

Tiruchirappalli Shows the Way

Community-Municipal Corporation-NGO
Partnership for City-wide Pro-poor Slums'
Infrastructure Improvement



A Report prepared by Gramalaya and WaterAid



Gramalaya has done pioneering work in community-based rural and urban water and sanitation



WaterAid's mission is to overcome poverty by enabling the world's poorest people to gain access to safe water, sanitation and hygiene education

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Tiruchirappalli shows the way

This endeavour demonstrates how basic community infrastructure and pro-poor solutions can work effectively at the city-level, when supported by city authorities, a social development organisation or an NGO and empowered groups instead of contractors managing complexes.

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Acronyms

BWSSB	Bangalore Water, Sanitation and Sewerage Board
CFT	Child-friendly toilet
CMT	Community-managed toilet
CO	Community Organiser
DEWATS	Decentralised waste water treatment system
ENPO	Environment public health organisation
INR	Indian rupees (1 USD = INR 46.54 ¹)
ISP	Integrated sanitary programme
ISC	Integrated sanitary complex
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
LPCD	Litres per capita per day
O&M	Operation and maintenance
ODF	Open defecation free
SHE team	Sanitation and hygiene education team
SHG	Self-help group
SDU	Social Development Unit
TCC	Tiruchirappalli City Corporation
TNUDP	Tamil Nadu Urban Development Programme
UGD	Underground drainage
WSS	Water supply and sanitation
WAVE	Women's Action for Village Empowerment

¹ Exchange rate as of August 4, 2006
(reference <http://www.rbi.org.in/home.aspx#>)

Executive Summary

Background of the study

In most slum communities of South Asia, the sanitation situation is deplorable, healthy living is impossible and the disease burden is heavy, especially for women and children. Lack of basic sanitation and adequate water for bathing and washing clothes is an acute problem and an infringement of human dignity and rights. Governments lack sensitivity to these issues and as towns and cities grow, they do not seem to be prepared to tackle this looming crisis. The city of Tiruchirappalli in Tamil Nadu, India shows a way out of this crisis. The Tiruchirappalli model of community-managed toilets with bathing and washing facilities is an example of a partnership between sensitive city authorities, communities and NGOs, working together to address these problems. The work undertaken by these partners over the last six years has demonstrated how this can be taken to scale at the city-level. Within the next two years, it is expected that all slum communities in the city will be covered by community-managed toilets (CMTs).

Tiruchirappalli has a population of around 752,000, of which 23 per cent live in 211 approved and 75 unapproved slums. Seventy eight per cent of residents are reported to have access to Tiruchirappalli City Corporation (TCC) water supply, and rich water resources are available from the Cauvery River and a high water table. Sanitation coverage is reported at 70 per cent with many households using septic tanks. Due to poor coverage of underground drainage, less than a quarter of households are connected. There are 339 community toilets in the city, around half of which are now managed by communities. Since 2001, most community toilets are Integrated Sanitary Complexes (ISCs) built under the Tamil Nadu Urban Development Programme.

This study, undertaken by Gramalaya and WaterAid, with the support of TCC in July 2006, sought to understand the benefits of CMTs and the challenges facing this model after six years of experimentation. The study reveals that communities can manage their own toilet units, and when they do this, the toilets are much cleaner than when managed by TCC, and entire communities can be declared open defecation free. Achieving clean and healthy slums does not require

huge financial investment; it requires a city authority sensitive to the problems faced by slum communities and supportive of community action, and dedication of communities and their support-NGOs. Managing their toilets leads to empowerment of women with many positive impacts in terms of personal and community development.

After initial reluctance, communities do pay for using toilets and services can be provided at affordable costs, even for the poorest. Financial management skills, systems for transparency and a focus on hygiene education are key elements for the success of CMTs, and NGOs should build capacity of Self-help Groups (SHGs) in these areas. Financial sustainability of community toilets is dependent upon the number of users and smaller toilets require support to be viable, for example waiving of electricity charges. City authorities should provide this support because community management of toilets saves them money. Ensuring sufficient and affordable water supply in all CMTs is a concrete step, which city authorities need to take to maintain hygiene standards and financial viability. Toilets are only a part of the sanitation solution. Sewage, wastewater and solid waste management must also be tackled and city authorities must play a lead role. Where land is available, community-managed solutions such as DEWATS are effective. Tiruchirappalli shows the way — CMTs provide a model that can work at the city-level when supported by city authorities. This is a model that can be adapted and introduced in many other cities.

Tiruchirappalli shows the way by demonstrating effective, basic, community infrastructure and pro-poor solutions that work at the city-level when supported by city authorities, a social development organisation, or an NGO and empowered groups instead of leaving it to contractors to manage these complexes. The question is why is community management better than other forms of management? The answer lies in a process of management that goes beyond finance to hygiene education, a sense of ownership of community assets and provides a much needed social space for poor women to come together and discuss issues other than sanitation.

Conclusions & major recommendations

1. Upscaling city-wide sanitation access for the poor

The work undertaken by these three partners since the year 2000, has demonstrated how this can be taken to scale at the city-level.

There are 359 community toilets in the city, around half of which are now managed by communities and the rest by city authorities. Within the next two years, all city slum communities are expected to have CMTs.

Tiruchirappalli has a population of around 752,000, of which 23 per cent live in 211 approved and the remainder in 75 unapproved slums (Census 2001). Seventy-eight per cent of residents are reported to have access to TCC water supply; rich water resources are available from the Cauvery River. Sanitation coverage is reported at 70 per cent with many households using septic tanks. Due to low coverage of underground drainage, less than a quarter of households are connected to the sewer system of the city. Since 2001, most of the community toilets constructed have been ISCs built under the Tamil Nadu Urban Development Programme.

2. Viability of community toilets, bathing and washing complexes in Tiruchirappalli

On an average, 590 people each day use the slum infrastructure of a community toilet complex. This masks a huge variation of 75 to 1,850 users per day. The average monthly income of community managed toilets is Rs. 6,000, ranging from Rs. 510 (in Nanthavan Store, a residential area, with 10 seats and no bathing and washing facilities, and 34 families paying a monthly rate of Rs. 15) to Rs. 20,600 (located in Kalmandhai, a commercial area where the toilet is used by both residents and passers-by, with 37 seats, bathing facilities, and 1,600 users per day).

Average monthly expenditure of a community complex is Rs. 4,800, ranging from Rs. 550 to Rs. 15,700 per month. The major regular expenditure is on staffing, electricity charges, cleaning materials and electric motor repairs. Other expenditure includes Women's Action for Village Empowerment (WAVE) membership fees (Rs. 100 to Rs. 500 per month depending on income), street cleaning and garbage collection, informal payment to septic tank cleaners, cleaning drains and blocked underground drains.

Given that this is a social infrastructure asset requiring high maintenance, staffing is the largest monthly expenditure category. The average cost

of staffing is Rs. 2,650 per month. On an average, five staff per day work in the well-managed complexes. Two caretakers work each day on a shift basis and are paid between Rs. 20 and Rs. 50 per day, depending on the size and income of the toilet. There are two cleaners per complex who are paid around Rs. 1,100 each per month. The watchwoman is paid between Rs. 500 and Rs. 1,200 per month. These wages are minimal and there is no scope for saving costs through reducing wages.

Community toilet complexes require large amounts of water to maintain hygiene. Where bathing and clothes washing facilities are available, even more water is required. Water is drawn from borewells using electric motors and hence substantial electricity costs are incurred. Average monthly expenditure on electricity is Rs. 1,200, and ranges from Rs. 120 to Rs. 5,150. When communities first took over management of these toilets, they were not required to pay electricity charges and these costs were covered by TCC. A few years ago, TCC began passing on these charges to communities. Appeals by ward councillors, SHE teams and WAVE to TCC on the grounds of insufficient income have resulted in exemptions in some CMTs. Currently, 65 per cent of WAVE Complexes pay for electricity. CMTs had earlier been charged commercial rates but after negotiation between TCC, WAVE and Gramalaya this was changed. A WAVE federation representation received a green signal from the Chief Ministers' Cell to change the electricity tariffs for community toilets managed by SHE teams, from commercial to domestic. The Cell directed the Tamil Nadu Electricity Board, which issued orders to change the tariff structure as desired by the WAVE federation. Today, among the 65 per cent Wave complexes which pay for electricity, in all but one case, domestic rates are charged.

Analysis shows that community complexes with less than 200 users per day (10%) run at, below, or around the breakeven point. Paying for electricity renders them unviable. For example, the two complexes with the lowest number of users per day are required to pay electricity charges and their income/expenditure ratio is 1.00. Further, the analysis also shows that the majority of toilets with less than 500 users per day are barely above the breakeven point and are, therefore, not likely to be able to cover maintenance costs. Forty-one per cent of toilets fall into this category. The remaining 49 per cent are financially viable on the present terms of operation and maintenance.

City authorities must play a lead role in sewage, waste water and solid waste management, and

should not make this a responsibility of the community and the NGOs that manage community toilets. Or, this should be paid for by the city corporation to the SHG or the NGO doing this task. In recent months, TCC has started hiring SHE teams to manage street cleaning and garbage management in the area around the toilet. This is being set as a pre-condition to handing over TCC toilets for community management. SHE teams have found that sweeper charges, around Rs. 1,200 per month, render some toilets financially unviable.

3. Why community participation and management is a better option than contracting out urban social infrastructure?

- a. Community participation alone can guarantee a low-cost, well-designed and user-friendly urban slum infrastructure. Community participation does not mean that 100 per cent of any urban slum community will at any one time agree to be a member of a slum user group or a SHG managing the infrastructure of a slum. Experience shows that 50 per cent participation from the slum can be taken as meaningful participation. Twenty per cent of the slum community, as is engaged in the case of Tiruchirappalli, this is a good indicator of community participation.
- b. Community management alone can sustain capital infrastructure, through timely operations and management, relying on members and users as participants and not simply as clients for a business opportunity. This level of community participation and management of slum infrastructure cannot be attained from “contracted out public works” to private parties, corporate houses or NGOs. Institutionalising community participation requires support and involvement of local NGOs and the coalescing of individual federations of slum managers into a city-wide federation of user groups. This will make them effective and help them engage with the municipal corporation/utility as equals.
- c. CMT infrastructure can be upgraded to provide bathing and washing facilities at affordable costs for the poorest urban slum dwellers. More than 50 per cent of Trichy’s community toilets now provide these services on a pay-and-use basis, as compared to only 10 per cent of the city corporation managed toilets.

4. Role of the City Municipal Corporation/Utility

Community management of toilets saves the city corporation a lot of money. Ensuring sufficient and affordable water supply for community toilets is a concrete step that city authorities must take to maintain hygiene standards and financial viability.

The Trichy experience demonstrates the important role of the city municipal corporation in providing an enabling administrative environment and active support to the NGO and community action. Unlike other countries in Asia and in other regions, creating urban infrastructure without express permission and funding from the municipal corporation and state governments, is impossible in India.

The municipal corporation or utility should be responsible for:

- a. The mandate to build community toilets and bathing and washing complexes in slums (recognised or otherwise). Where bathing and washing facilities do not exist, the city corporation must make additional capital investment to fill this gap.
- b. Water and sewage connectivity for urban slums is the responsibility of the municipal corporation/utility. This should be done irrespective of land tenure status, at a lower connection charge and with lower lifeline monthly tariffs. This has been done in Bengaluru, by the Bangalore Water, Sanitation and Sewerage Board (BWSSB).
- c. Water and electricity for community toilets and bathing and washing complexes should be charged at subsidised rates under the government’s poverty alleviation commitments. Commercial rates for electricity and water should never be charged.
Exempting electricity and cleaners charges (especially where average daily users are less than 500) is recommended. Alternatively, financial support for the WAVE federation can help them cross-subsidise these components for low income toilets.

5. Making City Municipalities/Utilities effective in addressing pro-poor priorities

- a. There is a need for a social development unit (SDU) to be established within the municipal corporation/utility. The BWSSB experience in Bengaluru demonstrates that this can make a predominantly engineering-focussed

utility shift focus to its social responsibility. Allocating a desk at the utility that slum dwellers can go to will provide connectivity and improved services to them.

- b. In addition to SDUs, the utility's field staff should be given some recognition and rewards for working in challenging slum areas. There are currently no incentives for them to serve the poorest and most marginalised slum communities and there is little recognition of their work.
- c. The TCC does not have an SDU at present. Under TCC's Integrated Sanitation Programme (ISP), four community Organisers (COs) have been placed at the four Zonal offices who report to the zonal assistant commissioner. Initially, their role was to promote management committees among users for all ISPs. The COs collect baseline data for slums and are responsible for promoting community groups under the Swarna Jayanthi scheme. There is a high turnover of COs and political influence in CO selection suggests that the COs cannot have been very successful in community mobilisation. Of the total 61 ISPs, COs have been able to promote management committees only in seven. There is a need to make this team more professional with a senior person from the social development wing heading it, with power and authority to make changes in the field.

6. Norms are required for provision of adequate and effective basic water and sanitation services for the slum dwellers in Indian cities.

This lack of norms reflects a lack of political commitment to the urban poor. Currently, there are no norms existing except a general norm of 135 litres per person per day for urban water supply and separate toilet blocks for men and women.

The following norms are proposed for both community complexes as well as individual connectivity for water and sanitation for slum dwellers:

- a. The average number of users in the Tiruchirappalli community toilets stands as high as 602 persons per toilet block per day (20 users per toilet seat as there are approximately 10 seats per toilet block). It means that the pressure of usage is very high in some complexes. Norms are needed for a reasonable time for an individual to access a toilet.

- b. Community toilet buildings will require capital investment for upgradation, changing of electric motors and other major repairs and maintenance (new toilet blocks, overhead water tanks, septic tanks or sewage connectivity and major repairs of doors and flooring that occur once in seven to ten years). This must be supported by the municipal corporation/utility.
 - c. There should be no connectivity charge for a slum-dwelling household. A lifelong monthly tariff for drinking water household supply that is half the minimum rate for the rest of the city, could be a norm for the utility to serve slum dwellers with connections. This has been done by BWSSB.
 - d. The Ministry of Urban Development and Poverty Alleviation, state government's urban departments, nodal agencies for health and public works, municipalities and utilities, should **invite representatives of communities, federations like the WAVE Federation, and NGOs** to develop designs and norms for community infrastructure development, maintenance and management.
- ## 7. Enabling support required for community participation and management of urban social infrastructure of community toilets, bathing and washing complexes.

- a. A supportive municipal corporation/utility should take proactive steps for ensuring financial sustainability of smaller CMTs. Waiving of electricity charges, free water-supply by the municipal corporation/utility, and support from NGOs in the initial years of operation, is critical. As long as operations and maintenance costs are borne by the community or the NGO, the municipal corporation should provide financial and non-financial subsidies (waiver of electricity charges and free water) to the smaller CMTs. These norms can be developed in the form of a special grants scheme for small CMTs from the central or the state governments and municipalities/utilities.
- b. **Community groups managing community toilets and local NGOs need basic management skills and training.** This can be provided by charities, corporations and municipalities. Managing operations and maintenance and accounting for all expenditures and incomes requires basic management skills, systems of accounting,

software and hardware for micro-credit management and community-counselling skills.

- c. In addition to management skills, **a focus on hygiene education and supporting the community through group initiatives** such as self-help credit and mutual aid are important functions of community-managed slum infrastructure. **Sustainability of any community-led initiative** will rest on this support. It is here that the role of a support organisation is critical, at least until such time when an effective city-wide federation of community managers can carry out operations on its own. In Trichy, the NGO Gramalaya provides this critical support with the assistance of WaterAid India.
- d. Viability of city-wide community-managed infrastructure requires **consolidation of**

individual units into a group and developing norms for cross-subsidisation between community complexes for the diversity of incomes and costs. Developing such norms cannot be an academic exercise and **needs a well-functioning city-wide federation of user groups to devise norms and systems** to support diverse working conditions and ensure operational viability. The federation should also develop community leaders and negotiate with the municipal corporation over longer term issues of infrastructure maintenance. **In Trichy, this stage was set by the federation of user groups coming together as the WAVE Federation** – a representative body of the toilet, bathing and washing complexes. It has helped catalyse city-wide community-management of urban infrastructure. The municipal corporation/utility/government has to continue supporting the good work initiated so far.

1 India's Urban Sanitation Struggle: Still a Long Way to Go

One in three city-dwellers lives in slum communities and the number of slum-dwellers in South Asia has increased by a quarter over the last decade (United Nations 2005). Most of these communities are not connected to city water and sanitation infrastructure, the sanitation situation is deplorable, healthy living is impossible and the disease burden is heavy, especially for women and children. Lack of basic sanitation and adequate water for bathing and clothes washing in these communities is an acute problem and an infringement of human dignity and rights.

The conditions in India are no better than the rest of South Asia. Data on urban sanitation in India differs from source to source. The 2001 census of India put urban sanitation coverage at 61 per cent of the population having access to individual or public toilets (WaterAid India 2005). However, recent data shows that only 25 per cent have access to a sewage connection (see Table 1.1).

Table 1.1: **Estimated sewerage connectivity/ population in urban India**

Year	Sewage connection (%)	Urban population as % of total population (year)
1990	30	26.1 % (1991)
1995	28	-
2000	26	27.78% (2001)
2004	25	-

Source: WHO and UNICEF, 2006

Unlike rural sanitation, urban sanitation does not suffer from lack of demand. However, urban sanitation has failed to plan and build sanitation access for the urban poor. Moreover, the Indian urban slum population is under-reported as per official estimates. Even though slum populations are valued as vote banks and ward-wise voter lists include all slum dwellers, these people are left out in the census classification for the urban population. Variations exist from state to state and city to city in this regard.

There are many categories/classifications of urban poor settlements in India including authorised and

unauthorised slums, resettled slums and jhuggi-jhopdi clusters (WaterAid India: Profiling the Informal City; Delhi report 2005). Urban poor, living in slum-like conditions could constitute at least 50 per cent of the urban population. It is fair to assume that on an average only 50 per cent of this slum population has access to adequate and safe water. WaterAid India believes that only 155 million out of the 280 million urban population, or 55 per cent had access to safe and adequate drinking water in 1990, as against the official estimate of 88 per cent coverage.

Even though access to drinking water was reported at 91 per cent for urban India, only 59 per cent of the urban population received drinking water from a public source to which they did not have sole access (1998-99 NSSO report). Limited metering and efficiency incentives, unviable pricing (does not even cover O&M costs), poor revenue-recovery rates and low connectivity to households and slum populations, are reasons for inadequate service coverage, unreliable and poor quality service provision for both water and sanitation.

Norms for water and sanitation for slum dwellers and the urban poor have not been defined by any state government and norms for displacement of slums are also non-existent. The living space provided in relocated slum settlements has decreased substantially over time, and provision of individual household toilets is being given up as well.

An urban water and sanitation study done in Madhya Pradesh, 2006 by WaterAid India found that 93 per cent towns in the state have less than 70 lcpd of water as against a minimum supply norm of 135 lcpd. The data related to supply of water indicated that only 63 per cent of the urban centres receive water daily, while 28 per cent towns receive water supply once in two days and nine per cent towns once in two or more days. The sanitation situation is much worse for slum dwellers where, in the absence of toilet facilities, open defecation is the norm. Where public toilets do exist, the ratio of toilet seats to the human slum population is as high as 1:1000 and with such poor maintenance it is usually contracted out.

Even a high performing private urban water and sanitation utility of Jamshedpur Steel Plant (JUSCO) reports a leakage of 25 per cent (as reported in the WSP meet in Delhi on 2 February, 2007) in its drinking water supply to the city (includes 10% unaccounted for water and 15% as non-revenue water supplied from public standposts). Reduction of non-revenue water alone, therefore, cannot become a criteria for eliminating public standposts in urban slums.

The Ministry of Urban Development in December 2005 announced the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) with an aim to create “economically productive, efficient, equitable and responsive cities”. One of the four focus areas of JNNURM is ensuring “basic services to the urban poor including security of tenure at affordable prices”. The Ministry has also constituted a national Taskforce on Universal Sanitation in Urban Areas. Two sub-committees under the Task Force have been set up – one on a National Urban Sanitation Policy and another to formulate a campaign: ‘Open Defecation Free Slums’.

However, the main problems the urban poor face in India today are the lack of shelter with a secured land title, and access to basic services at affordable costs. There are concerns that JNNURM may become a bottomless sink for infrastructure development. It may succeed in transforming the 63 large cities into “world class cities”, more by encouraging processes that would displace the poor and without in-situ upgradation of slums, than by any other means. This has been repeatedly witnessed over the last 20 years; the poor have been displaced rather than actively included in the process of city transformation (Mahadevia, 2006).

Sanitation condition in Tamil Nadu²

Tamil Nadu is no exception to the process of rapid urbanisation in India. This trend is not only reflected in the growth of population in urban centres but also in an increase in the number of urban centres. The latter has led to clustering of urban areas around metropolitan cities such as Chennai, Coimbatore, Salem, Tiruchirappalli, Madurai etc.

According to Census 2001, the population of Tamil Nadu is 62.11 million. The urban population of India and Tamil Nadu are 285.3 and 27.2 million respectively. Tamil Nadu thus accounts for six per cent of the country’s total population and 9.6 per cent of country’s urban population. While the percentage of urban population in the country increased from 12 per cent to 28 per cent during 1931-2001, Tamil Nadu registered a much higher percentage increase i.e., from 18 per cent to 44 per cent in the above

period (see Table 1.2) emerging as a state with the highest level of urbanisation (44%) in the country. Tamil Nadu ranks sixth in terms of population and eleventh in terms of area. Tamil Nadu has a density of 478 people per square kilometre as against the national average of 324.

Table 1.2: Tamil Nadu: Urban scenario

	Tamil Nadu	India
Population (million)	62.1	1027
% Decadal growth rate (1991-2001)	11.2	21.3
Urban population (million)	27.2	285.3
% Urban population	44	28
% Urban decadal growth rate (1991-2001)	43	32
Rural population (million)	34.9	741.7
% Rural population	56	72
% Rural decadal growth rate (1991-2001)	(-)5	18
Density (persons/sq km) (2001)	478	324

Source: Census of India, 2001

Urban infrastructure in Tamil Nadu lags behind its rapid pace of urbanisation. The issues of inadequate sanitation and solid waste management are gripping the urban local bodies. The urban poor are the most affected by lack of access to these services. According to Census 2001, of the 1.41 million households in the state, more than 9.19 million did not have latrines within the house. Only 3.291 million households had a water closet facility (see Table 1.3).

The lack of sanitation facilities for the urban poor also links with the issue of inhuman manual scavenging that is still prevalent in the state of Tamil Nadu despite being the first State to adopt the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993, that bans manual scavenging. Considering the total number of non-flush latrines, it is estimated that the public and private sectors together employ 100,000 manual scavengers in the state (Dorairaj, 2006).

What could be the way out to the issue of providing access to sanitation for the urban poor? State-specific approaches rely heavily on non-participatory processes of bringing in sanitation infrastructure for the urban poor. Experiences from Tamil Nadu and other states have shown that most of these state-run toilet complexes are mismanaged due to lack of community-participation in operation and management of these structures. Municipal bodies spend millions of rupees managing such toilets that may not provide safe access to sanitary

² This section heavily relies on Tamil Nadu State’s 10th plan document for data and analysis (ref: www.tn.gov.in/spc/tenthplan)

facilities for the poorer communities. This paper is a documentation of work undertaken jointly by WaterAid, Gramalaya and Tiruchirappalli City Corporation in transferring the operation and management of community toilets and bathing complexes to poor women.

Table 1.3: Distribution of households by type of latrine in Tamil Nadu, 2001

Total number of households	Rural	Urban
14,173,626	82,74,790	58,98,836
Pit Latrine		
10,35,315	3,77,122	6,58,193
Water Closet		
32,91,248	6,09,067	26,82,181
Other Latrine		
6,56,257	2,01,730	4,54,527
No Latrine		
91,90,806	70,86,871	21,03,935

Source: Census of India, 2001 quoted in Frontline, September 9-22, 2006

Methodology of the study

A field survey was conducted by Gramalaya staff in July 2006 of 61 CMTs in Trichy. The sample included all 41 CMTs supported by Gramalaya and 20 community toilets managed by other NGOs and TCC (10 each), which were randomly selected. Data were collected using structured questionnaires through interviews with toilet caretakers and users and through observation. Field survey findings were triangulated with Gramalaya and WAVE records and verified by the study team for a sub-sample of toilets. The results of the field survey were also presented to all Gramalaya field staff and TCC officials for verification and feedback. The study team

held key informant interviews with TCC and NGO staff and WAVE members. Focus group discussions were held with communities and WAVE members to understand the benefits of CMTs. The main findings of the study and the recommendations were presented to TCC officials and Gramalaya staff at two interaction meetings in July 2006.

Structuring the paper

The Tiruchirappalli model of CMTs with bathing and washing facilities and child friendly toilets is an example of a long, enduring and sustaining partnership among sensitive city authorities, communities and NGOs working together to address the issue of sanitation. The work undertaken by these partners over the last six years has demonstrated how this can be taken to scale at city-level. Within the next two years, it is expected that all slum communities in the city will have CMTs. This paper is an attempt to take stock of the achievement in Trichy over the last six years and draw out lessons for building on this success. It is based on primary research undertaken in July 2006 by Gramalaya and WaterAid staff from India, Nepal and Bangladesh, with the support of TCC officials.

This paper is divided into five sections. Section two describes the city of Tiruchirappalli or Trichy and its sanitation situation. Section three introduces the concept of community toilets and presents the three models used in Trichy for the management of these facilities. Section four briefly examines the roles of various stakeholders in supporting the CMTs. Section five describes the current situation of community toilets under these three models followed by an analysis of their financial viability. It further lists benefits of CMTs and the key challenges to sustaining these benefits. The study ends with a number of recommendations for strengthening the CMT effort in Trichy and scaling-up.

2 The Sanitation Situation in Tiruchirappalli

To recap, Trichy boasts the second largest city corporation in Tamil Nadu after Chennai. It was first constituted as a municipality in 1866 and in 1994 was declared a corporation. According to the 2001 census 752,000 people were covered by TCC within an area of 145 sq km. The city is divided into four administrative zones comprising 60 wards and 211 approved and 75 unapproved slums in the city. The total slum population is 162,000, around 23 per cent of the total population. Slums are located along railway lines or on open ground belonging to the government, local bodies and temples.

Drinking water supply

Drinking water is supplied through five head works on the Cauvery and 1,470 bore-wells, linked to 60 service reservoirs with a total capacity of 40 million litres. The total quantity of water supplied per day is around 85 million litres, equating to 105 LPCD.³ The distribution pipelines were first laid over 100 years ago and were replaced in 1980-82. TCC estimates a distribution loss of around 20-25 per cent. Seventy-eight per cent of the total population and 92 per cent of the 211 approved slums are reported to have access to TCC water supply, either through household connections or stand posts. There are around 70,500 household connections, of which 6,050 (9%) are metered. With the Cauvery nearby and a high water table, it is the management of this resource that poses a challenge (see Box 2.1).

Box 2.1: Tiruchirappalli city: Facts and figures

General information

Population in 2001	752,000
Slum population in 2001	162,000
Approved slums	211
Unapproved slums	75

Water supply and sanitation information

Drinking water coverage	78%
Approved slums with access to water supply	92%
Sanitation coverage	70%
Households connected to UGD	23%
Number of public toilets	20
Number of community toilets	339
Number of community managed toilets	167

The sanitation situation

Sanitation coverage is reported at 70 per cent in the city. In slum communities where there are no sanitation facilities, people defecate in open areas and along the banks of the Cauvery. There are 359 toilet units (see Table 2.1), with 3,146 seats, including 1,653 seats for women (TCC, 2006). Twenty of these are pay-and-use public toilets managed by TCC, located in commercial areas, and used by passers-by and people working nearby (see Box 2.2). The remaining toilet units have been constructed mainly for use by communities, mostly by TCC, and a few by Gramalaya. In recent years, TCC has constructed these toilets under the Tamil Nadu Urban Development Programme (see Box 2.3 below).

Table 2.1: Number of toilet units in Tiruchirappalli

	Pay & use	Free to use	Total
Public toilets	20 (12 managed by Private Sector) (8 TCC-managed)	0	20
Community toilets	167 (Community-managed, including 66 ISCs)	172 (TCC-managed)	339
Total	187	172	359

Source – Interaction with TCC, Gramalaya staff and WAVE members, July 2006

Box 2.2: Pay-and-use public toilets

In Tiruchirappalli, there are 20 pay and use toilets, located primarily in commercial areas spread across the four zones. Out of these, 12 are leased to the private sector and the rest are managed by TCC. These units primarily cater to the floating population in Tiruchirappalli, estimated to be around 50,000-70,000 people per day.

Community toilets previously managed by TCC, are in recent years being handed back to the communities to manage, sometimes directly and sometimes

³ The National Water Policy of India (2002) sets a minimum requirement of 135 LPCD.

Location of Tiruchirappalli City in Tamil Nadu, India



Box 2.3: Integrated sanitary complexes

In TCC, there are 66 Integrated Sanitary Complexes (ISCs), constructed under the World Bank supported Tamil Nadu Urban Development Programme (TNUDP-2). An ISC consists of toilet seats for men, women and children and facilities for bathing and washing clothes. ISCs are not of a standard size and the number of seats varies. However, in many cases the size appears not to be linked to the number of users – some large ISCs have very few users while small ISCs are used by many people. The first ISC in Tamil Nadu was constructed in Rajiv Gandhi Nagar, Trichy, in June 2001. TCC plans to construct more ISCs under the forthcoming TNUDP-3. TCC has handed over management of all ISCs to NGOs and communities. TCC covers 50 per cent of the expenditure in three of the ISCs deemed financially unsustainable. All others must cover their own costs through user fees. Construction of more community facilities is a positive step by TCC; however, the results have been mixed (see section 5).

with support from NGOs.⁴ Currently around half are managed by communities with a pay-and-use system. The other half are still managed by TCC and are free to use. TCC plans to hand over more toilets for community management, including some public toilets.

There is 147 km of underground drainage (UGD), connecting only 23 per cent of the households in the city. The cause lies in the fact that TCC was formed of a mixture of municipal and Panchayat areas where this infrastructure was non-existent. Infrastructure and equipment continues to be a problem today: TCC has two de-sludging tankers to clean septic tanks which is vastly inadequate to meet the current demand. There is one 28 MLD capacity sewage treatment plant catering to around 35-40 per cent of the city wastewater. Increasing UGD coverage, expanding treatment capacity as well as the fleet of septic tank cleaning tankers is high priority for TCC and a number of projects have been initiated. Trichy generates 381 metric tonnes of solid waste per day. Around 52 per cent of this is collected through door-to-door collection system by 1,823 municipal staff. The rest

⁴ There were seven NGOs working in Trichy on issues of urban sanitation in 2006: Gramalaya, SCOPE, Sevai, Exnora International, Ramasamy Chellappappa Educational Trust, Environmental Conservation Group and Kalki Groups.

of the waste is picked up from collection points. Solid waste is taken to 10 unauthorised dumping sites.

Connection charges and tariffs for water supply and sanitation – Unaffordable for the poor

The water connection charge in Trichy is Rs. 3,000 and the sewage connection charge Rs. 6,000. Households wanting a water connection must also pay for a sewage connection. These charges apply in all city corporations in the state. The water tariff for domestic use is eight rupees per thousand litres and Rs. 25 for commercial use. However, many meters do not function and TCC levies a flat rate of Rs. 85 per household per month for domestic water supply and Rs. 30 for sewage. The poor find these connection fees and tariffs unaffordable and rely upon shared stand posts, household toilets with septic tanks, community toilets or open defecation.

Municipal administration and finance – A healthy budget prioritising water supply and sanitation

The TCC is divided into two wings – political and administrative. The political wing comprises the council headed by a directly elected chairperson and ward councillors representing different wards of the city. The councillors bring in peoples' voices and aspirations on issues which are then taken up by the administrative wing. The administrative wing is headed by the Commissioner. Water supply and sanitation comes under the purview of two departments – engineering and public health. The Engineering Department looks after water supply, drainage, sewage systems and is headed by the city engineer. The department, in coordination with Tamil Nadu Water Supply and Drainage Board, undertakes implementation of water supply and sewage works. The Public Health Department is headed by the City Health Officer who looks after the solid waste management and public health. Other departments that have implications on municipal administration for water supply and sanitation are revenue, town planning, and pollution control board. Budget estimate (revenue fund-expenditure) for 2006-07 shows that TCC's total expenditure is estimated at Rs. 1,013 million and the allocation for water supply and drainage is Rs. 263 million, or 26 per cent of the total budget.

3 Community Toilets in Tiruchirappalli

This section describes three management models and the type of facilities and services available in the toilets. The three models are community toilets managed by:

- TCC
- SHE teams supported by WAVE and Gramalaya
- SHGs and individuals (sometimes with support of NGOs)

The first community toilet was constructed in Trichy in the early 1970s. Until 2000, all community toilets were managed by TCC. Many were in a filthy condition and had been abandoned. In 2000, a group of NGOs, supported by WaterAid, began working with communities to renovate and take over management of these toilets (see Figure 3.1). Following this model,

TCC began handing over responsibility for toilet management to communities, sometimes directly and sometimes through NGOs (see Box 3.1). To date, around half the community toilets in the city are being managed by communities (see Table 2.1).

TCC supports the concept of CMTs for three main reasons:

1. To improve management of community toilets and provide better service.
2. To reduce costs – previously TCC staff were required to clean each toilet, yet toilets were free to use and hence made a loss.
3. To provide services with less TCC staff – a ban has been introduced on recruiting more sanitary workers by the state; hence TCC faces a manpower shortage.

Box 3.1: Key points on community toilets

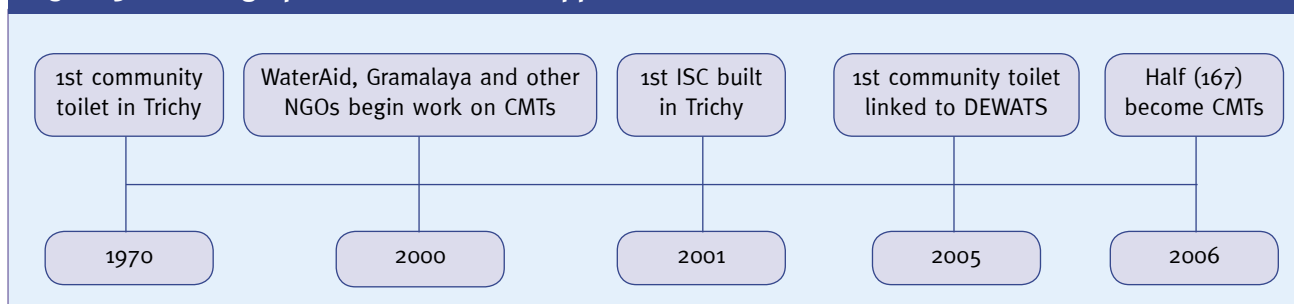
- Prior to 2000, all community toilets were managed by TCC. In 2006, around half of community toilets were managed by communities.
- Community toilets managed by TCC are free to use and run at a financial loss. CMTs are pay and use.
- In WAVE CMTs, 50 per cent of the community is directly involved in management of the toilets and there are high levels of transparency based on the token system and book keeping.
- Many NGOs are not actively supporting SHGs to manage CMTs.
- Most CMTs rely on water supply with borewells resulting in high electricity costs.
- Many CMTs do not have hand washing facilities.
- 57 per cent of CMTs are connected to the UGD; the 39 per cent have so called 'septic tanks', two discharge directly to an open drain and one has a DEWATS system linked to it.

How does TCC manage community toilets?

TCC itself still manages 172 community toilets without community involvement. These toilets are free to use. The entire operation and maintenance (O&M) cost, mainly comprising cleaning costs and electricity bills, is borne by TCC. A sanitary worker, a salaried TCC staff, is assigned to clean the toilet twice a day, once in the morning and once in the evening and a record of the cleaning schedule is maintained at the toilet. TCC spends about Rs. 0.95 million per year on cleaning materials⁵. Each toilet is provided with a borewell, fitted with a pump, which is operated either by the TCC sanitary worker or a nearby resident. The ward councillor keeps a close watch on the working of these units and attends to major problems and requests support from TCC when needed.

⁵ Interaction with Dr. S. Elangovan, City Health Officer, TCC on 25, 2006 at Tiruchirappalli, Tamil Nadu.

Figure 3.1: Scaling up of CMTs in Tiruchirappalli



How are communities, supported by WAVE and Gramalaya, managing their community toilets?

Gramalaya supports communities to renovate and take over management of community toilets. In a few cases Gramalaya has supported communities in building completely new toilets (see Box 3.2 below). To date, Gramalaya has supported 41 CMTs and is supporting another 75 in 2006-07.

Gramalaya begins by establishing a number of SHGs in a community, each with 15 to 20 members. There are two to seven SHGs per community. All SHG members are members of the SHE team. Two SHE members are chosen leaders and jointly operate the team bank account. These two members also represent WAVE federation (see Figure 3.2) on behalf of the SHE slum teams. On an average, half the households in a community are SHG members, hence half the community is directly involved in management of the toilet.

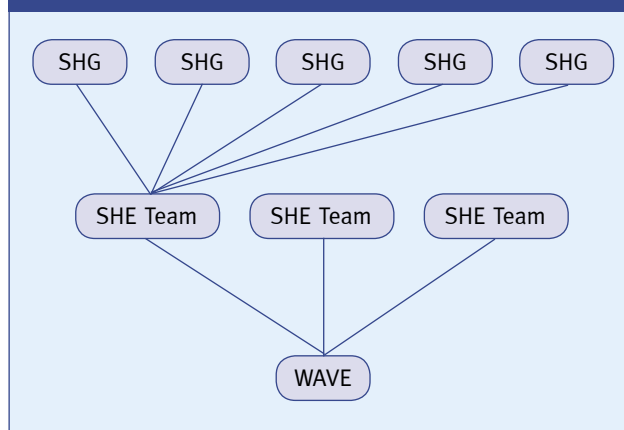
Each SHE team and the associated SHGs take responsibility for the toilet on a rotation basis. During that month, each SHG member is caretaker for a day, responsible for collecting user fees and maintaining the accounts book. The caretaker works an eight to 12 hour shift. Most SHE teams employ two cleaners, a woman for cleaning the women's seats and a man for cleaning the men's seats. A watchwoman is also employed for protection of the facility and operation of the water pump.

Box 3.2: An introduction to Gramalaya and the WAVE federation

Gramalaya was established in 1987 by a group of committed youths working in the field of rural development. The original goal of Gramalaya is to work for the amelioration of socially downtrodden people under an integrated rural development approach. Since, 1987, Gramalaya has been operating various rural development programmes and in 1999 Gramalaya extended its area of operation to slum communities of TCC. Health and hygiene education, promotion of Self Help Groups among rural and urban women, construction of low-cost housing and toilets are the prime activities of Gramalaya.

Women's Action for Village Empowerment (WAVE) is a federation of the 53 SHE teams in urban areas. The federation is headed by a president, assisted by a secretary and treasurer and there are 12 executive committee members. WAVE meets twice a month and discusses matters relating to problems faced by SHE teams and solutions for them. WAVE guides SHE teams in maintenance of community toilets and assists other SHGs to take over toilet maintenance of community toilets. WAVE also takes up issues connected with water and sanitation with the City Administration and engages in sanitation promotional activities in other slums.

Figure 3.2: Community management structures of CMTs



The SHE teams fix the user fees. In most toilets these are set at 50 paise for adults for defecation and at two to three rupees for bathing and washing clothes (see Box 3.3). Urination and use by children, elderly, and single women is free. In some toilets where the

Box 3.3: Tokens and transparency



Gramalaya and WAVE promote a token system at the pay-and-use toilets. After payment each user is provided a token. This ensures transparency as it shows how many people used the toilet each day and how much income has been collected. These details are entered into account books kept in the toilet complex. Accounts are presented by the SHE teams to WAVE and by WAVE to Gramalaya and are vetted by an external auditor. In some toilet complexes the account books are checked and signed on a monthly basis by a TCC junior engineer. This high level of transparency has created trust in the community. In many community toilets where this system is not followed, the lack of transparency over finances has led to community disputes (see Box 4.2). Having detailed information on the financial status of each toilet enables WAVE to monitor performance and intervene with advice on tariffs structures and loans when necessary.

Box 3.4: Clean environment in Gramalaya-built toilets

Gramalaya has supported communities to construct eight new community toilets. Some of these were built on the site of abandoned toilets left in a disgusting state. These toilets now have 10 seats for men and 10 for women, child-friendly and disabled-friendly seats and facilities for hygienic disposal of cloth used as sanitary pads during menstruation. The toilets built by Gramalaya are spacious, clean and green. In a few places SHE teams and the WAVE federation have built their own community centres, and gardens are promoted around all the toilets. The CMTs have become a clean and beautiful area used for social gatherings. This creates a sense of ownership and pride in the community.



community is reluctant to pay each time they use the toilet, a monthly card system is followed and the rates set at lower levels – between Rs. 15 and 30 per family per month. At these rates, communities report, they are able to use the toilets. The average monthly income of a household relying on a daily wage in the slum communities is Rs. 1,500 to 3,000. Toilet charges of Rs. 30 to 60 per month are between one and four per cent of monthly income.

Monthly cash collections are deposited by SHG teams, each in turn, in the common bank account and financial statement presented at monthly SHE team meetings. After covering O&M expenses, the remaining funds are used for health and sanitation related promotional activities in the community. Major repairs and any other management issues are also discussed. In case of sudden major expenditure, the SHE team is authorised to take a loan from the WAVE federation.

How do other NGOs and SHGs support communities to manage their community toilets?

TCC has handed over management of another 126 community toilets to communities not yet part of the WAVE federation. This has meant giving responsibility

to an NGO, SHGs or an individual in the community. These toilets are also run on a pay-and-use system, although the token system is not followed and records of accounts are not maintained. This often leads to community disputes as mentioned in Box 3.3 (also see Box 4.2). The user fees are the same as for Gramalaya-supported toilets, although users often do not pay. In many cases NGOs are not experienced in sanitation and are not playing an active role in supporting communities to manage the toilets and promoting health improvements in the communities. Appointment of caretakers by local politicians was reported as a major barrier to real community management.

Facilities and services in community toilets

Some toilets are new constructions; others are renovations. Renovation normally consists of major repairs and addition of seats for men or women. The average cost of newly constructed toilets was found to be Rs. 4,60,000 (ranging from Rs. 1,50,000 to Rs. 13,00,000) and the average cost of renovated toilets was Rs. 6,26,000 (ranging from Rs. 3,00,000 to Rs. 11,00,000). The higher cost of renovation may be due to adding on many extra seats, child-friendly toilets and the higher cost of construction by TCC compared to work undertaken by Gramalaya.

Table 3.1: Facilities in community toilets in Tiruchirappalli

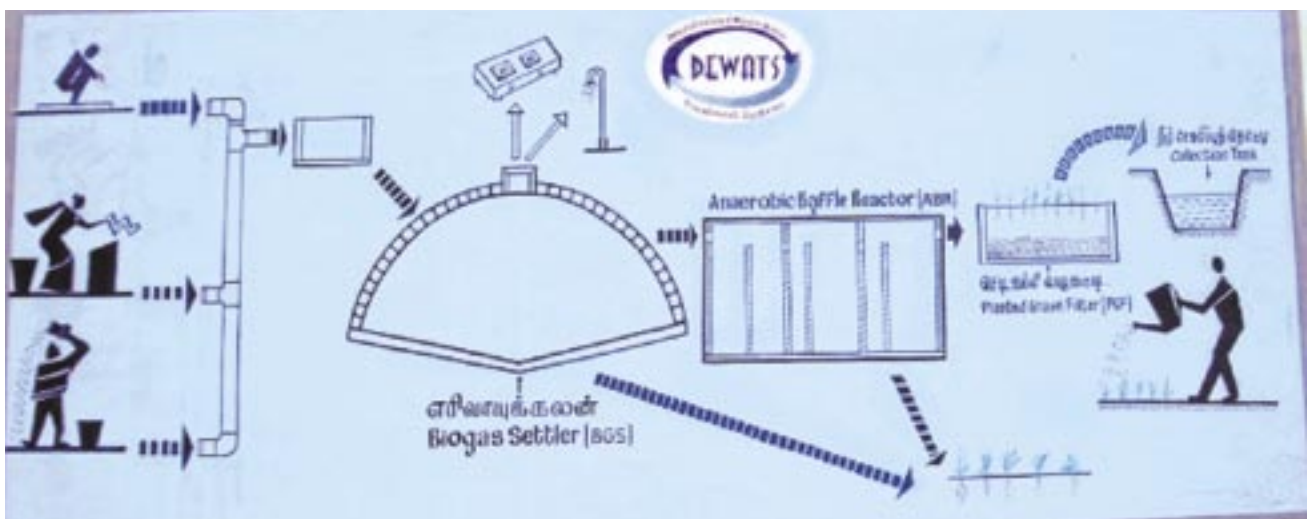
Facilities	TCC managed	Community managed	
		Supported by WAVE	Supported by other NGOs
Newly constructed toilet (% of toilets)	20	83	60
Renovated toilet (% of toilets)	92	34	71
Average number of seats	18	22	26
Child-friendly seats (% of toilets)	10	75	50
Seats for disabled people (% of toilets)	0	7	0
Bathing facility (% of toilets)	10	56	60
Clothes washing facility (% of toilets)	10	51	40
Wash basins (% of toilets)	0	61	20
Soap availability (% of toilets)	0	73	10

(Source: Field survey, July 2006)

Toilets managed by communities were found to have more seats for children and more bathing and clothes washing facilities than toilets managed by TCC. Very few of the toilets cater to the needs of the disabled. Hand-washing facilities (basins with soap) were not found in TCC-managed toilets but are available in most WAVE-supported toilets. This is because SHGs have greater awareness and sense of responsibility regarding health and personal hygiene and therefore provide these facilities (see Table 3.1). Some caretakers even encourage users to wash their hands. SHE teams also sell soaps, shampoo sachets, oil, talcum powder etc. on the toilet premises. Facilities

in CMTs are much better compared to other toilets, including the clean environment (see Box 3.4).

Toilets depend on borewells for water and have overhead water tanks to provide water on demand. Groundwater not only provides sufficient and free supply but is also more regular than the piped network. However, borewells result in substantial electricity charges. Most toilets are linked to the city sewerage network, the rest have septic tanks. Given that Trichy's UGD network is limited, it is not possible to connect all toilets. One community toilet is piloting DEWATS (see Table 3.2 and Box 3.5).



Schematic diagram of DEWATS technology implemented in East Devadanum

Table 3.2: **Services in community toilets in Tiruchirappalli**

Water and sanitation services	TCC managed	Community managed	
		Supported by WAVE	Supported by other NGOs
Community toilets with borewell water supply (%)	90	98	100
Average capacity of overhead tanks (litres)	4,675	5,500	7,840
Community toilets with 'septic tank' (%)	30	46	20
Community toilets with UGD connection (%)	60	53	70
Community toilets with open drain connection (%)	10	-	10
Community toilets with DEWATS (%)	-	3	-

Box 3.5: Community toilets with decentralised wastewater treatment system

Decentralised Wastewater Treatment System (DEWATS) is an innovative technological option for the treatment of sewage in areas where there are no treatment systems or UGD. The benefit of DEWATS is onsite wastewater treatment, low organisation and maintenance cost and environment friendly products like biogas and manure from sludge. It works on the principle of gravity flow and therefore has no electricity costs.

In Trichy, BORDA, a Germany-based organisation, has partnered with an NGO, Exnora International, for setting up the first DEWATS linked community toilet in East Devadanum. The DEWATS module includes biogas digester and anaerobic baffle reactor, which act as the primary treatment system, followed by aerobic planted gravel filter (PGF) and collection tank, which acts as the secondary treatment system. The wastewater from the men's and women's toilets flows into the biogas settler through underground pipelines. The primary treatment system is inoculated with cow dung slurry for micro-organisms during the commissioning of the plant. Gas production takes place after a digestion period of about 30 to 90 days. The digested slurry along with the sludge flows into the anaerobic baffle reactor where the sludge settles down due to gravitational flow in a series of chambers. The clarified wastewater is further treated in the PGF, where plants such as *Cana Indica* and common reeds, absorb the nutrients present in the wastewater and the aerobic bacterial inoculums present in the PGF bed further digest the sludge if any. The wastewater produced is clear with no odour and can be let out into any water body. Wastewater analysis shows the treated water has a biochemical oxygen demand value of less than 30 mg/litre which is the standard set by the Bureau of Indian Standards for safe discharge of wastewater into any water body.

In East Devadanum, the DEWATS is designed to treat 9 m³ of wastewater per day and the gas produced from the biogas digester is utilised for the lighting of the child-friendly toilet and for cooking/heating purposes. The daily output of biogas is about 2-3 m³ per day. The treated wastewater is used for irrigation in the nearby organic vegetable garden maintained by various SHG groups of East Devadanum which is a source of income for these groups. The entire operation and maintenance is carried out by the SHE team formed by Gramalaya.

Role of stakeholders in supporting CMTs

As the above discussion makes clear, a number of stakeholders provide support to CMTs. Table 3.3 summarises the current support roles being played and is the basis for some of the recommendations made on future roles in supporting this model.

Many NGOs working in Trichy appear to be playing a minimal role in supporting CMTs. These NGOs are focused on micro-credit activities and appear not to be focussing on hygiene behaviour change. The

supervision and guidance they are offering their SHGs in toilet management is inadequate.

In Tiruchirappalli itself, Gramalaya sees its future role as deepening sanitation by covering all schools in slums (around 200 schools), building the capacity of SHE teams to manage solid waste and strengthening WAVE. An immediate need is to find means of remuneration for the WAVE executive committee, which is working full time, yet on a voluntary basis. One income-generating opportunity being explored is procuring a septic tank cleaning



Biogas digester and outlet of gravel bed used in DEWATS

Table 3.3: Stakeholders' analysis in supporting CMTs

Stakeholder	Support currently being provided
TCC	<ul style="list-style-type: none"> • TCC sanitation inspectors and junior engineers monitor CMTs (irregular in some CMTs) • Emptying septic tanks • Covering electricity costs in some toilets • Providing piped water supply in some toilets
WAVE	<ul style="list-style-type: none"> • Monitoring status and financial viability of CMTs and providing advice • Providing loans to CMTs with large maintenance bills • Managing a store of cleaning materials for use in CMTs at low cost
Gramalaya	<ul style="list-style-type: none"> • Establishing SHGs and supporting them to construct and manage CMTs • Hygiene education and promoting ODF zones • Providing regular support to WAVE on maintaining toilets and financial management
Other NGOs	<ul style="list-style-type: none"> • Support to SHGs to manage toilets • Hygiene education to communities (some NGOs only)
Ward Councillors	<ul style="list-style-type: none"> • Monitoring CMT status • Requesting TCC to undertake maintenance of CMTs

vehicle for WAVE to maintain the growing number of CMTs managed by its member SHE teams and bring in income by servicing other septic tanks. Gramalaya also envisions scaling up this model outside of

Tiruchirappalli, both through demonstration in other towns and cities, through advocacy and by providing training to NGOs and government officials on managing CMTs.

4 Current Status of Community-managed Toilets

This section discusses the current status of toilets managed under the three different models. A total of 61 CMTs were studied and it was found that all of them were in use. The average population of the slum communities where the toilets are located, is around 1,200, ranging from 200 to 4,800. The average

household toilet coverage in these communities was found to be 25 per cent, ranging from 0.0 to 97 per cent. Table 4.1 provides details of toilet use and sanitation situation in sample slums in both TCC managed and community-managed toilets.

Table 4.1: Toilet use and sanitation situation in sample slums

Particulars	TCC-managed	Community-managed	
		Supported by WAVE	Supported by other NGOs
No. of toilets studied	10	41	10
Average number of households per community	286	224	293
Average population per community	1,297	1,086	1,511
Average household size	5	5	5
Household toilet coverage in the community (%)	30	25	19
Average number of users per toilet per day	464	602	525
Communities declared free of open defecation (%)	48	57	63

Source: Field Data

All the community toilets managed by TCC that were visited in the survey were in use, however, many of the toilets were found to be very dirty and in a poor state of repair, in some cases within a very short period of construction/renovation. Interviewees reported that many TCC-managed community toilets have been abandoned, resulting in high health risks to the surrounding population. Soap and hand-washing facilities were not found to be available. According to TCC officials, shortage of manpower, resulting from the ban on hiring more staff, has led to unhygienic conditions and poor maintenance in toilets.

The situation at Periyar Nagar is a case in a point. Three toilet complexes have been constructed, two of which have been abandoned and one is slipping into disrepair – all due to lack of management. TCC had built a sanitation complex. The structures do not have a water supply, are covered in faeces and are currently in a state of disuse. There is an ISC built next to the abandoned toilet. The women's section has 10 seats, bathing cubicles, washing facility and child-friendly toilets but is abandoned.

Next to the ISC is a toilet constructed by an NGO. This is currently used as a women's complex. The toilet is managed by SHGs promoted by the NGO. There is no token system in place and no record of accounts. The caretaker hands over Rs. 105 to the SHG each day and takes the balance as her wages. There were no signs of maintenance except the daily ritual of cleaning. Three toilets were closed due to blockage and have not been repaired. Water supply seems to be abundant but due to lack of management, the tanks are overflowing and are dirty. Communities visited in the study expressed interest in taking over the management of these toilets.

Toilets fully managed by communities – Clean toilets and clean communities

The average household toilet coverage in the WAVE communities is only 25 per cent and yet as a result of use of the CMTs, 73 per cent of the communities have been declared as free of the need for open defecation (see box 4.3). All the toilets visited were found to be in use and all are being managed by the community. Two of the SHE teams were found to be inactive; all others were

Box 4.1: Toilets without community involvement

Vadavoor: Political interference poses continuing challenge to SHE team

Vadavoor slum located in ward 56 of K. Abhishekapuram zone in Trichy city faces ongoing interference by vested political interests and is presented here as a case study of what SHE teams often have to face. But first, a brief profile:

- The slum has 107 households, six of which had individual latrines in 2005; this figure has increased to 18 in 2007.
- It has an ISP with 10 seaters (five each for men and women), two bathing units and three child-friendly toilet (CFT) seats constructed in 2005.

Soon after completion in 2005, it was opened for public use under the direct management of TCC.

Local councillor takes unhealthy interest

The local councillor Mrs. Vijayalakshmi Kannan was also the Zonal Chairman and her husband controlled the entire area. This slum was their vote bank and they dissuaded the community from paying for maintenance. The TCC cleaners who were supposed to clean the latrines never turned up, no user-fees were levied and there was no monitoring. The petty shop opposite the ISP sold arrack, and men misused the facility to gang up and drink.

Gramalaya builds SHGs....

Gramalaya promoted three SHGs here with 42 members. After much persuasion by TCC, Gramalaya was successful in bringing the ISP under community-management. When the SHE team took over management, latrines were filled with faeces up to one foot deep, and the team spent nearly Rs. 3,000 to clean up the mess. Gramalaya supported the renovation and the SHE team began their management with cleaning the ISP in 2006. The SHE team agreed upon charges of Rs. 20 to Rs. 30 per family (depending on the family size) and Rs. 0.50 per use for non-resident users who were normally rickshaw pullers and labourers. However, due to political interference, families were reluctant to pay and monthly payments never touched the full amount.

....but the problem continues

Local body elections heightened the interference from the councillors, and as the same person was re-elected, and was still influencing the community not to pay, the income for ISP fell even further. At one stage only three families were paying, other than the SHE team members. Non-resident users were very few in number and daily collection from them did not exceed Rs. 20 per day, which was sufficient to meet only the caretaker's salary. The SHE team made additional contributions to meet the deficit and paid the electricity bill and the cleaner's salary.

The situation in Vadavoor is only an example of how hard it can be to essay the SHE team's role.

performing their roles and responsibilities. Water supply was considered sufficient in all CMTs except one where the borewell yield reduces in the dry season and where the number of users is high.

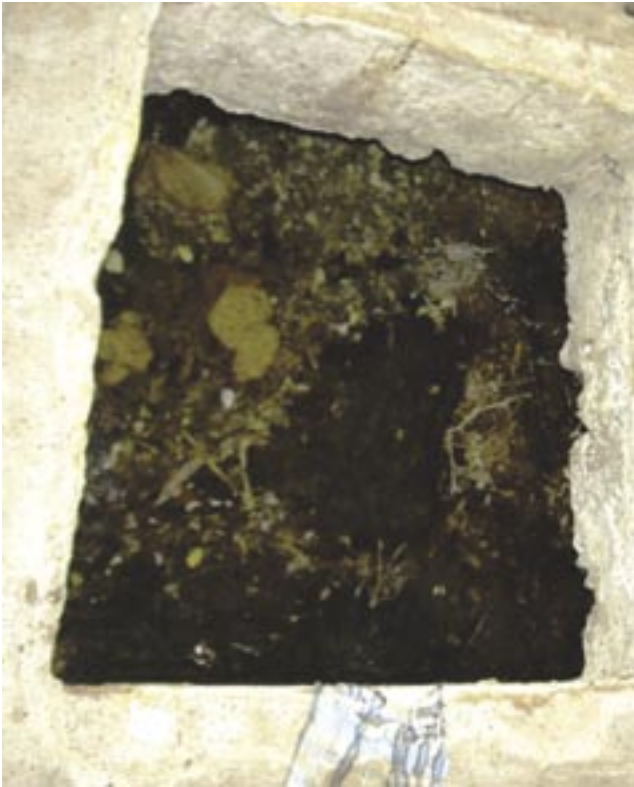
Toilets with some community involvement – Partial toilet use and partial open defecation

All the community toilets managed by non-WAVE SHGs and other NGOs that were studied were in use, however in many, the surroundings were found to be generally dirty. Only 40 per cent of toilets were being actively managed by the community. On an average,

525 people per day use the toilets. This is normally only a proportion of people living in the surrounding areas, which means that some people continue to practice open defecation. Only one of the communities has been declared open defecation free.

Financial viability of CMTs

This section presents some analysis on the financial viability of CMTs, based on income and expenditure over the last three months (See Table 4.2). In TCC-managed community toilets, income is not collected and details on expenditure are not available, hence



Septic tank needing to be emptied in Gorimedu



Leaking septic tank in Gorimedu

Box 4.2: Septic tank management – a problem in all models of management

Around half the toilets have a so called ‘septic tank’. In most cases these are in effect simply holding tanks and do not perform the functions of a septic tank. Septic tank management is a major problem. In many toilets they fill up quickly due to:

- The high number of users
- In the rainy season rain water enters some septic tanks
- Users bathe inside the toilet rooms and the bathing water flows down the pans into the septic tanks
- There are no soak pits.

When septic tanks fill up they overflow and the toilets are closed, and the users resort to open defecation. TCC only has two septic tank cleaning tankers and is therefore unable to empty all the septic tanks. These tankers are continually in crisis-management mode. They service septic tanks that are about to overflow but only skim off a layer of water and do not have time to empty the sludge. At some toilets such visits are made a number of times every day. TCC is responsible for emptying septic tanks in CMTs free of cost. However, tanker staff charge a small fee of Rs. 10 to 20. When tanks are being emptied frequently, daily in some cases, this becomes a substantial expenditure for communities.

no detailed analysis is made. However, it is clear that all these 172 toilets run at a loss and are a burden on TCC finances. For example, in the TCC-managed toilets in Gorimedu, no user fees are collected and two caretakers are employed with a combined monthly salary of Rs. 11,000.

How much income do CMTs collect?

For all CMTs, the only source of income is the fees collected from the users. Therefore, income is dependent upon the rate of user fees, size of community, household toilet coverage, number of seats in the toilet and facilities available. On an average, 590 people use each CMT per day. This masks a huge variation of 75 to 1,850 users per day. The average monthly income of a CMT is Rs. 6,000, ranging from Rs. 510 (CMT in Nanthavan Store, a residential area, with 10 seats and no bathing and washing facilities, and 34 families paying a monthly rate of Rs. 15) to Rs. 20,600 (CMT in Kalmandhai, a commercial area where the toilet is used by both



Signboard showing ODF status in the slum – Sebasthiyar Palayam

Box 4.3: Declaring slums free of open defecation: Some criteria

Gramalaya has set criteria, all of which have to be fulfilled before a slum is declared open defecation free. Some of these criteria are: community-managed (through SHG); pay-and-use systems; access of toilet to men, women and children; rationing users per seat (taking into account the slum population and household latrines); no open defecation; systems of solid waste collection and SHG /community monitoring of the same. Normally in a slum with community toilet, Gramalaya initiates the process of community mobilisation and SHG and SHE formation, instituting community-management and promoting behaviour-change among the community. Gramalaya and the community achieve open defecation free status as per the set criteria; the process takes about three to six months depending on the slum size and the challenges. The SHE team makes a representation to the councillor and the TCC simultaneously, sharing their intention to declare their slum open defecation free, and seek additional support towards environmental cleanliness, like installing additional dustbins, drainage renovation etc, for which TCC willingly extends support. The councillor and the SHE team together play a lead role in identifying additional support needed, fixing the date to declare and finalise the plans. Gramalaya facilitates the community in following-up with TCC. Normally the councillor presides over the declaration ceremony of ODF status with the participation of the TCC officials and led by SHE team and the community.

residents and passers-by, with 37 seats, bathing facilities, and 1,600 users per day).

Through this study it has not been possible to assess the proportion of income collected from bathing and clothes-washing facilities (with higher rates). This is an area for further study as adding these facilities to community toilets may be a means to increasing income and improving financial viability.

How much does it cost to run a CMT?

Average total expenditure of CMTs is Rs. 4,800 per month, ranging from Rs. 550 to Rs. 15,700. The major regular expenditure by all CMTs includes staffing, electricity charges, cleaning materials and repairs. Other expenditures include WAVE membership fees (Rs. 100 to Rs. 500 per month depending on CMT income), street-cleaning and garbage collection,

Box 4.4: Lack of transparency leads to community disputes: Case of Pathuvai Nagar

There are two groups promoted by the councillor currently managing this ISC toilet. Residents from four streets of Pathuvai Nagar are using the toilet. The septic tank is let out into the open drain and faeces float along it creating unhygienic conditions.

The current managers of the ISC toilet have not shared the accounts or income and expenditure among the users or the group members. The users are rift with doubts and distrust. There is a general perception that ISC management gives lots of surplus income and this leads to frequent acrimonious exchanges among the users.

Table 4.2: Income and expenditure in CMTs in Tiruchirappalli

Particulars (in Rs.)	Community-managed toilets	
	Supported by WAVE	Supported by other NGOs
Average monthly income per toilet	6,200	5,480
Average monthly expenditure per toilet (breakdown below)	5,300	4,300
Salaries	2,700	2,600
Electricity	1,300	800
Cleaning materials	600	500
Repair and replacement	270	220
Others *	420	3
Community toilets with a bank account (%)	98	70**
Community toilets with accounts kept on site (%)	95	60
Community toilets reported to be viable by managers (%)	76	80***

Note: * includes street cleaning/garbage management, WAVE membership fees, informal payments to TCC septic tank cleaners, cleaning drains; **though bank accounts are in existence, no regular transactions are made; *** data collected orally from the caretakers and not based on the records or analysis

informal payment to septic-tank cleaners, cleaning drains and blocked UGDs.

Staffing is the highest monthly outgo at an average of Rs. 2,650. On an average there are five staff per day working in WAVE CMTs (see section three above). Two caretakers work each day, on a shift basis, and are paid between Rs. 20 and Rs. 50 per day depending on the size and income of the toilet. Cleaners, two per CMT, are paid around Rs. 1,100 each per month. The watchwoman is paid between Rs. 500 to Rs. 1,200. These wages are minimal and there is no scope for saving costs through reducing wages.

The CMTs require large amounts of water to maintain hygiene. Where bathing and clothes washing facilities are available, even more water is required. Water is drawn from borewells using electric motors and hence substantial electricity costs are incurred. Average monthly expenditure on electricity is Rs. 1,200, and ranges from Rs. 120 to Rs. 5,150. When communities first took over management of these toilets, they were not required to pay electricity charges and these costs were covered by TCC. A few years ago, TCC began passing on these charges to communities. Appeals by ward councillors, SHE teams and WAVE to TCC on the grounds of insufficient income have resulted in exemptions in some CMTs. Currently, 65 per cent of CMTs pay for electricity. In all but one case, domestic rates are charged. Previously more CMTs had been charged at commercial rates but after negotiation between TCC, WAVE and Gramalaya this was changed. The WAVE federation also tried to bring up the issue of electricity tariff with the government. A representation

was made to the Chief Ministers' Cell to change the electricity tariff charged for community toilets managed by SHE teams from commercial to domestic. This request was forwarded to the Tamil Nadu Electricity Board and the Board issued orders to change the tariff structure as desired by the WAVE federation.

Some CMTs have tried to reduce electricity costs. For example, Dharmanathapuram CMT paid Rs. 3,000 as monthly electricity charges and shut down its bathing facilities because it could not afford to supply electrically-pumped water. The SHE team recently switched to a more efficient motor, and electricity bills fell to around Rs. 500. Analysis of the bi-monthly electricity costs showed large jumps in bills from month to month. This may be a result of crossing slabs in the tariff structure (see Box 4.3).

Average cost on cleaning materials is Rs. 550 per month. WAVE purchases bulk supplies of these materials and supplies to SHE teams at very low rates. Average monthly expenditure on repairs is Rs. 250. However these costs are often large (e.g. replacement of an electric motor) and place a strain on CMT finances. As mentioned earlier, WAVE offers a loan to member SHE teams to cover such costs.

In recent months, TCC has begun requiring SHE teams to manage street cleaning and garbage management in the area around the toilet. This is being set as a condition to handing over TCC toilets for community management. SHE teams are forced to recruit sweepers to undertake this task. TCC believes that CMTs can make a profit and hence have handed over

this responsibility to the SHE teams. SHE teams are finding that the cost of the sweeper, around Rs. 1,200 per month, is making some toilets financially unviable.

Are CMTs financially sustainable?

Simple analysis of income versus expenditure reveals the financial viability of WAVE toilets. Given that income is dependent upon the number of users, the income/expenditure ratio was compared to the number of users (see Figure 4.1). Analysis shows that CMTs with less than 200 users per day (within the small red circle on the figure) are running at below or around the breakeven point. Ten per cent of toilets fall into this category. In these toilets, the requirement to pay electricity charges means that they are not viable. For example, the two CMTs with the lowest number of users per day, one at the Airport Kamaraj Nagar with 75 users per day and one at Kezha Adaiyavalanjan, with 85 users per day, are both required to pay electricity charges and their income/expenditure ratio is 1.00. Further, the analysis also shows that the majority of toilets with less than 500 users per day (within the large blue circle) are barely above the breakeven point and are therefore not likely to be able to cover maintenance costs. Forty-one per cent of toilets fall into this category.

Benefits of CMTs

This section highlights the main benefits of CMTs as perceived by communities and TCC officials (also see summarised points in Box 4.4). These benefits are elaborated as below:

Table 4.3: Domestic electricity charges in Tiruchirappalli

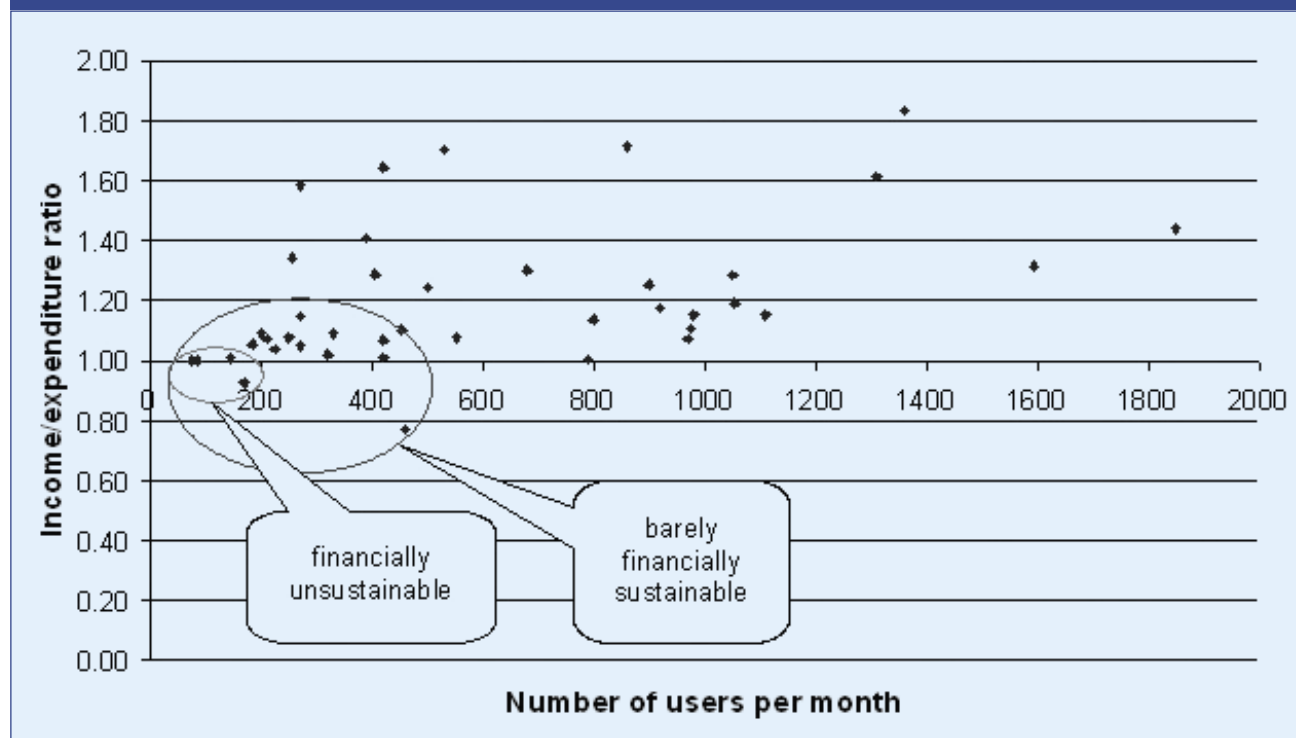
Electricity bi-monthly consumption units	Revised rate from 16/06/05 (INR per unit)
0 to 50	0.75
51 to 100	0.85
101 to 200	1.50
201 to 600	2.20
601 & above	3.05

Source: <http://www.tn.gov.in/gorders/energy-e-100-2004.htm>

Clean environment and access to a toilet

Communities emphatically stated “a clean living environment” as the primary benefit of the CMTs. Prior to taking over management of the toilets the communities were filthy, covered in faeces and this was even worse in the rainy season. People would walk with their nose covered from the unbearable stench and for families living close to the open defecation areas meal times were an ordeal due to the repulsive stench. The community, particularly women, had to move from place to place and street to street in search of a place to defecate. Now communities are clean, many CMTs have beautiful gardens and are social gathering spots and the women are motivated to clean the toilet surroundings. A proud sense of cleanliness and well-being is commonly felt among all residents in the communities.

Figure 4.1: Income\Expenditure ratio versus number of users in CMTs



Hygiene and health improvement

The year when Gramalaya began work on CMTs saw the death of two children due to diarrhoea. People reported that now in the same community, the incidence of diarrhoea and malaria had reduced significantly and subsequently medical expenses had reduced too. This is consistent with the findings of a study conducted by WaterAid in eight of the communities in 2001 which found that in the intervened communities, diarrhoea had reduced from 73 to 10 per cent and other diseases like malaria, typhoid, skin and worm infections were also significantly reduced. The study found that this had resulted in an 88 per cent reduction in household medical expenditure (WaterAid and Gramalaya, 2001).

Women's empowerment

- Learning to address family and community issues: Women leaders address issues not only related to sanitation, but get involved in issues related to community disputes, education of children etc. Women leaders have a vision that their group will grow and develop as a people's bank and their children will gain opportunities for higher education.
- The transformation from home maker to change agent: Rukmini, the treasurer of WAVE proudly states "I know whom to contact and how to represent various problems of our slum community to government officials". For the women in these communities, water and sanitation was just the entry point. They are using their self confidence, leadership skills and access to government machinery to address issues beyond sanitation for the larger

Box 4.5: Benefits and Drawbacks of CMTs

Benefits

- Improved environment
- Hygiene and health improvement
- Women's empowerment
- Addressing wider issues
- Housewife to change agent
- Ability to manage finances
- Employment opportunity
- Reduction in cost for TCC
- Demonstration of ODF in urban community
- High number of users

Drawbacks

- In the rainy season rain water enters some septic tanks
- Users bathe inside the toilet rooms and the bathing water flows down the pans into the septic tanks
- There are no soak pits.

community development. For example, WAVE met the city administration officials and arranged for 32 household water connections in Karuvattupettai slum.

- Ability to manage finances: Before their involvement with CMTs, women were not even entrusted with money for household expenses. Now they responsibly manage tens of thousands of rupees from CMTs throughout the city. They also manage credit not just for family but for community needs. Women know how to maintain accounts, records and operate a bank account. They negotiate with bank managers and develop proposals for their entrepreneurial plans.

Opportunities for employment

CMTs create employment opportunities for SHG members as caretakers and for community members as cleaners, night-guards and sweepers. While the number of days of employment available to each SHG member as a caretaker is low, around four days employment per year on average, SHG members emphasised this as an important benefit of CMTs.

Reduction in TCC sanitation costs

From TCC's perspective, one of the major benefits of CMTs is reduced costs of sanitary workers. TCC has no expenditure in CMTs, whereas previously it paid salaries, and for electricity and cleaning materials.

ODF in urban settings

CMTs offer a model of how poor urban communities can prevent open defecation in the entire community. The lessons from this model can be used in other cities in India and throughout the world.

Emerging challenges to sustaining benefits

CMTs supported by Gramalaya in Tiruchirappalli have been operational for six years now. All are in use, many are well-managed and communities are being declared open defecation free. However, a number of challenges emerge with regard to the sustainability of the toilet complexes and with regard to further scaling up this approach in the city. This section highlights some of the key challenges that need to be addressed by TCC, NGOs, WAVE and communities.

Political challenges

- Political interference in appointment of caretakers in TCC toilets.
- Local politicians pressurising TCC officers not to transfer 'free-to-use' toilets to 'pay-and-use' CMTs.

- Providing sanitation services to people living in unapproved slum communities – no community toilets have been built in these communities as this is considered illegal. In some cases, community toilets have been constructed nearby to these unapproved communities.

Administrative challenges

- Delays in TCC decision making and frequent change of officials.
- Inadequate processes for TCC to monitor the growing number of CMTs.
- Getting the balance right between constructing new ISCs under the TNUDP and renovating abandoned TCC toilets.

Technological challenges

- Introducing innovative and energy efficient technology in CMTs to save costs.
- Managing sewage and improving the open drainage system throughout the city to maximise health outcomes of CMTs.
- Shifting of focus from open defecation free areas to totally sanitised areas which would involve tackling problems of solid waste management and waste water.

Social challenges

- Managing resistance from sweeper communities, whose livelihood opportunities with the TCC are being reduced by CMTs.
- Backward caste users are refusing to share community toilets with scheduled caste (SC) users.
- Drug addicts and dealers use community toilets as a base and frighten away people who want to use the toilet.

Financial challenges

- High household connection fee for water and sewerage (Rs. 9,000) preventing people in slum communities from having a private household toilet.⁶
- Transferring of responsibility for sweeping streets around toilets from TCC to SHE teams.
- Financial viability of CMTs with less than 500 users per month.

⁶In Bangalore, for example, the household connection for water and sewerage is as low as Rs 550 which facilitates people in the slum to get connection and have their own individual toilet.



A new ISP in disrepair

Concluding remarks

The review of CMTs and bathing complexes in Tiruchirappalli, six years after the work began, has shown that achieving clean and healthy slums does not require huge financial investment. However, what it does require is a city authority sensitive to the problems faced by slum communities and supportive of community action, dedication of communities and their support NGOs. It has been proved that communities can manage their own toilet units and when they do this, the toilets are much cleaner than when managed by municipal authorities. There have been cases where the entire community can be declared open defecation free. Further, it has shown that managing toilets leads to empowerment



Cleaning septic tank in the slum of TV Kovil

of women with many positive impacts in terms of personal and community development. This experience shows that after initial reluctance, communities do pay for using toilets and bathing and washing facilities and these services can be provided at affordable costs, even for the poorest.

The financial sustainability of community toilets is dependent upon the number of users and smaller toilets do require support for them to be viable. As community management of toilets saves TCC money, in terms of cleaning staff costs, a strong case can be made for TCC to cover electricity costs in smaller CMTs. The public benefits resulting from open defecation free communities also mean that TCC should financially support these initiatives. Financial management skills,

systems for transparency and a focus on hygiene education are key elements for the success of CMTs and NGOs should build capacity of SHGs in these areas. Further, ensuring sufficient and affordable water supply in all CMTs is a concrete step that city authorities need to take to maintain hygiene standards and financial viability and ensure that bathing and clothes washing facilities can also be provided. Toilets are only a part of the sanitation solution. Sewage, wastewater and solid waste management must also be tackled by city authorities and this is the area where they must play a lead role. Where land is available, community-managed solutions such as DEWATS are feasible. Tiruchirappalli shows that CMTs and bathing complexes provide a model that can work at city-level when supported by city authorities.

5 The Way Forward – Recommendations

This section presents recommendations made by the study team for sustaining the benefits of the CMT and scaling up this model within Tiruchirappalli and beyond.

Reducing costs in CMTs: Given that financial viability is a major challenge to sustaining benefits, actors in Tiruchirappalli need to take actions to reduce running costs in CMTs.

- **Energy and water use:** Undertake energy and water audits of CMTs and promote energy efficient and water conservation measures such as solar, biogas, to make the whole system energy efficient, and fixing of leaks and raising awareness on value of water amongst users and cleaners. The audit may show ways to better manage electricity costs, for example by training SHE groups on the electricity tariff structure and encouraging prudent management to avoid jumping slabs. The study team also recommends exempting electricity charges in low-income toilets especially where average daily users are less than 500. Use rural pans instead of urban pans. The rural pans have a higher gradation and use less water to flush and to keep clean.
- **Maintenance:** Train SHE teams on technical aspects of CMT maintenance, including plumbing, electrical work and better septic tank management, to make them less reliant on external, expensive maintenance people. There is also a need to undertake major repairs in all CMTs.
- **Financial management:** Train all SHGs on the token system and keeping records and accounts. Conduct thorough analysis of income and expenditure and consult with community and WAVE before requiring SHE teams to employ sweepers for cleaning CMTs.

For increasing income in CMTs

Another way to improve viability is to increase income. The following recommendations are made in this regard.

- **User fees:** Where a monthly card system is used, the monthly fee should be at least Rs. 20 per household to ensure financial sustainability. Where affordable, a pay-and-use token system should be introduced.
 - **Income-generation:** Introduce income-generating facilities in CMTs such as a pay phone, a petty shop, install photocopy machines etc. WAVE should run a septic tank cleaning business with the help of TCC.
- For maintaining standards in CMTs:** Simply handing over responsibly for management of toilets to communities is no guarantee that services will improve. Actors need to play a number of roles with regard to monitoring performance and supporting communities to take on this responsibility so that standards are maintained.
- **Guidelines and coordination:** TCC should develop guidelines for community-management of toilets and bathing and washing complexes and a system for monitoring performance against the guidelines. Further, they should agree on criteria to be used in declaring an area open defecation free and totally sanitised. Many CMTs have complained that they are working under informal systems and hence TCC should introduce a system of formal agreement letters for handing over of toilets to CMTs. SHE teams should be established before the construction of new community toilets to allow community monitoring of construction. TCC should establish systems for coordination between NGOs, TCC and elected representatives regarding CMTs.
 - **Sufficient water supply:** TCC should ensure that all CMTs have access to sufficient, affordable water either through borewells or a city piped supply. For maintaining personal hygiene, TCC should provide financial support for adding bathing and washing facilities to CMTs.
 - **Sewage and drainage:** TCC should immediately address sewage outlets from CMTs into open

drains. TCC should also improve open drainage in areas where the solid waste problem has been addressed by communities.

- **Hygiene education and menstrual hygiene management:** Hygiene education should be provided to all communities managing toilets. Menstrual hygiene facilities should be built into the design of all new ISCs and fitted into existing ISCs and other community toilets.
- **Accessibility:** Accessibility audits should be conducted in all communities and facilities integrated in all community toilets to meet the needs of disabled people, elderly people, pregnant women and all other groups with specific needs.

For reaching total sanitation in Tiruchirappalli and beyond: Tiruchirappalli City Corporation, the NGOs and the communities in Tiruchirappalli have shown how sanitation problems in slum communities can be improved in a sustainable manner. This model now needs to be scaled up throughout the city and introduced in other cities throughout India. In this regard the following recommendations are made:

- TCC to commit to supporting the WAVE federation and other local NGOs to take on management of community toilets and draw up plans for expansion of CMTs in all slums in the city. TCC must extend infrastructure, community toilets, household toilets, UGD connections and water supply to unapproved slum communities. TCC should also reduce connection charges to promote household toilets.⁷
- TCC should promote community-level decentralised wastewater treatment facilities, such as DEWATS.
- All City Development Plans under the National Urban Renewal Mission (NURM) should include CMTs with washing and bathing facilities as a core pro-poor intervention and at least 20 per cent of budget should be allocated for addressing sanitation and hygiene needs of poor slum communities.
- NGOs should lobby for government to adopt Guidelines for Community-management of Toilets and Bathing and Washing Complexes.



Viragupettai community toilet maintained by SHE teams

⁷ TCC staff reported that a state level proposal is being considered to revise water and sanitation connection charges.

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WaterAid – Water for Life

The UK's only major charity dedicated exclusively to the provision of safe domestic water, sanitation and hygiene education.

Recognising water and sanitation as basic human rights and the foundation for overall development

WaterAid is an international charity established in 1981. Its vision is to enable poor communities gain access to safe and adequate water and sanitation. Presently, WaterAid works in 17 countries across Asia, Africa and the Pacific region. It operates through local partners, helping them set up low cost sustainable projects that can be managed by the community themselves.

WaterAid believes that water, sanitation and hygiene education are vital for the health, well being and dignity of poor people and provide the foundation for development and poverty reduction.

WaterAid in India

WaterAid started working in India in 1986. Since 2003, WAI shifted its focus from Southern India to include the poorer states in the north to better target India's most vulnerable communities. Keeping that in mind, the country office was shifted to the nation's capital, New Delhi.

Currently, WaterAid India (WAI) works in the ten states of Andhra Pradesh, Bihar, Chhattisgarh, Delhi, Jharkhand, Karnataka, Madhya Pradesh, Orissa, Tamil Nadu and Uttar Pradesh.

WAI also has liaison offices in Bhopal, Bangalore, Bhubaneswar and Lucknow



Gramalaya has done pioneering work in community-based rural and urban water and sanitation.

Gramalaya was established in 1987, by a group of committed youths with a vision of a society where people will have equal rights and access to protected water, sanitation health and improved income status without gender discrimination. Gramalaya began its work in the field of rural development and over the past two decades has diversified its operations with significant innovations on community management and child friendly solutions in the urban slums of Tiruchirappalli city. Gramalaya has successfully demonstrated that micro-credit can facilitate and accelerate the process of sanitation promotion. Gramalaya's water and sanitation programme is a catalyst of change towards empowerment of the vulnerable people particularly women and children.



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