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Kameshwaram's Unique Toilet Technology

Posted by: [Clean India Journal - Editor](#) August 18, 2014 in [Professional](#), [Washroom Hygiene](#) Comments Off

Kameshwaram, a typical coastal village in the Nagapattinam district of Tamil Nadu, that had faced the 2004 Tsunami, has been hitting the news for its successful sanitation programmes.

Kameshwaram, inhabited by 1,535 families, has a population of about 5713, according to the 2011 Indian census. Apart from the external aid post Tsunami extended to this small village Prof. Dr Shyama Ramani, an academican and economist, founded a Franco-Indian charity project by creating two associations — Un-Ami in France and Friend in Need in India (referred to as FIN Trust from now). FIN Trust functions as a research-action unit with strong participation of students and volunteers from various walks of life.



Recollects Dr Shyama, "discussions with residents of Kameshwaram revealed that prior to the tsunami there was plenty of green cover and trees, which helped the women of the village to defecate in the open. The men in turn used the beach. The village did not feel the need to have toilets at all, even though these sites attracted mosquitoes during the monsoons leading to diseases. Post-tsunami, it became a challenge

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for women to find secluded spots to relieve themselves and instead found privacy in rubbish heaps, where there was danger of getting bitten by rats, scorpions and even snakes. Moreover, women could relieve themselves only at dawn and then had to wait again until dusk. Sexual harassment was also a reality for the hapless women.”



FIN Trust took sanitation coverage for women as a priority. Research revealed that the high ground water table in coastal regions such as Kameshwaram makes any type of pit latrine; single pit or double pit; overflow during the three months of the monsoon season or after heavy rainfall. There was a search for an appropriate toilet technology for the area and research revealed that a urine diversion toilet designed in the late 1980s by a British naval engineer named Paul Calvert while on deputation to India, was appropriate for regions with high water table. This toilet separated the urine from the faeces, which could lead to efficient composting of faeces.

However, there were challenges in introducing this model to the residents of Kameshwaram because it demanded a great deal of effort both on the part of the end-user and the promoter in both its use and maintenance. But it was a marvellous model that presented a 'totally decentralised' system. It also presented a 'sustainable sanitation system' that closes the loop – completely recycling the waste without any risk of environmental contamination. Hence, is 'ecosan' or sanitary for the environment. These challenges have been documented in detail in several published papers by Dr Shyama Ramani and colleagues.

FIN Trust decided to develop a business model. Having no prior experience in sanitation, it decided to raise seed funds for an NGO (SCOPE, Trichy) which had many years of experience in implementation of toilets. “Having been well known in the sanitation sector, SCOPE was able to attract funds and with seed funding from FIN paying partially for the people's participation, about 150 urine diversion toilets were





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the people's participation, about 150 urine diversion toilets were constructed and inaugurated with great enthusiasm in Kameshwaram," explains Dr Shyama.

The Kameshwaram Panchayat was awarded the 'Nirmal Gram Puraskar' (prize for complete sanitation coverage) from the Indian government in 2007, based on the assumption that such sanitation drives would soon make a shift from open defecation to usage of toilets and ensure complete sanitation coverage of Kameshwaram. This also attracted other local social enterprises active in the sanitation sector to seek funds from international agencies to build more toilets in this village. For instance, in 2008, about 100 more urine diversion toilets were built by another local social enterprise with funding from WATER AID and seed funding from FIN.

To promote cleanliness and pride in owning and using a toilet, FIN Trust organised two 'Toilet Beauty Contest' which met with considerable success in achieving its goals.

Kameshwaram basked in the sanitation spotlight even more and between 2007 and 2009, other groups such as Western Christian Church groups and charity foundations of local industry associations also began sponsoring toilets. However, these toilets deviated from the 'ecosan' concept and were largely single pit latrines and toilets with attached chambers that were passed off as septic tanks. Thus, sanitation coverage increased with more number of players, with FIN Trust being at the centre of this web.



This was also when several challenges emerged for FIN Trust when some of these players also introduced 'flush and forget' toilets — largely perceived as a 'rich man's toilet' even though the ecological aspect of urine diversion toilets were apparent. Social tensions emerged and FIN Trust had to deal with something more than just promoting sanitation coverage. Another challenge was that many households did not care to repair parts of toilets when it required some maintenance. A high percentage of households frankly admitted that they would prefer waiting for an NGO to come and fix it rather than call a plumber or a mason themselves.

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All these challenges have been learning experiences for FIN Trust, which still aims at making Kameshwaram free of open defecation. By 2013, Friend in Need evolved into the social enterprise FIN-SWAM (Sanitation and Waste Management) and FIN-SWAM functions as a labour managed social enterprise. At present, it is a social venture, dependent on funds raised by Dr Shyama from a variety of sources, but the objective is to make FIN-SWAM self-sustaining in five to six years, with the revenue entirely coming from the payments for its services from the residents of Kameshwaram.

Presently, FIN-SWAM is working towards the following:

- Develop skilled and capable personnel from the village population who will provide sanitation and waste management services in Kameshwaram and nearby villages
- Develop standard environmentally sustainable toilet designs
- Create new designs that make ecological toilets attractive or even more attractive than toilets with septic tanks
- Create awareness on the need for toilets and waste maintenance and their sustenance
- Create a waste management system with the maximum recycling within the village
- Evolve documentation methods for quality audits of the main activities of FIN-SWAM
- Develop skilled and capable personnel from the village population who can implement the documentation and quality control protocols
- Develop skilled and capable personnel from the village population who can teach all of the above to residents of other villagers and NGOs

Sangeeta Venkatesh

On the right side of the page, there are social media icons for Facebook, Twitter, LinkedIn, and YouTube, along with a vertical banner that reads "Job opening in Cleaning Industry". The browser's taskbar at the bottom shows various application icons and the system clock indicating 09:43 on 06-11-2015.