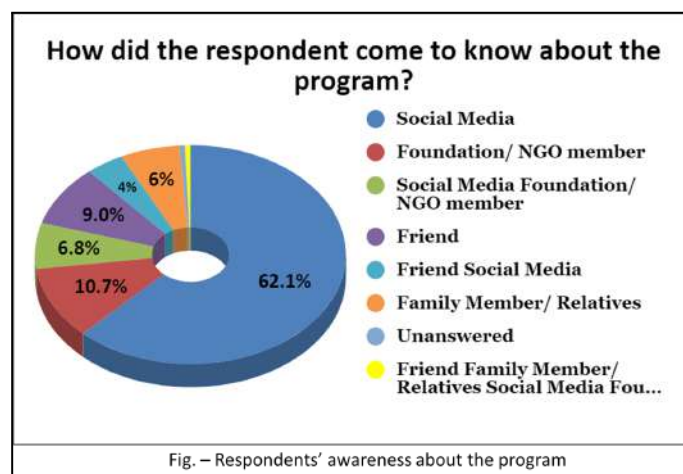
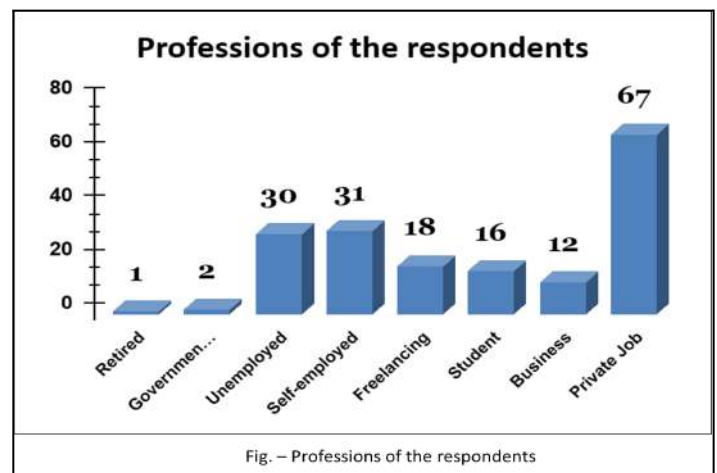
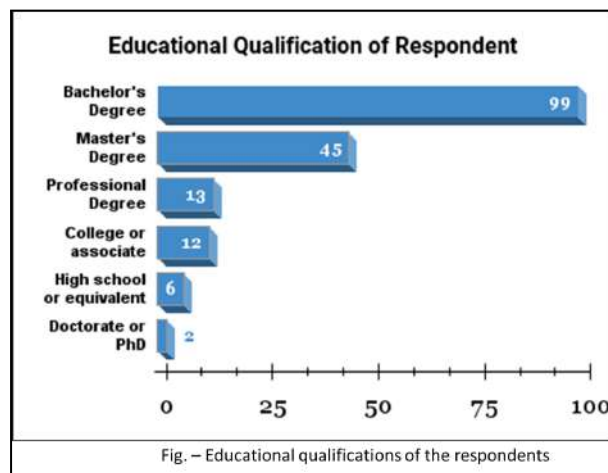
5. Analysis and Findings

Respondents profile

Age Group	Sadhanapada Participants	Survey Respondents
18-25	37%	25%
26-30	30%	42%
31-35	17%	14%
36-40	8%	10%
41-50	8%	8%



The quantitative survey was conducted through the web-based Kobo Collect platform. 177 participants of different age groups responded to the questionnaire. From the graphic presentations below, it is clear that a majority of the Sadhanapada participants are well educated individuals working in private companies. Most of them are active on social media and have become aware of the program through social media.



5.1 Relevance

Over the years, yoga has been accepted as a holistic system that aims to integrate the mind and body to achieve a state of well-being and harmony. Interaction with the program team and participants have revealed the following relevance for the Isha Sadhanapada program:

Need for a holistic program – Improving physical health is regarded as essential for overall well-being where several factors such as a sedentary lifestyle, poor nutrition, high rates of lifestyle diseases contribute to poor physical health outcomes. Likewise, anxiety and stress are common mental health issues that affect people around the world, including in India. According to a survey by the National Institute of Mental Health and Neurosciences (NIMHANS), around 7.5% of the Indian population suffers from some form of mental health issue, with anxiety disorders being the most common. Factors contributing to anxiety and stress include work-related stress, financial stress, social pressure, health-related stress, etc. Various interventions, including counselling, medication, and mindfulness-based practices like yoga and meditation, can help manage anxiety and stress among Indians. Thus, indicating Isha Sadhanapada program's high relevance in overall well-being.

Structure of the program - Isha Sadhanapada is structured as a 7-month program starting from Guru Poornima and ending on Maha Shivaratri. As understood from interactions with the Program team, 7 months is thought to be a long enough period of time to work on oneself, imbibe the benefits of the program and return to their world in a resolved way. The program is carefully structured to include yoga practice (sadhana) and volunteering (seva). The project objectives including improved physical health and improved physiological health have been well embedded into the structure of the program.

Screening participants for the program – The basic eligibility criteria for admission into the Isha Sadhanapada program is the completion of the Inner Engineering program. The call for applications typically open in November. The screening process includes going through the application and understanding if the need of the aspirant is genuine. A webinar is conducted for the aspirants to know what they can expect. Once the application is accepted, onboarding is facilitated and medical screening is conducted post-arrival at the Centre. The interactions with the program team revealed that this year close to 24000 applications were received, of which they will be able to include ~1000 participants only. This indicates how much the program is found relevant and looked up to.

Youth focussed - According to the survey result, 100% participants agreed that the Sadhanapada programme was relevant for them. As per the available data 37% of people of age group 18 to 25 years were the highest participants. In the survey most of the respondents were from the age group of 26 to 30 years. Though the Sadhanapada yoga programme is useful for all age groups, the age group of 26-30 years' respondents actively responded to the survey. This result shows that the programme is mostly influential to the youth.

Linkage to Sustainable Development Goals



5.2 Effectiveness

Improvements in physical health - The program recognises that good physical health is essential for overall well-being and thus physical well-being is one of the main objectives of the Isha Sadhanapada program. The activities to aid improved physical health in the program are the Inner Engineering course, Surya Kriya and yogasanas (Hatha yoga). When questioned about any improvements in physical health after the program, there was a consensus among the FGD participants that the program has helped them become physically more active and they experience high energy levels than before joining the program. The satvik food being served in the Centre keeping in mind the nutritional benefits of the participants also adds to improved physical health.

As disclosed by most of the FGD participants, *“There is a lot of walking in the Centre, this helps us in keeping fit.”*

One of the FGD participants mentioned, *“I have lost anywhere between 7 to 9 kgs and feel fitter and more energetic thanks to following the practice and eating the right quantity of food.”*

Improved sleep and energy levels - Improved sleep and energy levels are crucial for overall well-being and productivity. Lack of sleep can lead to a range of health problems, including mood disturbances, decreased immune function, and cognitive impairments. Factors that contribute to poor sleep and low energy levels include stress, medical conditions, poor diet, etc. The Isha Sadhanapada program promotes improved psychological and mental health by teaching meditation, daily/ weekly monitoring of energy and emotions. The individual and group volunteering activities including games also significantly contribute to better mental health of the participants.

One of the FGD participants revealed that he no longer felt the need to sleep longer hours and was even satisfied with 4 hours of sleep. Another participant shared that while he could sleep for 10 hours earlier and still feel tired, now he is sleeping only 4-5 hours and still feels energetic.

Better handling of situations / relationships – Yoga promotes mindfulness and helps to calm the mind, which can improve focus, concentration, and mental clarity. This indirectly helps in better handling of situations. The constant and continuous support of teachers and facilitators of the program is also an important contribution to achieving this objective of the program.



Fig. – Focused Group Discussion – Session 1

One FGD participant expressed that she is more self-aware and is able to make decisions easily. Another participant said that his habit of procrastination has stopped since the program.

One participant shared that after the program she is “responding rather than reacting”. She mentioned that relations with her parents have improved greatly, from talking to them twice a year, she now speaks to them weekly.

Another participant shared that he gets less triggered now and doesn’t overthink, this helps him maintain better relationships.

Feedback sessions – The program team believes that giving and taking feedback is an opportunity to get things out in the open so that issues can be resolved and they can jointly find ways to better the experience of the participants. Feedback is sought from applicants in the following manner:

- Daily journaling is encouraged
- Weekly sharing
- Facilitator meetings

The FGD participants expressed that the weekly sharing and facilitator meetings helped them a lot in resolving some internal conflicts they were facing. Some participants said that they were continuing daily journaling even after they completed the program.

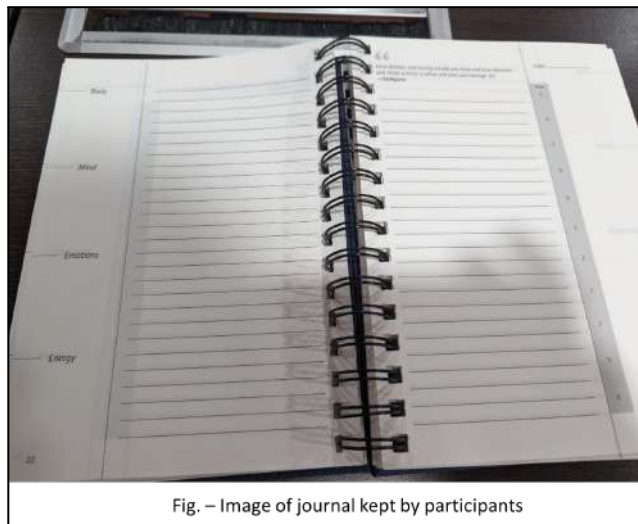


Fig. – Image of journal kept by participants

Sulaba mobile application - The Program

Team has developed a mobile application for the participants of the Sadhanapada program known as the Sulaba app. All the participants have to use the app daily to view their schedule, and communicate with their peers and facilitators. Incorporating technology into the program has made it more effective and friendly for the participants. Interactions with participants in the FGD revealed that they were very comfortable using the app and it was user friendly.

5.3 Efficiency

The Sadhanapada yoga programme is a 7 months intensive yoga program offered by the Isha Foundation. The program includes practices such as Hatha Yoga, Kriya Yoga, and meditation aimed at promoting physical, mental, and emotional wellbeing.

The studies have shown that practicing yoga and meditation can have several benefits for overall health and wellbeing. For example, regular yoga practice has been shown to reduce stress, anxiety, and depression, improve sleep quality, and enhance physical flexibility and strength.

Achievement of development goals - Presented below are the goals of the program as envisaged at the start of the program:

Goals	Achievement
80% of the participants who enroll should complete the program	90% of the participants completed the program (as disclosed by the Program Team)
80% of participants indicate improved physical and/or psychological health after completion of the program.	76% of the respondents of the survey indicated "excellent" improvement in mental well-being after completion of the program followed by 21% who indicated "good" improvement in mental well-being. 69% of the respondents of the survey indicated "significant improvement" in physical health after completion of the program followed by 22% who indicated that their health "somewhat improved" after completion of the program.

Dropouts: It was revealed in the FGD with the Program team that the dropout rate of participants in Sadhanapada program was nearly 10%. The dropouts were mainly because of family emergencies or if the health of the participant deteriorated.

Feedback on instructors - Teachers and facilitators play a vital role in shaping their students and inspiring the students to continue their practice consistently. **86%** of the survey respondents said that the facilitators guided them efficiently during the Sadhanapada programme.

Monitoring and evaluation of participants - At the end of the program, the Program Team gets the participants to fill out a Completion form which is thoroughly evaluated to verify if the participant has benefitted from the program. Additionally, through the program the expected outputs and outcomes are monitored from the following sources:

- On-going meetings
- Interviews
- Focus Group Discussions
- Observations
- Testimonials

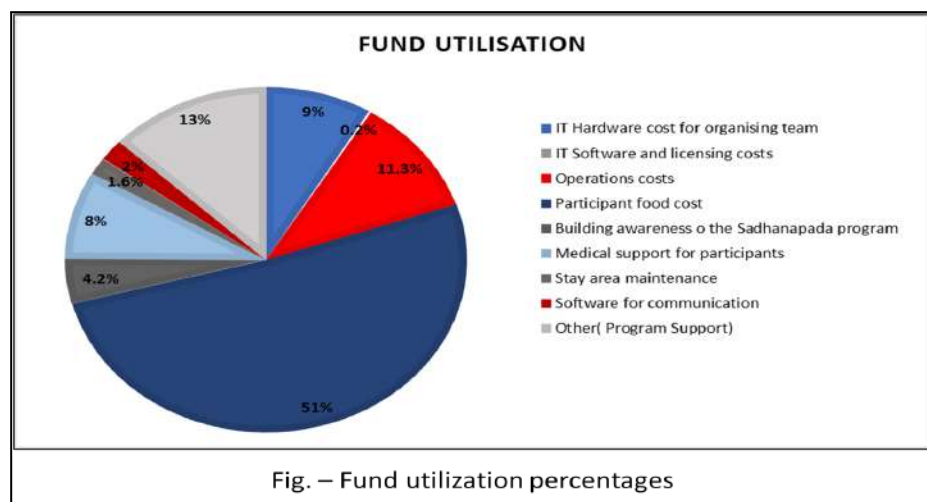
Use of technology - The training is supported by the use of quality technical equipment such as camera, computer and digital boards to make the training sessions highly productive. Part of the financial support by CIFCL (approximately 33 lakhs) was towards the scaling up of technology such as purchase of laptops and integrated high end systems, webcams, AWS server maintenance cost. Some of the laptops were seen during the field visit. Pictures are presented below:



Fig. – Equipment purchased during FY 21-22

Utilisation of budget:

The fund allocated for the Isha Sadhanapada program has been utilised efficiently. As discussed with the Program team, expenses were well-planned and carefully allocated to different areas. The

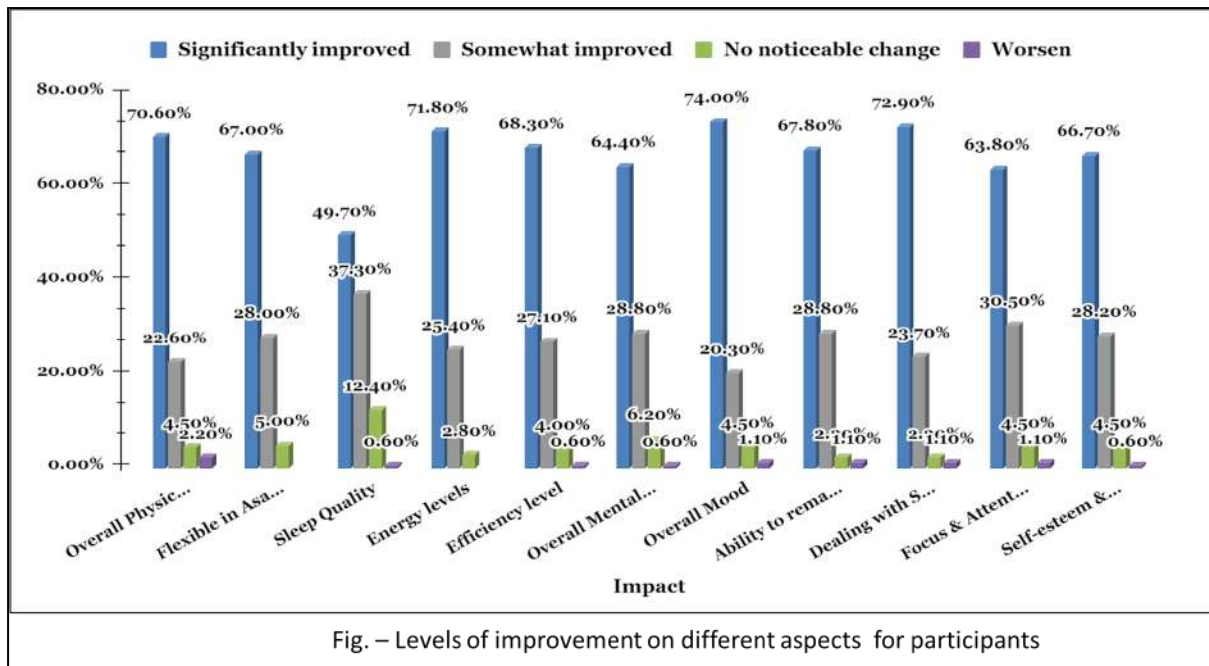


program's largest expenses were on participant food costs, amounting to Rs 1,83 Crs, and medical support for participants, which cost Rs 0.29 Crs, to ensure their physical and mental well-being. To expand the program's reach and benefits, Rs.0.15 Crs was spent on building awareness of the Sadhanapada program. Program operations required Rs 0.39 Crs, and the team also invested in IT hardware for organising the team, spending Rs.0.30 Crs. Communication software expenses were incurred, costing Rs.0.07 Crs and other program support expenses totaled Rs.0.46 Crs. Overall, the expenses were thoughtfully managed and allocated across different areas of the program.

5.4 Impact

Through a mix of Hatha Yoga, Kriya Yoga, and methods of meditation, the Sadhanapada Yoga program of the Isha Foundation aims to foster physical, mental, and emotional wellbeing. Presented below is the impact of the program for multiple parameters as revealed from the survey.

ISHA Sadhanapada Program



Impact on physical Wellbeing: As per the quantitative data collection, **71%** of respondents agreed that their health improved significantly. It was observed from the interactions during the FGD that their temporary health issues like headache, tiredness, lack of energy have been overcome by doing Yoga. The survey also revealed that **67%** of beneficiaries experienced flexibility in their body after performing Asanas. The FGD interaction with Sadhanapada participants revealed their increased energy levels post the program. Initially they found it difficult to perform yogasanas, however, due to continuous practice, they are able to perform all the Asanas that were taught as part of the course.

Quote from the beneficiaries

"Lot of improvement in mental and physical improvement in my health. I attended the programme and I could get out of my comfort zone. "

"It was so amazing that I noticed lots of changes in my health. I feel very lucky to be in that program as it helped me to improve my health."

"It is a multi-dimensional program and offers benefits in various levels. I could significantly improve physical health and emotional quotient by the end of the program without any huge efforts."

"I became flexible like I could never have imagined and the flair, vigour and agility in my physical body became like that of my teenage days."

Sleep quality enhanced: Adequate sleep is one of the essentials of overall physical and mental wellbeing of children. It was noted during the discussion with the Sadhanapada Program Team that few participants used to have issues with proper sleep. However, after joining the program, they have no issue of sleeplessness. The quantitative data shows that **50%** of respondents were significantly influenced as their sleep quality has improved. During the FGD the participants also stated that there is a specific form of Asana called "Sabasana" which helps to get sound sleep. Few of

the participants also shared that the routine of Sadhanapada is designed in such a manner that one will definitely get quality sleep.

Improved energy and efficiency level: The quantitative evidence shows that **72%** of respondents mentioned that their energy level increased whereas 68% of respondents felt that their efficiency level improved. There were instances that few of the in-house beneficiaries lost weight and rejuvenated their energy levels.

Quotes from the Beneficiaries

"I felt it's my mother's womb. I have taken rebirth after sadhanapada. Sadhguru is my father, mother, friend, mentor, partner & everything. Ashram is loaded with energy. Simply being there we can experience blissfulness."

"As a part of Sadhanapada i have learnt great things and energy levels improved. Improvement in all the aspects of my life. Sadhanapada made me realise how much more our body can do. My energy levels were so high".

Improved overall Mental health: As per the quantitative result, **64%** of respondents believe that their mental health improved after the program. It was observed during the focus group discussion that the participants have overcome situations like trauma and depression. During the focus group discussion the participants shared their experiences of how they could balance themselves in challenging scenarios. The survey result shows that **74%** of beneficiaries say that there is significant improvement in overall mood and 68% of beneficiaries say that Sadhanapada program was significant in helping to be calm in challenging situations.

Quotes from the Beneficiaries

"I was going through divorce when I applied for the program. Life looked very dull and low. I was not sure what to do or how to be. But after the program started and I got my seva I didn't even have time to think about the past. Waking up early, doing guided yogasana and other practices, pradakshina, Dhyanalina and Devi, going to seva helped me a lot in coming out of my low phase and I was filled with energy and positivity. Volunteering for programs and monthly meetings helped me look inward and many things became very clear to me. I used to blame others and would get upset if problems arose but when journal writing started, I could see that problems I faced could be solved easily and where were my faults. So overall I can say that this program literally brought me out of the world of my mind, thoughts and emotions. It showed me the life beyond I experienced which was only psychological."



Fig. – Focused Group Discussion – Session 2

Improved ability to deal with stress: The present world is full of stress and people opt for many methods to deal with the stress. It was observed from various interactions during the visit to the Isha Yoga Centre that the peace and quiet of the centre have a large role to play in reducing the stress amongst participants. There are instances captured during the FGDs that few participants were going through a difficult time and they were about to make a wrong decision. However, due to the Sadhanapada program, their lives changed and they became volunteers in the Centre. It is evident from the survey result that **73%** of respondents mentioned that the ability to handle stress has significantly improved whereas **24%** respondents mentioned it has somewhat improved as per their situation.

Quotes from the Beneficiaries

"I had Fibromyalgia and was following a Satvik diet. I used to take 40mg of Duzela tablets when I arrived for Sadhanapada. After returning, I progressively discontinued the medications, and now, by Sadhguru's grace, I am free of all ailments. Now I do not have stress."

"I am blessed to have the experience of Sadhanapada. I genuinely feel that this program was launched for me. Because I was searching for this kind of a support from many years even before my Shambhavi initiation to get recovered from my OCD problem and get a balanced, stress free and joyful life. And I got it and living such a life. I have no word to express my gratitude to Sadhanapada team and Sadhguru."

Focus and attention strengthened: The quantitative result show as **64%** beneficiaries are agreed that there is significant improvement in focus and attention in life whereas **31%** of beneficiaries say that it was helpful to some extent, However, it was verified during the focus group discussion that the yoga has helped to strengthen the focus and attention which helped them to take right decision in life.

Quotes from beneficiaries

"Sadhanapada changed the very way I approach every single thing that happens to me. 7 months during the program just flew away. It's a very joyful program with an intense schedule focussing more on self-growth. Loved each and every day of it."

"Feels like a different lifetime but definitely the comparisons that were mentioned a lot during the program about carrying the values after returning to outside life has helped me reconnect to the Sadhanapada principles."

Improved self-esteem and confidence: **67%** beneficiaries say that there is significant improvement in their self-esteem and confidence whereas **28%** of beneficiaries expressed that Sadhanapada programme helped to some extent to improve self-esteem and confidence. It was evident from the FGD participants that Sadhanapada programme helped them garner confidence in themselves.

Quotes from beneficiaries

"As I fully love to do whatever physically indulged activity, I was so happy to be a part of Akshaya, the pressure, speed, focus, quick decision-making, over-all noticing, after all activities I got guidance from

the lead to improve. That volunteering time really gives me an entirely changed life outside. All things got smoother just because I got the experience from sadhanapada seva."

5.5 Sustainability

The Sadhanapada program has been successfully running for more than 5 years and is one of the most popular programs of Isha Yoga Centre. Sustainability of the program is planned through the following:

- Periodical meetings with the Core group to discuss program improvements.
- Facilitator training programs.
- Encouraging participants to become Volunteers (~10% participants each year stay back to become volunteers).
- Corporate CSR in the thematic area of Preventive Healthcare.
- Alumni interactions.

6. Conclusion

The calm and peace of the Isha Yoga Centre was also witnessed in the interactions with the Sadhanapada participants. This is testimony to the positive transformation that the program has brought about in the lives of participants. As mentioned by a few participants, it is a seven-month programme but it is a life changing programme. There is enough evidence to say that the programme has brought transformation in its current form.

Best Practices

- The Sadhanapada programme is run under the expert supervision and the activities are carried out by a technically sound team.
- The structure of the program is very robust, which keeps participants challenged and occupied.
- The fact that close to 10% of the participants each year stay back to become full time volunteers highlights its positive impact.

Challenges

- With the gaining popularity of the program, the applications are much higher than the seats available at the Isha Yoga Centre.
- Our discussion with the Program Team revealed that a detailed baseline survey was not conducted. However, an endline survey was conducted at the completion of the program. The program's impact could have been measured more effectively had the endline survey conducted by the Program Team been compared with a baseline survey.
- As per the quantitative data only 50% of beneficiaries are maintaining the daily journal after the completion of the program. This calls for follow up sessions to reiterate its importance.

7. Recommendations

Recommendations are made for stakeholders and decision makers to understand the program's best practices and/or areas for improvement to make informed decisions. This is laid out for possible future actions.

- Isha Sadhanapada in its current form is a very structured program and well appreciated by its participants. To make it more effective, it is recommended to conduct a detailed Baseline Survey at the start of the program on various parameters such as sleep quality, flexibility, psychological health, energy levels, etc. The baseline will serve as a reference point for tracking the progress of the participant and to measure the change at the end of the program.
- Promote Sadhanapada alumni gatherings in various cities on a periodic basis for continued benefits of the program.

Impact Assessment

ISHA Free Community Yoga Intervention



Implemented by-



Supported by-



Submitted by -



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We would like to extend our special thanks to all the respondents and the beneficiaries of the 'Free Community Yoga Intervention' program. A special thanks to the young people who participated in the study along with their parents and teachers who welcomed us into their school and provided us with the necessary information.

We would also like to thank the on-ground team of the implementation partners, Isha Foundation, and their leadership for facilitating these interactions with the beneficiaries.

We would also like to take this opportunity to extend our deepest gratitude to the leadership at Chola Mandalam Investment and Finance Company Limited (CIFCL) for giving us this Impact Assessment study and guiding us through all the initial discussions and design and methodology of the study. Thank you for your continuous encouragement and patience through the implementation of the study.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Isha Foundation is a not-for-profit, spiritual organization founded in 1992. Sadhguru Jaggi Vasudev aka Sadhguru is the driving force behind the Foundation that is nestled in the foothills of the Velliangiri Mountains near Coimbatore, Tamil Nadu, India. The ashram hosts the Isha Yoga Centre, which offers various programs.

The Global Burden of Disease study published in 2019 estimated that nearly 200 million people in India have experienced mental disorders, nearly half of whom suffer from depressive or anxiety disorders.¹ COVID-19 only aggravated the already prevalent situation. Tamil Nadu had been quite adversely affected during the COVID-19 pandemic. With the pandemic and lockdowns, people were staying at home and doing less in terms of social interactions and exercise. This led to negative effects on physical and mental health. There was a need to introduce ways to attain physical and mental balance. Cholamandalam Investment & Finance Company Limited (CIFCL), partnered with Isha Foundation to offer Free Community Yoga Intervention to people from age 7 and above. Through the Free Community Yoga Intervention, CIFCL and Isha Foundation tried to bridge the gap caused by physical and mental disconnects and support the execution of the program to 1,50,000 beneficiaries across Tamil Nadu.

This report presents the results of an impact assessment study conducted for Isha Foundation's –Free Community Yoga program. CIFCL supported and funded the project in FY 21-22 for the duration from November 2021 to March 2022. The project aimed to provide access to a healthier lifestyle for participants and the community through the dissemination of knowledge on various yogic practices and their benefits.

For the Impact assessment, the team chose a mixed methodology research tool that included direct field observations, Key Informant Interviews (KIIs), and beneficiary interviews. The field visit was on the 2nd and 3rd of March 2023. The objective was to understand the inputs, outcomes, and outputs of the project and its contribution in terms of the impact it had on the beneficiaries. This CSR project is aligned with SDG Goal 3 - Good Health and Wellbeing. The project has created a positive impact on several indicators such as sound sleep, energy levels, relationship management, and physical activity levels of the beneficiaries. 100% of beneficiaries revealed that they have felt improved physical and mental health post the project and continue to practice the techniques regularly. It was observed that the project was completed within the timelines and it had a positive impact on the life of people in all the above indicators mentioned. The overall impact of the project is found to be satisfactory.

The outreach community program has covered 1,16,113 participants in 2051 sessions, all of this provided free of cost. This includes both online and offline modes. It is recommended that districts other than Coimbatore can also be targeted for the free community yoga program and follow-up courses to the program may be included so that participants may share their feedback and doubts if any after their participation.

¹ <https://idronline.org/mental-health-and-covid-19-in-india/>

2. Introduction

Yoga offers physical and mental health benefits for people of all ages. Yoga has been an integral part of India through its culture and heritage. In Sanskrit, yoga signifies uniting your consciousness with divine consciousness. It describes a way to live a healthy life both physically and mentally. Yoga is believed to have originated in India around 5,000 years ago.

Registered as a public charitable Trust, Isha Foundation is a not-for-profit, spiritual organization founded in 1992. Sadhguru Jaggi Vasudev aka Sadhguru is the driving force behind the Foundation that is located at the foothills of the Velliangiri Mountains near Coimbatore, Tamil Nadu, India. The ashram hosts the Isha Yoga Centre, which offers various programs. The Foundation believes that volunteering is a way of life. Isha Yoga Center is a vibrant and powerful space for those seeking inner transformation and an established state of well-being.

The Foundation through 'Isha Outreach' has introduced many outreach projects such as Project GreenHands, Isha Vidhya, Action for Rural Rejuvenation, Rally for Rivers, and Cauvery Calling to name a few. Isha Outreach includes several path-breaking initiatives in various issues pertaining to the environment, education, health, and community revitalization efforts. They primarily work in South India. Supported by over 11 million volunteers in 300 centers worldwide, Isha Foundation's activities address all aspects of human well-being. The Foundation offers a variety of programs that provide methods for anyone to attain physical, mental, and psychological well-being. The programs that are offered range from beginner-level yoga programs, advanced programs, additional programs, children's programs, and "become a teacher" programs. From its powerful yoga programs for inner transformation to its inspiring projects for society, the environment, and education, Isha's activities are designed to create an inclusive culture that is the basis for global harmony and progress.

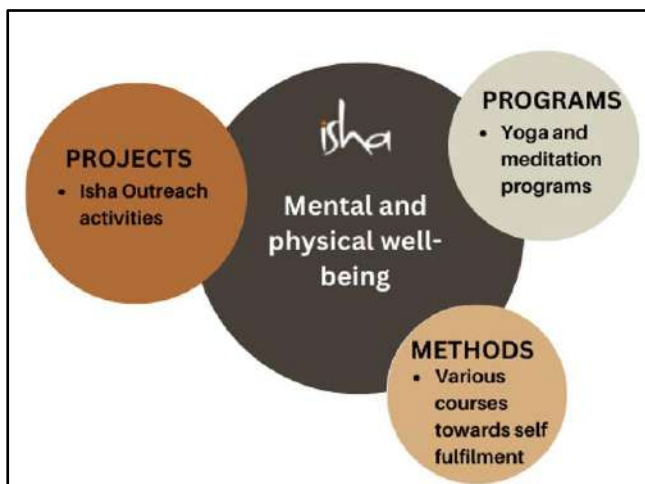


Figure 1 - Image representing the approach of Isha Foundation

Their fundamental vision is to offer the science of inner well-being to every human being – a science that helps a person realize the ultimate potential within.

Aligned to Sustainable Development Goals (SDGs), the Foundation aims to cover SDG 3 of ensuring healthy lives and promoting well-being for all ages.

3. Program Overview

3.1 Impact Assessment background

As per the National Mental Health Survey of India 2015-2016, the mental health crisis was already a serious crisis even prior to COVID-19 in India. It reported that about 10 percent of adults meet the diagnostic criteria for a mental health condition (ranging from mood and anxiety disorders to severe mental illness). The Global Burden of Disease study estimated that nearly 200 million people in India have experienced a mental disorder, nearly half of whom suffer from depressive or anxiety disorders.²

³India accounts for more than a third of the female suicides globally, nearly a fourth of all male suicides, and suicide has been the leading cause of death in young Indians. COVID-19 only aggravated the already prevalent situation. Tamil Nadu had been quite adversely affected during the COVID-19 pandemic. It was among the highest impacted states of COVID-19 during the pandemic. With 38 districts in total, It saw its largest COVID spike in May 2021. Coimbatore District, the second largest city of Tamil Nadu has a population of around 4.1 million people spread over 12 Taluks. It too had its share of suffering in the aftermath of the pandemic. An insight into the mental health needs of the common public of Tamil Nadu, India, subjected to COVID-19 lockdown revealed that Coimbatore recorded more than 35% distress levels which were above average proportion of people under distress during COVID-19.⁴ Since health and well-being were the priorities of any nation, India went through the lockdown in five phases following partial-unlock down along with recommendations like restrictions on freedom of movement, social and physical distancing, self-isolation, and quarantine measures, etc, to curb down the disease spread.

The COVID-19 pandemic led to a variety of mid and long-term effects. With the pandemic and lockdowns, people were staying at home and doing less regarding social interactions and exercise. This led to negative effects on physical and mental health. With the lingering symptoms seen, there was a need to introduce ways to attain physical and mental balance. The new realities were working from home, temporary unemployment, home-schooling of children, and lack of physical contact with other family members, friends and colleagues. Adapting to lifestyle changes such as these, and managing the fear of contracting the virus, were the challenges of the time. Hence, looking out for mental health, and staying physically active took focus.

The World Health Organization defines health as “complete well-being in terms of physical, mental, and social, and not merely the absence of disease⁵” therefore, continuous lifestyle behaviour programs towards improvement are the focus.

² [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(19\)30475-4/fulltext](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(19)30475-4/fulltext)

³ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7597717/>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7888250/>

⁵ <https://www.who.int/about/governance/constitution#:~:text=Health%20is%20a%20state%20of,absence%20of%20disease%20or%20infirmity.>

Isha Foundation through its project 'Free Community Yoga Intervention' felt the need to reach out to more people and communities to experience physical, mental, emotional health and well being through yoga interventions. Yoga has been especially recognized even by the medical community to play an important role in preventive healthcare and tackling lifestyle disorders. Yoga comprises physical, mental, and spiritual practices and promotes self-healing. The program facilitated simple learning tools like Simha Kriya, Surya Shakti, Nadi Shuddhi, Yoga Namaskar, and Isha Kriya.

Given the proximity of the Foundation to Coimbatore district, the Free Community Yoga Intervention program was implemented with a special focus to cover people in and around Coimbatore.

Cholamandalam Investment & Finance Company Limited (CIFCL), which is the financial services division of the Murugappa Group, had partnered with Isha Foundation to offer Free Community Yoga Intervention to people from age 7 and above. Through Free Community Yoga Intervention, CIFCL and Isha Foundation tried to bridge the gap caused by physical and mental disconnects and support the execution of the program to 1,50,000 beneficiaries across Tamil Nadu. This was a free program imparted through online and offline modes.

3.2. Context

Objective of the project

- To strengthen the health & well-being of the community with a special focus on Coimbatore District.
- To spread awareness of the benefits of Yoga practices in both urban and rural areas.
- To provide benefits of yoga to the different social segments of the community.
- Offer free Yoga programs (Simha Kriya, Surya Shakti, Nadi Shuddhi, Yoga Namaskar, Isha Kriya, Uyir Nokkam) to 150,000 from Tamil Nadu
- Spread benefits of Yoga practices to 150,000 people



Figure 2 - Project details of Isha Free Community Yoga Program

Location:

Tamil Nadu with a focused approach around Coimbatore districts.

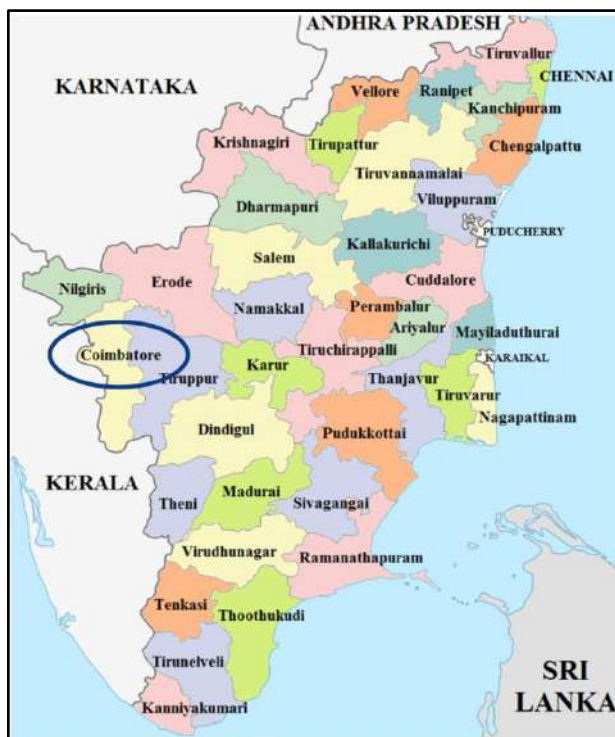
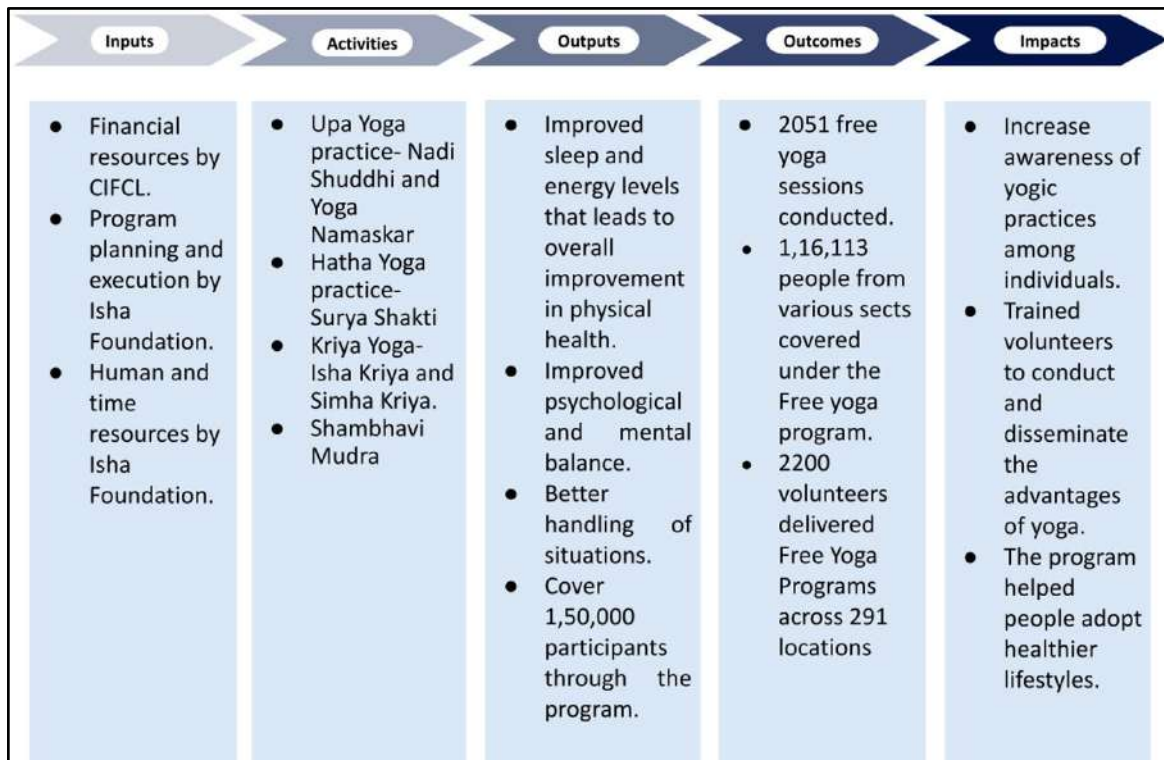


Figure 3 - Image of the focus area of the program

Impact Map



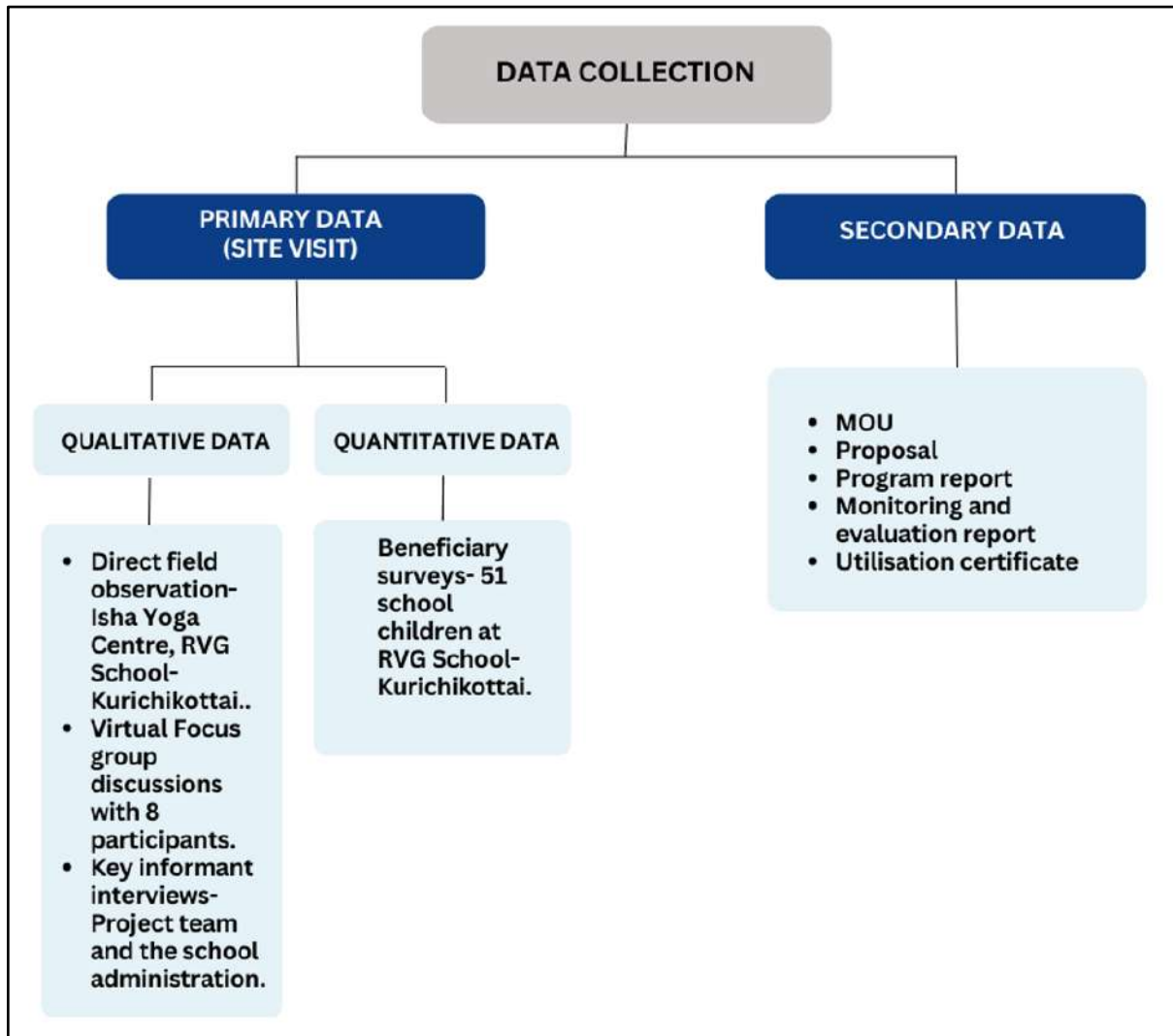
4. Methodology

The impact assessment study for this project started with separate initial meetings between CIFCL and the concerned Implementing partner. While the meeting with CIFCL was to broadly understand their expectations and timelines, the meeting with the Implementing partners was to understand the program, its objectives, the target beneficiaries involved, and the challenges faced in implementing the program. Post the introductory meetings, a list of pre-requisite documents was called for. This was done to initiate desk review.

Basis the documents received; the team started the desk review of project documents to develop more understanding of the programs and their interventions. Accordingly, the key stakeholders of the project were identified and mapped to capture their opinions and feedback and a mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools. Keeping in mind the program's vast coverage and the numbers involved, we suggested the quantitative survey be conducted on 500 sampled participants along with field observation and FGD. However, due to the technology and linguistic barriers faced by the participants, Isha Foundation informed us that it was not feasible to initiate the quantitative survey on the proposed number. Isha Foundation instead proposed a school visit where the intervention was executed and the children were performing the taught practices on a daily basis. Considering the difficulties, the proposed method was followed after consulting all the relevant stakeholders.

Field observation, Virtual Focus Group Discussions(FGDs), Semi-structured interviews, Key Informant

Interviews, and beneficiary interviews were included in assessing the impact. The data collection was done as mentioned below:



Respondents' profile

A survey was conducted as a part of the quantitative methodology. 51 children from the RVG School at Kurichikottai participated in the same. The children were aged between 10 years and 14 years and ranged between Classes 6 to 8. Given the vastness in terms of the project scale, a random sampling method was used in beneficiary selection.

Age	Number of children
10 years	1
11 years	3
12 years	20
13 years	19
14 years	8
Total	51

5. Analysis and Findings

5.1 Relevance

Yoga has proven relevant and beneficial for everyone regardless of age, gender, physical ability, or lifestyle. Interaction with trainers, trainees, and other non-residential beneficiaries has revealed the following relevance.

Need for a holistic program

Improving physical health is regarded as essential for overall well-being where several factors such as a sedentary lifestyle, poor nutrition, and high rates of lifestyle diseases contribute to poor physical health outcomes. Likewise, anxiety and stress are common mental health issues that affect people around the world, including in India. According to a survey by the National Institute of Mental Health and Neurosciences (NIMHANS)⁶, around 7.5% of the Indian population suffers from some form of mental health issues, with anxiety disorders being the most common. Factors contributing to anxiety and stress include work-related stress, financial stress, social pressures, health-related stress, etc. Various interventions, including counseling, medication, and mindfulness-based practices like yoga and meditation, can help manage anxiety and stress. Thus, indicating Isha Yoga for All program's high relevance in overall well-being.

Components of Yoga for All program

Interactions with the Program Team revealed that there are numerous yogic practices that can be taught. However, it is pertinent that people start slow and advance into deeper practices. Yoga for All offers beginner-level practices which sow the seeds for other programs offered at the Isha Yoga Centre. Under Yoga for All the following sessions are covered, either individually or combined into one session:

- Simha Kriya - It helps boost the immune system, increase lung capacity, and purifies the body and the mind.
- Surya Shakti - It strengthens the heart, boosts vigor and vitality, Improves immunity, strengthens the muscles, tones the digestive system, corrects hormonal imbalances, lubricates the joints, develops mental clarity and focus, and remedies weak constitutions.
- Nadi Shuddhi - It helps improve neuromuscular coordination, blood circulation, and blood pressure and relieves body aches. This slow breathing technique causes blood vessels to relax and widen, thereby improving cardiovascular health.
- Yoga Namaskar - It brings balance and stability into the system, strengthens the lower back muscles, and activates the lumbar region of the spine.
- Isha Kriya - Practising Isha kriya calms the mind and body, reduces stress, anxiety, and depression, energizes the body, and improves health and it is said to empower an individual in handling unpleasant situations around himself/herself.

⁶ <http://indianmhs.nimhans.ac.in/Docs/Summary.pdf>

- Uyir Nokkam - Improved physical health, stress-free life, better relationships, and effectiveness in handling situations are some of the benefits that can be derived from Uyir Nokkam program.

The components of the Yoga or All program support the overall objective of strengthening health and well-being and spreading the benefits of yoga practices.

Focus groups - The objective of the program was to spread awareness of yoga practices to six major focus groups as given below:

- Schools and colleges.
- Business establishments.
- Medical institutions.
- Urban public.
- Rural public.

The project aimed to provide Yogic tools for well-being that could be practiced by a diverse range of individuals from different backgrounds. The Yogic practices were designed to be accessible to anyone aged seven and above, regardless of prior experience with Yoga. As explained by the Program Team, these Yogic exercises took only a few minutes each day and resulted in significant and visible improvements in people's health, well-being, and energy levels.

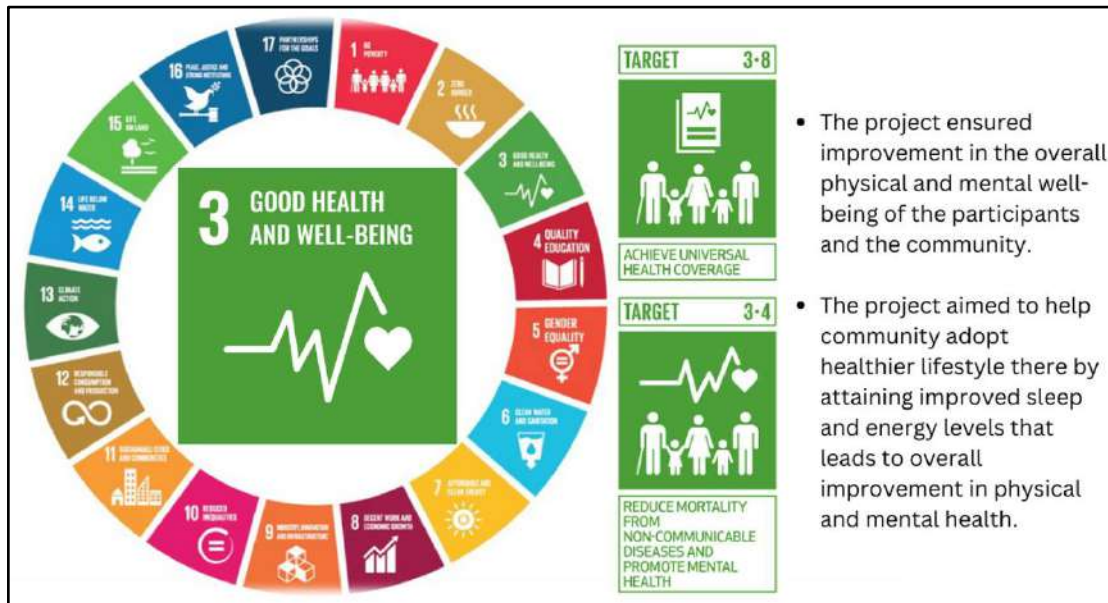
Creating a sense of community:



Figure 4 - Children at RVG school performing yoga

The ‘Yoga for All’ program was implemented in schools and colleges and was accessible both in physical and online modes. Online programs and pre-recorded videos were available on the website as well. It was observed that the participants who were a part of the yoga, either offline or online, displayed a sense of community belonging, and togetherness. The “Yoga for All” program is relevant to bring people together from different parts of the country.

Linkage to Sustainable Development Goals



5.2 Effectiveness

The primary focus of assessing effectiveness remains on establishing whether an intervention has achieved its intended results at different levels of the results chain. The definition of effectiveness includes the key concepts of achievement of objectives, the varying importance of objectives and results, differential results across groups, and understanding the factors that influence outcomes.

Yoga for All was started in 2010 with Isha Kriya and later Upayoga was incorporated into the program. The physical sessions of the Yoga for All program were suspended during COVID-19. However, it continued to be available through online platforms.

The Reach of the Yoga for All program:

As per the data available, the programs under Yoga for All were introduced in 48 schools covering 9079 students and 9020 students in 32 colleges. 96,212 members of the general public participated which had a population mix of volunteers and participants. A total of 1,16,113 participants participated in 2,051 sessions. This has been captured from the documents maintained with the project team. There were 2,200 volunteers who conducted the programs in 291 locations. While the focus group also included medical institutions and business establishments, the outreach to them was limited and outreach data was not maintained.



Figure 5 - Snapshot of the program coverage

Multi-lingual yoga offerings:

As per the vision of Sadhguru, the foundation has a clear plan to reach the participants in a number of languages and in various ways. There are clubs in different locations and coordination teams have a monitoring mechanism to ensure the wide reach of the program. There is a Project Manager for the verticals like school programs, college interventions, and rural and urban interventions. Each vertical was supervised by the Cluster Coordinators. However, there is no evidence for the intervention among the businessmen. According to the Isha staff, it was very difficult to map the businessmen.

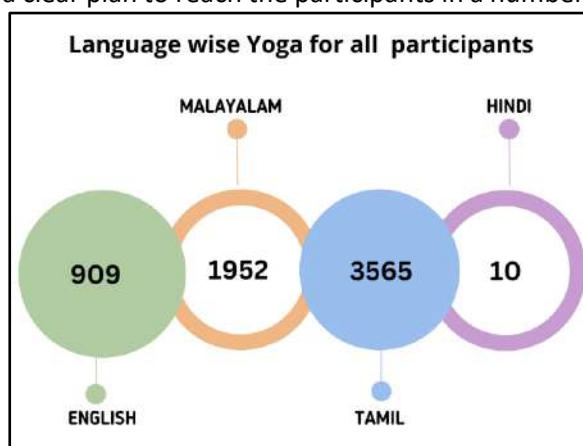


Figure 6 - Breakup of the linguistic profile of the participants

Feedback session - Every session of Yoga for All

is followed by asking the participant to fill up a registration form, and Google Form at the end of the session. The idea behind the feedback is to learn from and enhance the effectiveness of the program.

Reach through Sadhguru App - The downloads had surpassed 5 million, indicating the Outreach program's effectiveness. While there was a mechanism for counting the number of participants through the App, it was impossible to determine the exact number of beneficiaries as many individuals may have used the program with a single App, leaving no record of their participation.

The effectiveness of the program as revealed through the interactions with children, teachers and parents of RVG Matriculation School are as below:

- **Benefit for Physical health:**

The children and the parents revealed that Yoga postures (asanas) helped them to improve flexibility, and strength, balance, and overall physical health. Children revealed that they do not feel lazy after starting yoga in school. Parents opined that children hardly fall sick after the yoga practice.

- **Stabilizing Mental health:**

Our interactions with teachers and children revealed that yoga helped children and teachers in reducing anxiety, depression, and stress by increasing relaxation and mindfulness. It was evident from the survey and interactions that children's academic performance had been enhanced due to the practice of yoga. It also improved their mental clarity, focus, and self-awareness.

- **Helpful in character Building:**

The discipline maintained in the process of yoga practice is helpful towards character building as some



Figure 7 - Students of RVG school performing yoga

children are practicing even when they are not in school. Parents revealed that their children were obedient and displayed reduced arrogance. The children also confessed that their irritable attitude had been transformed and that was reflected in their behaviour.

5.3 Efficiency

Efficiency is used to understand how well resources of the program are used and the extent to which the program delivers results in an economic and timely way.

Fund Utilization: Due to the COVID pandemic, the fund utilization was revised. A major portion of the budget was allocated toward technology to enable the restart of the yoga program through online platforms. 16 Laptops for the back office, 8 Laptops for streaming, one Sony Camera, 4 webcams, and 3 ring lights were provided for the online platform. These tools were effective and because of these, the reach of the program was successful.

Expense Head	Budget	Total
Programme Delivery Expenses	43,94,250	39,33,949
Manpower Costs	16,81,250	17,84,924
IEC Expenses	13,65,500	15,63,356
Infrastructure Costs	21,59,000	23,71,611
Total	96,00,000	96,53,840

Target vs achievement - While the target as per the agreement was outreach to 1,50,000 people, the number achievement was 1,16,000. The target was not achieved on account of the COVID second wave and the inability of the Program Team to conduct multiple offline sessions. However, the number which has been achieved within 4 months of the program after COVID is an achievement compared to the whole target. As per the monitoring data, from May 2021 to November 2022 a total of 29,647 members of the public were reached out to in physical locations whereas 38,584 individuals were reached out to through online platforms. 8,910 volunteers were trained through the Anand Alai Programme.

Monitoring of the program:

The program's vision was to extend the advantages of Yoga practices to 150,000 individuals in Tamil Nadu, with volunteers supporting the initiative. Their involvement in schools and colleges was only after receiving permission from senior school and college authorities. As shown in the accompanying graph, program attendance peaked in July and May of 2021. We noticed that many participants who initially visited the Yoga center later became full-time volunteers to promote the program.

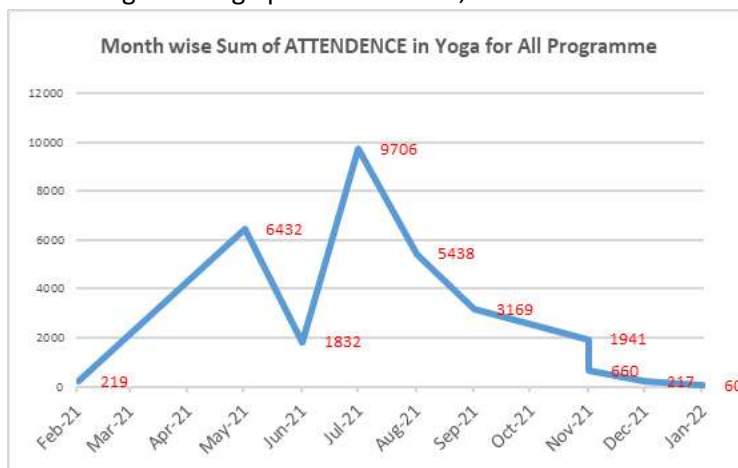


Figure 8 - Graph indicating the attendance of the participants

Analysis of the survey responses of school children

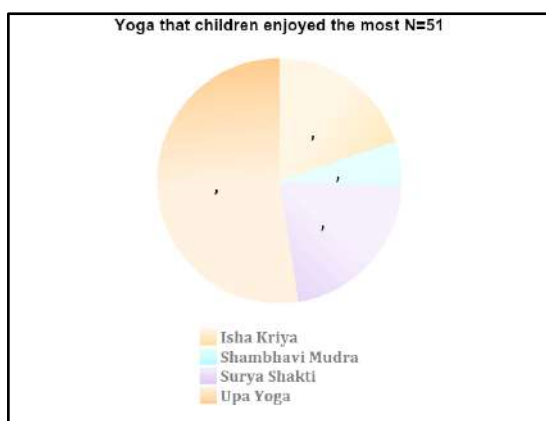


Figure 9 - Chart indicating the preferred practice

16% of children found the yoga challenge level as high whereas 55% of children found it a medium level of challenge.

The analysis shows that 96% of children practice yoga daily whereas 4% of children practice 3 to 4 times a week. As per the survey data, the children who are practicing yoga 3-4 times a week find Shambhavi Mudra difficult as their challenge level is higher.

Yoga Practice level among children:

As per the school children, Upa Yoga has been accepted as the most enjoyed yoga whereas the Shambhavi Mudra was least enjoyed by children. However, during the FGD the children mentioned that they enjoy all forms of yoga.

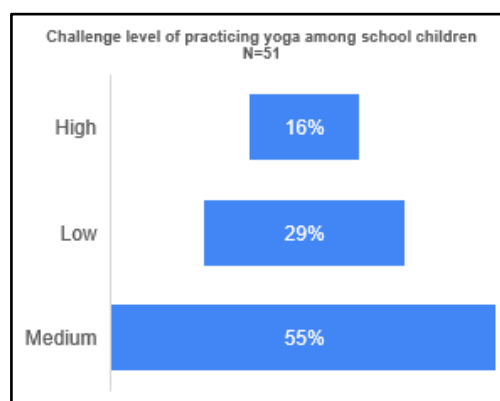


Figure 10 - Graph indicating the challenge levels of the program

A perfect plan to scale up:

In order to scale up the program, the program was targeted to education institutions and rural and urban populations through clubs and in-house programs. The rapid growth of the program is the result of its well-planned execution. The program is influential in terms of motivating the participants to be part of the program at any place and at any time. The simple format of the yoga practice has enabled the participants to practice daily. As per the survey done among the children of class from 6th to 8th

of RVG School, 53% of children are practicing yoga only in school which means school is the appropriate place for them as children to practice in a group. However, 47% of children practice yoga even at home. The discussion with the children revealed that they practice at home whenever they are absent from school.

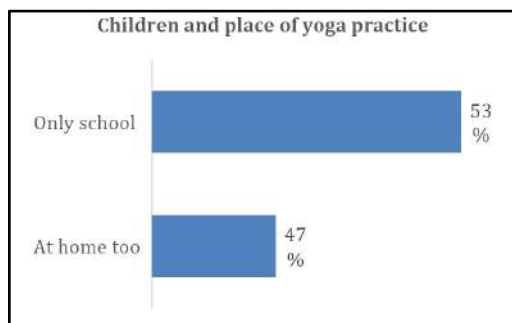


Figure 11 - Graph indicating the location of performing yoga

Impact assessment visit to the RGV Matriculation school, it was noted that the children are proficient in yoga practices.

Physical well-being and Cure:

During the virtual FGD, the participants shared testimonies of their physical ailments cured after practicing yoga. Health issues like sinusitis, spondylitis, acidity, and indigestion were cured because of regular yoga practice. It was noted by the volunteers of the Yoga for All program that different forms of yoga can heal physical ailments. The FGD participants mentioned that Upayoga is helpful toward physical well-being. During the FGD, the school children mentioned that the frequency of falling sick is very rare since the day they adopted yoga in their lives.

"I was struggling due to sinus problem for a long time. I have come across the books of Sadhguru and started Uyirnokkam and breathing exercises. Within 40 days I got cured of my sinus". Shared by an FGD participant.

"I have seen changes in my life. My ways of handling people have improved. I have lost a lot of weight in 6 months. Practising Isha Kriya helps me to be calm throughout the day; my Health and energy levels have improved. Now I am a coordinator for this program for youngsters." Spoken by a Professor who turned into a full-time yoga volunteer.

5.4 Impact

The program aims to build a healthy society by reaching out to more individuals. It was observed during the visit to the Isha Foundation that there was a huge number of aspirants from different countries. As per the data, 1,500 visitors visit the center every month. As part of the



Figure 12 - Students participating in the activity-based survey

Contributing towards confidence and performance:

During the FGD the school children shared that their academic performance has improved as a result of the yoga practice. Their confidence levels were observed during the interaction reflecting their passion for the yoga practice.

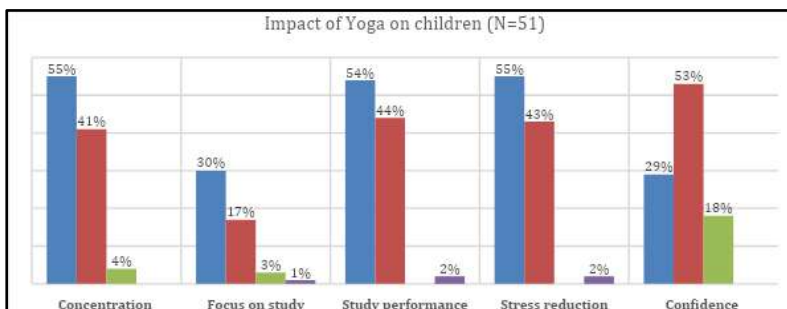


Figure 13 - Graph showing Impact

The analysis of the data in the graph infers that the increased levels of concentration have resulted in good academic performance in the study. 55% of children said that their concentration has increased and 54% of children said that they can secure good marks in their studies due to the increased focus and confidence due to yoga practice.

During the virtual FGD, the participants also acknowledged that their working efficiency has increased due to the yoga practice.

It was noted that the teachers of the school also underwent yoga training. Yoga has helped the teachers to handle the children with patience. According to the teachers, the introduction of yoga to children resulted in an improvement in their concentration, enabling them to remain seated for longer periods. The teachers also noted that the children appeared to remain refreshed throughout the day as a result of practicing yoga.

Strengthening the emotional ability:

The virtual FGD uncovered that the participants had recovered from negative situations, including depression and receiving sad news about their loved ones, with the aid of yoga, which helped to calm their minds. Individuals from various sectors, such as teaching, business, homemaking, students, and people of all ages, have benefited from it. The virtual FGD also highlighted that Isha Kriya has proven to be useful in achieving mental stability.

"During corona time my mother passed away due to a heart attack. It was very sudden and I was not able to go through this situation. On that day Sadhguru spoke about parental death and coping through a blog. I was able to overcome this through Guru's guidance. Yoga has helped me spiritually and to cope with the situation". Said a participant in the virtual FGD.

Social relationship restored:

Through direct observation during the impact assessment visit, it was revealed that yoga has not only impacted physical and mental well-being but also it has impacted social relations. During the FGD with Yoga for All beneficiaries, one participant shared about his broken relationship and how yoga had helped him to heal and move on..

LIFE TESTIMONY

"I was into a relationship and unsuccessful in that love affair. My life was totally mess. I came across a board of Isha and joined the programme in 2007. Within 48 days my life changed and became a transformed person."

.... FGD

As per the inference of the spot survey among school children, 45% of children were impacted by yoga as their relationship with their peer group and parents have significantly improved. The children also shared in the group discussion how they changed their revengeful attitude and brought change by themselves. The parents also acknowledged that they have seen positive changes in their children. According to the parents, their children are more obedient than before they started participating in yoga practices.

Enhancement in sleeping quality:

During the virtual FGD it was revealed that a few of the participants were struggling to get good sleep. Some even talked about their dependency on pills for good sleep. However, after adopting the yoga practice there was no need for sleeping pills as was shared by the FGD participants.

"I am a wholesale vegetable businessman. Due to my long working hours, a gastric-related disease developed in me, and I was hospitalized for this. I was struggling to sleep. I heard about this program and joined the yoga for all program. Within 10 days, I could sleep better; my digestion is better now, it's miraculous." Shared by one of the FGD participants.

Creating Change Agent:

In terms of the scale of the yoga program, it has reached schools and colleges where the students are conducting the yoga class by themselves. Many trainees have turned into full-time volunteers irrespective of their engagement platform either in-house or online. The yoga program had a great influence in terms of transforming its beneficiaries into yoga practice advocates.

It was observed that there is no such negative remark or demerit of yoga found during the visit to the yoga center. The simplified form and flexibility in timing is the core strength of the program. It was noted that many participants were attracted to the program by self-motivation or motivation by their neighbors or by seeing the hoardings and posters of the Yoga program. It was captured during the virtual FGD that the participants ranked 10 out of 10 for their practice level which proves the influence level of the program.

5.5 Sustainability

Strong Mechanism and Meticulous plan in Place

There is a two-tier sustainability plan,

1. Large Scale Awareness
2. Sustained Impact.

In accordance with the first tier, simplified yoga was taught which was easy and simple to practice. The yoga program was offered to permanent institutions like schools and colleges. The Yoga team had a technical team and all the necessary equipment available to carry out the online program. There were project managers and vertical coordinators responsible for taking care of the on-ground programs.

As part of the tier two sustainable plan, clubs were formed in different places based on the availability of students. The teachers and volunteers were assigned to certain clubs. The clubs are self-sustaining, as there were instances when the students converted to full-time volunteers and organized clubs by themselves.

Simple in adaptation and strong in base:

The sustainability of the Yoga program can be affirmed by the design of the program. The program is very simple to adopt and the result is influential and grounded with a spiritual base.

Adequate Channels to spread the program:

It was observed from the responses of yoga volunteers and other officials that they have adopted different modes to spread the free offering to the public. The audio and video programs have had a wider outreach within rural and urban communities. Online platforms are used to reach out to the educated mass. Through institutions, it reaches out to the working professional, and through posters and hoardings reaching out to the public.



Figure 14 - Image of the office at the Isha Yoga Center

6. Conclusion

The program name has been rightly determined as “Yoga for All” as this is free and aims for the betterment of society and individuals as well. The overall observation has drawn the conclusion that the Yoga for All program is the need of the hour and has the scope to widen its scale.

Best Practices

- There is a logical concept behind the program as it aims for the overall well-being of people.
- There is no monetary benefit expected from any teacher, student, or volunteer in return for their service in the yoga program.
- The evidence supporting the efficacy of the yoga program is so substantial that it can produce immediate results.

Challenges

- Challenges of a technical nature encountered in instructing the general populace on accessing Zoom and participating in virtual lessons.
- Due to the program's rapid expansion, there is a shortage of teachers and volunteers available to conduct the new classes.

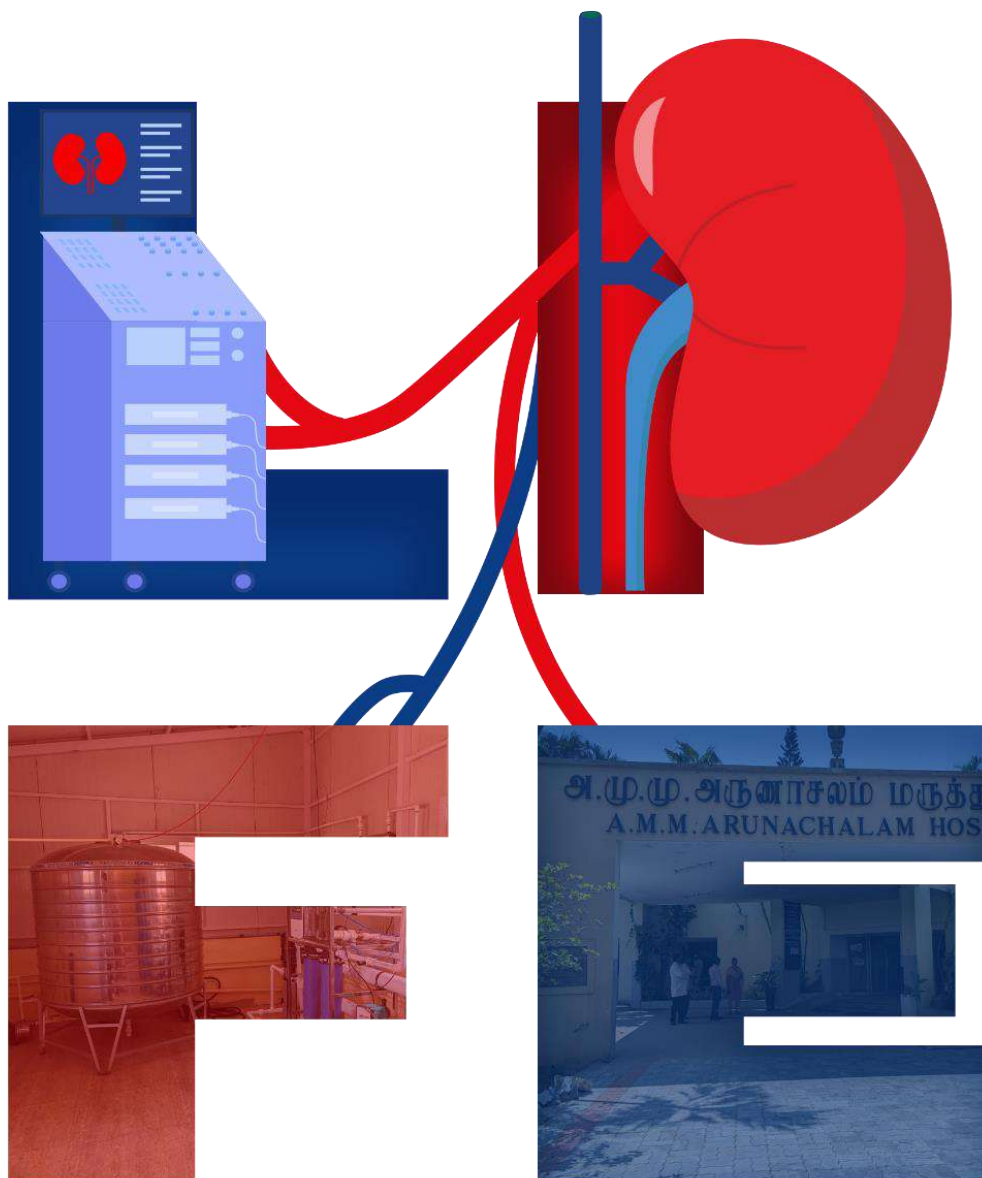
7. Recommendation

Recommendations are made for stakeholders and decision makers to understand the program's best practices or inadequacies to make informed decisions. This is laid out for possible future actions.

- Tamil Nadu comprises 38 districts, and the district of Coimbatore is the only one chosen for the free yoga program. However, other districts can also be considered.
- It is crucial for the Isha Yoga program to focus on enrolling businessmen since there is limited evidence of their participation in yoga.
- Follow-up courses should be incorporated into the program to enable participants to provide feedback and clarify any doubts they may have after practicing yoga.

Impact Assessment Report

Dialysis Centre-AMM Arunachalam Hospital



Implemented by-



A.M.M. FOUNDATION

Supported by-



Submitted by -



March 2023

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Acknowledgment

We are thankful to the doctors, hospital administrative staff, and patients of AMM Arunachalam hospital who participated and shared their opinion, and provided necessary evidence during the Impact Assessment process. Our hearty gratitude to the AMM Foundation representatives who organised the field visit as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the construction of the dialysis unit at AMM Arunachalam hospital.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

AMM Foundation was formed in 1953 as the AMM Charities Trust and since then they have been working in the social sector mainly in education and healthcare services. The foundation is set up with the vision to help the economically disadvantaged with free services without any discrimination. The Dialysis unit at AMM Arunachalam hospital is a new project of AMM Foundation; the unit was constructed in the year 2022.

It is estimated that there are some 20 million patients with chronic kidney disease in India, but only 20 percent get dialysis treatment. The remaining 80 percent either can't access it because they live in rural areas or can't afford it since dialysis is an expensive treatment. Approximately every dialysis costs around Rs 1500/-, per cycle 3 times a week which results in a huge expenditure for patients to the tune of Rs 2 - 3 Lakhs annually. This project bridges the gap between the rich and the poor by providing free treatment to the underprivileged free of cost.

CIFCL engaged M/s. Chrysalis Services Private Limited (Chrysalis Services) in 2023 to undertake an Impact Assessment of the program Dialysis center - AMM Arunachalam hospital implemented by the AMM Foundation. For the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, and impact. An Impact Assessment field visit was conducted on the 22nd of February 2023 at Nellikuppam Cuddalore, Tamil Nadu.

The assessment has revealed that the project was relevant owing to the need for the dialysis unit was based on a study "Tondaimandalam Nephropathy" an analysis conducted by Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER) which is about the high prevalence of chronic kidney diseases in South India and a rapid assessment study by the hospital highlighting the need for quality dialysis in and around 15 villages of Nellikuppam. Nellikuppam had no dialysis unit before this setup and they provide treatment to the patients free of cost.

It was analysed that the Implementing Partner has abided by the objective and the project completion duration. The program's outcomes demonstrate its exceptional effectiveness and efficiency as the patients from the dialysis unit were completely satisfied with the treatments and care provided. They also wanted to visit this hospital because of the free cost treatment and medicines at subsidised rates.

The hospital has a technical tie-up with the Wockhardt Foundation for the dialysis unit operations and staff. The unit has procured 11 dialysis machines and has the capacity to take almost 33 dialysis per day and around 990 dialysis a month. The hospital currently has 27 patients who require dialysis 3 times a week utilising only 324 dialysis out of 990 dialysis capacity of the hospital for a month. The hospital, therefore, has the capacity for treating more patients in the future. The dialysis unit has a dedicated team consisting of a qualified Centre head, trained technicians, nurses, housekeeping staff, and a weekly consultant nephrologist.

The overall assessment of the project reveals that the dialysis unit has been adequately set up to meet the need and the program has been beneficial to patients requiring frequent dialysis. The services of the dialysis unit are being well utilised by the beneficiaries.

2. Introduction

Working on the thematic areas of Education, Healthcare, and Special projects, AMM Foundation was founded in 1953 as the AMM Charities Trust, with the noble vision of giving back to the community. This Foundation is the CSR arm of the Murugappa Group and was established by the Murugappa Group with the aim to undertake projects that are socially relevant, impactful, and sustainable. The company supports socially beneficial projects with sustainability as a guiding principle. Aligned to Sustainable Development Goals (SDGs) goals 3 and 4, they aspire to ensure inclusive

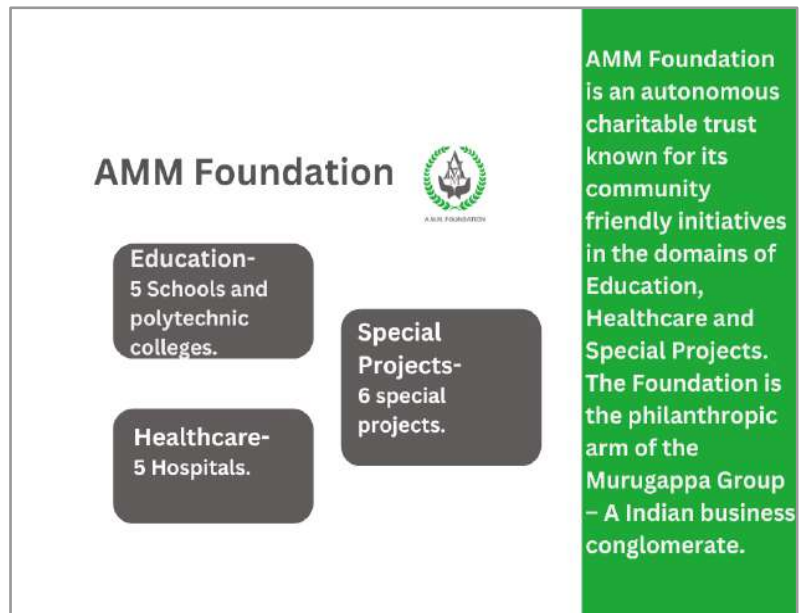


Figure 1 Program details of AMM Foundation

and equitable quality education and promote lifelong learning opportunities for all and ensure health and well-being for all. The Foundation aims to cover a wide spectrum of beneficiaries through its philanthropic pursuits with a view to empower economically and socially backward communities. Currently, the Foundation manages five hospitals, four schools, and one polytechnic college under its Education and Healthcare programs. AMM Foundation also works on around six special projects in similar areas. It hosts a few notable projects like scholarship programs, a football academy, mobile science labs, rejuvenating the water bodies, a mobile health van, and a dialysis unit under. Living up to the vision, the Foundation has ensured the welfare of the community over the realms of commerce.

AMM Arunachalam hospital was set up in memory of the chairman of AMM foundation, the late Mr. AMM Arunachalam. The hospital was founded in the year 2000 with part funding by the Government of Japan. The hospital served the rural population spread across 75 villages around Nellikuppam, Cuddalore. The dialysis unit is set up on the first floor of AMM Arunachalam hospital. The hospital also has a fully functioning Out Patient Department (OPD) where consultation with doctors and medicines are available at subsidised rates. Pre-COVID times, the hospital was running a hospital but due to inactivity this has been closed now and the Dialysis Centre has been set up in its place. The dialysis unit was set up at the AMM Arunachalam hospital in partnership with the Foundation. The dialysis unit was inaugurated on 27th January 2022 at AMM Arunachalam hospital in Nellikuppam.

Program Overview

3.1 Impact Assessment Background

The Global Burden of Disease (GBD) studies have shown that chronic kidney disease (CKD) has emerged as a leading cause of worldwide mortality, accounting for 3.04% of all deaths, representing a 50% rise over 10 years in India. Every year about 2.2 Lakh new patients of End Stage Renal Disease (ESRD) get added in India resulting in additional demand for 3.4 Crore dialysis every year. With approximately 4950 dialysis centers, largely in the private sector in India, the existing infrastructure is ill equipped to meet the demand. ¹

As per the Indian CKD Registry, a voluntary reporting body of chronic kidney disease patients' data, the doctors cited that Tamil Nadu is home to approximately 65,000 CKD patients every year. Another report from the Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER) found a high prevalence of CKD in the southern coastal districts of India, in the states of Tamil Nadu and Puducherry. A study was conducted for a total of 2424 patients with CKD, the patients were predominantly male with a median age of 52 years. Out of the sample data for patients for the research, more than half the patients accounting for approximately 56% were from districts of Villupuram and Cuddalore in the state of Tamil Nadu. ²

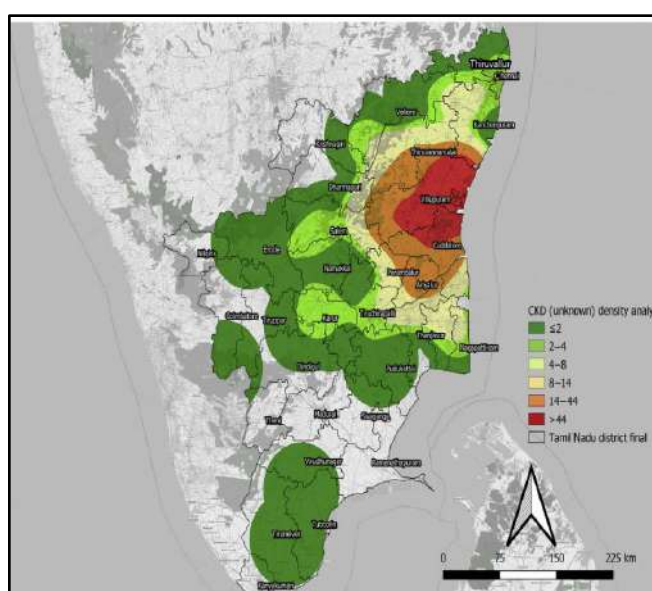


Figure 2 Map highlighting high concentration areas for kidney diseases

The patients were mostly from an underprivileged background in farm labour or any other form of labour that required physical activity. The climate is mostly hot and humid in these areas. However, further studies are also taken to understand other contributing factors for the high prevalence of kidney diseases amongst the underprivileged in South India. The patients mostly belonged to the states Tamil Nādu and Puducherry which corresponds to the historical region called “Tondaimandalam” as per the report hence the name “Tondaimandalam Nephropathy” was given to this analysis.

With this study as a backdrop, the need for a dialysis unit was realised and AMM Arunachalam Hospital, Nellikuppam decided to utilise the free space for a dialysis unit. The dialysis unit was launched on 27th January 2022 in partnership with the Wockhardt Foundation which is the technical partner and helps

¹ https://www.nhp.gov.in/pradhan-mantri-national-dialysis-programme_pg

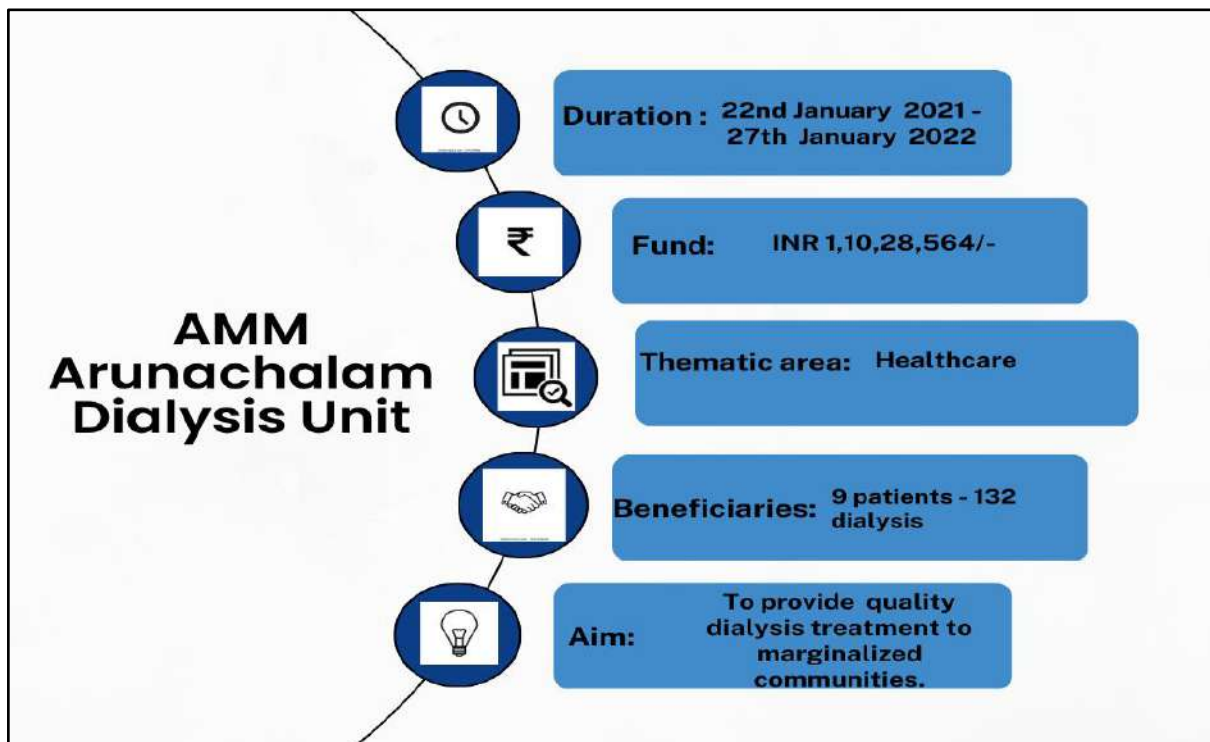
²

https://www.paho.org/disasters/dmdocuments/RespToolKit_19_Tool%2011_DistributionofEmergencyFoodDuring%20anInfluenzaPandemic.pdf

in the day-to-day functioning of the dialysis unit. Here, dialysis is provided to all the patients free of cost.

The unit has a team consisting of one centre head, trained technicians, nurses, housekeeping staff, and a consultant nephrologist who visits the dialysis unit once a week. CIFCL, as a part of their corporate social responsibility helped in the setup of the dialysis unit by providing funds to AMM foundation.

CIFCL Project details:



3.2 Context

Chronic kidney disease (CKD) is fast becoming a major public health issue in India. At least 2.2 lakh new patients of end-stage renal disease are added in India each year. Early detection and sufficient financial resources are major requirements for successful dialysis. Dialysis is an expensive treatment because of its recurring cost. Each dialysis costs around Rs 1500/-, per cycle and needs to be done 3 times a week. This results in a huge expenditure for patients to the tune of Rs 2 - 3 lakhs annually. This, leads to financial stress for practically all families with such patients, and many of them are forced to quit their treatment due to financial constraints. As a part of the project, CIFCL has provided financial support for the setup of the AMM Arunachalam dialysis unit.

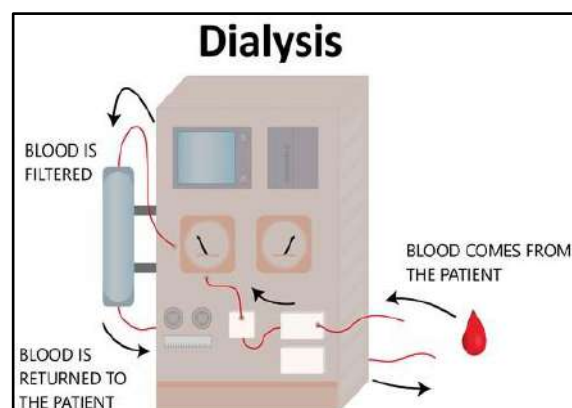


Figure 3 Dialysis treatment machine procedure

List of top 11 major items sponsored as part of the project:

Item
New Fresenius 4008S DM WITH NABP (FRESENIUS)With 5 Years CMC Warranty
Tiles and shed for RO Plant
Dialyzer Reprocessing Machine (Reno Clean or Nephroton)
Automatic -RO Plant 1000/PH/ Lit Capacity
Effluent Treatment Plant
Dialysis Cot
Connections(Plumbing) UPVSC Tubing
Ac(1.5-Ton) With Stabilizer And Fixing
Electric Works
Pigeon Hole-rack with 25 Chambers
Automatic Defibrillator Philips Heart-Start FRx Defibrillator



Figure 4 Connections (Plumbing), Tiles and shed for RO Plant and Dialyzer reprocessing machine



Figure 5 Dialysis cot, Effluent treatment plant and Automatic -RO Plant 1000/PH/ Lit Capacity

Location Map:

Nellikuppam is a small town located in the Cuddalore city of Tamil Nadu. The city had no dialysis hospital before this AMM Arunachalam dialysis unit.

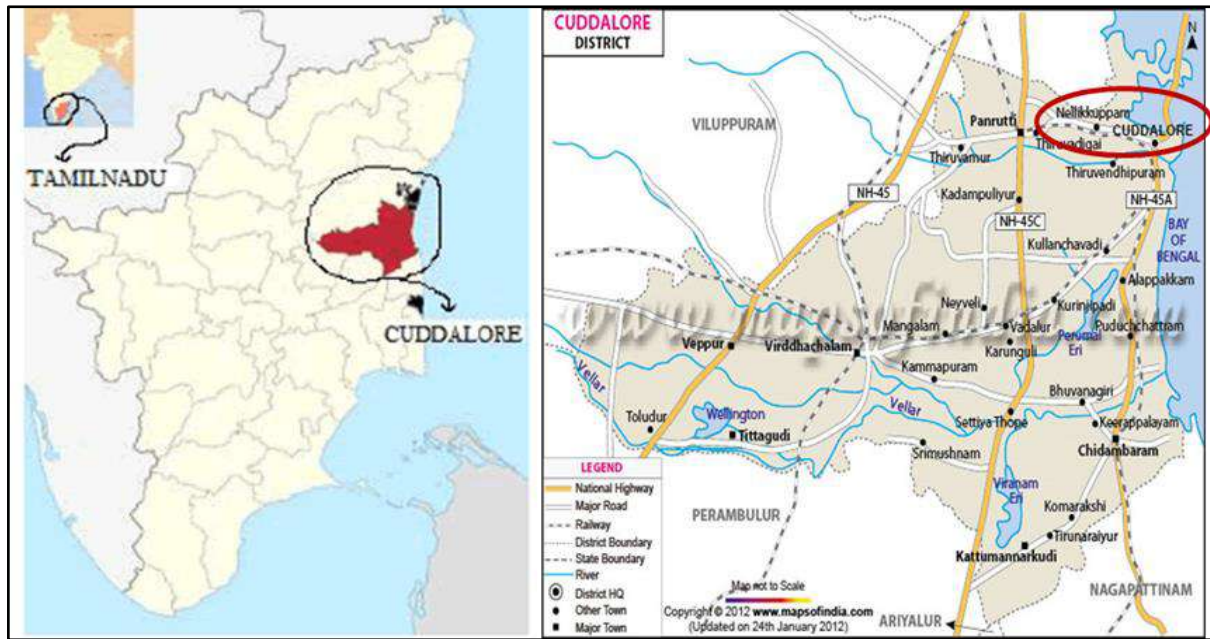
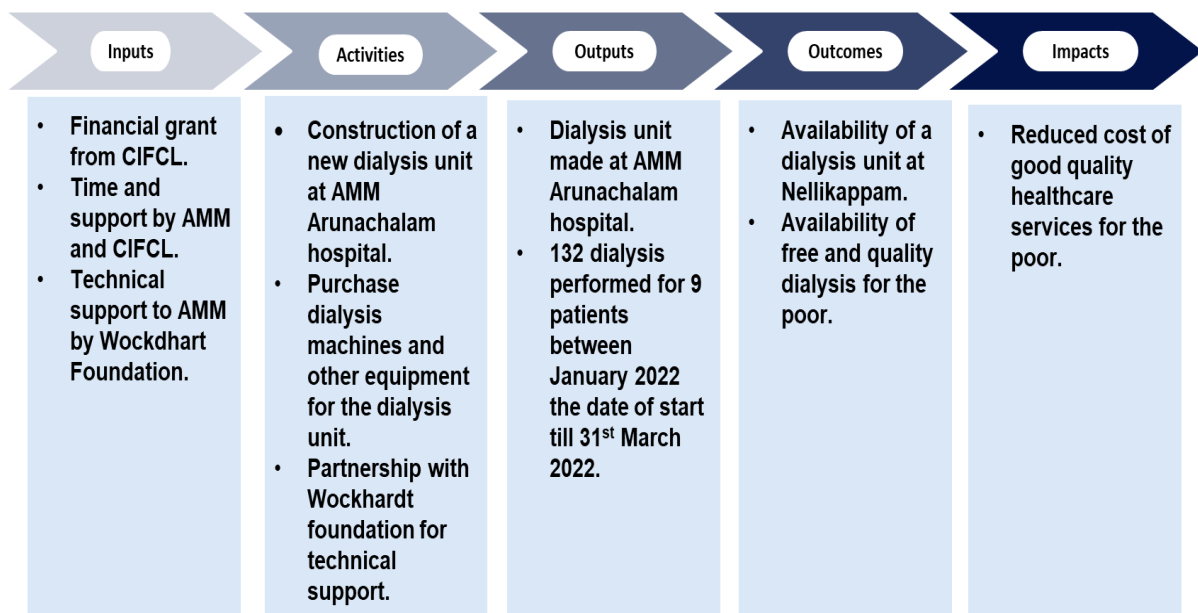


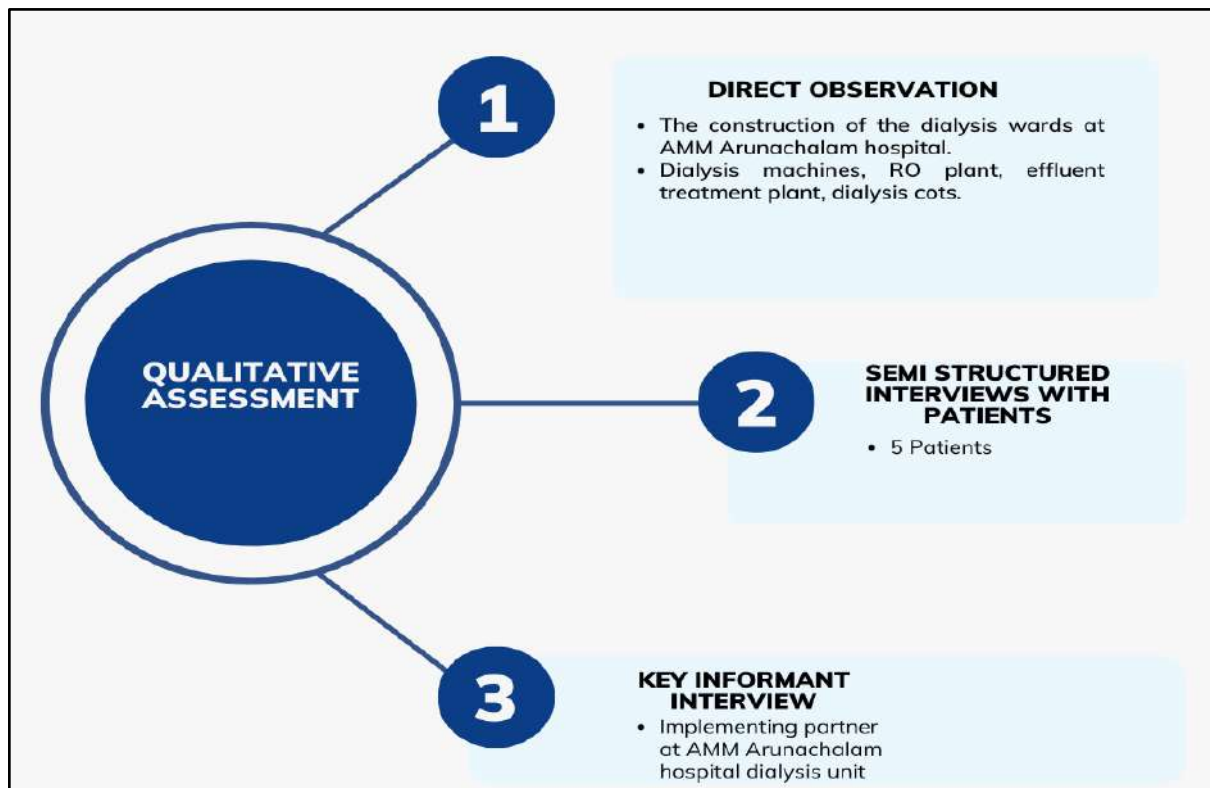
Figure 6 Location map for AMM Arunachalam dialysis unit

Impact Map:



4. Methodology

According to the design of this impact assessment, a qualitative study was considered to map the impact of the project. As part of the field validation for the impact assessment, the following methodology was adopted:



5. Analysis and Finding

Respondents profile

As a part of the impact assessment the field visit team was able to meet 5 patients out of the 9 patients that were treated during the financial year 2022-2023. These respondents were from Nellikuppam, Cuddalore, and nearby villages and all of them visited the hospital for treatment. Amongst the 5 beneficiaries, 4 started treatment in February 2022 one in March 2022 with the hospital, and have availed at least more than 10 dialysis each.

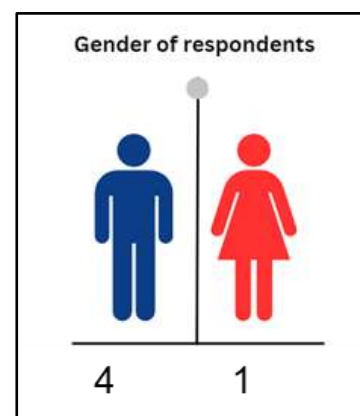


Figure 7 Respondent gender breakup

	Date of start for treatment
Patient 1	25.02.2022
Patient 2	11.02.2022
Patient 3	08.02.2022
Patient 4	11.02.2022
Patient 5	07.03.2022

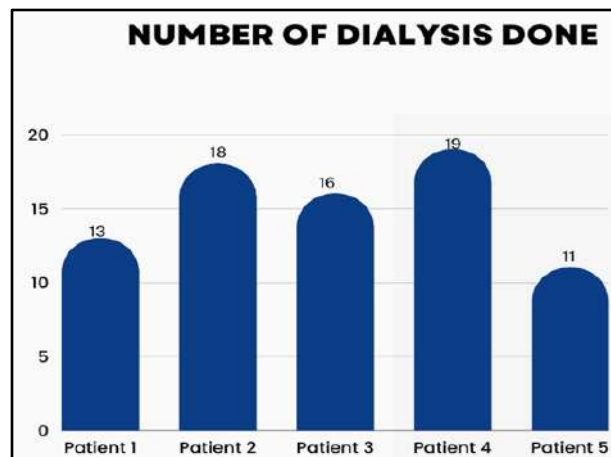


Figure 8 Number of dialysis for each respondent

5.1 Relevance

High prevalence of kidney diseases in South India:

The dialysis unit was relevant owing to the high number of CKD patients in Tamil Nadu as per the Indian CKD Registry, a voluntary reporting body of chronic kidney disease patients which states that Tamil Nadu is home to 65,000 kidney patients every year. Another report from JIPMER “Tondaimandalam

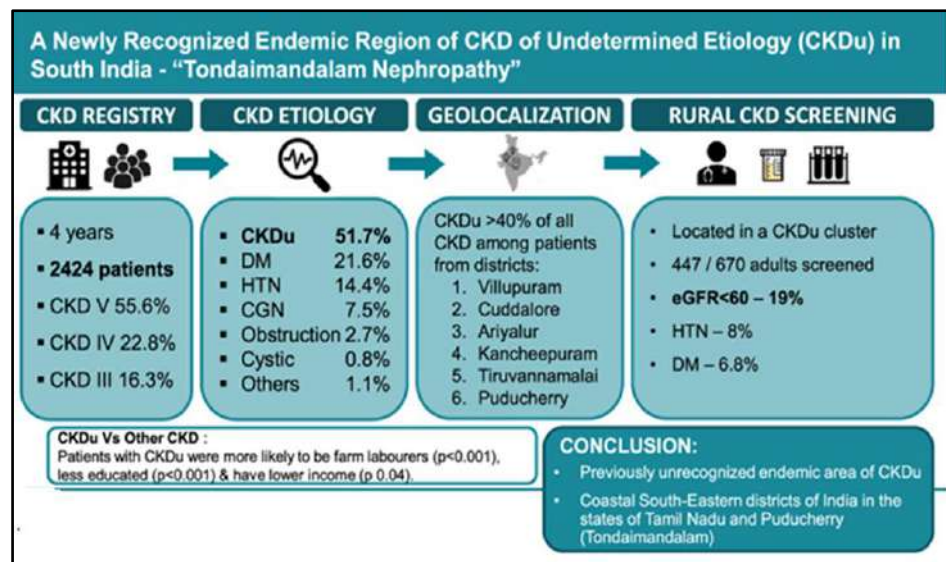


Figure 9 Table highlighting CKD patients amongst South-Eastern districts of India

Nephropathy” also highlights the prevalence of CKD amongst the underprivileged population engaged in agricultural labour in coastal south-eastern India in the states of Tamil Nadu and Puducherry (Tondaimandalam) in India. The report is based on a study of a sample population of 2424 patients from these regions and it was revealed that more than 56% belonged to the districts of Villupuram and Cuddalore in Tamil Nadu³. Nellikuppam where the dialysis unit is set up is a district in Cuddalore, Tamil Nadu.

³ <https://www.sciencedirect.com/science/article/pii/S2468024920315114#undfig1>

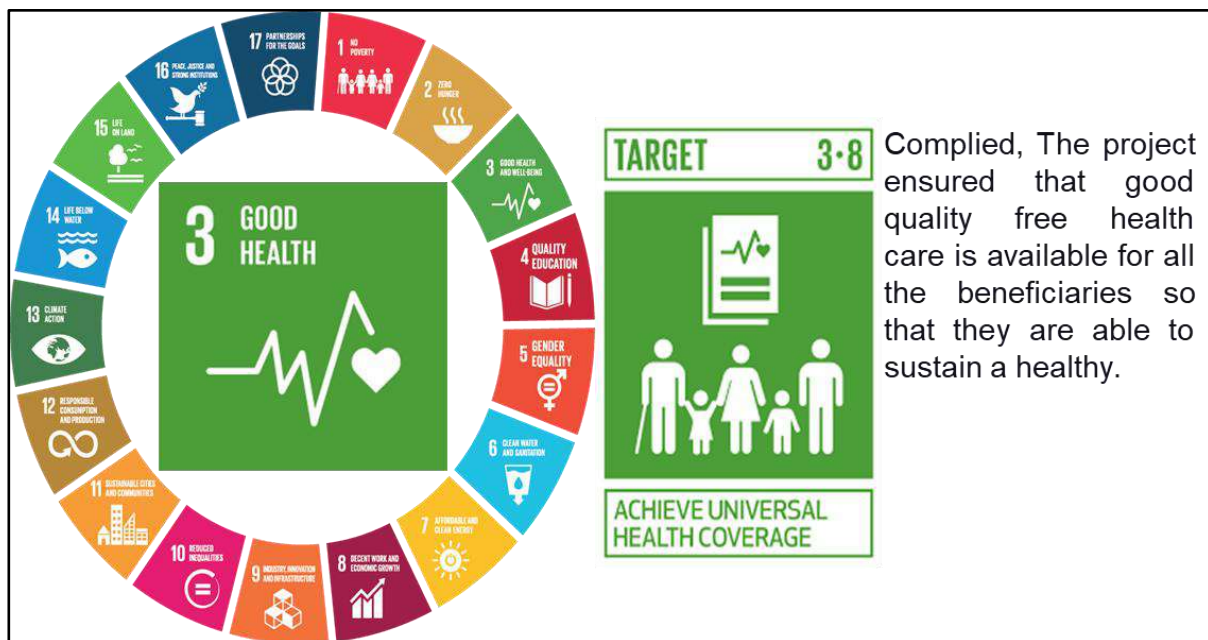
No dialysis unit in Nellikuppam:

As per the information from the hospital staff, there was no dialysis unit in Nellikuppam, thus highlighting its need. The AMM Arunachalam dialysis unit provides quality dialysis treatment to people in Nellikuppam and almost 10 villages nearby.

Accessibility to treatment:

Dialysis is an expensive treatment also because of its recurring nature. Approximately every dialysis costs around Rs 1500/-, per cycle 3 times a week which results in a huge expenditure for patients to the tune of Rs 2 - 3 Lakhs annually. This, therefore, leads to financial stress for practically all families with such patients, and many of them are forced to quit their treatment due to financial constraints. The dialysis unit at AMM Arunachalam hospital provides quality treatments to all patients free of cost thereby reducing the financial burden.

Linkage to sustainable development goals:



5.2 Effectiveness

Objectives	Evidence
Construction of the new dialysis unit.	A new dialysis unit was set up at the AMM Arunachalam hospital on the first floor of the building. The first floor of the hospital had two wards, one with 6 dialysis machines and the other one with 5 dialysis machines. The team visited the dialysis wards and witnessed the ward setup, dialysis machines, RO plant, generator, and medical equipment required for the dialysis.
To help in the dialysis treatment free of cost for the underprivileged.	The construction and setup for the dialysis unit started in January 2021 and became operational on 27th January 2022. The hospital has performed 132 dialysis free of cost for 9 patients between 27th January 2022 to 31st March 2022. The field visit team met some of the patients during their visit and was thus validated.
To make the dialysis unit accessible.	The hospital was set up at AMM Arunachalam Nellikuppam keeping in mind the "Tondaimandalam Nephropathy" analysis by JIPMER report recognizing the need for a dialysis unit as there was no dialysis hospital in Nellikappam earlier. The hospital serves people in the village as well as the nearby villages.
To provide quality care to the patients	The hospital has a technical tie-up with the Wockhardt Foundation which provides them with the expertise related to the dialysis unit in terms of – trained staff, and the unit setup. This helps in providing good quality care to the patients who are coming from far-off areas as well to this hospital.

5.3 Efficiency

During the physical verification, the usage of approved resources was scrutinised through one-to-one interviews with the implementing partner's representatives, dialysis patients, and direct observation of the quality of fund utilisation.

Budget Utilisation: As per the statement from the implementing partner, the total cost for the construction of the dialysis unit at AMM Arunachalam hospital was Rs 1,15,30,101/- out of which Rs 1,10,28,564/- was from CIFCL and the remaining Rs 5,01,537 was borne by AMM Foundation.

Timeline: The construction and setup of the dialysis unit started in January 2021 and was completed in January 2022. The dialysis unit at the hospital became operational on 27th January 2022 and they have done 132 dialysis from then till 31st March 2022.

Monitoring Mechanism: The project for the dialysis unit at AMM Arunachalam hospital which was sponsored by CIFCL involved the setup and operations of the unit.

- The dialysis unit has a dedicated team consisting of a qualified Centre head, trained technicians, nurses, housekeeping staff, and a weekly consultant Nephrologist to properly monitor the patients.
- All the patients are given treatments based on their diagnosis and their vitals are checked before starting the dialysis treatment.
- The dialysis machines are disinfected after each dialysis is performed to keep the machines clean and sterile for the patients' safety.
- After the dialysis each patient's bed is cleaned with fresh cleaning materials to avoid cross-contamination from one patient to another.
- The dialysis unit maintains a hygienic and clean environment to ensure their infections transfer to patients as they have low immunity.



Figure 10 Staff at the dialysis unit



Figure 11 Clean and hygienic dialysis ward

5.4 Impact

The goal of the project was to set up the dialysis unit at AMM Arunachalam hospital, Nellikuppam. The field visit included direct observation to gauge the impact of the newly constructed dialysis unit, machines, staff, doctors, and interactions with patients. The impact information was also drawn after a KII with the implementing partner AMM Foundation.

Improved health:

The field visit team got to meet 5 patients of the 9 patients that the new dialysis unit has treated from the inauguration in January 2022 till 31st March 2022. All the patients said that there is an improvement in their health after the treatment. The patients were completely satisfied with the medical procedures followed at the hospital.



Accessibility to quality dialysis treatment:

The patients were satisfied with the treatment procedure followed at the hospital. One of the patients left their ongoing treatment at another hospital after getting treatment at the dialysis unit of AMM Arunachalam hospital.



Figure 12 Dialyzer reprocessing machine

Reduced financial strain:

The patients were happy with the fact that there were no fees charged for the dialysis treatments. One of the patients comes to the hospital from as far as 10 km just to avail of good quality treatment for dialysis at no cost. The patients were also satisfied with the medicines and injections that are provided to them at subsidised rates. The patients need an injection for the treatment each month the cost of which is Rs 1600/- in the market and it is provided at a subsidised rate of Rs 400/- to the patients. No treatment cost and subsidised rate medicines have led to reduced financial strain on the patients and their families.

Testimonials from patients:



"I am 65 years old and have been suffering from chronic kidney disease. Since 7 March 2022, I have begun dialysis from AMM Arunachalam Hospital, visiting the hospital thrice a week for dialysis. I am well looked after here and easily get appointments for dialysis. " - A Sampath from Cuddalore



"Earlier I visited Tanjore Medical College for dialysis, but I was not happy with the way the dialysis was done there. At AMM Arunachalam Hospital, I get personal attention, the hospital is very clean and hygienic and best of all, the treatment is free of cost" - G Murugan (started dialysis in February 2022)



I was referred to AMM Arunachalam Hospital by my sister. Earlier I was very scared about the procedure but I feel relaxed and cared for here. I visit thrice a week for dialysis. Where else will we get such good treatment free of cost?" – Anjalaidevi (who started dialysis in February 2022)



"I have had a failed kidney transplant in Chennai and now I need to get dialysis done in a week thrice. I travel 10 km to come to the dialysis center to avail free dialysis and meet with the doctor. I am also thankful for the subsidised cost of medication also." – G Gopalakrishnan (started dialysis in February 2022)



"I came here one year back in a wheelchair, and now I am walking perfectly, this shows how much help I received. The dialysis center at AMM Arunachalam Hospital is even better than the Pondicherry hospitals. I am thankful for the free treatment here. To avail quick treatment in case of any complications during dialysis, request an Ambulance is kept on standby at the hospital. " – S Mubarak (started dialysis in February 2022)

5.5 Sustainability

Sustainability refers to the ability to maintain or support a process continuously over time. The following things ensure the sustainability of the project.

- The AMM Foundation has set up this hospital in partnership with the Wockhardt Foundation. Wockhardt Foundation provides technical expertise to the dialysis unit regarding daily operations and staff.
- The dialysis unit has a dedicated team consisting of a qualified Centre head, trained technicians, nurses, housekeeping staff, and a weekly consultant Nephrologist to properly monitor the patients.
- The hospital has 11 dialysis machines which have a capacity of 33 dialysis per day which is around 990 dialysis per month. The hospital currently has 27 patients who require dialysis 3

times a week utilising only 324 dialysis out of 990 dialysis capacity of the hospital for a month. The hospital, therefore, has the capacity for treating more patients in the future.

6. Conclusion:

People who have kidney failure, or end-stage renal disease (ESRD), need dialysis. Even if it is not curable, the patient can still lead a meaningful life while on dialysis. The project was for the setup of the dialysis unit at AMM Arunachalam hospital Nellikuppam as there was no dialysis unit in the city. It is a success in providing quality healthcare to the vulnerable.



Figure 13 AMM Arunachalam Hospital at Nellikuppam

Good Practices:

- The program has enhanced the quality of treatment and care provided to people from marginalised communities.
- Support through free treatments and subsidised medicines has reduced the financial burden of families.
- The hospital maintains a clean and hygienic environment for the patients as they have low immunity and are prone to diseases.

Challenges

- The hospital has been set up well but it does not have an ambulance which might be required in case of an emergency during the dialysis treatment.

7. Recommendations:

The project has been able to help in terms of the provision of being an important life-saving unit and also for reducing the burden on account of financial expenditure for patients. The dialysis unit however faces some challenges, to overcome them we have a couple of recommendations:

- The dialysis unit at the hospital does not have an ambulance whereas CKD patients are susceptible to heart attacks during the dialysis procedure and the availability of an ambulance may help to take care of such emergencies.
- To increase the outreach of the program and ensure that more people benefit from it there should be some publicity of the free dialysis program. As the hospital has 11 dialysis machines which have a capacity of 33 dialysis per day which is around 990 dialysis per month. The hospital currently has 27 patients who require dialysis 3 times a week utilising

only 324 dialysis out of 990 dialysis capacity of the hospital for a month. The hospital, therefore, has the capacity for almost 666 more dialysis in a month.

Impact Assessment Report

Sir Ivan Stedeford Hospital- Renovation of the Existing IP block

Implemented by -



Supported by -



Submitted by -



March 2023

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Acknowledgement

We would like to put on record our gratitude to the Chola mandalam Investment Finance Company Limited(CIFCL) for granting us the Impact assessment project implemented by the AMM Foundation at Sir Ivan Stedeford Hospital (SISH).

We acknowledge and appreciate the efforts put in by the AMM Foundation in the seamless management of providing us with relevant information and documents that supported our Impact assessment study. We are grateful for organising the field visits and helping us engage with the stakeholders.

We are thankful to the administration of Sir Ivan Stedeford Hospital for guiding and supporting us with the information to conduct the Impact Assessment. We are thankful to the staff members and the respondents at Sir Ivan Stedeford Hospital who participated and shared their opinion and provided necessary evidence during the Impact Assessment study.

We also thank all the team members of Chrysalis Services who put the information together to prepare the Impact Assessment report.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment, and we are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Each year, CIFCL supports non-profit and non governmental organizations working in various key thematic areas. In FY 21-22, CIFCL donated INR 794.50 Lakhs to AMM Foundation towards the Corporate Social Responsibility (CSR) project- Renovation of Inpatient (IP) block at the Sir Ivan Stedeford Hospital - Phase III. This report presents a summary of the impact assessment conducted as a part of CIFCL's CSR endeavours for the FY 2021-22 project implemented by AMM Foundation.

Chrysalis Services was awarded the Impact assessment project by CIFCL to assess the project's impact for FY 21-22. The Implementing Partner supported the data collection process by sharing the relevant documents, stakeholder contact details and facilitating the interactions with the key stakeholders of the program. The team started with the desk review followed by field observations and beneficiary meetings. The agreement and the project details were studied in detail as a part of the desk review. This was then supported through the interactions with beneficiaries and hospital staff to understand the purpose and expected impact of the projects.

This project focused on enhancing the infrastructural facilities at Sir Ivan Stedeford Hospital to enable quality treatment to the marginalised section of the society. There was mounting pressure on the hospitals due to lack of space and medical equipment to provide for the growing needs of the society. This pressure propelled them to provide for the needs and hence the renovation project was taken up that was duly supported by CIFCL. The project, which was in its third phase in FY 2021-22, had started in 2014 and had been supported by CIFCL since. The site visit was conducted on the 6th February 2023. The total funding amount towards the renovation activities that was granted was INR 794.50 Lakhs. However, INR 285 Lakhs was returned back to CIFCL since they were unutilised in FY 21-22. As per the information received, due to the issues faced with manpower, the renovation of the cafeteria block was incomplete during the project year and hence could not be evaluated during the field visit. The funding has helped in expansion of the building to 22,000 sq. ft. in different phases and houses modern medical equipment. This hospital provides medical treatment at subsidised rates and through the assessment it was affirmed that 98% respondents find this helpful and easy on their pockets. The beneficiaries and the hospital staff appreciated the prompt nature of support provided through these programs.

The findings from the study revealed that the objectives were met and the program was designed to address the needs of the target beneficiaries. The assessment suggests that the CSR activities have been performed aligned to SDG Goal 3 with the targets to focus on various aspects of healthy life and healthy lifestyle. The program achieved well in the areas of community needs and quality medical treatments being provided to them.

2. Introduction of the Implementing Partner- AMM Foundation

Working in the thematic of Education, Healthcare and Special projects, AMM Foundation was founded in 1953 as AMM Charities Trust, with the noble vision of giving back to the community. The Foundation is the CSR arm of the Murugappa Group. The Foundation was established by the Murugappa Group with an aim to undertake projects that are socially relevant, impactful, and sustainable. The company supports socially beneficial projects with sustainability as a guiding principle. Aligned to Sustainable Development Goals (SDGs) goal 3 and 4, they aspire to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all and ensure health and well-being for all. The Foundation aims to cover a wide spectrum of beneficiaries through its philanthropic pursuits with a view to empower economically and socially backward communities. Currently, the Foundation manages five hospitals, four schools and one polytechnic college under their Education and Healthcare programs. AMM Foundation also works around six special projects in similar areas. It hosts a few notable projects like scholarship programs, football academy, mobile science labs, rejuvenating the water bodies, mobile health van and a dialysis unit under the same. Living up to the vision, the Foundation has ensured welfare of the community over the realms of commerce.

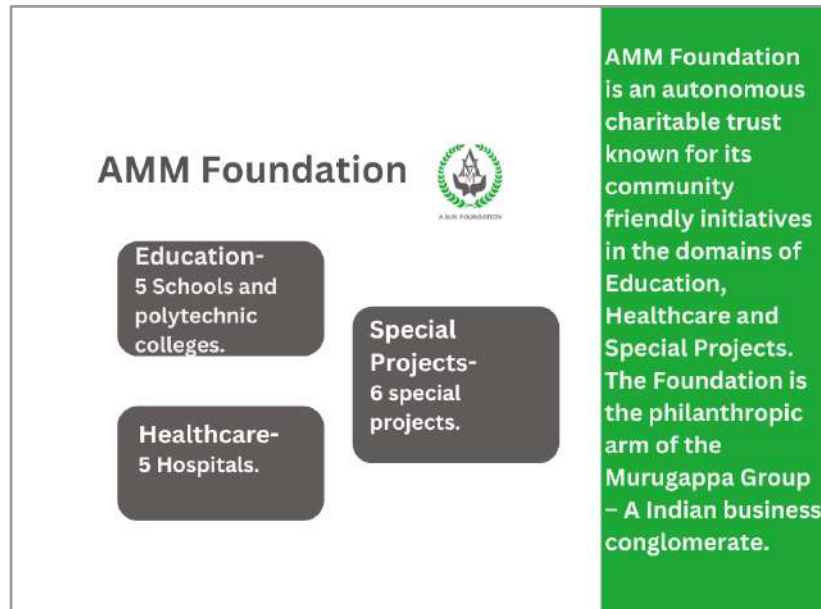


Figure 1 - Program details of AMM Foundation

AMM Foundation supported the renovation works carried on at Sir Ivan Stedeford Hospital (SISH). The history of Sir Ivan Stedeford Hospital goes a long way back. Sir Ivan Stedeford was instrumental in starting the Tube Investment factory in India. Based on his close friendship with AMM Murugappa Chettiar and the contributions made towards the field, it was decided by the trust to name the hospital in his honour. The opening of the Sir Ivan Stedeford Hospital in 1966 on the Avadi - Ambattur Trunk Road marked a significant milestone in the history of the AMM Foundation. The hospital was conceptualised as an effort to provide health services to the employees of the Murugappa Group. What started as a small scale clinic was later expanded into a public hospital. Today, the multi-specialty hospital has been serving about five lakhs patients a year. Sir Ivan Stedeford Hospital is a 175 bedded multispecialty charity hospital providing medical care to poor and marginalised sections of the society living in and around Ambattur, Avadi, Thiruvallur region. The Hospital is situated in an area of 25 acres and was started on 25th February 1966. Initially, the Hospital functioned with an out-patient(OP)

department and 100 bedded facility. It gradually expanded its activity. Serving an average 1599 OPs in a day, this hospital provides good quality health care at a highly subsidised rate.

3. Program Overview

3.1. Impact assessment background

As per World Health Organisation, about 5.7 – 8.4 million deaths per year are due to poor quality care in low and middle income countries, which represents 15% deaths overall in these countries¹. Globally, the essential structures for achieving quality care are inadequate. The aim of Universal Health Coverage (UHC) is for all people who need health services to receive high- quality care without financial hardship. Quality health services (promotive, preventive, curative, rehabilitative and palliative) are thus embedded within the definition of UHC. Even with increased access to services, health improvements can remain elusive unless those services are of sufficient quality to be effective.

Health care is one of India's most rapidly expanding sectors. However, the question of whether the expanding industry size translates into better quality services and improving outcomes for patients still remains. In this regard, the government released the National Health Policy (NHP) 2017 to serve as a guiding document for the policymakers in the achievement of India's national goals and international commitments. NHP recognizes some key dimensions of high-quality healthcare – consistency, positive health outcomes, patient-centeredness, equity, and trustable service delivery. Improving the quality of health care is also essential to meet the health-related targets of the Sustainable Development Goals (SDGs)². Infrastructure must integrate the hospital, as the centre for acute and inpatient care, into the broader health care system, and should facilitate the seven domains of quality– patient experience, effectiveness, efficiency, timeliness, safety, equity and sustainability. Infrastructure includes the built environment and supporting elements: equipment, access, information technology, systems and processes, sustainability initiatives and staff. Overall these interwoven facets should enable patients to move seamlessly, with their privacy and dignity maintained at all times, from initial referral through local hospitals to specialist tertiary centres and discharge to appropriate care whatever the age, disorder or social circumstances of the patient.

3.2 Context

Due to the high number in OP that the hospital caters to (an average about 1599) in a day, the current facility was unable to accommodate the growing numbers. The challenge faced by the hospital was crowd management and needed immediate intervention on reducing the waiting time for the individuals requiring treatment. SISH needed additional built-up space to ease out the congestion due to increased OP attendance and to also add new facilities to the existing infrastructure. Alongside, the present infrastructure required renovation to improve the ambience and facilities. Hence it was

¹ <https://www.who.int/news-room/fact-sheets/detail/quality-health-services>

² https://www.nhp.gov.in/nhpfiles/national_health_policy_2017.pdf

proposed to expand and renovate the hospital infrastructure to enable them to cater to more patients in a day.

As a part of its CSR enterprise, CIFCL supported the renovation and expansion of Sir Ivan Stedeford Hospital. The funding for the program started in 2017 and this is a long term project that is funded by CIFCL. The hospital is geographically placed in the 2 acres of the 25 acres owned by the AMM foundation at Tiruvallur. The hospital has easy access and is situated on the main road of Chennai-Ambattur. The funds contributed by CIFCL was useful in expanding and renovating the existing buildings and wards at SISH.

CIFCL Project Details

As per the agreement, the following is the list of infrastructural support provided with support from CIFCL in FY 21-22.

Sl No	Contents	Sub contents
1	Construction of IP Block involving civil, plumbing, electrical, HVAC, firefighting systems, Elevator, Security & networking systems and medical gas works.	New Operation Theatre Complex
		Casualty Treatment Center
		Intensive Care Unit (ICU) and Step Down ICU
		Ophthalmology Male & Female wards
		Orthopaedics Male & Female wards
		Ear Nose Throat(ENT) Male & Female wards
		Septic Male & Female wards
2	a. Construction of Staff quarters (G+2) 16 Single Bed Room and 4 Double Bed Room flats involving Civil, Electrical, Plumbing and Sanitation works.	CSSD wing (Central Sterile Services Department)
	b. Staff House (G+1) 04 Flats	16 single bed rooms for live-in nurses with attached bath rooms, kitchen and a living room.
3	Renovation of cafeteria Block.	Four double room flats consisting of living room, study room, kitchen, dining hall and two bed rooms.
		Provision for dining hall to accommodate 100 visitors and staff members.
4	Electrical Upgradation and rerouting of cables, Firefighting Alteration works in existing OP block.	Separate cook and service area for In Patient, Out Patient and staff members.

Objectives of the project

- To provide access to quality healthcare
- To reduce the financial barriers for people when trying to access health services.
- To increase service utilisation for specific services, in line with people's health needs.

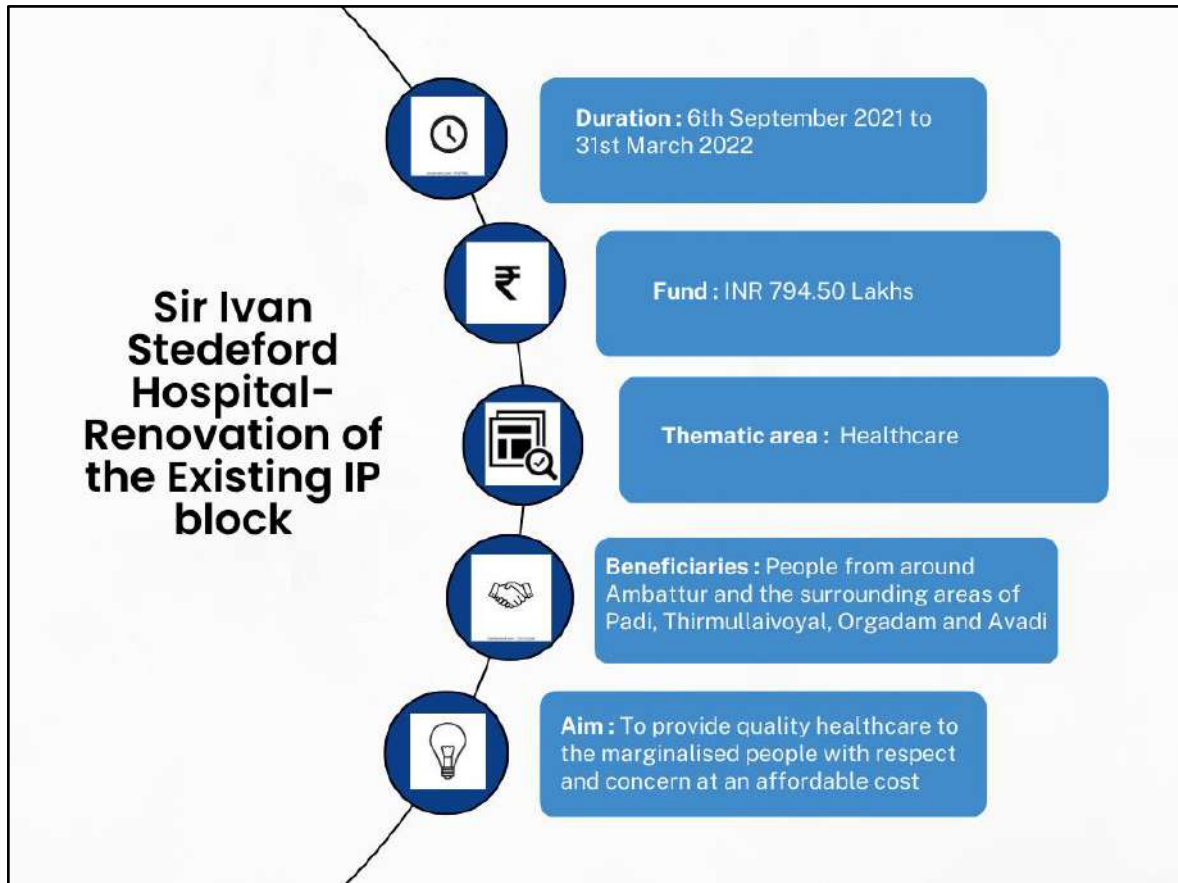


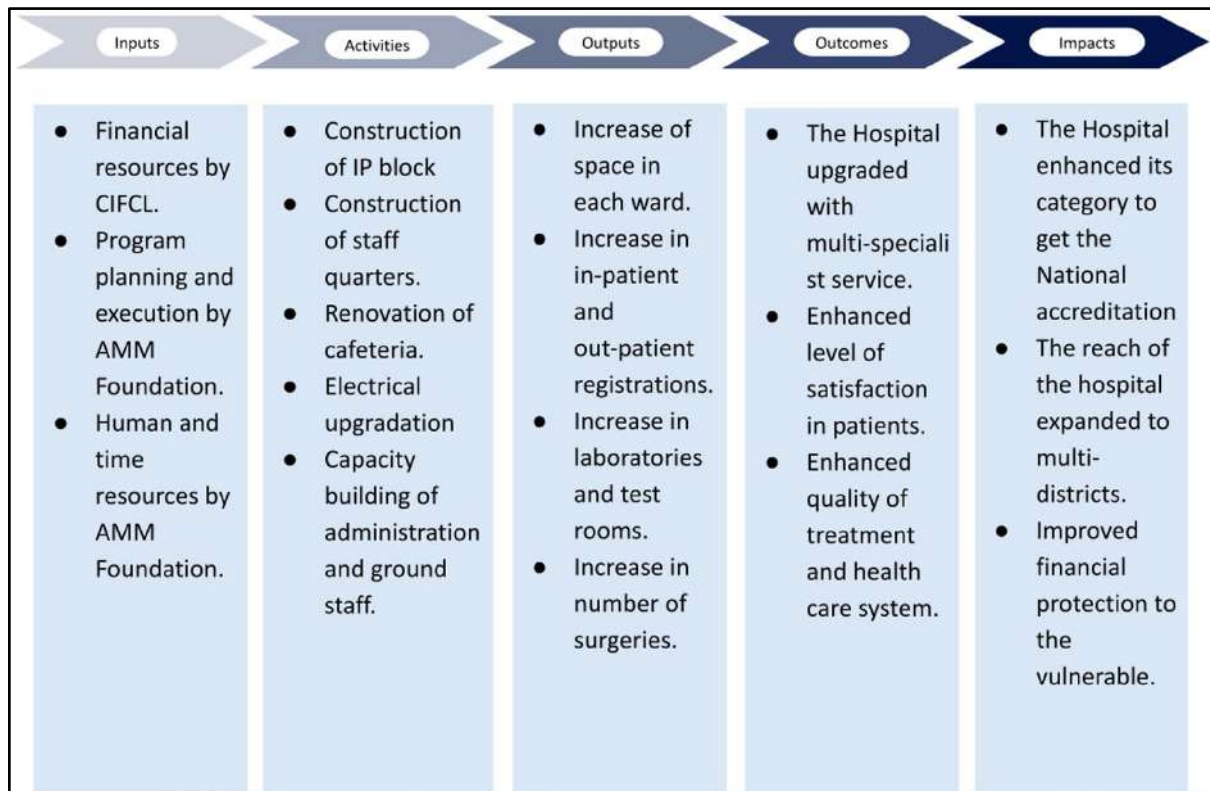
Figure 2 - Project Details of Sir Ivan Stedeford Hospital - Renovation of the existing IP block

Location



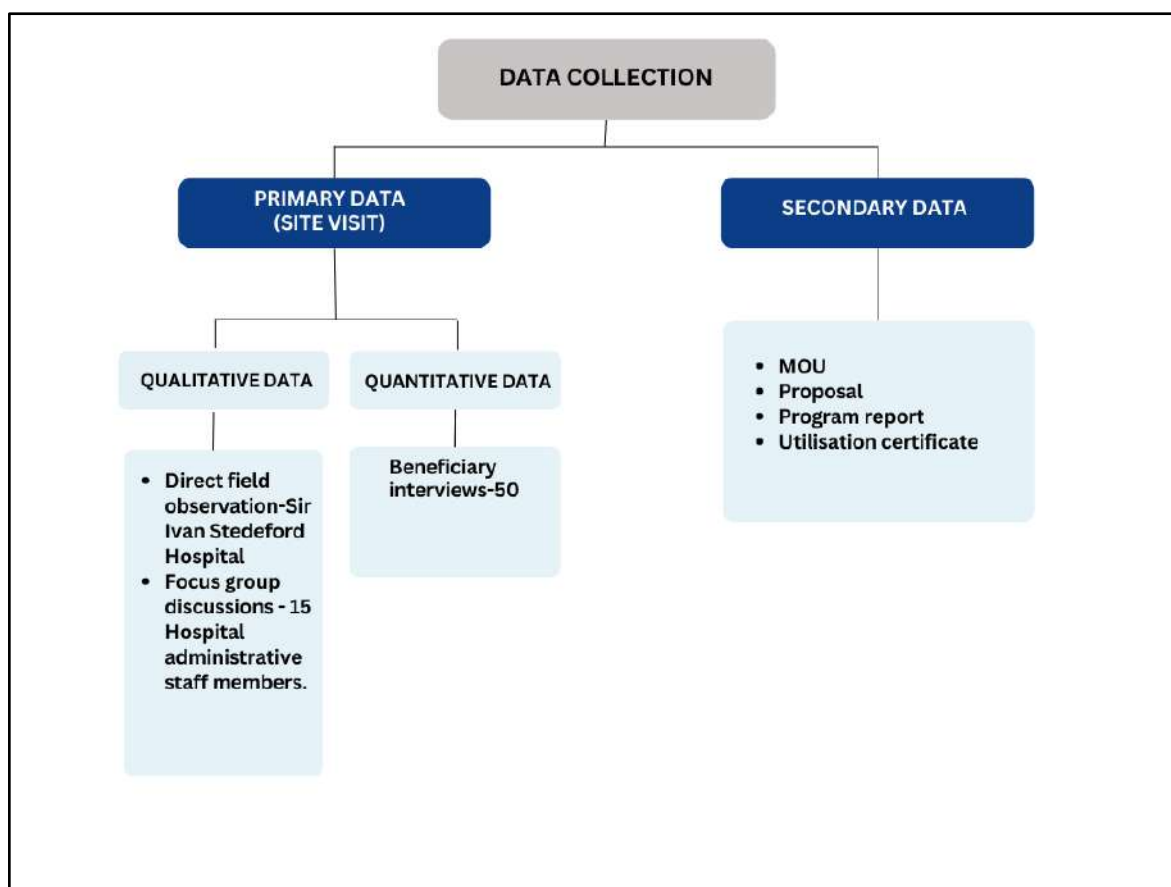
Figure 3 - Location of Sir Ivan Stedeford Hospital

Impact Map



4. Methodology

The process of Impact assessment was initiated by scheduling an initial meeting with CIFCL and AMM Foundation teams, separately. The meetings with CIFCL was to understand their CSR projects and expectations from the report. The meeting with the Implementing partner was to understand the efficiency of processes used to deliver interventions and expected impact in their opinion. Through these meetings, we had an understanding of the program, its objectives, and the implementation strategy followed. Post the introductory meetings, a list of pre-requisite documents was called for. The team started the desk review based on the project documents received. Accordingly, the key stakeholders of the project were identified and mapped to assess the outcomes and impact of the renovated infrastructure of the hospital, on the community. Mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools like field observation, Focus Group discussions and beneficiary interviews. The data collection structure mentioned below:



The data collected consisted of information collected through primary and secondary methods. Beneficiary questionnaire, key informant interviews and direct field observation were adapted to cumulate the impact. A purposive sampling technique was regarded to identify the respondents in the location. Focus was given towards gender proportion while the sampling was carried out.

Respondents profile

The selection of the respondents was based on patients/parents or guardians who required medical intervention at the Sir Stedeford Hospital, in addition to interacting with stakeholders at the SISH. Based on the nature of the intervention and substantial evidence presented, a random sampling was done on the walk-ins of the hospital on the field visit day.

A total of 50 direct beneficiaries were interviewed, 21 being male and 29 being female respondents. As per the responses from the hospital administration, most of the patients/beneficiaries walking in were from lower-income backgrounds. This was found true through the quantitative survey conducted. Around 74% of the respondents were individuals whose household income was below Rs 20,000/-per month. This demonstrates that the hospital facilities are majorly being utilized by the said section of the community. However, the services provided are equal for every patient irrespective of their social background. They do not differentiate in the treatments or facilities based on their social status.

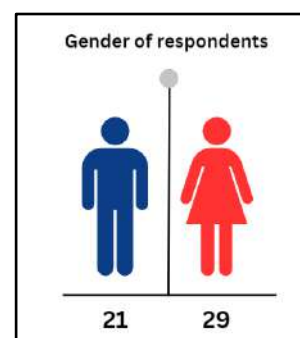


Figure 4 – Respondent gender break-up

The survey revealed that 16% of the respondents were earning through daily wages while the rest were either working in private companies or running small businesses.

The average family size of the respondents were 4 members and it ranged from a minimum of 3 members to a maximum of 8.

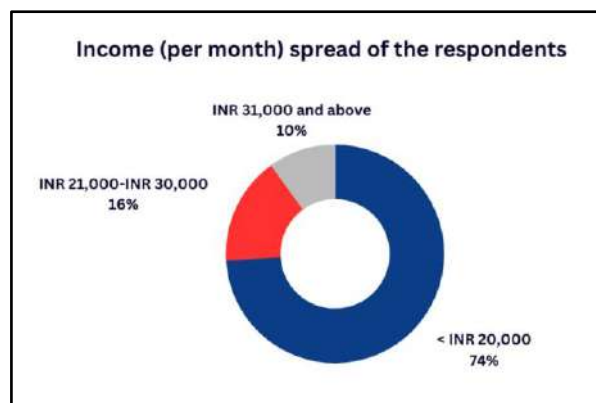


Figure 5 - Income spread of the respondents

5. Analysis and Findings

5.1 Relevance

The construction of the infrastructure followed a detailed process approach in adherence to the Government norms. While the responsibility of execution and finances were handled by AMM Foundation, SISH managed the overall supervision of the construction works. CIFCL supported the renovation and expansion of the infrastructure. This was a long-term project and the funding from CIFCL commenced in 2014. It is evident from the physical visit to the hospital that the renovation and expansion of the infrastructure have impacted various aspects of the hospital.

Reduction in waiting time

The study with 50 patients revealed that 64% of patients could go back to their homes on the same day as the treatment, thus deriving at the result that the hospital was better equipped to handle a high volume of out patients (OP). 98% of patients felt that the new blocks and differential treatments being provided worked as a one stop shop and said it was convenient to them. During the Focus Group Discussion(FGD) with the administration staff, it was noted that the hospital attracts patients from distant places too. It talks about its significance to individuals needing treatments.

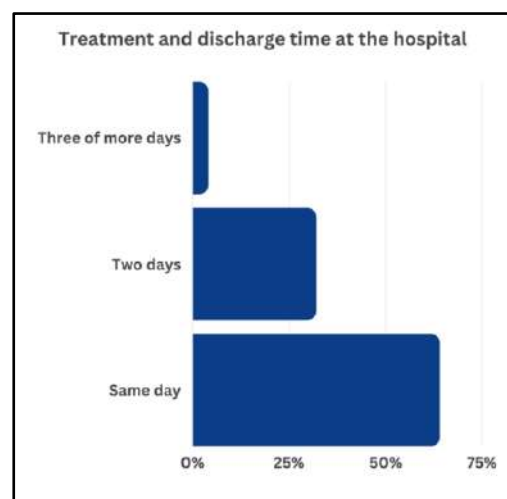


Figure 6 - Treatment and discharge timelines

During the transect visit, it was observed that the newly constructed inpatient (IP) block is well maintained and there is a decent gap between the beds in every ward. The average number of beds in wards is 6 with the overall bed capacity at the hospital being 175.

The renovation of the cafeteria is still under construction.



Figure 7 - Image of the waiting room at the hospital

The Hospital has waiting areas for patients to wait or rest while undergoing treatments. The seating areas were refurbished to enable more patients and the respondents acknowledged the benefit of renewed infrastructure.

Improved facility at the hospital

As a result of the renovation activities, the OPD, and the maternity wards that were clubbed, have now been constructed in separate places which created a conduciveness and reduced excess crowding situation.

This enabled better treatments to patients. The evaluation accounted for the inclusion of vulnerable groups and disability inclusion. It is a disability friendly hospital even having



Figure 8 - Images of the Operation theatre and Intensive care unit

washrooms for the disabled. Every ward has been kept very neat and clean. The IT section too has been upgraded with the latest technology.

The vital illness that the community visited the hospital was for treatment of Diabetes, with about 300-400 cases being registered in a day. With improved facilities at the hospital, the capacity to treat illnesses has increased. Apart from the basic facilities like a blood bank, laboratory, diagnostic blocks, CT scans, MRI, Ortho, ECG, ECHO, and DMT, there are 21 departments providing treatments to different ailments. On an average around 25 gynaecology treatments and 7-10 MRIs are being managed in a day. If the out patients are to



Figure 9 - Image of the Ortho ward - Female

be considered, the numbers would increase. Every OPD has a well-maintained examination room. There are more than 15 OPD's with supporting medical equipment.

Both the treatment and medicines are provided at subsidised rates that benefits the community.

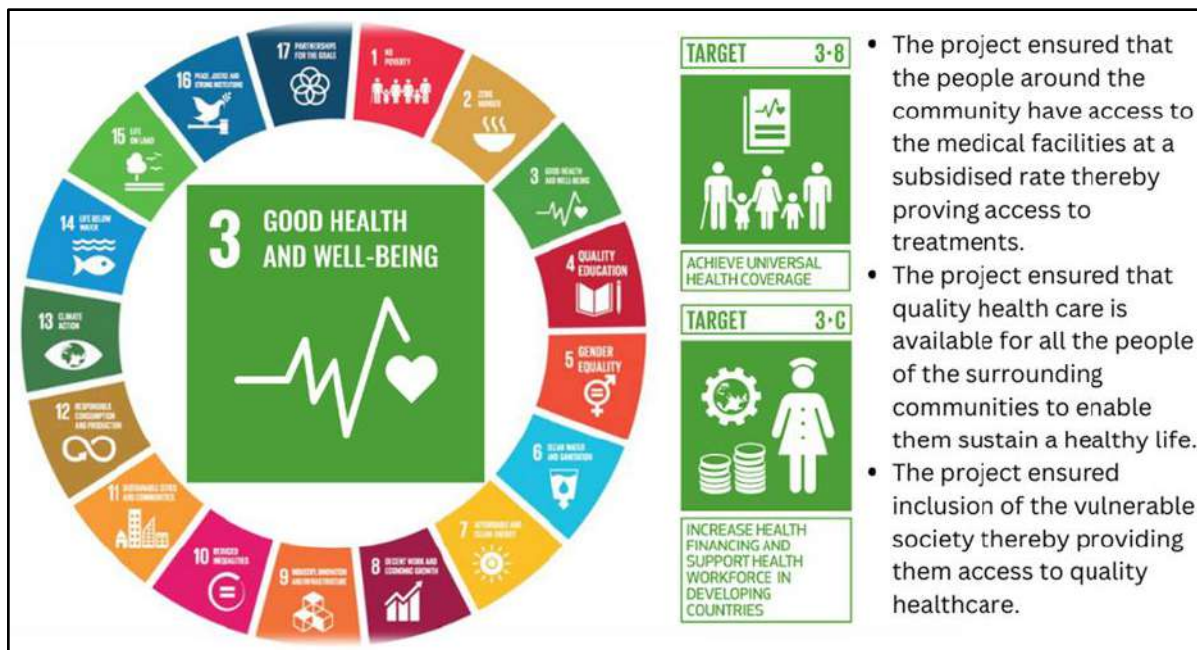
There are smoke detectors, water sprinklers, fire extinguishers, and fire hydrant systems as per norms and are fully functional. As per the information received from the staff, there is a weekly mock drill to train them on handling the fire crisis, if any.

With the crucial infrastructural work completed, The National Accreditation work is in progress.



Figure 10 - Image of the CSSD Wing

Linkage to Sustainable Development Goals



5.2 Effectiveness

Effectiveness and impact are complementary criteria focusing on different levels of the results chain. Effectiveness considers the achievement of results relative to an intervention's objectives

Apart from the cafeteria renovation, all the other works have been completed in the year FY 21-22. The FGD with the hospital administration revealed that all the

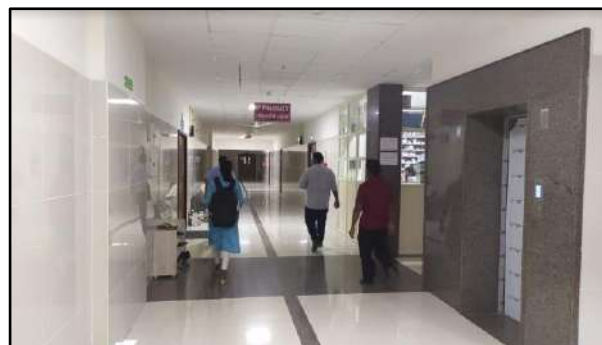


Figure 11 - Image of the new IP block

equipment are fully functional and well maintained. It was evident that there is a good team for hospital management. The ICU head too seconded this. As per the responses from the hospital staff, the hospital is better equipped in providing the quality of healthcare than before the renovation and expansion project.

The key feature of the hospital is that it is providing multi-speciality health services with Rs 5/- charged as the initial registration fee. While the consultations to patients are provided free of cost, the treatment and medicines that follow, are provided at a highly subsidized rate. The objective of the project was to renovate and expand the infrastructure to enable reduction in financial barriers for the people when accessing healthcare services. 100% respondents felt that the charges are highly affordable. The intake of average OP during the day is a testament for the same.

Reason for infrastructural changes	Benefits of the changes
The hospital was old and needed updated technology and precision along with expansion to admit more patients.	<p>Now with the better infra support, the doctors and the administration confirmed that they are better equipped to treat patients.</p> <ul style="list-style-type: none"> · Improved access to quality care · Timely and seamless treatment enabled · Improved hospital management
With differential treatments not being available, patients were referred to other hospitals.	Expansion has increased the capacity of managing about 1599 (average) outpatient cases a year.
Incapacity in handling the increasing numbers of patients needing treatments.	Better and efficient treatment with a total bed capacity at 175.
With increased capacity to handle patients, it only meant that there would be a need to support staff who support in the treatment of the patients.	With improved staff quarters, it was revealed that the staff were happy with the benefits provided. This led to increase interactions among co-workers and increased morale.
With expansion, the capacity of the cafeteria needed to be expanded to accommodate patients and staff.	Under construction.



Figure 12 - Images of cafeteria under construction and staff quarters

5.3 Efficiency

Checking efficiency is important in order to assess whether an intervention's resources can be justified. Efficiency criterion aims to measure if the project was implemented in a cost-effective and timely manner.

As per the administration department of the hospital, we were informed that the financial operation was handled by the AMM foundation and the Stedeford hospital utilized the resources as per the guidance of the AMM foundation. On further investigation, it was understood that while INR 794.50 Lakhs was approved by CIFCL for the project, INR 285 Lakhs was returned back to CIFCL since they were unutilised in FY 21-22. The civil works of the cafeteria was incomplete and under construction at the time of our field visit. Lack of manpower was the main reason for the delay of the project completion, as informed by the officials at AMM Foundation and SISH. The same, however, was evaluated due to the inclusion in the agreement between CIFCL and AMM Foundation.

Staff Efficiency: Efficiency of the hospital is directly correlated with the efficiency of the staff. The corresponding table shows the count of staff members at SISH.

Category	Head Count
Doctors	75
Nursing Staff	108
Paramedical & Ministerial	128
Watch & Ward	10
Total	321

The team at SISH are better equipped with their time and efforts in managing the treatment of the patients with the new infrastructure constructed. The turnaround time for treatments have been positively affected post the construction of the new blocks. This was substantiated in the reduction in time graph shown earlier.



Figure 13 - Images of medical gas works and elevator

The assessment team found the surroundings very clean and well-maintained. The medical equipment including the IT section is operated by qualified technicians. The hospital has 380 KVA and 500 KVA generators for emergency power backup. There is Bio-medical waste management which is handled by Tamil Nadu waste management limited company. There are smoke detectors, water sprinklers, fire extinguishers, and a fire hydrant system in place. The compound is protected with a boundary wall and

security guard supervision in two main gates. The hospital is enabled with closed circuit (CCTV) to monitor the whole hospital.



Figure 14 - Image of Firefighting system and electrical panel board

It is fair to say that they follow a process-driven approach based on the processes in place, documentation maintained and seamless communications between the stakeholders.

5.4 Impact

Improved access to quality treatment

The expected outcome of the project is to enhance the standard of treatment quality and build an effective healthcare system for all patients. The assessment conducted by the team with 50 randomly sampled patients revealed that 78% of the patients were regular patients who had visited the hospital on multiple occasions. 90% of patients shared that their family members too are dependent for treatments in the hospital thus revealing that this was the hospital they relied on. 88% of the respondents were people living within 20 kilometres of the hospital. This showed their dependency for medical facilities at SISH.



Figure 15 - Image of the casualty treatment centre

Improved access to affordable healthcare services

Based on the respondents' profile, the hospital mainly caters to people with an average income of Rs 23,000/-. The subsidized treatment reduced the financial burden on the families. It was noted from the result that the low registration fee (Rs.5/-) and free consulting fee is what attracted the people to visit the hospital. Most of the patients expressed that the treatment and medicine cost was much lower than other hospitals. All the respondents agreed that the overall health condition of the family has improved by accessing the health care in this hospital. While a few services were not charged, the maximum charge for a service was Rs 60,375/- charged against Orthopaedic related surgeries.

Positive contribution through multi-speciality treatments

The infrastructure support has enabled quality treatment. The survey result showed that 50 patients were being treated for 42 different types of ailments. The hospital has a total of 2545 different services offered. This indicates the multitude of the treatments offered at the hospital.



Figure 16 - Image of the Opthal ward- Male

Improved facility at the hospital

The respondents rated the cleanliness at the hospital to be very high. It was also observed that the facility was renovated and maintained well. 98% of patients were happy with the new facilities and construction of infrastructure supporting the current structure of the hospital. They agreed with the fact that the expansion of the building enhanced the quality of the hospital. Surveyed members also rated the quality of care provided at the hospital to be very high. 100% of patients agreed that there was proper diagnosis and treatment at the hospital.



Figure 17 - Image of the ENT ward - male

Out of 50 patients, 84% of patients rated the hospital at 4 & 5 in the Likert scale of 1 to 5 (1 being the lowest and 5 being the highest).

The renovation has helped the hospital to maintain consistency of treatments even in the post-COVID 19 period. There has been an increase in surgeries and



Financial Year	Total outpatient admissions	Total inpatient admissions	Deliveries	Surgeries
2020-21	331076	4944	1471	3869
2021-22	422616	6206	1412	4505
Growth in Percentage	28%	26%	-4%	16%

medical tests conducted after the addition of the infrastructure. The corresponding table shows the growth in terms of total number of the treatments for FY 20-21 versus FY 21-22. The overall

growth seen in treatment numbers was 27% for FY 21-22.

The assessment team observed that the conducive atmosphere and the sufficient space in the wards have created positivity among the patients.

The services of the hospital have not only impacted the patient but also the lives of the staff of the hospital. There is excellent leadership and a dedicated team to make this service accessible to many vulnerable patients.

5.5 Sustainability

Sustainability is a criterion to look at the longer-term effects of the intervention. Different aspects such as financial, social, and economic factors are considered while assessing sustainability. The hospital has been able to complete a major part of the project within the timelines and has been able to maintain positive impacts through medical treatments to the vulnerable. While this project required funding for its infrastructural upliftment, the dependency on the same will be minimal to nil for the same project in the coming years. However, there may be additional expenses on account of newer requirements/maintenance of the infrastructure. Due to the nature of the project, and the fact that they provide subsidized treatments, there may be a dependency on continued sponsorship from various stakeholders, including corporates, government programs like Aayushman Bharat, and other philanthropic institutions. The project's success in providing quality healthcare to the vulnerable highlights the need for this initiative. The project has been able to reduce financial stress among its beneficiaries is another social parameter that is considered for evaluation. As per the responses from the administration team, other contributors have also supported the hospital.

6. Conclusions

The logical analysis through the quantified data and the transect observation conclude that the CSR fund has been used for the intended objectives through renovation and expansion of the infrastructure of the Sir Ivan Stedeford Hospital. The renovation and expansion has created an impact on the patients that they are consistent with their frequency of visits, considering Stedeford hospital as the first option for their families' treatment. Based on the current assessment, it was observed that AMM Foundation has exhibited an extremely satisfactory execution of the support provided by CIFCL.

Good practices

- The program has enhanced the quality of treatment and care provided to people from the marginalised communities.
- The support through subsidized and equal treatment to all has reduced the financial burden of families by breaking the barriers to accessing quality treatment.
- The program increased the capacity of providing diversified treatments to increased beneficiaries.
- Providing quarters, enhanced the satisfaction among the staff members.

Challenges

- Though most of the construction was completed in FY 21-22, the dining area in the cafeteria was under renovation at the time of our field visit and could not be evaluated.

7. Recommendations

Recommendations are made for stakeholders and decision makers to understand the program's best practices or inadequacies to make informed decisions. This is laid out for possible future actions.

- CIFCL should continue working on such projects to support and enhance their infrastructure. This would help a large number of people in India who access public health institutions to receive quality treatment.
- The Hospital administration in liaison with AMM Foundation may plan to publicize the hospital services across Tamil Nadu which can additionally help for many more economically weaker patients.

Impact Assessment Report

WEE Swaccha Odisha Grama Vikas Project V



Implemented by  WEE

Supported by-  **Chola**
Enter a better life

Submitted by -  **chrysalis**
services
care. connect. compassion.

March 2023

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Acknowledgement

We are thankful to the villagers, Water and Sanitation Committee of Nuabhumi Badabhuin G.P., Narasinghapur Block, Odisha who participated and shared their opinion and provided necessary evidence during the Impact Assessment process. Our hearty gratitude to the Women Education and Environment (WEE) representatives who organised all field visits as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the Swachh Odisha project which involved the construction of toilets, digging borewells, installation of solar panels and water tanks in Nuabhumi village of Odisha.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Women Education and Environment (WEE) is a non-profit organisation that works to educate the village communities about the basic facilities such as health, hygiene, education and livelihood options for their upliftment. Since 1994 WEE has made its presence felt in small villages and districts of Odisha, however, they intend to spread across the country with their mission to act as an agent of change for the marginalised communities in small villages.

Access to sanitation is essential for human dignity, health and wellbeing. In many villages, people still defecate in the open because of the lack of toilets and they do not have access to clean water. They still use water streams in the village for drinking and sanitation used by the animals. As a result, poor sanitation in India leads to over 126,000 deaths every year from diarrheal diseases. This project aims to overcome water and sanitation problems and help towards the national goal of Swachh Bharat Abhiyan and the United Nations' sustainable development goals of clean water, sanitation, and affordable and clean energy.

CIFCL engaged M/s. Chrysalis Services Private Limited (Chrysalis Services) in 2022 to undertake an Impact Assessment of the program Swaccha Odisha Grama Vikas project implemented by WEE. During the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, and impact. An Impact Assessment field visit was conducted on the 21st and 22nd of February 2022 at Nuabhum Badabhuin G.P, Narasinghapur Block, Odisha to gauge the impact created by the CIFCL project.

In terms of the relevance of the project the water source earlier used for drinking was a water stream which was half a kilometre away and the same water stream was used by animals near the village, this created a fear of animal attack and snake bites. The village had a borewell dug by the government earlier but the presence of fluoride and arsenic in the water was high because of which it was not fit for drinking. There was open defecation prevalence in the village because of the lack of toilets.

It was analysed that the Implementing Partner has abided by the objective and the project completion duration. The construction of the toilets, installation of the overhead tanks, and the solar units were completed within the scheduled time and all legal permissions were taken before the construction which made the program effective.

After the implementation of the project, there is a reduction in waterborne diseases, animal attacks, physical injuries because of carrying the water from the stream to the village. There is 24-hour water supply in the village and each house has a toilet because of which the village is now open defecation free creating a clean and hygienic environment in the village.

The implementing partner has set up a water and sanitation committee consisting of the villagers. This committee takes care of any water and sanitation issues in the village; they have also appointed a technical officer for the solar units. The committee collects money from villagers for the maintenance of the project installations. The project has been logically designed and technically implemented. The service has been well used by the targeted beneficiaries.

2. Introduction

Women Education and Environment (WEE) is a non-governmental organization started in 1994. The organisation helps the communities from small villages and districts by implementing programs related to sanitation, hygiene, education and livelihood. Women Education & Environment (WEE) has its presence in remote areas of nine districts of Odisha: Anugul, Dhenkanal, Nayagargh, Khurdha, Cuttack, Puri, Ganjam, Boudh and Rayagada till now. They focus on health & hygiene issues, water, sanitation, natural resource management and livelihood promotion and these projects benefit women, farmers, forest dwellers and artisans from the villages.

Quality of life, health, hygiene and social environment, largely depend on safe drinking water and proper sanitation. Social and economic development is not possible without basic social infrastructure for human development. WEE is a registered organisation working on rural development exclusively for uplifting rural people by nurturing and strengthening them with various grassroots level initiatives. WEE as an organisation has made its presence felt in Odisha till now however it intends to work in the rural areas of different states in India to bring an improvement in general quality of life by creating awareness about health, education, women, hygiene, and sanitation.

3. Program Overview

3.1 Impact Assessment background

The concept of Swachh Bharat aims at the provision of access to every person with sanitation facilities including toilets, solid & liquid waste disposal systems, village cleanliness and adequate drinking water. India has made rapid progress in ending open defecation across the country. The number of people defecating in the open in India has reduced significantly by an estimated 450 million ¹people.

The government of India launched the Swachh Bharat mission, under which each family is to be provided with toilets to end open defecation. Unfortunately, these toilets are not provided with a water supply; hence the purpose of the toilet has not been met. Providing water to each toilet is a 'must element' for the success of the mission.

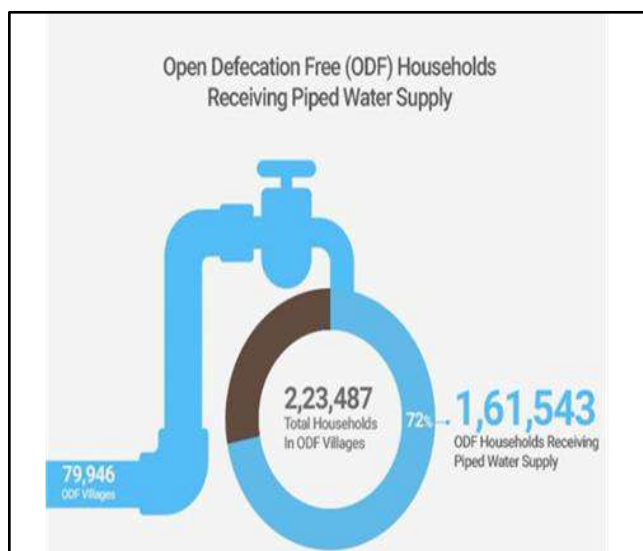


Figure 1: Source -Ministry of drinking water and sanitation

¹<https://www.unicef.org/india/what-we-do/water-sanitation-hygiene#:~:text=The%20number%20of%20people%20defecating,the%20cities%20or%20the%20countryside.>

Groundwater is laden with arsenic and fluoride in eastern states like West Bengal, Jharkhand and Orissa which is a serious problem. 40 million² People in India reside in arsenic affected areas. Groundwater in these areas is fluoride and arsenic laden, using such water for sanitation purposes results in complicated health issues. Though Swachh Bharat Abhiyan is a programme under the Ministry of drinking water and sanitation, very few villages in rural India have water resources available to even use the toilets built by the government. The receding water levels, especially during the summer does not help as the water is not even available to meet the basic needs of the villagers.

CIFCL Project details:

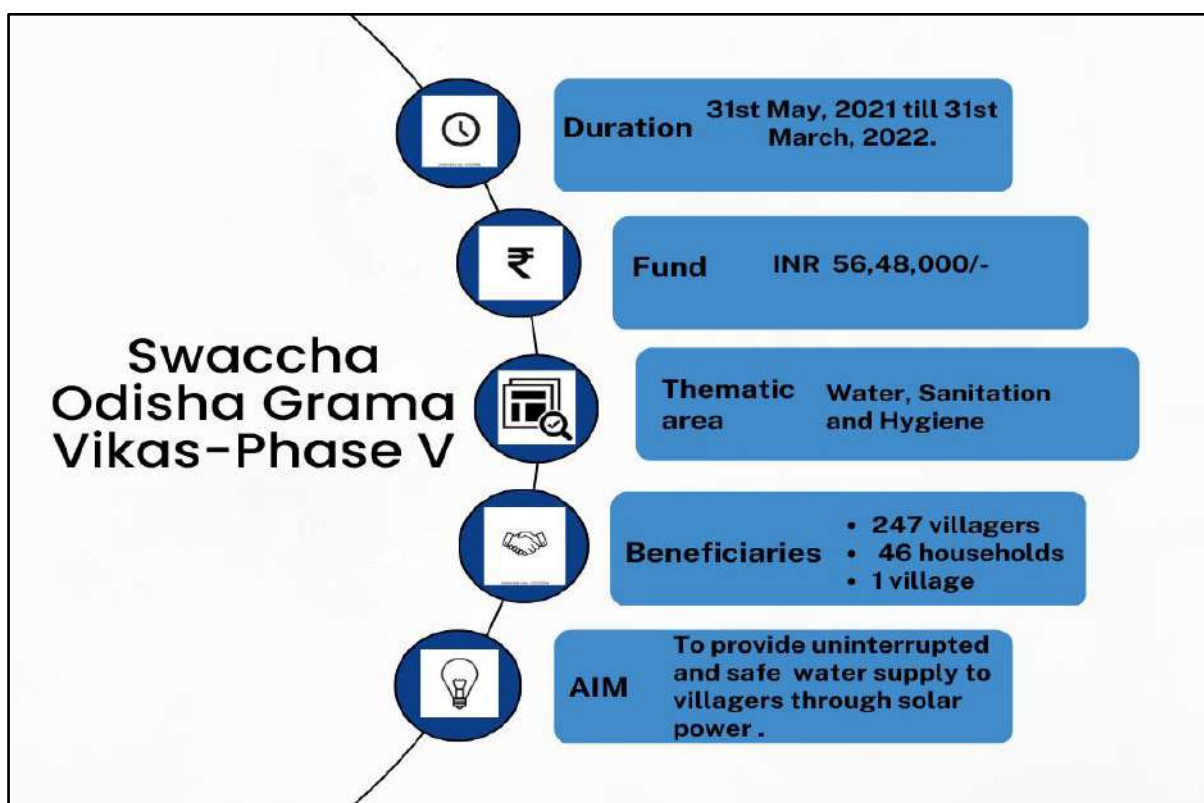


Figure 2: Project details for Swaccha Odisha Grama Vikas Phase V

3.2 Context

In line with the national goal, Cholamandalam Investment and Finance Company Ltd. (CIFCL) with their implementing NGO partner WEE have taken a strong initiative as a part of their corporate social responsibility to provide water and sanitation facilities while also promoting renewable energy to provide running water supply for drinking and sanitary needs in Nuabhum Badabhuin village in

² http://cgwb.gov.in/bhujal-manthan/geogenic%20pollution_edit_snd.pdf

WEE Swaccha Odisha Grama Vikas Project V

Narasinghapur Block, Odisha. The village is a tribal area which is remotely located with irregular supply of electricity making it difficult to install infrastructure.

As a part of the project, CIFCL has provided financial support for bore wells, overhead tanks, constructed bath-cum toilets and solar powered motors to draw water. This initiative has helped people from the village ensure personal hygiene, family hygiene, healthcare and clean drinking water for the villagers.

Items sponsored as part of the project:

- Two 5,000 litres capacity overhead tanks in the village.
- Two borewells.
- Two solar units installed.
- 46 toilets were constructed for each household in the village.
- 300 litres capacity water tanks installed at each of 46 households in the village.

Location Map:

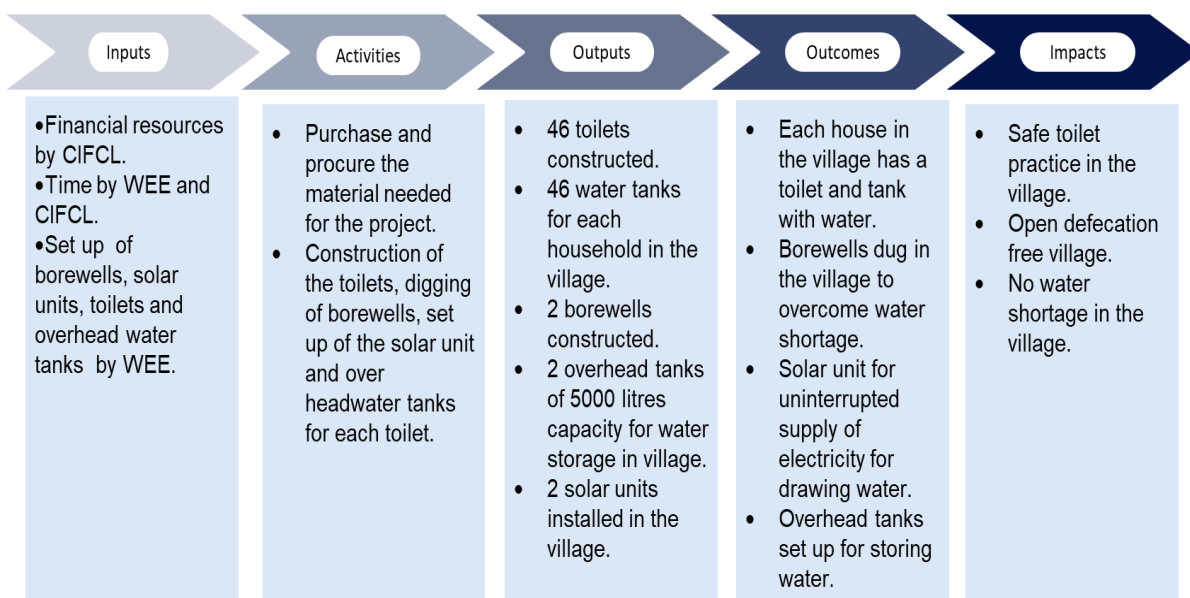
The village Nuabhumi Badabhuin G.P, Narasinghapur Block, Odisha is 97.7 Kms away from Cuttack. The village is a small tribal area which has only 46 households and a total population of 247 people.



Figure 3: Location map for Nuabhumi, Narasinghapur Block, Odisha.

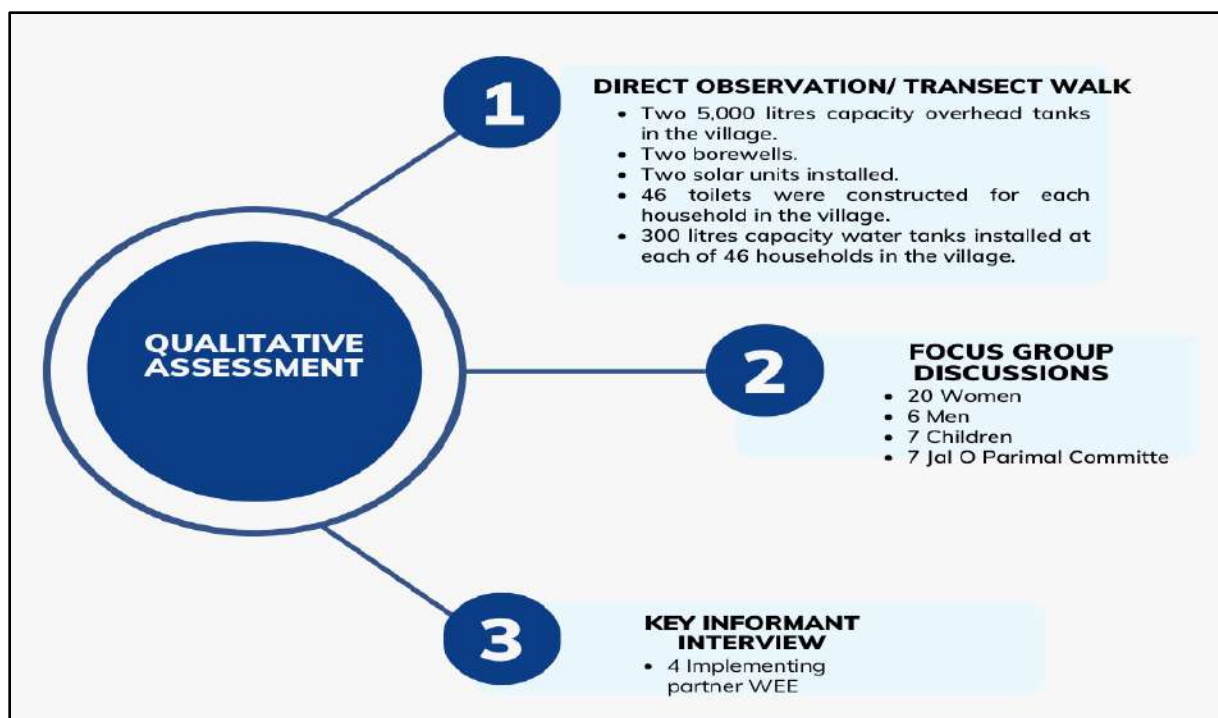
WEE Swaccha Odisha Grama Vikas Project V

Impact Map:



4. Methodology

The impact assessment included the qualitative methodology such as FGD with Men, women, and children was conducted. The evidence from the implementer partner has been validated with the responses of the FGD participants. Apart from this, the construction of toilets and installation of bore wells and overhead water tanks and the village environment were observed by transect walk.



5. Analysis of Findings

The village Nuabhumi which is 7 kilometres away from Narasinghpur Block is one of the remote and detached villages of Cuttack district. Even after 75 years of independence, the village is still in the primitive stage.

5.1 Relevance

Focal Problem:

Since the beginning, the villagers were drinking water from the brook and a stagnant water source where all domestic and wild animals were entering the water. During interactions with villager members, it was revealed that most of the time the water was contaminated with elephant dung. There was no other source of water for drinking. The same water was used for both drinking and sanitary sage. The implementing partner WEE has completed the drinking water and sanitation project funded by CIFCL.

Pre-condition of drinking water: As per the historical memory shared by the villagers, the government has tried to install tube wells for drinking water. However, the water was not usable as high levels of arsenic and fluoride content were found in the water. The government department red-marked (Banned) many tube wells and prohibited people from using the water for drinking. It was noted by the Implementation Partner that the presence of arsenic and fluoride was found in the surface water. The depth of the tube wells was 40 to 50 feet.



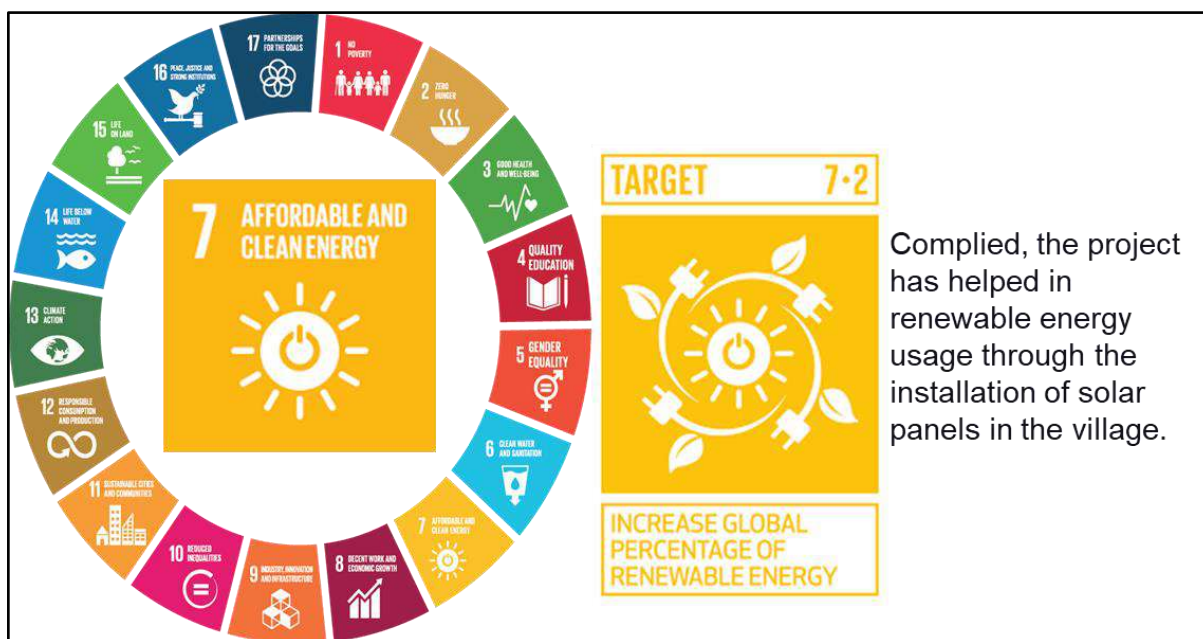
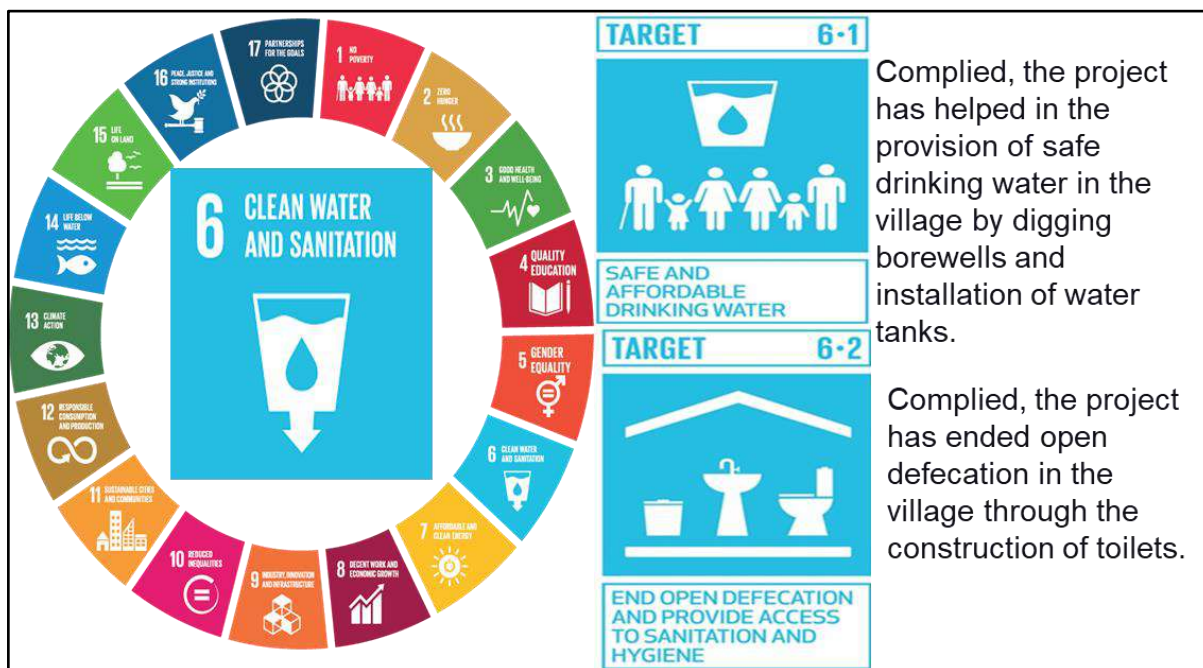
Figure 4: Source of water before the project.

Fear of Animal Attack during open defecation: It was revealed from the women's group that most of the women were facing lots of difficulties defecating in the open. In the daytime, it was difficult to go out for defecation and at night, there was danger of animal attack and poisonous creatures as the village is surrounded by dense forest.

Physical injury and damage of utensils while fetching water: Though the primary water source was half a kilometre from the village, it would take 1 hour to bring water due to the slippery path and bamboo bridge. It was noted that many times women fell with their pots and injured themselves. The children also mentioned that sometimes they had to skip school to fetch water.

It was revealed during the field visit that the village is surrounded by jungle. There were no interventions related to drinking water and toilets other than the CIFCL project. As the problem was analyzed thoroughly with the responses from the villagers, the project funded by CIFCL was found very relevant to deal with the focal problem.

Linkage to Sustainable Development Goals:



5.2 Effectiveness

The plan was to dig two borewells and to install overhead tanks of 5000 litres each.

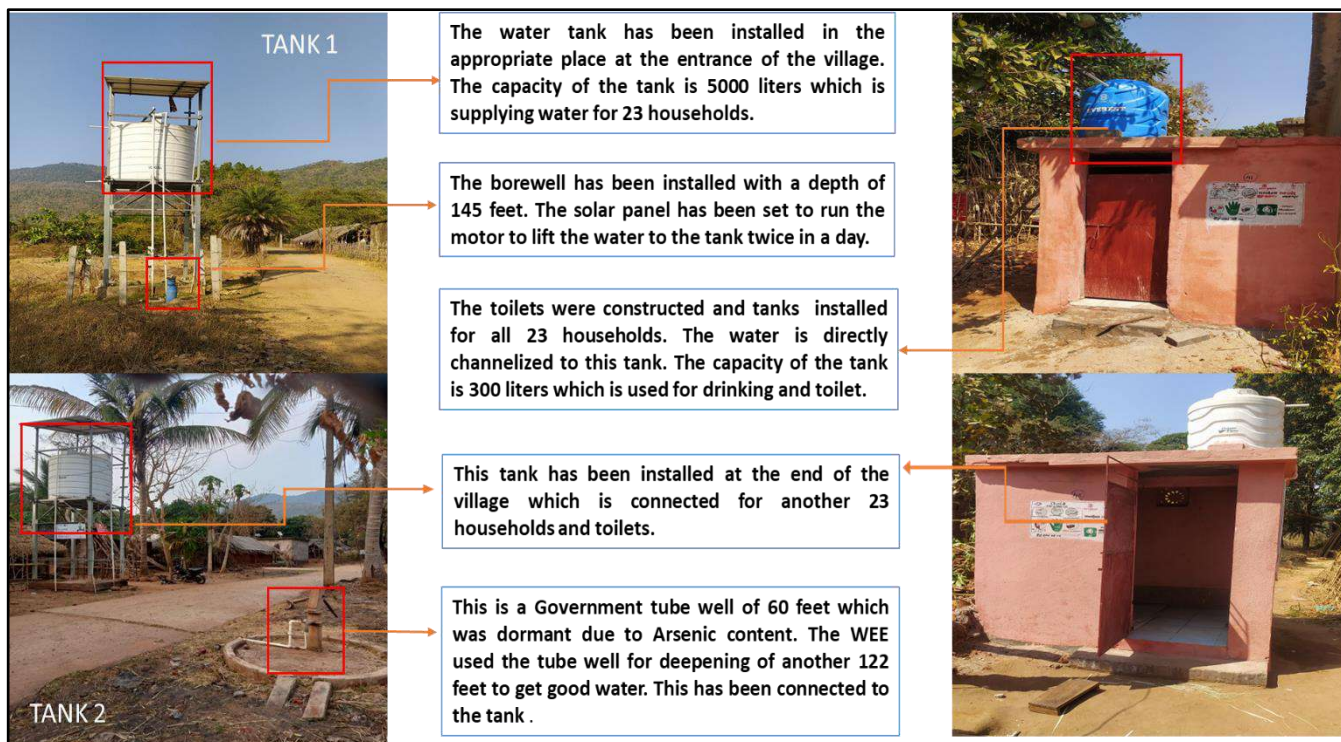


Figure 5: Overhead tanks connected to tanks at each toilet in the village.

Completion of the construction: As per the agreement, the construction has been completed on time. The construction started in May 2021 and completed in February 2022. This was confirmed by the implementing partner and the users as well during the field visit. The solar panels, motor, tanks and toilets are well maintained and in usable condition. There were two borewells fixed with solar panels and 46 toilets were constructed.

5.3 Efficiency

Resource Mobilization: As per the discussion with the Implementer partner, the whole construction was completed within the agreed budget. No external agency was involved to resolve any technicality in terms of Solar empanelment as the Implementing partner has a Solar Engineer. The total construction was supervised by WEE, the implementing partner. The quality and progress were monitored by WEE field promoters regularly.

Community Contribution: Community Contribution is always encouraged for any project to ensure ownership. The households of Nuabhumi were encouraged to contribute to this project. All the households had given 3 days of labour contribution during the toilet construction. The awareness was created that the further repair or replacement of pipes in the household will be taken care of by the individual household.

Legal documentation: The Implementing partner has obtained all the necessary documents with no objection at the Panchayat level for the designated place to install two panels in the village. The structure has been handed over to the Jal O Parimal Committee in the village.

Optimum use of the solar energy: The water points have been installed looking into the lacunas and limitations of the village. There is no sufficient electricity in the village and the village may find it difficult to pay the bill whereas the use of solar energy has made it completely free from financial burden.

During the field visit, it was observed that so far there is no defect observed in the solar panel and motor. There is no deficiency in the water supply. However, since there is a history of arsenic and fluoride content in the water, planning could have been done to attach a filter after the water test.

5.4 Impact

The solution to the gender issue: At the village level, it is commonly understood that women are burdened with fetching water and household chores. It was revealed from the women's FGD that the women were facing difficulties to bring water from the stream, especially during the rainy season. There was a particular time to fetch water from the stream. There were incidences of physical injury and loss of pots while bringing water from the stream.

However, after the initiation of this project, the burden on women has been reduced. The water is available at the doorstep through a tap.

Access to sufficient drinking water: The villagers were drinking unsafe water which was filtered with rural practices (Mostly with a clean cloth). It was difficult to fetch drinkable water during the rainy season. There was also no water supply facility during the rainy season. Since the primary water source is far away from the village, the households had to use the collected water meticulously. This CIFCL project has solved the drinking water issue as the households are fetching water from the home-based tap whenever they need it. Earlier the people of the households used to wait for some time until the debris of the stream water settled at the bottom of the pot and then they used to drink the water. However, now they can drink directly from the tap.



Figure 6: Transformation from buckets to overhead tanks.

Breaking the Cycle of diseases: It was noted from the discussion with men and women of Nuabhumi village that, earlier diarrhoea was frequent among children and adults. However, there is no evidence of any casualty because of diarrhoea. Now after the drinking water and sanitation project, there is no case of diarrhoea seen in the village. People were suffering from skin diseases before this project,

An unrecognised Open Defecation free village: Nuabhumi is the last village of the Narsinghpur block which is situated at the foot of the hill and covered with dense forest. Since there was no Swachha Bharat Mission initiative, the village has not been considered as an Open Defecation Free village. During the transect walk around the village it was noticed that there were no human faeces found outside. All 46 households have toilets and it was evident from the interactions with the women that the toilets are used by every member of the house.

Became a model village: There are other villages around the Nuabhumi village for whom it became a model village. During the interaction, adolescent girls explained that their friends talk well about the village as this village has a water and toilet facility. The leaders of neighbouring villages want to have a similar kind of project in their villages. According to the Implementing Partner, the CIFCL project was admired by the ex-Minister of Odisha Tourism and present MLA and Vice President of BJD party name Shri Devi Prasad Mishra.

“Many of our friends say that we are fortunate to be born in this village as we have sufficient water and do not have any fear during an emergency at night. We will choose to get married in the household where there is a toilet as we could know the benefit of toilets because of this project”.
Shared by adolescent girls from the village.

The kitchen garden as the spin-off program: It was observed during the transect visit in the village that most of the families have channelized the wastewater towards their kitchen garden. The women witnessed that they can get vegetables from their kitchen garden.

Every household has a backyard kitchen garden and it was evident from the FGD participants that they get organic vegetables from the backyard kitchen.



Figure 7: Vegetable Garden

5.5 Sustainability

The existence of Jal O Parimal Committee (Water and sanitation Committee): The Implementing Partner has formed the Water and Sanitation Committee to look after the maintenance of the facilities funded by CIFCL. There are 7 members in the Jal O Parimal Committee including the President and Secretary. The committee aims to take care of the project further. The Jal O Parimal Committee is the custodian of the amount collected from each household as they collect Rs.20/- from each household towards future maintenance.

Presence of village-level technical support: The Water and Sanitation Committee has appointed a person to maintain the solar panel and check the water supply process daily. So far there is no such defect occurred, and hence no expense has been made towards any technical issue. There is a strong resolution that the point person is responsible to report any discrepancies.

Monitoring Mechanism: The Water and Sanitation committee is solely responsible to monitor the water management and maintenance of the project. It was revealed from the FGD with Water and Sanitation Committee that every member has been given the responsibility to visit the solar panel unit.

On the other hand, the Implementing Partner has the system to monitor the project for another year even after handing over the project to the village. The Implementing Partner has a solar engineer to provide the solution to any issue with the solar panel.

Local Ownership: Since the project has addressed the most important issue of the village every household is keen to maintain the assistance that was provided to them. It was revealed that a few households' water taps were broken and those households replaced the tap without bringing it to the notice of the committee. Any issue related to the water supply is being solved peacefully.

6. Conclusion

The expected outcome of the project to install two borewells with solar panels and two water tanks of 5000 litres in two spots of the village to supply sufficient water for 46 households and to the assisted toilet has been successful. The project has been logically designed and technically implemented. The service has been well used by the targeted beneficiaries.

Best Practices

- No one is going outside for defecation and every member of the household uses the toilet. Quick adaptability was observed among villagers. The village is found open defecation free as per the direct observation.
- There is unity found in the community and the Jal O Parimal committee is active to take the project further. There is a regular monthly meeting and collection of money for future maintenance.
- The contribution of villagers towards the project was one member of each house to give labour support during the construction work and mainline excavation.

Challenges

- It was found that there is limited awareness of health and hygiene and a lack of training for the Jal O Parimal Committee.
- The Jal O Parimal Committee is still handling the collected amount as cash in hand as there is no bank account opened so far.

7. Recommendation

The Nuabhumi village from Odisha was a rural village with limited supply of electricity, no toilets and safe drinking water. The Swaccha Odisha project has made available to the villagers' 24-hour water supply in the village and with the toilet construction the issue of open defecation is resolved. The village however faces some challenges to overcome them we have the following recommendations:

- The groundwater for the state Odisha is laden with arsenic and fluoride. It is suggested to get a water test done to check the levels for this village.
- Health and hygiene training can be conducted to make the villagers more aware.
- Technical and financial training can also be provided to the village committee members so that they can handle the basic installation problems and efficiently handle the money contributed by the villagers for the maintenance of the installations.

Impact Assessment Report of

Eureka School Infrastructural Development Project

Implementing partner -



Supported by -



Submitted by -

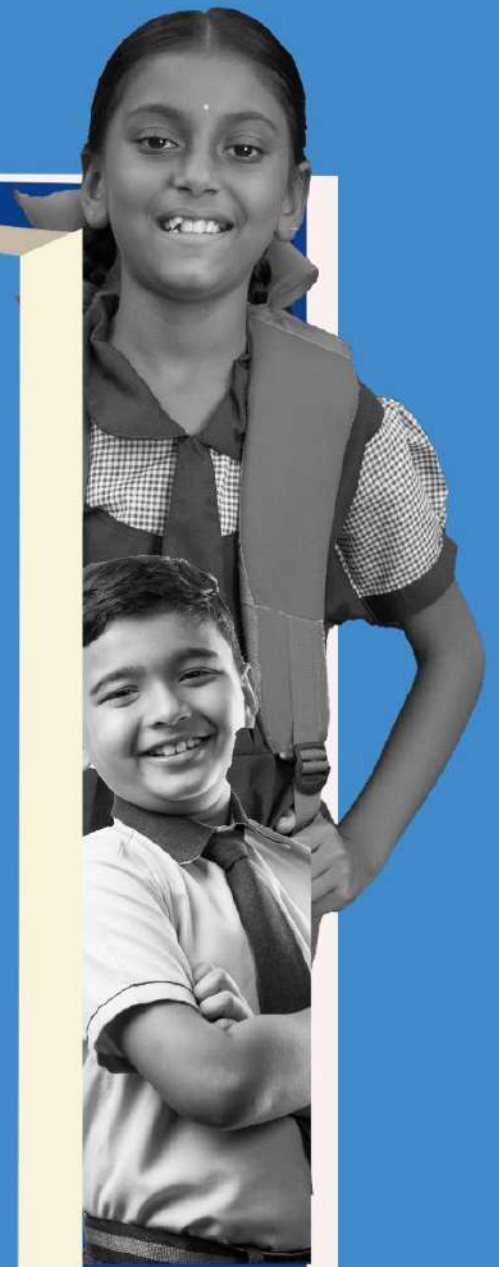


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Acknowledgement

We are thankful to the parents, teachers and children of Eureka Primary School who participated and shared their opinion and provided necessary evidence during the Impact Assessment process. Our hearty gratitude to the AID India representatives and the Principal of the Eureka Primary School who organised all field visits as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the construction of new classrooms in Eureka Primary School.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.



1. Executive Summary

AID India was founded in 1996 in the Indian state of Tamil Nadu. AID India is a registered non-profit organisation that has been working in Tamil Nadu for the last 25 years in the field of education. One of their initiatives is the Eureka Primary Schools which has been functional since 2005. The aim of the initiative is to provide quality education to the poor children of the Venketrayanpettai village of Vembakkam block which is 90 kilometres away from Chennai. The school is functional with 11 teachers and 218 students from class LKG to 5th standard.

An Impact Assessment field visit was conducted on 10th of February, 2023 to gauge the impact created by the CIFCL supported project. As part of the project implementation, two new classrooms were constructed as per the government norms of school buildings. The duration of the construction work was from June 2021 to March 2022. However, the construction was completed by February 2022.

There is a growing demand for admission to the school, parents mentioned that there is no such school around which provides quality education with a minimum fee. It was revealed during the interaction with the parents that most of the families depended on agriculture or daily wage. The Eureka Primary School is affordable as per their income. The enrollment has witnessed an upper curve from 30 in 2006 to 218 in 2022. The lack of extra classrooms was limiting them to having extra computer classes, science lab and other curricular activities. Spacious classrooms and the cheerful ambience have created a conducive atmosphere for study. It is examined by the response of teachers and children that the construction of new classrooms is contributing towards quality education as children have got an opportunity to get computer knowledge and the classrooms have given the space to follow new teaching techniques.

It was analysed that the Implementing Partner has abided by the objective and the duration of the project completion. The classrooms were built with cool roofing architecture. The construction was carried out by a professional builder. The building is disabled-friendly.

The project is effective as children could avail of a classroom with enough space to carry out their activities inside the classroom. The addition of the classrooms has kindled the aspiration in school management to try for the registration of Middle school in future.

The smile scale exercise revealed that children are interested in coming to school because of the infrastructure. The conducive environment in the classroom has impacted the children's study which was observed during the classroom visit.

It was captured from the class teachers that the large classrooms have facilitated learning through the play way method which was not possible earlier. Additionally, since the children shifted to the new classrooms, the old classrooms were converted into a computer lab, science lab, Library and Gallery room. One of the teachers shared that due to the new style of construction and quality of teaching, the school became the centre of attraction for other private and government schools. It was observed that quality education has not been compromised by the Eureka Primary School.

The upward curve of the increase of enrolment indicates sustainability. The school has self-designed study material which is not deviating from the curriculum of the State Board of Examination, Tamil Nadu. The overall management of the school confirms that the objective of the project will be taken care of in future. However, there is a need for more classrooms and buildings as the parents wish for Eureka Primary School to have higher classes, this will reduce their financial burden to enrol children in other schools and ensure continuity of their education.

2. Introduction

AID India was founded in 1996 in the Indian state of Tamil Nadu. AID India is a registered non-profit organisation that has been working in Tamil Nadu for the last 25 years in the field of education. The vision of AID India is to uplift the downtrodden communities, particularly the marginalised, and create avenues for the poor to escape generational poverty by providing quality education, healthcare, shelter and sustainable livelihoods. AID India has recognized that social change and community development can be brought about by providing quality education to every child.

AID India brings a robust mix of individuals from various sections of society to come together and builds a brighter future for the masses. The AID India team is deeply passionate towards each cause and shares similar core principles and goals towards creating an equal society for all. AID India takes up various projects for the development of marginalised communities, especially in rural areas. Below are projects AID India works on:

- Education - AID India believes in quality education for all for which they have set up -Eureka schools, Eureka village centres and Eureka training programs.
- Eureka Homes - AID India provides reconstruction of the houses for the marginalised communities in Tamil Nadu who were displaced by natural calamities.
- Village Development - AID India helps in village development by leading them with campaigns in agriculture, health, education, community empowerment, relief and rehabilitation.
- Health Nutrition and Pre-Primary - This programme aims to cater to the educational and health-based needs of rural children. This program is targeted at children between the age group of 0-6 years
- Livelihood - The Livelihood Project by AID India is an initiative to help small business owners and micro-entrepreneurs whose business was affected by covid.
- Scholarship - The Scholarship Project is to help students from school and college with monetary aid. This initiative was started to prevent students affected by poverty and Covid -19 from dropping out of schools and colleges.
- Kitchen Garden - AID India teams educated the people on various vegetables and their nutritious values. They taught the people about the techniques and methods to cultivate the plants that yield good, healthy vegetables.

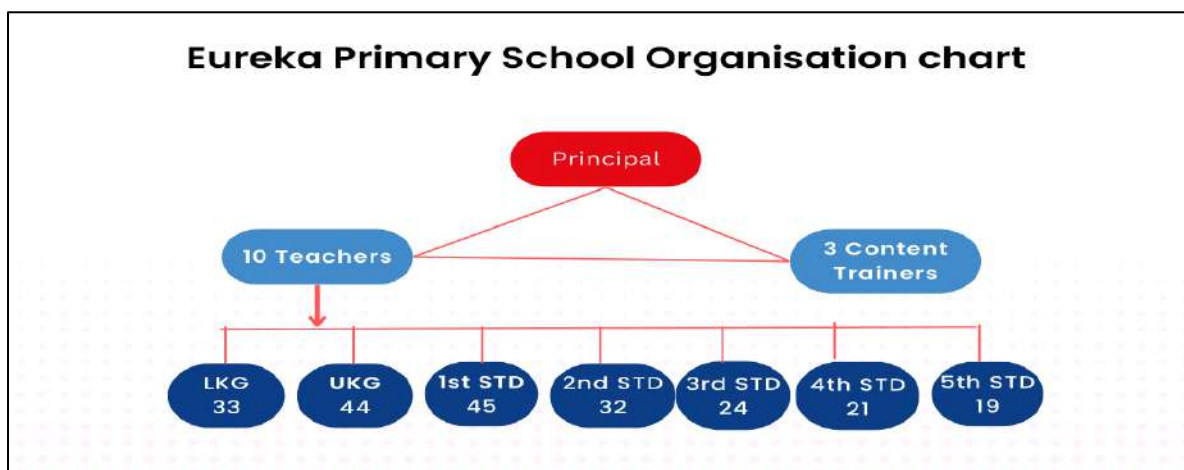


Figure 1 - Eureka Primary School Organogram

Eureka School Infrastructural Development Project

Eureka schools is a project of AID India. Two Eureka schools were started in 2005 with the aim of providing quality education to poor children from villages and they have been able to improve the lives of over 330 rural children every year since then. They believe when one child from a village achieves his/her aim, it encourages other children to dream bigger. The schools have rural children who are first generation learners from their families. Quality education can help them come out of generational poverty. Creating opportunities and helping the children of the poor in villages have access to resources can enrich the lives of the young minds of our society.

The Eureka Primary School is the result of one of the purposes of AID India to establish a Model school for the poor children. The Eureka Primary School has been designed to accommodate the poor children who can access quality education with a minimum financial burden. Priority has been given to the children of poor families. Apart from the infrastructural development, the school strives for quality education. The aided grant from CIFCL has been utilised for infrastructure development by constructing two new classrooms.

3. Program Overview

3.1 Impact Assessment background

India is a country with a 1.38 billion population which is further divided into two sections: urban and rural. The rural population of India represents 65% of the total population, around 880 million. As of 2021, the literacy rate in rural India was around 73.5%. The majority of India still lives in villages.¹Hence, rural education in India is of utmost importance.

The Annual Status of Education Report (ASER) survey shows that even though the number of rural students attending schools is rising, more than half of the students in fifth grade are unable to read a second-grade textbook and are not able to solve simple mathematical problems.² The reason cited for this problem in surveys is the increasing number of single classrooms to educate students from more than one grade. The Annual Status of Education Report (ASER) also highlights that there is little to no access to quality education for rural populations in Tamil Nadu. The right education can only be achieved with the right

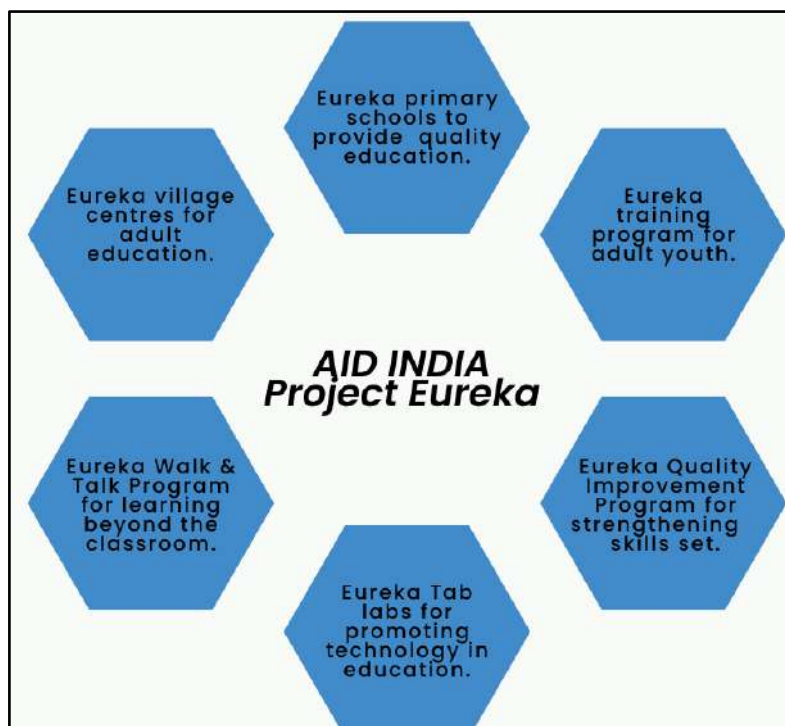


Figure 2 - Projects of Eureka

¹Source <https://www.ibef.org/blogs/rural-education-integral-to-india-s-progress#:~:text=India%20is%20a%20country%20with,rural%20India%20was%20around%2073.5%25.2>

²<https://blog.mygov.in/shaping-the-bright-minds-of-tomorrow-education-in-urban-and-rural/>

Eureka School Infrastructural Development Project

infrastructure. Improved learning infrastructure will encourage students to take interest in education and enable a change in mindset.

The CICFL project for Eureka Primary School is a continuation of the projects since 2017. The present project focused on the construction of two new classrooms which are additional classrooms to the school.

Eureka Primary School which is a project of AID India offers an aspirational model of school for the children of the poor in villages of Tamil Nadu. Education is regarded as one of the most powerful tools to transform individuals, communities and countries as it provides us with the basic means to lead an impactful and aspirational life. Two Eureka schools were started in 2005 with the aim to provide quality education and help children to achieve their full potential, irrespective of their social or economic circumstances. Eureka Primary School helps them get a good quality education and get them out of the cycle of generational poverty. The school has LKG to V classes. Initially, the school had LKG to 2nd standard which started with 30 children and has increased up to 218 as of now (Boys 121 and girls 97).

CIFCL Project details:

Thematic area: Quality Education

Objective of the project: To provide quality education for poor children in villages with the right infrastructure.

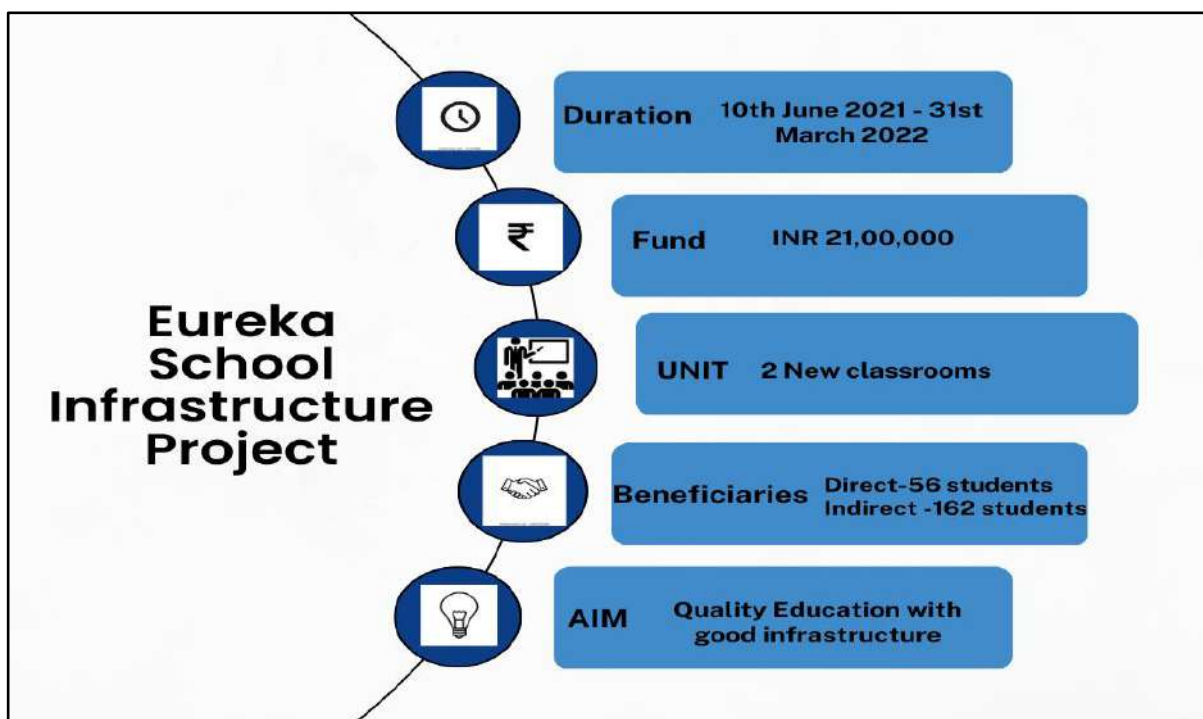


Figure 3 - Eureka Primary School Project Details

3.2 Context

The Cholamandalam Investment and Finance Limited (CIFCL) as a part of their corporate social responsibility has extended their support to help AID India for constructing two additional classrooms to meet the growing demand for classes and to meet the Tamil Nadu private school regulation rules at Eureka Primary School, Vembakkam. In its early days the school was running in a container. There were 5 old classrooms which were also constructed with financial support from CIFCL. At present there are 7 class rooms out of which two new classrooms were constructed with the financial support of CIFCL received in FY 2021-22. There are 4 creative rooms for English, Math, Science and Library. Since the school had limited classrooms, there was no place for a computer lab. The project aimed to construct 2 new classrooms. A good school infrastructure, with renewed spaces, makes it possible for children that live in remote areas to study well and, in addition, tends to improve the attendance and interest of students.

Location Map:

The school is situated at village Venketrayanpettai in Vembakkam which is 90 Kms away from Chennai. The school is attended by children from 10 neighbouring villages which have a minimum of 1 km and maximum 10 Kms distance to school.

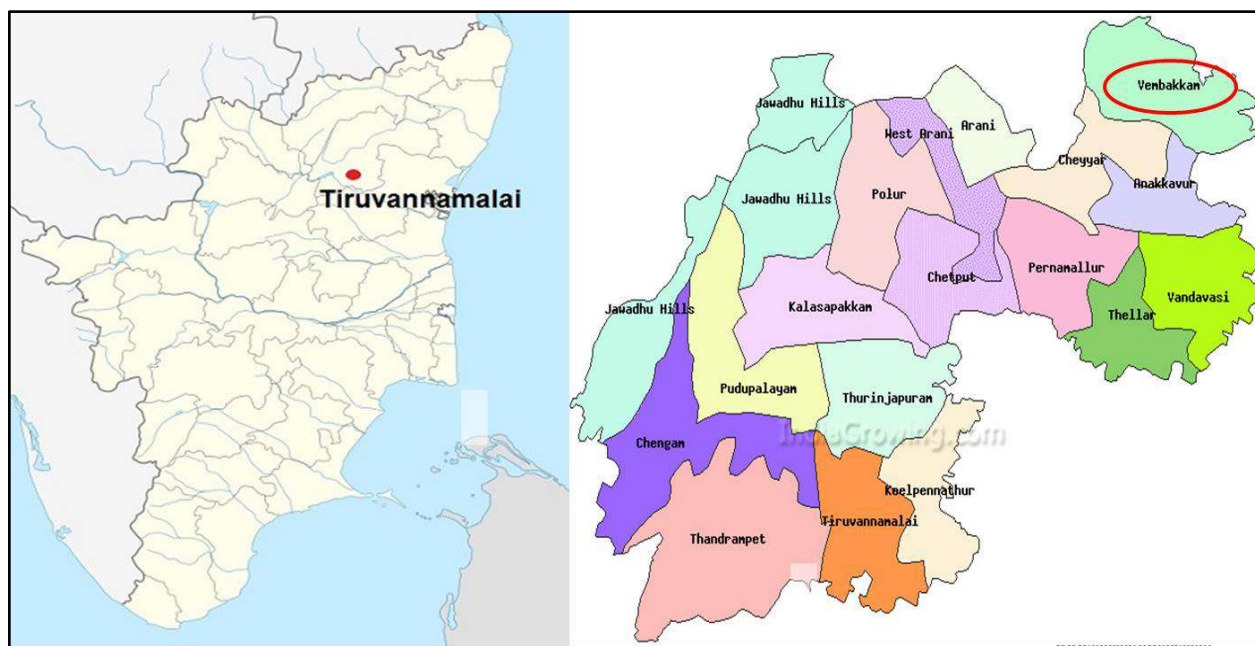


Figure 4 - Location of Eureka Primary School (Vembakkam)

Eureka School Infrastructural Development Project

Impact Map:

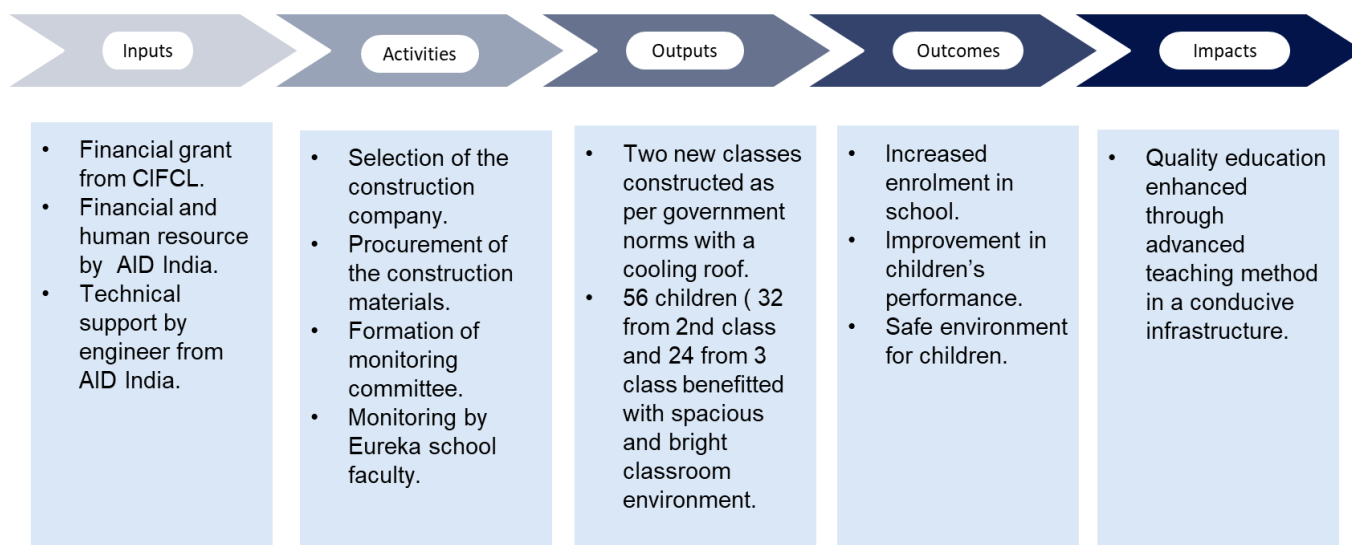


Figure 5 - Impact Map

4. Methodology

According to the design of this impact assessment, a qualitative study was considered to map the impact of the project. As part of the field validation for the impact assessment, the following methodology was adopted:

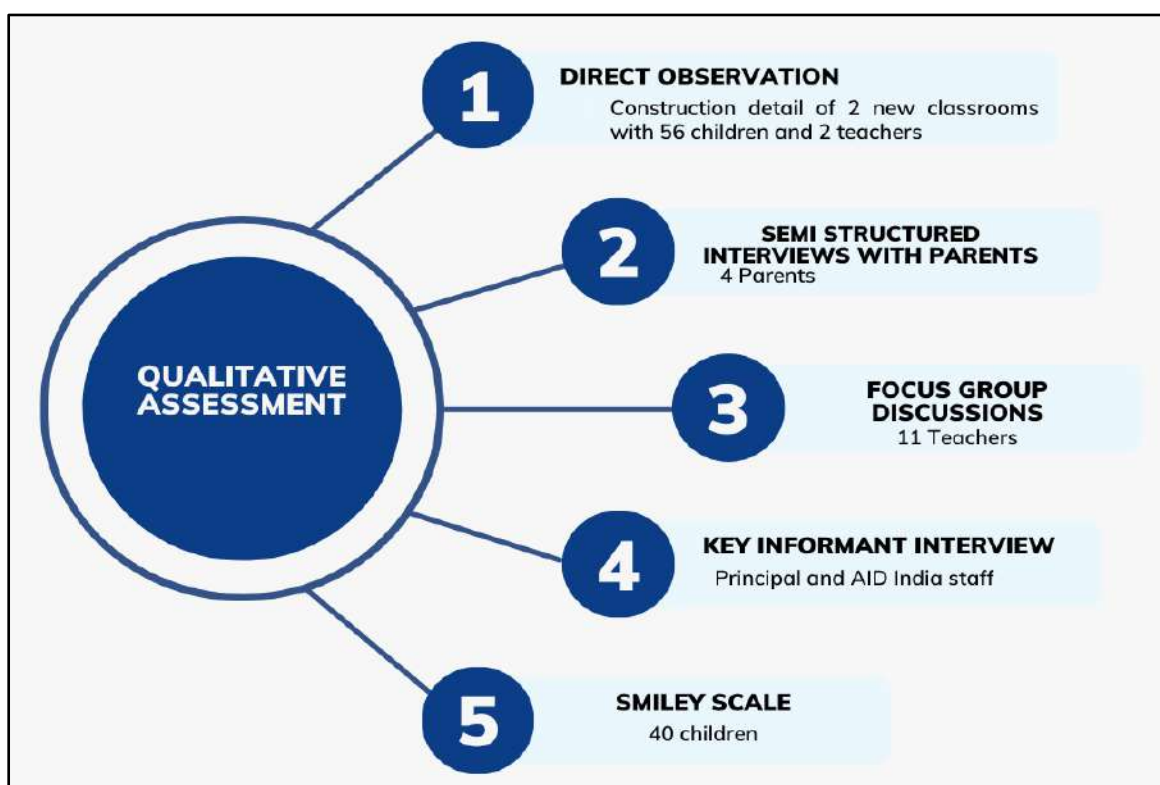


Figure 6 - Impact Assessment Methodology

5. Analysis of Findings

5.1 Relevance

The Eureka Primary School is the only low-cost English medium school in the area. While there is another private English medium school in the locality, the parents preferred the Eureka Primary School for their children's education because of its affordability and quality of education. There is a minimal fee structure and the needy children avail of scholarships for further higher study. As of now, the school has assisted 120 poor children with their higher studies as scholarships.

The Eureka Primary School began with 30 children which increased to 218 children at present. The growing demand of parents to admit their children to school required extra classrooms. The construction of the classrooms has created an opportunity to convert the old classrooms into a computer lab and library room.



Figure 7 - Computer Lab and Library

The old classrooms were not as per the government's safety norms (As per the government standard there should be two exits and windows. The old classrooms were not constructed with a heat resistance roof). The new classrooms have two exit doors and two windows and the roof of the building has been constructed with heat resistance.

The construction of new classrooms was relevant as it has generated an idea for the management to try for the registration of middle school in future. The conduciveness in the classrooms has made children enthusiastic towards study. All the children in the new classrooms interestingly showed their play way method of learning during the interaction with them. The teachers witnessed that the new classrooms create a cheerful learning environment.

Linkage to Sustainable Development Goals



Target 4.1

By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes.

Target 4.2

By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.

Target 4.5

By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations.

The project ensured that quality education is all the kids at school and gender disparities at the Primary School.

5.2 Effectiveness

The objective of the project was to provide a conducive atmosphere for the children of Eureka Primary School by constructing two new classrooms. The new classrooms are in addition to the existing 5 classrooms.

Objectives	Target detail	Evidence
Construction of new classrooms	Each room should be 400 sq.ft Per pupil 1 sq.ft For teacher 40 sq.ft	The classrooms have been constructed as per the prescribed size. The classrooms were neat and clean. There are two windows and exit doors.
Allotment of children	The classrooms will be allotted for UKG and 1 st standard.	As per the plan, the new classroom should be occupied by the UKG and 1st standard, however, for convenience, the UKG and 1st standard children were shifted to the classrooms which are close to the washroom. The new classrooms are occupied by the children of classes 2nd and 3rd as there are more children in these two classes.
Quality check and supervision of construction	Deployment of authorized construction company	The classrooms were constructed as per the prescribed plan. The construction work was supervised by AID India staff. Mr. Muttu Krishanan is an external Engineer of a Construction company named Aascons Builders and was hired for quality checks every fortnight during the construction.
Classrooms with adequate light and space	Two classrooms on the ground floor with adequate light and space for the children.	It was validated that both classrooms have adequate light because of the two doors and windows. The room's roof was constructed with a unique design of heat resistance. Apart from this, there are ceiling fans in the classroom.

Eureka School Infrastructural Development Project



Figure 8 - Newly constructed classrooms

Intended objective: It is evident from the field validation that there is no deviation in terms of specification in the construction of classrooms. It was observed that the classrooms were neat and clean. The children expressed their happiness during the interaction. **“Due to the sufficient space, it is easier to conduct various activities inside the classroom”**, shared by class teachers of classes 2nd and 3rd.

Parents’ Opinion:

“The new classrooms look different from the other classrooms. It is very joyful to see that children are studying in a safe environment.”

5.3 Efficiency

During the physical verification, the usage of approved resources was scrutinized through one-to-one interviews with the Implementing partner’s representatives and direct observation of the quality of fund utilization.

Budget Utilization: As per the statement from the implementing partner, the total cost for the construction of the two classrooms was 28 lakhs, out of which 21 Lakh was from CIFCL and the remaining 7 Lakh was borne by AID India.

Monitoring Mechanism: There was a special team from AID India to monitor the construction. As per the validation, there were no such surplus materials left out after the construction which indicates the meticulous usage of building materials.



Figure 9 - New classrooms and corridor

Timeline: The construction started in June 2021 and was completed in March 2022. Despite the rain during the construction, there is no such deviation found in terms of compliance with the timeline.

5.4 Impact

The goal of the project is to provide high-quality input to the children of the school by the provision of two classrooms. The field visit included on-spot research to gauge the impact of the newly added classrooms on the school and children. The research included the FGDs, Key Informant Interviews, and direct observation. The impact information was drawn after conducting an FGD with 11 teachers, KII with Headmaster and the Aid India representative, and four parents whose children are first-generation learners. The field visit also included collectively meeting 215 children of class LKG to 5th standard to observe their level of satisfaction.

Conducive atmosphere for children:

It was observed during the visit that the classrooms are well maintained and children were seated on a clean surface. There was enough space in the classroom for children to take part in various activities. On the ground floor, the classrooms have good circulation of air and light which creates brightness inside the classroom.



Figure 10 - Spacious classroom in use






New classrooms lead to the start of the computer lab and Library:

Earlier the school had 5 classrooms and the newly added classrooms have created an opportunity to start the computer lab. It was one of the desires of the school to impart quality and updated knowledge to children.



Figure 11 - Computer Lab and Library

The perspective of children: The field visit included conducting the Smiley Scale exercise with 29 children of the mixed group from Class 3rd, 4th, and 5th. The exercise revealed the following perception of children.

Particulars	V.Sad 	Sad 	OK 	Happy 	V.Happy 	REASONS
School	-	-	-	-	100%	The school has good space and a playground. The school has good curricular activities. Children enjoy teaching in the play- method.
New Classroom	-	-	10%	4%	86%	10% of children want to have a kid's seat and cupboard to keep their lunch bags.
Teachers	-	-	-	14%	86%	Teachers are jovial and protective
Study	-	-	-	3%	97%	There are unique methods of teaching and children and most of the children like the study materials.
Sports	-	-	-	3%	97%	Children are given training in different games and juggling.

The school became a centre of attraction: It was revealed during the KII with Headmaster and the Aid India representative that the school has been visited by the Block Education Officer who suggested the government teachers visit the school. The parents are attracted to the school for its quality teaching and protection of children.

Increase in enrolment: Adequate classrooms lead to an increase in enrolment in 2022. Before the construction of classrooms, the total strength was 156 which increased to 218 in 2022. The parents of surrounding villages are opting for the school instead of other schools. The parents mentioned the Eureka Primary School as the first option for their children's education for its infrastructure. There is a demand for Middle school as after completing Primary school here, the children are going to a nearby school named Vidya Vikash Higher Secondary private school which is 19 km away from Eureka Primary School.

5.5 Sustainability

The study curriculum of the school is similar to the government state board curriculum. The building has been set up as per the government norms of safety and security. The following findings ensure the sustainability of the school.

- Well-managed system by AID India: There is a periodic assessment of the performance of children and teachers. Unique track record maintained for children's progress.

Eureka School Infrastructural Development Project

- The school is the first choice for parents of the neighbouring villages as one of the parents said “The Eureka Primary School is the first choice for us as we are satisfied with the care and holistic teaching.”
- There is an adequate dedicated staff who have been continuing for 12 years.
- The school has proper permission from the Government for Primary school and thriving for Middle school.
- The school land is in the name of the Aid India Trust.

6. Conclusion

Education is an inevitable portion of children’s lives and this is one of the important parts of child rights. The quest of the project to uplift quality education by providing appropriate infrastructure is successfully fulfilled. The fund has been utilized for the intended goal.

Best Practices:

- The teaching-learning materials are unique and there is a unique way of measuring the progress of children. The school follows the play-way method of teaching and has developed the necessary material to make learning interesting. The school has a mechanism to monitor individual performance progress. [Eureka School classroom project.mp4](#)
- The parents have access to the teachers to enquire about their children’s performance. There is no home-work culture in the school, which is the best way to give space for children to enjoy after school.
- The school has teachers and content specialists for English, Math, and Science which is different from other schools. There are participatory play methods that have been designed to concentrate on personality development. The pictorial study material is contributing to the cognitive development of children.

Challenges:

- The school has good infrastructure, however, there is no proper fence or compound wall.
- Due to poverty, only a few families can send their children to another good school after completing their schooling as there is no Middle school in the Eureka Primary School.

7. Recommendation

Access to quality education is a major concern for rural schools. Primary education is the first stage of education which forms the foundation for a child. AID India through its programme Eureka school has made good quality education accessible to the marginalised communities in the rural areas. To overcome the challenges the school faces we have the following recommendations:

- Since there is growing demand for admission in the school, the school has a plan to include Middle school level classes from 5th to 7th. Therefore, there is a growing need for more classrooms.
- Though the premises of the school is spacious for children, there is no compound wall as the school is surrounded by a temporary fence. So, there is a need for a compound wall to ensure the safety and security of children.

Eureka School Infrastructural Development Project

- The Government of Tamil Nadu could consider deployment of teachers from other schools to learn about the teaching methodology of Eureka Primary School.
- Eureka Primary School has a full-fledged computer lab which could also be used for adult digital literacy in the surrounding areas.
- Eureka Primary School could consider computer related workshops for those children who show an aptitude for this subject.

Impact Assessment

Interventions in
School for differently
abled.

Implemented by-



Supported by-



Submitted by -



March 2023

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Acknowledgment

We are thankful to the parents, children, and staff of the WORTH Trust and WORTH digitization unit who participated and shared their opinion, and provided necessary evidence during the Impact Assessment process. Our hearty gratitude to the WORTH Trust representatives and the Manager of the WORTH Trust who organized all field visits as per the plan.

We thank the key officials of the Cholamandalam Investment and Finance Company Limited (CIFCL) who offered this opportunity to assess the impact of their three projects - "Education for the visually impaired", "Food waste to the energy treatment plant", and "School bus for intellectually challenged persons" at WORTH Trust and WORTH digitization unit.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment, and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

WORTH Trust is a non-profit organisation, established in 1963 that works primarily in the domain of differently abled. They work on a self-sustaining model in which they have their own industrial units where mostly differently-abled people work and the revenue they generate from these units is used for training, day care centre, early intervention centre, and school for hearing and speech impaired for differently abled people.

CIFCL engaged M/s. Chrysalis Services Private Limited (Chrysalis Services) in 2023 to undertake an Impact Assessment of the program. The impact assessment of the project was undertaken using the OECD criteria. An Impact Assessment Field visit was conducted on the 13th of February at the WORTH Trust centre at Kaptadi, Vellore and another visit was done on the 8th of March at the WORTH digitization unit to gauge the impact created by the CIFCL projects. As part of the project implementation a new Index Braille Box V5 was installed at WORTH digitization unit Chennai for braille books production, food waste to energy treatment plant was set up for hygienic disposal of waste and LPG gas production along with these a new Ashok Leyland 39 seater bus was bought for the travel of intellectually challenged persons at WORTH Trust centre Katpadi, Vellore.

All three projects of WORTH Trust were aimed to help the differently abled people through its different interventions:

Education for visually impaired: WORTH Trust has been producing braille books in Chennai for the last 9 years. Earlier they were operating with embosser index braille V4, which was an outdated model thereby causing frequent breakdowns. It took a lot of time for servicing the machine due to the non-availability of spares and trained technicians. The Unit was unable to meet the demands of visually impaired customers with reliance on an outdated machine. After the installation of index braille box V5, there are no breakdowns, the unit is able to meet the demand for braille books and almost 74,038 braille pages have been printed since installation in October 2021 till March 2022.

Food waste to energy treatment plant: The WORTH Trust center at Katpadi, runs a residential, school for children with speech & hearing impairments. The center prepares three meals (breakfast, lunch, and dinner) for the students, staff of the school, and WORTH Trust employees because of which there was approximately 50 kgs of food waste daily which was dumped in a pit. This caused disposal costs, the danger of falling in the pit, and an unhygienic environment. With the installation of the plant, these problems are overcome and the center has been able to save on their LPG gas cost by buying one cylinder in 2 months as against 2 cylinders monthly.

School bus for intellectually challenged persons: WORTH Trust as part of its Rehabilitation activities runs a day activity center for the intellectually challenged and a residential school for children with speech and hearing impairments. Bus facilities are given free of cost for intellectually challenged children and their parents to come for the training every day and for speech and hearing impairments for all their travel requirements at school like attending functions, competitions, etc. The old bus was unfit for use and required a lot of maintenance. The new Ashok Leyland 39-seater bus has a low entry point and is fit for the differently-abled.

It was analyzed that the Implementing Partner has abided by the objective and the project completion duration. The program is effective for all three projects as it helped to meet the requirements of differently-abled people. The Implementing partner has utilized 100% of the resource that was received for the implementation of the CIFCL project within the agreed timeline. There is also periodic maintenance undertaken for the school bus, biogas plant, and braille embosser machine. The services are being well utilized by the target beneficiaries.

1. Introduction

WORTH (WOrkshop for Rehabilitation and Training of the Handicapped) Trust, was established almost 60 years ago by the Swedish Red Cross in 1963. It was started with the objective of rehabilitating leprosy-cured persons generally ostracized by society, through industrial training and employment. It combines commercial and rehabilitation work in a fully unique and self-sustaining model by its three industrial units – WORTH braille's, Worth Plastics, and Worth Industries across three locations in Katpadi, Trichy, and Pondicherry. They supply quality products to major industries in the auto, engineering, and home appliances sectors. It is a one of a kind setup as persons with different physical challenges can be seen working together and the people who are trained in-house are employed. Perkins braille's, universal braille bags for children, auto parts, toilet seats, digitization of books, and mobility aids are some of the things produced at WORTH. The surplus of the revenue generated after covering all operating expenses is utilized for the rehabilitation activities of the organization like rehabilitation for the hearing impaired, children with special needs, daycare centers for children with mental disabilities, and early intervention centers for children with various disabilities. The involvement of WORTH Trust in the community has changed the lives of so many differently-abled people and their families.

2. Program Overview

3.1 Impact Assessment background

CIFCL as a part of their corporate social responsibility has sponsored three projects of the WORTH Trust in FY 21-22 to help as interventions for the differently abled. Details are presented below:

Education for visually impaired persons:

A significant number of people worldwide are visually impaired. The World Health Organization (WHO) pins that number at about 45 million people globally; these are people who have visual impairments that are not able to be corrected with lenses. Many of these people read through the assistance of audio-supporting software or by running their fingers over the raised type that we all know as Braille. A braille embosser is a device that connects to a computer to produce printed material in the braille writing system. Braille embossers are a form of assistive technology because they print documents for blind or visually impaired users. The concept is similar to a laser or inkjet printer, but a braille embosser works by embedding raised dots onto a piece of thick paper rather than using ink or toner. While braille embossers are obviously very useful to people with no or low vision, the downside is that they are more expensive than ordinary printers.



Figure 1 Index Braille Box V5

WORTH Trust runs WORTH Digitization in Chennai which undertakes the conversion of print books to digital word/audio files that can be read using screen readers in computers or MP3 players by visually impaired persons. Printing of braille books for the visually impaired especially school and college students is also undertaken here.

The WORTH Trust digitization unit was operating the braille production of books with only one Embosser Index Braille V4, which is an outdated model thereby causing frequent breakdowns. The machine takes a lot of time for servicing due to the non-availability of spares and qualified/trained technicians. The unit was unable to meet the demands of the visually impaired customers with reliance on only one outdated machine.

Food waste to energy treatment plant:

Among different types of organic wastes, food waste and its impact on the environment is a major concern globally. It occupies the highest potential in terms of economic exploitation as it contains high amounts of carbon and can be efficiently converted into biogas and organic fertilizer. Biogas is produced by the breakdown of organic matter in the absence of oxygen (anaerobically), primarily consisting of methane and carbon dioxide. It can be produced from raw materials such as agricultural waste, manure, municipal waste, plant material, sewage, green waste, or food waste. When the biogas is filtered to remove the hydrogen sulphide, the resulting mixture can be burned as an energy source for cooking, lighting, or heating water or space. Biogas improves hygienic conditions by reduction of pathogens. It also provides environmental advantages by protecting air, water, soil, etc. Making biogas from organic waste recycling is a good way to manage potentially harmful organic waste.



Figure 2 CHUGG 35 Food waste to energy treatment plant

Worth Trust has a hostel for school children, a technical training center, and staff whose food is cooked at the center and this created a lot of food waste which was earlier collected in a pit and then later disposed of. This was neither hygienic nor safe for the people on the campus because of the fear of falling in the pit and it involved a cost and hassles in disposing of. Worth Trust is highly environmentally conscious and adopts a zero-waste practice. The biogas plant helped in solving the disposal issues and saving on their LPG cost. After the gas plant installation, the gas produced was used for cooking and the rich digested slurry left after the breakdown, and gas production is used for landscaping.

School Bus for intellectually challenged persons:

WORTH Trust started their Day activity center in 2007 where they conduct training programs for children with attention deficit hyperactivity disorder (ADHD), cerebral palsy (CP), down's syndrome, and intellectually challenged. These children are trained with their mother, father, or caretaker to enable them to continue to practice training with proper understanding at home. WORTH Trust also have specially designed therapeutic rooms like sensory integration, soft play, and snoezelen white room that helps them to reduce hyperactivity and relax them. The bus facility is provided to these children and their caretakers free of cost so that they can come to the activity center and get trained in their daily living skills, academics, and pre-vocational and vocational skills.



Figure 3 New school bus

WORTH Trust also runs a residential school for the speech and hearing impaired in Katpadi. Children aged between 4 and 7, join different classes from nearby places and pursue their studies up to 5th standard, primarily through Lip Reading. The bus facility is provided to the school children free of cost to these children so that they can come to the school for attending functions, competitions, etc. The bus at WORTH Trust is also used for the various rehabilitation camps for the differently-abled.

A school bus for these children helps them to come to the center without any additional cost and get their treatments done by professionally qualified special educators, physiotherapists, speech therapists, vocational instructors, and craft teachers. The WORTH Trust earlier had a bus for this purpose but that has broken down and is not fit for the travel for specially challenged and visually and speech impaired kids.

CIFCL Project details:

EDUCATION FOR VISUALLY IMPAIRED PERSONS	FOOD WASTE TO ENERGY TREATMENT PLANT	SCHOOL BUS FOR INTELLECTUALLY CHALLENGED PERSONS
Duration 2nd Jul, 2021– 31st Mar, 2022.	Duration 17th Feb, 2022– 31st Mar, 2022.	Duration 17th Feb, 2022– 31st Mar, 2022.
Fund INR 11,89,000 /-	Fund INR 23,13,000 /-	Fund INR 2,27,000 /-
Thematic area Education	Thematic area Environment	Thematic area Education
Beneficiaries Yearly over 1000 beneficiaries from visually impaired schools and colleges.	Beneficiaries 60 hostel students, 60 students from technical training center and 200 staff at WORTH Trust.	Beneficiaries 53 speech and hearing impaired and 97 physically and mentally challenged persons.
Aim To help in providing education and employment for the visually impaired.	Aim To help in the hygienic disposal of food waste and create renewable energy source.	Aim To help in the education of speech and hearing impaired, physically and mentally challenged persons.

3.2 Context

Cholamandalam Investment and Finance Limited (CIFCL) as a part of its corporate social responsibility has extended its support to WORTH Trust for three of its projects. A braille embosser machine for the education of visually impaired persons, an energy treatment plant for hygienic disposal of food waste, production of LPG gas, and a school bus for intellectually challenged persons. Intellectual disability causes significant limitations to a person's functioning. The WORTH Trust as an organisation works for the empowerment of persons with disabilities and the underserved through various initiatives focused on providing quality education, early intervention centers, residential schools, vocational training, and rehabilitation. This initiative of CIFCL has helped the WORTH Trust to provide the facilities required for better functioning of the trust's interventions.

Location map:

The WORTH Trusts digitization unit is located at Kottivakkam Chennai, the digitization unit undertakes embossing of the braille books for the visually impaired. WORTH Trust runs a government recognized residential, transitional school for children with Speech & Hearing Impairments, a day activity center, and a vocational training center at Katpadi.

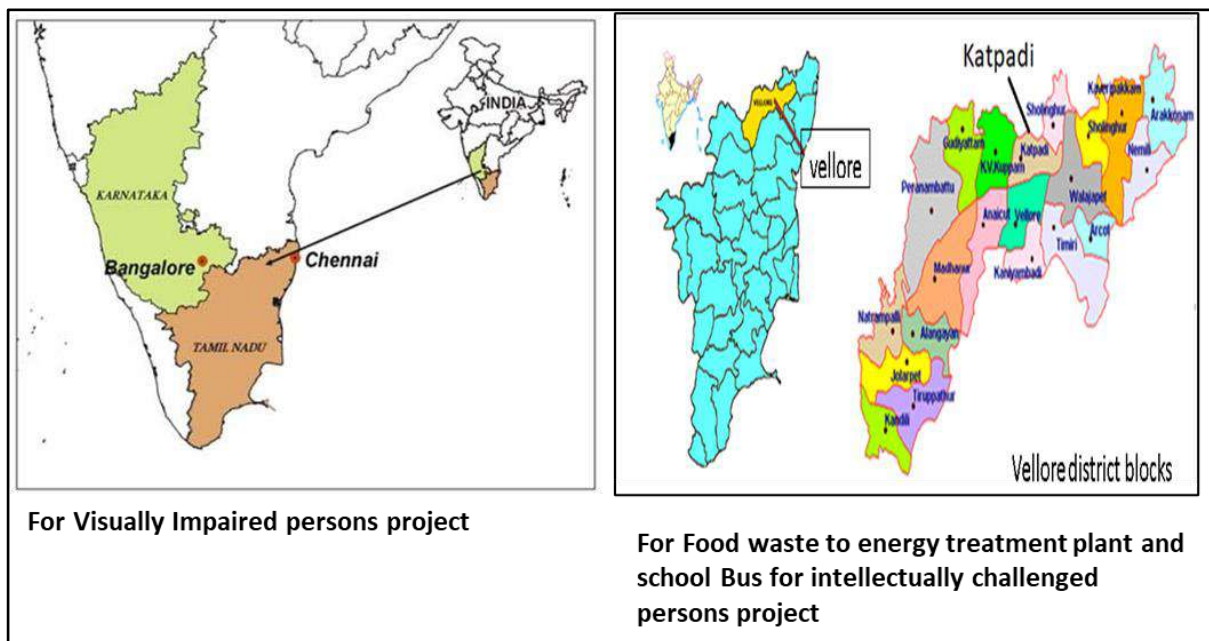
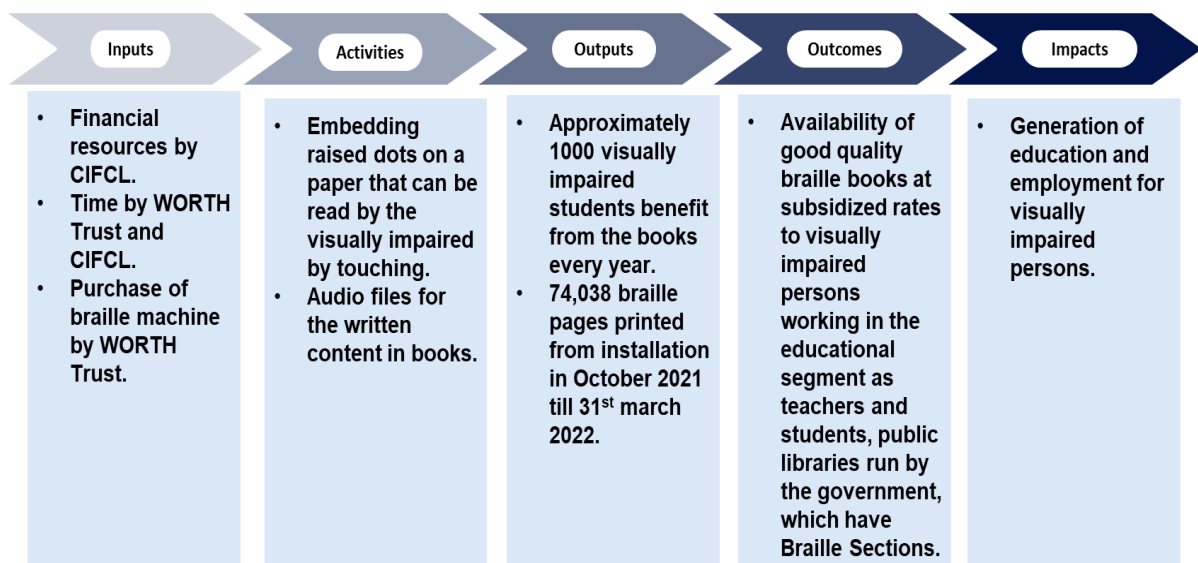
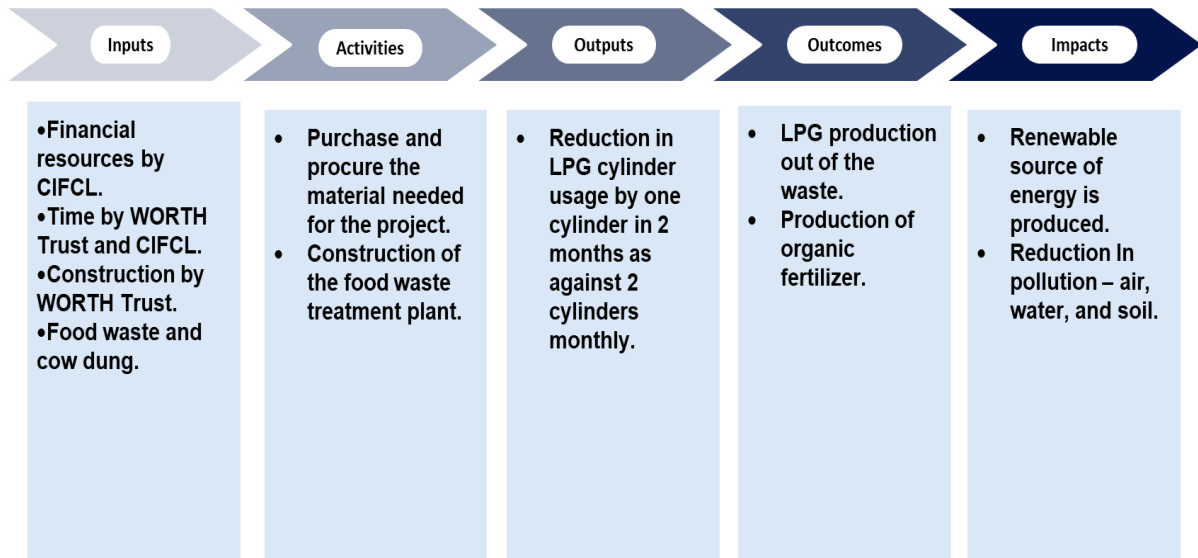


Figure 4 Location map for Kottivakkam, Chennai and Katpadi, Vellore.

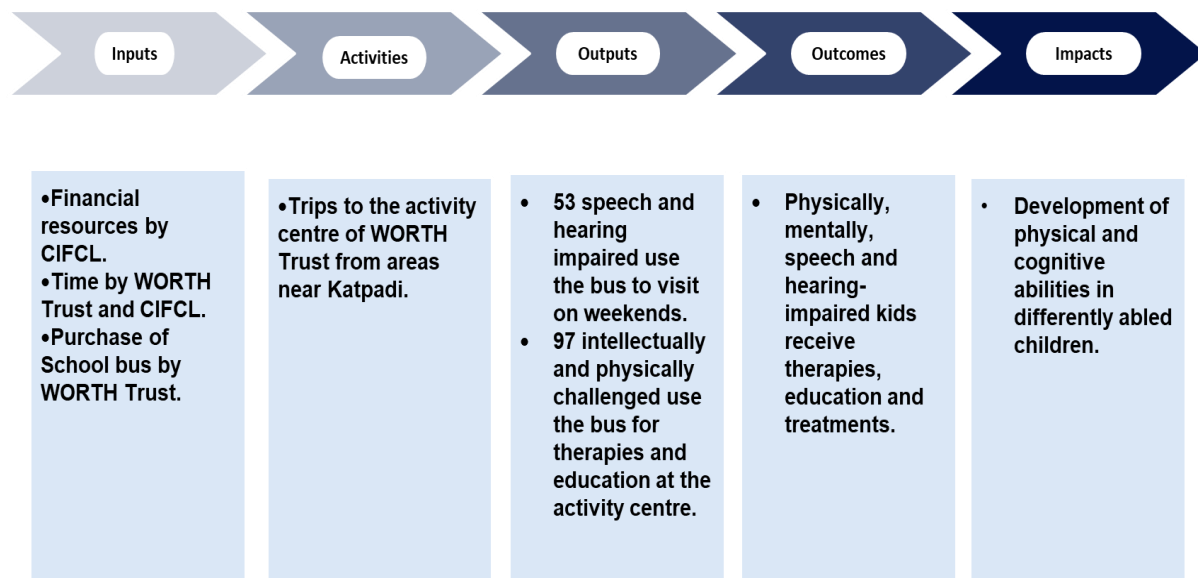
Impact Map for the education of the visually impaired:



Impact Map for food waste to energy treatment plant:

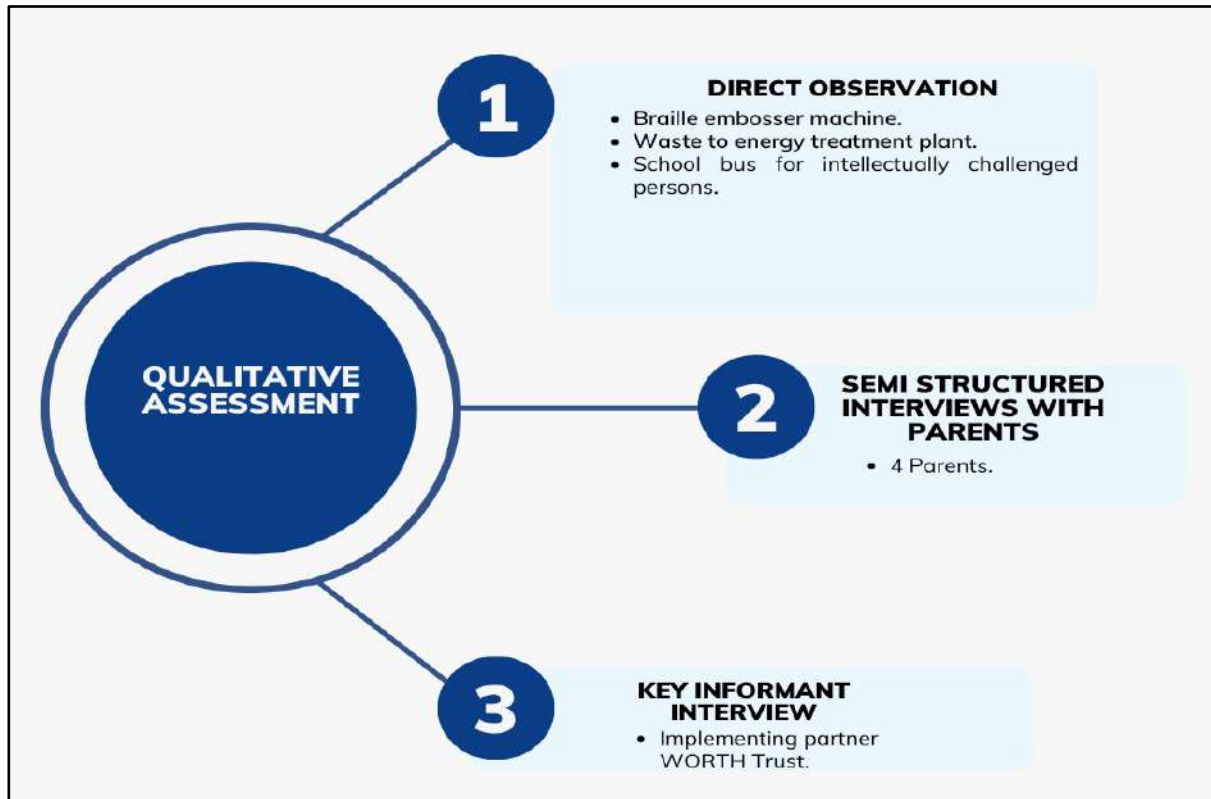


Impact map for school bus for intellectually challenged persons:



4. Methodology

According to the design of this impact assessment, a qualitative study was considered to map the impact of the project. As part of the field validation for the impact assessment, the following methodology was adopted:



5. Analysis of Findings

5.1 Relevance

WORTH Trust has been in existence since 1963 and trains and rehabilitates differently-abled persons helping them to lead a life with dignity. In Vellore, WORTH Trust is the only such organisation that is dedicated to the differently abled for many decades. All the 3 requirements of WORTH Trust that were funded by CIFCL were genuine needs of the Trust.

- The WORTH Trust digitization unit was operating the braille production of books with only one Embosser Index Braille V4, which is an outdated model requiring high maintenance and was unable to meet the demands of the visually impaired customers with reliance on only one outdated machine. A second machine was much needed to meet the ongoing demand.



Figure 5 Braille alphabets

- WORTH Trust runs a recognized residential school for children with speech and hearing impairments, and a technical training center. Food is prepared at the trust for the students and the employees because of which there was a waste of almost 50 kgs daily. The biogas plant was pertinent in helping to solve the food waste disposal issues that the Trust faced.



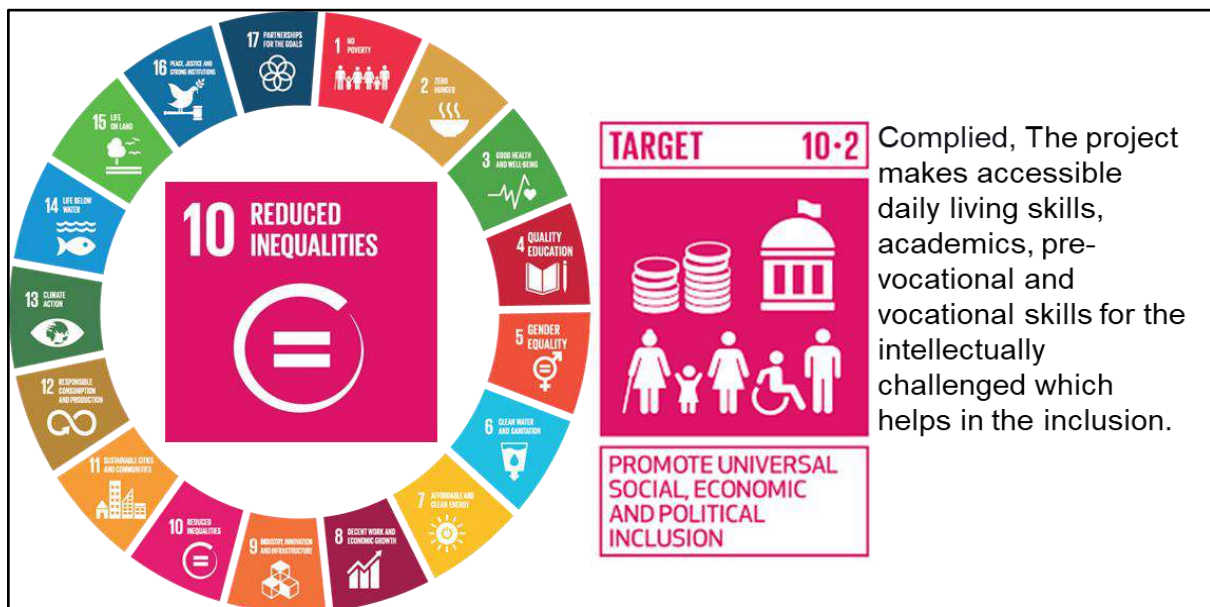
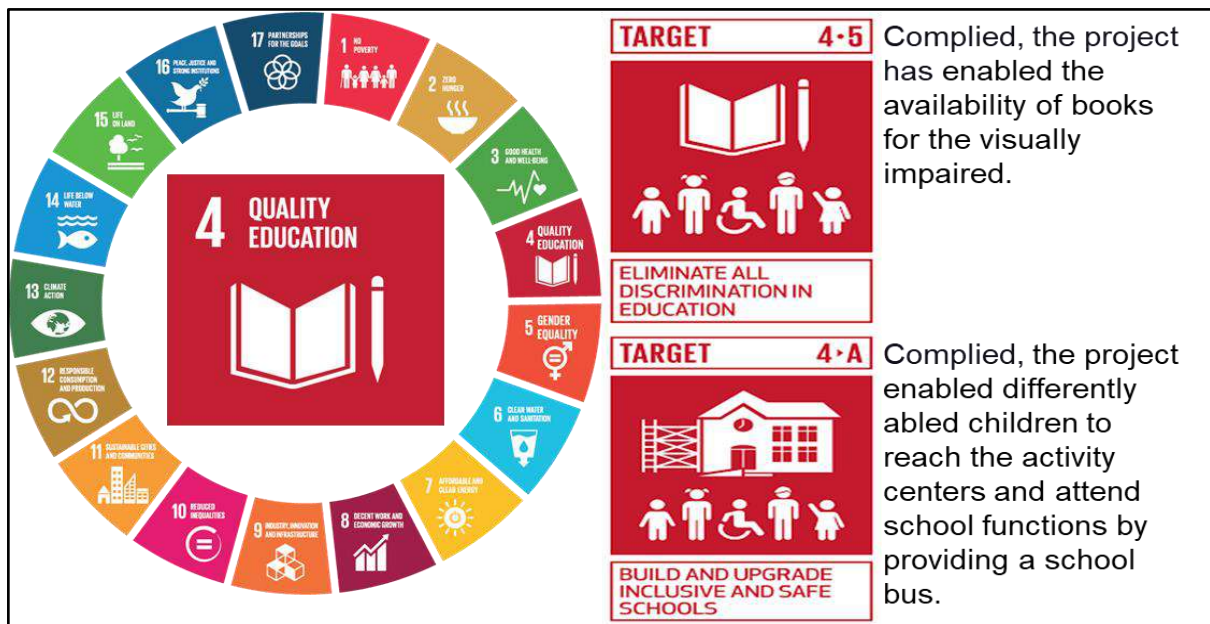
Figure 6 Logbook for daily waste and gas produced

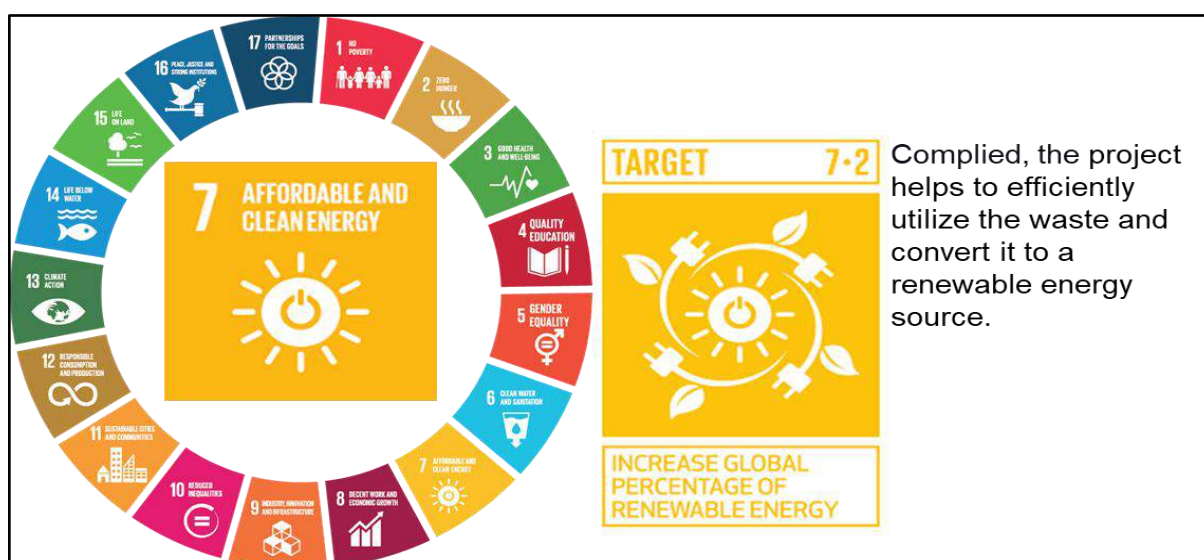
- The WORTH Trust runs a day activity center for the Intellectually Challenged. Bus facilities are provided free of cost for these children and their parents to come to the Center daily. The Trust also runs a residential school for speech and hearing-impaired children. The bus facility is also provided to the school children free of cost for all their travel requirements at School like for attending functions, competitions, etc.



Figure 7 New school bus operational

Linkage to Sustainable Development Goals:





5.2 Effectiveness

The objectives of all the 3 projects were to meet the requirements of the WORTH Trust. Details are given below:

Objectives	Evidence
Food waste to energy treatment plant: To help in the hygienic disposal of food waste	The biogas plant has been installed outside the kitchen at the Katpadi Centre. A neat platform has been made over which the biogas plant has been placed. The Field Visit team witnessed the running of the machine. The liquid from the biogas plant which acts as natural manure is disposed of through a pipe to the garden area where vegetable plants and fruit trees were growing. The area where the biogas plant is placed is maintained in a hygienic manner.
School Bus for intellectually challenged persons: To help in the treatment and therapies of differently abled children and their parents	The school bus is used for intellectually challenged children and their parents to come to the Katpadi Centre to get their treatments done by professionally qualified trainers. The Field Visit Team observed that the 39-seater school bus has been maintained in very good condition, with even the plastic covers on the seats still intact. The bus has a lowered footboard to enable children with disabilities to easily board the bus.
Education for visually impaired persons: To meet the requirement for braille books in Chennai	The Braille embosser machine has been installed at the WORTH Digitisation Centre in Chennai. The machine was set up to meet the increased demand for printed braille books. The machine is operated by two visually impaired attendants. The new Index Braille Box V5 was installed in October 2021 and till March 2022 it has printed 663 volumes/books which is 74,038 braille pages. As understood by the WORTH team, the machine is running well with no issues.

It was evident from the Field validation that there is no deviation from the objectives of the three projects.

5.3 Efficiency

During the physical verification, the usage of approved resources was scrutinized through one-to-one interviews with the Implementing partner representatives and direct observation of the quality of fund utilization.

Project	Funds Utilisation	Remarks
Education for visually impaired persons- Braille embosser machine.	11,89,000/-	Entire amount was utilized for the machine cost, installation, and transport.
Food waste to energy treatment plant.	2,27,000/-	Entire amount was utilized for the setup of the energy treatment plant from food waste and the purchase of a school bus. The amount sanctioned for the energy treatment plant and the school bus was 25,40,000/-.
School bus for intellectually challenged persons.	23,13,000/-	

Maintenance - Maintenance of the school bus, biogas plant, and braille embosser machine has been given high importance as observed during the Field Visit.

- The school bus was maintained well and serviced periodically.
- The Biogas plant was also closely monitored and a logbook was maintained to write the quantity of food waste and how much gas is produced from it. The logbook also recorded the number of hours the gas was used.
- The braille machine was at the WORTH Digitization center in Chennai. The machine is also maintained well and a record of the number of pages printed since the installation is recorded.

Timeline: All three projects including the setup of the biogas plant, the installation of the braille embosser machine, and the purchase of a school bus for the differently abled were completed before the agreed duration as per agreement.

5.4 Impact

All three projects aimed to provide equipment to WORTH Trust based on their immediate needs. The field visit included on-spot observations and discussions with WORTH Trust representatives operating the equipment funded by CIFCL.

Education for visually impaired persons:

As per Tamil Nadu census data from 2011, there are 1,27,405 visually impaired people in Tamil Nadu and over 2,000 visually impaired¹ students in the state. WORTH digitization, a unit of WORTH Trust, has been producing books for the visually impaired for the last nine years to meet the needs of the visually impaired.

The WORTH digitization unit of WORTH Trust was operating the braille production of books with only one Embosser Index Braille V4 which was an out of date model thereby causing frequent breakdowns. It used to take a lot of time for servicing the machine due to the non-availability of spares and qualified/trained technicians. The Unit was not able to meet the demands of the consumers with reliance on only one outdated machine. The new Index Braille Box V5 was installed in October 2021 and till March 2022 it has printed 663 volumes/books which is 74,038 braille pages. The new braille Embosser has also reduced the cost of production as there are no breakdowns.



Figure 8 New Index Braille Box V5

Food waste to energy treatment plant: The biogas plant has substantially reduced the expenditure on LPG cylinders since its installation. The Field team saw a log book that maintains the records of the food waste every day and the hours for which gas is used after production. The gas book of the Centre revealed that the center is buying one cylinder in 2 months as against 2 cylinders monthly.

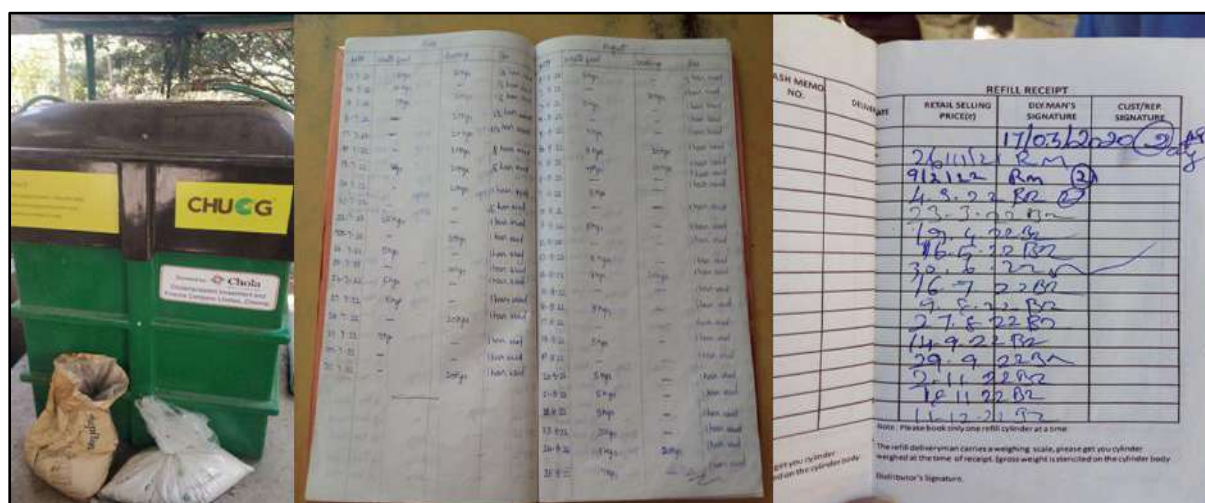


Figure 9 CHUGG 35 Food waste to energy treatment plant, logbook for daily food waste and LPG gas receipt.

¹ <https://twocircles.net/2021nov11/444087.html>

School Bus for intellectually challenged persons:

The school bus is a huge attraction for the parents of intellectually challenged children to visit the Centre and undergo training from the various expert trainers at the Day Care Centre. Currently, 2 trips are undertaken by bus daily to ferry the parents and children to the Day care center. Based on our discussions with a few parents, they revealed that they are unable to visit the Centre daily as the bus runs full.



Figure 10 New school bus with students and parents

Quotes from parents:

Conversations with parents of intellectually challenged children revealed their gratitude for the provision of the bus.

“Providing this bus saves me time as I would otherwise have to change two buses to come to the Centre”.

“This is really helpful as I have to carry my child from home to the Centre; I get a seat for myself and my child till the Centre is reached.”

“My child sees known faces on the bus ride and it keeps him happy to meet other children that he knows.”

5.5 Sustainability

The following findings ensure the sustainability of the projects:

- Well-maintained systems by WORTH Trust - There is periodic maintenance undertaken for the school bus, biogas plant, and Braille embosser machine.
- Dedicated staff - The staff operating the school bus, biogas plant, and Braille embosser machine are very dedicated and have been working with WORTH Trust for multiple years.
- The school bus, biogas plant, and Braille embosser machine are maintained on the WORTH Trust premises and are not likely to be shifted causing wear and tear to the machines.

6. Conclusion

There were three projects of the WORTH Trust that were sponsored by CIFCL in the financial year 2020-2021. A braille embosser machine for the education of visually challenged persons, a food waste-to-energy treatment plant, and a school bus for intellectually challenged persons. People with intellectual and visual disabilities can live meaningful, satisfying, and productive lives, within their own communities, when they are provided with adequate facilities. The project was taken up to provide facilities to differently-abled people and the targeted beneficiaries have well used the service.

Best Practices:

- The books produced by the braille embosser machine are made available to the teachers and students, and public libraries run by the government have braille sections at subsidized rates which only includes the cost of the braille paper.
- Effective utilization of waste for the production of renewable energy production. The food waste and cow dung is processed in the biogas plant to produce LPG gas and the leftover slurry is used as manure for the garden.
- Increased accessibility for intellectually challenged persons to reach the activity center where they can learn their daily living skills, academics, pre-vocational and vocational skills.

Challenges:

- The capacity of the current energy treatment plant installed is 35kgs only, however, the daily wastage of food at WORTH center is around 50 kgs.
- Nonavailability of trained technicians or spare parts for the braille machine in case of breakdown leads to loss due to shut down.
- Parents of the intellectually challenged have to use the bus on a rotational basis. There is only one 39-seater bus and the intellectually challenged people come with their parents.

7. Recommendations

WORTH Trust is an organisation that helps differently-abled people through various interventions such as training, education, early intervention center, and employment. In line with the objective of assisting differently-abled persons and removing any barriers to their development, we recommend some points to overcome their challenges which are:

- Installation of one more food waste to an energy treatment plant or one with a higher capacity to cater to the food wastage generated in the unit.
- Purchase of one more bus for the travel of the intellectually challenged and hearing and speech impaired may help to provide adequate space for all.

Impact Assessment Report

Swaccha Telangana

Project Phase IV

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March 2023

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Acknowledgement

We are thankful to the villagers, Water Committees of 5 villages and Panchayat members who participated and shared their opinions and provided necessary evidence during the Impact Assessment process. Our hearty gratitude to the Bala Vikasa Social Service Society representatives who organised all field visits as per the plan.

We thank the key officials of the Chola mandalam Investment and Finance Company Limited (CIFCL) who engaged us to assess the impact of the “Swachh Telangana Project - Phase IV” which involved the support to arrange purified drinking water through Any Time Water(ATW) using Ultra Filtration or Reverse Osmosis System in 17 villages of Telangana.

We also thank all the team members of Chrysalis Services who put all the information together to prepare the Impact Assessment report.

Affirmation

We affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment, and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

The Bala Vikasa Social Service Society is a non-profit organisation that has been providing health, education, livelihoods, and natural resource management in the rural community since 1970. The organisation practices the Community Driven Development approach to empower rural communities in India to become self-reliant. Their approach involves working closely with local communities to identify their unique needs and priorities, and to develop sustainable programs that provide long-term solutions. Their efforts have impacted millions of people in rural India by improving access to essential services and resources.

Poor water quality in India due to fluoride content, high minerals, and high TDS levels in groundwater leads to waterborne diseases and health problems such as fluorosis, anaemia, skin lesions, and neurological damage. Around 25 million people in India are presently affected by fluorosis and 66 million are at risk of developing it. A recent study conducted by the Central Ground Water Board in Telangana indicates that most of the districts have higher than permissible limits of TDS and fluoride content in groundwater. To overcome this issue, this project seeks to ensure clean drinking water which is free from harmful contaminants and safe for human consumption.

An Impact Assessment field visit was conducted on 13th and 14th February 2023 of 5 villages to gauge the impact created by the CIFCL supported project. CIFCL supported efforts to arrange purified drinking water for people by providing “Any Time Water” (ATW) with UF or RO filters. This project ensured clean drinking water for 17 villages in Telangana. The duration of the project was from June 2021 to March 2022.

During the impact assessment of the project, Chrysalis Services Private Limited (Chrysalis Services) followed the OECD criteria, ensuring that the assessment covered the project's relevance, efficiency, effectiveness, impact and sustainability.

The project was found effective due to its community contribution, improved water quality, access to safe drinking water, cost-effectiveness, and resource mobilisation. The project had significant impacts on rural communities, including a reduction in water-borne diseases, time saved on water collection, and income generation for the development of the village. It is also found to be providing an alternative source of clean water to communities that were unable to access safe drinking water previously.

The implementing partner set up a water committee consisting of the villagers. This committee takes care of any issues with the working of the ATW machine in villages. The project had been logically designed and technically implemented. The service has been well used by the targeted beneficiaries.

The program's outcomes demonstrate its exceptional effectiveness and efficiency in providing clean drinking water. Therefore, it is recommended that the program should be continued to ensure that more people receive clean drinking water which is a basic necessity for human survival.

2. Introduction

Bala Vikasa Social Service Society(BVSSS) is a non-profit organisation that is committed to Community Driven Development (CDD). It was founded in Warangal in the year 1991 by Singareddy Bala Theresa Gingras and her husband, Andre Gingras. The organisation's main goal is to empower communities to become self-reliant and take charge of their development.

In the last 31 years, BVSSS has empowered millions of people in rural communities to lead their development through Community-Driven Development programs. They work closely with local communities to identify their needs and priorities, and then develop sustainable programs and projects focused on areas such as health, education, livelihoods, and natural resource management. They believe community participation is key to success, and all projects have a significant participation and beneficiary contribution component to instill collective responsibility and community ownership. Every project is monitored and evaluated using a well-conceptualised Performance Measurement Framework. Programs are designed to be sustainable and are focused on long-term solutions rather than short-term fixes.

The BVSSS Community Water Purification Plants is a unique initiative designed to provide safe drinking water to communities severely affected by fluoride content and hard water. They address this issue in 5 states of India - Telangana, Andhra Pradesh, Maharashtra, Karnataka, and Chhattisgarh. This initiative has benefited about 2 million people by providing them with access to RO purified water at a nominal cost of Rs. 5 for 20 litres, using Any Time Water Prepaid Cards. The initiative is based on a unique innovation that ensures round-the-clock access, transparency, and accountability in water distribution. The ultimate goal of the project is to provide purified drinking water facilities to people in the target villages, improve their health and well-being, and promote the sustainable use of water resources.



Figure 1 - Any Time Water machine in Adilabad

3. Program Overview

3.1 Impact Assessment background

It is estimated that waterborne diseases have an economic burden of approximately USD 600 million a year in India¹. Fluoride, high minerals, and high total dissolved solids (TDS) are major concerns for

¹ <https://www.unicef.org/india/what-we-do/clean-drinking-water>

water quality in India. In India, approximately 25 million people are presently affected by fluorosis and 66 million are at risk of developing fluorosis², a condition caused by long-term exposure to high levels of fluoride in drinking water, which leads to skeletal and dental fluorosis. High levels of minerals such as iron, arsenic, and manganese have also been found in many parts of India, leading to health problems such as anaemia, skin lesions, and neurological damage. Many studies found that TDS levels in groundwater in many parts of the country were higher than the permissible limit set by the Bureau of Indian Standards (BIS), indicating poor water quality. High TDS levels can cause gastrointestinal diseases and other health problems. Clear water is necessary to avoid these health hazards, and access to safe drinking water is a basic human right. Therefore, it is important to take necessary measures to ensure that drinking water is free from harmful contaminants and is safe for human consumption.

In May 2021, a study was done by the Central Ground Water Board (CGWB)³ on 1233 groundwater samples, collected from various locations in Telangana. Analysis of the samples showed that 3.16% exceeded the permissible limit of Total Dissolved Solids (TDS), while less than 1% exceeded the permissible limit in chloride. Nitrate levels exceeded the BIS permissible value in 40% of samples, indicating anthropogenic contamination. Fluoride concentrations varied from 0.01-13.90 mg/L, and 15% of samples exceeded the permissible limit. Hence, it is necessary to have clear water to avoid the health risks associated with high levels of fluoride, high minerals, and high TDS in groundwater.

During 2021-2022, BVSSS implemented the fourth phase of the "Swaccha Telangana Project" in Telangana State, India. The project's primary objective was to supply clean drinking water to 17 villages that had high levels of fluoride and poor Total Dissolved Solids (TDS) quality. The project is in alignment with India's "Swachh Bharat" initiative, which aims to enhance public health by enabling access to clean water. Installing water purification facilities in these villages was a critical aspect of the project's implementation.



Figure 2 - Villagers near ATW machine

The main objectives of the project are:

- To provide clean drinking water to the people living in the target 17 villages by setting up Ultrafiltration (UF) plants and Reverse Osmosis (RO) systems and provide 'Any Time Water' (ATW) facilities to the people living in these areas.
- The project aimed to promote the sustainable use of water resources while improving the health and well-being of the local community.
- The project also involved regular water quality testing and monitoring, as well as community awareness programs highlighting the importance of clean water and sanitation.

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5664902/>

³ http://cgwb.gov.in/Regions/SR/Reports/GWYB_2022_Telangana.pdf

- This project was implemented in these villages with the cooperation and collaboration of both the local communities and the Bal Vikas society.

CIFCL Project details

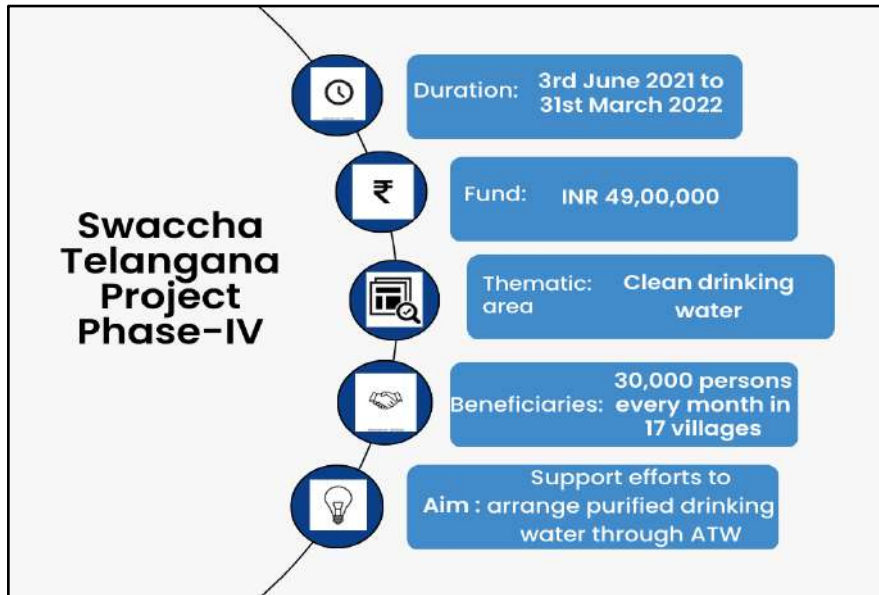


Figure 3 - Project details of Swaccha Telangana Phase- IV

3.2 Context

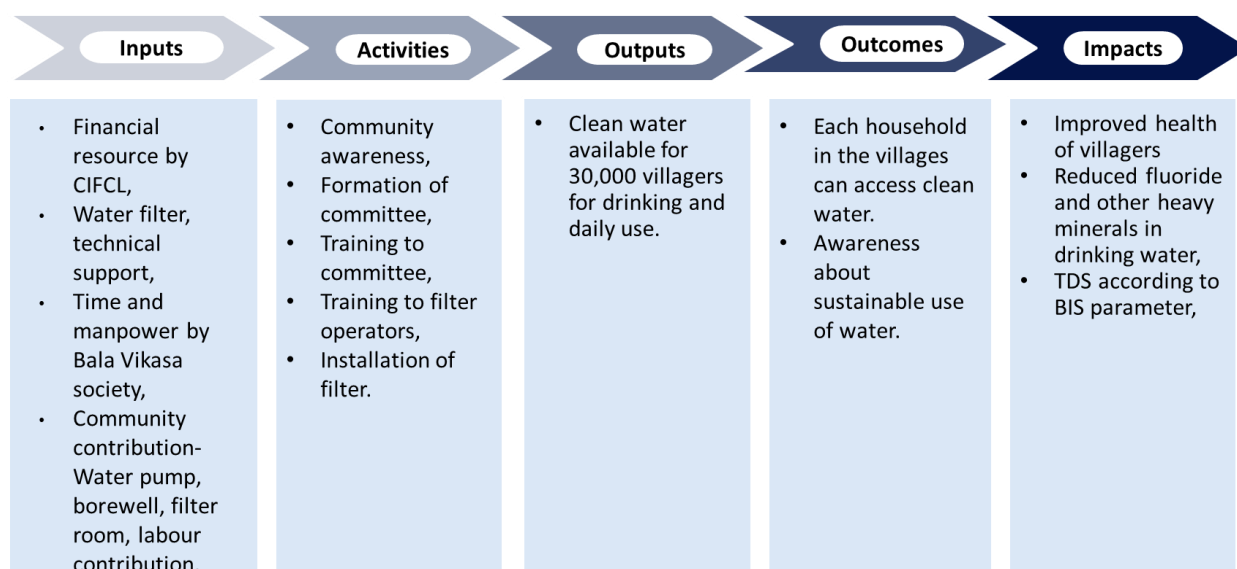
Cholamandalam Investment and Finance Company Ltd. (CIFCL), in alignment with the national objective of providing clean drinking water to all citizens, partnered with BVSSS, an implementing NGO, to undertake a significant initiative as part of their corporate social responsibility. This initiative aims to provide clean drinking water facilities for 5248 families in 17 villages in Telangana, comprising rural and tribal communities who are experiencing health issues due to the low quality of groundwater available for consumption.

Location: Project was implemented in 17 villages- Tosham, Kogdhur, Ankoli, Taroda, Bheempur, Marlavai, Jamgaon, Machareddy, Kothapalli, Sonkas, Gandhinagar, Kobbai, Burnapur, Venkatapur, Gollapally, Komal, Ponnari of 6 districts - Adilabad, K.B.Asifabad, Kamareddy, Nizamabad, Medak and Nirmal districts of Telangana state.



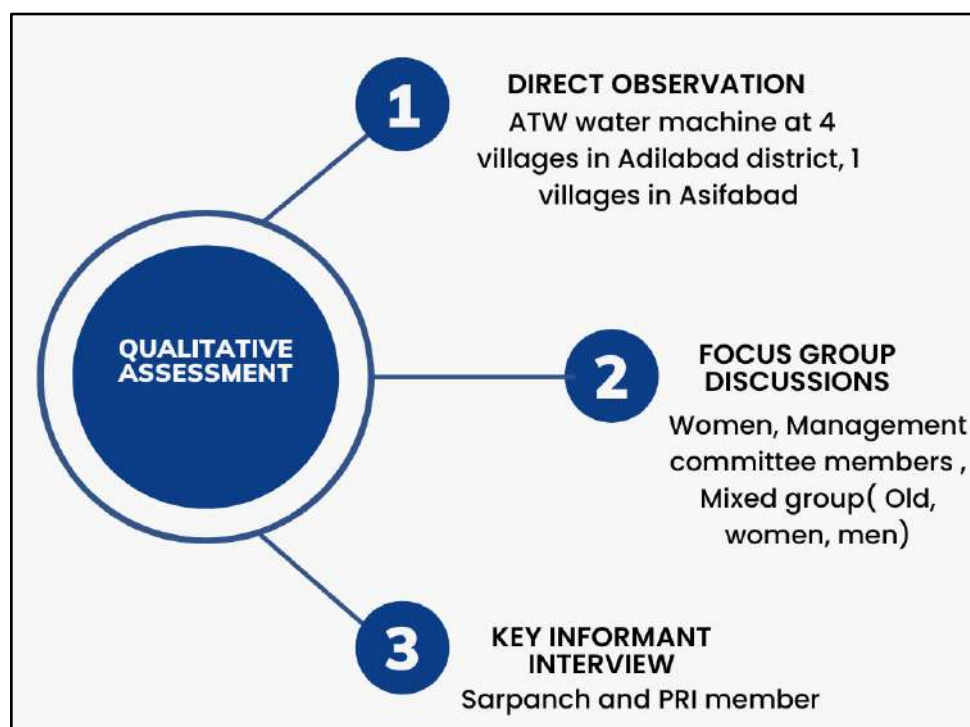
Figure 4 - Location of 6 districts where Phase- IV has been implemented

Impact Map:



4. Methodology

The impact evaluation included qualitative assessment in 5 villages. It includes conducting focus group discussions (FGDs) with villagers, committee members and mandal level officials. The evidence provided by the implementing partner was cross-checked with the responses obtained from FGD participants. In addition, the functionality of the installed Any time water machine and proper working of filters were observed.



5. Analysis and Finding

5.1 Relevance

Relevance in terms of addressing the issue: As per the Central Ground Water Board, it was declared that there is a presence of hardness and fluoride in the water in the areas of Adilabad and Asifabad. The water quality is unsatisfactory to drink. It was revealed from the FGDs with the villagers that there were issues of dental fluorosis, skeletal fluorosis, kidney stones, and digestive issues.

The government report ([open_record_view.php\(telangana.gov.in\)](https://open_record_view.php(telangana.gov.in))) says that there is a fluctuation in groundwater levels due to inadequate rainfall. Despite the initiation of Mission Bhagiratha, there is a scarcity of drinking water in these districts. It was found that there was a failure of borewells in the village areas. The implementation of the Swaccha Telangana project was relevant to address the issue of safe drinking water as earlier people were bringing water from long distances (more than 6kms) and drinking water from open wells.

Relevance in terms of selection of the villages: BVSSS has worked in this area for more than a decade and implemented activities related to working on drinking water for a decade in the area of Telangana State. The people of Kogdhur, Ponnari, Sonkas, Bheempur and Jamgaon had requested the district collector to intervene in safe drinking water in their villages. Since the District collector was aware of Bala Vikasa's efforts for this intervention, he suggested to the villagers to approach BVSSS. The BVSSS team consulted the District Collector after the request was raised from the villagers to conduct the feasibility study in those villages. The villages were selected as per the feasibility report. The people of these villages were fetching water from the open wells which were not safe for drinking.

Relevance in terms of need and willingness of the people: The BVSSS began its process by initiating a meeting with all the representatives of these villages.

These villagers expressed their willingness to collaborate with BVSSS after seeing the results of the other projects related to drinking water in the neighbouring villages. The intervention of ATW is relevant to the context as the urgent need for the people of the selected villages was to overcome the safe drinking water issue.

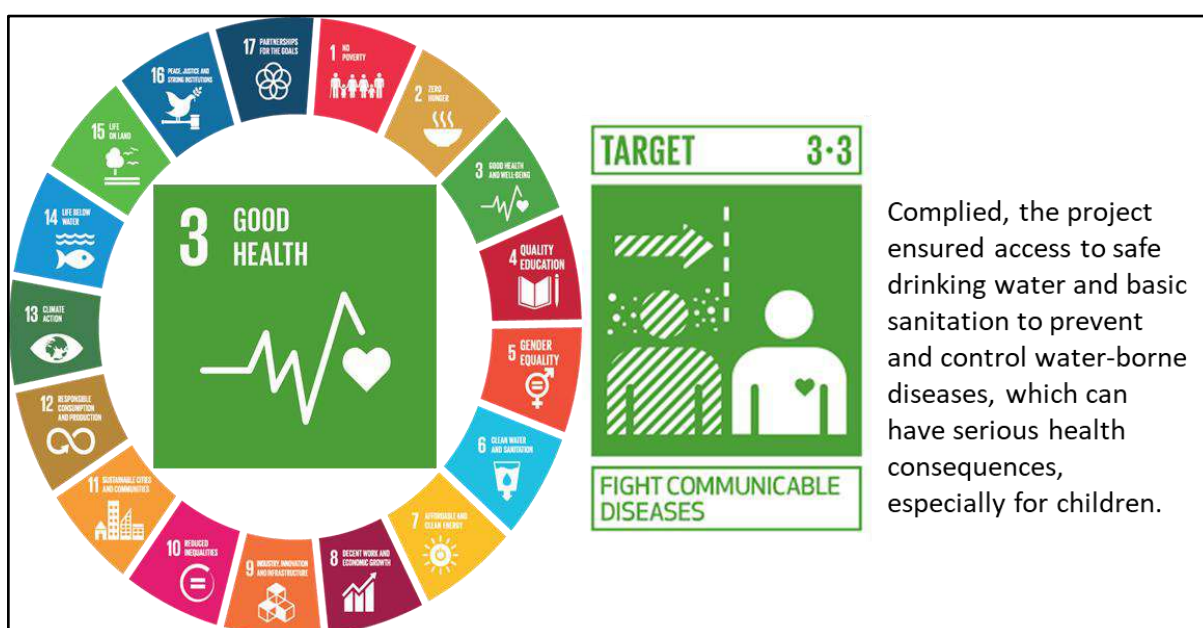
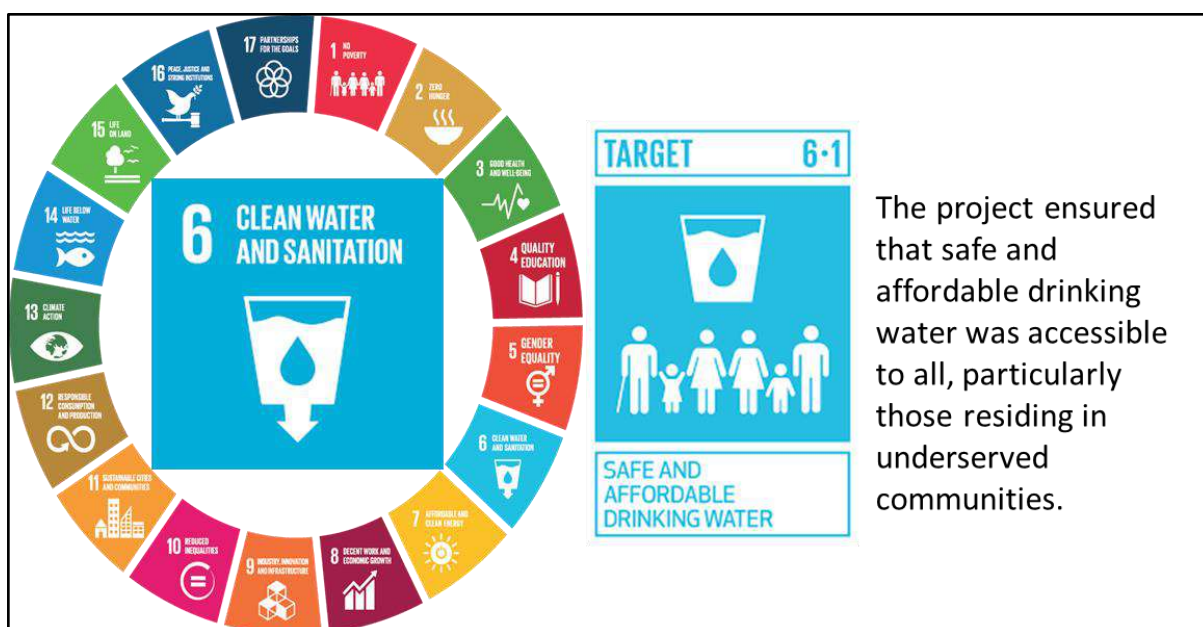
Relevance in terms of ensuring good health: The ATW project design is appropriate as there is complete ownership and high participation of the respective community. The initiation of ATW is helpful for people to access safe drinking water which has significantly improved public health by reducing the spread of water-borne diseases such as cholera, typhoid, and dysentery which was shared by the ATW beneficiaries in the FGD. This has been helpful to reduce healthcare costs and improve productivity.

Relevance in terms of reducing financial burden: The ATW project is relevant as it also has significant economic benefits by promoting better health, reducing healthcare costs, and improving productivity. This has led to partial income generation for one or two persons engaged as ATW operators. They get a monthly technical charge and at the same time, the committee has generated

an amount through this initiative. The committees have a financial balance of Rs. 2000/- as minimum and Rs.60000/- as maximum.

Relevant in terms of protecting human rights: Access to safe drinking water is a basic human right. The ATW project has protected this right by helping women to get safe water at their doorstep. This project has ensured that all people regardless of caste, creed, and colour have access to Safe drinking water.

Linkage to Sustainable Development Goals



5.2 Effectiveness

The effectiveness of the ATW project was assessed based on its ability to achieve its intended goals and objectives. The following factors were noted from the field visit that determines the effectiveness of the ATW project.

Excellent Community contribution: As per the design of the project, the shelter, borewell, and motor need to be arranged by the village. The total cost of a single ATW setup is Rs. 7,50,000/- out of which the CICFL assistance was Rs.2,50,000/-. As part of the community contribution, the community arranged the room for the filter and borewell with a water pump.

It was explored that in the Bheempur community, the bus passenger waiting shed has been converted to a filtration room whereas in Jamgaon village of Asifabad, the Sarapanch has converted his own office for filtration room and he sits outside of the panchayat office. In Sonkas village the community store room has been moulded as a filtration room whereas in Ponari village there was an old water supply system that was constructed in the year 1963. However, the salt content was high in the water. The Ponari Panchayat has donated a room for the ATW project and the Sarapanch has donated 1 lakh for this project. Though there is another source of drinking water in Ponari village, the villagers like to drink ATW water as it is safe and filtered.



Figure 5 -Bus waiting shed converted into filter area



Figure 6 - Filters installed in the Bus waiting shed

STEPS FOLLOWED TO INSTALL ANY TIME WATER PLANT



Improved water quality: The primary goal of the ATW project is to provide sufficient quantities of water with improved water quality and reduce the risk of water-borne diseases. As per the BVSSS representative, the water of the target area had the presence of hardness and Fluoride.

Another important goal of the ATW project is to provide access to safe drinking water to the target population. The ATW is effective as there is evidence that the villages like Sonkas provide 10 Jars (20 litre each jar) of water for school children. In Bheempur, the committee supplies water to the tribal people who do not have access to drinking water and no money to purchase water daily. The ATW project is effective as it has saved the time of fetching water. Earlier people used to bring water from 6 to 7 kilometres distance.

5.3 Efficiency

The objective of the project is to support efforts to arrange purified water for the villagers by Any Time Water with more ultrafiltration. The project has been executed cost-effectively.

Budget Utilisation and resource mobilisation:

The interest of the villagers was well mobilised and there was full cooperation from the village. High participation was obtained from the community and the allocated budget for the project has been utilised appropriately. The implementing partner BVSSS has adopted the community-based idea as the groundwork of the project was initiated by the community. They have provided all technical support. Apart from the village operator looking after the plan, the implementing partner has appointed a technical staff whose primary job is to provide paid service to all the ATWs.



Figure 7 - Jamgaon sarpanch room converted to filter plant

The capacity of Any Time Water plants: There is evidence that the ATWs are supplying a minimum of 150 jars to 600 jars in a day. As per the information collected from different ATWs, in most of the ATWs, daily 2 times water is pumped which takes 2 hours whereas in Bheempur ATW it takes 5 hours daily to pump the water for filtration. As per the size of the supply, the ATWs were installed with 500 litres, 1000 litres, and 2000 lifters water containers in the filtration plant. It was observed that the ATWs are functional 24 X 7.

ATW card for each household: Every household is with an ATW card and the Filtration plants are fully sensor-enabled. The cards need to be recharged before fetching water. There is a recharge machine in every plant and there is a mobile-based App to recharge the ATW card. The monthly financial statement is retrieved from the machine and the total amount is submitted to the Village Committee by the filter operator.



Figure 8 - ATW card recharge machine

5.4 Impact

The ATW project has a significant impact on rural communities, where access to clean water is often limited. Here are some of the impacts that the ATW has created on the rural life of the Adilabad and Asifabad districts.

The exercise "Tree of Change" was conducted with the committee members of Jamgaon village. In the exercise, it was mentioned that the fruits are the changes that occurred due to the initiation of ATW and the birds are the threats that may destroy the changes. The committee members mentioned that due to the ATW project, the

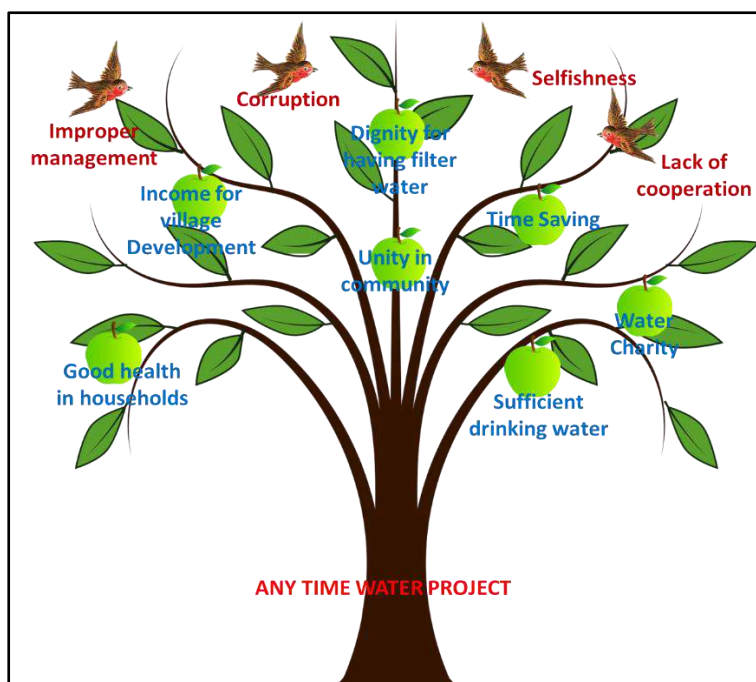


Figure 9 - Any time water project impacts

committee has income that is being used for the development of the village. It was observed that the people of Jamgaon feel that the ATW has restored their health as they are drinking filtered water. Earlier people used to travel a long distance to collect water. However, now they save time and use it for productive purposes. Few communities are at the foot of the jungle and the people of that area are not able to access safe drinking water. As per the Swachha Telangana project, the villages where a minimum of 200 households are available, those villages are eligible to set up a water filter plant. In this case, the committee members are doing water charity by sending water to those communities.

Improved household health: According to the villagers, the ATW project significantly improved the health of rural communities by reducing the incidences of water-borne diseases such as cholera, typhoid, and dysentery. It was captured from the participants that filtered water is helpful for *dal* preparation which ensures nutrition for children. This can lead to a reduction in healthcare costs, fewer missed work or school days due to illness, and an increase in productivity.

Economic benefits: The ATW project has significant economic benefits for rural communities by promoting better health, reducing healthcare costs, and improving productivity. This has led to the creation of jobs as at least 2 to 3 people have been engaged to maintain the plant and increased economic growth in the community. It was checked that there was a minimum of Rs. 2500/- and a maximum of up to Rs. 50000/- balance in the committee accounts. The committee members of Jamgaon shared that the saving of the drinking water will be used for their children's education. Earlier they were purchasing 20 litres of water for Rs.30/- excluding the transportation charge whereas now they get the same at Rs.5/-.

Increased access to education: It was noted by the children and the parents in all the selected villages that, earlier children used to wait for the water supplier to come to their villages, and in a few villages, they used to travel far away to fetch water. Due to the water collection time, many times children dropped schooling. However, the ATW created less burden on adolescent girls to fetch water.

Environmental benefits: The ATW project is relevant as it also has positive environmental benefits by reducing pollution and protecting natural water sources. This is preserving the ecosystems and promoting sustainable development. It was seen in all the villages that there were soak pits to manage the wastewater due to which the whole village is clean and there is no water stagnation.

Social equality and unity in the communities: The ATW helped to promote social equality by providing access to safe drinking water to marginalized communities. It has created good social cohesion and reduced inequalities in the community. It was noted from the FGD with Bheempur Gram Vikas Society's members and villagers that they supply free water to the tribal people who are not able to access safe drinking water. It was marked that due to the ATW project, there is no caste discrimination as all are drinking water from the same place.

Impact Assessment using Ten Seed Method

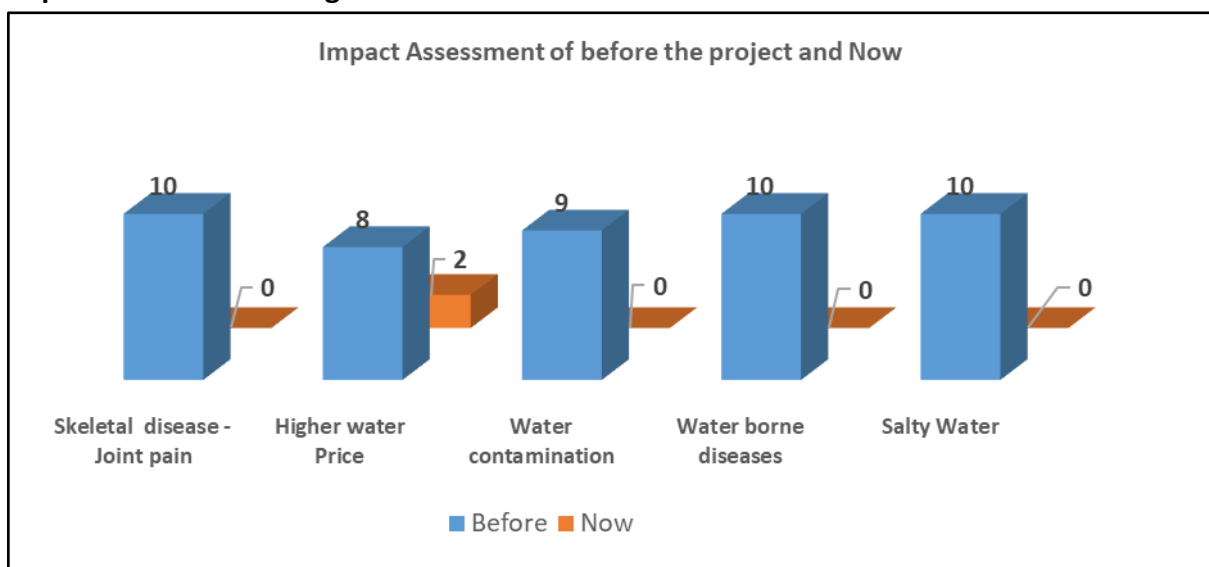


Figure 10 - Impact: before the project and now

An exercise was conducted among the villagers of Ponnari village. The ten-seed method focused on the problems related to water and how the project impacted those problems. The Swachha Telangana project has addressed all the issues which were explained by the participants during the exercise. There were 23 villagers including women who participated in the exercise and the voting was considered as per the collective decision of the participants.

Case study of a Model Village Development Committee:

Bheempur is one of the backward villages in Asifabad which is inhabited by more than 400 households. Most of the people are agrarian and depend on a daily wage. Seasonal migration

was frequent in this village due to the limitation in livelihood.

The village is surrounded by forest and most of the families also depend on the forest product for their livelihood. The people were drinking water from the stream and unsafe open wells. The open wells would dry up by the beginning of the summer. They used to travel 7 to 8 kilometres to purchase water. On the other hand, government servants such as Doctors, Welfare officers, Zilla Parishad, DRDO, ATWO, teachers, and VAS coined the idea of the formation of the Village Development committee. The safe drinking ATW project has brought many changes in the village. The villagers also show respect for domestic animals in terms of drinking water. As there is sufficient safe drinking available in the village, they have constructed a manger for the domestic animals, so that the animals should not be deprived of water. The Bheempur village development committee has decided to collect a contribution from all the government servants and those who are abroad to educate the children of the village. According to the key leaders of the committee, the ATW project is a vital factor for unity in the village. Because of the ATW project, there is no discrimination in the village as all fetch water from the same place. The committee has also decided to give free water to disabled households where there are only old people who cannot collect water from the ATW.

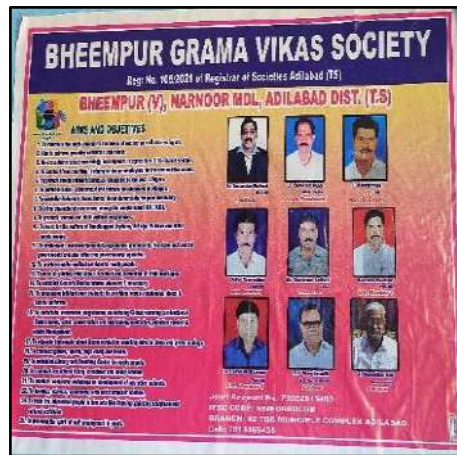


Figure 11 - Adilabad management committee



Figure 12 - Water resource for animals

5.5 Sustainability

Usage and maintenance of ATW: It was revealed by the BVSSS representative that most of the time rural people hesitate to drink filtered water. The representatives thus created awareness among the villagers about the benefits of consuming filtered water and took assurance from them that they will consume the filtered water after ATW is installed.

The water management committees in every village are monitoring that every household of their respective villages is drinking the water.

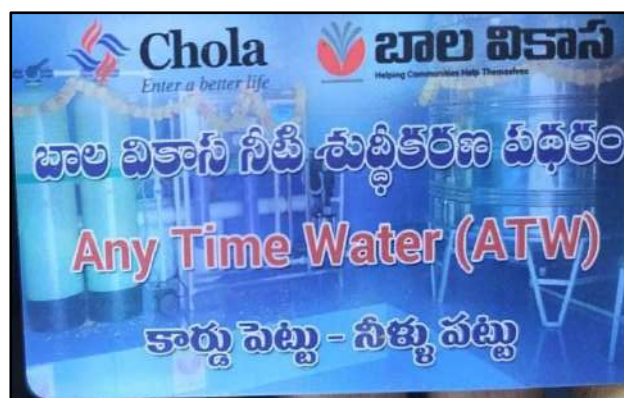


Figure 13 - ATW card

Though sustainability is a crucial aspect of safe drinking water projects, it was ensured that the villages have the willingness and capability to maintain it further. It was noted that they have appointed a technician to monitor the plants even after handing over the plan to the committee. The Technician is being paid Rs.300/- per month per plant from each ATW village. He monitors 23 to 24 plants in a month.

Financial sustainability: As per the field observation, the ATW needs financial stability in the committee to run the plant. There is a need to change the filter regularly every month for which there is a need for financial balance in the committee. In every village, there is a cash balance to take care of the maintenance of the ATW plants. It was evident that they can cover the costs of operation and maintenance over the long term. This was found in the communities that have a monthly collection (Rs.20/- as minimum) from each household apart from the income from ATW.

Environmental sustainability: Safe drinking water through ATW is environmentally sustainable, which means, it has no negative impact on the environment. It was observed in the village Ponnari that the panchayat has dug a pond and water-recharging body to recharge the borewell from where the water comes to the plant for filtration. They have used the same water storage tank which has existed since 1963 in their village. In Jangaon village, it was observed that a proper soak pit was made for the wastewater which is beneficial for recharging the kitchen garden. All the visited ATWs were well maintained and there were no stagnant water bodies found outside due to the ATW.

Social sustainability: The Swachha Telangana Project meets the needs of the target population and promotes social inclusion through ATW initiation. This is proved through community participation in project planning and implementation, as well as through the involvement of local stakeholders and the promotion of gender equality. The village committees are not only managing the ATW but also taking care of all other social issues.

Technical sustainability: There are operators to operate the ATW in every village and they are trained by BVSSS. Apart from this, there is a local technical person deployed by BVSSS who looks after all the technical solutions across all the plants. In the villages visited, there was no such plant that was not functioning and the people were confident to run it without any external help.

Institutional sustainability: This project has been supported by the local government and other stakeholders like Sarapanch and other government servants of the villages. There are appropriate institutional arrangements for project management and operation. In every village, the Grama Vikasa committees are found to be very active to manage the whole plant. There is strong unity found in every village and support for each other having been bound in a common cause.

6. Conclusion

The Swachha Telangana project has achieved its objective as it has been compared with the evidence and found appropriate for the context of the targeted area. The process followed for the initiation of the project is logical.

Best Practices:

- There is excellent unity among the villagers and there is the presence of strong and active Committees as they have readiness for financial aspects for the continuity of the project.
- No villagers are drinking other water since the filtration plant was installed in their villages. They also use the water for cooking purposes.
- The culture of water charity for the financially weaker section has been adopted by the committees which shows caring for others and building social cohesion.
- Providing technical support for one year by the Implementing Partner even after the handing over of the project to the villagers has created trust among villagers.

7. Recommendation

Swaccha Telangana project Phase-IV ensured the availability of clean and safe drinking water 24 hours in 17 Villages. These villages however face some challenges, to overcome them we have given the following recommendations:

- There are small hamlets that do not fall into the criteria to avail water from the ATW plant and are thus deprived of safe drinking water or travel a long way to get the safe water. There is a need for ATW plants that can be installed by clustering two to three villages as per the household criteria for the project.
- The committees that have no bank account need to approach Banks for an account so that the mobile technology can be connected to the bank account for recharge and there will be transparency in the documentation.

Impact Assessment Report

3 Projects of Nature Conservation Foundation

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We would like to extend our special thanks to all the respondents and the beneficiaries of the three programs, who accommodated our request and participated in the various discussions thus enabling us to collect the required evidence for the study.

We would like to express our gratitude to and appreciation to the Implementing partner Nature Conservation Foundation (NCF) whose inputs have made it possible to complete the report. This study would not have been possible without their cooperation and facilitation of interactions with the beneficiaries.

We would like to express our gratitude to the leadership and team at Cholamandalam Investment Finance Company Limited (CIFCL) who trusted us with the project and guided us with all the initial discussions. Their continuous encouragement and patience have been a great morale to us through the implementation of the study.

Affirmation

We are proud to affirm the findings of this Impact Assessment report. The data and analysis presented within demonstrate a deep understanding of the project's objectives and their impact on the target population. The report provides valuable insights that will help guide future decision-making and ensure the continued success and sustainability of the project. We commend the team responsible for this comprehensive and thoughtful assessment and are confident that its recommendations will lead to positive outcomes for all stakeholders involved.

1. Executive Summary

Cholamandalam Investment Finance Company Limited (CIFCL) in its CSR efforts has tried to strike a balance between environmental protection and social imperatives. One such initiative was implemented through their partner Nature Conservation Foundation(NCF). Started in 1996 as a public charitable trust, The Nature Conservation Foundation (NCF) was established with the overarching goal to protect and conserve the natural environment, in particular the preservation of wildlife and wild places in India. CIFCL supported three projects by NCF in the FY 2021-22. The three were the Elephant project at Valparai, the High altitude program at Spiti, and the Oceans and Coasts program (OCP) in Lakshadweep. To evaluate the impact of these initiatives and understand further the needs and aspirations of the beneficiaries, an Impact assessment study was solicited. Chrysalis Services (Chrysalis Services) was empanelled to conduct the study that was supported in FY 21-22.

The process began with initial meetings with the CIFCL teams and implementing partner NCF. The team reviewed documents and data provided by NCF to recognize the objective and impact generated by the programs. Documents reviewed included the MoA signed with CIFCL for the projects, monitoring reports by the implementing partners, audited utilization certificates, and any other supporting documents. The team then planned the field visits and conducted stakeholder interactions in liaison with NCF. The team followed OECD criteria to review the impact of the program. For the Impact assessment, the team chose a mixed methodology research tool that included direct field observations, Key Informant Interviews (KIIs), and beneficiary interviews.

The study revealed that the projects undertaken by NCF, had multiple interventions targeting the conservation efforts of the landscape they work in. The objectives laid out by the Implementing partner at the start of the funding period had been accomplished and there was a positive impact seen in their programs. All the projects efficiently utilized the inputs (funds, expertise, time, etc.) to achieve the intervention outcomes. This report presents the results of an impact assessment study conducted for Nature Conservation Foundations programs. CIFCL supported and funded the project with a total of Rs 52,43,352/- in FY 21-22 for the duration from 1st June 2021 to 31st March 2022. While the elephant program in Valparai has been funded for one year, both the High altitude program in Spiti and Oceans and Coasts program is being supported for three years starting 2021 to 2024.

Elephant program in Valparai

The field visit to Valparai was conducted on the 7th and the 8th of February 2023. The objective with which NCF set out with this intervention was to introduce early warning signals to individuals thereby creating a safer zone for people and elephants and promoting their co-existence. A mobile phone-based technology intervention was introduced in 2011. As a part of the project for FY 21-22, it was seen that additional 305 subscribers had enrolled in the program and this showed that there was an increase in subscriptions year on year. There had been no Human-elephant conflict(HEC) in the said year and the program has been able to deliver a satisfactory impact.

After the implementation of the program, it was seen that there were nil human-elephant encounters, thus creating a safer zone for both. The installation of beacon lights was yet another intervention that helped in the mitigation of HEC. The project had been logically designed to the needs of the beneficiary

and the terrain involved. Hence it is a highly relevant program. NCF in collaboration with managers of the tea estates periodically conduct awareness programs.

The model today works as an epitome for other places with identical terrains facing similar issues.

High altitude program in Spiti

The field visit was conducted on 8th March 2023. The objective of the high altitude program was to make possible a reasoned reconciliation between human society and wild nature, using science-based and socially-responsible nature conservation programs and policies. Multiple programs were introduced that involved the local community's support in implementation. Through our field visit, we understood that Livestock Insurance intervention was introduced in three villages across Spiti valley in FY 21-22. This benefitted over 38 households. The livestock is safer post-intervention and the community has decreased financial burden owing to livestock loss. Introducing crop guards in six villages in FY 21-22, ensuring that the agricultural produce was safer from damages caused by wild herbivores/livestock grazing in the fields. Free grazing reserve was an effort started in 1998 toward the conservation of wild animals in the landscape. Through community involvement, specified landscapes were identified. NCF entered into an agreement with the community to allow a certain percentage of land for free grazing by wild animals. This has not only helped the land become habitable for the wild but there has also been an increase in the number of wild animals in the landscape making it a sustainable habitat for the wild. The monetary compensation received through the program, by the community has helped them invest the same into various religious and cultural activities thus enabling socio-economic development. The community corral built in FY 21-22 has kept the livestock safer from predator kills. The design of the corral was technically sound and the end product has been well used by the village community in Langza. The programs are managed by the village committee and monitored by the NCF team.

Oceans and Coasts Program

Since time immemorial, human activities have been the main driver of climate change. The repercussions of climate change now include increased global temperatures, intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting of polar ice caps, catastrophic storms, and declining biodiversity. Specific to declining biodiversity, the intensity of fisheries on the high seas and the reefs have had severe impacts on the marine environment. This calls for effective measures to ensure that exploitation through fishing does not compromise the commitments established for protecting biodiversity in the deep ocean by the United Nations. In its efforts to protect the above, NCF set out with a focus on monitoring these changes through research and analysis. Their area of focus is Lakshadweep. While most of the fieldwork is being done in the islands itself, some laboratory-based research work is being done at the National Centre for Biological Sciences (NCBS), Bangalore.

The objective was to understand the inputs, outcomes, and outputs of the project and its contribution in terms of the impact it had on the objective it set out to achieve. A visit was scheduled to both NCBS and Lakshadweep on 17th March 2023 and 22nd March 2023. While the research scholar took us through the work he has been doing at the lab, relevant stakeholders in the community and the project team at the islands, threw light on their work. Through groundwork on the field and stakeholder

Projects of Nature Conservation Foundation

engagement activities for better awareness, NCF has been striving to make an impact through its program. The assessment indicates that the Oceans and Coasts program has become a hub of knowledge-sharing and research-oriented solution providers to an array of decision-makers. 100% of the respondents belonging to the community were aware of their research and community awareness programs. The key informants in the Government-led departments seconded this. The team has been invited by the Government of Karnataka to provide inputs on the development of a Rapid assessment of the blue economy. Another significant achievement was the presentation of the work on SNP (Single nucleotide polymorphisms) done in the year at the Students Conference on Conservation Science, Cambridge, UK. It was understood that Covid-19 had created issues in getting work permits, report analysis, and submissions, this has been considered and mentioned in the report accordingly. The team has been working for 25 years in the terrain and this speaks a lot about their credibility and the work gone in.

2. Introduction of the Implementing Partner - Nature Conservation Foundation

Started in 1996 as a public charitable trust, The Nature Conservation Foundation (NCF) was established with the overarching goal to protect and conserve the natural environment, in particular the preservation of wildlife and wild places in India. Based in Mysore, NCF experiments with innovative techniques and research methodologies to explore the best options. From coral reefs and tropical rainforests to high-altitude programs in India, NCF has worked in a range of wildlife habitats. They strive to understand the survival needs of endangered species such as snow leopards and elephants, as well as equally fascinating but lesser-known wildlife such as corals and spiders. Their work spans around Western Ghats, Oceans and coasts, high altitude landscapes, and the Eastern Himalayas.

Their research addresses human resource use and its impacts on wild species and ecosystems. They combine wildlife conservation action and strategic policy interventions with rigorous principles of conservation science and forge long-lasting productive partnerships with governmental and non-



Figure 1 - Program details of Nature Conservation Foundation

governmental partners as well as with local communities. They are actively involved in education and public engagement programs, apart from supporting and mentoring the next generation of conservation leaders through their Ph.D. and Conservation Leadership programs. While promoting wildlife conservation, their programs also strive to safeguard livelihood and development options for local communities. They envision a world in which nature and society flourish together. Their mission statement is “exploring, understanding, and conserving the natural world through research and responsible engagement with society”. Aligned to Sustainable Development Goals (SDGs) the Foundation aims to cover a wide spectrum of SDG 14 to conserve and sustainably use the oceans, seas, and marine resources for sustainable development and SDG 15 of protecting Biodiversity and natural habitats.

3. Program Overview- Elephant program in Valparai

3.1 Impact assessment background

Human-elephant conflict is a major concern in India. As per the report published by WWF India, up to 40-50 elephants are killed annually in human-elephant conflicts. Expansion of human settlements and agricultural fields across India has resulted in widespread loss of elephant habitat, degraded forage, reduced landscape connectivity, and a significant decline in elephant populations relative to their historical size and overall range. India has the largest number of wild Asian Elephants, estimated at 29,964 according to the 2017 census by Project Elephant, i.e. about 60% of the species' global population. Frictions between humans and elephants are called Human-Elephant Conflicts (HEC).¹ This occurs mainly over space. Over the past few years, this has become a major conservation concern for governments, conservationists, and people living close to these wild animals. Loss of natural habitat and fragmentation have brought wild elephants closer to human habitations, sparking these conflicts. A few facts about elephants in India,

- Around 22 percent of elephant habitat is found within our protected area network, while the remaining elephant range lies outside, in places now occupied by people.
- The estimated 28,000 wild elephants in India are distributed over about 3% of the country's geographical area.
- The Central and State Governments together spend 10 to 15 crore rupees every year on controlling elephant depredation and paying ex-gratia to affected people.
- 40 – 50 elephants are killed annually while crop-raiding.²

In our densely populated subcontinent, elephants and people share land and resources, leading to frequent and often fatal conflicts. The interface between intensifying agriculture and diminishing elephant range is where most conflict occurs. Most long-term measures require humans to modify their behaviour. Current and future land-use plans need to accommodate elephants.

3.2 Context

The Valparai plateau is a small hill station in the Coimbatore district of Tamil Nadu. It is located on the Annamalai range of hills on the Western Ghats. It also consists of the Annamalai Tiger Reserve. Valparai is surrounded by a 220 sq km area of tea and coffee plantation landscape interweaved with rainforest fragments. This area, originally part of the Annamalai forest, has been occupied by approximately 120 elephants. The tea and coffee estates support the livelihood of around 70,000 residents of Valparai most of whom work in the tea and coffee plantations. It was seen that exploitation of the forests began in the 1800s and surged higher during British rule. The plateau of

1

https://www.panda.org/discover/knowledge_hub/endangered_species/elephants/asian_elephants/areas/issues/elephant_human_conflict/

² <https://www.conservationindia.org/articles/human-elephant-conflict>

Valparai which was an elephant corridor was converted into tea plantations, without the focus being given to the elephants' corridor. Though 40% of the area was supposed to be unmarred, steady encroachment has made this plateau a vulnerable landscape for human-elephant conflict. With an increase in the HEC, there was a need for continual checks and solutions to the issue. The intervention by NCF commenced in 1994, by pondering the needs of humans and elephants. In 2004, the transmission of elephant movements was broadcasted on television. With newer technology in place, the subscribers for the TV network drastically fell. Hence, the messaging system was introduced in 2011.

Due to this conflict-driven region, elephants have often caused the loss of human lives and injuries. The result elicited fear, trauma, and antagonism besides damage to buildings that store food grains and residential places. In Valparai specifically, home to the second-largest Asian elephant population in India, 48 people and 75 elephants have died between 1994-2022, there has been a record of 2736 herd days in FY 2021-22 within the 200 square kilometer area due to these conflicts.



Figure 2 – Map - Coimbatore districts

To curb the issue, NCF has implemented simple, adaptive, participative technology-based interventions which include alerting people over mobile phones. A bulk SMS text and voice calls are sent out to alert the target group on elephant movements. The installation of mobile-operated alert beacons in strategic locations indicates elephant locations and their movements is yet another intervention managed by NCF. These effective measures have been well regarded by the state government departments, plantation companies, and local people in the region.

As a part of the CSR undertakings, CIFCL supported this program that was initiated by NCF. Total funding of Rs 10,00,000 was allocated to this project out of the total funding of Rs 52,43,352/-.

3.3 CIFCL Project Details

Objective of the project

- Promoting human-elephant coexistence in the plantation–forest landscape of the Anamalais by use of communication technology.
- Monitoring elephant movements and conflict occurrence in the Valparai plateau.
- Strengthening and expanding early warning systems (EWS) using bulk SMS, voice call, and alert beacons to minimize human fatalities due to elephants.
- Analysing the impact of early warning systems on the occurrence of incidents of conflict
- Outreaching maximum estate through on-the-field and off-the-field interactions and training.

Projects of Nature Conservation Foundation

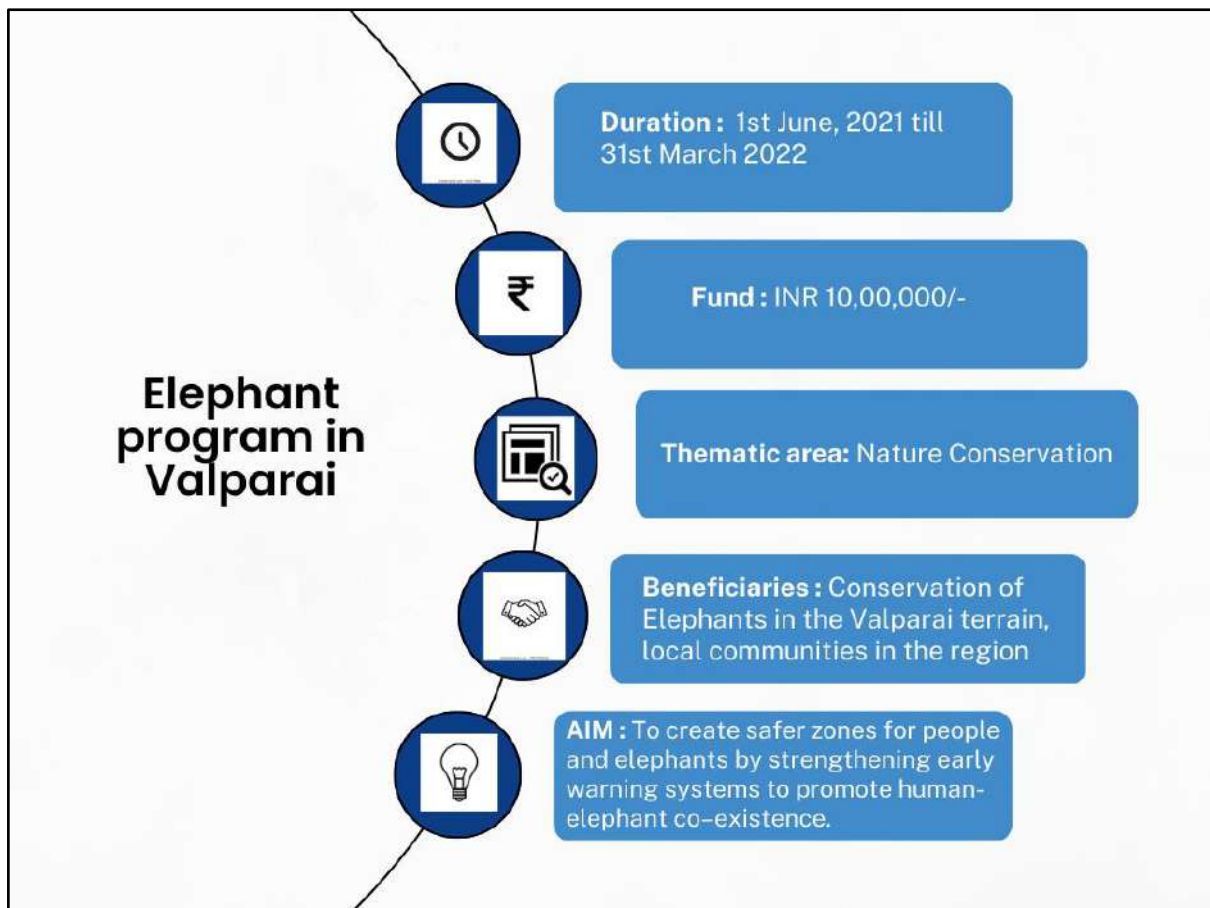


Figure 3 - Project details of Elephant program at Valparai

Location Map

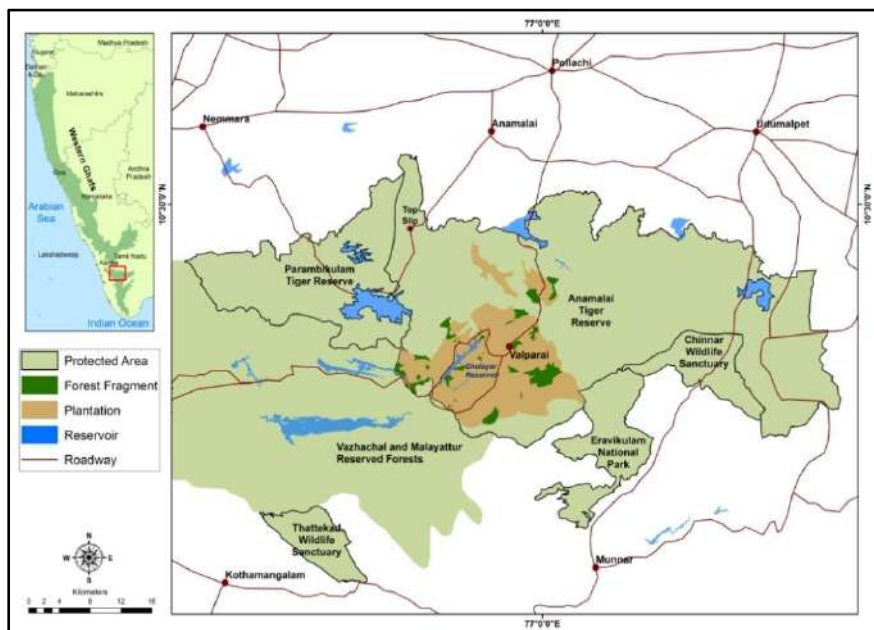
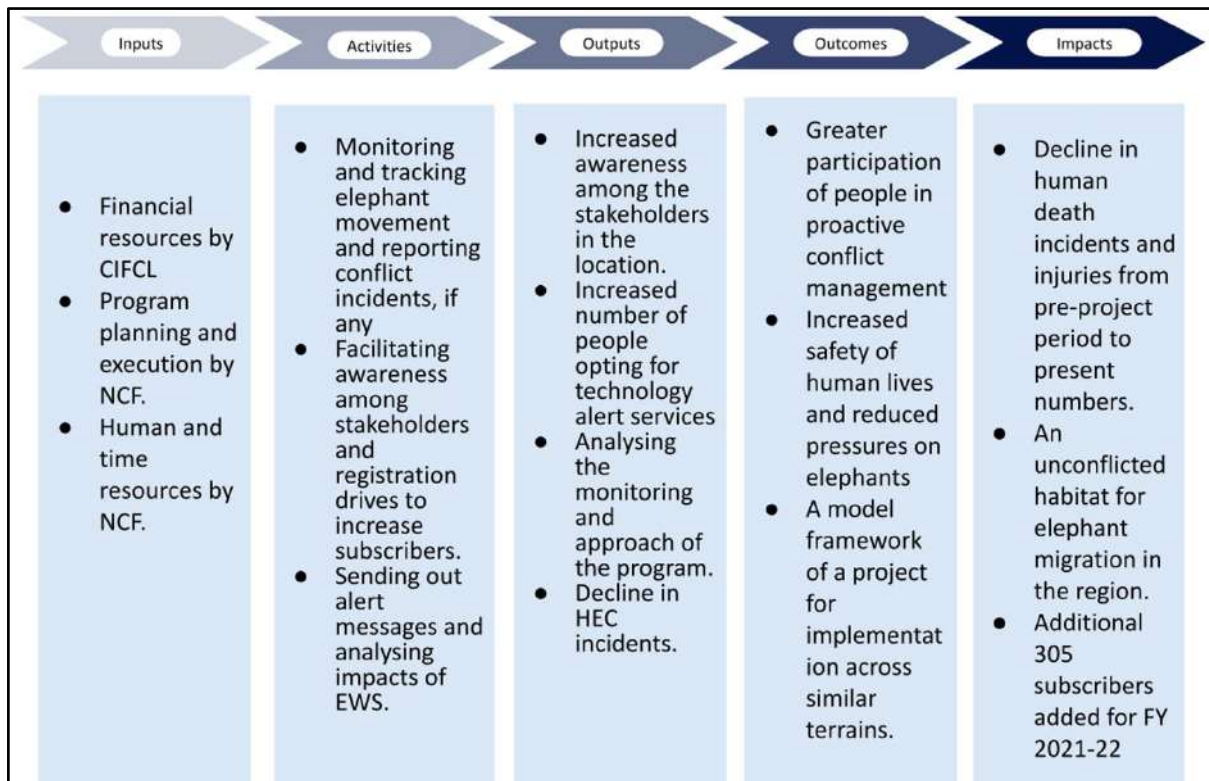


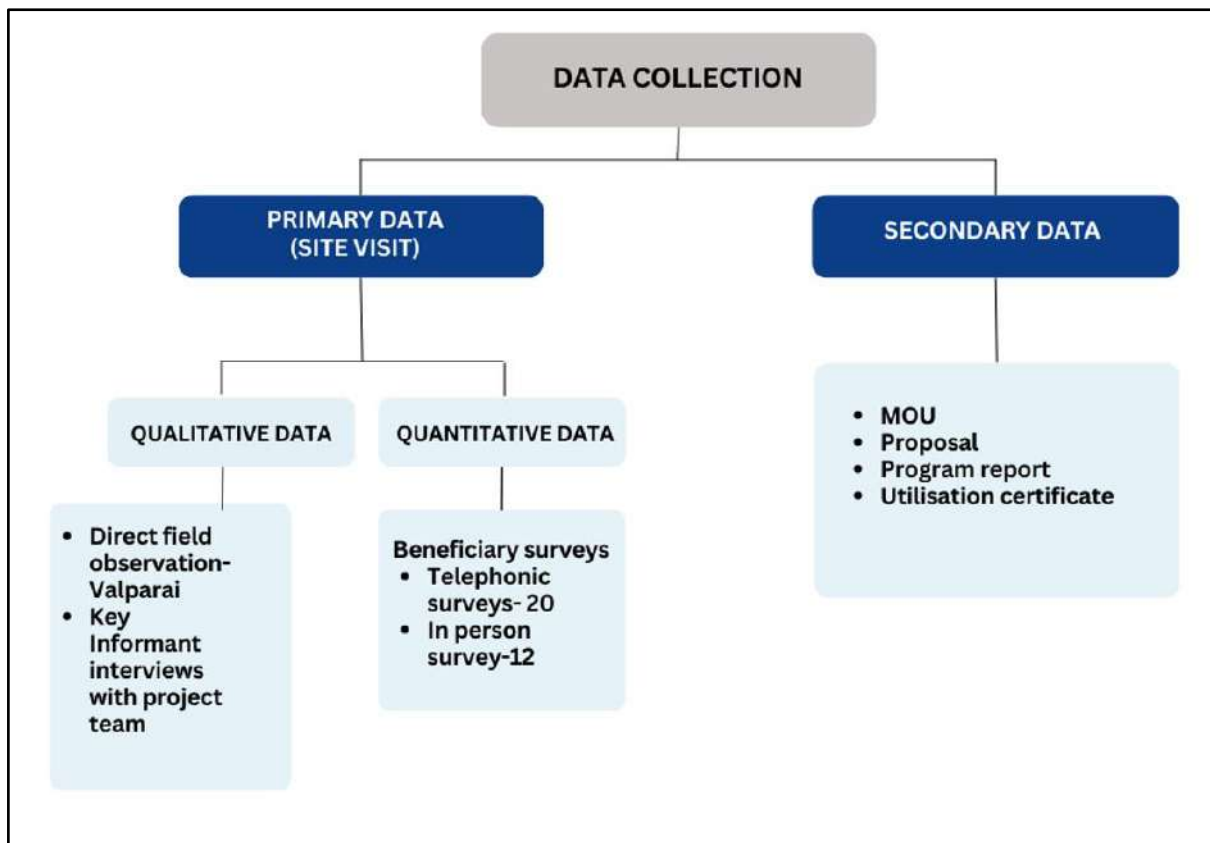
Figure 4 - Location of the elephant program

Impact Map



4. Methodology

The impact assessment study for this project started with separate initial meetings between CIFCL and the concerned Implementing partners. While the meeting with CIFCL was to broadly understand their expectations and timelines, the meeting with NCF was to understand the program, its objectives, and the challenges faced in implementing the program at the grassroots. Post the introductory meetings, a list of pre-requisite documents was called for. This was done to initiate desk review. Basis the documents received; the team started the desk review of project documents to develop more understanding of the programs and their interventions. Accordingly, the key stakeholders of the project were identified and mapped to capture their opinions and feedback, and a mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools (field observation, key informant interviews, and beneficiary interviews) for data collection as mentioned below:



The data were collected through primary and secondary methods. Primary data was collected from the beneficiary questionnaire, key informant interviews, and direct field observation. The questionnaires were implemented to gather data related to assessing the causes of human-elephant conflicts, the effectiveness of the program, and further suggestions for making the program more effective. A random sampling technique was regarded to identify the respondents in the location. Focus was given to gender proportion while the sampling was carried out.

Respondents profile

Below is the table showing the respondent data. The nature of conflict and management and mitigation strategies to reduce conflict in the area was understood and substantial evidence was supported to understand the effectiveness of the same. Random sampling was regarded.

Total respondents	Male	Female	Total beneficiary for 2021-22
32	19	13	305

100% of respondents were estate workers living in various estates within the Valparai Plateau. It was seen that 88% of respondents were married and their families too were involved in working at the

estates. Around 59% of the respondents were workers having greater than 15 years of experience working on these estates. Analyzing the data of respondents, it is visible that workers in the estate were experienced and understood the terrain well.

Key informant interviews were conducted with selected members from the project team.

Interviews were held with the local community such as tea estate workers, tea shop owners, ration shop owners, etc. to

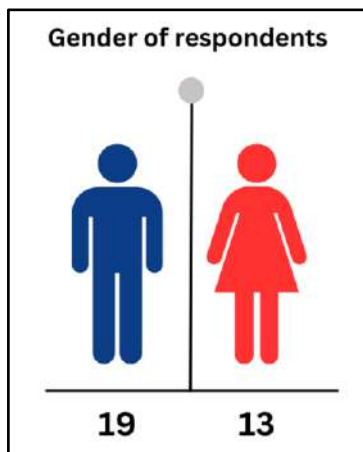


Figure 6 - Respondents gender break up

explore the nature of the program and human and elephant

coexistence.

Field observation was mainly used to confirm the respondent's responses, so that accurate and reliable information would be collected during field observation.

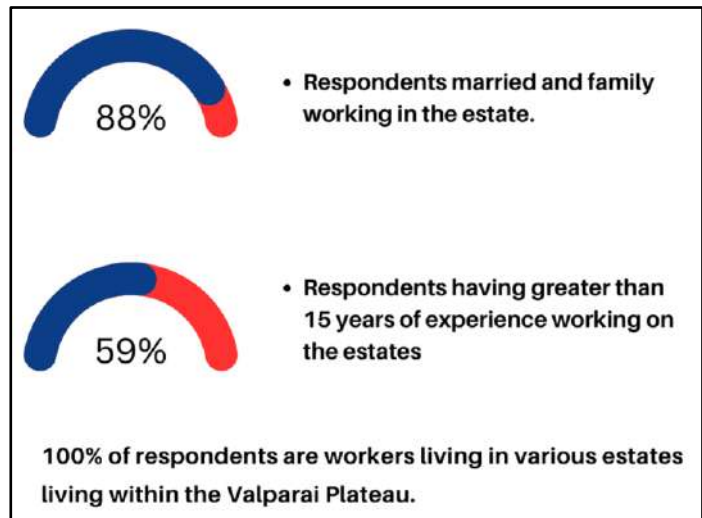


Figure 5 - Respondents profile

5. Analysis and Findings

Between 1994 and 2002, the plateau recorded 25 deaths in nine years. An initial analysis conducted by NCF revealed that most people who succumbed to death were unaware of the elephant's presence around them. The awareness levels among the people in these forest-fringed areas were one of the major concerns and led to HEC. Though a few site-specific short-term solutions were in place, they did not help in curbing the prevalent issue and led to continual HEC.

The program of broadcasting warning messages on the Valparai channel was started in 2003 by NCF. Though broadcasting was executed through television for an initial few years, there was a gradual decrease in viewership observed (from 25,000 subscribers to ~5000 subscribers). In 2011 the SMS and voice alert system came into existence as a more effective mode of communication.

5.1 Relevance

The most important element for analyzing relevance is the assessment of the extent to which an intervention addresses beneficiaries' needs and priorities. In reference to the context, it is seen that with manual labor being pervasive in the landscape, it is evident that people need to work in these tea plantations for their living. While this was an elephant corridor earlier, because of human settlement in these areas through the years, it became imperative to protect the people living here. As seen in the respondent's profile, around 88% of respondents had settled in the landscape alongside their families. With people moving and working around the target area of 220 sq km, there was a need to stay vigilant on elephant movements in the terrain. The intervention aims at keeping the community safe through their intervention. They track and send out distress signals to the target population within a 2km radius of the elephant-sighted area. Hence the program is relevant.

During the field observation, the team came to understand the real-time messaging service 'Gupshup'. Gupshup is a conversational messaging platform. The operator sends out an SMS using the system alongside a regionally transmitted voice alert message. Within minutes, this is broadcasted to the numbers falling in the radius of the elephant sighting. The team gets real-time data on successful deliveries and otherwise.

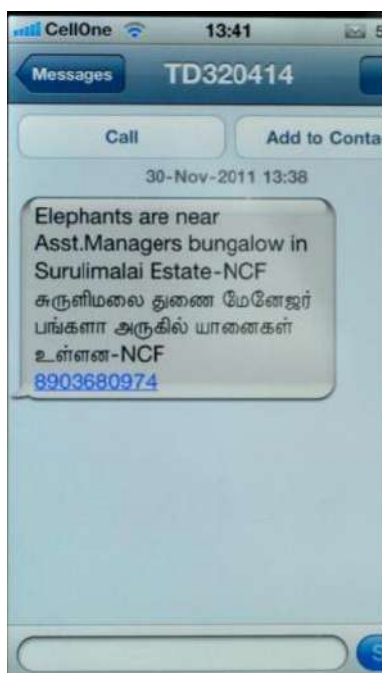


Figure 7 - Sample of the SMS alert

In FY 21-22, the responsiveness in terms of the subscription to the program has seen an increase. In FY 21-22, there were 305 new subscribers to the program. The total active subscriptions stand at around 5000 to date.

Around 35 light beacons are installed at various critical locations identified by Forest Departments/NCF. These light beacons are turned on when there are elephants around these critical locations,

so
people
from

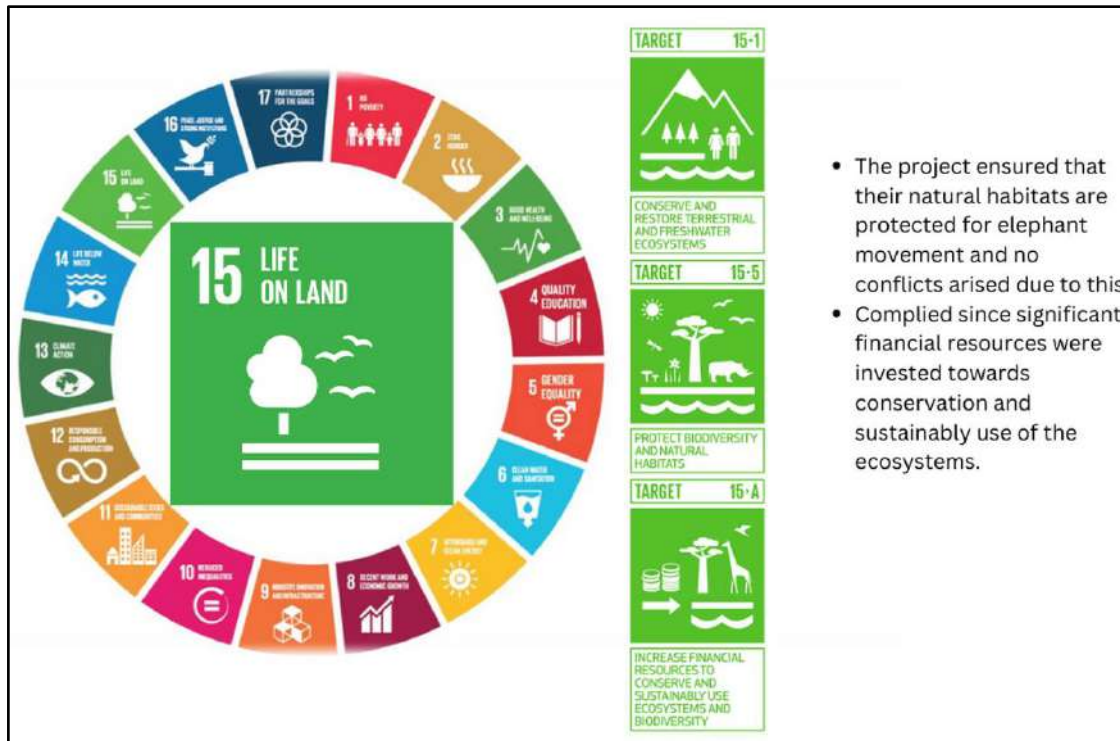
distance too are able to view and get wary of the situation. These are mobile-operated LED-light alert indicators that signal the presence of elephants and their movements within a kilometer radius of each light. These indicators have a SIM card and red flashing LED bulbs mounted on a 10-meter-long pole and are visible from a kilometer away.



Figure 8 - Light beacon at Valparai

100% of the respondents said that there were no hesitations in enrolling in the program and it was revealed by the beneficiaries that they received regular refresher training and crisis handling training from the project teams.

Linkages to Sustainable Development Goals



5.2 Effectiveness

Effectiveness provides insight into whether an intervention has attained its planned results, the process by which this was done, which factors were decisive in this process, and whether there were any unintended effects.

The tracking of elephants is a routine activity conducted every day. A dedicated field team is in place which also includes members from the tribal community. They survey the target landscape either through four-wheelers, two-wheelers, or on foot, record information on elephant locations, and report any conflict incidents.

For FY 21-22, there have been 108 incidents of property damage with a maximum damage of 52 conflicts occurring to ration shops. The second highest damage was to residences with the figure being 33. There was an increase in incidents in FY 21-22 - on account of Rapid response teams' vehicles being damaged and

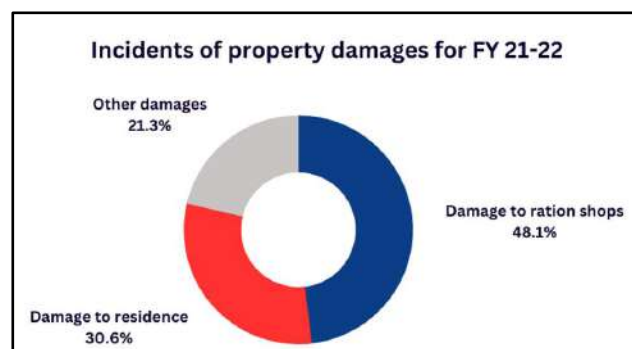


Figure 9 - Chart representing property damages for FY 21-22

hence they could not reach the conflict location in time.

No deaths have been reported for FY 21-22 and the reports have been verified on this account on the field visit.

SMS/Voice alert report FY 21-22

The analysis of the SMS text alerts and voice call alerts showed the data below,

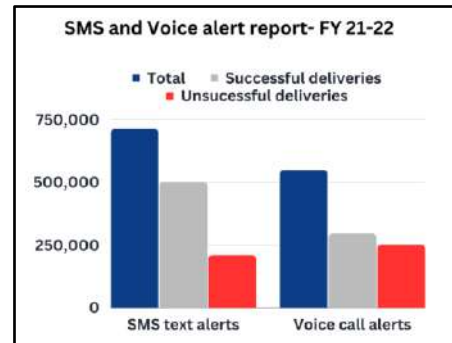


Figure 10 - Graph representing the SMS and Voice alert report

SMS text alerts

Total messages initiated	Average per day	Successful deliveries	Unsuccessful deliveries
7,12,204	2158	501354	210850

- 70% of the messages have got delivered
- Of the unsuccessful deliveries, 66% of the numbers were unreachable (140060) and 32% constitute to technical failures (68196)

Voice Call alerts

Call alerts initiated	Calls answered	Calls not answered
548903	296118	252785

- 54% of people have answered the calls and have hence got the warning signals
- 46% of people have missed their calls and they have gone unanswered

100% of the respondents interviewed by the Chrysalis team found the program effective and said that they are more capable in handling crisis situations because of the initiation of the SMS/voice alerts intervention. They are capacitated in terms of knowing the exact location of elephant movements. Due to the increased awareness levels they possess, they avoid the routes for a possible encounter with the elephants.

All the respondents felt that the mobile services are very helpful in keeping them safe.

During the interactions with the beneficiaries, 100% of respondents said that NCF is very supportive in terms of managing the program. The teams have conducted various outreach programs to increase awareness levels. Street plays, frequent interactions with plantation management, and workshops for frontline staff of the Forest Department are some of the regular activities being conducted. The corresponding table shows the various interactions that NCF has conducted in FY 21-22.



Figure 12 - Street play by the NCF team

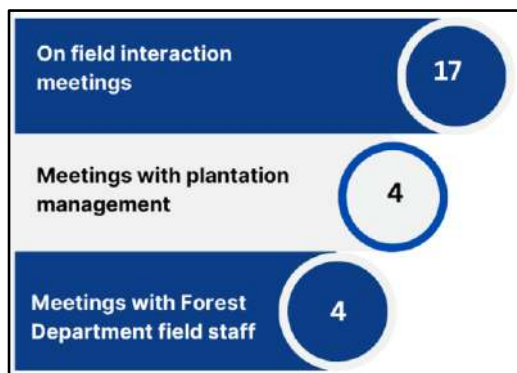


Figure 11 - Stakeholder engagements for FY 21-22

In terms of the program dissemination itself, around 22% had known about the program through NCF while a major 46% of the respondents had become aware of the program through their friends/colleagues who had enrolled in it. Hence, there is more responsiveness to enrolling in the program through word of mouth.

5.3 Efficiency

Efficiency is used to understand how well the resources of the program are used and the extent to which the program delivers or is likely to deliver results in an economic and timely way.

The project is being managed with a team size of seven. While three are field staff who verify the location of the elephant movement, there is one program manager and one resource person sending message/voice messages through *Gupshup*. Two field staff are allotted for light beacons.

Fund Utilisation - The corresponding chart shows the funds utilized for FY 21-22. The funds have been utilized under different expense heads. Upon analyzing, we understood that the major portion was

Project Head	Funds utilised (INR)
Project Coordinators	1,92,000
Field Assistants	3,43,200
Early Warning Systems	2,88,860
Travel	1,24,772
Utilities	51,168
Total	10,00,000

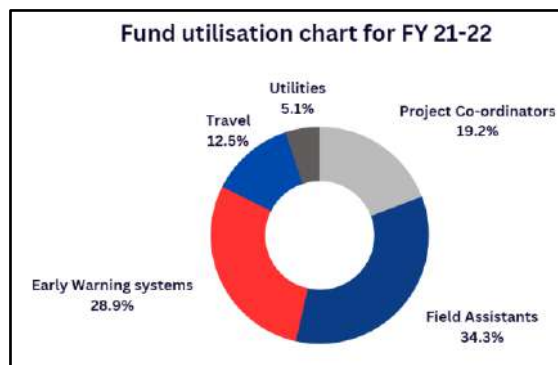


Figure 13 - Chart showing funds utilised for FY 21-22

spent on the Field assistants and Early warning systems.

Gupshup is a web-based service provider to mobile phones. Currently, voice alerts are sent in the vernacular language (Tamil). The team conducts registration drives to increase the database of elephant alert subscribers.

Community involved approach

The number of people who informed about elephant locations varied from year to year. However, approximately around 90 people during 2019-20, around 75 between 2020-21, and around 90 between 2021-22. A major part of the success depends on the informers who call to give updates on the elephant locations.

A database on the number and nature of phone calls received over the contact number provided along with the SMS text and voice alerts are maintained by NCF. This is compared with the number of incidents with the pre-project baselines. While this is currently being done on a monthly basis, the team has also maintained a database of logs of phone calls received from people in response to SMS and voice calls. This was verified during the visit for FY 21-22.

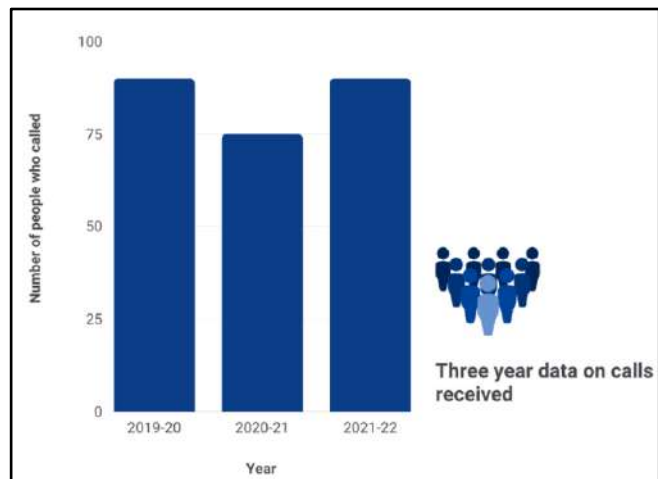


Figure 14 - Graph representing the informants

Currently, the alert lights are installed in 35 critical locations. The number of old lights replaced with new ones varies based on the need. The replacements with newer units took place on account of damages due to electric surges or lightning etc. While 10 lights were replaced in FY 2019-20, no replacements have happened for FY 20-21 or FY 21-22.

5.4 Impact

Impact addresses the ultimate significance and potentially transformative effects of the intervention. It seeks to identify the social, environmental and economic effects of the intervention that are longer term or broader in scope than those already captured under the effectiveness criterion.

- Since the program's inception, 23 deaths in 19 years have occurred. There has been a drastic decline of 56%. The instances of human death/injury were nil during FY 2021-22.
- Of the quantified data, it was revealed that 81% of respondents had opted for the SMS/voice alert services within the last five years and 19% of respondents had opted for the subscription in the previous years. We can clearly assess that the program has increased momentum in terms of subscriptions in the last five years.
- 100% of respondents said that they receive updates on their mobile phones when the elephants are in close proximity. There are no delays in the same and hence it enables them to stay vigilant.



Figure 15 - Estate workers with NCF / Street play team

six elephants succumbed to reasons not known.

- 100% of the respondents said that they have never faced HEC post the inception of the services and they avoid the routes sent to them in the alert services.
- The support provided by the project is inclusive in nature as it provides benefits to all the beneficiaries without differentiating between men and women.
- However, the same does not apply to elephants. Though there were no retaliations,

"I have been getting the SMS updates for 2-3 years now. It is very useful since we know when and where we should not venture out. The program volunteers are helpful, they explain everything to us very patiently." – Ms. Mariyaselvi, Tea estate worker, Sholiyar Estate

"I have been getting the SMS updates for over 3 years now. With the help of NCF and its volunteers, there are fewer human-elephant conflicts. The light beacon is also very helpful." – Mr. Moideen, Tea shop owner

5.5 Sustainability

The program is currently being run by NCF with support from various corporates. Some of the big names in the corporate sector have funded the programs in the past. Due to the technical and complex operation of the program, it requires a well-trained and dedicated team. It is also pertinent that the team is well aware of the Valparai plateau to know exactly to whom alert messages should be sent. While there is a scope for growth, transferring the program to be managed by local administration or Forest Department may require a lot of training and hand-holding. All 32 respondents said that they encourage these messaging services and would recommend everybody around them to subscribe to it. Hence, the need is definitely there.

6. Conclusion

It is unbiased to say that NCF has been productive in terms of implementing the program and running it effectively. They have coupled technology with sensitization programs to work in sync with each other. These have created a pathway for people and animals to co-exist peacefully. All the respondents felt that the team does an exceptional job in terms of conveying the message and managing the program. They all feel that NCF has provided timely support when need be. NCF too has been very cautious in its approach. This was felt during the data sharing for respondent callings. They maintain the confidentiality of the data. It was observed that the beneficiaries too were responsive to third parties (such as Chrysalis Services) after they got the required confidence from the NCF team.

The SMS/voice alerts are sent out in the most robust and diligent way. Their responsiveness to the queries raised and document submissions also demonstrates their strong processes are in place.

Good practices

- It was seen that people follow the protocol upon receiving the warning signals and avoid the paths that would lead to probable elephant encounters.
- People in the terrain displayed respect towards the conservation efforts in place and understood the need for co-existence with the elephants.
- The project efficiently utilized the inputs in terms of funds, expertise, and time to achieve the objectives.

Challenges

- There is a need to put a sustainability plan in place, to ensure that the impact is sustained and

the continuity of the program.

7. Recommendations

Recommendations help create a pathway to improve the effectiveness of future projects. It provides for the decision-makers and stakeholders to understand the program's best practices or inadequacies and take necessary action to make informed decisions. Based on our field visits and the interactions with the respondents, below are some of the recommendations,

- Number of light beacons is useful in getting aware of the elephant locations. 20% of respondents recommended more beacon lights be installed for better coverage and scope. It would be helpful if these lights are installed at a higher level and made multi-directional.
- It was noted that the women folk in the community had given their spouse's numbers as against theirs to get these subscription services. Hence naturally the dependency on getting the information through their spouses may delay the alert messages getting transmitted. More stakeholder engagements are needed to set aside their apprehensions.
- Currently the dependency to transmit the SMS/voice alerts is on one local person who knows all the areas of Valparai. She is completely responsible to signal the whereabouts of the elephants and send the messages to the proper locations. This can be avoided by developing algorithms to automatically identify the elephant-seen area and the surroundings.
- Focus on SMS being sent in other regional languages to accommodate the increased number of migrant workers being present in the estates.
- NCF could evaluate using technology such as live video transmitters/drones to make the program more effective.

8. Program Overview- High altitude program in Spiti

8.1 Impact assessment background

Nature Conservation Foundation (NCF) works in India's high altitudes, striving to help conserve the snow leopard – as well as the diversity of wildlife and landscapes in a scientifically robust and socially responsible manner. They combine research, community-led conservation, education, and policy-level dimensions in their approaches toward program implantation.³ Currently, Spiti valley is a habitat of one of the few surviving wild populations. At a national level, the Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, has embarked upon two National level initiatives focusing on landscape-level participatory approach to conservation management, namely, The Project Snow Leopard and GoI-GEF-UNDP's SECURE Himalaya. India is also a partner country in the Global Snow Leopard Ecosystem Protection Program (GSLEP). This speaks of the commitment to the conservation of wild species. The snow leopards are categorized as 'Vulnerable' by IUCN and in Schedule I of the Indian Wildlife (Protection) Act 1972, and the J&K Wildlife (Protection) Act 1978. They are listed in Appendix I of the Convention on International Trade in Endangered Species (CITES) and the Convention on Migratory Species (CMS), affording the highest conservation status to the species, both globally and in India⁴. Researchers estimate that there are between 400 to 700 snow leopards in India. In India, their geographical range encompasses a large part of the western Himalayas, including the Union Territories of Jammu and Kashmir and Ladakh, Himachal Pradesh, Uttarakhand, and Sikkim and Arunachal Pradesh in the eastern Himalayas. The state of Himachal Pradesh has over 50% of its terrain under high altitude regions of the Greater and Trans Himalayan tracts. Spiti is located in the northeastern part of the state of Himachal Pradesh. There are about 231 villages in Spiti Tehsil

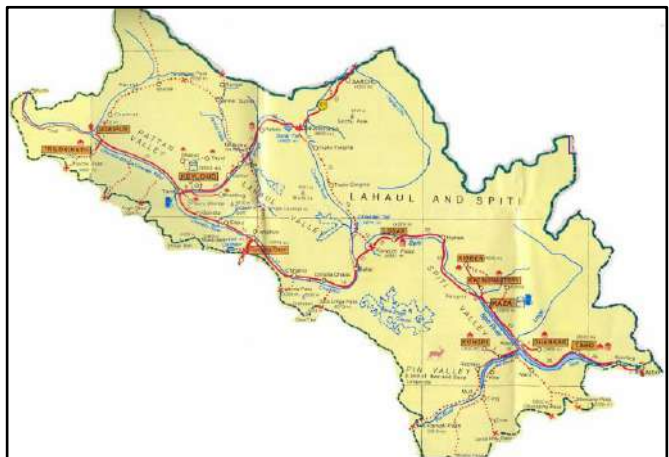


Figure 16 - Map - Lahaul and Spiti

Spiti Valley is a high-altitude area where water is always an issue. The land is not very fertile. Modern interventions have slightly improved the prospects but it still remains mostly barren and people cultivate a few vegetables, and fruits during the brief summer season, while the winter is harsh as everything gets buried under snow. One of the major economic activities of people is raising livestock. This includes sheep, goats, donkeys, yaks, yak-cow hybrids, and horses. The high altitude terrain only means that the landscape is inhabited by wild carnivores that include snow leopards and is also a refuge to other predators like wolves and red foxes. The most important wild prey of the snow leopard and other wild predators in

³ <https://www.ncf-india.org/high-altitudes>

⁴ https://images.assettype.com/ncfindia/2021-04/20ba641b-992f-4b4c-9368-e8d4d77168da/SPAI_compressed.pdf

⁵ https://www.wwfindia.org/about_wwf/priority_species/snow_leopard/about_snow_leopard/

the region are the ibex and the bharal. Wildlife in these areas is not bound by National parks or sanctuaries owing to the sheer vastness of the landscape, and can often be seen near human settlements. People too generally continue to use lands for their subsistence, irrespective of whether the pastures fall inside or outside protected area boundaries. This fuzzy physical separation between humans and wildlife provides a fertile ground for conflict as well as coexistence between the two.

8.2 Context

It was seen that the grazing areas for the herbivores in the terrains of Spiti were out-competed, which forced them to move into deeper terrain in need of food. This being a potential habitat for snow leopards and other carnivores, led to serious problems of livestock being predated upon. This conflict between humans and wildlife led to a significant economic loss for the locals. The repercussions of their resentment occasionally led to the persecution of these endangered carnivores. A variety of programs have been developed by NCF to redress the issues since the inception of the program in 1998.

The program which was funded by CIFCL is one such program designed not only to offset economic losses due to livestock depredation but to also reduce the extent of depredation by providing financial rewards to herders for better anti-predatory herding. This is a three year project funded by CIFCL that commenced in 2021 and goes on until 2024. The project directly addresses the long-term prospects of the endangered snow leopards in Spiti valley by reversing population declines and engendering community support for conservation programs. In its efforts to bring about the coexistence of humans and the wild, NCF charted a program that aims at minimizing the effects of the conflict and compensating for economic loss to the local communities. Four multi-faceted intervention programs are in place to accomplish the objectives of NCF. The project is in alignment with activity (iv) Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agroforestry, and conservation of natural resources which is prescribed under the Schedule VII of the Companies Act 2013 and contributes to the goal of SDG 15 to ensure Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. A brief overview of the interventions executed by NCF are:

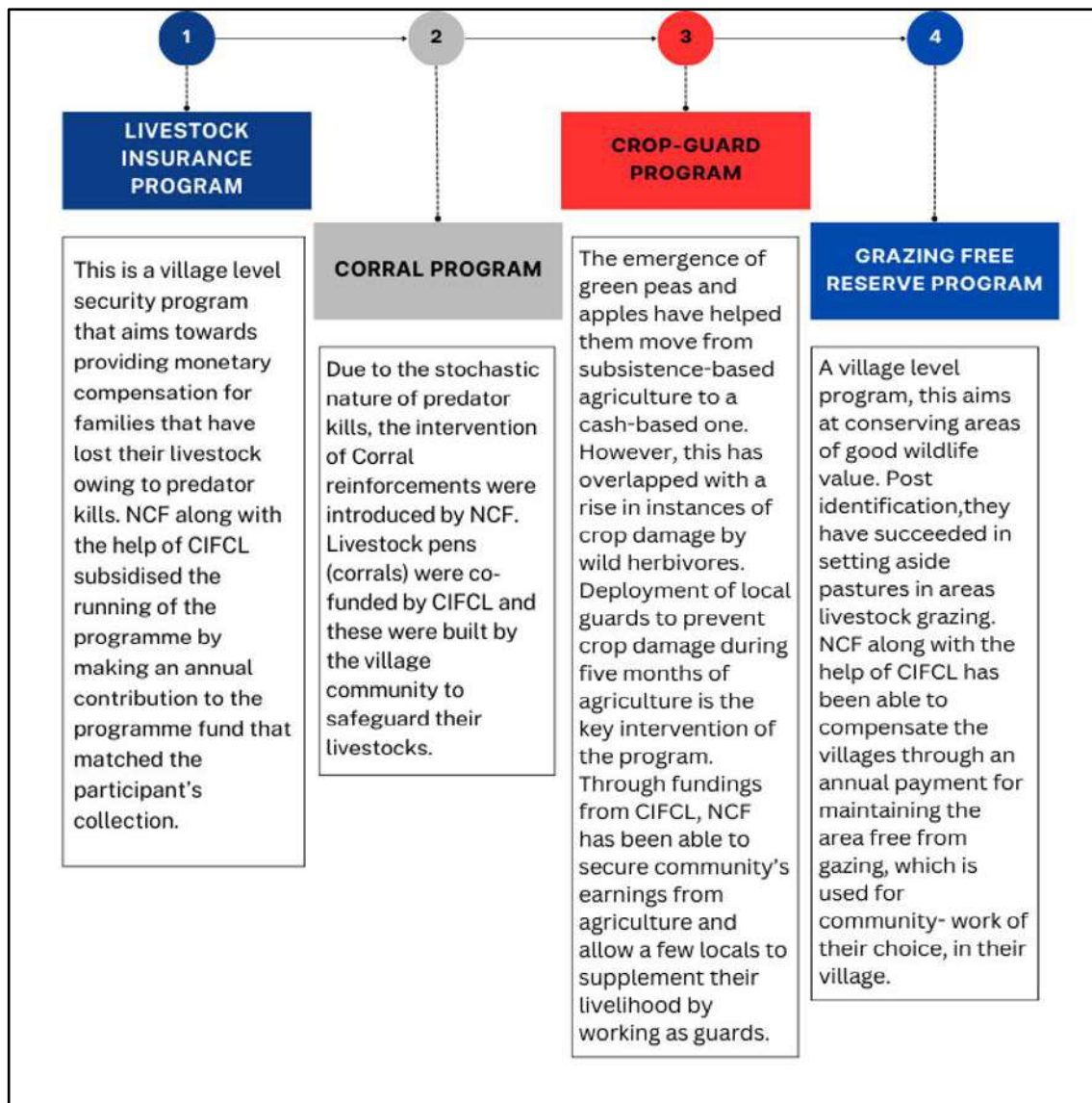


Figure 17 - Interventions by NCF

8.3 CIFCL Project details

Objectives of the project:

- To make possible a reasoned reconciliation between human society and wild nature, using science-based and socially-responsible nature conservation programs and policies.
- To contribute to the knowledge and conservation of India's unique wildlife heritage with innovative research and imaginative solutions.
- To safeguard livelihood and development options for local communities.
- To provide protection against socio-economic challenges faced by the local communities.

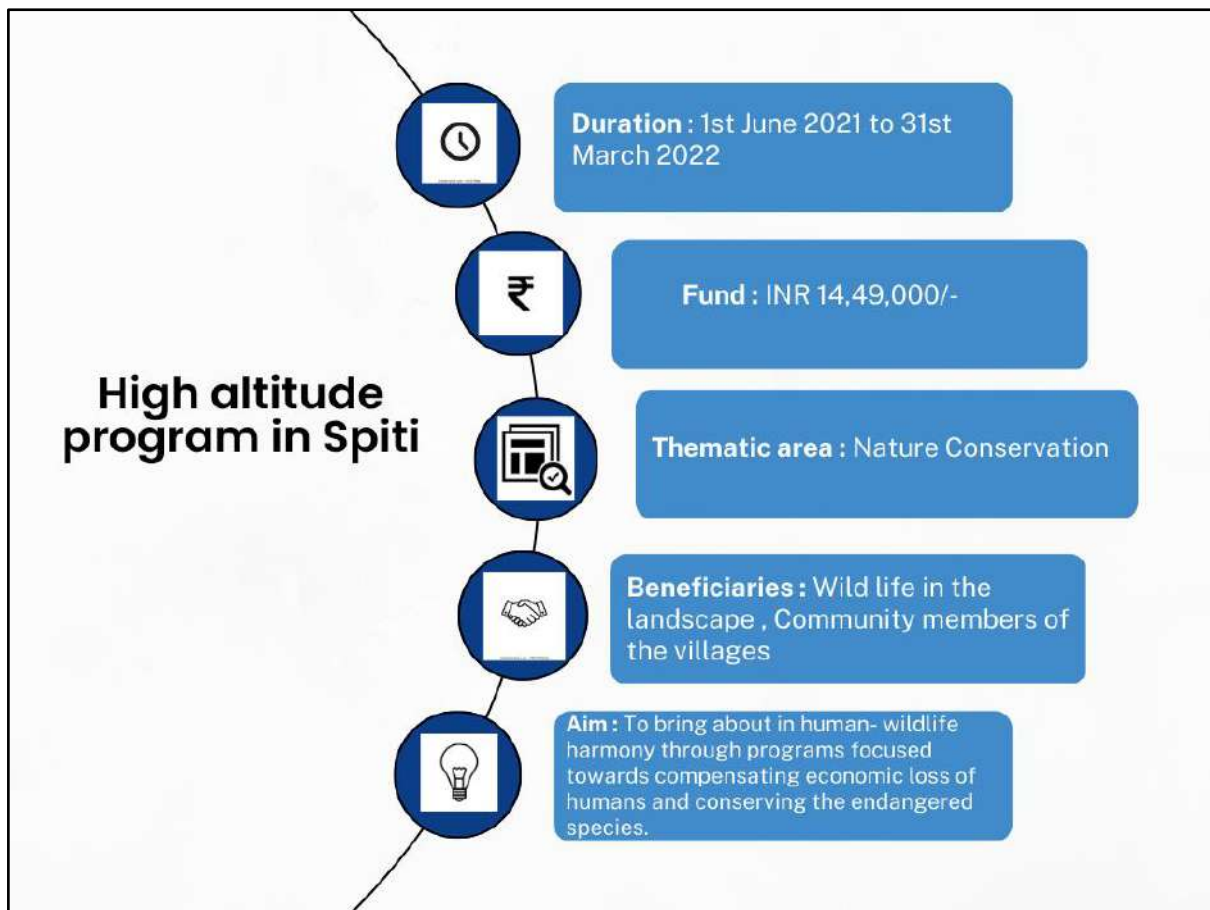


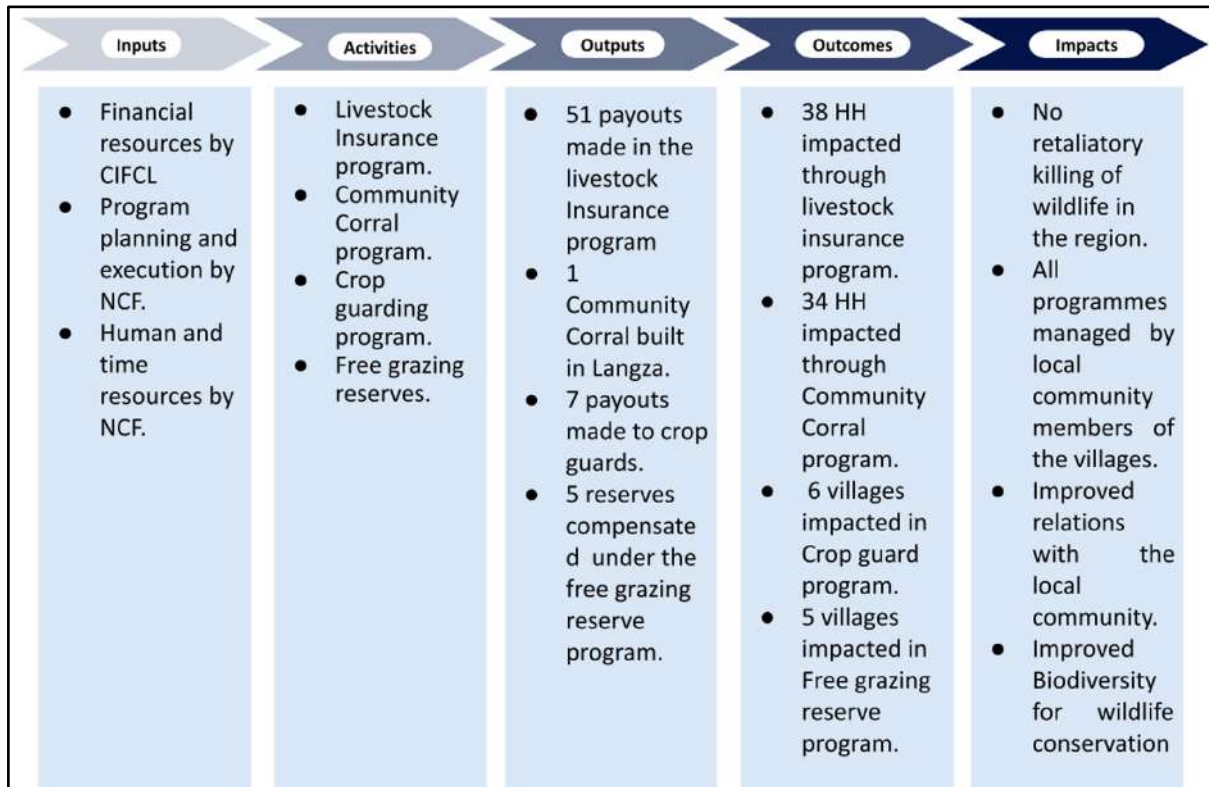
Figure 18 - Project details of the High altitude program in Spiti

Location: Upper Spiti Landscape (USL) consists of Spiti which is the subdivision of the Lahaul & Spiti district of Himachal Pradesh.



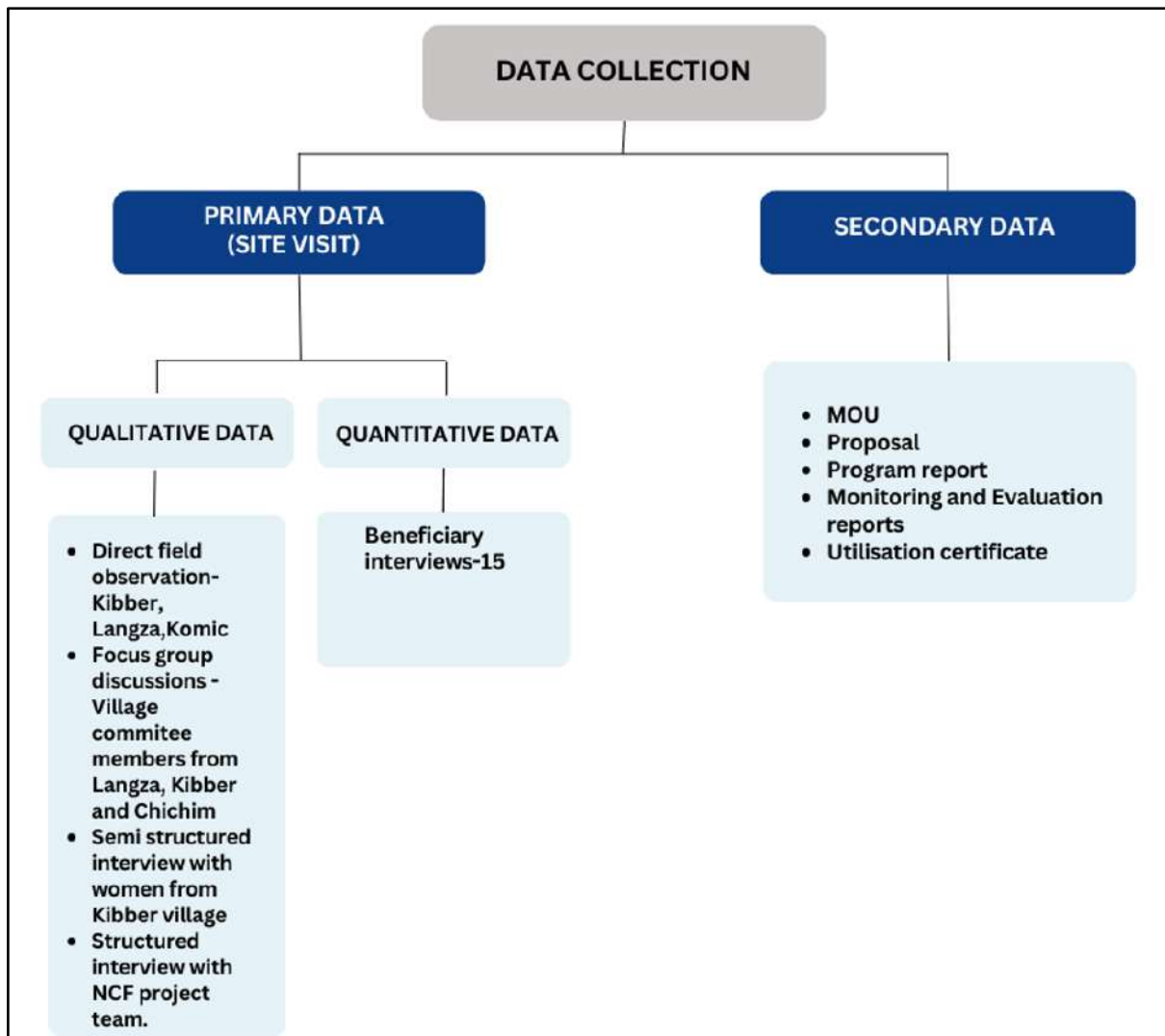
Figure 19 - Map - Spiti Valley

Impact map



9. Methodology

An initial meeting with the CIFCL and the NCF project teams was scheduled to understand the program in depth. Subsequent questions were asked where the teams had doubts. Based on this, the relevant documents were called for. The team through an initial desk review understood the background of the program, and various interventions being conducted as a part of the program. The documents were studied in depth and the methodology for data collection was prepared. Accordingly, the key stakeholders of the project were identified and mapped to assess the outcomes and impact of the interventions on the community. Based on the objective and the activities involved, questionnaires were prepared to interview while on a field visit. The mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools like field observation, Focus group discussions, project team interviews, and beneficiary interviews. The methodology used ensured that the OECD-DAC evaluation criteria were followed to provide our findings and implementable recommendations. The data collection structure is mentioned below:



Respondents Profile

Keeping the intervention and location in mind, a total of 15 beneficiaries were sampled for interviews. A random sampling technique was observed for the selection of respondents during the field visit. While five female beneficiaries were interviewed, ten male beneficiaries were interviewed.

Focus Group Discussions (FGD) were initiated with the committee members from Langza, Kibber, and Chichim villages. The discussions were further supported through semi-structured interviews with the female community members who were a part of the Snow Leopard enterprise, an initiative managed by NCF and Snow leopard trust.

100% of the respondents had livestock under their care, with an average size being 5 per respondent. All the respondents were enrolled in the livestock insurance program run by NCF. At a village level, they were all beneficiaries of Corral, Crop guard, and Grazing

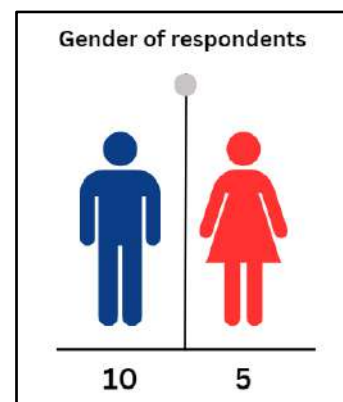


Figure 20 - Respondents gender break-up

free reserve programs.

10. Analysis and Findings

10.1 Relevance

Evaluating relevance helps users to understand if an intervention is doing the right thing. It allows evaluators to assess how clearly an intervention's goals and implementation are aligned with beneficiary and stakeholder needs, and the priorities underpinning the intervention. Keeping this as the parameter in mind, we observed that the work carried out by NCF in this aspect covers the most challenging conservation projects in India. Surveys showed over 50 snow leopards across the state (CI 41-73).⁶ With such high stakes in place, protecting the landscape to ensure the conservation efforts becomes the primary focus. With this, due consideration needs to be given to the community who live in the



Figure 21 - The landscape

terrain. Only when there is harmony between the two, will the landscape flourish. To support their efforts in doing so, NCF introduced socially and economically relevant programs to the community living in such terrains. The communities in the terrain are unable to protect their livestock and often fall prey to the predators there. This leads to retaliatory killings which negatively impacts the objective of the program.

⁶ https://images.assettype.com/ncfindia/2021-03/b6bd9916-f8fc-4aa8-a607-a27d683274f9/HP_SL_assessment_Final_Report_1.pdf

Livestock Insurance program:

This intervention focuses on insurance payouts to the affected families that have lost their livestock due to predator kills. It is a program that is managed by the appointed village committee and monitored by the NCF team. It was understood that the insurance program was introduced to support the killings of large-bodied animals. These include Yaks, Cows, Donkeys, and Horses. The corresponding table shows the monthly premium for each of these animals and the claim amount (INR) in case of livestock loss.



Figure 22 - Large bodied animal Yak

Age	Animal- Yak (Male)	Claim Offered	Animal- Yak (Female)	Claim Offered	Age	Animal- Horse (Male)	Claim Offered	Animal- Horse (Female)	Claim Offered
1	100	6000	80	5000	1	100	8000	80	7000
2	40	8000	30	7000	2	60	14000	50	12000
3	50	10000	40	9000	3	70	18000	60	16000
4	60	20000	40	14000	4	80	22000	80	18000

Animal- (Male)	Premium Paid	Claim Offered	Animal- (Female)	Premium Paid	Claim Offered
Donkey	30	3000	Donkey	20	2500

Animal	Premium Paid	Claim Offered
Cow	30	5000

100% of respondents felt that the premium to be paid for these animals was reasonable since the



Figure 23 - FGD with the village committee

program protects their losses and hence there was no hesitation in enrolling in the program. The program onboarding process was simple. An initial Rs 1000/- was charged towards the enrolment post which the prescribed premium needed to be paid. All of this money form the corpus. Insuring the young of the animal was mandatory and the family can decide on insuring the rest

of the livestock that they have. Complete descriptions of animals were taken down by the committee when the animal got insured. It was understood that while major threats were being posed from the wild, there was a substantial threat from the stray dogs within the community. It was revealed that the population management of stray dogs poses a major issue in the terrain. Stray dogs attack young

ones of animals. In FY 21-22, there were five instances of the dogs killing calves of large-bodied animals. Since compensation was provided through the insurance program, the respondents were happy with the program.

Corral reinforcements:

In FY 21-22, the Community Corral was built in Langza village to safeguard the village donkeys. This can house around 100 donkeys. The Community Corral was built a few kilometers from the village area. The committee of the village decides on the land based on the discussion with the villagers. During our meeting with the village committee, we were informed that the Community Corral has made their livestock safer. The Corral is a 7ft structure, with the initial 4ft from the ground being a stone structure and the remaining structure being strong iron fencing positioned adjacently to avoid predators from climbing the fence. This houses the donkeys from the community. The village committee informed us that this was the need at the village level and NCF honored the same.



Figure 24 – CIFCL funded Community Corral at Langza

Crop Guards:

Agriculture is the main source of sustenance and income during the summers. Due to encroached grazing by wild herbivores, it was often seen that the crops underwent damage during the said season (between April- September). The damages were caused by wild herbivores that would sometimes enter the pastures looking for food hence causing a threat to the crops. It was understood that though a few pastures had fencings, they did not serve the purpose since the wild herbivores were capable of hopping over the same. Hence NCF introduced this intervention, where a guard was appointed through the village committee. The appointed guards would monitor any potential threat from the animals. Depending on the area of the pasture, one or two guards would be appointed in varied shifts. An interview with the crop guard revealed that they use sling-bullet to scare any animals from entering the pastures. This habitual chasing ensures that the animals do not enter the area. Over time, the incidents of animals entering the pastures have reduced and the village committee revealed that they are satisfied with the intervention. 100% of respondents in the community too confirmed that the major threat was posed by Blue sheep and that their crops are safer post-intervention. The main produce of agriculture is green peas and potatoes in the region.



Figure 25 - Blue Sheep

Free grazing reserves:

This intervention is an effort made by NCF, to bring about socially-responsible nature conservation practices in the region. As pointed out earlier, the sheer vastness of the landscapes disables the terrain from having protected areas as National parks. Under this program, a certain percentage of the landscape is identified and tagged as Free grazing reserve. The villagers do not take their livestock for grazing into these areas and they refrain from going there themselves. Hence, this is exclusively meant for wildlife. As a goodwill gesture, NCF has been paying out monetary compensation to the village committee. The committee then in consensus with the villagers decides on where the money should be invested. This is further utilized by the community in various programs such as the building of monasteries and cultural activities. 100% of respondents who belonged to the local tribal community said that they were satisfied with the program and the fact that monetary compensation through the programs was being invested back into the community.

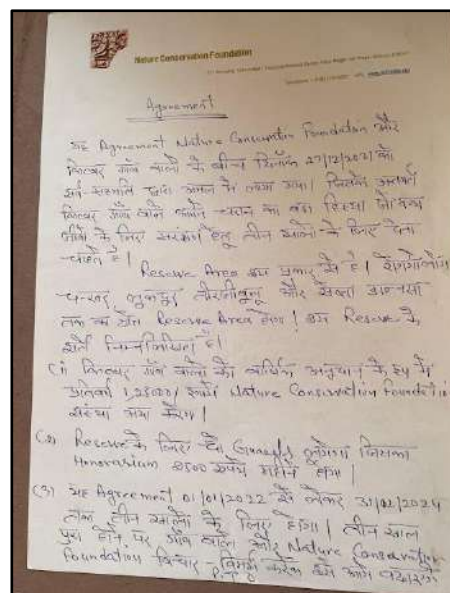
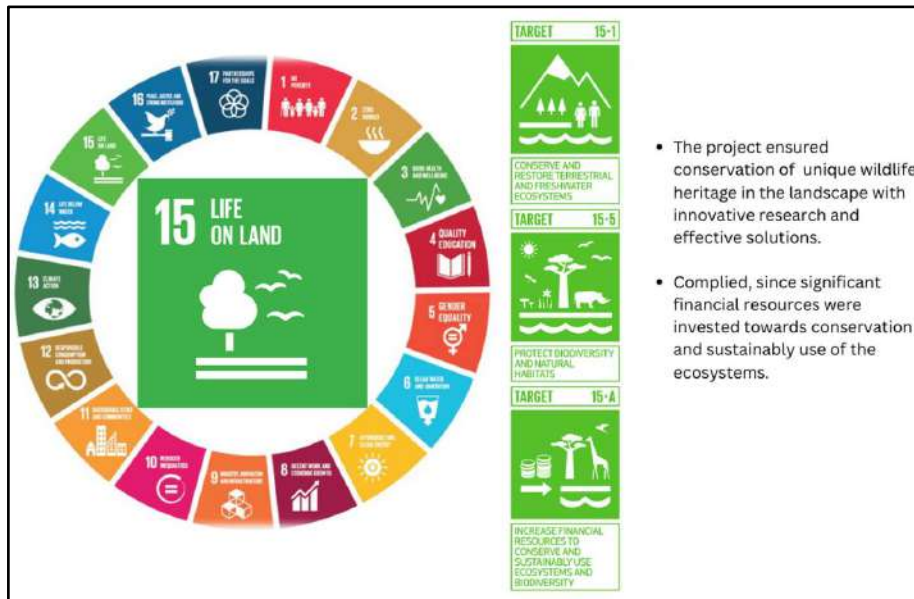


Figure 26 - Agreement between NCF and the village committee for Free grazing reserves

In terms of recognizing the issue at hand and doing the right thing, NCF has been able to recognize and study the issues and provide a solution-based approach. They collaboratively take support from the locals who actively get involved in the implementation of the program. It can be derived that NCF has been sensitive in its approach towards the program in closely involving the community. Since the community takes ownership, there is 100% involvement from them. This resulted in the community supporting NCF through the years in various programs. In response to the context and the way the program has been prepared, the response of the village committee gives us the understanding that they are doing the right things.

Linkage to Sustainable Development Goals



10.2 Efficiency:

The criterion reviews the implementation strategy and mechanism. The purpose of this is to understand if the intervention has achieved its objective and the extent to which it did.

The NCF team works with a project team size of 6. The project's members are all local people who belong to the community. They are familiar with the landscape and hence the villages around the landscape to feel comfortable dealing with them. The project team consists of 3 field technicians, 2 field coordinators, and 1 field assistant. In terms of the programs developed, each member manages a program and has a complete understanding of the same. Through the quantitative survey and qualitative responses, it was understood that the fondness to the team was high and that they were supportive. Both the respondents and the village committee confirmed this.

Livestock Insurance program:

100% of respondents said that they were aware of techniques for the efficient handling of their livestock since this is something they have done through the years. They get various products from the livestock they domesticate. Wool, milk, and even using them to carry things and meat. Animals like Yaks are domesticated for religious purposes too. Matching funds amounting to INR 2,27,521/- were transferred to the programs at three villages. The CSR funding was topped up to the premium collected by the community and this was verified through the utilization certificate (UC) submitted by the NGO.

Our visit revealed that the documentation in terms of premium payment was being managed by the villagers themselves. This was a seamless process and the claim payouts were paid annually. However, we noticed that there were no separate records that were maintained for FY 21-22, and the same was clubbed with the previous years. The project team confirmed that this was due to the change in the cycle of premium collection and payouts made for the said year. The current cycle for premium payment and claim payout has been fixed from December to January, as confirmed by the NCF project team. Another discrepancy that was found was that there was no record of dates. The registers are maintained for the year. This makes it difficult to distinguish the premiums paid and claims paid for the said financial year. While NCF, overlooks the process of premium collection and payouts, clarity in terms of documentation would have brought out the efficiency levels that it intends to offer.

Pashu Bhima Yojana Kibber Year 2022	
1. Padma Dimdel -	
Yak adult	60 x 12 = 720
Horse adult	80 x 12 = 960
Donkey	20 x 12 = 240
Cow	30 x 12 = 360
Horse Young	10 x 12 = 120
Total	3480
2. Tanzin Chhetung -	
Demo	60 x 12 = 720
Cow	30 x 12 = 360
Yak Young	40 x 12 = 480
Total	1560
3. Tanzin Yongdwi -	
Yak	60 x 12 = 720
Yak	60 x 12 = 720
Horse	80 x 12 = 960
Total	2400

Figure 27 – Record book of the premiums paid

Community Corral:

The utilization certificate towards the program was verified and the payouts matched the CSR funding.



Figure 28 - Placard outside the Community Corral

As per the project team, the design of the Corrals was thoroughly researched by scientists involved in the program and based on the studies, the structure was thought upon and finalized. The design along with materials was provided to the community. The community members, in liaison with NCF, have built the corral. Considering the economic and operational efficiency, the timeline taken to build the corral was one month.

Crop guard:

The visit revealed that the document around the payouts has been well maintained. The

interview with the guard revealed that he has been working as a guard for six years. The village committee confirmed this and said that they review the performance based on the incidents of encroachment. The respondents said that the guard to protect the crops has made their lives easier as there is reduced stress on the safety of the crops. 100% of respondents agreed similarly.

Free Grazing reserves:

This is a program with which NCF commenced its work around the landscape in 1998. The funds and expertise have been utilized efficiently within the timelines for the project to achieve the outcome.

The corresponding table shows the fund utilization towards the program,

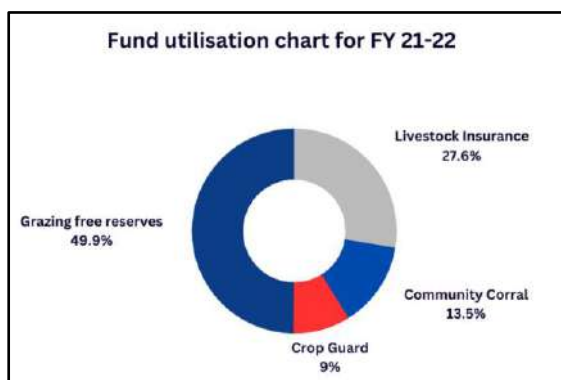


Figure 29 - Chart indicating the funds utilised

Projects of Nature Conservation Foundation

Program	Number of villages covered	Annual compensation paid out
Livestock Insurance	3- Sagnam, Chichim and Kibber	INR 3,05, 500/-
Community Corral	1- Langza	INR 1,50,000/-
Crop Guarding	6- Demul, Komic, Kibber, Tashigang, Getey, Chichim	INR 1,00,000/-
Grazing free reserves	5- Lossar, Kiama, Kibber, Langchha, Lalung	INR 5,52,479/-

NCF has various other awareness programs in place to make the programs more effective. Himkatha newsletter, Poster campaigns, and selection of champions in each village are some of the approach methodologies they follow. They work closely in liaison with the Forest departments and provide support wherever needed. 100% of the respondents informed that the NCF team is very supportive in terms of managing each program.

10.3 Effectiveness:

The criterion reviews the implementation strategy and mechanism. The purpose of this is to understand if the intervention has achieved its objective and the extent to which it did.

Livestock Insurance program:

The discussion with the project team revealed that there are no other NGOs in the terrain that works toward the conservation of the landscape. The program is unique to this landscape. There however are forest department/government schemes in place, that the villagers can approach for livestock loss compensation. 50% of respondents said that the compensation from the government is a tedious process and time-consuming. While the follow-ups are on, they do not rely on the efficiency of the process. In terms of the livestock insurance program implementation, during the field visit, we observed that the documentation is maintained in different registers. They have separate records for premium payments done and claims paid out. In a few instances, where there has not been a claim over 5 years, such individuals are exempted from premium payment. There however is no rule book maintained around the same and the process is transposed to the changing needs/evolution of the needs of the community. 100% of respondents said that they have received their claim payout on killings by predators. Since the program has been introduced, they worry less about the financial burden it may pose in case of livestock loss. A total of 38 households(HH) have benefitted from this intervention against a loss of 51 livestock respectively.

Figure 30 - Record book of the claims paid out

As per the NCF, the challenge, however, lay in the continuity of the members of the village committee.

While the village committee is formed by selecting members from each social class category, the continuity of the members in a few villages poses a challenge. Hence, they are always on guard and hand hold each of the interventions very closely.

Corral reinforcements:

Community corral have been built by the people of the community and the design and materials were provided by the NCF. This was 100% community involvement since the manpower was provided by the community. For FY 21-22, the Langza community built the corral in a time span of one month, with 26 volunteers working around 2 shifts. The NCF merely hand-holds the community in channelling their needs and ensuring success. The entire village of Langza has benefitted through the intervention of the community corral which houses 34 HH. There have been no predator encounters since FY 21-22, ever since the corral has been built.

Crop guard:

Since the decision to select the crop guards lies with the village committee, they would select the person best suited for the job. The discussions with the committee team and the respondents revealed that the damages to the crops have become far less post the intervention started. This also revealed that the community has stopped retaliatory killings of wild herbivores. They have ownership of these wild animals and the intervention ensures the safety of both crops and as well as wildlife. While the village committee informed us about the effectiveness of introducing the crop guard in agricultural pastures, an interview with the payout beneficiary revealed that they need an increment in their payouts made.



Figure 31 - Blue sheep

Free grazing reserves:

100% of the respondents felt that the program introduced has benefitted them as it was a win-win scenario for both the wildlife and the community. Approximately 450 sq km were converted as free grazing reserves to encourage the wild into coming into the pastures for food. The team follows observance reports to monitor the increase in numbers. The corresponding table shows the data for the ungulate surveys conducted in 2021. This activity provides comprehensive insights both for research and conservational efforts by NCF. While we were informed that there has been an increase in wildlife coming into these grazing areas, the data could not be compared with the previous years. The monetary benefit that the community gets is invested in their cultural upliftment.

Location	Animals	Numbers
Lossar	Ibex	104
Kibber	Blue sheep and Ibex	988

10.4 Impact:

Impact has been measured in terms of the proportion of respondents who reported having a significant change in their lives due to the initiation of the project. The extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects. The purpose of measuring the impact is to ascertain the primary or secondary long-term effects produced by the project. This could be direct or indirect and intended or unintended. Unintended effects are effects that were not planned as a result of the intervention and can be positive or negative.

Livestock Insurance:

For FY 2021-22, a total of 51 payouts were made benefitting 38 households across 3 villages- Sagnam, Chichim, and Kibber. The villagers have adapted well to this program and have 100% knowledge when it comes to the process. The expected impact has been achieved as they have all received the payout and the insurance process is carried out seamlessly. There were instances of livestock loss on account of dog killings too. Since this too was a loss of life, the payouts have been made. This can be termed as an extended impact. Considering the challenges that people of the terrain face, this compensation helps them relieve some financial stress. This program commenced in 2002 and has covered 4 villages since.

No.	Animal	Sex	Colour	Tag No.	Cause	Date of Insured	Amount	Total
1	Dime	Male	AF Brown				400 x 6	2400
2	Horse	Female	AF Black				8 x 6	480
3	Yak	Male	AF Black				10 x 6	600
4	Donkey	Male	AF Black				4 x 6	240
5	Horse	Female	AF Black				8 x 6	480
Total =							1,320 Rs	
Horse YF killed by dog								
Yak YF killed by SL								
Signature of Dykes								

Figure 32 - Receipt copy of the premiums paid and subsequent claims paid

I have been a member of the livestock insurance program since its inception. I have received my claim money on account of our yaks and horses being killed last year. Since the insurance is there, there is a sense of relief and reduced financial burden.

-Testimonial by livestock insurance claimant, Mr. Nawang Rinchon

Community Corral:

In FY 21-22, through the community corral, 60 livestock were protected and this benefitted 34 HH at Langza village. In terms of coverage and impact through the years, it was seen that the intervention was introduced in 2013 and has been able to cover 18 villages in the valley. Since inception, the teams have built 105 individual corrals and 3 community corrals thus benefitting 270 households.

Crop Guard:

For FY 21-22, seven guards across six villages- Demul, Komic, Kibber, Tashigang, Getty, and Chichim have received the payout for crop guarding. This was for a period of 5 months in summer. The intervention was started in 2013 and so far has been able to cover nine villages across the valley. The salary for the crop guard was fixed at Rs 2500/- per month in FY 21-22.



Figure 34 - Crop guard at Kibber

(2021)

2 Villages Crop Guarding Account Details

1) Demand Village: One Guard for 5 months Amount: INR 25000 = INR 12,500/- Account Name: Narsing Boda Account No: 3309984943 IFSC: SBIN003337 Bank: SBI, Kaza
2) Kama Village: One Guard for 5 months Amount: INR 25000 = INR 12,500/- Account Name: Sonam Tanka Account No: 3300631777 IFSC: SBIN003337 Bank: SBI, Kaza
3) Hilekine Village: One guard for 3 months Amount: INR 25000 = INR 9,500/- Account Name: Kunga Chetan IFSC: SBIN003337 Bank: SBI, Kaza
Langcha Village: Two guards for 2 months Amount: 25000 x 2 = INR 10,000/- Account Name: Yasha Nepal and Gati Chhang Joint Account Account No: 3714258622 IFSC: SBIN003337 Bank: SBI, Kaza
Tashang Village: One guard for 5 months Amount: 25000 x 2 = INR 12,500/- Account Name: Gurup Naga Account No: 3336521370 IFSC: SBIN003337 Bank: SBI, Kaza

Figure 33 - Record book of salaries paid out to crop guards

"I have been working as a crop guard for six years now. This job supports my household through extra income in the summer. Since the job is manual and needs 100% effort from my end, I would request the concerned officials to increase my salary" - Testimonial by Crop Guard, Mr. Cherring Tandup

Grazing free reserve:

A total of five reserve areas were maintained in FY 21-22 under the CIFCL funding. While new agreements were made with Lossar, Langchha, and Lalung, the agreements were renewed with Kibber and Kiamo. This program has enabled bringing about livelihood security at the village level and this was revealed by both the respondents and the village committee. Since this has enhanced the number of wild herbivores found in this area, it contributes to the knowledge and conservation of India's unique wildlife heritage with innovative research and imaginative solutions. Through this intervention, there has been sustainable development in the livelihoods of the community members and they take ownership.



Figure 35 - Discussions with the women of the community at Kibber

With respect to other social economic indicators, there was an upward trend in them as well. 100% of respondents felt that there was a change in their living standards after the project introduction. Due to the sustained efforts towards wildlife heritage and landscape preservation, there has been an increase in tourism. 100% of women respondents informed us that they are into carpet making in winter and knitting various products that they sell to tourists. This supplements their household income and showed 100% satisfaction. The project thus had a positive impact on the quality of life of the beneficiaries and the community. The project had benefitted several aspects of the lives of the households supported under it and had the potential to act as a key enabler to catalyze positive change in the long term as well.

10.5 Sustainability:

Sustainability assesses the likelihood that project achievements will continue after the project. This includes an examination of the capacities of the systems needed to sustain benefits over time. The systems and processes have been established keeping continuity in consideration. The involvement of the community is the substantiation of the same. The intervention started by NCF has substantially brought about changes in the thought process of the community. They understand the need for co-existence and mutual respect towards wildlife and landscape conservation. All the people interviewed displayed pride in these interventions and the benefit it has brought to the landscape. NCF has been able to complete the project within the timelines and has been able to achieve its objectives. With regular support from corporates and community involvement, the programs can continue showing a positive impact. Environmental sustainability takes special note here since the program influences the overall biodiversity of the ecology. All the interventions except the livestock insurance program, introduced, require minimal operational expenditure. While the corrals installed will require minimal funding, the rest of the three projects will need continued support from various stakeholders. The project has been able to reduce financial stress among its beneficiaries is another social parameter that is considered.

11. Conclusion

The logical analysis through the quantified data and the transect observation conclude that the CSR fund from CIFCL has been used towards the intended objectives. Through these interventions, the project created positive change in the socio, economic and environmental elements for the beneficiaries and the landscape. It is important to note that the evaluation had certain constraints associated with it. The inclusion of these constraints is important as they help us in strengthening the future course of current projects and planning new projects that would be implemented in the operational areas.

Good Practices

- The project efficiently utilized the inputs (funds, expertise, time, etc.) to achieve the intervention outcomes.
- The premiums charged for the program are sustainable for the communities to pay.
- The project intervention is relevant as it is aligned with CIFCL's CSR policy and is directly linked

to the SDG goals- 8, 11, and 15.

- Community involvement in the execution of the projects enhances the sustainability of the program.
- The women folk in the communities are enterprising. They manage the household along with participating in carpet making, knitting, and farming.

Challenges

- Information on premiums paid and claims paid for the financial year was not available, since the documents were maintained based on the year.
- For the insurance program, no records categorization based on dates were mentioned, hence making it difficult to assort the data.
- There was a dependency on the village committee around the implementation of the programs at the village level. This could pose a challenge and bring down the effectiveness in scenarios of the committee members quitting posts.
- Since the project period collided with Covid-19 second wave, the program took a hit in terms of its implementation and monitoring.

12. Recommendations

Providing recommendations helps to formulate policies, programs, and projects in the future. They set paths for future interventions that are focused on increasing the equity of results, which in turn supports the wider achievement of intervention results and development goals. The assessment suggests that the CSR activities have been performed satisfactorily. Below are some recommendations based on the evaluation,

- The programs performed well in the areas of community and landscape needs, increasing goodwill and villagers' participation.
- Coverage and scope of including small-sized animals in the livestock insurance plan to be reviewed.
- While the women are resourceful and manage the show independently, 100% of women respondents revealed that they do not indulge in the monetary aspects of the program. It may be recommended that they are involved to make the program inclusive.
- During the study, we understood that villagers are looking for help in other areas as well and are expecting some projects in medical infrastructure, education, and water supply works for their communities. Though NCF covers some of these interventions under its scope, these were some feedback received from the beneficiaries.
- The committee could be given financial training for better management of funds and bookkeeping.
- Practices around community engagement, provision of training to the local communities on document management, and engaging with NGOs for more diligent monitoring and



Figure 36 - Small sized animal sheep

management are recommended.

13. Program Overview- Oceans and Coasts Program

13.1 Impact assessment background

Lakshadweep translates to 'a hundred thousand islands'. It is a club of 36 atolls and coral reefs, known for its rich marine life and preserved ecology. Lakshadweep is India's smallest union territory covering a total land area of barely 32 sq km. None of the islands exceeds 2 km in breadth. Lakshadweep's aquatic area amounts to 4200 sq km of lagoon area and 20,000 sq km of territorial waters. The calm water of the lagoons in Lakshadweep despite a turbulent sea is because the encircling coral reefs smoothen high ocean waves, allowing marine life to flourish within the lagoon and protecting the islands. The corals are hence the lifeblood of the islands. Of the 36 islands, 10 are permanently inhabited with a population of close to 70000 people. While the literacy rate is 93.15% for males and 81.56% for females, the main occupation of the islanders is fishing and agriculture.

The coral islands of Lakshadweep are atolls. An *Atoll* is a ring-shaped coral island in the open sea. It forms when coral builds up on a submerged mud bank or on the rim of the crater of a sunken volcano. The atoll surrounds a body of water called a lagoon. One or more channels connect the lagoon to the open sea.⁷ Corals, on the other hand, are among the oldest ecosystems in the world and support an amazing variety of marine life. Although they cover a mere 0.25% of the global sea

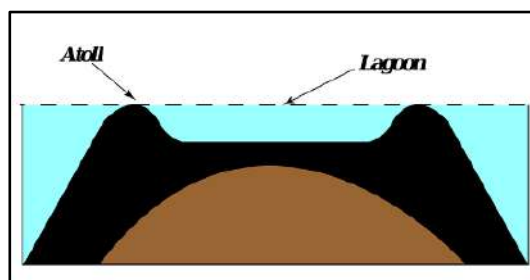


Figure 38 - Formation of atolls

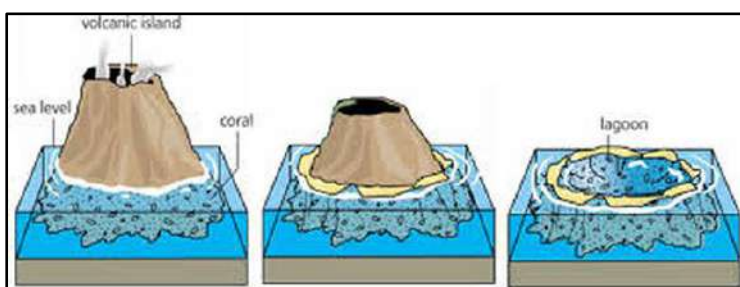


Figure 37 - Formation of atolls

surface, they sustain almost a fourth of the world's fish species. In Lakshadweep alone, there are an incredible 190 types of ornamental fishes, besides a virtual cornucopia of other marine life that is sustained by the coral reefs. Corals are living organisms that make up the reefs and provide the ecosystem for marine life to thrive especially fish⁸. Coral reefs are a natural barrier, protecting these islands against the swelling of the seas, and keeping salt water out of the limited freshwater sources here. However, due to the

⁷ <https://medcraveonline.com/MOJES/coral-atolls-of-lakshadweep-arabian-sea-indian-ocean.html#:~:text=It%20forms%20when%20coral%20builds,of%20water%20called%20a%20lagoon.>

⁸ <https://earthjournalism.net/stories/the-dying-corals-of-lakshadweep#:~:text=Scientists%20say%20that%20the%20loss,are%20essential%20to%20island%20formation.>

ecosystems and diminish nature's benefits to humans.

13.2 Context

Coral bleaching occurs when corals are stressed by changes in conditions such as temperature, light, or nutrients, causing them to expel symbiotic algae living in their tissues, revealing their white skeletons. Large-scale coral reef bleaching events attributed to warmer surface ocean temperatures have been regularly reported over the last two decades and climate research reveals that the recurrence interval between events is now about six years, while reef recovery rates are known to exceed ten years. This means that, on average, reefs will not have sufficient time to recover between bleaching events and so a steady downward spiral in reef health is to be expected in coming decades.



Figure 39 - Bleached Coral

In addition to changes in ocean status due to natural variation and climate change, people change the state of the ocean by removing resources from it. The most widespread and largest in magnitude is the harvesting of fish and other marine organisms for human consumption and industrial uses. In specific to Lakshadweep, small-scale fisheries have been a cornerstone of livelihoods. However, through the years it was seen that there was a shift from oceanic to reef-dependant fisheries. This directly impacts the fish abundance in the reefs and thereby impacts the larger issue at hand- Global climate change.

Human activities have been the main driver of climate change. The consequences of climate change now include, among others, intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms, and declining biodiversity.⁹

While it is possible to keep fisheries sustainable, this requires significant investments in monitoring, assessment, and management and strong local community-based approaches. The reef death will only lead to the loss of fisheries, livelihoods, tourism, and habitats. The demise of tropical coral reef ecosystems will be a disaster for many dependent communities and industries. Through the program, NCF explores various aspects mentioned above. That includes socio-economic, behavioral, and resource management theory approaches for individual fishers and fishing communities for balanced harvesting.

The duration of the funding by CIFCL is for three years that commenced in 2021 and will continue over three years till 2024. Their work in FY 21-22, focused on exploring how demand for the fishery for reef fish has been growing in Lakshadweep over the last few years. The work was focused on three islands, Agatti, Kavaratti, and Kadmat that represent the hub of fishing operations in Lakshadweep. Understanding how fishing communities continue to shift their fishing preferences in relation to availability, economics, convenience, and changing aspirations is critical. The study is aimed at understanding the principal drivers of commercial fishing in Indian waters. They use cutting-edge technologies to determine ecologically-meaningful boundaries for fisheries management. In the case of newly developing fisheries, the project identifies the socio-economic drivers of Lakshadweep

⁹ <https://www.un.org/en/climatechange/what-is-climate-change>

fisheries and their consequences for nearshore ecosystems. This information is shared with local stakeholders and local authorities in order to arrive at more sustainable means of fishing Lakshadweep waters.

The three main components of the Ocean and Coasts program (OCP) include

1. Population boundaries of commercially important fish species along the Indian Coastline
2. Monitoring trends in a rapidly growing reef fishery in Lakshadweep Archipelago
3. Determine the impacts of the Covid-19 pandemic on coastal and reef fisheries

13.3 CIFCL Project Details

Objective of the project:

- To understand the drivers of overfishing on the Indian west coast.
- To determine genetic overlaps in commercially important fish species along the west coast of India.
- To understand the changes taking place in commercial fisheries in Lakshadweep.
- To undertake outreach activities with local stakeholders.
- To track changes to a newly emerging commercial fishery for coral reef fish in Lakshadweep Archipelago.
- To link reef health to island habitability.
- To develop a climate action plan for Lakshadweep.

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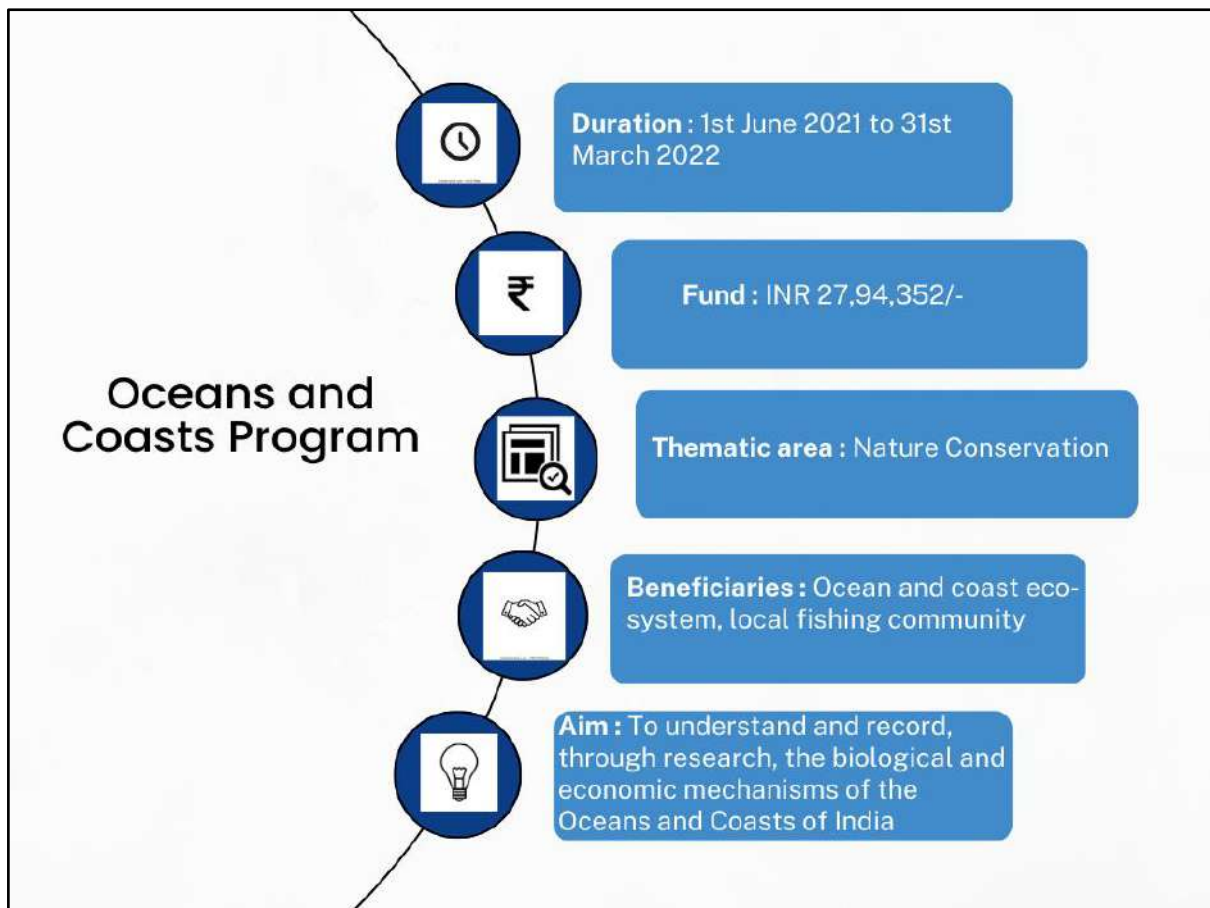


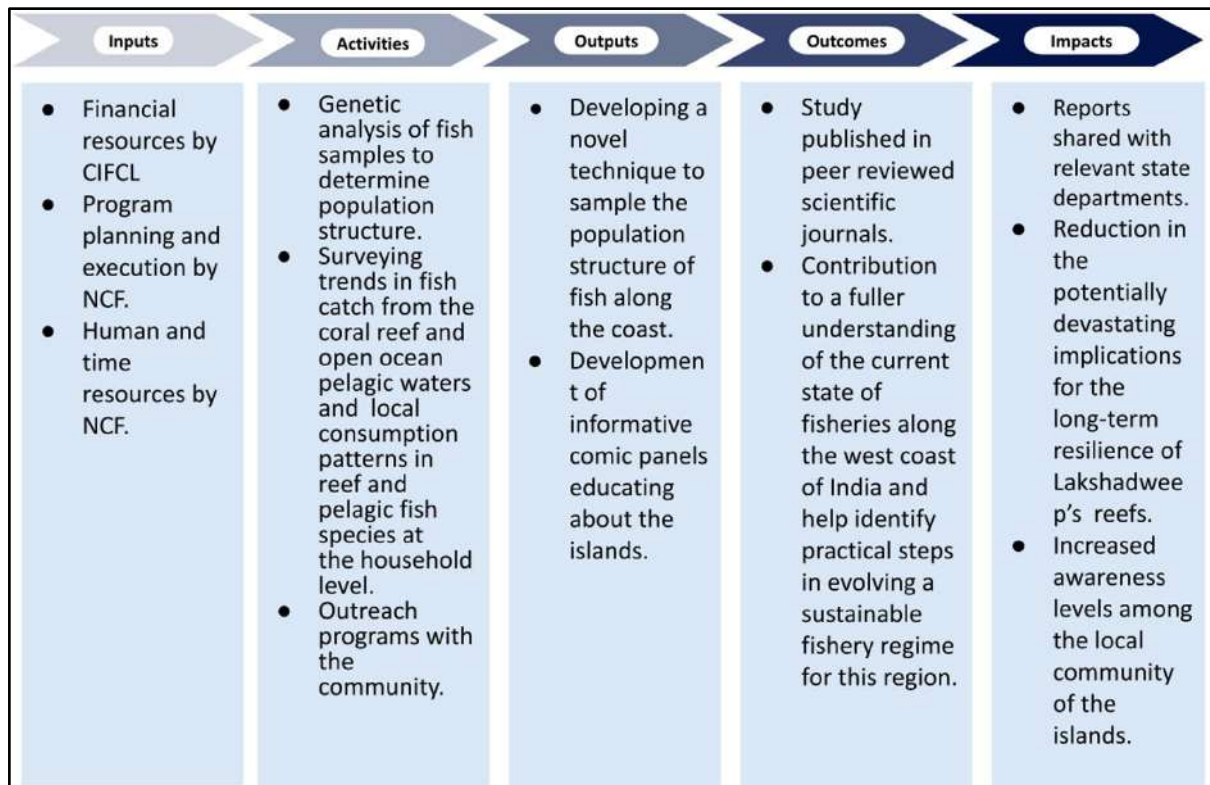
Figure 40 - Project details of the Oceans and Coasts Program

Location: Lakshadweep (Kavaratti, Agatti, and Kadmat)



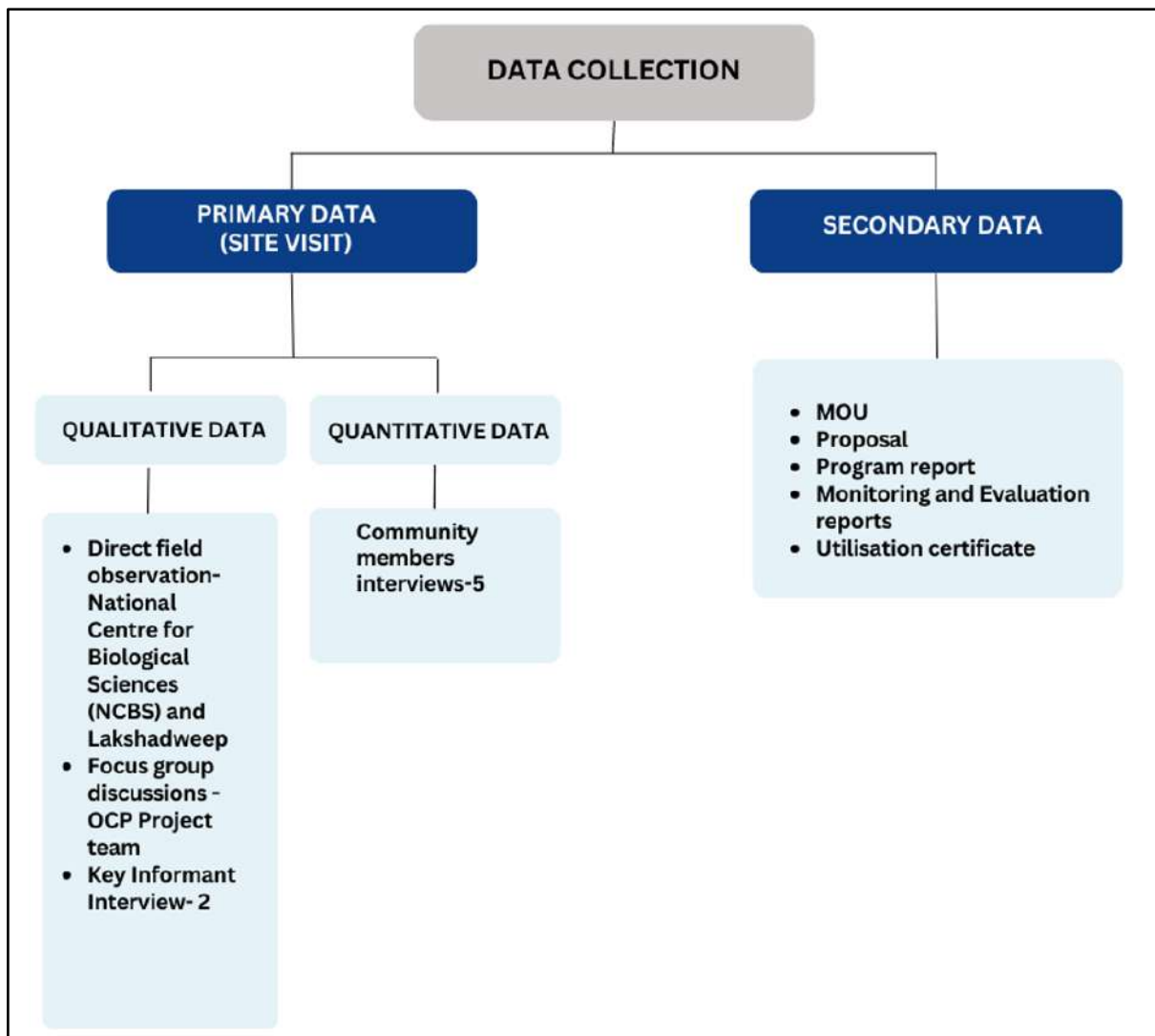
Figure 41 - Location of the program

Impact Map



14. Methodology

The process of Impact assessment was initiated by scheduling an initial meeting with CIFCL and NCF teams, separately. The meetings with CIFCL were to understand their CSR projects and expectations from the report. The meeting with NCF was to understand the processes used to deliver interventions and the expected impact in their opinion. Through these meetings, we understood the program, its objectives, and the implementation strategy followed. Post the introductory meetings, a list of pre-requisite documents was called for. The team started the desk review based on the project documents received. Accordingly, the key stakeholders of the project were identified and mapped to assess the outcomes and impact of the Oceans and Coasts program (OCP) on the target area and its community. The mixed-method research design was adopted for the study which included the usage of quantitative and qualitative research tools like field observation, Focus Group discussions, and Key Informant interviews with community beneficiaries. The data collection structure is mentioned below:



The data collected consisted of information collected through primary and secondary methods. Focus group discussions with the project team, key informant interviews with community beneficiaries, and direct field observation were adapted to cumulate the impact. A random sampling technique was regarded to identify the respondents in the location. The report presents an assessment of the impacts of the research work done on the Ocean and Coasts program and their activities based in Lakshadweep. Relevant stakeholders were identified, and their engagement activities were understood to seek their views and foster our understanding of the project work. Field observation was the primary tool used here to understand the work at the ground level. Field visits were initiated to National Centre for Biological Sciences on 17th March 2023 and Agatti at Lakshadweep between 22nd March to 24th March 2023.

15. Analysis and findings

15.1 Relevance

Relevance and quality of design are measures of the extent to which the conservation project and the program design represent a necessary, sufficient, and appropriate approach to achieving changes in key factors to bring about positive changes in targeted elements of biodiversity/footprint.

NCF deals with the aspects that affect Global Climate change. Hotter temperatures, the occurrence of frequent severe storms, depleted freshwater levels at the inhabited land, warming rising oceans, and loss of marine species are some of the issues faced in the target area that NCF is working on at the Lakshadweep islands. Given the scientific approach, the program by NCF in the target area is primarily a research-based approach. These research results are presented to various government stakeholders such as the Department of Fisheries, the Department of Science and Technology, Department of Environment and Forest, to name a few. They are dependent on them to take further action. These studies help relevant people understand the issues at hand and help tackle the consequences leading to climate change at a local level which is already a global emergency. In most scenarios, the studies are published in peer-reviewed scientific journals.

The intensity of deep-sea fisheries on the high seas and the impacts on the marine environment calls for effective measures to ensure that fishing does not compromise the commitments established for protecting biodiversity in the deep ocean. NCF has been working through the years working on a long-term program to capture any significant adverse impacts on vulnerable marine ecosystems. The project aims at understanding various factors that determine the fishing population through the research work done at National Centre for Biological Sciences (NCBS). Fishing directly impacts ocean life. Hence having a clear understanding of their populations through the coastline is one of the work packages that NCF has been working on. It was seen that the SNP (Single nucleotide polymorphisms) genetic sampling and Allele Frequency tests were performed at NCBS. While SNP markers of different fish species from different sites were compared in order to get relative measures of dissimilarity within and between sites, Allele frequency tests were carried off to understand the incidence of a gene variant in a population. SNP genetic sampling has been completed for 9 different fish species. Through this, the aim is to provide a path to better geographic information and management of population boundaries. With sustained and better management of fishing practices, the objective is to reduce the pressure of overfishing in states along the west coastline.

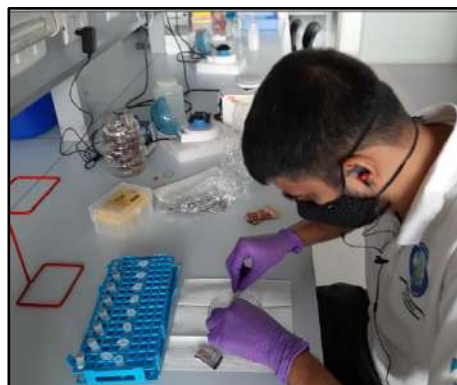


Figure 42 - Laboratory work at NCBS

Understanding the issues faced in the coral reefs in Lakshadweep, it was observed that there has been a lot of research that has gone in by the NCF team. From tracking changes across various spectrums of Oceanography to recording them, there has been a monitored approach to the program. The local

communities are involved through surveys to support their research findings and understand their outlook in the process. It was observed that there are government stakeholders which include various interested departments that they closely work with. The team gets their annual research permits issued by the Department of Environment and Forest at Kavaratti. The KII with officials from the Department of Environment and Forest revealed that the NCF submits reports of their research and the work that has gone in for the year to these departments, which are sometimes published in their annual report sections. It was understood that their team works very closely with NCF. They even said that they were part of community awareness exhibitions in the past and found their work relevant.

There are a few other institutes both private and governmental working in similar realms and we were informed by the project team, that there have been collaborations in the past for publishing 'research collectives' which mentions various development policy mouthpieces that are relevant to the islands.



Figure 43 - Aerial view of Kavaratti island

It was noted that while the results of the research can be published and submitted to at the

various policymaker level, the final authority in terms of taking relevant actions is fully dependent on the concerned government panels. This was a challenge that the team faced in terms of implementing solution-based approaches.



Figure 44 - Freshwater well

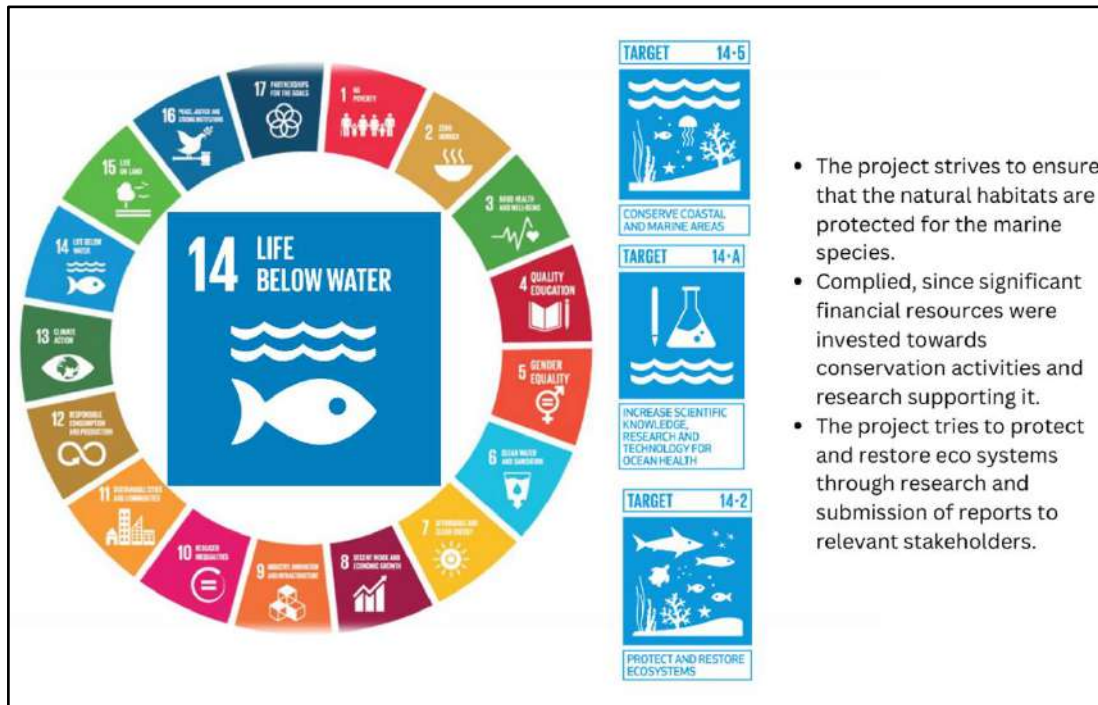
100% of respondents from the community said that there has been depletion in reef fish catch, more frequent coral bleaching, frequent weather changes, and a reduction in levels of fresh water in the



Figure 45 - Mainland boat

islands. All of them opined that there was an effect on their income levels due to the reduced fish catch. The mainland boats too indulge in reef and pelagic water tuna fishery which is further adding on to the pressure on the reefs. This correlates to the effects of degrading coral reefs in the islands. This indirectly throws light on the need for such studies.

Linkages to Sustainable Development Goals



15.2 Effectiveness

Effectiveness helps in understanding the extent to which an intervention is achieving or has achieved its objectives. It can provide insight into whether an intervention has attained its planned results, the process by which this was done, which factors were decisive in this process, and whether there were any unintended effects.

Based on the three main aspects of the program, it is clear that the NCF team had a clear objective laid out and have a course of action intended towards achieving the same. The corresponding table talks about the work packages that were proposed along with their objectives and activities that have gone into making the program effective.

Work Package 1- To understand the population boundaries of commercially important fish species along the Indian Coastline.

Objectives	Observations made
Explore if genetic tools can be used to determine the vulnerability of individual fish populations to overfishing.	1. We were informed that the genetic sampling work for 9 commercial fish species and study on SNP analysis was completed. The reports of the study were presented at the Students Conference on Conservation Science, held in Cambridge, UK on March 2022.
To determine genetic overlaps in commercially important fish species along the west coast of India	2. It was understood that in 2021 Government of Karnataka invited NCF for review and comments on the development of a Rapid assessment of blue economy potential in Karnataka. 3. The Know Your fish website is up and running and disseminates important information on the variety of fish that needs to be consumed through the seasons. 4. In terms of the Allule Frequency Test, we were informed that the same was initiated in FY 21-22 and is still ongoing. We were informed that while all the laboratory work for it was completed, the bioinformatics work is currently being developed.

10

Work Package 2- To monitor trends in a rapidly growing reef fishery in Lakshadweep Archipelago

Objectives	Observations made
To understand the changes taking place in commercial fisheries in Lakshadweep.	1. Through surveys in communities and research this trend was analysed. As informed by the project team, reports have been submitted to The Department of Science and Technology for 2020-21 and 2022-23. We were informed that due to the effects of Covid, though the work continued on the field, exclusive reports were not available and that the above reports cover the period overlapping with the assessment period.
Outreach activities with local stakeholders	2. A comprehensive online campaign titled 'Melem Keezhem' (above & below) was conceptualized. Through FY 21-22, they developed this informative comic panels on Lakshadweep in both Malayalam and English. They also worked on compiling all the panels along with photographs showcasing NCF's work over the years to create a print resource for distribution across the different islands. FY 21-22 saw much of the background works in terms of preparing an archive, researching the content and preparing the material itself. Subsequently, the whatsapp campaign was launched in September 2022. 3. No other exhibitions or workshops were conducted during FY 21-22.

¹⁰ <https://www.cofm.edu.in/notification/Rapid-Assessment-of-Blue-Economy-in-Karnataka.pdf>

Work Package 3- To determine the impacts of the Covid-19 pandemic on coastal and reef fisheries

Objectives	Observations made
Document restrictions placed on coastal fisheries as a result of the Covid-19 pandemic and its impacts on local fishing communities	<p>1. It was observed that various media reports were collected for media analysis of the impacts of the Covid-19 pandemic on coastal fisheries.</p> <p>2. We were informed that phone-based interview surveys were conducted during the said period with community stakeholders in Lakshadweep to understand the short and long-term impacts of the Covid-19 pandemic on fishing practices, supply chains, and the economics of the fishery. However, the same could not be substantiated.</p>

100% of respondents spoken to were aware of the outreach programs conducted by the team. Some were even a part of surveys conducted by NCF. They had all visited the exhibitions in the previous years and had read 'Melem Keezhem'. 90% of the respondents were a part of the Whatsapp group that familiarises people with the islands and the issues faced.



Figure 46 - Logo of 'Melem Keezhem'



Figure 47 - Presentation at Students Conference on Conservation Science, Cambridge, UK

It was also seen that the team conducts various training

programs at the local departments in the islands to keep them aware of the situation of the reefs. This however could not be substantiated due to the records of the same not being available for FY 21-22.

15.3 Efficiency

Efficiency is a measure of the relationship between outputs such as the products or services of an intervention and inputs like the resources that it uses, and may include a measure of 'value for money.' An intervention can be thought of as efficient if it uses appropriate, sufficient, and least costly avenues to achieve the desired deliverables and meet desired quantity and quality.

The team is 11 members strong, with each member having a designated responsibility. There are separate teams, that work in the reefs, a team dedicated to the work being conducted at NCBS and a team to manage all the outreach activities that are initiated at the islands. Each member is allocated based on this expertise. Most of the team members working in the waters are technically sound with

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their work and majorly constitute research scholars working towards the project at their post-graduation or doctorate degrees.

The fund allocation for FY 21-22 is as below.

Project Head	Funds utilised (INR)
Personnel Cost-	5,72,880
Personnel Cost- Lakshadweep	9,37,440
Travel and Stay	2,44,865
Equipment	65,203
Field Supplies	1327
Genetic Analysis	6,00,000
Outreach, publicity and publication cost	1,18,605
Administrative	2,54,032
Total (INR)	27,94,352

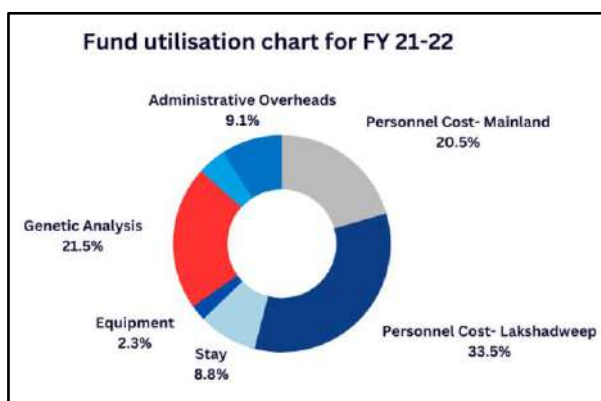


Figure 48 - Chart indicating the funds utilised

For FY 21-22, the funds towards equipment were utilized towards a laptop purchase. Diving equipment, soil moisture sensors, and freshwater temperature recorders, rainwater gauges are some of the types of equipment used by the team. They have heavy wear and tear owing to the nature of the work involved. The team spends close to six months on the field from September to May. The pieces of equipment embedded in the ocean or sites on the ground are monitored on an annual basis and the findings are recorded accordingly.

We were informed that the SNP analysis work done by the NCF was the first of its kind in India.



Figure 49 - Equipment purchased in FY 21-22

15.4 Impact

Impact addresses the ultimate significance and potentially transformative effects of the intervention. It seeks to identify the social, environmental, and economic effects of the intervention that are longer-term or broader in scope than those already captured under the effectiveness criterion.

- Due to the nature of the intervention being research oriented, there are no immediate tangible impacts seen.
- While the program covers an important topic of climate change, through the observation and stakeholder meetings, it was understood, that smaller issues and the challenges faced by the community such as reduced fish catch, depleted freshwater levels, delayed recovery of coral reefs etc are what contribute to the bigger issue at hand.
- The approach that the NCF follows is to work with the local community on creating awareness

of the islands and the impacts of their actions- both good and bad on the same. Currently, reef fishing is open to all and there are no rules in place to control the same. The efforts by NCF are ultimately aimed at halting ecological damage through research on the subject.

- In terms of awareness, there was a notable impact seen since people

were completely aware of NCF and their work around Lakshadweep. Though there was no technical understanding of the know-how of the same. The total coverage of stakeholders through their Whats app group since program inception stands at 2841.

- They have been able to build strong relationships across various government departments, and this displays their competence in having made an impact there. The KII with the two administrators confirmed this.
- Upon discussion with a local journalist at the islands, it was understood that NCF is often included in discussions around the environmental decisions that need to be taken on the islands and they are regarded very highly due to their presence in the islands for a long term.

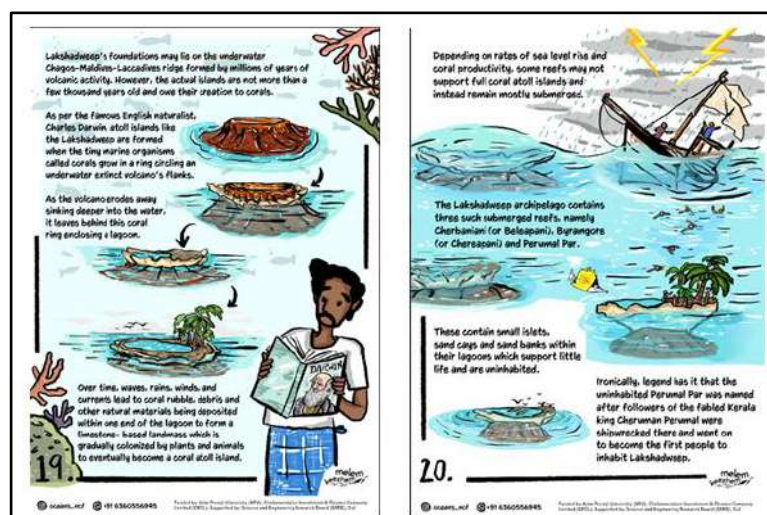


Figure 50 - Panels of 'Melem Keezhem'

"NCF has been very good with its work. They submit annual reports on the work that has gone on in the year. Our team works closely with them. 'Melem Keezhem' has been a very important milestone in connecting with the local community. It helps the people of Lakshadweep understand the issues relevant to us. More programs in the Malayalam language can be initiated by NCF in the future" – Testimonial by Ms. Safna Beegum, Environmental Assistant-Wildlife division, Department of Environment and forest, Lakshadweep

“NCF has been working here for many years now. We are closely associated with them since we are the nodal departments through which they get their work permits. Renewal of their work permits requires them to submit the reports. The reports are passed on to the higher authorities in the system. They are people committed to their work” – Mr. Arif, Department of Science and Technology

15.5 Sustainability

The research work and studies around conservation activities of the oceans become effective with the right results. This requires investing in the right resources both in terms of technical expertise and facilities. NCF through OCP has been doing just this. Considering these aspects, it is respectful to say that there will be continued dependence on corporates and other philanthropic institutions to support their research work. Their work revolves a lot around funding received especially with the support required for the use of laboratories and specialized apparatus. While a major output of the program is in the form of research papers, their impact can be evaluated based on the acceptance level of such papers and corrective actions taken based on them. Since this is subject to bureaucratic involvement, it goes in a separate direction. They have been funded by the Department of Science and Technology apart from certain corporate foundations previously. There will also be a continued dependence on various government decision-makers, for the continued sustainability of the program.



Figure 51 - Snippets of Lakshadweep: 1. The lagoon in the Indian Ocean, Agatti, 2. Ship wrecked during Cyclone Ockhi, 3. Local fishermen, Mr Abdul Kalam who is also an artist

16. Conclusion

NCF has been doing scientifically substantial work through the years. Their presence in the area since 1998 and the fact that they have been around in the good times and the bad, speaks about the credibility of the work. Through field observations, it was seen that people in the community are familiar with NCF and their work. While most of the intended objectives set out have been achieved, a few have taken a toll owing to the challenging COVID pandemic or deficiency in record keeping. Based on the current assessment, it was understood that the team has the required technical expertise in the subjects they are dealing with. The tangible impact in terms of the community outreach programs has exhibited extremely satisfactory executions. One of the key elements of the 2030 Agenda includes environmental sustainability, climate change, and natural resource management. Given these aspects of the environmental indicators, it is clear that the project directly impacts the SDG target 14.2 “by 2020, sustainably managing and protecting marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and taking action for their restoration in order to achieve healthy and productive oceans”

Good practices

- The NCF has a strong base at the locations they operate from and hence the community is responsive to them and their programs.
- The team through their years of efforts has been able to build relationships with the key stakeholders across various departments operating in Lakshadweep.
- Community awareness and involvement enhance the sustainability of the program.

Challenges

- Obtaining work permits year after year seemed to pose a big challenge for NCF to work in the field.
- Non- availability of segregated documentation for FY 21-22, made it difficult to evaluate segments of the program.
- Since there was a lot of technical information, and no tangible impact to assess in terms of environmental indicators, our team had to really strive in their approach to evaluation.
- Due to the nature of the intervention and the fact that it is a scientific research based long term program, it came with its limitations of evaluating the impact.

17. Recommendations

While a conclusion offers you the opportunity to summarize or review the report's main ideas, recommendations suggest actions to be taken in response to the findings of a report. Recommendations are made for stakeholders and decision-makers to understand the program's best practices or inadequacies to make informed decisions. This is laid out for possible future actions.

- A clear-cut segregation in terms of all the activities that are conducted by the Implementing partner needs to be recorded for better clarity and impact.
- While the activities are aligned to each of the work packages and objectives, emphasis needs to be given on the accomplishments and timelines within which it can be fulfilled. This will aid in effective monitoring of the project.
- CIFCL should continue and support such projects that aim at having a greater impact on crucial subjects such as Global climate change.