Sanitation Case Study:

Rural Sanitation Program, India

CAWST

About this document

CAWST's Latrine Program Implementation Case Studies give detailed overviews of different latrine programs. Each case study describes how the implementer(s) addressed seven components of latrine programs, and what challenges they have faced. Each case study is in a "Question and Answer" format. This document is part of a collection of resources for learning and training about sanitation. To access CAWST's other sanitation resources, visit cawst.org/resources.

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About CAWST

CAWST, the Centre for Affordable Water and Sanitation Technology, is a Canadian charity and licensed engineering firm based in Calgary, Canada. CAWST acts as a centre of expertise in water, sanitation, and hygiene (WASH) for the poor in low- and middle-income countries, and addresses the global need for WASH by building local knowledge and skills. Our expertise is in non-networked WASH technologies and approaches. CAWST solely focuses on capacity development: we do this by providing subsidized training, consulting, and free open-content education resources. We help other organizations start, strengthen, and grow their WASH programs.

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Program overview

LEAD ORGANIZATION	Gramalaya
TYPE OF ORGANIZATION	Nonprofit organization
NAME OF PROGRAM	Rural Sanitation Program
LOCATION OF PROGRAM	India, primarily in the state of Tamil Nadu
DATES OF PROGRAM	1987–present
SIZE OF PROGRAM	200,000 latrines in 30 years, reaching approximately 1.2 million people
IMPLEMENTATION REACH	Gramalaya plans to reach more people by working in five more states in northern India and continuing their work in the five southern states. They plan to work with 100 nongovernmental organizations (NGOs) and microfinance institutions (MFIs).

About the program

Gramalaya aims to help communitieis to improve their overall socioeconomic status and health development. The underlying principle of the Gramalaya approach lies in the belief that health empowerment will in turn lead to economic and social improvement that would give people the power to confront not only illnesses arising from water and sanitation related problems but also the poverty and depression that follows. Therefore, Gramalaya's first 5-year period (2007–2012) was focused on promoting health and hygiene initiatives with an emphasis on sanitation. At the end of that 5-year period, Gramalaya shifted its focus towards economic development through microcredit and livelihood promotion activities. They have declared 47 rural villages as open defecation free.

About Gramalaya

Gramalaya is an NGO, established in 1987 and based in Tamil Nadu state in southern India. They started operating primarily in the rural areas of Thottiyam, Thathaiengarpet, and Thuraiyur block, and in the informal settlements of Tiruchirappalli City Corporation in Tiruchirappalli District. Their main activities include: health and hygiene education; promotion of self-help groups among rural, urban, and tribal women; and construction of low-cost latrines and safe water supply through microcredit. The Government of India has approved Gramalaya as one of the National Key Resource Centres of the Ministry of Drinking Water and Sanitation to provide training to government officials in the states of Karnataka, Andhra Pradesh, and Tamil Nadu.

More information about this implementer's programs can be found at the following link: http://gramalaya.in

STAKEHOLDER ENGAGEMENT	PRODUCTS AND SERVICES	DEMAND CREATION	FINANCES	CAPACITY DEVELOPMENT	MONITORING FOR IMPROVEMENT	FECAL SLUDGE MANAGEMENT

Engaging with others

There are many stakeholders involved in implementing a latrine program. Partnerships with community leaders, government, and respected organizations can make a big difference in an initiative's success. Let's find out more about Gramalaya's approach to engaging with others.

Which stakeholders are involved in the program, and what are their roles?

PROGRAM STAKEHOLDERS	
Association of Water, Sanitation, and Hygiene (AWASH) committees	An AWASH committee is formed in each community Gramalaya works with, and it is operated by peer educators (animators) identified by Gramalaya. AWASH committees are responsible for creating demand, facilitating implementation (including financial management), and monitoring. Depending on the location, there might already be a CBO that can take on this role.
Households	Households are responsible for the installation and maintenance of their latrine. They discuss the design and construction of a latrine with the AWASH committee, and pay for everything that is not covered by a subsidy. They often dig the pit themselves.
Masons	Masons are either community members or they come from a nearby town. They build the toilet.
Cement fabricators	They supply high quality materials, including the slab.
District Rural Development Agency (DRDA)	The DRDA is responsible for planning and payment of the government toilet subsidy through the *Swachh Bharat* [Clean India] Mission (SBM).
Local government (*Panchayati Raj*)	There are three levels of local government: village, block, and district. They are responsible for planning and monitoring construction of toilets. They approve the implementation plans and manage the government subsidy. They also lobby to higher government on various topics. There is an SBM official at the district level.
Microfinance institutions (MFIs)	MFIs provide loans for latrines and often work with the AWASH committee. They explain to households how they can access loans, and they distribute Loan Appraisal Forms.
Donors	They provide financial resources for the programs. Donor funding often comes from government or from corporate social responsibility (CSR) initiatives.

The SBM logo is Gandhi's glasses with the words Swachh Bharat [Clean India] on the lenses and the national tricolour across the bridge.
The tagline is Ek Kadam Swachhata Ki Ore [a step toward cleanliness]

Have you engaged with government?

Yes. We are working under the Swachh Bharat [Clean India] Mission (SBM) to make India open defecation free by 2 October 2019, which is the 150th anniversary of the birth of Mahatma Gandhi. The Government of India wants to see the construction of 111 million toilets, at a cost of around thirty billion US dollars. Many NGOs, including Gramalaya, are working with the government to achieve this mission. A key component of the mission is a subsidy of 12,000 rupees (US$185) provided to certain households. The Ministry of Drinking Water and Sanitation is responsible for the SBM in rural areas, which are called gramin in Hindi.

Have you engaged with the local government?

We engage with government at all levels. Other than national government, we also work with state government—particularly the Rural Development Department and the person responsible for the SBM. For example, we are an executive member of the State Rural Sanitation Society, which is supported by the Government of Tamil Nadu and the Rural Development Secretary. As a member, we can advocate and lobby for health and sanitation.

In rural areas, we also have to work with the different levels of local government, which is known as Panchayati Raj. This includes three levels: village (Gram Panchayat), block (Panchayat Samiti), and district (Zila Parishad) level.

How do you work with government?

One of our key objectives is to work closely with all levels of government and advocate prioritizing water and sanitation. We work closely with government to frame policies on WASH. And we offer our technical expertise to them, more as consultants.

What is the relationship between government and NGOs like?

We work closely with government. We need their approval to implement projects. They like to work with NGOs because we are efficient and transparent.

Why do you work with community-based organizations (CBOs)?

CBOs are the backbone of Gramalaya in all its programs. CBOs include women's self-help groups, panchayat-level federations, AWASH committees, and children's self-help groups. These CBOs are trained and responsible for planning, implementing, and monitoring water and sanitation programs. They are the real implementing

Household with their new latrine

agencies at the field level. Gramalaya is a facilitator and catalyst. They are the community change agents.

The AWASH committee seems like it has a central role in the program. Who are they?

Yes, the AWASH committees are key to the program. They are usually around 20 volunteer members. The committee is trained to ensure the transparency of the projects. Some of their responsibilities are to:

- Work as a link between Gramalaya and local government

- Work as a mediator in bringing together MFIs, NGOs, and local government schemes for increasing the coverage of household water connections and toilets

- Monitor the community, ensuring environmental sanitation in the area

- Support development and implementation of Information, Education, and Communication (IEC) material

- Coordinate with cement fabricators

- Manage CSR finances (bank account, vouchers, bookkeeping)

How do you coordinate so many stakeholders?

Coordination is what we do. We are the catalyst. So we link the different stakeholders.

We engage stakeholders in various ways but usually through consultations, meetings, and discussions. For example, we have the Experience Sharing and Review Meeting where staff share their experiences with the project. We also have advisory committee meetings to ensure transparency, and we have intersectoral coordination meetings with members that are part of the SBM to make sure the project is well understood.

Lessons

Any lessons on engaging with stakeholders you would like to share with other implementers?

Advocacy is very important to make change on a larger scale. Governments need to hear from implementers to change policies and implementation processes. We are currently providing feedback on the provision of subsidies to make the process more effective. Government can be bureaucratic — be patient.

Products and Services

Latrine design and construction is often the focus of sanitation programs. Supporting services, before and after the installation of a latrine, are essential for long-term use. Let's find out more about Gramalaya's latrines and the services they provide.

Who do you build latrines for?

We mainly focus on household toilets, but in the Tiruchirappalli urban area we work on community toilets as there isn't always space for household toilets.

What type of latrine(s) does the program promote?

We have built various types of cost-effective pit toilet models, mainly single or twin pit. But in the last ten years, we've focused on twin pit pour flush latrines measuring 4 ft x 4 ft (1.2 m x 1.2 m). Households often use a bucket to flush the toilet. We also build twin pit latrines with a bathroom area to bathe in. We call it a SMART toilet, and it measures 4 ft x 8 ft (1.2 m x 2.4 m).

Why did you chose this type of latrine?

We conducted some research to find out what type of toilet worked best in the communities we work in. We selected 10 sample villages where Gramalaya constructed household toilets 20, 15, and 10 years ago. Based on this research, we found that twin pits were most appropriate. We found that households

were reluctant to empty a single pit because it smelled, and they sometimes reverted back to open defecation.

The twin pit pour flush toilet is more sustainable. Once the first pit is full, you can use the second pit. It takes about five to seven years to fill up a pit, and by that time, the fecal sludge in the first pit will become completely dry, like sand. Also it is cheaper than a septic tank, disposal is easy, and it's a common design. This technology is in the SBM guidelines.

The key for us is that technologies are appropriate, low-cost, location-specific, replicable, and sustainable.

Who builds the latrines?

At the start, Gramalaya used to build latrines. Now this responsibility has been given to the AWASH committee, which coordinates with the masons. Gramalaya trains the masons, who are either part of the community or from a nearby town.

Do you work in challenging environments?

Although we promote the twin pit pour flush toilet designed by UNDP for

Ceramic pour flush toilet

control—particularly for the slab and the bricks for the superstructure. The suppliers or the AWASH committee organize the transportation of the materials to the households.

Explain the process of how a household obtains a latrine.

Projects are often either implemented through government or CSR initiatives. For government projects, usually Gramalaya gets a request from the DRDA to take up a latrine project in a cluster of villages. Gramalaya then goes to the villages and conducts a baseline survey (how many people have toilets, how many don't). We then conduct a focus group with the households who don't have latrines. Usually 75% of these households want to make use of the subsidy and want a latrine. An AWASH committee is formed and trained. They engage with the households, masons, suppliers, and MFIs. Some households will need a loan to buy the materials and to pay for the labour. The household often digs the pits. The materials are transported to the household, and the mason builds the latrine. Officials from DRDA will supervise the construction process of the toilet. DRDA will reimburse the households with the subsidy. Most households have a bank account, as there has been a push from the government to do so.

Have you dealt with any technical problems?

We noticed that toilets with temporary superstructures needed frequent repair and renovation. Hence, now we promote toilets with permanent superstructures.

Have you made any changes to the latrine model?

Yes, we've added the option of an incinerator to burn sanitary pads, and a shower component. This is the 3-in-1 SMART toilet. We designed this toilet because a lot of household toilets were very small and didn't provide privacy for menstrual hygiene and bathing.

hard soils, we do work in challenging environments where we need to promote other designs. These include:

- Single pit pour flush pit models with honeycomb brickwork or pits lined using local stones
- Dry pit latrines in difficult areas like tribal belts and economically deprived communities
- Eco-san toilets/compost latrines for waterlogging, water-scarce and rocky areas, as well as coastal regions.

Where do the materials for the latrine come from?

They are sourced locally. A good supply chain exists for the construction material, even in small towns. However, we do coordinate with suppliers for quality

If the latrine breaks, who repairs it?

Most latrines don't break, but if they do the household would figure out how to fix it, either themselves or get a mason. The main types of breakage are with the superstructure, and there are rarely slab or connection issues.

How do you ensure the latrines are used and maintained correctly and consistently?

The AWASH committee visit the households regularly to make sure that the household is using the latrine correctly. Gramalaya also does follow-up visits.

Are people satisfied with their latrines?

Very much, and almost 100% of latrines are in use.

Lessons

Any lessons on products and services you would like to share with other implementers?

• The design of the latrine must be sustainable; it should last for a long time. This means you need to look at how the sludge will be emptied.

• Improve your design if necessary, such as adding bathrooms or incinerators, but also don't over complicate—promote what is working.

The SMART toilet incorporates twin pit latrines with a bathroom area to bathe in.

Creating demand

The definition of creating demand is when people have the motivation, opportunity, and ability to purchase, maintain, and use a latrine. Demand creation should inspire people to continue using latrines because they see the value it adds to their lives. Let's find out more about Gramalaya's approach to creating demand for latrines.

What was the sanitation situation before you started this program?

Often, households were going to the bush, the ponds, or the river banks to relieve themselves. They would go before dawn or after dusk.

Who pushes for toilet construction?

The push comes from all sides. Sometimes it is a proactive local government, sometimes it is the community itself, and sometimes it is Gramalaya.

What is the main barrier for installing a latrine?

There are three main barriers. Households don't understand the importance of a toilet, they don't know how to build the toilet, and/or they don't know how to access funding.

What motivates people to install a latrine?

The SBM has been an important motivator. The messaging to end open defecation is everywhere: IEC materials, TV ads, radio. It is frequently talked about by high-level politicians such as the prime minister and top level ministers. They also have celebrity ambassadors. It's really helped to create demand for latrines.

How would you describe the relationship that you have with communities before starting a project.

As we have been working for 30 years, many communities know us and trust us.

How do you create demand for latrines?

The AWASH committee tends to target women and children to create demand for latrines. We implement Community Approaches to Total Sanitation (CATS), supporting the community from the start to the end of the project. After 2000, we also incorporated Community Led Total Sanitation (CLTS) to our demand creation approach. We also target schools. Ten percent of our program budget is allocated for demand creation activities.

Painting in village explaining the benefits of sanitation

What materials are used (e.g., posters, games) to create demand?

Posters, games, and videos. Gramalaya has created them. We also create IEC toolkits for staff to ensure good quality behaviour change communication.

What are your thoughts about sanitation marketing?

Sanitation marketing is the need of the hour. Gramalaya is thinking about social marketing to promote household toilets by leveraging funds from banks and MFIs, as well as connecting with social entrepreneurs to provide services to households through finance, technology, and construction material support. This would include engaging the existing entrepreneurs who are already producing toilet construction materials and arranging masons' support to construct the toilets.

Lessons

Any lessons on creating demand you would like to share with other implementers?

- Tailor the material to local conditions. Avoid bringing in resource people from outside—they don't know the communities well.

- Door-to-door campaigns, group discussions, and group awareness programs work well.

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Financing

Funding a latrine program can be complicated. There are various costs and many financial models. Let's find out more about how Gramalaya funds latrine programs and plans for financial sustainability.

How much does a household pay for a latrine? How did you decide on the price?

A basic twin pit pour flush latrine can be built for 15,000 rupees (US$230), based on our experience. The government gives a subsidy of up to 12,000 rupees (US$185). Sometimes people take loans from MFIs for 4,000–5,000 rupees (US$60-80). A SMART toilet costs on average 22,000 rupees (US$340).

How do households pay for a latrine?

Households save money and often get a loan from an MFI. Once they build the latrine, the government provides them with the SBM subsidy. In CSR programs, the AWASH committee manages the financial support for the households.

Can all households afford a latrine?

No, not all households can afford a latrine. The government subsidy is provided after the construction of the toilet, so households need to get a loan.

How does a household get the government subsidy?

The government subsidy is given to households under the poverty line. Usually the villages we work in are where 95–100% of the households are under the poverty line, so they all get a subsidy after the construction of the toilet. The government monitoring staff take pictures before, during, and after the construction of the toilet. They have a geodatabase of the construction of toilets to keep track of subsidies.

How do you work with microfinance institutions?

We also encourage MFIs to allocate more funds for water and sanitation. When they agree, we work as an intermediary between the AWASH committee and the MFIs.

Who manages the finances at the community level?

There is a subgroup in the AWASH committee that focuses on finance. They control and supervise the expenses and payments in CSR programs.

Board used to estimate the cost of building a latrine during training.

How are CBOs funded?

All the CBOs we work with, such as the AWASH committee, are volunteers.

Are masons able to make a living building latrines?

Yes, they are able to; they do other construction work as well.

How is your organization funding your latrine programs?

Gramalaya is funded by various donors. We've worked with the following donors:

- Habitat for Humanity

- The Government of India

- Foundations such as the HT Parekh Foundation and the Ford Foundation

- CSR programs such as Merrill Lynch and Bank of America, VST Industries, Walmart, Oil and Natural Gas Corporation Limited (ONGC), and Diageo Breweries

Lessons

Any lessons on finance you would like to share with other implementers?

- Subsidies should be provided in installments if that helps a household to build a latrine. It can be difficult for households to save money or get a loan.

- Funding is difficult, and becoming more difficult for rural sanitation.

Capacity Development

Developing capacity is a process for individuals, organizations, and societies to obtain, strengthen, and maintain their capabilities. This includes everything from the knowledge and skills a mason needs to build a latrine to the regulations and laws governing sanitation products and services in a country. Let's find out more about how Gramalaya approaches capacity development.

What is your approach to capacity development?

Capacity development is at the core of Gramalaya. We are working to establish an International Resource Centre for Water and Sanitation. It's located in a rural area near our projects. There is a technology park at the training centre with more than 24 toilets types displayed. The purpose is to serve as an information documentation centre, to train various stakeholders, and to facilitate networking. Capacity is built in many ways; exposure visits, training, and frequent meetings are key.

Who do you train?

We train various stakeholders. This includes:

- Training staff on WASH, toilet technologies, hygiene education and CATS

- Training masons specifically on twin pit toilets (usually 30 masons per training)

- Training cement fabricators to improve the quality of construction materials

- Training Swachh Bharat functionaries to ensure SBM subsidies are released on time

- Training AWASH members to ensure the sustainability of the project (two-day training at the training centre)

Did you develop the capacity of your own staff?

Yes, we develop the capacity of our staff through trainings and conferences. It is a constant process. Trainings on new topics and updates are needed.

Is any other organization responsible for developing the capacity of sanitation stakeholders?

There are many NGOs and some government organizations providing the training on different topics.

Are there any key capacity gaps within this program?

Government extension officers need training on different sanitation topics. Refresher trainings ae required periodically on technical aspects and technologies.

Toilet technology park at the training centre

Lessons

Any lessons on capacity development you would like to share with other implementers?

- Government staff responsible for sanitation should be trained on sanitation to be able to fulfil their responsibilities. We worked on a project where it was mandatory for government officials to undergo training, and it made everything easier.

The National Institute of Water and Sanitation where we develop the capacity of various stakeholders.

Monitoring for improvement

Monitoring is essential to continuously improve a latrine program. It should be practical; all information collected should be used to measure how well goals are met and to identify ways to improve the activities. Let's find out more about how Gramalaya effectively monitors a latrine program.

What do you monitor?

At the community level we monitor coverage and usage of toilets. But we also monitor our internal processes to ensure our implementation strategies are effective.

What indicators do you use?

To monitor the use of the latrine we use four main indicators:

- The wetness of the toilet (is it being used for bathing, for flushing)
- Cleanliness—water is available and stored inside the toilet or bathroom, soap is available, and other hygiene products are available (for example, toothbrush, toothpaste)
- Presence of objects (for example, water bucket, soap, toothbrush)
- Reduction or complete elimination of open defecation points in the village

How do you monitor?

There are three ways that we monitor our sanitation programs:

- The top-level management team meets every month at our headquarters for the Project Management Committee (PMC) meeting. The Central Office Monthly Monitoring Intervention Team (COMMIT) join the meeting and share their feedback and recommendations.
- Middle management staff, who are engaged at the field level and are responsible for project deliverables, report to their respective Project Directors who then bring issues up at the PMC meeting.
- CBOs like the AWASH committees monitor progress and achievements frequently.

Lessons

Any lessons on monitoring you would like to share with other implementers?

- Monitoring is key. Having a Director of Monitoring helps make this process easy and efficient. It is good to have monitoring committees within each project location.

- Collecting data by hand can be complicated. We would like to start using mobile phones for monitoring. We could upload pictures, reports, and enter data about follow-up visits.

How do you use the results to improve your project?

We analyse the data and look at the deviations. Deviations have to be approved. We then discuss the deviations with the project management team and discuss ways to overcome challenges.

We also have a large staff meeting twice a year called the Experience Sharing and Review Meeting. All staff from the grassroots to senior-level staff participate. We discuss the projects and share our experiences to try and improve the projects.

How do you measure health, environmental, and societal impact?

We conduct a baseline survey, which includes diarrheal incidences. We then compare results later on to compare.

Masons building a twin pit toilet

Fecal Sludge Management

Latrine pits and tanks will eventually fill up. Fecal sludge management includes emptying, transportation, treatment, and use or disposal of fecal sludge from an on-site sanitation technology (like a pit latrine or septic tank). Let's find out more about how Gramalaya manages fecal sludge.

Have you incorporated fecal sludge management into the program?

Yes. This is why we promote the twin pit. When one pit is full, the other pit can be used. While the second pit is in use, the sludge in the first pit can dry up.

Have any of the latrines filled up?

Yes, it takes about five to seven years for a pit to fill up for an average-sized family. The family knows when a pit is full because they can no longer flush. They then change to the other pit.

Who empties the latrine? How are they paid?

Usually the household empties the pit. The composted materials inside the pit can be easily removed using a spade. At the time of construction itself, the beneficiaries and family members are educated on the toilet, including the filling period and emptying methods. We teach them how to use the diversion chamber to divert waste into the alternative pit. They close one pit and open the other.

Where does the sludge go after emptying?

Households use the sludge for their garden. Some people don't want to use the treated sludge, but when we explain why it is safe, they start using it. Gramalaya has tested the nutrient value of the humus collected from the pits, which is free of pathogens one year after the household stops using the pit.

Small-scale farming fields