

Government of India



Guidelines for

Swachh Bharat Mission (SBM)



December 2014

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1. Introduction

1.1. According to Census 2011, India's urban population is 377 million or 31% of the total population. These numbers are expected to increase to 600 million by 2031. The Census 2011 also showed that in 4,041 statutory towns, close to eight million households do not have access to toilets and defecate in the open (7.90 million). Weak sanitation has significant health costs and untreated sewage from cities is the single biggest source of water resource pollution in India. This indicates both the scale of the challenge ahead of the Indian cities and the huge costs incurred from not addressing them.

1.2. The Swachh Bharat Mission (SBM) emanates from the vision of the Government articulated in the address of The President of India in his address to the Joint Session of Parliament on 9th June 2014:

"We must not tolerate the indignity of homes without toilets and public spaces littered with garbage. For ensuring hygiene, waste management and sanitation across the nation, a "*Swachh Bharat Mission*" will be launched. This will be our tribute to Mahatma Gandhi on his 150th birth anniversary to be celebrated in the year 2019"

SBM is being implemented by the Ministry of Urban Development (M/o UD) and by the Ministry of Drinking Water and Sanitation (M/o DWS) for urban and rural areas respectively. These guidelines are for the implementation of Swachh Bharat Mission (Urban).

2. Swachh Bharat Mission (SBM) Urban Overview

2.1. Mission Objectives

- 2.1.1. Elimination of open defecation
- 2.1.2. Eradication of Manual Scavenging
- 2.1.3. Modern and Scientific Municipal Solid Waste Management
- 2.1.4. To effect behavioral change regarding healthy sanitation practices
- 2.1.5. Generate awareness about sanitation and its linkage with public health
- 2.1.6. Capacity Augmentation for ULB's
- 2.1.7. To create an enabling environment for private sector participation in Capex (capital expenditure) and Opex (operation and maintenance)

2.2. Duration of the mission

The Mission will be in force till 2nd October 2019

2.3. Mission components

The Mission has the following components:

- 2.3.1. Household toilets, including conversion of insanitary latrines into pour-flush latrines;
- 2.3.2. Community toilets
- 2.3.3. Public toilets
- 2.3.4. Solid waste management
- 2.3.5. IEC & Public Awareness
- 2.3.6. Capacity building and Administrative & Office Expenses (A&OE)

By Public Toilets, it is implied that these are to be provided for the floating population / general public in places such as markets, train stations, tourist places, near office complexes, or other public areas where there are considerable number of people passing by.

By Community toilets, it is implied that a shared facility provided by and for a group of residents or an entire settlement. Community toilet blocks are used primarily in low-income and/or informal settlements / slums, where space and/or land are constraints in providing a household toilet. These are for a more or less fixed user group.

2.4. Mission Coverage: Cities and target population

2.4.1. All Statutory towns will be covered under the Mission. Definition of statutory towns is at *Annexure I*.

2.5. Mission Strategy

- 2.5.1. Comprehensive Sanitation Planning, which includes
- (a) City Level Sanitation Plans
- (b) State Sanitation Concept As per Annexure IV
- (c) Sate Sanitation Strategy

2.5.2. Behavioral Change Strategy and IEC

- 2.5.3. Enabling Environment for Private sector participation
- 2.5.4. Capacity Building

- 2.5.5. Special focus groups : The State Governments shall pursue the following:
 - i. All manual scavengers in urban areas are identified, insanitary toilets linked to their employment are upgraded to sanitary toilets, and that the manual scavengers are adequately rehabilitated.
 - ii. In their efforts to streamline and formalize SWM systems it shall be the endeavor of ULBs that the informal sector workers in waste management (rag pickers) are given priority to upgrade their work conditions and are enumerated and integrated into the formal system of SWM in cities.
 - iii. All temporary accommodation for migrants and the homeless in urban areas have adequate provision for toilets either on the premises or linked to a public / community toilet.
 - iv. Mandating that construction labour in urban areas have access to temporary toilets at all sites in urban areas, buildings, parks and roads where construction / maintenance work is taking place or where construction labour is temporarily housed.
 - v. Priority shall be accorded pro-actively to cover households with vulnerable sections such as pensioners, girl children, pregnant and lactating mothers.

2.6. Mission Outlay

The estimated cost of implementation of SBM (Urban) based on unit and per capita costs for its various components is Rs. 62,009 Crore. The Government of India share as per approved funding pattern amounts to Rs. 14,623 Crore. In addition, a minimum additional amount equivalent to 25% of GoI funding, amounting to Rs. 4,874 Crore shall be contributed by the States as State/ULB share. The balance funds is proposed to be generated through various other sources of fund which are, but not limited to:

- a. Private Sector Participation
- b. Additional Resources from State Government/ULB
- c. Beneficiary Share
- d. User Charges
- e. Land Leveraging
- f. Innovative revenue streams
- g. Swachh Bharat Kosh
- h. Corporate Social Responsibility
- i. Market Borrowing
- j. External Assistance

3. Concept Sanitation Strategy:

It is understood that without a proper **city sanitation plan** and resulting **state sanitation strategy**, as indicated in National Urban sanitation policy-2008, comprehensive planning cannot be achieved to attain the objectives of Swachh Bharat Mission. However, both the activities require time and wide consultation at various levels including citizen engagements. It is also understood that although many states and cities have prepared these plans and strategy, many more have not done so.

In order to give a quick start to the Swachh Bharat Mission, it is, therefore proposed that all states may submit a **brief concept Note on state sanitation strategy**, as given in the **AnnexureIV** of these guidelines as a part of there initial proposal, in order to claim their first installment for individual household toilets, IEC and Capacity Building as well as the revolving fund for other components.

The concept note and proposal shall be submitted online to MoUD by state governments by 30 January 2015.

The states should however, simultaneously start preparing City sanitation plans for each city and State Sanitation strategy as per National Urban sanitation Policy 2008 as these will be required before any further release can be made to the states.

4. SBM (Urban) Component -I: Household toilets

- 4.1. SBM (Urban) aims to ensure that
 - a) No households engage in the practice of open defecation,
 - b) No new insanitary toilets are constructed during the mission period and
 - c) Pit latrines are converted to sanitary latrines.

The Target Group for construction of household units of Toilets, thus, is:

- (i) 80% of urban households engaging in open defecation
- (ii) All households with insanitary latrines
- (iii) All households with single-pit latrines

These will be targeted under this component for the construction of household toilets or individual household latrines during the mission period. The remaining 20% of households practicing open defecation are assumed to be catered by community toilets due to constraints of space.

4.2. **Household toilets** constructed under SBM (Urban) will have two main structures – the toilet *superstructure* (including the pan and water closet), and the

substructure (either an on-site treatment system, or a connection to existing underground sewerage system).

4.2.1. Whenever a sewerage system is available within 30 metres from the proposed household toilet, only the toilet superstructure may be constructed and connected to the existing sewerage system. ULBs must facilitate these connections for household toilets under SBM (Urban), wherever applicable and economical.

4.2.2. In the event that a sewerage system is not available within 30 meters from the proposed household toilet, in addition to the construction of the toilet superstructure, an on-site treatment system (such as twin pits, septic tanks, bio-digesters, or bio-tanks) should also be constructed for the collection, treatment and/or disposal off sewage at, or near the point of generation.

4.2.3. ULBs should ensure that all household toilets being constructed under SBM are built in tandem with water supply arrangements in ULBs. Beneficiary households will be responsible for the operation and maintenance of the household toilets. Suggested technical specifications, technologies and tentative cost of household toilets are available at *Annexure II*

4.3. For this component, *beneficiary* shall mean any household that does not have access to an individual household toilet or has an insanitary toilet (dry/ *bahou* and single pit latrine). No other criteria is to be applied.

4.3.1. Selection of Beneficiary Household shall be as per the strategy adopted by ULB under the guidance of state government. However, the following guiding principals may be followed:

- (i) Initially, a campaign to create awareness may motivate beneficiaries to come forward on their own. This should be taken at the ULB level and followed up by accepting a simple application and undertaking, to be verified within 7 days and approved at ULB level.
- (ii) ULBs are expected to carry out a house-to-house survey. In so doing they shall also take into consideration Census 2011 data or any recent survey available to them. This baseline data shall be put in public domain by 15.02.2015.
- (iii) Any Claims and objections received shall be addressed in a transparent manner and continuous modifications can made in the baseline data.
- (iv) Based on this house to house survey, all households practicing open defecation shall be identified and ULB's need to approve either a Household toilet or plan for community toilets for each of such identified household/group of household.

4.3.2. Beneficiary households will be targeted under this scheme irrespective of whether they live in authorized/unauthorized colonies or notified / non-notified slums. Under SBM (Urban), tenure security issues are to be de-linked with benefits.

4.3.3. The states and ULB's must ensure that the maximum number of beneficiaries from individual households toilets will be normally limited to the numbers indicated in the Census of India 2011 for each town.

4.4. Central government incentive for the construction of household toilets will be Rs. 4,000 per household toilet for each identified beneficiary household.

4.4.1. 50% of the Central Government incentive (Rs. 2,000/-) will be released to the identified beneficiary household by the ULB as 1st installment on approval by the ULB along with share of the state government. There is no bar on releasing any extra funds at any stage using additional resources generated/provided by state government/ ULB.

4.4.2. The ULB shall verify each application before releasing any incentive. Verification of the application should be completed within 7 working days of its submission of application by the beneficiary.

4.4.3. The remaining 50% of Central Government incentive as 2nd installment should be released to the identified beneficiary household along with the State Government's incentives upon verification of physical progress of construction of the household toilet. The actual process of verification will be as per the directions of the respective State Government.

4.4.4. Final Verification of the construction of the household toilet should be supported by location-based technologies, wherein self-attested geo-tagged photographs of the construction, along with the applicant are taken out. These photographs must be uploaded to the SBM (Urban) MIS and be monitored by the ULBs and the States.

4.4.5. All financial incentives (government and /or private) for this component will be deposited directly (by electronic clearing service) into the bank accounts of the beneficiary households (including accounts opened under the *Pradhan Mantri Jan Dhan Yojana*). No cash/cheque disbursals shall take place.

The ULBs should ensure that financial incentives to beneficiary households are transferred in a timely and hassle-free manner. The State government should evolve standard norms for this throughout the state and ensure the monitoring of its implementation.

5. SBM (Urban) Component II: Community toilets

5.1. Under SBM (Urban), it is estimated that about 20% of the urban households in cities, who are currently practicing open defecation are likely to use community toilets as a solution due to land and space constraints in constructing individual household latrine.

5.2. Community toilet blocks will consist of a given number of toilet seats, as per requirements, toilet superstructure including the pan and water closet, and a substructure (either an on-site treatment system, or a connection to underground sewerage/septage system) shared by all the toilet seats and facilities for hand wash.

5.2.1. Care should be taken to ensure that these facilities have adequate provision for separate toilets and bathing facilities for men, women and facilities for the disabled (e.g. ramp provision, braille signage, etc.).

5.2.2. The norms for connection of the superstructure to an on-site system or connection to an underground sewerage system as defined in paragraphs 4.2.1 and 4.2.2 above will apply here.

5.2.3. ULBs should ensure that all community toilets being constructed under SBM (Urban) are built in tandem with water supply arrangements in ULBs. Suggested technical specifications, technologies and tentative cost of community toilets are available at *Annexure II*.

5.3. For this component, **beneficiaries** shall be groups of households ("beneficiary household group") in urban areas whose members practice open defecation and who do not have access to household toilet, and for whom the construction of individual household toilets is not feasible. Beneficiary household groups under this component of SBM (Urban) shall be identified by the procedure as designed by the ULB. This may be application based or survey based, with or without participation of community based organisations. Involvement of civil society organisations is to be encouraged. NGO's, Area, Ward or Mohalla Sabha's may be used for this purpose. Beneficiary household groups will be targeted under this scheme irrespective of whether they live in authorized/unauthorized colonies or notified / non-notified slums. Under SBM (Urban), tenure security issues are to be de-linked with benefits.

5.4. Once a sufficient number of households are identified as a group, the ULB shall identify suitable piece of land adjoining their houses/dwelling and design the toilet block. Efforts should be made to look into all possible sources of revenue generation by leveraging land ,use of rooftop or any other means.

5.5. Central government incentive for the construction of community toilets will be in the form of 40% Grant/VGF, for each community toilet block constructed. The remaining funds have to be generated as indicated in para 2.6 above.

5.6. Projects will be prepared and sanctioned by ULBs. In the entire project approval and procurement process, all provisions and procedures as prescribed by respective State Governments for ULBs must be followed in their entirety. The entire approval procedure except for release of Central funds will end at the ULB level. To this end the States are required to empower the ULBs if not already done so. This includes the delegation of powers to allot land (for this purpose) to ULB's and mechanisms to leverage this land to make the Community Toilet a viable project.

5.7. All community toilets constructed under SBM must have a minimum 5 year maintenance contract.

5.8. States will contribute a minimum of 25% funds towards community toilet projects to match 75% Central Share. (10% in the case of North East States and special category states).

6. SBM (Urban) Component -III: Public Toilets

6.1. Under SBM (Urban), States and ULBs will ensure that a sufficient number of public toilets are constructed in each city. All prominent places within the city attracting floating population should be covered.

6.2. Care should be taken to ensure that these facilities have adequate provision for men, women and facilities for the disabled (e.g. ramp provision, braille signage, etc.) wherever necessary. Suggested technical specifications, technologies and tentative cost of public toilets are available at *Annexure II*.

6.3. ULBs should ensure that all Public Toilets being constructed under SBM (Urban) are built in tandem with water supply arrangements in ULBs.

6.4. There will be no Central Government incentive support for the construction of public toilets under SBM (Urban). States and ULBs are encouraged to identify land for public toilets, and leverage this land and advertisements to encourage the private

sector to construct and manage public toilets through a PPP agreement. Additional funding support by any means other than Gol grant can be used for public toilets.

6.5. The Projects will be prepared, sanctioned and implemented by ULBs. In the entire project approval and procurement process, all provisions and procedures as prescribed by respective State Governments for ULBs must be followed in their entirety. The entire approval procedure should end at the ULB level. To this end the States are required to empower the ULBs if not already done so. This includes the delegation of powers to allot land (for this purpose) to ULB's and mechanisms to leverage this land to make the Public Toilet a viable project.

6.6. All Public Toilets constructed under SBM must have a minimum 5 year maintenance contract.

7. SBM (Urban) Component IV: Solid Waste Management

7.1. Municipal Solid Waste Management (MSWM) refers to a systematic process that comprises of waste segregation and storage at source, primary collection, secondary storage, transportation, secondary segregation, resource recovery, processing, treatment, and final disposal of solid waste. The Manual on Municipal Solid Waste Management, 2000 published by M/o UD and revised from time-to-time, may be referenced for DPR formulation and implementation.

7.2. ULB's are to prepare DPR for Solid waste management of their city in consultation with state governments. Smaller cities can form clusters to become viable entities to attract private investment. 100% Cost reimbursement for preparing the DPR shall be done by Gol as per unit cost and norms set up by NARC.

7.3. State governments may handhold ULB's in quickly preparing DPR's for SWM by empanelling /shortlisting /identifying private or government agencies for the same.

7.4. The DPR's should be bankable, having a viable financial model. These will be prepared emanating from the needs identified in the City Sanitation Plan. DPRs should be aligned with Govt. of India's goals outlined in the NUSP 2008, SWM rules, advisories, CPHEEO manuals (including cost-recovery mechanisms), O&M practices and Service-level Benchmark advisories released by M/o UD from time to time. Street Sweeping and litter control interventions will be part of DPR which is essential for a clean city.

7.5. In order to promote projects of waste to energy, it is clarified that the central government Grant / VGF may also be used for such projects, either upfront or as generation based incentive for power generated for a given period of time.

7.6. The State High Powered Committee (HPC) will authorize institutes of national repute for appraisal of DPRs for the technical and economic appraisal of DPRs for projects recommended by ULBs. No appraisal will be done by MoUD. The cost of DPR appraisal by these institutes shall be an admissible component under administrative costs, subject to norms as approved by MoUD.

7.7. The performance and quality of appraisal by these identified and authorized institutes will be evaluated and monitored by HPEC as well as NARC and corrective actions taken wherever necessary.

7.8. The State Level high power committee will approve the DPR as well as the financial model of solid waste management.

7.9. The implementation of SWM projects will be as per directions of State Level High Power Committee.

7.10. Central government incentive for the SWM projects will be in the form of a maximum of 20% Grant / VGF for each project. The remaining funds have to be generated as indicated in para 2.6 above.

7.10.1. While considering projects under MSWM it will be ensured that there is no duplication in terms of funding under any other scheme or programme.

7.10.2. Detailed technical and financial appraisal of the DPRs will be carried out in the manner prescribed in paragraph 10.5.4. O&M arrangements for the project shall necessarily be an integral part of the project in the DPR.

7.10.3. SWM projects will be sanctioned by the State level HPC which shall include a representative of the MoUD. In the entire project approval and procurement process, all provisions and procedures as prescribed by respective State Governments must be followed in their entirety. The entire approval procedure for MSW projects except for release of Central funds will end at the State Level.

7.10.4. The States shall be free to choose the technology for SWM projects, toilets and street sweeping. The Ministry of Urban Development shall, from time to time, bring to the notice of the States, through advisories and manuals, and other consultative mechanisms, various options available in these fields.

7.10.5. States will contribute a minimum of 25% funds for SWM projects to match 75% Central Share.(10% in the case of North East States and special category states).

8. SBM (Urban) Component -V: IEC & Public Awareness

8.1. A key strategy under SBM (Urban) is behavior change communication to ensure that sanitation as an issue is mainstreamed with the general public at large and should cover issues of open defecation, prevention of manual scavenging, hygiene practices, proper use and maintenance of toilet facilities (household, community or otherwise), etc., and its related health and environmental consequences. Communication material for behavior change shall be designed in consultation with the M/o Information and Broadcasting, M/o Health & Family Welfare, and should be in sync with the material being used under SBM (Rural).

8.2. A total of **15%** of the total central allocation will be earmarked for this component. Of this, **12%** will be earmarked for States to undertake massive public awareness campaigns on sanitation and establishing its link to public health, hygiene and the environment through various means including - radio, social media, documentaries, plays, workshops, etc. The remaining **3%** will be earmarked for the MoUD to draw a national media campaign and developing standard campaign tools for effective awareness and communication on sanitation.

8.3. Expenditure on Newspaper and TV is not an admissible item under this component for the state government or for the ULB's as this is taken care by government of India ministries and organisations.

8.4. States shall prepare an annual action plan, with details of State funding commitment, for Public Awareness & IEC and State HPC shall approve it. At least 50% of the IEC fund in each annual plan, as approved by State HPC, must go to the ULB's for IEC activities at the grass root level.

8.5. HPEC at State level shall be the competent authority to authorize and delegate administrative powers for use of the state level funds within the approved plan. ULB's shall be competent to spend the minimum 50% part of the ULB level funds, as per approved plan.

8.6. Under no circumstance shall this fund be utilized for purchase of vehicles, construction and maintenance of buildings, creation of posts and payment of salary, and purchase of furniture and fixtures.

States will contribute a minimum of 25% funds towards IEC & Public awareness to match 75% Central Share (10% in the case of North East States and special category states) in each annual plan.

9. SBM (Urban) Component VI : Capacity Building and Administrative & Office Expenses (A&OE)

9.1. **3%** of the total Central Government allocation under the mission will be earmarked for capacity building, administrative and office expenses of States and ULBs.

9.2. **2%** of the total Central Government allocation under the mission will be utilized at MoUD level for capacity building, convening national and regional workshops, various awards and best practice recognition, programme research, studies, international cooperation for capacity building and technology development, A&OE and various eligible purposes in consultation with the Integrated Finance Division (IFD) of the M/o UD.

9.3. States shall propose extensive capacity building activities to be implemented in a mission-mode manner, which will enable the progressive achievement of objectives of SBM (Urban) in a time-bound manner. These will be specified in the comprehensive annual action plan prepared by each state. This will be approved by State Level High Power Committee after sharing and considering suggestions from MoUD. At least 50% of this fund, in each annual plan, as approved by State HPC, must go to the ULB's for activities at the ULB level.

9.4. HPEC at State level shall be the competent authority to authorize and delegate administrative powers for use of these funds. ULB's shall be competent to use the minimum 50% fund, as per approved plan, passed on to them.

9.5. States will be encouraged to use other available capacity building funds to dovetail or integrate capacity building activities of ULB's.

9.6. States and ULBs should identify relevant officials (both senior level officials and field-level functionaries) for training and draw up a calendar of training for them. It will be the responsibility of the State Mission Director to ensure that identified officials undergo adequate capacity building / training to ensure the success of SBM (Urban) in the state. Additionally, states should also identify relevant officials / persons capable of spreading the training on sanitation under SBM (Urban) as "master trainers" who can attend central government training on SBM (Urban) in the states.

9.7. All support structures for implementing the mission at the state and ULB levels defined in the Mission Management Structure (section 11 of the SBM (Urban) guidelines), *i.e.,* the Programme Management Units (PMUs) at the State level, the Programme Implementation Units (PIUs) at the city level, and Independent Project Review & Monitoring Agencies (IPRMA) etc., engaged on an outsourced basis, shall be funded under this head.

9.8. Under no circumstance shall this fund be utilized for purchase of vehicles, construction and maintenance of buildings, creation of posts and payment of salary, and purchase of furniture and fixtures.

9.9. States will contribute a minimum of 25% funds towards Capacity Building and Administrative & Office Expenses (A&OE) to match 75% Central Share.(10% in the case of North East States *and special category* states) in each annual plan.

10. Funding pattern and financial process

10.1. *Funding pattern:* Guiding Principals:

- a) First installment will be released to states on receipt and acceptance of proposal containing the brief concept state sanitation strategy as given in **Annexure IV**.
- b) For House Hold Toilets, Funds in the first installment will be released as per number of beneficiary household identified, in the concept sanitation plan, at the rate of Rs. 2000/- Central assistance.
- c) For Community Toilets and Solid Waste Management Projects, Adequate funds will be released on the proposal of the State Government for SWM and Community toilet projects. It will be ensured that funds do not remain parked with the state governments Gol share of grant / VGF may be drawn from this pool fund maintained at state level. This will be replenished on demand by states based on progress.
- d) For IEC, Capacity Building and Administrative expenditure, appropriate percentages of (a) and (b) above shall be added to the first installment.
- e) States will contribute a minimum of 25% funds towards all components to match 75% Central Share. This will be 10% in the case of North East and special category States.
- f) Subsequent installments shall be released based on utilization certificates of previous grants, physical and financial progress and other indicators as approved and desired by the National Advisory & Review Committee (NARC).

10.2. Clarification on Grant v/s VGF

10.2.1. Under Swachh Bharat Mission, projects under PPP mode are encouraged, to invite private capital in urban infrastructure as well as to bring in private sector efficiency in delivery of urban services and O & M. It is also understood that in the current scenario, there may be a requirement for viability gap funding. For solid waste management, revenue streams such as Compost from organic waste, recycled construction material from C & D waste, Power from waste to energy plants can be leveraged.

10.2.2. All ULB's must first explore possibility to take up the projects in a PPP mode for the above reasons. Government of India funds as per prescribed funding pattern will be available for claiming VGF.

10.2.3. State governments can also add or generate funds for ULB's as additional incentives over and above minimum 25% share required to make the projects viable.

10.2.4. Release of VGF grants will be as per contractual arrangement with the private partner and as approved by state government. However, it will be ensured that funds do not remain parked with the state governments.

10.2.5. Adequate funds will be released on acceptance of the proposal of the State Government for SWM and Community toilet projects. ULBs will initiate project preparation and bidding as per the guidelines for community toilets and SWM.

10.2.6. States will release the Central Government share of VGF adding their share in conformity with the contractual requirements of the project taken up on PPP mode.

10.2.7. In case state government feels that a project is not suitable to be taken under PPP methodology, it may then consider the Gol share (as per funding pattern) to be treated as Grant from Gol to the ULB. It will be up to the state government and ULB to arrange for the balance resources for the project, which must be ensured at the time of approving a project.

10.2.8. For PPP Projects, state governments to follow their own policy and rules. No project shall be referred to Government of India.

10.3. Allocation of funds to States / UTs

10.3.1. The mission will be implemented with the following classification of funding to states:

S. No.	Classification	Percentage Allocation (Central Govt. funding)	Total Amount for Mission Period Rs. Crore
i.	Project Fund based on Normative Criteria	60%	8773.80
ii.	Performance Fund based on Performance Matrix	20%	2924.60
iii.	Public Awareness & IEC Activities	15%*	2193.45
iv.	Capacity Building & A&OE	3%	438.69
V.	Research, Capacity Building & A&OE (M/o UD)	2%	292.46

*3% of which to be retained by M/o UD

10.3.2. The **Project Fund** specified in 10.3.1(i) above shall be allocated as follows:

i. The distribution of the Project fund will be as under: (Rs. in Crore.)

a.	Project Funds for States other than the North-East	80%	7019.04
b.	Project Funds to North-East States	10%	877.38
C.	Flexi Funds*	10%	877.38

*Flexi Funds in terms of the Department of Expenditure OM No. F.No.55(5)/PF.II/2011 dated 06.01.2014) will be available to states

- ii. Where ever it is required for fund allocation to be divided among States / UTs it will be done by giving :
 - A) 50% weightage to the ratio of urban population in each State / UT to the total urban population, and
 - B) 50% weightage to the ratio of number of statutory towns in each
 State / UT to the total number of statutory towns.

Both ratios shall use Census 2011 data. Details of distribution of Project Fund across States / UTs are at **Annexure III**.

10.3.3. The **Performance Grant** specified in 10.3.1(ii) above shall be kept with the SBM National Mission Directorate as Performance Grant and released as per the criteria mentioned below for rewarding performing states. The release of the performance grant shall be based on a Performance Matrix and Third Party Evaluation by the Independent Project Review & Monitoring Agency (IPRMA) on the following outcomes:

- a. Elimination of open defecation
- b. Conversion of insanitary latrines into pour-flush latrines
- c. Eradication of manual scavenging
- d. Prevention of pollution of water sources
- e. Ensuring cleanliness and hygiene in public places
- f. Awareness creation
- g. Capacity building

The National Advisory & Review Committee (NARC) at the M/o UD may also design other relevant criteria for the release of these funds and shall take a final view regarding the release of this grant keeping in view the progress made and circumstances of each State. This will not be applicable in the first installment. No withholding of 20% shall be done while releasing the first installment to the states.

10.4. Disbursal of funds to States / UTs and ULBs

10.4.1. States / UTs will submit a proposal for release of grant to the Central Government based on projections and authenticated targets with a Concept Note on State Urban Sanitation strategy in the format given in **Annexure IV**. This shall be submitted online to the SBM National Mission Directorate.

10.4.2. On acceptance of the State Government's proposal by the ministry, first installment of funds shall be disbursed to States / UTs in the following manner:

- i. 50% of the project fund shall be divided among states as per the formula mentioned at 10.3.2 (see also **Annexure III**).
- ii. 12% of Project funds released above shall be released as IEC and the Public Awareness component and,

- iii. 3% of the Project funds released above shall be released or the Capacity Building and A&OE funds.
- iv. No withholding of 20% shall be done on account of performance grant, while releasing the first installment to the states.

10.4.3. Subsequent installments (including for Capacity Building & IEC, and the Public Awareness and A&OE) shall be released on

- (i) Submission of the Utilization Certificate for 75% of the fund released as 1st installments and,
- (ii) Satisfactory physical and financial progress as per NARC criteria.

The quantum of subsequent installments will be based on actual demands and projections of expenditure for admissible components as per funding pattern of SBM.

10.4.4. Release of central contribution towards Grants / VGF by States/UTs for projects shall be in a manner described in paragraph 10.1 and 10.2 above.

10.4.5. At the end of the 2nd and 3rd quarters of each Financial Year, the use of allocated funds by States / UTs under the mission shall be reviewed by NARC, and NARC may reallocated funds from non-performing states to performing states based on the potential to utilize funds in a given financial year.

10.4.6. State governments shall evolve a suitable mechanism to release funds along with state share to ULBs within 30 days of release of the central share by M/o UD. Interest at the rate specified by the M/o Finance from time-to-time shall be levied on the State for any delay in release of funds to ULBs beyond 30 days. This will be implemented by appropriate deductions from the state's next installment of fund release under the mission.

10.5. Sanction of projects (DPRs)

10.5.1. Projects will be sanctioned by state government (HPEC) or ULBs as prescribed in these guidelines. This is specified for each for each component of SBM in these guidelines.

10.5.2. Only new projects will be considered under the Mission and it will be ensured that there is no duplication. Projects will be considered as "new" if they are not projects already sanctioned and ongoing under state and central schemes and externally-aided programmes.

10.5.3. Wherever Detailed Project Reports (DPRs) are to be prepared for project sanction, fund release and monitoring, the cost of DPRs for the projects under the Mission shall be reimbursed subject to norms set-up by the NARC.

10.5.4. The State High Powered Committee (HPC) will authorize institutes of national repute for appraisal of DPRs for the technical and economic appraisal of DPRs for projects recommended by ULBs. The cost of DPR appraisal by these institutes shall be an admissible component under administrative costs, subject to norms as approved by MoUD.

11. Mission Management Structure Swachh Bharat Mission (SBM)

Urban will have a three-tier mission management structure as follows:

11.1 National Level

11.1.1. A **National Advisory and Review Committee (NARC)** headed by the Secretary, M/o UD, and comprising representatives of relevant line ministries will be notified by the M/o UD. NARC will meet as per the requirements, but will meet at least once in three months. The functions of NARC will be:

- i. Overall monitoring and supervision of SBM (Urban)
- ii. Advise the States / UTs to explore avenues for innovative resource mobilization of private financing and leveraging land for PPP in sanitation projects.
- iii. Approve installments and release of installment of funds for states / UTs by Central Government under the mission.
- iv. Develop and modify performance matrix and criteria for the release of performance grants to States / UTs as specified in paragraph 10.3.3.
- v. Monitor outcomes and performance of projects sanctioned under SBM (Urban)
- vi. NARC may delegate, as it considers appropriate, some of the functions within prescribed limits, to the National Mission Director (NMD) of the SBM National Mission Directorate to ensure speedy implementation of the mission
- vii. Any other issue which may be referred to it by the Government

11.1.2. The **SBM National Mission Directorate** will be headed by a National Mission Director (NMD) who will not be below the rank of Joint Secretary to the Government of India.

i. The NMD will be the overall in-charge of all activities related to SBM (Urban). NMD will be supported by a suitable team of officers at the

National Mission Directorate and will be Member-Secretary of NARC for all matters.

- ii. The Mission Directorate shall be supported by a dedicated Project Management Unit (PMU) with 10-12 experts and support staff mainly on an outsourced basis. The PMU shall cover 4 verticals – Programme management, IEC & Media, Information Technology, and Monitoring & Evaluation.
- iii. The SBM National Mission Directorate will formulate a framework for support structure for the State Mission Directorates and issue appropriate guidelines / advisories to states from time-to-time.

11.2. State level

11.2.1. A **High Powered Committee (HPC**) under the chairpersonship of the State's Chief Secretary, and with members drawn from concerned departments (including a MoUD representative) shall be responsible for the management of SBM (Urban) at the State / UT level. The functions of the SLMRC will include:

- Preparation, approval, and online publishing of the State Sanitation Strategy (SSS) for the respective state and City Sanitation Plan (CSP) for all cities covered under SBM (Urban), if not already done.
- ii. Finalisation of the Concept Note on the Urban Sanitation Situation before submission to the SBM National Mission Directorate
- iii. Empanel consultants of repute and experience for:
 - a. Preparation of DPRs under SBM
 - b. Conducting independent review and monitoring during execution of projects
- iv. Empanel reputed Institutes like IITs, NIT's, State Technical Universities etc. for appraisal of DPRs.
- v. Sanction projects relating to Solid Waste Management recommended by the ULBs.
- vi. Plan for additional resource mobilization .
- vii. Plan for fund flow in the short, medium and long term
- viii. Recommend proposals for release of installments of funds for projects under the mission
- ix. Monitor outcome and O&M arrangements of projects sanctioned and completed under the mission

- x. Review the progress of Capacity Building, IEC, and Public Awareness activities under the mission and approve their annual action plan.
- xi. Address violation of norms and conditions
- xii. Ensure convergence of action for sanitation in the state and bring about inter-departmental coordination for this purpose as and when required.
- xiii. Ensure timely audits of funds released and review the "Action Taken Reports" on various Audit reports of the mission and other similar reports
- xiv. Review legal issues, if any
- xv. Take up any other matter relevant for the efficient implementation of the mission, or matters referred to it by the SBM National Mission Directorate

11.2.2. The **SBM State Mission Directorate** will be located within the Urban Development Department (UDD) in the State / UT.

- The SBM State Mission Directorate will be headed by a State Mission Director (SMD) of appropriate seniority. The SMD will also function as Member-Secretary to the State Level HPC.
- ii. The SMD will create / notify a uniform structure across the state for the planning, designing, project preparation, appraisal, sanction and implementation of sanctioned projects under the mission at the ULB level. This shall be done keeping in mind the advisories issued by the National Mission Directorate from time-to-time.
- iii. The Mission Directorate shall be supported by a dedicated Project Management Unit (PMU) on an outsourced basis.

11.3. ULB level

The SBM is envisaged as People's movement (Jana Andolan) for ensuring hygiene, waste management and sanitation across the country. It is therefore essential that in its implementation the ULBs elicit the active participation of the Ward Committees, Area Sabhas, Resident Welfare Associations, NGOs and Civil Society Groups.

12. Monitoring & Evaluation (M&E)

12.1. States / UTs will be required to send in Monthly Progress Reports (MPRs) / Quarterly Progress Reports (QPRs) in prescribed formats with regard to targets and achievements. Apart from these, the Mission Directorate may prescribe other reports that may be considered appropriate from time to time. Given the scale of the mission, a comprehensive and robust IT enabled MIS will be established for tracking of targets and achievements. States / UTs will be required to submit progress reports online once this MIS is operational.

12.2. Monitoring activities will include, but not be limited to, third party evaluation, impact evaluation studies, etc. The evaluation of the mission will be undertaken during the course of its implementation to effect mid-term correction and align the mission to achieve its objectives

12.3. A **District Level Review and Monitoring Committee (DLRMC)** will be constituted with a view to fulfill the objective of ensuring satisfactory monitoring of projects under the Chairpersonship of a Member of Parliament. Detailed guidelines for this purpose will be issued separately by the SBM National Mission Directorate.

13. Logo and Tag line

The Logo and Tagline for the SBM (Urban) is given in *Annexure V*. This shall be displayed prominently on all projects and literature/publications under the mission.

Annexure I: Targets and definitions under SBM (Urban)

(Definitions reproduced from "House & Household Series Tables, Census of India 2011)

Targets under SBM (Urban)

For the purpose of SBM (Urban), the following action will have to be taken:

S.	Objective	Action under SBM Census 2011
No.		(Urban) (Targets) definition
i.		 80% urban households defecating in the open to be targeted for construction of household toilets No latrine within premises – open
ii.	Elimination of open defecation	 20% urban households defecating in the open to be targeted for construction of community toilets No latrine within premises – open
iii.		 Construction of public toilets for floating population (presumed at 5% of total urban population)
iv.	Conversion of insanitary latrines into sanitary latrines	 100% of urban households having insanitary latrines to be targeted for construction of household toilets Night soil disposed into open drain Service latrine with night soil removed by humans Service latrine with night soil serviced by animals
V.	Conversion of single pit latrines	 60% of urban Pit latrines with slab households having Pit latrines with

S.	Objective	Action under SBM	Census 2011
No.		(Urban) (Targets)	definition
		pit latrines	 ventilated improved pit Pit latrines without slab / open pit
vi.	Solid Waste management	80% of the urban population to be covered by SWM services (allowing for a 2% increase year on year)	 Total urban population

Definition of Types of latrines under Census 2011

As per the Census of India 2011, the following various types of latrine facilities were surveyed:

- 1. <u>Flush / pour flush latrine connected to piped sewer system</u>: If a pour flush latrine is connected to a system of sewer pipes that collect both human excreta and waste water and removed them from the household environment
- 2. <u>Flush / pour flush latrine connected septic tank</u>: If a pour flush latrine is connected to a septic tank that collects both human excreta and wastewater and removes them from the household environment
- 3. <u>Flush / pour flush latrine connected other system</u>: If the pour or pour-flush latrine is connected to any system other than a piped sewer system or septic tank e.g. excreta and waste water gets flushed into the street, yard / plot, drainage ditch or any other location
- 4. <u>Pit latrines*</u>: defecation into pits dug into the ground for reception of night soil directly without flushing.
 - a. <u>Pit latrine with slab</u>: A pit latrine with a squatting slab or platform or set firmly supported on all sides, and raised above the surrounding ground level to prevent surface water from entering the pit, and easy to clean.
 - b. <u>Pit latrine with ventilated improved pit</u>: Pit latrines with slabs that are ventilated by a pipe extending above the latrine roof and the open end of the vent pipe is covered with mesh or fly-proof net
 - c. <u>Pit latrine without slab / open pit</u>: Pit latrines without a squatting slab or platform or seat

*Census 2011 does not distinguish between single pit and twin pit latrines. However for SBM single pit latrines will be considered insanitary and shall be converted. Definition of twin pit latrine see Annexure II.

5. <u>Night soil disposed into open drain</u>: Where a latrine facility may exist, but the excreta and waste water is disposed directly into an open drain

- 6. <u>Service latrine</u>: where human excreta is collected in a bucket, or other container, or even allowed to collect in the open
 - a. <u>With night soil removed by humans</u>: where the human excreta is removed physically by human beings
 - b. <u>With night soil serviced by animals</u>: where the human excreta is removed physically by animals
- 7. <u>No latrine within premises public latrine</u>: Households have no latrines within the premises of the dwelling unit and use an available public latrine
- 8. <u>No latrine within premises open</u>: Households have no latrine within the premises of the dwelling unit and defecate in the open in areas such as open fields, bushes, rivers, streams, railway tracks, etc.
- 9. Insanitary latrine means a latrine which requires human excreta to be cleaned or otherwise handled manually, either in situ or an open drain or pit into which the excreta is discharged or flushed out, before the excreta fully decomposes in such manner as may be prescribed.(Chapter I Section 2(i)(e) The Prohibition of employment as manual scavengers & their Rehabilitation Act,2013)

The Census of India 2011 defines two broad kinds of urban areas as follows:

- i. **Statutory towns** are urban areas defined by administrative units that have been defined by 'statute' as urban such as municipal corporations, municipalities, cantonment boards, notified town area committees, town panchayats, or nagar palikas; and
- ii. Census Towns: All administrative units satisfying the following criteria:
 (i) it should have a minimum population of 5,000 persons; (ii) at least 75% of the male main working population should have been engaged in non-agricultural pursuits; and (iii) it should have a density of population of at least 400 persons per km² (1,000 per mile²)

Annexure II: Technical options for toilets under SBM (Urban)

This note explains the technical options for toilets that are recommended under the Swachh Bharat Mission (SBM) Urban.

On-Site Sanitation (OSS) vs. Underground Sewerage

Wherever a sewerage system is available within 30m from the proposed individual household, community or public toilets only the superstructure (i.e. toilets) may be constructed under SBM and connected to the existing sewerage system. No construction of treatment units such as twin pits, septic tank, bio-digester or bio- tank shall be allowed.

Features of OSS Systems

When sewage is collected, treated and/or disposed off at, or near the point of generation, without the use of an underground sewerage system, the system is called "on-site sanitation" (OSS) system. OSS systems are sanitation facilities provided for the use of individual households, community and the floating population. There are a number of situations when an underground sewerage system may not be feasible or desirable. For example, for smaller cities where construction of sewerage infrastructure may be expensive, or those cities that are in hilly areas or in undulating terrain where it may not be practical to construct a sewer network, or even in many cities that have grown organically and where not all households are connected to the existing sewerage network.

OSS systems consists of two main structures, the toilet (superstructure, including the pan and water closet) and the treatment unit. OSS retains waste in the vicinity of the toilet either in a pit, tank or vault. The treatment ranges from a basic sanitary facility such as twin-pit latrines, to a simple type of treatment system by combining a septic tank and a soak pit, or a bio-digester toilet (aerobic and anaerobic).

The following technological options for OSS are recommended under Swachh Bharat Mission (SBM) Urban for construction of Individual Household Latrines (IHL) / household toilets, group / shared latrines, and, community and public toilets

S.	OSS	Kind	of Latrines	6					
S. No.	Option	ш	Shared	Community	Public	Application			
NO.	Option	IHL Latrines Toilets Toilet		Toilets					
						In low- to medium-			
						density areas,			
	Twin-pit					particularly peri-urban			
1.	latrines /	1				areas, where there is			
	Leach Pits					space to install pits and			
						where the digested			
						sludge can be applied to			

S.	oss	Kind of Latrines						
s. No.	Option	IHL	Shared Latrines	Community Toilets	Public Toilets	Application		
						 local fields and/or gardens as a fertilizer and soil conditioner Where water use is in the range 30–50 liters per capita per day depending upon the characteristics of the soil or groundwater level 		
2.	Septic Tank System with soak pit	•	•	~	•	 Septic tanks are widely used to provide partial treatment of wastewater from individual homes, household clusters or institutional buildings where there is no sewerage network. For soak pits to function, soil conditions must be suitable for infiltration of effluent from septic tanks 		
3.	Bio- digester toilets (Anaerobic – developed by DRDO)	•	5	✓	•	 Widely used to provide 80% treatment of wastewater from IHL, household clusters or institutional buildings where there is no sewerage network. The effluent should be passed through a reed bed or soak pit before discharge. For soak pits to function, soil conditions must be suitable for infiltration of effluent from septic tanks 		
4.	Aerobic BioTank	1	✓	✓	1	Widely used to provide 100% treatment of		

S.	OSS	Kind	Kind of Latrines			
S. No.	Option	IHL	Shared	Community	Public	Application
NO.	Option		Latrines	Toilets	Toilets	
						wastewater from IHL, clusters of houses or institutional building where there is no sewerage networks. The effluent can be directly
						 endent can be directly discharged since it is completely safe; Chlorination is followed after treatment

Technical features and specification for toilets under SBM (Urban)

The details of technical features and specifications for toilets are given as under. The costs are simply estimates at this point of time and should be verified at the time of selection and installation of the technology.

I. Twin-Pit Latrine

Description	It consists of superstructure (Toilet) and treatment units (two chambers). The two underground chambers (pits) are provided to hold fecal sludge. These are normally offset from the toilet and should be at least 1 meter apart. A single pipe leads from the toilet to a small diversion chamber, from which separate pipes lead to the two underground chambers. The pits should be lined with open-jointed brickwork. Each pit should be designed to hold at least 12 months accumulation of fecal sludge.						
	Wastewater is discharged to one chamber until it is full of fecal sludge. Discharge is then switched to the second chamber. Just						
	before the second chamber is full of fecal sludge, the contents of						
	the first pit are dug out. During the time of storage, digestion should ensure that it is odorless and free of pathogens.						
	The pits must be used alternately and the diversion chamber must						
	be accessible so that flow can be diverted between chambers.						
	Wastewater should never be diverted back to the first chamber						
O&M	before digested sludge has been removed from it.						
Requirements							
	Responsibility for O&M of the twin-pit latrine rests primarily with the						
	householder, who needs to ensure that the pits are used in the						
	correct sequence and are emptied at the appropriate time.						

	However		ıtility or	nrivate c	ontractors	are re	quired for
	-	However, ULB utility or private contractors are required for emptying and to ensure safe disposal of septage at a treatment					
	plant.						
Additional	If digeste	d materi	al cannot	be used	in local f	fields and	d gardens,
Infrastructure	provision	will have	e to be ma	ade for tra	ansportatio	on to are	as outside
/ treatment	the city fo	r reuse o	n agricultu	ural land.			
requirements							
			•		-		as a result
	•		•	•	•		he filled pit
			e year so	that the c	ontents de	egrade ar	nd become
Limitations	harml		the energy	tion and	maintana		romonto io
Limitations	•		ntial at the			•	rements is
							he pit and
				-		-	if water is
	•	or drinki	-		potorniai	problom	
			or Toilet/	Super St	ructure (a	as shown	in Fig.1):
		-	mm x 900	-	-		σ,
		b. 800 r	mm x 1000) mm x 19	900 mm		
	(b) Mater	ial – Brid	ck work (a	s per Fig.	1) / FRP/	Pre-cast	Cylindrical
	Unit						
	. ,		-			•	60 Sq. ft.
	· ·	• •		cation of	superstru	icture an	d distance
Specifications		en two p	shown in	Tabla -1 k			
Specifications		5 users		10 users		15 user	'S***
			Depth		Depth		Depth
	Dia (A) Dia (A) Dia (A)						
	Pit	900	1000	1100	1300	1300	1400
	SIZE						1400
	*- only for IHL						
	**- Group household toilets						
Coot for F	•	The specification for pits given at Fig 2 may be referred to. Tentative cost varies from Rs. 15,000/- to Rs. 20,000/- depending					
Cost (for 5					אי- נט KS.	20,000/-	aepenaing
users)	upon the construction material.						

	DESIGN OF PITS UNDER DIFFERENT CONDITIONS
	A typical pour flush latrine with circular pits for normal conditions is shown in Figure
	2. In rocky strata with a soil layer in between, the leach pits can be designed on the
Normal	same principle as those for low subsoil water level and taking the long-term
conditions	infiltrative capacity as 20 l/m2/d. However, in rocks with fissures, chalk formations, or
	old root channels, pollution can flow for very long distances; hence these conditions
	demand careful investigation and adoption of adequate pollution safeguards. Pits in

	black cotton soil should be designed taking infiltrative rate of 10 $l/m^2/d$.
	A vertical fill (envelope) of 300 mm in width with sand, gravel or ballast of small sizes
	should be provided all round the pit outside the pit lining in rocky strata with fissures
	and in black cotton soil.
	The pit top should be raised by 300 mm above the likely level of water above ground
In water-	level at the time of water logging. Earth should then be filled well compacted all-
	round the pits up to 1.0 m distance from the pit and up to its top. The raising of the
logged areas	pit will necessitate the raising of latrine floor also. A typical pour flush latrine in
	water-logged areas is shown in Figure 3.
In high	Where the subsoil water level rises to less than 300 mm below ground level, the top
In high	of the pits should be raised by 300 mm above the likely subsoil water level and earth
subsoil water	should be filled all round the pits and latrine floor raised as stated above. A typical
level	pour flush latrine with leach pits in high subsoil water level is shown in Figure 4.
	Where circular pits of standard sizes cannot be constructed due to space
	constraints, deeper pit with small diameter (not less than 750 mm), or combined
Where space	oval, square or rectangular pits divided into two equal compartments by a partition
is a	wall may be provided. In case of combined pits and the partition wall should not
constraint	have holes. The partition wall should go 225 mm deeper than the pit lining and
	plastered on both sides with cement mortar. A typical pour flush latrine with
	combined pits is shown in Figure 5.

II. Septic Tank

r							
Description	A septic tank is a buried chamber that collects, stores and treats the wastewater under anaerobic conditions. Effluent from septic tanks should be discharged into a soak pit. A well-managed septic tank will remove about 50 to 60 % of the biological load in the wastewater						
Mode of operation	Solids settle in the tank and digest anaerobically. This reduces sludge volume and enables wastewater to infiltrate into the ground without clogging the leaching system. Sludge settles in the tank and digests anaerobically over time, releasing methane and other gases.						
O&M Requirements	Septage must be removed from septic tanks at least once every 2 or 3 years and transported off-site for treatment prior to disposal. Municipal utility or private contractors are required for desludging of septic tanks and to ensure safe disposal of septage at a treatment plant. However the responsibility for O&M of the septic tank itself lies with the owner of the property						
Limitations	 Cost and space requirements for the soak pit. Though septic tanks are designed for receiving black water, they often receive both black and grey water. As a result, the retention time in the septic tank is insufficient and the soak pit becomes hydraulically overloaded. This means that the septic tanks need to be de-sludged regularly 						
Specifications	 (a) Size options for toilet / super structure as shown in Fig. 1 750 mm x 900 mm x 1900mm or 800 mm x 1000 mm x 1900 mm (b) Material – Brick work (as per Fig. 1) / FRP / Pre-cast Cylindrical Unit (c) Minimum Land requirement - 40 Sq. ft. to 50 Sq. ft. (depending upon the location of superstructure) (d) Soak-pit size - The seepage pit may be of any suitable shape with the least cross-sectional dimension of 0.90 m and not less than 1 m in depth below the invert level of the inlet pipe. The construction shall be of perforated brickwork 						

No. of users	Length (m)	Breadth (m)	Liquid depth (m) (Cleaning interval of)	
			2 years	3 years
5*	1.5	0.75	1.0	1.05
10**	2.0	0.90	1.0	1.4
15**	2.0	0.90	1.3	2.00
20**	2.3	1.10	1.3	1.80
vill be treated in th Note 2: A provision Note 3: The sizes	cities are recomm ne septic tank n of 300 mm shoul of septic tank are	ended on the assun d be made for free b e based on certain a rhile choosing the s	road. assumption on pe	eak discharge

 Cost (for 5 users) Tentative cost varies from Rs. 25,000/- to Rs. 30,000/- depending upon the construction material (toilet and septic tank). Pre fabricated septic tanks are available at lower cost in the market, which also may be explored to speed up the implementation.

III. Biodigester Toilet (Developed by DRDO)

Description	 A bio-digester toilet is an anaerobic multi-compartment tank with inoculum (anaerobic bacteria) which digests organic material biologically. The details of bio digester toilets are shown in Figure 7. This system converts faecal waste into usable water and gases in an eco-friendly manner. It can be connected to the toilet or a series of toilets. The toilet can be a superstructure fixed on the bio-digester or a separate unit. Bio-digester has an inlet an outlet and a gas pipe. The tank has two components, namely, anaerobic microbial inoculum (seed bacteria) and specially designed fermentation tank. The tank can be made out of Stainless steel, Mild steel, FRP or concrete. Semi-treated water from bio-digester 					
	tank is needed to be further disposed into a soak pit or a reed bed arrangement for its treatment to acceptable levels of discharge.					
Advantages	 As there is no sludge formation, there is no need for de-sludging and treatment. It is therefore more economical in the long-term as it conserves water and has minimum O&M Night soil degradation, occurs through microbial reaction which converts it into bio gas and odorless water. Technology is environmental friendly, maintenance free and efficient without depending on conventional energy sources. Permits use of toilet cleansing agents. Suitable for mobile and stationary platforms. Lifelong usage bio-digester tank does not need recharging, re-shifting or maintenance. Costs lesser than the conventional toilets. Easy to transport and install. 					

	One-third to one-fourth capacity of septic tank						
Limitations	Space requirement is less.						
Limitations	• Toilet Superstructure						
	 Toilet Superstructure (a) Size of Toilet / super structure – as shown in Fig. 1 750 mm x 900 mm x 1900mm or 800 mm x 1000 mm x 1900 mm (b) Material – Brick work (as per Fig. 1) / FRP/ Pre cast Cylindrical Unit 						
	Bio tank (a) Land requirement – 25 sq. ft. (b) Tank internal dimensions – 1336 mm x1036 mm x 900 mm (c) Diagonal partition wall of 8mm thickness (adequately stiffened by ribs) 						
	 (d) Tank is buried 600mm deep and anchored by 300mm long stainless steel (SS316) anchor bolts at corners (e) FRP tanks of 8mm thickness (f) Provision of water sealed outlet from the tank 						
Specifications	 (g) For 5-6 users: a. Total capacity: 700 litres (1000 mmX700 mm and 1000 mm depth). Where space is a constraint the depth of the tank can be increased to 1.5 m 						
	 b. Volume of anaerobic Compartment (30% of total capacity): 210 litres 						
	 c. Tank may be constructed with masonry also. Table 3 - Volume of bio-digester tank for various user groups: 						
	No. of users	Size of bio-	Remarks				
	4-8 (Single family)	0.7m ³ (FR	Individual				
	8-15 (two families)	1.2 m ³ (FRP / RCC material)		Group / shared			
	30-50	3.2 m ³ (FF	RP / RCC material)				
	100-120	6.0 m ³ (FF	6.0 m ³ (FRP / RCC material)				
	200-220	12.0 m ³ (F	- Community				
	500-600	30.0 m ³ (F	30.0 m ³ (FRP / RCC material)				
	 Toilet cost between Rs. 12,000 and Rs. 15,000 depending on material of construction; Bio-digester tank as per Table 4 below: 						
	Bio-digester tank ->	Material of construction					
Cost	No. of users /	Masonry					
Estimates	Capacity		Cylindrical Unit	plastic			
	5 to 7 users (700 Litre)	17,100	11,600	22,000			
	10 to 12 users (1000 Litre)*	19,000	13,600	24,000			
	*Group / Shared toilets						

IV. Bio Tank / Bio Toilets (Patented by private operators and approved by the Department of Science and Technology)

	This technology differs from that of the bio-digester toilets developed
Description	by DRDO since the process adopted is aerobic - which involves a
Description	different multi-strain of bacteria which breaks down the waste matter
	through oxidization. Bio-toilets consist of a purpose built multi-

	chambered bio-tank in which the wasto is stored as shown in Figure
	chambered bio-tank in which the waste is stored as shown in Figure 8 . The movement of the waste is slowed down as the waste flows from one chamber to another by a special process in the Bio-tank such that the multi-strain bio-media present in the tank can digest the waste and convert it fully into non-toxic neutral water. This water then passes through the last chamber for disinfection. Here water is treated with Chlorine where the majority of the germs are killed. The resultant water is free from all sorts of E-coli and fecal coliforms. The bricks and mortar Bio-tank is described in the last diagramme of Figure 8.The superstructure is made of bricks and mortar. These are
	available in both flush and non-flush models.
Adventerree	 Aerobic bacteria are very efficient in breaking down organic waste and the waste is decomposed into water by the bacteria within 24 hours. The end products of aerobic degradation are carbon dioxide (CO₂) and water (H₂O). The aerobic pathway also releases a substantial amount of energy.
Advantages	 The Bio-toilet is available in both, portable as well as fixed models. The advantage of the portable model is that it can be shifted from one location to another as and when required, and the module can be assembled and disassembled easily. The Bio-toilet eliminates the need for any periodic sludge removal.
	• The bacteria functions best in temperatures between 4 and 55
	degrees centigrade
Limitations	 Bio-toilets need proper bacteria inoculation periodically depending on the usage at particular sites. An in-depth understanding of the operation and use of toilets in a given area must be undertaken BEFORE choosing bio-toilets as a solution. Attention must be given to O&M, especially in dense urban settlements where chances of blockage of bio-toilets increase, making it dysfunctional over a period of time if the inoculation is not done in time.
	Phenyl/ Harpic or any strong detergent/acid and bleaching
	powder should not be used to clean the pan. Only herbal /
	ayurvedic cleaning agents should be used.
	Chlorine dose is necessary for disinfection.
	Responsibility of cleaning the toilet / superstructure is with the owner
O&M	of the household in the case of IHLs / shared latrines and with the
	ULB in the case of community / public toilets. (a) Size of Toilet/ Super Structure as shown in Fig. 1 –
Specifications	 750 mm x 900 mm x 1900mm or
2223110410110	 800 mm x 1000 mm x 1900 mm

	(b) Material – Bricks and Mortar walls of Bio Digester tank and						
	Superstructure, PCC tank floor, RCC toilet floor, PVC Door and						
	Frame, RCC/PVC/GI sheet Toilet Roof.						
	(c) The Bio-toilet system consists of:						
	 Bio digester Tank(Bricks & Mortar/FRP/Steel), 						
	 Superstructure(Bricks & Mortar/FRP) 						
	Indian Pan/WC						
	• Size: 4 feet x 4 feet tank base, 4 feet tank height, 6 feet						
	superstructure height.						
	 Maximum usage recommended: 30 defecations/ day/ 						
	bio-toilet (no limit on urination)						
	(d) Land requirement - 16 Sq. ft.						
	The tentative cost of bio-toilet including super structure is						
	approximately Rs.20,000/- depending upon material of construction.						
Cost	The bio-toilets should be supplied by the manufacturers, and the O&M						
Estimates	for at least 5 years (including the feeding of inoculum in the periodicity						
	needed) along with IEC (to train users for O&M) by the manufacturer /						
	, 3						
	supplier also should be built into the undertaking.						

Norms & Specifications for Community and Public Toilets

Description	A <i>community toilet block</i> is a shared facility provided for a group of residents or an entire settlement. Community toilet blocks are used primarily in low-income informal settlements where space and/or land are constraints. Pour flush option is generally used in this kind of OSS systems. It is also advisable to provide facilities like washing, bathing, and a small incinerator in this block for the use of the community <i>Public toilets</i> are provided for the floating population / general public in places such as markets, train stations or other public areas, where there is a considerable number of people passing by.							
			eptic tanks for elow in Table	•	public toilets			
Septic tanks for public /	No. of users	Length (m)	Breadth (m)	-	depth interval of) 3 years			
community	50	5.0	2.00	1.0	1.24			
toilets	100	7.5	2.65	1.0	1.24			
	150	10.0	3.00	1.0	1.24			
	200	12.0	3.30	1.0	1.24			
	300 15.0 4.00 1.0 1.24							

Community Toilet - Norms for toilet seats	Source: Manual on Sewerage and Sewage Treatment Systems, 2013 Part A Engineering Note 1: A provision of 300 mm should be made for free board. Note 2: The sizes of septic tanks are based on certain assumptions on peak discharges, as estimated in IS: 2470 (Part 1) and while choosing the size of septic tank exact calculations shall be made. Note 3: For population over 100, the tank may be divided into independent parallel chambers of maintenance and cleaning				
	S. No.	Sanitary Unit	For Male	For Female (A)	
	i.	Water Closet	One per 100 persons up to 400 persons; For over 400 persons, add at the rate of one per 250 persons or part thereof	Two for 100 persons up to 200 persons; over 200 persons, add at the rate of one per 100 persons or part thereof	
Public Toilets	ii.	Ablution Taps	One in each W.C.	One in each W. C.	
- Norms for toilet seats	iii.	Urinals	One for 50 persons or part thereof	Nil	
tonet seats	iv.	Wash basins	One per W. C. and urinal provided	One per W. C. provided	
	Source: Manual on Sewerage and Sewage Treatment Systems, 2013 Part A Engineering Note: i) It may be assumed that two-thirds of the number are males and one- third females ii) One water tap with drainage arrangements shall be provided for every 50 persons or part thereof in the vicinity of water closet and urinals. * At least 50% of female WCs may be Indian pan and 50% EWC iii) Separate seat may also be provided for trans-genders <i>iv) Special arrangements may be made for physically challenged.</i>				
Treatment units	 Bio Digester with reed bed systems/ soak pits Bio Tank Septic Tank with Soak Pits 				
Cost	Tentative basic cost for community toilets is Rs. 65,000/- per seat and public toilets is Rs. 75,000/- per seat. However, the cost per seat would vary depending upon the construction material, quality of construction, type of treatment technology adopted and O&M for specified period etc. However the cost of toilet in bio-digester given by NBCC are as under.				

	Superstructure 5 Cubicle f	or 200 lisers	
		VI 200 43513	
	Pre Painted galvanized Sheets	Masonry	Cement Board
-	Rs. 1,63,000.00/-	Rs.95,000.00/-	Rs. 80,000.00/-
	Superstructure 10 Cubicle	for 400 users	
	Pre Painted galvanized Sheets	Masonry	Cement Board
	Rs.3,26,000.00/-	Rs. 1,80,000.00/-	Rs. 1,60,000.00/-
	Bio Digester Tank 10 KLD	for every 200 use	ers
	Masonry		
	Rs. 1,74,000.00/- per 200 user		
Additional Infrastructure	ning and upkeep ure that public ar lels for the genera supply and bring		
Implementation Mode	All toilets shall be constru provision of O&M for at leas	•	

For additional details the guidelines developed by NBCC can be downloaded. (www.nbccindia.gov.in)

Figures



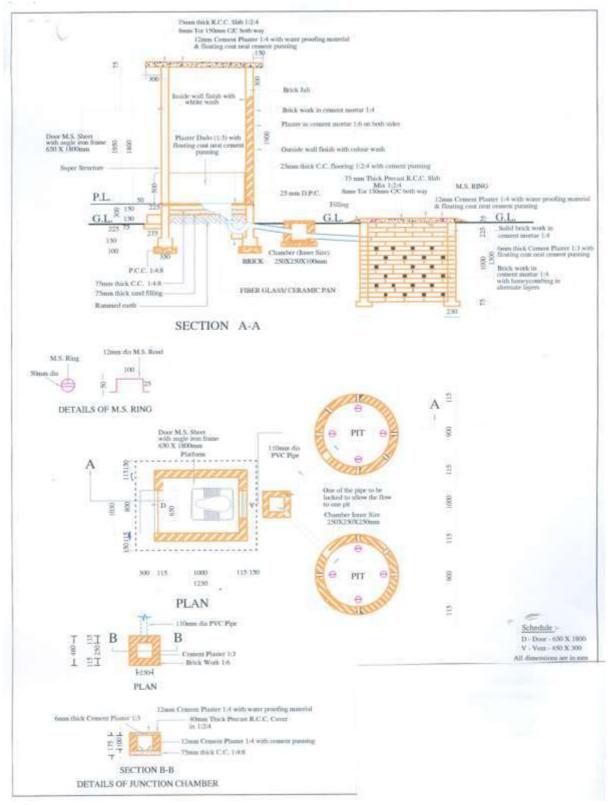
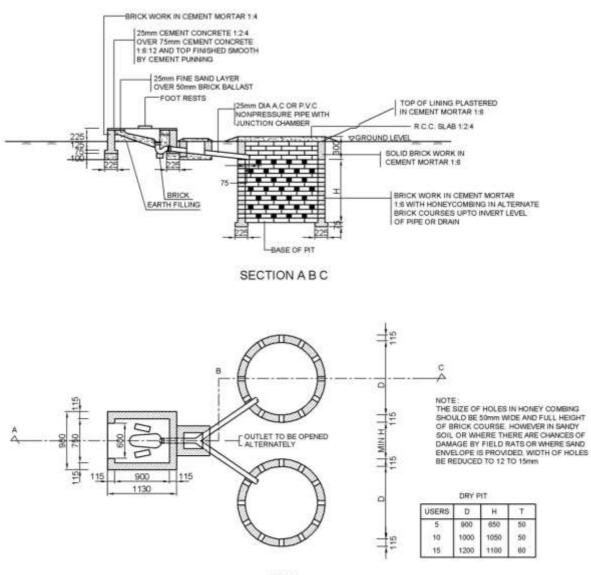


Figure 2: Pour-flush latrine with circular pits

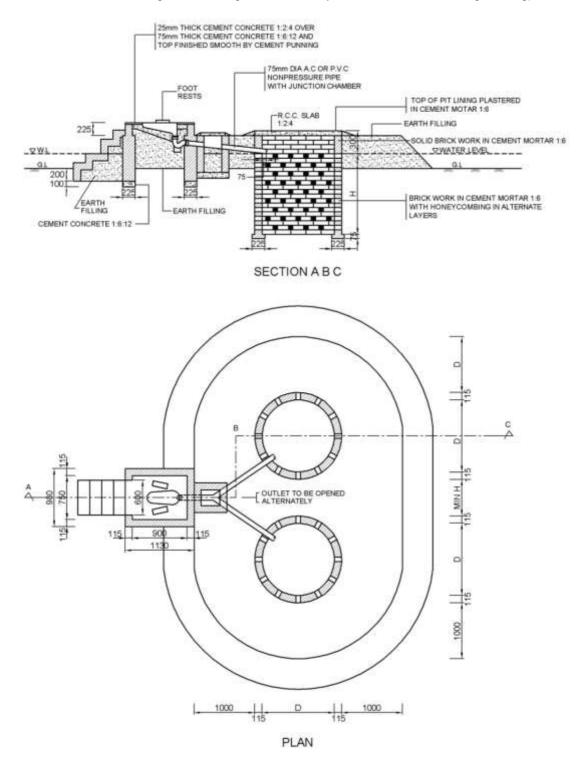
(Source: Manual on Sewerage and Sewage Treatment Systems, 2013, Part A: Engineering)



PLAN

Figure 3: Pour-flush latrine in water-logged areas

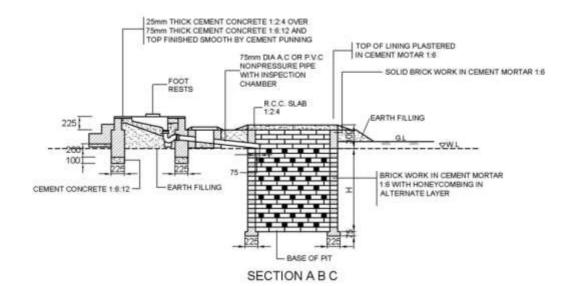
(Source: Manual on Sewerage and Sewage Treatment Systems, 2013, Part A: Engineering)



40

Figure 4: Leach pits in high subsoil water level

(Source: Manual on Sewerage and Sewage Treatment Systems, 2013, Part A: Engineering)



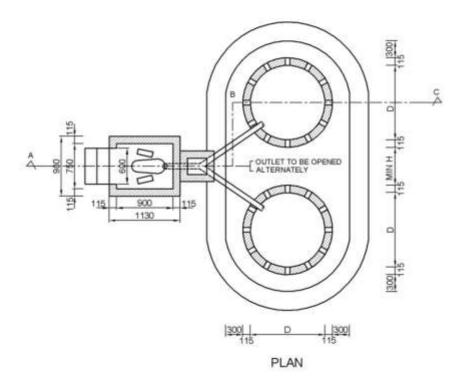
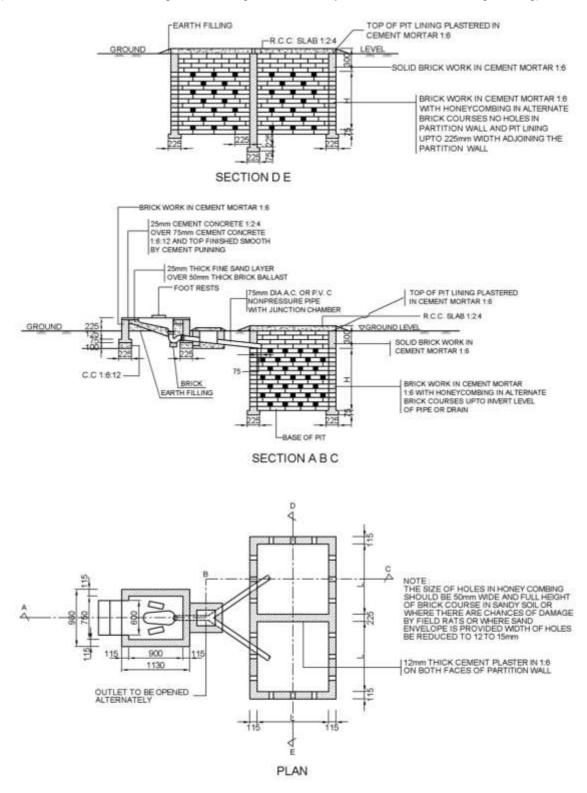


Figure 5: Pour-flush latrine with combined pits

(Source: Manual on Sewerage and Sewage Treatment Systems, 2013, Part A: Engineering)



<u>Figure 6: Typical sketch of two-compartment septic tank for 5 users</u> (Source: Manual on Sewerage and Sewage Treatment Systems, 2013, Part A: Engineering)

(Dimensions in mm)

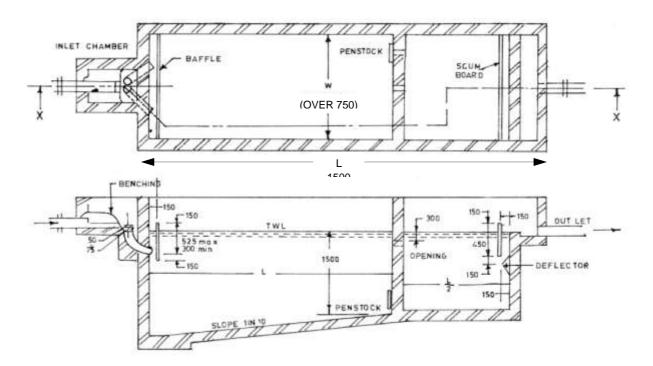
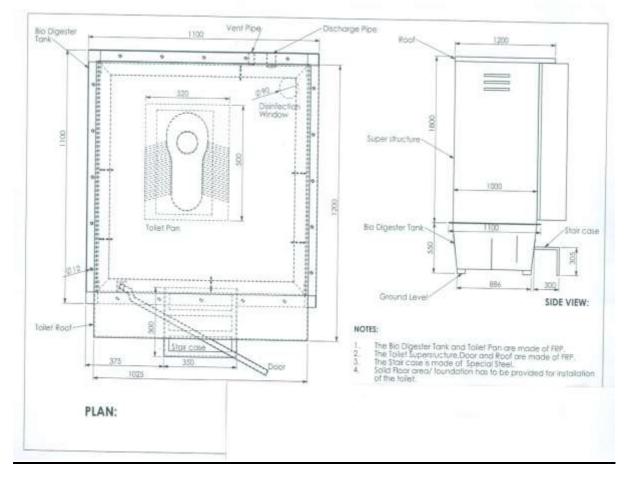


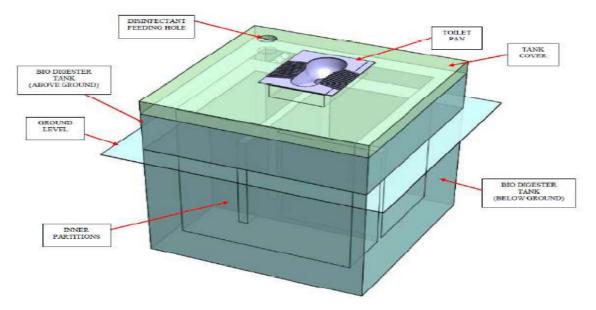
Figure 7: Details of bio-digester with reed bed (Source: DRDO)

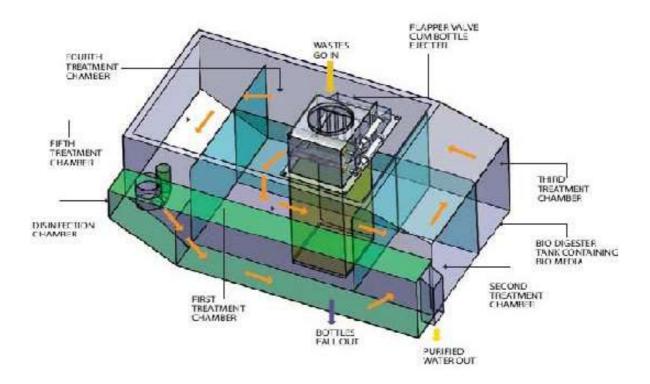


Figure 8: Details of Bio-Toilet

(Source: Private Agency)







Annexure III: Distribution of the Project Fund across States / UTs under SBM (Urban)

	POPULATION OF STAT	UTORY TOWNS	STATUT	ORY TOWNS	OPEN DEFE	Fund Share*	
States/UTs	Pop. (minus OG)	Population Share (%)	No.	ST Share %	HHs	HH Share %	(%)
ALL India	31,85,49,793		4,041		79,02,614		
NON-NE STATES	31,20,08,498		3,823		78,59,648		
ANDAMAN & NICOBAR ISLANDS	1,08,058	0.03%	1	0.03%	1,209	0.02%	0.03%
ANDHRA PRADESH	2,30,04,396	7.37%	125	3.27%	5,81,673	7.40%	5.32%
BIHAR	1,12,41,824	3.60%	139	3.64%	5,46,409	6.95%	3.62%
CHANDIGARH	9,61,587	0.31%	1	0.03%	6,397	0.08%	0.17%
CHHATTISGARH	56,87,885	1.82%	168	4.39%	4,15,147	5.28%	3.11%
DADRA & NAGAR HAVELI	98,265	0.03%	1	0.03%	1,992	0.03%	0.03%
DAMAN & DIU	68,273	0.02%	2	0.05%	678	0.01%	0.04%
GOA	4,01,929	0.13%	14	0.37%	5,788	0.07%	0.25%
GUJARAT	2,31,88,334	7.43%	195	5.10%	3,88,836	4.95%	6.27%
HARYANA	78,61,917	2.52%	80	2.09%	1,28,059	1.63%	2.31%
HIMACHAL PRADESH	6,58,036	0.21%	56	1.46%	10,911	0.14%	0.84%
JAMMU & KASHMIR	29,40,098	0.94%	86	2.25%	44,501	0.57%	1.60%
JHARKHAND	53,05,359	1.70%	40	1.05%	2,54,374	3.24%	1.37%
KARNATAKA	2,21,63,498	7.10%	220	5.75%	5,34,829	6.80%	6.43%
KERALA	52,47,614	1.68%	59	1.54%	18,429	0.23%	1.61%
MADHYA PRADESH	1,87,83,104	6.02%	364	9.52%	7,89,555	10.05%	7.77%
MAHARASHTRA	4,67,83,521	14.99%	256	6.70%	6,94,830	8.84%	10.85%
NCT OF DELHI	1,14,02,709	3.65%	3	0.08%	62,210	0.79%	1.87%
ODISHA	59,69,842	1.91%	107	2.80%	4,08,170	5.19%	2.36%
PUDUCHERRY	7,48,267	0.24%	6	0.16%	18,941	0.24%	0.20%
PUNJAB	95,55,705	3.06%	143	3.74%	1,02,026	1.30%	3.40%
RAJASTHAN	1,57,17,489	5.04%	185	4.84%	4,31,290	5.49%	4.94%

	POPULATION OF STAT	UTORY TOWNS	STATUT	ORY TOWNS	OPEN DEFE	Fund Share*	
States/UTs	Pop. (minus OG)	Population Share (%)	No.	ST Share %	HHs	HH Share %	(%)
TAMIL NADU	2,98,32,766	9.56%	721	18.86%	11,28,692	14.36%	14.21%
UTTAR PRADESH	4,06,94,476	13.04%	648	16.95%	9,65,922	12.29%	15.00%
UTTARAKHAND	24,89,380	0.80%	74	1.94%	19,206	0.24%	1.37%
WEST BENGAL	2,10,94,166	6.76%	129	3.37%	2,99,574	3.81%	5.07%
NE STATES	65,41,295		218		42,966		
ARUNACHAL PRADESH	3,13,557	4.79%	26	11.93%	4,241	9.87%	8.36%
ASSAM	33,19,375	50.74%	88	40.37%	27,900	64.94%	45.56%
MANIPUR	6,36,625	9.73%	28	12.84%	3,427	7.98%	11.29%
MEGHALAYA	3,75,930	5.75%	10	4.59%	1,887	4.39%	5.17%
MIZORAM	5,71,771	8.74%	23	10.55%	1,019	2.37%	9.65%
NAGALAND	5,05,440	7.73%	19	8.72%	2,279	5.30%	8.22%
SIKKIM	1,47,695	2.26%	8	3.67%	719	1.67%	2.96%
TRIPURA	6,70,902	10.26%	16	7.34%	1,494	3.48%	8.80%

Annexure IV

Concept Note on State Urban Sanitation Strategy for the State of _____

PART A: Parameters determining the existing urban sanitation situation

1	State Profile
1.1	Name of the state
1.2	Total Urban Population as per 2011 Census
1.3	Number of Statutory towns 1 as per Census 2011
1.4	Number of Census towns 2 as per Census 2011
1.5	Population of statutory towns (as per Census
	2011)
1.6	Population of census towns (as per Census 2011)
1.7	Total number of urban households

2	Status of Sanitation Situation as per Census 2011[FOR STATUTORY TOWNS ONLY]	Total nos. as per Annexure 1 (State)*
2.1	Number of urban households resorting to open defecation (not in premises – open)	
2.2	Number of urban households having pit latrines	
2.3	Number of urban households having insanitary latrines	

3	Solid waste management (tentative quantity based on per capita waste generation) [FOR STATUTORY TOWNS ONLY]	Total (State)*
3.1	Total Solid waste generated (in MT)	
3.2	Total Waste collected (in MT)	
3.3	Total Waste Transported (in MT)	
3.4	No. of cities with SWM Disposal Facility	
3.5	Total Waste treated (in MT)	

*City-wise information may also be added wherever available.

PART B: Institutional Mechanism for Swachh Bharat Mission (SBM) - Urban

	Provide Details		
Name of the Nodal Agency for SBM	[Provide name of Nodal Agency; else if not designated, provide details of process by which nodal agency will be appointed]		
Name and Designation of Nodal Officer with contact no.	[Provide name of Nodal Officer; else if not designated, provide details of process by which nodal officer will be appointed]		
Institutional Mechanism		Start date (Month / Year)	End date (Month / Year)
a. Constitution of the State- level High Powered Committee (S- HPC)	[Provide details of S-HPC; else if not constituted, provide details of process by which S- HPC will be constituted; timeline should be max. within 1 month of submission of concept note]		
b. Setting up of State Mission Directorate	[Provide details of Mission Directorate; else if not constituted, provide details of process by which Mission Directorate will be constituted; timeline should be max. within 1 month of submission of concept note]		
c. Setting up of PMU at the state-level under SBM	[Provide details of PMU set-up; else if not set- up, provide details of process by which PMU will be put in place; timeline should be max. within 3 months of submission of concept note]		
Submission of State Sanitation Strategy as per the National Urban Sanitation Policy, 2008 (please refer Ministry's website <u>www.moud.gov.in</u>)		Start date (Month / Year)	Date of submission (Month / Year)

PART C: Component-wise action plan for Swachh Bharat Mission (SBM) - Urban

Physical Targets

1		Targets	Baseline 2014	Cumulative Estimated Projection upto2019	Reasons/Justification based on 2001-2011 data and other factors	Target 2014- 15	Target 2015- 16	Target 2016- 17	Target 2017- 18	Target 2018- 19 (up to Oct, 2019)	Cumulative Target (2014-19)
A*	а	Construction of new individual household latrines (IHL)									[100% of 2014 baseline]
	b	Conversion of pit latrines into sanitary latrines	[Part A, 2.2.4]								[60% of 2014 baseline]
	С	Conversion of insanitary latrines into sanitary latrines	[Part A, 2.2.5]								[100% of 2014 baseline]
B*		Construction of Community toilets [NORM: 1 seat / 25 women and 1 seat / 35 men]									[100% of 2014 baseline]
C*		Construction of Public Toilets [NORM: 1 seat / 50 women and 1 seat / 100 men up to specified numbers**]	[Part A, 1.2]								[5% of 2014 baseline]
D		Solid waste Management	[No. of cities proposed to be covered]								[100% excluding the on-going project]
Е		Capacity Building	[Part A, 1.3]								[100% of cities]
F		Public Awareness & IEC	[Part A, 1.3]								[100% of cities]

*Efforts shall be made to construct the toilets within two years i.e. upto 2016-17.

**Please also refer Manual on Sewerage & Sewerage Systems, Part A for more details (page No. 8-16)

Financial Targets

	Financial Targets													
	(Rs in Crores)													
2	Funding [As	2014-2	2019	2014-1	15	2015-	16	2016-1	7	2017-1	8	2018-3	19 (upto	Remarks
	per the funding	(TOTA	L)									Oct. 20)19)	
	pattern in the	Tenta	Centra	Tenta	Central	Tenta	Central	Tentat	Centra	Tentat	Central	Tenta	Central	
	SBM Urban	tive /	l Share	tive /	Share	tive /	Share	ive /	l Share	ive /	Share	tive /	Share	
	Guidelines]	estim		estim		estim		estima		estima		estim		
		ated		ated		ated		ted		ted		ated		
	a. Construction													
	of new													
	individual													
Α	household													
	latrines													
	(IHL)(Based													
	on the cost													

					-		-		-		
	per										
	household										
	toilets)										
	b. Conversion of										
	pit latrines										
	into sanitary										
	latrines										
	(based on the										
	cost per										
	household										
	toilets)										
	c. Conversion of										
	insanitary										
	latrines into										
	sanitary										
	latrines										
	(based on the										
	cost per										
	household										
	toilets)										
- D											
В	Construction of										
	Community										
	toilets [NORM: 1										
	seat / 25 women										
	and 1 seat / 35										
	men] (based on										
	cost per seat)										
С	Construction of										
L			-	-		-	-	-		-	
	Public Toilets										
	[NORM: 1 seat /										
	50 women and 1										
	seat / 100 men										
	up to specified										
	numbers](Based										
	on cost per seat)										
D	Solid Waste										
D											
	Management										
	(based on per										
	capita cost of										
	Rs.1500/ capita										
	may be										
	considered less										
	or more with										
	proper										
	justification in a										
-	separate sheet)										
Е											
	Building &										
	A&OE (5% on										
	Central share)										
F											
	Awareness &										
	IEC (15% on										
	Central share)										
1	Total	1									
	Total										

Annexure-V

