



**WATSAN and  
Renewable Energy**

# Sustainable Financing for Safe Drinking Water, Sanitation and Renewable Energy

The *Sustainable Financing for Safe Drinking Water, Sanitation and Renewable Energy* project (known as WATSAN and Renewable Energy) is a three-year project that was jointly funded and implemented by Maanaveeya Development & Finance Private Ltd. and International Finance Corporation (IFC). Formally launched on 9 August 2011, its total cost estimate of US\$ 1 million was shared equally between Maanaveeya and IFC. Designed with a dual objective, it built the capacity of MFIs to undertake sustainable finance on the one hand, while contributing to climate-change mitigation on the other. Such a model comes with the awareness that particularly among the low-income rural population, combining climate-change mitigation with improved livelihoods is only possible when it is strongly supported by an income-generating activity.

The project's design represented a turning point in Maanaveeya's portfolio which is increasingly steered towards developing integrated activities from its core position in microfinance. This is evident through its dual-component loans which finance an income-generating activity along with another product that addresses water, sanitation or renewable energy needs. Implemented through Maanaveeya's MFI partners, several innovative products and services have been promoted. The sanitation component includes three types of toilets that could be constructed; the water component

comprises a water-connection facility, a water-storage unit or a water filter while the renewable energy component provides for an energy efficient stove or solar lighting.

Progress within the sector has been patchy – the Millennium Development Goals with regard to access to water and sanitation have not yet been achieved, and broadly speaking, India is still in a rather weak position with regards to sanitation. While some progress has been made in terms of water supply, the quality of water is questionable. The report on Drinking Water and Sanitation of the Standing Committee on Rural Development states that sanitation (in India) is mainly a mindset issue based on sociocultural issues and habit.

The parliamentary panel report tabled in Lok Sabha recently attributes the practice of open defecation in India to a combination of factors such as traditional behavioural patterns and people's lack of awareness about associated health hazards. In this scenario, in which only 10.5% of the population in India has access to toilets (World Bank Report 2010), and where 80% of the diarrheal diseases are caused by water that is contaminated due to poor sanitation (WHO), creating access to water and sanitation products is critical to the overall improvement of the lives of low-income people and their movement out of poverty. The WATSAN and Renewable Energy project sought to address these issues.



Cover photo: Ramu w/o. Palpandy, Parankivayal village (Photo: Opmeer Reports)

Everyone benefits through WATSAN

# Implementation strategy and process

Implementing a project of such scale and complexity called for planning and strategizing even prior to its formal launch. This involved generating awareness, providing technical assistance to create delivery systems for products and services, and the selection of partner MFIs.

## Awareness generation

Generating awareness and thus understanding the demand for these products and services was Maanaveeya's first step in the project's implementation. A series of three workshops was conducted at which all stakeholders came together in order to understand the model that was being pitched, as well as their roles and responsibilities. The participants included Maanaveeya staff, MFI partners, resource persons, experts from relevant sectors, manufacturers and technology and service providers. There were also sessions at which technology and service providers presented a demonstration of their products and services. Along with the technical know-how, the sessions created an understanding of the non-technical aspects such as motivation and behavioural changes required in implementing the project. It was this process of sharing information and experiences that greatly speeded up the project's implementation. A regional conference that was conducted towards the end of the project also concluded that there was a high level of satisfaction among all stakeholders with respect to the implementation process.

## Partner selection and implementation

In order to implement the project, Maanaveeya selected existing partners who had already met its general selection criteria on four major aspects. Firstly, the MFIs needed to have integrated financial sustainability with social performance, thus promoting integrated livelihoods. Secondly, they needed to have the capacity to reach out to clients and areas which were not covered. Thirdly, their focus needed to be on serving small to medium enterprises (SMEs). Operationally, they were required to have an outstanding loan portfolio of at least INR 250 million, with a minimum of three years of experience, to furnish audited financial statements and already offer a number of products. In addition, the partner needed to have the potential and inclination to implement the WATSAN project.

Twelve MFIs were selected on the basis of these criteria, all of which had prior experience of working with Maanaveeya. The loans to the clients through the MFI are of a larger amount, as they combine the income-generation component with the WATSAN/renewable energy component. Hence, the MFI can have a reasonable loan size without added operational costs. This also helps the MFI manage the non-income generating loan portfolio within the limit prescribed by the Malegam committee, which recommends that no more than 25% of the loan amount is granted for non-income generating purposes.



*Toilet model at GUARDIAN's unit office, Keeranur, Pudukottai District*

The deliberations during and between the workshops provided a platform for the MFIs to articulate their own needs such as funding requirements, staff training, community orientation, exposure visits, piloting projects, contacting manufacturers and suppliers, as well as the monitoring of the entire project.

Maanaveeya supported its partners in developing in-house training modules in order to retain a standard methodology and yet remain flexible. The modules addressed a gamut of issues such as village selection, community mobilization, awareness and demand creation, individual and group assessment by senior staff, loan sanction, disbursement, utilization and recovery. By following these procedures, clients were able to obtain loans along with products and services that suited their requirements.

## Technical assistance and capacity building

An essential part of the project's implementation was the provision of technical assistance and capacity building to MFIs. At the first level, MFI managers were provided with training in educating their clients about the various products, and how to obtain and utilize a loan. Several MFIs backed up such awareness generation with targeted campaigns using street plays, documentary films, video clips and demonstrations. A process was designed for the delivery of products and services from the manufacturer to the client through the MFI. Capacity building was also provided, which saw the training of masons (many of whom were women) in best practices for toilet construction. The value of the technical assistance totalled INR 20,773,900. Another component examined the government subsidy for toilet construction.

# Achievements and outcomes

## Achievements

Through the WATSAN and Renewable Energy project, Maanaveeya sanctioned loans to 12 MFI partners with the total number of beneficiaries reaching 233,932 as against the initial target of 111,200 beneficiaries – thus achieving not 100%, but 210% of the target.

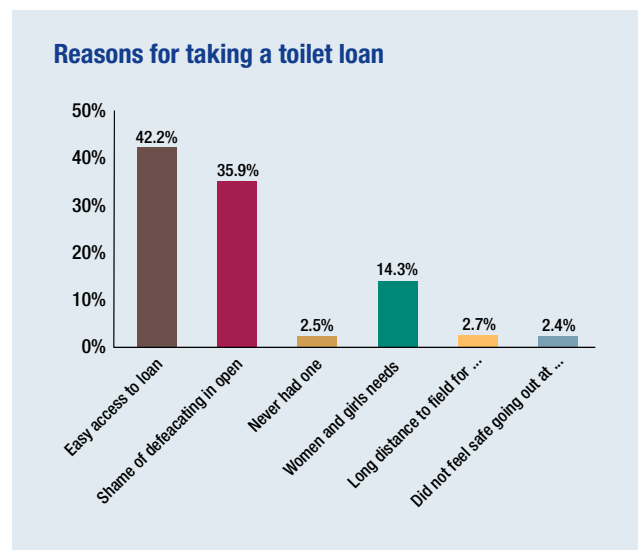
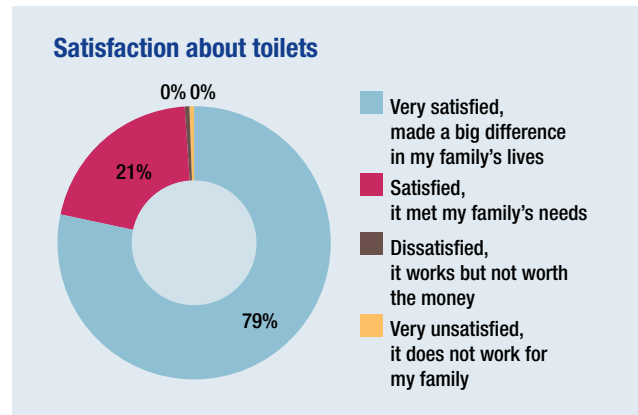
The impact assessment conducted by Healing Fields Foundation (for the MFI Grameen Koota) stated: “This project has [had] a direct impact on increasing access to finance for low-income households in India to purchase sustainable energy, water and sanitation solutions.” It also mentions that Maanaveeya regularly met its performance targets through the course of the project, and that it has been defined as a scalable model which can be replicated at other MFIs for sustainable energy financing.

## Impact

In total, three kinds of loans were provided: toilet construction, water, energy efficient stoves and solar-lighting loans. The outcomes of each of these are discussed below.

## Toilet loans

The loans provided for the construction of toilets have had profound effects on the lives of the beneficiaries. In fact, it has proven to be the most popular of the three types of loans. Women in particular, have been spared the indignity of having to go to the toilet outside (not to mention the time saved), as a result of having toilets constructed in their own homes. Apart from the increased social status, there are obvious health benefits arising from the improvements in hygiene. For almost all the respondents, the toilet built from the loan is the first-ever toilet in the house. Women no longer



Mrs Maithili and Miss Pechiyamml working on the construction of a toilet in Kachanam village

feel embarrassed or afraid of going to the toilet, as it is within the privacy of their homes. There are impressive quantitative outcomes of the toilet loans with 25 villages in Nagapattinam under the MFI Bharati achieving 100% sanitation. Women were given training in masonry and were involved in toilet construction – a first-time achievement. Assessing the feedback from one of the MFIs (Grameen Koota), 99% of the clients were satisfied with the toilets, with 42.2% of the respondents citing ‘easy access to loan’ as the reason for constructing toilets, even more than ‘embarrassment/lack of privacy’.

Evaluating the toilet loans shows that almost all clients who constructed the toilets use them. Nearly two-thirds of the users have a system of regular cleaning in place. However, there needs to be greater emphasis on maintenance.

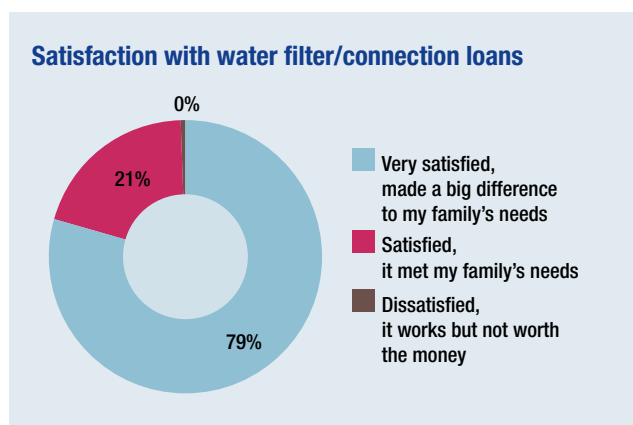
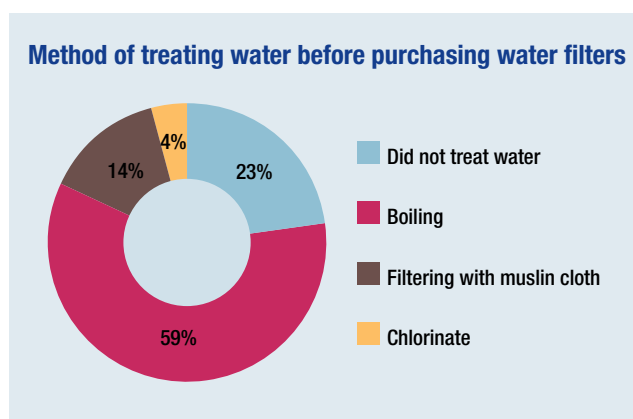
### Water loans

Water loans have also had an immediate and significant impact on people’s lives. Respondents stated that the difficulties associated with manually fetching and treating water has been greatly reduced and the time saved on such tasks could not be underestimated.

The majority of water loans were taken by clients whose source of drinking water was the village well. Water loans were given for piped water connections, water storage units and water filters. The beneficiaries have used the loans in



Water facilities in Keeranur, Tamil Nadu were provided by GUARDIAN



different ways. The purpose and utilization of water loans were influenced by context and location. In rural areas, where access to water is a major challenge, the loans have been used for water connections and storage tanks, as is the case in many areas of south-east Maharashtra and Karnataka. In urban and semi-urban areas, water filters have been more popular. The maximum number of water-filter loans was taken by clients with an income of between INR 5,000 and 15,000 a month. The immediate measurable result is that families spend less effort and money on water needs than they did in the past. They enjoy better health as a result of improved sanitary conditions and the availability of safe drinking water. Four out of five clients who responded to the impact assessment survey say that they are very satisfied with the loans, and that it has made a big difference to their lives. Some respondents say that the extra time saved is channeled into other chores and into their income-generating activities. The programme is expected to have long-term positive implications, improving the quality of life for people in disadvantaged regions and addressing current and future environmental and ecological problems.

### Renewable energy loans

This component includes loans for solar lighting as well as for energy-efficient cook stoves. Many of the clients have found the solar light useful, which helps them to reduce their electricity bills and have a reliable source of light even when power cuts occur. In many homes, it has enhanced children’s education by enabling them to study after sunset. In some enterprises such as weaving units, solar lights provide sufficient lighting, especially when attention to detail is so important. Many homes use solar lighting even during the day, particularly when there is hardly any daylight because of poor ventilation. The cook stoves have been useful for clients, both in terms of saving fuel and in reducing smoke emissions.

# Case studies

## Case study 1: Toilet construction

Mathavi lives with her husband and three children in the village of Thirukannamangai, in the Koradacherry block of the Thiruvarur district of Tamil Nadu. Mathavi's husband is a mason, while she sells home-made snacks (murukku) to earn extra income. Her eldest daughter Mahalakshmi is in her first year at Swami Dhayananda Arts College in Manjukudi while her son and younger daughter attend the local school.

The family lives in a house constructed as part of the Indian government's Rural Landless Employment Guarantee Programme. The toilet constructed with the house became so damaged that it was irreparable. The family began to use the road to defecate, but Mahalakshmi disliked this practice and went away to her grandmother's house to continue her education. She refused to come home given the lack of a toilet.

When the family considered constructing another toilet, they were short of funds. Mathavi approached BWDC and



obtained a loan of INR 12,000 and had a toilet constructed. Apart from the obvious convenience, the family has been reunited with Mahalakshmi who returned home.



## Case study 2: Water connection

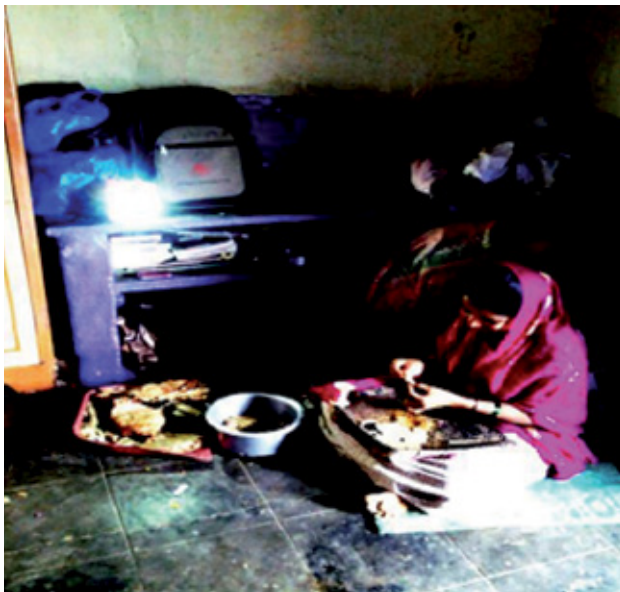
Mrs Alima Begum moved to Bharada village in Balod, Chattisgarh, 25 years ago after her marriage. Life was not easy because of the lack of proper roads, and there was no water connection in the house. She came into contact with ESAF, through which she took out a loan to generate income. Along with the loan came exposure to the the financial market and how to negotiate. While her financial condition improved, the local water crisis began to affect her everyday life. In her locality, everyone would crowd around the single water-pump, leading to frequent arguments with her neighbours.

Members of the ESAF team visited her house and briefed her on the Nirmal Jeevan Dhara project, through which she could secure a water connection for her house. The loan from ESAF enabled her to arrange her water connection. Alima says this has freed her from the everyday quarrels, and allowed her to concentrate on her work. She's grateful to ESAF, and hopes that many more people like her can derive similar benefit.

### Case study 3: Energy efficient stove

Mrs Jarena Gote lives in a small house in Hubli with barely any ventilation. In the past she had two types of stove: a country stove and a chimney stove. The country stove emitted too much smoke, so most of her cooking was done with the chimney stove. Cooking for a family of four (her husband and two school-age children) used to consume about three to five litres of kerosene per month.

It was then that she approached GFSPL for a loan to buy an energy-efficient stove. This type of stove consumes far less firewood and cooks faster too. She now uses it to cook all her food such as rice, roti and even lamb curry. The kerosene stove is still used – but only to make tea and coffee. Her new stove is portable, so she can even take it outdoors. Cooking is no longer smoky and suffocating for Jarena, and she enjoys her cooking much more as a result.



### Case study 4: Solar light

Mrs Mumtaz, a resident of Hubli, rolls beedis (a type of thin cigarette) to earn additional income for her family. As there are no proper windows to ventilate her house, she used to sit outside in the heat while she worked. During the summers, when power cuts became frequent, she would use a kerosene lamp which her daughter also used to study. As kerosene became more expensive and scarce, she began to look for other sources of lighting. That's when she heard about GFSPL and took a loan to purchase a solar light. The solar light enables Mumtaz to work inside the house. It was a real boon to her daughter Yasmeen, who had her Class X exams approaching. She was able to study with the solar light even when power cuts struck.

# Challenges and lessons learnt

As in every project, the lessons learnt and challenges faced help pave the way forward by consolidating best practices and finding ways to overcome limitations. If success is gauged in terms of the holistic development of the community as a result of this project, then some MFIs certainly fared better than others. Their success could be attributed to the following factors:

- Earmarking part of the portfolio to WATSAN and renewable energy loans.
- Aligning the project implementation strategy with the MFIs business plan, and promoting grant and loan funds to provide financial assistance.
- Generating demand for WATSAN and renewable energy loans through effective community mobilization.
- Establishing good ties with the technology and service providers.
- Continuous monitoring of the project in order to ensure utilization.
- Having trained and dedicated staff and use of IEC material in the local language, reduced the time that staff members spent in community mobilization.
- Having impact-assessment strategies in place in which impact is measurable in a short period of time.

## Success stories

- The MFI Bharati constructed more than 12,000 toilets without any subsidies.
- The MFI GUARDIAN was able to successfully operate in both rural and semi-urban areas despite the presence of other MFIs, because none of its competitors offered loans that addressed water and sanitation-related needs. Furthermore, they created a demand by conducting awareness programmes, e.g. by using government and census data stating that 56% of Indian households still practised open defecation.
- The Grameen Financial Services Pvt. Ltd. created interest through the use of the idea of safeguarding members from waterborne and sanitation-related diseases.
- ESAF handled the issue by building strong relationships with the communities it served, convincing them of the social and economic changes that would take place in the course of time.
- Maanaveeya's coordinated approach in implementing the project and holding workshops, provided a platform to regularly exhibit a range of facilities by putting in place an effective monitoring system through the involvement of local and government agencies.



Shaiza Khan preparing for lunch. The solar powered lamp was bought with ESAF's help





*A villager in front of one of the village toilets bought with the support of Belstar*

## Challenges

As in every project, WATSAN and Renewable Energy had its share of challenges, which were both technical and social in nature.

- Firstly, the goal of an India free of open defecation is only attainable when communities as a whole begin to use toilets. However, toilet loans do not reach the poorest of the poor due to a lack of repayment capacity. Hence, community water and toilet loans should be encouraged and supported by government and multinational organizations.
- While a government subsidy is available for the construction of a toilet, accessing it is a complex procedure, which is why few people make use of it.
- Most clients incur additional expenses for toilet construction over and above the loan amount, placing a greater financial burden on them.
- In several cases it was found that women began to use the toilets at home soon after construction, while men continued the practice of open defecation owing to shyness.
- With regard to toilet construction, there was a fixed mindset among clients and masons about fixing a vent pipe even in the case of leach pit toilets, while it is not required.
- In the case of stove loans, it is advisable to field test the product before launch in order to avoid problems and having to withdraw the product after launch.
- With regard to the sale of products, the manufacturers should provide the right technology by ensuring the appropriate supply and services. The biggest challenge with respect to technology and the sale of products (water filters, solar lamps and stoves) is after-sales service and the monitoring of function and usability.
- While the MFIs can provide awareness-building and promotional activities, mobilize members and deliver credit, product innovation is beyond their scope.

*"I am delighted to be part of this project from conception to completion. It started with the thought of making a positive difference to our clients' lives alongside extending microfinance services. Maanaveeya has been a forerunner in facilitating access to energy, water and sanitation through our MFI partners. I am happy to share the success that we not only achieved 200% of the set target, but also brought a positive social turn by improving the dignity of women, saving time for productive purposes and through maintaining decent health conditions. Our client-centric approach has been vindicated with the GOI Program 'Clean up India – Swachch Bharat Mission'. Our project closed in December 2014, but we continue to support our partners and are exploring opportunities to collaborate with social and development organizations to scale up this project.*

*We are fortunate to have the partnership of International Finance Corporation (IFC). Besides funding support, IFC has helped us with project design and implementation. We would like to thank our MFI partners, WATSAN and Renewable Energy partners, service providers and other stakeholders for the success of the programme."*

*We made a difference, but it's like a drop in the ocean.*

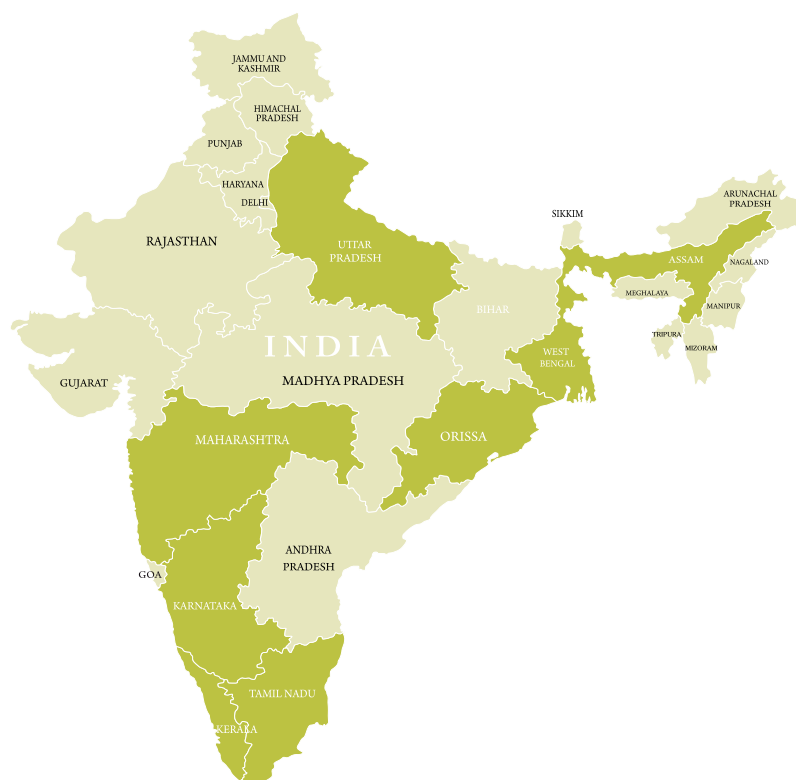
**Gouri Sankar**  
 Managing Director  
 Maanaveeya Development & Finance Private Ltd.

*"A key barrier to increasing adoption of clean energy, water and sanitation products and changing ingrained behavior is the lack of finance at the household and enterprise level. Building the capacity of financial institutions (FIs) to increase clean energy lending helps IFC meet the twin objectives of enabling inclusion through financial services and mitigating climate change. Partnering with Maanaveeya, helped IFC reach out to almost 200,000 households and a million individuals."*

**Sakshi Varma**  
 Operations Officer, Finance and Markets  
 World Bank Group

## List of major partners

- Assam** – Unnaco, Nightingale, Grameen Sahara
- West Bengal** – Sahara Utsarga Welfare Society, Uttarayan Financial Services
- Uttar Pradesh** – Margdarshak Financial Services, NEED
- Maharashtra** – ESAF, Grameen Financial Services
- Orissa** – Swayamshree Micro Credit Services
- Karnataka** – Grameen Financial Services
- Tamil Nadu** – Bharathi, GUARDIAN
- Kerala** – ESAF



# The way forward

There is a pressing need for the WATSAN project. In a country where nearly 56% of households still practise open defecation, health and hygiene-awareness programmes are changing attitudes, leading to a growing demand for sanitation and water products and facilities.

The WATSAN and Renewable Energy project has successfully completed its first phase of implementation at an opportune time, as the Shri Narendra Modi's government has taken a significant step towards eliminating open defecation. The Swachh Bharat mission (Gramin), aims at making India 100% free of open defecation by 2019, which marks 150 years since the birth of Mahatma Gandhi. This mission also seeks to bring about an improvement in the general quality of life for those living in rural areas.

This project has demonstrated that promoting integrated livelihoods by combining a social and economic need is definitely the way ahead. This is backed up by the fact that all those who constructed toilets cited the 'availability of loan' as the main reason for construction. Maanaveeya should continue to align its project implementation strategy with the MFIs' business plan, and continue to provide a platform to all stakeholders to share their experiences, best practices, exhibit products and discuss the challenges faced.

While toilet loans are the most popular type of loan, a number of issues still need to be resolved. Given that toilet construction is a lot more expensive than the loan amount

provided, it is necessary to come up with low-cost models as well as provide linkages to the government subsidy. This opens up the possibility of public-private partnerships. To scale up the project, bankers and financial institutions should come forward to provide loans and the RBI should consider WATSAN loans as priority sector lending. Phase 1 of the project's implementation largely depended on the development of the right partnerships – such as financial providers, service providers, government initiatives (subsidy), manufacturers and technology providers.

In conclusion, Maanaveeya's implementation of this phase of the project shows that when finance is made available to low-income households, it enables them to purchase sustainable technologies and solutions. It has resulted in an effective model, particularly because it was preceded by building awareness among the MFIs' end-users with respect to the products and services available. Apart from proving the long-term business viability of sustainable finance, the implementation process was structured and smooth in all aspects from partner selection, training, monitoring to follow-up. An impact analysis can clearly show the benefits. Maanaveeya expects to scale up the project and reach a wider clientele.

Maanaveeya is committed to continuing the project in line with government policies and is exploring funding support from social and development organizations.



*Sunanda Soumkar, a beneficiary of ESAF's water loan scheme*

Oikocredit's vision is a global, just society in which resources are shared sustainably and all people are empowered with the choices they need to create a life of dignity.



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