Tamil Nadu Urban Sanitation Policy (Draft), 2012

Tamil Nadu Urban Sanitation Policy*

Municipal Administration and Water Supply Department

This policy document has been prepared by the Commissionerate of Municipal Administration, Government of Tamil Nadu, after consultation with policy makers, non-governmental organizations, community-based organizations, academic and private institutions and sanitation experts.

2/23/2012

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1. INTRODUCTION

Sanitation is often called the "orphan MDG," and India ranks poorly in terms of access to sanitation.[1] While the 7th MDG goal is to halve by 2015 the proportion of population without access to sanitation, the efforts to achieve these international targets have been insufficient and ineffective in India. The absence of sound programmes and policies to improve sanitation are reflected in our dismal sanitation figures. The Ministry of Urban Development (MoUD) under the National Urban Sanitation Policy ranked and categorized 423 cities in 2008 to evaluate their sanitary health and hygiene standards. As per these ranks, none of the cities studied by the MoUD can be categorized as "healthy and clean." Further, cities of Tamil Nadu, which have traditionally been considered to be superior to their counterparts in terms of access to water and sanitation, also need to improve their scores. With the exception of Tiruchirapalli that received a comparatively higher score of 59 on 100, all others have unpardonable scores (Chart 1). The latest National Family Health Survey (NFHS 3) figures for Tamil Nadu also conform to the findings of the MoUD. The report states that 57 per cent of the households[2] in Tamil Nadu have no toilet facility.

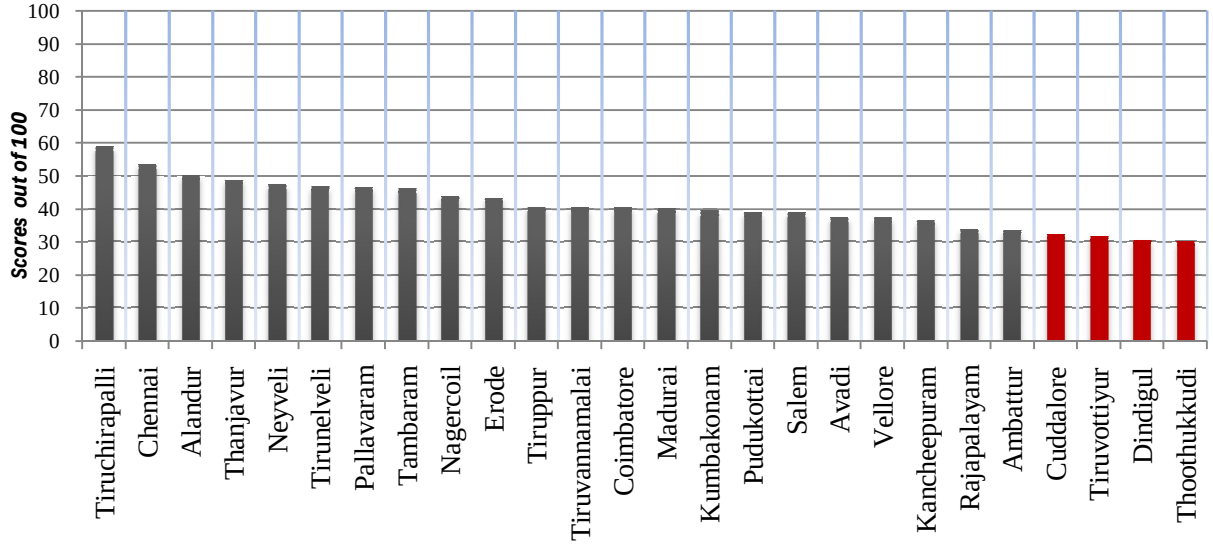


Chart 1: Ranking of Tamil Nadu Districts, Sanitation and Hygiene Standards, 2008[3]*Source: NUSP, MoUD, Secondary Research*

On one hand we have government funded mass programmes targeted at improving access to sanitation, but largely focused on rural areas. [4] On the other hand, we have rapidly urbanizing cities suffering from an acute shortage of water and sanitation, cities which have not seen as many targeted programmes in spite of the evident need. In these cities, **policies need to be inclusive** and ensure that outcomes do not lead to marginalization of impoverished residents. Further, a flagship programme called the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in December 2005 came to recognize the growing needs of urban cities. Its pro-poor mandate and inclusive design won itself a lot of supporters. However, the state still needs to considerably focus on improving the condition of the urban poor. In this context, slums **without basic infrastructure and civic amenities will be the focus of the state. The state will endeavour to recognize or "declare" slums**[5] **and create comprehensive data about informal settlements**, so that the un-served populations can avail of pro-poor programmes in the coming years.

[1] MDG refers to the Millennium Development Goals defined by the United Nations Millennium Declaration, wherein 8 international development goals, including access to improved sanitation, were sought to be achieved by 2015.
[2] Rural and urban combined
[3] Annexure 1: Categorization of district ranks
[4] The more recent ones were the Total Sanitation Campaign launched in 1999 and the Nirmal Gram Puraskar in 2005: https://www.wsp.org/wsp/sites/wsp.org/files/publications/WSP_India_TSC_Report_Vol_1_Press.pdf?
[5] The last round of slum declaration happened in Chennai in 1986, more than 25 years ago!

2. THE CURRENT STATUS OF SANITATION IN TAMIL NADU

Today, Tamil Nadu is one of the most urbanized states in India, and around 50 per cent of the population lives in urban areas (Chart 2). It is projected that the urban population would peak at 69.1% in 2026. Even though urban investments have been stepped up significantly, the pace of infrastructure creation continues to lag population growth and demand for services. These gaps in access to basic services are particularly worrying for the urban poor, especially those in non-notified slum areas.

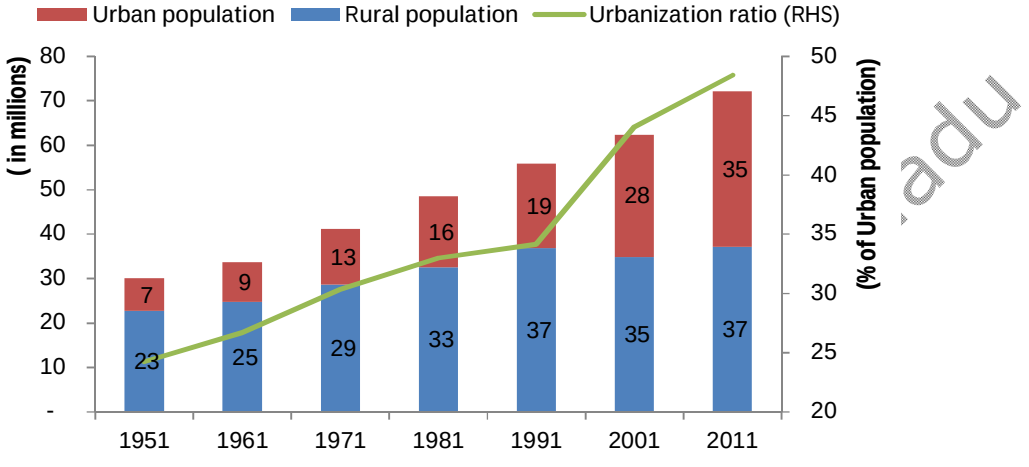


Chart 2: Growth in Urban Population in Tamil Nadu, *Source: Census of India, Secondary Research*

According to Census (2001 and 2011 provisional) figures there are 59 lakh urban households in Tamil Nadu out of which, 35.7% of the urban households do not have access to toilets, 7.7% use community toilets, 30% do not have access to drainage networks, and 35% are connect to open drains.

Access to sanitation also has implications on education. The Annual Status of Education Report (ASER) shows that usable toilets could be found only in around50 per cent of government schools in India. Four out of ten government primary schools do not have separate toilets for girls. Their data also suggests higher dropout rates, especially for girls, in cities with inadequate sanitation facilities at schools.[6] Tamil Nadu has a dropout rate of 38 per cent, which is lower than most states in India. Nevertheless, we need to ensure that these rates decrease with time. Better sanitation facilities at the school might be one of the targeted ways of reducing school dropout rates.

Recently, the India Human Development Report 2011 regarded open defecation as a serious threat to the health and nutritional status of India. India constitutes one-fourth of the infant deaths that occur globally due to acute diarrhoea.[7] Menstrual hygiene and health are integral to the goal of better sanitation systems in our societies.

Further,the proportion of notified and non-notified slums with no latrine facility was found to be significantly higher for Tamil Nadu; 27 per cent and 40 per cent respectively. The lack of formal space for the urban poor in city master plans has forced them to opt for informal settlements, where sewerage networks cannot reach and sanitation facilities are compromised. Access to sanitation has to be stepped up in our rapidly urbanizing cities and towns, especially in slum colonies and non-notified slums in the state.

1.1 FACTS AND FIGURES: SANITATION IN TAMIL NADU

As per the 74th Constitutional Amendment Act, Public health, Sanitation, Conservancy and Solid Waste Management is one of the core functions of the ULBs. Sanitation is defined as "*safe management of human excreta, including its safe confinement, treatment, disposal, and associated hygiene- related practices.*" While

[6] ASER is survey of schools in rural areas, but the findings of the report can be generalized for urban areas as well. http://www.asercentre.org/ngo-education-india.php?p=Download+ASER+reports

[7] UNICEF

this policy pertains to the management of human excreta and the associated public health and environmental impacts, it is recognized that integral solutions need to take account other elements of environmental sanitation, i.e. Solid Waste Management, special wastes, drainage, and also the management of drinking water supply.

Slum Population per seat of public convenience: Tamil Nadu has 10 City Municipal Corporations, 125 Municipalities and 529 Town Panchayats. The slum population per seat of public convenience for 9 city corporations, viz. Coimbatore, Erode, Madurai, Salem, Thoothukudi, Tiruchirapalli, Tiruneveli, Tiruppur and Vellore is given in the chart below:

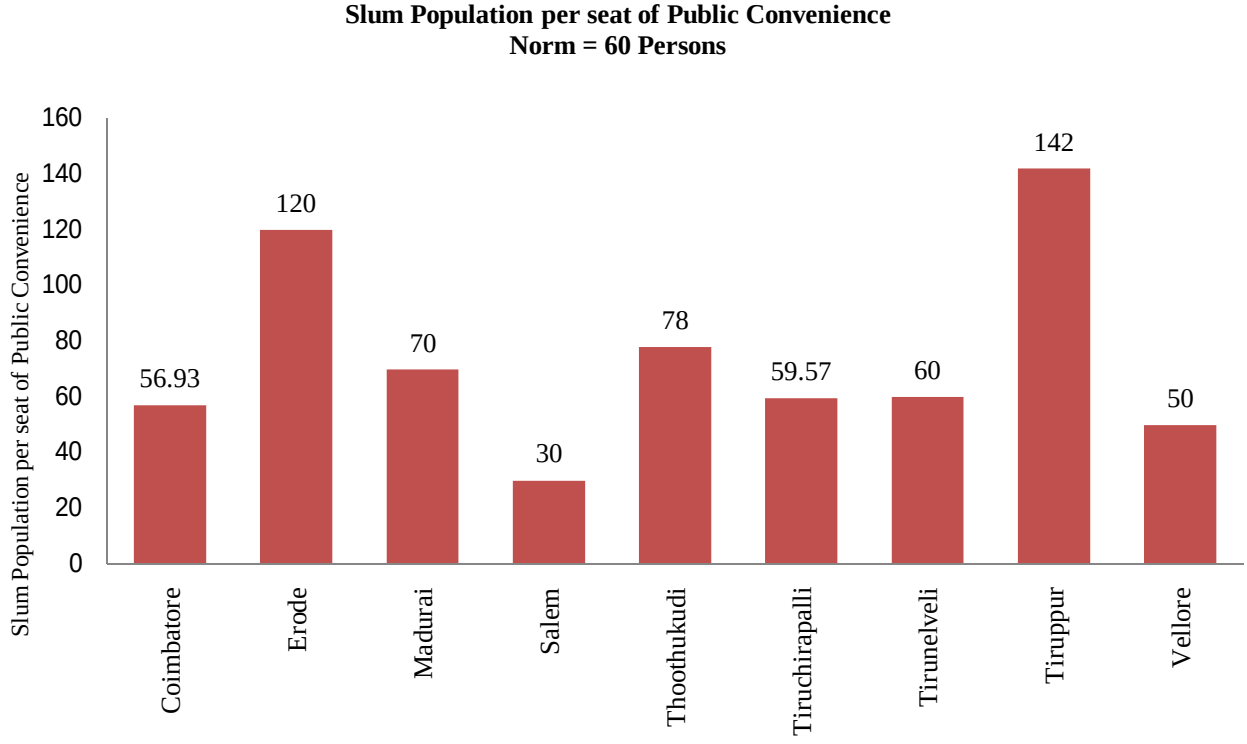


Chart 3: Slum Population per seat of Public Convenience for city corporations
Source: Commissionerate of Municipal Administration, Secondary Research

This chart clearly shows the need for more sanitation facilities in the form of public toilets and community toilets in many of our city corporations. In Tiruppur, for instance, the slum population per seat of public convenience is 142 persons which is more than double the prerequisite norm of 60 persons. Similarly for Erode it is 120 persons per seat of public convenience against the requirement of 60 persons. The 125 Municipalities also show a similar picture. The following chart shows that less than 33% of the Municipalities satisfy the norm of 60 persons per seat of public convenience.

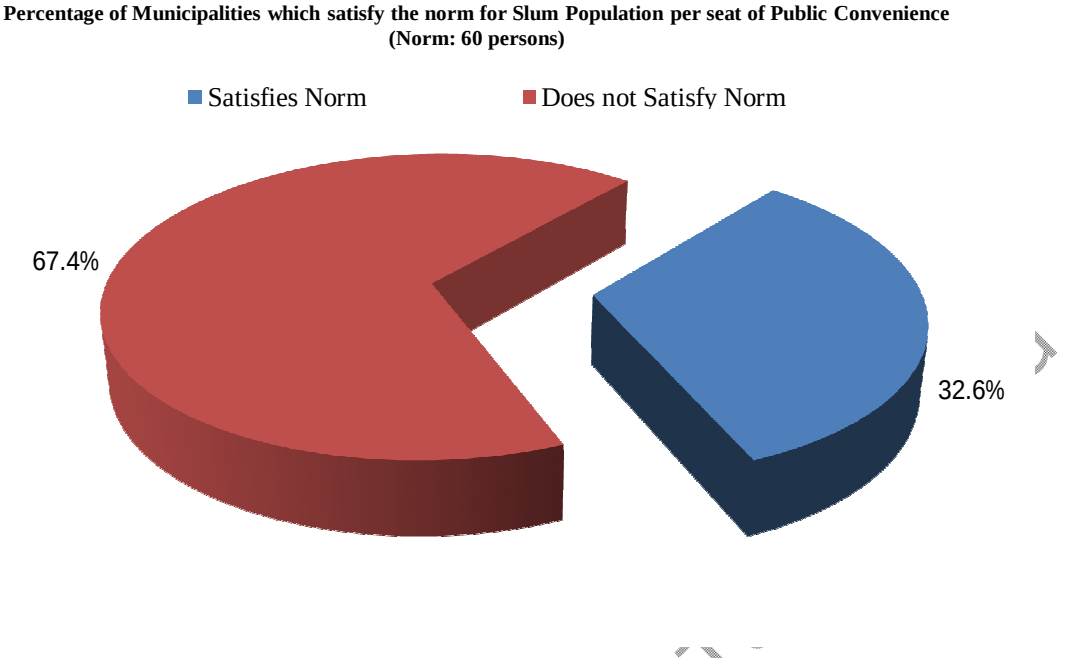


Chart 3: Percentage of Municipalities which satisfy the 60 persons norm for Slum Population per seat of Public Convenience;
Source: Commissionerate of Municipal Administration, Secondary Research

The following chart gives a list of the Municipalities which far exceed the norm of 60 persons for slum population per toilet seat:

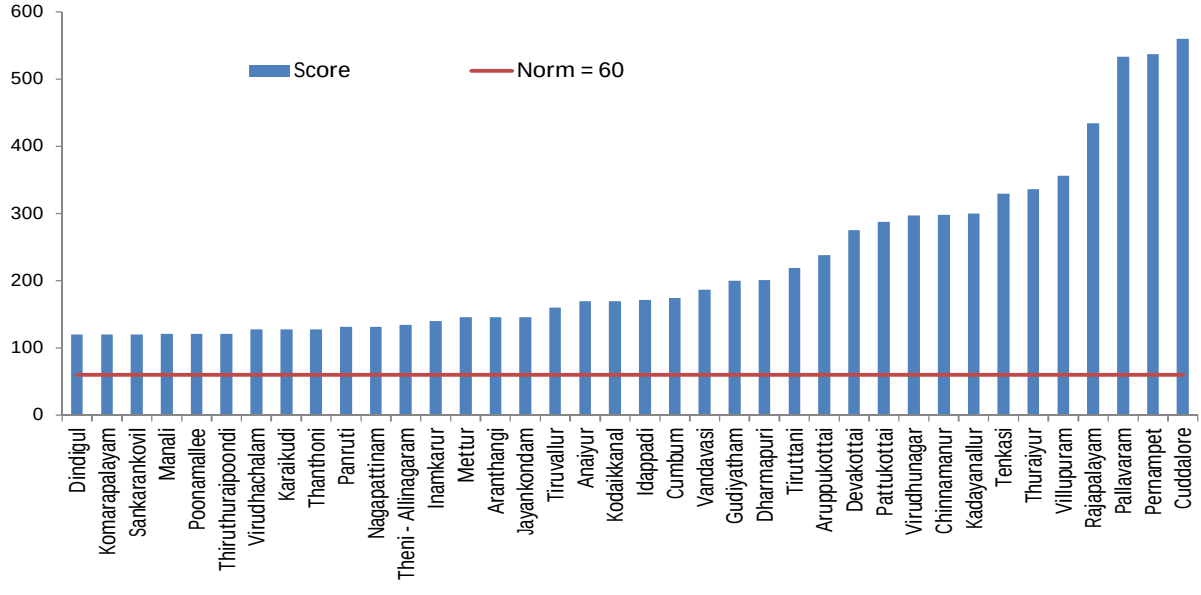


Chart 4: Municipalities which exceed the 60 persons norm for Slum Population per seat of Public Convenience
Source: Commissionerate of Municipal Administration, Secondary Research: IFMR-CDF

As one can clearly observe for the figure, any municipality which crosses the red line exceeds the norm of 60 persons. Municipalities like Cuddalore, Pernampet, Pallavaram, Villupuram, Thuraiyur, Tenkasi, etc far exceed the prerequisite norm. The chart above thus envisages the need for better sanitation facilities for all.

Sewerage: It has been a practice in urban sanitation to invest in Under Ground Sewerage System including the Sewerage Treatment Plants (STPs) in the cities. It is the policy of the State Government to provide Under

Ground Sewerage System (UGSS) to all the towns in phases. Out of the 10 City Municipal Corporations in Tamil Nadu, 8 Corporations, i.e. Chennai, Madurai, Coimbatore, Tiruchirappalli, Tirunelveli and Tiruppur have sewerage system. In Thoothukudi, Vellore, Salem and Erode Corporations, the work is under progress. Out of the 125 Municipalities, only around 15% have sewerage connections, and in over 9% the work is under progress. However, the coverage of population by the sewerage system is generally confined to the core areas of the cities where the system has been completed. While the sewerage systems are considered ideal for the dense urban settlements, over a period of time, a large number of on-site arrangements have emerged as the popular solution for the bulk of urban households. Almost half of the urban households have built their own on-site systems including septic tanks, soak pits or even connected directly with the open drainage system.

Solid Waste Management[8]**:**Solid Waste Management is one of the obligatory functions of the ULBs. The Government of India enacted the Municipal Solid Waste Management (M&H) Rules, 2000 making it mandatory for the ULBs to improve the system within a given time frame (before 31.12.2003). The MSW Rules, 2000 direct all the local bodies and concerned institutions to adopt source segregation of household waste, door to door collection, proper transportation and scientific disposal of the waste. All the ULBs including Chennai Corporation in Tamil Nadu generate about 15,000 MT of solid waste per day. About 80% of generated waste is collected and about 60% is transported to the disposal site.

Consequent to the MSW Rules, the ULBs have prepared an Action Plan to implement the MSW Rules. Financial support amounting to Rs.266.28 crores was arranged for the ULBs under various schemes to provide infrastructure such as purchase of vehicles, improvement in compost yard etc. Land for the development of disposal for 21 ULBs was additionally acquired and creation of Regional Landfill Facility is under way. Integrated MSWM projects were sanctioned for Coimbatore and Madurai Corporations and Namakkal, Alandur, Pallavapuram and Tambaram Municipalities are under implementation under the JnNURM.

It is the policy of the Government to ensure that all ULBs comply with the Municipal Solid Waste Management Rules, 2000. Municipal Solid Waste would be segregated into groups of organic, inorganic, recyclables and hazardous waste. Mechanization will be emphasized for collection, transportation and in disposal to reduce the manual handling of garbage. The metal, plastics, glass and paper wastes are to be recycled. Composting of organic waste will be the primary method of disposal, while the possibility of energy from waste will also be explored. The other non biodegradable waste will be disposed through the scientific sanitary land fill. The use of regional landfills will be emphasized to deal with such waste from the adjoining urban local bodies due to shortage of Land and on economic consideration.

Manual Scavenging: The Government of India enacted, "the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act 1993'" to eradicate the inhuman practice of head-loading and manual scavenging associated with dry service-latrine. In Tamil Nadu, under Low Cost Sanitation Scheme, 4,91,229 individual toilets and 345 community toilets have been constructed and 4450 scavengers were liberated from manual scavenging and rehabilitated by providing alternative jobs, or providing self employment with the financial assistance from the Government of Tamil Nadu. In June 2003, the Government issued a notification that no person shall engage in or employ for or permit to be engaged in or employed for any other person for manually carrying human excreta, or construct or maintain a dry latrine, in areas comparing of the whole of the State of Tamil Nadu with effect from 1st October of 2003.

TAMIL NADU POLICY: VISION

"To become totally sanitized, healthy and liveable and ensure and sustain good public health and environment outcomes for all their citizens with a special focus on hygienic and affordable sanitation facilities for the urban poor and women."

[8]A detailed Solid Waste Management Policy (updated in February 2012) is available at the Municipal Administration and Water Supply Department, Commissionerate of Municipal Administration

3. TAMIL NADU URBAN SANITATION POLICY: VISION

The National Urban Sanitation Policy was launched by the Ministry of Urban Development in 2008 to accelerate the tempo of sustainable sanitation in the cities. The policy advocates "*all the cities to become free from open defecation and that all human waste and liquid waste be collected and safely treated.*" Provision of sustainable sanitation has been identified as a key-driver for economic and sustainable development in general.

Tamil Nadu government welcomes this policy and will endeavour to deliver total sanitation services to its residents. In a recent speech during Budget Demand 2011-12, the Hon'ble Chief Minister said:

"This Government is committed to making the state open defecation free by 2015. The solution lies in mapping areas where open defecation is still being practised, providing facilities wherever the need arises, and also putting in place a mechanism to maintain these facilities. The Government will work out the appropriate strategy in this regard and provide infrastructure in phases to cover the entire state by 2015."

4. KEY POLICY ISSUES

In order to achieve the above vision, the following issues must be addressed:

Lack of/ Poor Awareness: Sanitation has been accorded low priority and there is poor awareness about its inherent linkages with public health.

Social and Occupational aspects of Sanitation: Despite the appropriate legal framework, little or no attention has been paid towards the occupational hazard faced by sanitation workers daily.

Fragmented Institutional Roles and Responsibilities: There are considerable gaps and overlaps in institutional roles and responsibilities at the national, state, and city levels. Lack of clear lines of accountability for sanitation has led to inefficient systems and solutions.

Lack of an Integrated City-wide Approach: Sanitation investments are currently planned in a piece-meal manner and do not take into account the full cycle of safe confinement, treatment and safe disposal.

Limited Technology Choices: Technologies have been focussed on limited options that have not been cost-effective, and sustainability of investments has been in question.

Reaching the Un-served and Poor: Urban poor communities, as well other residents of informal settlements, have been constrained by lack of tenure, space or economic constraints, in obtaining affordable access to safe sanitation. In this context, the issues of whether services to the poor should be individualised and whether community services should be provided in non-notified slums should be addressed. However provision of individual toilets should be prioritised. In relation to "Pay and Use" toilets, the issue of subsidies inadvertently reaching the non-poor should be addressed by identifying different categories of urban poor.

Key Policy Issues:

- ✓ **Lack of Awareness/ PoorAwareness**
- ✓ **Social and Occupational aspects of Sanitation**
- ✓ **Fragmented Institutional Roles and Responsibilities**
- ✓ **Lack of an Integrated City-wide Approach**
- ✓ **Limited Technology Choices**
- ✓ **Reaching the Un-served and Poor**
- ✓ **Lack of Demand Response**

Lack of Demand Responsiveness: Sanitation has been provided by public agencies in a supply-driven manner, with little regard for demands and preferences of households as customers of sanitation services.

These issues, along with region specific issues (detailed in Section 5 of this document) will be addressed in order to eradicate open defecation by 2015 in Tamil Nadu.

5. POLICY GOALS

The overall goal of this policy is to transform Tamil Nadu into "*community-driven, totally sanitized, healthy and liveable cities and towns.*"

The specific goals are:

a. Awareness Generation and Behaviour Change

- Generating awareness about sanitation and its linkages with public and environmental health amongst communities and institutions;
- Promoting mechanisms to bring about and sustain behavioural changes aimed at adoption of healthy sanitation practices;

b. Open Defecation Free Cities:

All urban dwellers will have access to and use safe and hygienic sanitation facilities and arrangements so that no one defecates in the open. In order to achieve this goal, the following activities shall be undertaken:

- Promoting access to households with safe sanitation facilities (including proper disposal arrangements);
- Promoting community-planned and managed toilets wherever necessary, for groups of households who have constraints of space, tenure or economic constraints in gaining access to individual facilities;
- Adequate availability and 100 % upkeep and management of Public Sanitation facilities in all Urban Areas, to rid them of open defecation and environmental hazards;

c. Integrated City-Wide Sanitation:

Re-Orienting Institutions and Mainstreaming Sanitation:

- Mainstream thinking, planning and implementing measures related to sanitation in all sectors and departmental domains as a cross-cutting issue, especially in all urban management endeavours;
- Strengthening national, state, city and local institutions (public, private and community) to accord priority to sanitation provision, including planning, implementation and O&M management;
- Extending access to proper sanitation facilities for poor communities and other un-served settlements;

Sanitary and Safe Disposal:

100 % of human excreta and liquid wastes from all sanitation facilities including toilets must be disposed of safely. In order to achieve this goal, the following activities shall be undertaken:

- Promoting proper functioning of network-based sewerage systems and ensuring connections of households to them wherever possible;
- Promoting recycle and reuse of treated waste water for non potable applications wherever possible will be encouraged.
- Promoting proper disposal and treatment of sludge from on-site installations (septic tanks, pit latrines, etc.);
- Ensuring that all the human wastes are collected safely confined and disposed of after treatment so as not to cause any hazard to public health or the environment.

Proper Operation & Maintenance of all Sanitary Installations:

- Promoting proper usage, regular upkeep and maintenance of household, community and public sanitation facilities;
- Strengthening ULBs to provide or cause to provide, sustainable sanitation services delivery;

6. POLICY STRATEGY

On January 27, 2012, the Municipal Administration and Water Supply Department conducted a one day national workshop with Municipal Commissioners, health officers, policy makers, institutions, NGOs and individuals with expertise on devising and delivering sanitation services. Inputs from this workshop of all the stakeholders have been taken into consideration and these should also reflect in city sanitation plans.[9]Cities are requested start writing their plans according to guidelines given in the National Urban Sanitation Policy, as well as this policy note. All local issues and concerns relating to sanitation, strategies and way forward should be detailed in each of the individual CSPs, and participatory planning and mapping should be adopted by the city task sanitation force formed for writing and implementing the CSPs. Every city is different from the other in terms of underlying problems and conditions, and the policy mandates that the cities take up these issues earnestly in their CSPs. The remainder of this section will talk about a broader state strategy that should form the premise of the CSPs.

A. Clear Assignment of Institutional Responsibility, Resources and Capacities at all levels:

As envisaged by the National Urban Sanitation Policy, Tamil Nadu must ensure clear ULB responsibility as envisaged in the 74th Constitutional Amendment. Where this is partial or incomplete, states will needto make concerted efforts to devolve powers, roles and responsibilities along withfinancial and personnel resources necessary for ULBs to discharge their functions.Alongside, the ULBs will also have to be accorded wide-ranging powers over agencies that currently carry out sanitation related activities in the city but are not directly accountable to them, e.g. para-statals and PHEDs.

In the above context, it is imperative that sanitation, especially for the poor in both declared and undeclared slum areas, should be a priority of a single department in the government, and targeted programmes to increase access to sanitation should be initiated and closely followed up by **active citizen participation that is actively fostered by the government to ensure needs are being met.**

As furnished in the NUSP:

"State Strategies will need to dwell on this issue carefully – strengthening existing state level institutions that are charged with ensuring compliance of ULBs to environmental standards (e.g. State Pollution Control Boards), health outcomes (e.g. Health Departments), and Service Delivery Standards (e.g. State Urban Departments). Wherever these responsibilities or action on deviance are not spelt out clearly, the state strategy will need to make these clear. The strategy will also have to identify the ULB as having the key regulatory remit over all properties and agencies/households in the city in respect of outcomes and process standards stipulated by it."

For this we need to identify a single authority at each of the 10 Corporations, 125 Municipalities and 529 Town Panchayats to be made accountable for provision of sanitation facilities in the region. The Public Health Department at all Corporations should be actively involved in improving sanitation facilities in their designated region, and these departments should be closely following up with Engineers, Health Officers, Sanitation Inspectors and Officers at the Zonal levels. Further, in City Corporations, specific roles and responsibilities are to be assigned to the Ward Councillors for ensuring that certain minimum standards for public sanitation and hygiene practices are maintained in their respective wards.

It is important that the ULBs, with the help of local staff and officials, conduct a monthly inspection of sanitation facilities and standards in their respective regions. For this purpose, an inspection team should be constituted with the authority and powers to translate field observations into meaningful change. Para-statals, like the Chennai Metro Water, should be made accountable for adequate provisioning of clean water and uninterrupted sewerage networks, even in the non-notified slums of Chennai.

[9]Annexure 3: January 27, 2012 Workshop: Minutes of the Meeting, Commissionerate of Municipal Administration

It is essential that every city that prepares its City Sanitation Plans (CSPs) clearly mentions the name of departments, name of personnel in each of these departments, NGOs, CBOs, sanitary workers, and state officials overseeing the region's work involved in the preparation and execution of the CSPs. To achieve the aforementioned, considerable coordination will be required across other government agencies and institutions, private and community institutions – to highlight the priority to sanitation, as well as in planning and implementation of programs.

B. Setting Standards at the State and ULBs Level:

In order to set standards at the State level, cities of Tamil Nadu will endeavour to achieve outcomes that are higher than national standards. Cities in Tamil Nadu will compete with each other to obtain the highest possible level of quality of life through improvement in sanitation facilities – both individual and public. The rating of cities in regard to their performance will be based on a set of parameters, as indicated in the NUSP. The following table shows all the indicators on the basis of which performance will be measured. These indicators are categorized into Output-related, Process-related and Outcome-related indicators (Annexure 2).

Service Delivery in cities: ULBs will need to be responsible for asset-creation and managing systems including service delivery. In this context, the ULB may bring in public, private and community agencies/groups to provide services on its behalf. But the final accountability with regard to performance in sanitation will have to be that of the ULB. Departments and para-statals currently carrying out these responsibilities will need to be accountable to the respective ULBs (including for example, financing through the ULBs). The State governments will need to make explicit directions in this regard, including roles for NGOs and CBOs and the urban poor.

C. Planning and Financing at the State and ULBs Level:

It is the policy of the Government to encourage individual toilets in all urban households and to restrict community toilets only to market places, commercial centres other such places where floating population is high and also places where there is a space constraint for putting up individual toilets. ULBs are responsible for planning and financing public infrastructure. The problem of shortage of funds is well recognized by the ULBs and the focus in the coming years will be on devising targeted subsidies to the poorest of the poor households, as envisaged by the NUSP.

Following Hon'ble Chief Minister's speech, the Municipal Administration and Water Supply Department issued guidelines for identifying public places where open defecation is still being continued. The Department requested the ULBs to prepare estimates of funds required for providing basic facilities such as water supply and electricity in existing latrines and construction of new latrines in these areas. In this context, the 9 Corporations and 7 Regional Directorates under the Commissionerate of Municipal Administration conducted an in-depth study of their regions to analyse the level of open defecation. They also looked at existing finance and the estimated[10] the inflow of funds required by the ULBs in the next five years to achieve an open defecation free status. "Regions" concerns the 125 Municipalities that are divided into 7 Regional Directorates (Chengalpattu, Vellore, Salem, Tiruppur, Thanjavur, Madurai and Tirunelveli) for administrative convenience, and "Corporations" refers to the all the 9 Corporations (Coimbatore, Erode, Madurai, Salem, Thoothukudi, Tiruchirapalli, Tiruneveli, Tiruppur and Vellore) in Tamil Nadu. These figures exclude Chennai city.

CORPORATIONS

[10]These figures are provisional and are subjected to change as per the changing demands and needs of the ULBs. Revisions in these figures are also expected to take place in the coming months after an in-depth survey of ULB needs.

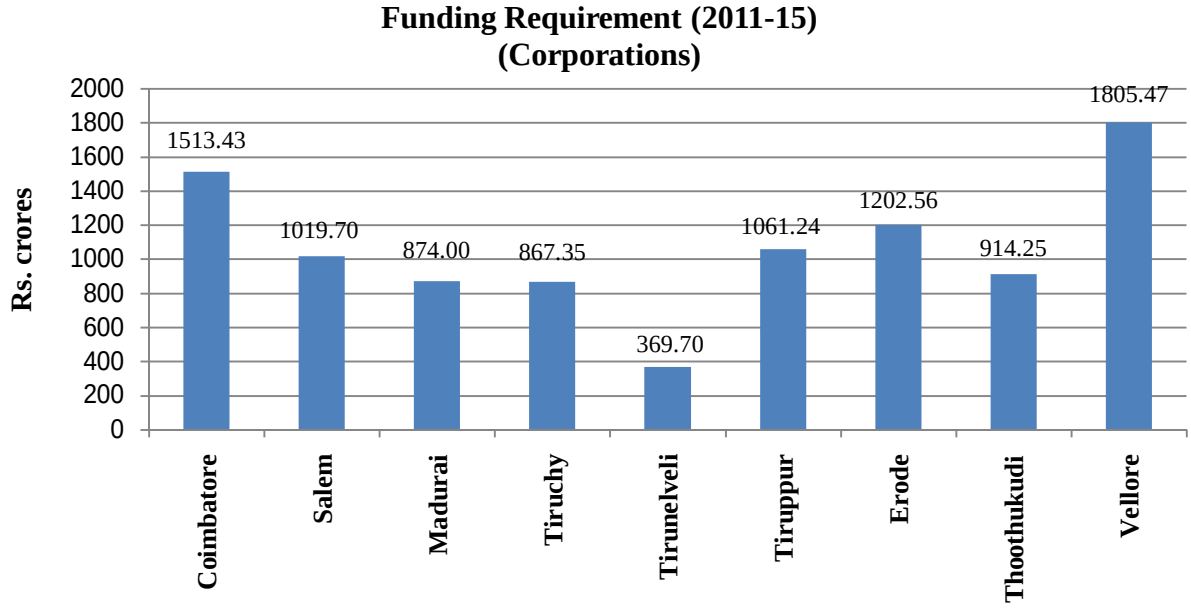


Chart 5: Funding Requirement of Corporations for Achieving Open Defecation Free Status (2011-15)*Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF*

The above graph is an aggregated figure for each of the 9 Corporations. It includes estimated expenditure on Improvement of Existing Common Toilets, Improvement of Existing Individual Toilets, Construction of New Common Toilets and Construction of New Individual Toilets. A break-up of these is given in Chart 6.

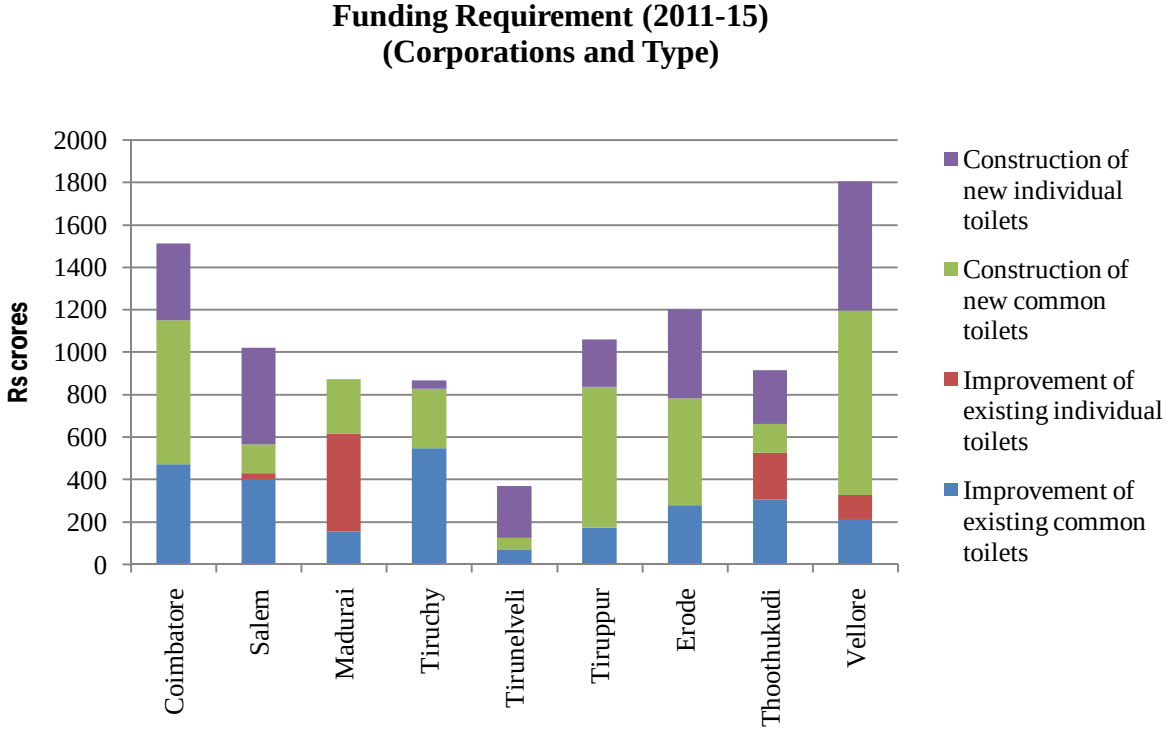


Chart 6: Fund Requirement for Corporations by Type
Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF

Chart 6 shows the fund requirement by the Corporations for each type of expenditure: construction of new individual toilets, construction of new common toilets, improvements in existing individual toilets and improvements in common toilets.

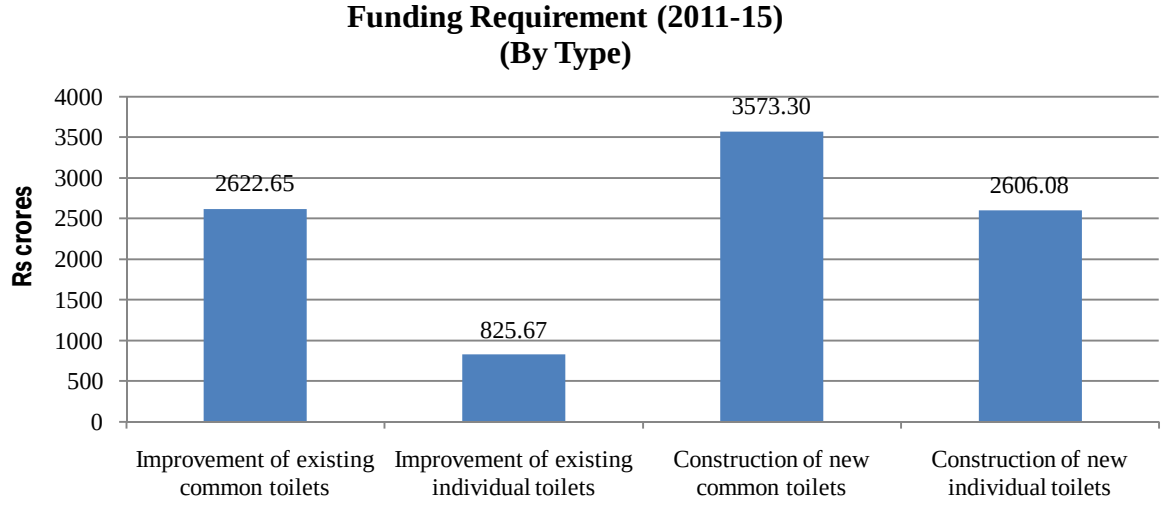


Chart 7: Estimated Funds required for each type of expenditure (2011-2015)
Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF

REGIONS

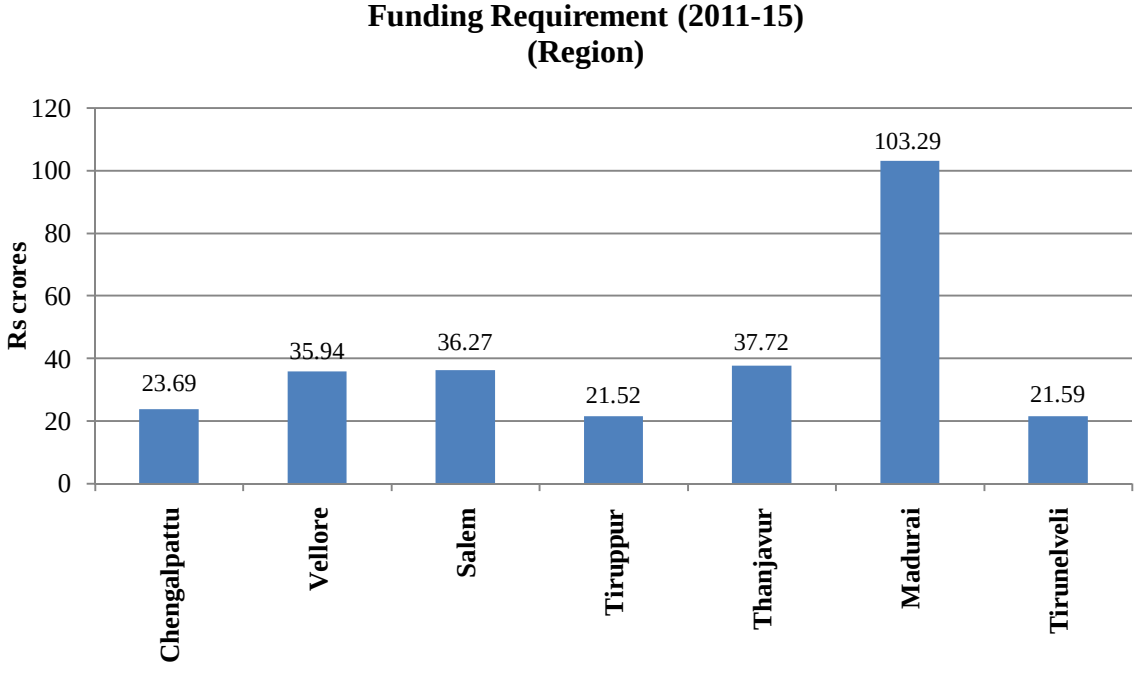


Chart 8: Fund Requirements for the 7 Regional Directorates (2011-2015)
Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF

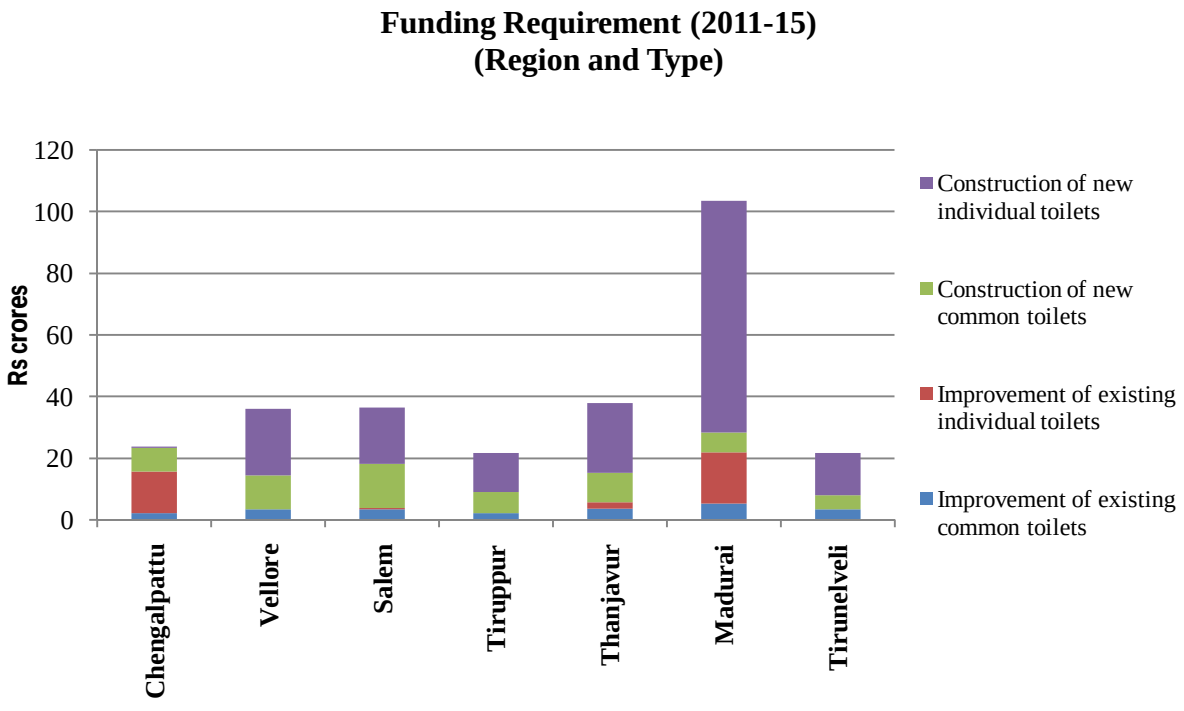


Chart 9: FundingRequirements of Regional Directorates by Type of Expenditure (2011-2015)
Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF

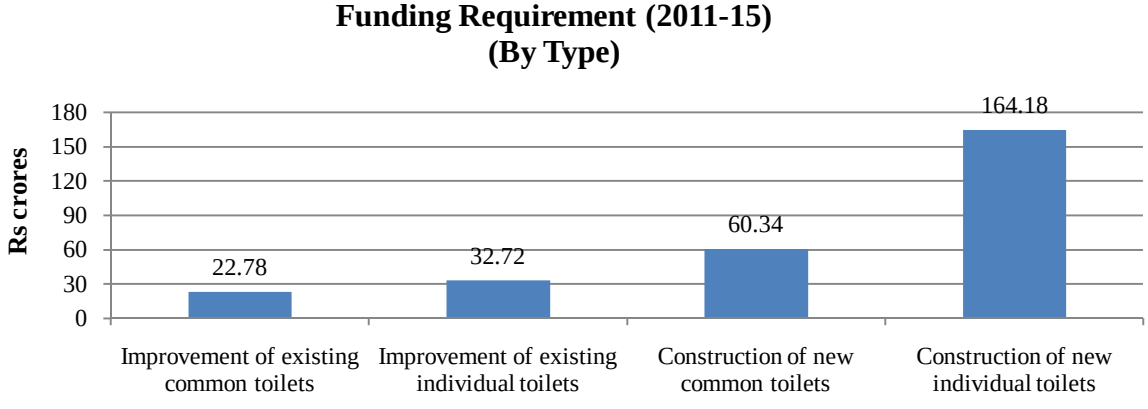


Chart 10: Funds Required for Each Type of Expenditure (2011-2015)
Source: Commissionerate of Municipal Administration, Secondary Research – IFMR-CDF

While ensuring adequate resources and finance for conducting these activities is crucial to the success of our plans, there has to be a concerted effort to ensure that the resources are utilized in a planned and phased-out manner to achieve desired outcomes. Excessive focus on building public toilets to improve sanitation has proven to be a futile effort in the past, and the policy urges the ULBs to have a clear plan before sanctioned funds are utilized.

D. Public Toilets and Community Toilets versus Household Toilets

Public toilets are often dirty and unhygienic because of poor design, poor construction and/or poor maintenance. They are unsafe for women and children, especially at night, since due to bad location choices, they are often situated in areas where there is dim lighting and fewer people or households in the surrounding areas. The distance between one's household and a public toilet in many cases is long enough to discourage people from using these public amenities. User charges in slum colonies and low income areas force individuals to minimise their usage of public toilets. Numerous public toilets lack in electricity, water and other necessary infrastructure due to which they remain unusable.

Maintenance is a serious problem. Users of public toilets tend to be detached to this amenity as they do not have a sense of ownership. In this context, the policy mandates construction/reconstruction of public toilets and/or community toilets only in areas where absolutely needed and where either one or all of the following conditions apply;[11] in all other cases, individual household toilets should be constructed:

- Low-income and high-density areas where households do not have the capacity to invest in individual toilets
- Water logging and flooding are persistent problems in the area
- Space constraints deter the residents from constructing an individual toilet
- Areas where the floating population is high: Commuters, especially in areas like bus terminals, public spaces like the beach and other recreational facilities. However, in case of informal sector workspaces like construction sites, shopping places, vegetables markets etc - while a toilet is necessary and the ULBs will strive to provide adequate facilities, we urge private establishments and residential buildings situated nearbyto pay attention to worker's sanitation needs.

Community toilets also share some of the drawbacks with public toilets; neverthelessthey arepreferred over public toilets in places where the purpose is to serve small groups of households. Unlike public toilets, community toilets are maintained by community based organizations and local leaders, and the sense of ownership by the residents is higher than that of public toilets. Community toilets are also cheaper for the users than the pay-per-use public toilets, but the success of community toilets is based on the community's commitment to the cause of better sanitation. It is sometimes difficult to maintain these toilets if the community is not committed enough, and entails a higher per- capita capital cost than public toilets. While the sustainability of a community toilet can be challenging, they can function better than a public toilet if the toilet is well designed, the location is appropriately planned such that women and children in the community have to walk lesser distances to use the toilet, and all community members are committed to the facility.

Sustainability of both community and public toilets can be challenging; thus the ULBs, CBOs, NGOs and private players are requested to pay adequate attention to the design and location of the toilets. Unless toilets are user-friendly and located in convenient areas, they will not be optimally utilized by the residents. Toilet should be inclusive; they should serve the needs of all – women, children, men, the elderly and the disabled. Toilets should be accessible; populations for which the toilets are targeted should have quick access to the toilet. The area should be adequately lit and user charges should be based on a thorough assessment of the willingness to pay. Minimum levels of hygiene should be maintained in all of these toilets, and attendants in these toilets should be well-trained in sanitation and hygiene.

The issue of recovery of operation & maintenance (O&M) cost is complex and has rendered many toilets unsustainable in the past. Appropriate user charges are critical to the smooth functioning of the toilet facility. Thus we need to emphasize the need for use charges collection as the means of ensuring accountability as well as financial sustainability. User charges will differ from city to city and location to location. Hence, ULBs are requested to conduct a detailed assessment do derive estimated O&M costs and user charges. ULBs should include this assessment in their respective CSPs.

[11] "When are communal or public toilets an appropriate option?";Water and Sanitation for the Urban Poor, Topic Brief, February 2011

E. Reaching the Un-served populations and the Urban Poor at the State level:

As stated in one of the earlier sections, the lack of formal space for the urban poor in city master plans has forced the urban poor to opt for informal settlements, where sewerage networks cannot reach and sanitation facilities are compromised. Above all, lack of basic data regarding availability of water and sanitation, especially among the urban poor, poses a serious challenge for policy makers and is a major barrier to designing foolproof policies and programmes. NSSO data indicates that a large percentage of slums do not have access to underground drainage, improved toilets, garbage disposal and other basic services, with conditions being far worse in non-notified slums.[12] A concerted focus on improving conditions, especially for the urban poor and those who live in substandard housing is required in every aspect of planning, budgeting, and project implementation.

In this context, states will need to resolve tenure, space and affordability constraints to providingindividual sanitation facilities preferentially, and community facilities where individualprovision is not feasible. The provisioning of basic sanitation should be de-linked fromthe issues of land tenure. Every urban dweller should be provided with minimumlevels of sanitation, irrespective of the legal status of the land in which he/she isdwelling, possession of identity proof or status of migration. However, the provision ofbasic services would not entitle the dweller to any legal right to the land on which he/she is residing. At least 20% of the funds under the sanitation sector should beearmarked for the urban poor. The issues of cross subsidiary the urban poor and theirinvolvement in the collection of O&M charges should be considered. States will needto issue guidelines to support cities in adopting participatory approaches tocommunity sanitation, and rational planning for appropriate and adequate sanitationfor floating population, institutions and public place workers, with explicit recognitionof cost recovery for sustainable management, service delivery and repairs andmaintenance. Special role of NGOs and CBOs needs to be recognized in thisrespect, especially for community sanitation facilities.

F. Mapping the sanitation conditions

More data, more mandatory public disclosure, and better sharing of data between government departments is required for good urban planning and management, for understanding local needs, and for enabling institutionalized processes of transparency and public participation in urban governance. Many of the failures of urban governance stem from failures to assess local needs properly, prioritize investments, and provide the information in ways that can enable both internal and external monitoring of progress. The state, as well as the ULBs in cities should put all public toilets in the state onto one geo-spatial database. Such a database will enable greater transparency and communication between government departments and toward the public, resulting in better urban sanitation management.

Data creation and management are particularly important in order to ensure that certain sections of the population don't get excluded in the movement to improve access to sanitation. This would entail a detailed participatory GIS mapping of all slum colonies and sanitation facilities in these slum coloniesin the city. Cities and associated groups involved in writing the CSPs will conduct a thorough mapping-cum-surveyexercise of all sanitation facilities (city level, zone level and ward level) including mapping existing communal and public toilets, their type, condition, ownership/management details, and usage figures. Slum colonies (notified/non notified, declared/undeclared), service gaps in these slum colonies, and state the estimated investments, targets and time required for meeting the service gaps should also be mapped as a parallel exercise to bridge service gaps. Preliminary findings should be included in the CSPs and documents should be regularly updated for correctly assessing the growing and changing needs of un-served as well as other sections of the population. The plan should *involve residents in efforts to count and identify beneficiaries for planning.*

G. Monitoring & Evaluation at the State and City Levels:

As stated in the NUSP:

[12] Refer "Slums in India: A statistical compendium 2011," National Buildings Organization.

"The State government willbe responsible for M&E of its cities' performance, and hence needs to devise datacollection and reportage systems using outcome indicators. ULBs in turn need totrack compliance of households (establishments, etc.) with outcomes and processstandards that it has adopted. Introducing citizens' report cards, citizens' monitoringcommittees, self-assessment system, inter-city competitions, etc will be considered.NGOs and CBOs will also play key roles in M&E."

In order to achieve total sanitation services, it is important for the state to have a mechanism to check the performance of the cities. For this, the cities will have to undertake the following tasks with immediate effect[13]: 1. Formulation of City Task Sanitation Force; 2. Preparation of status report; 3. Preparation of City Sanitation Plan; 4. Submission to the Respective States and the MoUD, GoI. Setting up a sanitation task force can be challenging and all necessary steps should be taken to ensure that the group formed is diverse enough to look at all aspects of sanitation, viz. development and provision of service, community awareness and planning approval, developing appropriate sanitation policies, and personnel involved in city development planning.[14] This working group should be well established with legal stamps from city authorities, should be committed to the cause, and every member in the group should have clear cut roles and responsibilities. The group should have access to resources for carrying out their activities and goals.

The status report should be based on a complete mapping of existing sanitation services in the city, quality of services, understanding of local needs and aspirations, assessing key gaps and challenge, and clear cut recommendations for intervention. This entails a baseline survey which will form the basis for a City Sanitation Campaign to mobilize all the stakeholders and raise awareness about total sanitation. To ensure that the data collected and mapped is useful, the working group needs to pay attention to all stages of data collection – scoping exercise to develop a methodology; collecting secondary data and reports on sanitation from state and city officials, NGOs and CBOs, and private sector; initial analysis to draw general conclusions; collection of additional sanitation facts in the form of primary data collection; and final analysis using both primary and secondary information. Based on the baseline survey, the city will draw up and implement with the support from the State Government and the Government of India, a comprehensive City Sanitation Plan.

H. The Role of Communication and Media in achieving meaningful outcomes

Behavioural change is the key to achieving total sanitation services in Tamil Nadu. Most toilets are left unused because residents and communities are not made well aware of the importance of toilets. Even in the presence of toilets, many residents prefer to defecate in the open. This attitude needs to change and people need to be made aware of the importance attached to sanitation, and also health repercussions that one can have without access to sanitation. However, it can be challenging to change traditional beliefs and practices. In this context, the state government mandates the ULBs and working groups to have a citizen centric approach towards planning and implementation. We need to develop a comprehensive communication strategy for our people so that outcomes are inclusive and sustainable. This communication strategy should be aimed at increasing awareness regarding sanitation and health, and result in individuals and communities adopting safe, sustainable and hygienic sanitation solutions. Community based organizations, NGOs and the civil society at large have a significant role to play in ensuring that the communities are constantly engaged in the entire process of achieving open defecation free cities. The role of the civil society groups/institutions in enabling this would be:

- To engage with local communities to understand and comprehend needs and aspirations: surveys, informal dialogues, group discussions and interviews
- To engage with the urban local bodies so that the ideas communicated are not only in sync with local needs but also with the overall goal of the ULBs
- To communicate to the local urban bodies the knowledge gained, in a simple and concise format, probably in some pre-defined format so that clear recommendations and protocols are given
- To ensure that efforts by the ULBs and civil society groups are targeted towards concern areas identified earlier through continuous engagement with communities

[13]For more details, refer to the National Urban Sanitation Policy (2008), MoUD, GoI
[14] "*Marching Together with a Citywide Sanitation Strategy*", January 2012, Water and Sanitation Program"

The communication chain should involve women and children of all households, and education should be imparted through innovative methods. Communication can constitute of - simple yet catchy key messages, drawings and signs inside toilets, print media, regional audio-video mass media, and other traditional media like street theatre, puppetry, story-telling etc. Focused group discussions and workshops in communities can also form an effective engagement. The motive should be to highlight the economic benefits of better sanitation practices. Further, hygiene education, especially menstrual hygiene should become a part of school education. The headmaster and other teachers should mandatorily tutor students on the importance of sanitation and hygiene. This might entail a practical class on toilet and water use. All necessary steps should be taken by the school to enlighten the youth about the importance of hygiene and sanitation at home as well as in public. Sanitation should become a state-wide campaign and all individuals – general public as well as the state should be involved in the process of achieving better sanitation services.

I. Capacity Building & Training at the ULB level:

The state strategy needs to identify agencies that will train its state level, ULB personnel and conduct an orientation for elected representatives. Specialized agencies of the state government, and/or NGOs and private sector organizations should be involved in the process. The focus should be on capacity building - not just training but also development of systems and capacities of ULBs in line with the Urban Sector Reforms that the state may be implementing. ULBs will provide training on sanitation to their own staff – using state level resource agencies. They will need to utilize Govt. of India and State Government Schemes for training and capacity building in order to achieve this. The staff should be imparted knowledge on public sanitation and its linkages with public and environmental health. The staff should be in a position to deliver exemplary sanitation services, and can make use of on-site workshops, training programs, exposure visits. The staff should prepare a set of guidelines to facilitate planning and implementation of communication activities.

7. CONCLUSION

The success of our vision depends on the level of involvement of all stake-holders viz. state government, ULBs, NGOs, academic institutions, CBOs, sanitation experts, the private sector and the general public. Each and every person needs to be actively involved in ensuring that their city is open defecation free by 2015.

In order to achieve this goal, we foresee the following processes as being crucial:

- The goals of individual cities should be specific, measurable, attainable, relevant and timely. CSPs should revaluate goals periodically to ensure that the outcomes are in line with the broader mission and vision of the programme.
- Plans should be drawn in a participatory manner so that outcomes are inclusive and efficient. Participatory mapping will highlight infrastructure gaps especially in non-notified slums in the city, and help in bridging these gapsby ensuring that un-served populations are included in the pro-poor plans and policies.
- The role of information, education and communication will be critical in the entire process of planning and implementation. Print media and electronic journalism should play an important role in ensuring that communication is not lost in any stage of planning and implementation.
- Existing programmes and policies of the government of Tamil Nadu shouldbe augmented and strengthened in the next few years, such that all programmes and policies supplement each other.
- Special focus areas such as school sanitation, sanitation for the poor and menstrual health and hygiene should be integral to all plans and programmes of the ULBs.
- Finally, the focus should be on achieving measurable outcomes resulting from increased investments along with greater transparency and accountability in processes.

Over the coming years, sanitation has to garner a strong momentum in our entire state, and by 2015, the entire state of Tamil Nadu should be free of open defecation, and all residents should have access to safe and improved sanitation services.

STATE AWARD SCHEME FOR SANITATION IN CITIES OF TAMIL NADU

State Government Support

Towards the achievement of the Urban Sanitation Policy Goals, the Government will extend support as given below:

- Cities will be encouraged to prepare City level sanitation strategies within a period of one year.
- Providing assistance for the preparation of Detailed Project Report (DPR) as per the City Sanitation Plan.
- Promote public-private partnership in respect of key projects/ activities identified in the city sanitation plan
- Provide technical assistance and support to the cities for awareness generation and capacity building.
- Provide rating of cities in respect of Sanitation and recognition of best performers by instituting a State Award.
- Funding projects wherever possible from different funding sources

In order to encourage ULBs to perform better in all aspects of planning, coordination, and implementation, the state government has instituted an annual awards scheme to the best performing towns and cities in Tamil Nadu. The award is based on the promise that improved public health and environmental standards are the two outcomes that cities must seek to ensure for the urban citizens. In doing so, the Urban Local Bodies need to plan and implement holistic city-wide sanitation plans, thereby put in place processes that help to reach the outputs pertaining to safe collection and disposal (including conveyance, treatment, and/or re-use without adverse impacts on the environment in and around the cities). It may be noted that the awards will not recognize mere inputs, hardware or expenditure incurred in urban sanitation but assess how they lead to achievements of intermediate milestones towards the final result of 100% safe disposal of waste from the city on a sustainable basis. The cities will need to raise the awareness of city stakeholders (households, establishments, industries, municipal functionaries, media, etc) since improved sanitation can ensure improved public health and environmental outcomes only if considerable changes in behaviour and practice take place across the spectrum of the society.

The city will implement its City Sanitation Plan in a strategic manner, clearly prioritizing the areas that need urgent attention and implementing the long term plans in parallel. Again, the emphasis will be on mobilizing all the city stakeholders and raising the importance of behavioural change, practices and installations for safe and sanitary disposal of all the wastes of the city on a sustainable basis. On the basis of their performance, they will be eligible for the following awards:

Achievement of milestones:

I. The cities/urban areas that have achieved the sanitation outputs and outcomes described above and have systems and procedures in place to sustain them, will apply to Government for recognition and nomination for the State award.

II. The State Urban Sanitation Advisory Group will be responsible for setting out and revising the criteria for the State Award. This Committee will also be the final authority in deciding the Annual Awards to the applicant cities / urban areas

III. On the basis of plans prepared and implemented, the cities will be able to measure the results of their actions and be able to clearly chart out their improvements over time compared to their baseline situation.

IV. On achieving the remarkable results, i.e., coming into the Green category (Healthy and Clean City), cities will typically become eligible for the State award. Other cities showing remarkable incremental performance or selective achievements may also be given special or honorary awards. The cities in different size-classes may also be considered for category-wise awards.

V. Based on the results of the rating survey and the selection of awardees, the cities will be invited to participate in a State Urban Sanitation Award ceremony.

Special and Honorary Awards

In order to mobilize the cities to participate in the competition, two strategies will be followed:

- Institution of award
- Institution of special and honorary awards to the citiesshowing spectacular performance in selective dimensions or substantial increments.

Special Awards:

Special Awards will be given to recognize the special achievements, especially in the initial stages, since achievement of 100% sanitation may be difficult especially in the initial stages. For instance, a city may demonstrate remarkable performance in the area of stopping open defecation although 100% treatment may be a constraint because of lack of time and resources within a given year. In such cases of selective performance awards will be instituted – in the initial years, these awards will be to accord recognition to:

- Stopping Open Defecation
- Remarkable performance in awareness generation
- Institutional assignment and implementation of operational procedures
- Mobilization of community organizations or non-governmental agencies in sanitation campaigns

Awards for Exemplary Performance:

It may be difficult for many urban areas to immediately show all-around performance in sanitation. Therefore, the cities showing maximum overall improvements in a given year, compared to their baseline situation, may also be given an award in recognition of incremental efforts made by them.

LEGAL REGULATIONS

Even though many of the Municipal laws state the sanitation responsibilities of the households and the ULBs, they are not comprehensive and clearly defined. The ULBs will examine the existing laws and the rules in this regard and make recommendations to enact the rules explicitly regarding;

- safe sanitary arrangements at the unit level (household, establishment)
- Design and systems for safe collections
- Norms for transport / conveyance
- Treatment and final disposal

ANNEXURE 1

City	Score*
Tiruchirapalli	59.02
Chennai	53.63
Alandur	50.24
Thanjavur	48.82
Neyveli	47.6
Tirunelveli	46.82
Pallavaram	46.54
Tambaram	46.19
Nagercoil	43.91
Erode	43.26
Tiruppur	40.76
Tiruvannamalai	40.61
Coimbatore	40.49
Madurai	40.16
Kumbakonam	39.44
Pudukottai	39.12
Salem	39.02
Avadi	37.54
Vellore	37.35
Kancheepuram	36.52
Rajapalayam	33.89
Ambattur	33.46
Cuddalore	32.4
Tiruvottiyur	31.71
Dindigul	30.64
Thoothukkudi	30.15

No.	Category	Description	Points
1	Red	Cities needing immediate remedial action	< 33
2	Black	Needing considerable improvement	34-66
3	Blue	Recovering	67-90
4	Green	Healthy and clean city	91-100

* These figures show that all districts of Tamil Nadu ranked here are either “Red” or “Black” as per colour codes.

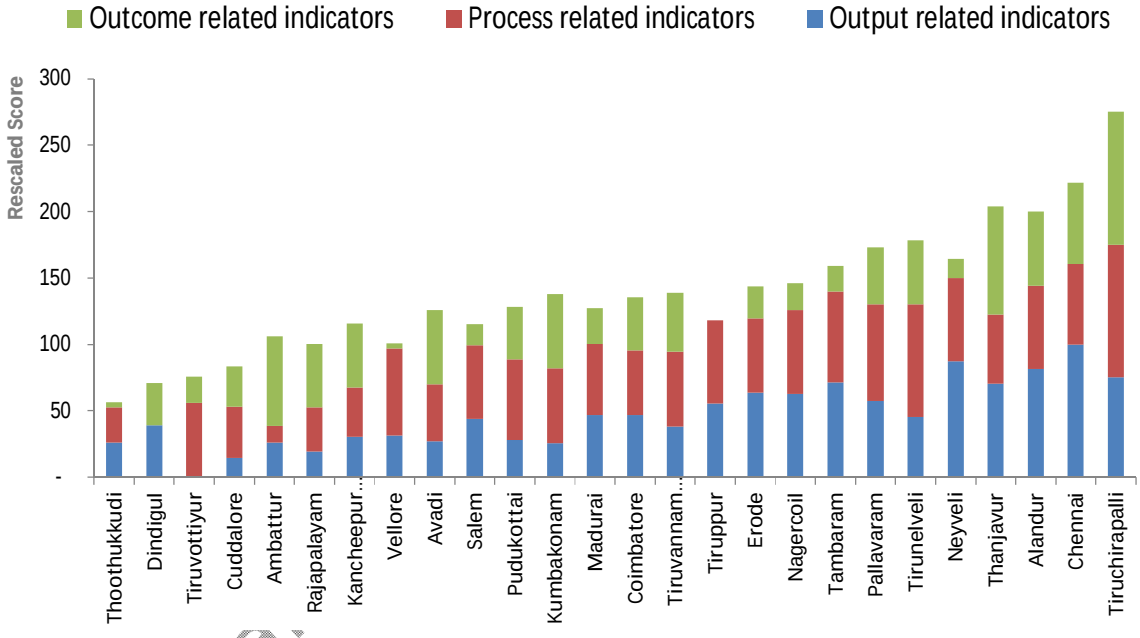
ANNEXURE 2

TABLE (1): INDICATIVE OBJECTIVE RATING CHART FOR SANITATION IN CITIES		
No.	**INDICATORS**	**Points***
1	**OUTPUT-RELATED**	**50**
A	No open defecation sub-total	16
i)	Access and use of toilets by urban poor and other un-served households (including slums) – individual and community sanitation facilities	4
ii)	Access and use of toilets for floating and institutional populations – adequate public sanitation facilities	4
iii)	No open defecation visible	4
iv)	Eliminate Manual Scavenging and provide personnel protection equipment to sanitary workers	4
B	Proportion of total human excreta generation that is safely collected	6
C	Proportion of total black waste water generation that is treated and safely disposed off	6
D	Proportion of total grey waste water generation that is treated and safely disposed off	3
E	Proportion of treated waste water that is recycled and reused for non potable applications	3
F	Proportion of total storm-water and drainage that is efficiency and safely managed	3
G	Proportion of total solid waste generation that is regularly collected.	4
H	Proportion of total solid waste generation that is treated and safely disposed off	4
I	City wastes cause no adverse impacts on surrounding areas outside city limits.	5
2	**PROCESS-RELATED****	**30**
A	Monitoring & Evaluation systems are in place to track incidents of open defecation	4
B	All sewerage systems in the city are working properly and there is no ex-filtration (Not applicable to cities without sewerage system)	5
C	Septage / sludge is regularly cleaned, safely transported and disposed after treatment, from on-site systems in the city (MAXIMUM 10 marks for cities without sewerage system)	5
D	Underground and Surface drainage systems are functioning and are well-maintained	4
E	Solid Waste Management (collection and treatment) systems are efficient (and are in conformity with the Municipal Solid Waste Rules, 2000	5
F	There is clear institutional responsibility assigned; and there are documented operational systems in practice for (b)/(c)/ (e) above	4
G	Sanctions for deviance on part of polluters and institutions is clearly laid out and followed in practice	3

3	OUTCOME-RELATED	20
A	Improved quality of drinking water in city compared to baseline	7
B	Improved water quality in water bodies in and around the city compared to baseline	7
C	Reduction in water-bodies disease incidence amongst the city population compared to baseline	6

* The marks for the above indicators will be revised in every two or three years, over time, indicators about more stringent conditions, e.g. no-urination, or spitting or open/public spaces, etc., will be introduced as indicators. The weights accorded to each category and specific indicators will also be revised.

** In this context, bigger cities may consider instituting good practice systems that comply with ISO (International Standards Organization) and / or BIS (Bureau of Indian Standards) process systems.



This chart gives indicator-wise performance of cities in Tamil Nadu. This survey was conducted by the MoUD, and Tamil Nadu's cities will have to focus on these figures while writing their City Sanitation Plans. While the MoUD entrusted different weightages to outcome, process and output indicators, this graph shows rescaled scores. All scores were normalized to give equal weights to all the three indicators.

ANNEXURE 3

Minutes of the Meeting: Sanitation Workshop, January 27, 2012

1. **Introduction by the Commissioner, CMA: Overall goals of the workshop**

- A holistic approach needs to be adopted in order to achieve an open defecation free status by 2015
- A lot of work has already gone into increasing access to sanitation but problems prevail – the situation is complex
- Constructing a toilet is not sufficient – it has to be accompanied by strong socio-cultural changes, behavioural changes over time
- Toilets should be inclusive: Should be built after taking into consideration the needs of the handicapped/disabled, women, children, elderly
- Community involvement is mandatory for a sustainable solution
- Rather than excessive focus on "low cost", the focus should be on investment in health and hygiene sanitation. The goal should be sanitation access for all through optimal utilization of funds and resources.
- IEC activities will be crucial in the next 4-5 years: It is important to understand local needs and aspirations through interactions with communities, their community leaders

2. **Presentation by SomyaSethuraman, CDF-Institute for Financial Management and Research on "Open Defecation Free Tamil Nadu by 2015: Vision, Challenges, and Way Forward" on behalf of the CMA:**

- Rapid urbanization calls for stepping up of infrastructural investments in sanitation. Projected urban population in 2026: 69.1%, projected slum population in 2017: 1 crore
- Service Gaps continue to grow with greater urbanization
- 57% of households in Tamil Nadu do not have a toilet facility
- Ranking of TN districts as per the National Urban Sanitation Policy shows that all districts are performing poorly
- CMA statistics on the present scenario shows extent of UGSS and public toilets is insufficient
- Municipalities far exceed the norm of slum population per seat of public convenience. Eg: Cuddalore has approximately 600 people per public toilets when the norm is 60 persons
- Proposed fund allocations by the CMA for the next five years in the 9 Corporations and 125 Municipalities: A brief Review
- Features of the NUSP and challenges we will face in the future: As per NUSP ranks, we can clearly see what are districts lagging in – outcome/process/output indicators
- Key Issues: Social and Occupational aspects of Sanitation, Awareness Generation, Choice of Technology, **Reaching the un-served and the Poor**, Demand Generation
- Transparent Chennai (project of CDF-IFMR) maps show that toilets are not in areas of apparent need: Toilets should be built closer to slums, busy market areas, bus stops etc.
- The proportion of notified and non-notified slums with no latrine facility is significantly higher for Tamil Nadu; 27 per cent and 40 percent respectively. So we need to focus on pro-poor solutions
- Way Forward: Baseline data collection – GIS, Awareness Generation: Behavioural change, Integrated City-Wide Sanitation, Safe Disposal of waste, Upkeep of Sanitary Installations, Implementation Support Strategy, State Government Support: CSP, DPR, PPP, Funding, Capacity Bldg, Awards, Legal Regulations: Acts, Rules, byelaws, Communication Strategy; Target Audience: Households – women and children, Key Messages, Hygiene Education as an integral component of the school syllabus, Elected Representatives in Management Role, Partnerships with NGOs, CBOs, and resource institutions, Women's Self Help Groups
- Entire process has to be iterative

3. **Mr.DayanandPanse, Ecosan Services Foundation: "Sustainability of Sanitation Plan"**

- Ecosan Services Foundation was founded in 2006 which's main objective was to promote ecological sanitation and sustainable sanitation.
- Sanitation includes toilet water, grey water, Solid waste, rainwater, storm water, Industry waste, and a treatment of all of these. So, it is much more than just toilets.
- Waste should be considered as a resource for the sustainable practice of sanitation.
- Sustainable solution: Move up the ladder – Basic Sanitation (reduces immediate risk of pathogen exposure) to Environmental Sanitation (Sanitation system with exposure control, treatment and pollution prevention) to Ecological Sanitation (Sanitation system with exposure control, pollution prevention, nutrient reuse, resource conservation)
- Talked about Water Resource Management, Principles of Water use, Economic principles and waste water managing and pricing, role of private sector etc.
- The challenge is to achieve an appropriate 'fit' between the 'hard' technical and physical characteristics, the economics of Sustainable Sanitation technologies and the institutional environment that facilitates their selection, construction and operation
- Key issues: Gender, expertise, Integrated Water Resource Management
- A complex institutional network: Decision making is also complex
- School sanitation is crucial for behavioural change: catch them young
- Local decision making should be a clear process: Diagnosis – Planning – Implementation – Operation
    - While planning, Basic diagnosis must be done
    - Current Patterns of Water Supply and Sanitation
    - Social and Cultural Factors
    - Position of Stakeholders
    - Economics and Engagement
- Integrated Water Resource Management: "IWRM is a process that promotes the coordinated development and management of water, and land related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the ecosystem"
- ESTs: Efficient Sanitation Technology produces high results with low efforts: Waterless toilets (compost- and dry-), Water saving toilets, Water saving urinals, Waterless urinals, Water saving taps, Water saving showerheads, Pressure reducers, Water saving household appliances, Economised water use: personal hygiene, Economised water use: cleaning & watering
- ACCESS (mainly funded by the European Commission) : Accelerating City-to-city Exchange for Sustainable Sanitation – locations in which they are operating in India and beyond.

4. **Dr.AbirMullick, NID, "Pilot Project design for construction of individual/public toilets for the urban poor"**

- This was a study on why people defecate in the open: Habitual, spatial issues, familial issues, public toilets not clean, no toilet at home, design of the toilet is not suited to the needs of many, people care less for places that do not belong to them
- Provide public toilets that people would want to use.
- Background study in the northern parts of India to understand why people defecate in the open
- Their research questions focussed on why people prefer outdoor defecations and what kind of public toilets can stop open defecation
- Encourage customization of public toilets according to gender, handicaps, child etc.
- The study involved a sample of 300 people from 6 different states.
- The study suggests technological solutions on aspects like ventilation, roofing, walls, back support, doors, scaffoldings, sewage systems etc
- Public toilets should be a positive experience for the people: They need to be made aware of the uses of public toilets and personal hygiene.
- They did not have any cost estimates as of now and they are still working on it

- The CMA was concerned about whether they could replicate the similar practices in Tamil Nadu also. The CMA asked for a revalidation of their findings in context of Tamil Nadu
- Suggestions were also given by the CMA about good practices that are already prevalent in Tami Nadu which can be modified and put to best use by the research group.

5. Mr.Elangovan, Gramalaya, Tiruchy

- Status of sanitation in Tiruchy before intervention: high incidence of water-borne diseases, improper disposal of waste, open defecation rampant, stagnation of waste water, absence of CBOs
- Stakeholders for their project: WAVE, AWASH Committee, SHGs, NGO, field staff, community (implementers), Field staff (facilitators), donors/MFI/bankers (supporters)
- Gramalaya believes in access to – technology, information, resources
- Comprehensive approach to sustainability: combining hardware (construction of latrines, providing safe water, etc) and software (IEC activities, training and capacity building)
- Before commencement of hygiene education, base line survey and slum level meetings conducted and analyzed. Indicators were fixed. Lesson plans prepared with schedule and the field staff oriented with action plans developed in co-ordination with CBOs.
- AWASH are committees formed in each community which would work for the slum improvement/ village improvement.
- Inter personal communication is more effective
- Children are health ambassadors
- Awareness camps
- Toilet queue campaign
- Community Managed toilets: stakeholder analysis was done for this
- Project Advisory meetings to ensure goals are in sync with needs
- Achievements: 100 percent open defecation free slum in India
- The roles and responsibilities for AWASH fixed and monitored by the WAVE Federation. WAVE Federation would take in-charge of motivating the local communities to form the AWASH in every locality wherever appropriate.
- Now all the current AWASH and WAVE Federation are independent and need no help or guidance by Gramalaya.
- Gramalaya associated with GUARDIAN (an MFI) which was the main investing partner for constructing low cost toilets.
- Gramalaya also helped in the formation of City Sanitation Task Force meetings and counselled people regarding its importance.

6. Mr.Ganapathy on the functions of SCOPE and the importance of UDT toilets

- Close the loop on sanitation: People – urine/faeces – Natural Manure – Soil – Crops – Food – People
- Human Excreta (Urine & faeces) are not a waste. They are resources to be reused for improving agricultural production and prevent contamination of the environment. ECOSAN approach aims at sanitizing the urine & faeces.
- Ecosan toilets are useful in areas which have high water table and scarcity of water
- The toilets have separate chambers for the deposition of Urine and Stool.
- A family of 5 can use 1 toilet for about 9 months and then after drying the mass can be used as fertilizer.
- Ecosan toilets: Urine was given as fertilizers on Banana Research Plants and it was a grand success.
- Proper demonstrations were shown on the usage of UDT (Urine Diversion Toilets).
- In Nagapattinam there are around 300 Eco San Toilets (UDT) and people over there are paid money for using these toilets because they are providing fertilizer resources.

- Eco San toilets are being considered in the City Sanitation Plans of 8 Municipalities and 1 town Panchayat (Velankanni).
- He commented that 60 % of Tsunami it toilets are not functional due to chokes. Eco San Toilets will work over there.
- Ecological Sanitation Concept must be popularized among decision making people and its importance and advantages must be discussed

7. Exnora – Vijay Anand on Exnora's experience in working in Kulithalai Municipality

- Data collection
- Active support of the municipality
- Sanitary workers were given incentives for collecting plastic waste in the town.
- Consultations from the experts in Auroville (Pondicherry) for treating waste water in the site itself.
- Discussion with CDD Society, Bangalore for Technical Support
- Kulithalai emerged as a model in the State in solid waste management and sanitations through community participations
- EXNORA played an important role in forming the City Sanitation Task Force with involvement of the community
- CSPs should be people's plan not a consultant's plan
- Process: 1. Formation of a City Sanitation Task Force 2. 100% Sanitation Campaign 3. City Sanitation Plan 4. Capacity Building & Training
- Methodology: Household Survey, Secondary Data Collection, Public Toilet Survey, Creation of Database, Creation of Base Map on GIS Platform, Preparation of spatial analysis, Evaluation of data, Sectoral analysis, Ward analysis Compilation of consolidated Key Issues, Identification of Goals, Recommendations, Framing the Action Plan, Elaboration of technical, institutional and financial proposals, Submission of Final City Sanitation Plan

8. Presentation by GIZ: "Sanitation in Urban India"

- Sanitation is interrelated with water supply, solid waste, storm water
- Cities currently supported by CSPs by the MoUD: Nashik, Raipur, Kochi, Shimla, Varanasi, Tirupati
- Process of CSP preparation: 1. Formulation of City Task Sanitation Force 2. Preparation of Status Report 3. Preparation of CSP 4. Submission to respective States, MoUD and GoI
- NUSP has two broad goals: Create greener cities and eradicate pollution
- We need to process city wide baseline information for spatial analysis
- Lessons learnt: 1. Money/funding also is no solution 2. City's focus is too much on investment 3. No DPR mode for implementation (Investment has been optimal, other factors like improving accountability, awareness, participation, operation and maintenance, financial sustainability have been suboptimal)3. ULBs need more qualified staff to manage complex change processes (Kochi Municipal Corporation), Cities need capacity enhancement strategies at all levels 4. Integrated Planning unlocks sustainable and cost effective solutions (Raipur – A city of 100 lakes) 5. Constant communication is important 6. Extending city limits without adequate infrastructural growth leads to unsustainable solutions (Tirupati) 7. Representation from all levels – ward, city, state level important in all CSP meetings.

9. Dhan Foundation: "Decentralized Waste Water Treatment System"

- In 2007 – a water wealth study was done. It was found that in Madurai the water table has gone below over 80 ft which was just about 3 ft 80 years ago
- Quality of water was getting poorer
- There were 201 slums in Madurai of which DHAN worked with 80 of them.
- There were contaminations at the point of delivery of the taps. This was mainly due to aged pipes and poor conditions, Illegal tapping and leakage, sewage pipeline parallel to water pipeline: both were getting mixed

- Suggestions were given such as bio filters for water treatment.
- Segregate the gradable and degradable wastes.
- Starting a scheme especially in slums for maintenance of the sanitation of a slum to a worker or an association or so. And each house contributes Rs 10 for their usage.
- Bringing stakeholders together.
    - DEWATS is a possible solution:
    - treatment of organic wastewater from domestic and industrial sources
    - affordable prices
    - fulfilment of discharge standards
    - treatment of wastewater flows from 1-1000 m3/d
    - tolerance to inflow fluctuation
    - no dependence on external energy
    - minimal maintenance
    - reliability and long-lasting
    - reuse of wastewater and its contents
- Example of DEWATS implemented: Panaiyur

10. Discussion Points:

- IEC activities extremely important
- Menstrual Hygiene is important
- The issue of open tenders: Usually persons who get tenders not passionate about sanitation and hygiene
- We need to go in campaign mode – like that of the rainwater harvesting system
- Public private partnerships will be critical in the future: Government cannot maintain all public toilets
- Lack of communication has led to toilet provision failures
- Children need to be educated – Sanitary ambassadors at schools to be promoted
- Illegal activities in toilets like – smoking, drinking need to be stopped
- Local solutions and local plans should be emphasized upon – decentralized plans
- Focus on the urban poor and informal sector workers
- Education needs to be imparted to women and children of the household
- Habitual changes need to take place through IEC activities
- Ownership issues of a toilet need to be sorted out

CMA's final comments:

We need to find customized solutions for each region. While today's learnings were extremely important, we need to focus on our local problems and conditions to arrive at appropriate solutions. We should not replicate others because factors and problems in each region are different. In spite of so many efforts, the problem of open defecation still prevails. So, we should be able to formulate a policy that ensures open defecation is eradicated soon.

We have to update our policy document to incorporate all of the issues discussed today, and ensure that these are addressed in individual city sanitation plans. A small core committee can be formed immediately to take forward the proceedings of the meeting today. The policy will be made more comprehensive and updated. It is not only going to be about visions and missions but actionable progress as well. We should remember that the process has to be iterative – we need to learn through our own mistakes and experience and keep correcting them.