

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
O. A. No. 200 of 2014

In the matter of:

M. C. Mehta

... Applicant(s)

Versus

Union of India & Ors.

... Respondent(s)

Next Date: 28.11.2025

INDEX

Sr. No.	PARTICULARS	PAGE NO.
1.	Reply Affidavit on behalf of the National Mission for Clean Ganga (NMCG) in compliance of the order dated 04.07.2025	
2.	<u>Annexure -1:</u> Copy of the relevant pages of the Judgement dated 13.07.2017 passed in O. A. No. 200 of 2014	
3.	<u>Annexure -2:</u> Copy of CPCB Indicative Guidelines on Restoration of Water Bodies	
4.	<u>Annexure -3:</u> Copy of Swachh Bharat Mission Operational Guidelines, 2021	
5.	<u>Annexure -4:</u> Copy of AA&ES order for the project "Interception, Diversion & Sewage Treatment Plants (STP) Works for Naini (District G) & Phaphamau (District F) in Allahabad City and Jhunsi Area of Allahabad district"	

Date: 27/11/2025

Place: New Delhi



ADVOCATE FOR THE RESPONDENT:

Gigi. C. George, Advocate

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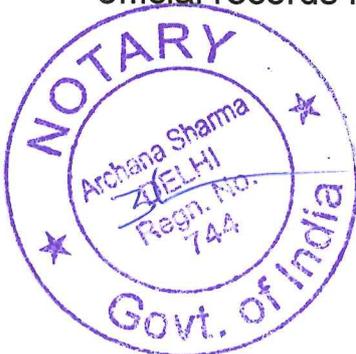
Union of India & Ors.

... Respondent(s)

Reply Affidavit on behalf of Respondent National Mission for Clean Ganga (NMCG), Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti New Delhi in compliance of the order dated 04.07.2025

I, Anup Kumar Srivastava, S/o Late P. L. Srivastava, aged 58 years presently working as the Executive Director, Technical in the NMCG, D/o WR, RD & GR, Ministry of Jal Shakti, New Delhi do hereby solemnly affirm and state as under:

1. That I have been authorized to swear this affidavit on behalf of the answering Respondent NMCG by the Competent Authority. Further, it is stated that I am well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records in the present case.



अनूप कुमार श्रीवास्तव/Anup Kumar Srivastava
कार्यकारी निदेशक (तकनीकी)/Executive Director (Technical)
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भारत सरकार, नई दिल्ली / Govt. of India, New Delhi

- 2 -

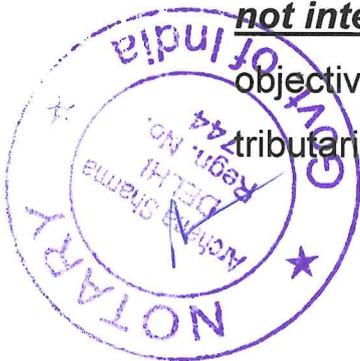
2. That I have gone through the order dated 04.07.2025 passed in the matter by the Hon'ble National Green Tribunal, Principal Bench, New Delhi and has understood the contents therein.
3. That it is humbly submitted that the Hon'ble NGT, vide solemn order dated 04.07.2025, was pleased to observe, inter-alia, that the State of West Bengal has not disclosed the total quantity of sewage being discharged into River Ganga through various drains/khals/canals and which is required to be diverted to STPs. The Hon'ble Tribunal further noted that out of 106 identified drains, only 47 drains have reportedly been tapped, and untreated sewage continues to be discharged through the remaining untapped drains.
4. That it is further submitted that the Hon'ble Tribunal also recorded that several natural khals and Canals are being utilized for discharging sewage and sullage into River Ganga, which is in violation of the provisions of the Water (Prevention and Control of Pollution) Act, 1974, and contrary to the directions of the Hon'ble Supreme Court in *Paryavaran Suraksha*.
5. That it is respectfully submitted that the Hon'ble Tribunal, while examining the status of sewage treatment infrastructure in the State, observed that out of 42 STPs situated in the 30 Ganga-front towns, only 31 STPs are operational and merely 7 STPs are compliant with the prescribed effluent discharge standards. The Hon'ble Tribunal emphasised the necessity of establishing sewage treatment facilities dedicated exclusively to treating sewage and not diluted or weak




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sewage mixed with storm water, as such inflows place an unnecessary hydraulic load on the STPs.

6. That it is further submitted that the Hon'ble Tribunal, while examining the report of the CPCB, observed that out of 15 water quality monitoring locations, as many as 13 locations between *Berhampur* and *Patikali* were found to be exceeding permissible limits of *Fecal Coliform* as well as *Fecal Streptococci*, thereby posing serious public health concerns warranting immediate remedial action by the State of West Bengal and NMCG.
7. ***That it is most respectfully submitted that the Hon'ble Tribunal has accordingly directed that NMCG shall prepare and execute a comprehensive rejuvenation plan to ensure prevention of discharge of sewage/sullage into storm water drains, khals and Canals, and to develop appropriate centralized and decentralized sewage treatment facilities. The Hon'ble Tribunal further directed that such rejuvenation plan shall form part of the District and State Ganga Action Plans and be monitored in accordance with the Ganga Rejuvenation Order, 2016.***
8. That at the outset it is respectfully submitted that the answering respondent **NMCG is in agreement with the observations of this Hon'ble Tribunal that storm water drains, khals and Canals are meant exclusively for carrying storm water/fresh water and are not intended to carry or discharge sewage/sullage.** The primary objective of NMCG is to abate pollution in the river Ganga and its tributaries. Accordingly, NMCG is working on tapping drains that




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carry sewage and diverting it to treatment facilities. This interception & Diversion (I&D) approach serves as an interim solution and provides immediate relief to the river. Also, the State authorities are advised to develop permanent sewerage networks and integrate them with the STPs constructed under NMCG. ***The NMCG strategy focuses on end-of-pipe treatment, in line with the directions of the Hon'ble NGT contained in the judgment dated 13.07.2027 passed in the matter.*** The Hon'ble NGT at para 65 on page No.152-154 has held that

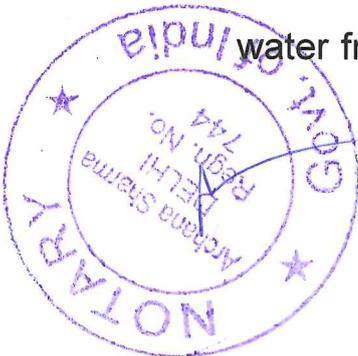
"... We have dealt with the end of the pipe treatment in great detail, the need of the hour is to clean the river as a priority and for that, treatment of the drains which are meeting the river and are carrying mixed effluents should be of antecedence. This also fits in with the river basin approach where entire river basin along with the tributaries and storm drain joining the river, being treated as one organic entity. The Tribunal had discussed in great detail with all the stakeholders and the only rational conclusion that emerges and is most appropriate is that the drain wise treatment should be adopted in preference to cleaning of cities, particularly when the cities consists of all kind of planned, unplanned, haphazard development and slum areas. Even the drains of a particular city can hardly be counted with certainty...."




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Copy of the relevant pages of the Judgement dated 13.07.2017 passed in O. A. No. 200 of 2014 is annexed and marked as Annexure -1

9. That it is further submitted for consideration of this Hon'ble Tribunal that under Article 243 (W) of the Constitution of India, powers, authority and responsibilities have been devolved on the Municipalities and the Urban Local Bodies (ULBs), as may be necessary, to enable them to function as institutions of self-government and such Municipalities/ULBs are mandated to take necessary measures for the preparation of plans and performance of functions for the implementation of schemes, as may be entrusted to them by the State legislature, including those in relation to the matters listed in the 12th Schedule which includes public health, sanitation conservancy and solid waste management, protection of the environment and promotion of ecological aspects.
10. That the NMCG is supplementing the efforts of the State Government for pollution abatement of rivers by providing requisite financial assistance. At present, no major project pertaining to the main-stem of River Ganga in the State of West Bengal is pending with NMCG. The State Govt. of West Bengal has further been requested to submit, on priority, the DPRs for the 11 pending Ganga main-stem towns. The State Govt./ULBs have also been advised from time to time to ensure strict segregation of freshwater/storm water from sewage/sullage, to tap all drains discharging into rivers,



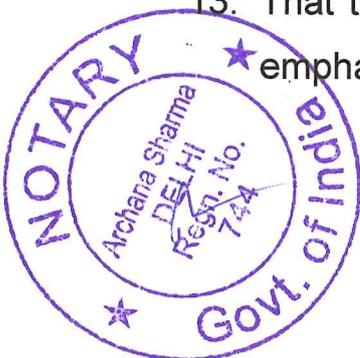

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and to ensure that the entire sewage load is conveyed to designated STPs.

11. That it is further respectfully submitted that ***the drainage systems in the form of Natural khals/ Canals, irrigation/ drainage channels have not been envisaged under the Namami Gange Program (NGP), as these drainage systems predominantly carry fresh water or storm water in huge quantities. The guiding principle in conceptualizing sewerage infrastructure projects under the NGP has consistently been to segregate the sewage component from fresh water/storm water so as to avoid treatment of fresh water and prevent unnecessary hydraulic load on the STPs, and to ensure that only techno-commercially viable projects are grounded out of public funds.***
12. That the CPCB, under the Water (prevention and Control of Pollution) Act, 1974, as amended from time to time, is mandated to take measures for the prevention, control and abatement of pollution at national level. The CPCB framed ***Indicative Guidelines on Restoration of Water Bodies***, identify drain interceptions, screen installations, diversion structures, and provisional pumping as critical first steps for preventing pollutant loads from entering rivers.

A copy of *CPCB Indicative Guidelines on Restoration of Water Bodies* is annexed and marked as **Annexure –2**

13. That the ***Swachh Bharat Mission Operational Guidelines, 2021*** emphasizes the need for immediate interventions—including drain




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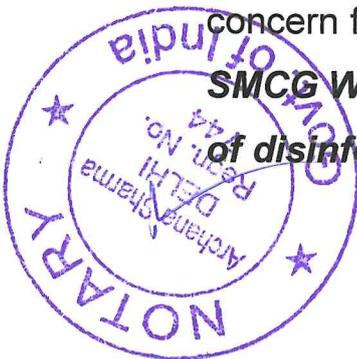
diversion, de-silting, and pumping—to protect water bodies while long-term infrastructure is created. This approach promotes citywide inclusive sanitation, where all pathways of wastewater (including flowing drains) need to be managed.

A copy of the *Swachh Bharat Mission Operational Guidelines, 2021* is annexed and marked as **Annexure –3**

14. That, NMCG duly recognizes the importance of developing a sewerage network and accordingly, while approving the projects, the States, through Administrative Approval and Expenditure Sanction (AA&ES) order, are advised to suitably align the project with the ***Strategic Sanitation Plan/City Sanitation Plan/Master Plan*** for the town and ensure synergy with other central/State-sponsored programs like AMRUT etc.

A sample copy of an AA&ES order for the project “Interception, Diversion & Sewage Treatment Plants (STP) Works for *Naini (District G) & Phaphamau (District F)* in Allahabad City and Jhunsi Area of Allahabad district” is annexed and marked as **Annexure –4**

15. That as regards the water quality of River Ganga particularly with regards to *Fecal Coliform* as well as *Fecal Streptococci* that has been reported by CPCB to be exceeding permissible values, it is humbly submitted that higher levels of *Fecal Coliform* have been a concern for NMCG as well. ***NMCG has taken the matter with the SMCG West Bengal and approved the projects for installations of disinfection units in all existing STPs devoid of disinfection***



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- 8 -

system. NMCG has sanctioned projects to SMCG West Bengal for installation of chlorination unit in 10 existing STPs of West Bengal.

16. That West Bengal has an extensive network of natural khals, Canals and storm water drains, especially in Ganga-front towns. These channels historically served as tidal inlets, storm water conduits, navigation routes and ecological buffers. However, due to rapid urbanisation, inadequate sewerage infrastructure and widespread encroachments, many of these natural drains are presently carrying untreated sewage and sullage. Cleaning and rejuvenating natural khals, Canals and storm water drains is essential not only for river health but also for States' urban resilience.
17. That it is humbly submitted for consideration of this Hon'ble Tribunal that State Government of West Bengal, ULBs, the Irrigation & Waterways Department, KMDA, KMC, may kindly be directed to work in an integrated and coordinated manner to ensure the following:
- (i) Intermixing of storm water and sewage due to incomplete sewer networks, illegal household/industrial connections, and absence of flow segregation systems is effectively prevented;
 - (ii) Desilting of storm water drains/khals/Canals, restoring of their cross-sections and addressing of water quality concerns by arresting all sewage/sullage outfalls discharging into the Canal/storm water drains;

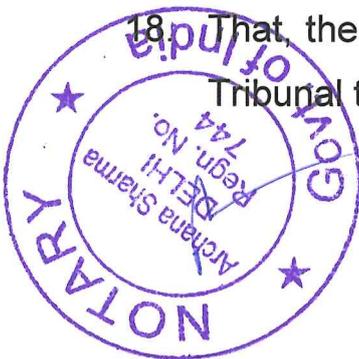


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- (iii) Adequate maintenance, timely repair and proper functioning of the Canal lock-gate and weir gate systems are ensured to maintain hydraulic performance and prevent stagnation;
- (iv) All encroachments, illegal constructions and physical obstruction along natural khals/canals which reduce their carrying capacity and causes water-logging or stagnation are identified and removed in time bound manner;
- (v) Stringent enforcement of municipal by-laws, environmental norms, and prohibitions on illegal sewer connections is undertaken by concerned authorities; and
- (vi) Drainage Master Plans are mandatorily prepared for all Ganga Front Towns in the State and are aligned with future urban growth and climate resilience parameters and the objective of preventing pollution of the river system.

The aforesaid efforts are aimed at restoring the natural hydrology of khals/Canals/storm water drains and ensuring that these channels carry only storm water, thereby contributing to river rejuvenation, strengthening flood management measures and reducing waterlogging in the low lying areas of surrounding wetlands that usually gets inundated during rainy season or during diurnal tidal ingress.

18. That, the answering respondent herein craves leave of the Hon'ble Tribunal to file additional reply, in future, if required.




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19. That the statement made in forgoing paragraphs are true to my knowledge and enclosed annexures are true copy of its original.
20. In light of the above submission, it is respectfully submitted that this Answering Respondent NMCG, shall abide by any order(s) or direction(s) passed by this Hon'ble tribunal in this Application.

Deponent

अनूप कुमार श्रीवास्तव/Anup Kumar Srivastava
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VERIFICATION:

Verified at Delhi on this the day of 27 NOV 2025 November, 2025 the averments and facts stated herein above are true and correct to my knowledge and belief and nothing material has been concealed therefrom.

Sahil Adv
PT 2265/173
I identify the deponent who has
Signed / put T.I. In my presence

Date:

Place: New Delhi

Deponent

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Certified that the foregoing statement
was declared or solemn affirmation
before me which has been read over
to the deponent who has admitted

as Correct

Notary DELHI

27 NOV 2025

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH
NEW DELHI**

.....

ORIGINAL APPLICATION NO. 200 OF 2014

(C.WRIT PETITION No. 3727/1985)

(M.A. No. 594/2017 & 598/2017)

IN THE MATTER OF:

M.C. Mehta

.....Applicant

Versus

Union of India

.....Respondents

AND

ORIGINAL APPLICATION NO. 501 OF 2014

(M.A. No. 404 of 2015)

Anil Kumar Singhal

.....Applicant

Versus

Union of India & Ors.

.....Respondents

AND

ORIGINAL APPLICATION NO. 146 OF 2015

Society for Protection of Environment &
Biodiversity & Anr.

.....Applicant

Versus

Union of India & Ors.

.....Respondents

AND

APPEAL NO. 63 OF 2015

Confederation of Delhi Industries & CEPT Societies
(An Organisation of CETP Societies)

.....Applicant

Versus

D.P.C.C. & Ors.

.....Respondents

AND

ORIGINAL APPLICATION NO. 127 OF 2017

J.K. SrivastavaApplicant

Versus

Central Pollution Control Board & Ors.Respondents

AND

ORIGINAL APPLICATION NO. 133/2017**(WRIT PETITION (C) No. 200/2013)**

Swami Gyan Swarop SanandApplicant

Versus

Ministry of Home Affairs & Ors.Respondents

COUNSEL FOR APPLICANT:

Mr. M.C. Mehta, Advocate in person
Ms. Katyani and Ms. Mehak Rastogi, Advocates
Mr. Gaurav K. Bansal, Advocate
Mr. Ritwick Dutta & Mr. Rahul Chaudhary, Advocates
Mr. S.K. Bhattacharya and Mr. N.B. Paonam, Advocates

COUNSEL FOR RESPONDENTS:

Ms. P.B. Singh, Advocate
Mr. Rahul Verma, AAG with Dr. Bharti Reddy
Mr. Raj Kumar, Advocate
Mr. Abhishek Attrey, Advocate
Mr. Abhishek Yadav, Advocate
Mr. Pradeep Mishra, Advocate
Mr. Raj Panjwani, Senior Advocate
Mr. Mukesh Verma, Advocate
Mr. Kabir S. Bose, Advocate
Mr. Vijay Bahadur Singh, Senior Advocate along with Mr. Ranjit Rao,
AAG for State of U.P
Ms. Antima Bazaz, Advocate for AIDA UPSMA
Mr. Sanjeev Ralli, Advocate for GNCTD/DPCC
Mr. A.R. Takkar, Advocate
Mr. Parag Tripathi, Senior Advocate

Sanctioned Schemes	76 (including 6 institutional development schemes) NON EAP-49 World Bank-26 JICA-1 (Varanasi)
STP Capacity Sanctioned	659.23 MLD
Sewer Network Sanctioned	2469.53 KM
No of Projects Completed	16
STP Capacity Created	110.50 MLD
Sanctioned Amount	Rs. 4974.79 Crores
Expenditure till June, 2014	Rs. 910.57 Crores

65. We have discussed in great detail the deficiencies in execution of GAP-I and GAP-II, by referring to supporting Reports and data. Thus, we have to find a way ahead which is devoid of such deficiencies and is capable of attaining the object of cleaning and rejuvenating River Ganga. The IIT Consortium, other technical experts, the stakeholders' consultative process, the Principal Committee constituted by the Tribunal and finally the Tribunal itself find that adhocism was one of the principal factors for rendering GAP I and GAP II ineffective and unsuccessful. There is no use of treating only the hot spots or treating one or two segments in a city located at the riverbank and leaving all the drains, which are carrying mixed waste to join the river. Even the point where STP/CETP is constructed to treat the effluents or sewage, it joins other bigger drains downstream and thus, even the

treated water again gets highly polluted. There has to be a systematic approach, which will help in cleaning the entire segment on a watershed basis rather than the particular spot, which may be a highly polluting spot, but treating it by itself without taking other required steps for prevention and control of pollution would be of no consequence and without effective results. The Tribunal has to take a holistic view and not a view, which will not stand the test of scrutiny, technically, scientifically and in terms of implementation. The experience in the past must educate all stakeholders not to repeat the mistakes and spend public funds in an indiscriminate manner and thus avoid improper utilization of public funds on the one hand and increase of pollution on the other. The growing population, unplanned and even planned development with industrialisation enhancement itself will in a big way cause the pollution levels to go up, unless appropriate steps are taken without delay and default and in a planned manner. We have dealt with the end of the pipe treatment in great detail, the need of the hour is to clean the river as a priority and for that, treatment of the drains which are meeting the river and are carrying mixed effluents should be of antecedence. This also fits in with the river basin approach where entire river basin alongwith the tributaries and storm drain joining the river, being treated as one organic entity. The Tribunal had discussed in great detail

with all the stakeholders and the only rational conclusion that emerges and is most appropriate is that the drain-wise treatment should be adopted in preference to cleaning of cities, particularly when the cities consists of all kind of planned, unplanned, haphazard development and slum areas. Even the drains of a particular city can hardly be counted with certainty. Thus, we would deal with all the drains which are joining the river Ganga and its tributaries in Segment B of Phase-I.

DIMENSIONS OF THE PROJECT FOR CLEANING AND REJUVENATION OF RIVER GANGA IN SEGMENT-B OF PHASE-I

66. Though Segment-B of Phase-I primarily falls in the geographical limits of State of UP but it was considered appropriate to involve all the stakeholders in finalizing the scope of the project and facets of its implementation in relation to Segment-B. The primary stakeholders are MoWR, NMCG, MoEF&CC, CPCB, UPPCB, State of UP and UPJN. The Principal Committee had been constituted by the Tribunal *vide* its order dated 14th November, 2014 consisting of Senior Most officers of above stakeholders i.e. MoWR, NMCG, MoEF&CC, CPCB, UPPCB, State of UP and UPJN and most importantly the experts from IITs particularly IIT Delhi and IIT Roorkee. The purpose was to receive input of the highest echelons in the field of technology for treatment and consequential use of treated water, while ensuring cleaning of river Ganga in preference

“Indicative Guidelines for Restoration of Water Bodies”

(in compliance to Hon’ble NGT Order dated 10.05.2019 in M.A.No. 26/2019 in OA.No. 325 of 2015)



Central Pollution Control Board

(Ministry of Environment, Forest and Climate Change, Govt. of India)

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CONTENTS

S.No	Description	Page No.
1	Introduction	1
2	Recognition Phase	5
3	Restoration Phase	8
4	Protection Phase	16
5	Improvement Phase	23
6	Sustenance Phase	38
7	References	39
8	List of Figures	
	Figure 1. A Model Lake or Pond Restoration Technique	28
	Figure 2. Model Flow Chart for Restoration of Pond or Lake	29
	Figure 3. Model Flow Chart for Rejuvenation of Polluted Rivers	37
	Figure 4. Flow Chart Showing Criteria for Categorization of River Monitoring Location	48
	List of Annexures	
	Annexure-I: Water Quality Criteria-Designated Best Use	41
	Annexures-II: Criteria for categorization of river monitoring location	42

Indicative Guidelines for Restoration of Water Bodies (Polluted Lakes, Ponds and Rivers)

1 Introduction

Adequate availability of water of required quality is pre-requisite for survival and quality of human life. Surface water bodies like lakes, ponds, reservoirs, tanks and rivers were treated as community resource or asset over the centuries. In urban areas also such water bodies played an important role as a source of drinking water, absorption of flood water and a conduit for ground water recharge. They were being nurtured, protected, conserved and managed by the active participation of the local community without any code of conduct or rule. In turn, these water bodies have been catering the local human and livestock populations. The introduction of public water supply and ground water development through tube wells and hand pumps in the modern times, coupled with urbanization and industrialization induced pollution, a tectonic shift in the attitude of the people towards these water bodies has been witnessed. Both locals as well as the government have started neglecting this asset and have stopped caring, nurturing and conserving these community resources. Mushrooming urban, industrial and infrastructure development has further changed the status of these water bodies from community resources to a mere dumping ground or sink for solid wastes, construction debris, domestic sewage, industrial effluents, religious offering etc. resulting in severe degradation in the quality of such resources.

India has had abundant supply of water resources. However, from being a water abundant country India is gradually progressing towards water scarcity due to increasing population pressure, urbanization and uncontrolled growth. At present it is sustaining 18 per cent of world population with 4 per cent of global water

resources. Therefore, management of water resources has assumed great importance. Today availability of water resources is a major issue and is a big challenge facing our country.

In order to revive, restore and rehabilitate the traditional water bodies, the Government of India launched a Scheme for Repair, Renovation and Restoration (RRR) of water bodies which has multiple objectives like comprehensive improvement and restoration of water bodies thereby increasing tank storage capacity, ground water recharge, increased availability of drinking water, improvement in agriculture/horticulture productivity, improvement of catchment areas of tank commands, environmental benefits through improved water use efficiency by promotion of conjunctive use of surface and ground water, community participation and self-supporting system for sustainable management for each water body, capacity Building of communities in better water management and development of tourism, cultural activities, etc. by providing Central Grant to State Governments under a Pilot Scheme directly linked to agriculture during the remaining period of Xth Five Year Plan in January 2005. Keeping in view the benefits arising out of the implementation of the scheme, it was extended to XII Plan as well. Further, the Ministry of Environment, Forest and Climate Change is implementing a Centrally Sponsored Scheme of National Plan for Conservation of Aquatic Eco-systems (NPCA) since February, 2013 for conservation and management of identified lakes and wetlands in the 11 country in a holistic and integrated manner. Under the scheme financial assistance is provided to the concerned State Governments for undertaking various activities for conservation of wetlands and lakes, which also include a small component of lake front development and beautification, especially in urban lakes.

The National Water Policy (2012) formulated by MoWR, RD&GR advocates conservation, promotion and protection of water and highlights the need for augmenting the availability of water through rain water harvesting, direct use of

rainfall and other management measures. Further, the Standing Committee on Water Resources (2012-13) in their 16th Report on “Repair, Renovation and Restoration (RRR) of Water Bodies” also substantiated that *encroachment on water bodies is threatening the existence of a large number of water bodies and throwing consequent challenges of depleting ground water resources, occurrence of devastating floods in urban areas as well as water scarcity. Afore-said Committee suggested steps required to remove encroachment and to restore the water bodies.*

In recent years several metro cities such as Mumbai and Chennai have witnessed unprecedented flood. Encroachment of river bed is one of the reasons of flooding since it reduces the desired waterway of the river. Inadequacies of flood protection works, reduction in the water holding capacity of natural reservoirs in the basin due to progressive siltation, breaching of river banks, raising of river bed caused by deposition of silt are also the reasons. Encroachments happen due to number of local factors, thus issue is to be looked into by concerned State Government as per the prevailing rules and regulations of the respective State/UT.

As per MoWR, RD & GR, total number of water bodies have declined in the States which may be attributed to (i) increase in population and density of population per square kilometer; (ii) change in land use pattern; (iii) shift from paddy based agriculture to cash crop cultivation; (iv) depletion of ground water; (v) rapid Urbanization; (vi) unplanned urbanization and development activities; (vii) boom in construction activity; (viii) new water bodies have been developed to meet the additional requirement of water for drinking water and irrigation arising due to increase in population; (ix) some of the water bodies mainly, wells in southern group of islands were lost due to submergence of coastal area during tsunami in 2004.

NITI Aayog based on a study warning that India is facing its 'worst' water crisis in history and that demand for potable water will outstrip supply by 2030 if remedial steps are not taken. Nearly 600 million people faced high to extreme water stress. Also, made predictions that twenty-one cities, including Delhi, Bengaluru, Chennai and Hyderabad will run out of groundwater by 2020, affecting 100 million people. If matters are to continue, there will be a 6% loss in the country's Gross Domestic Product (GDP) by 2050. Moreover, critical groundwater resources, which accounted for 40% of India's water supply, are being depleted at "unsustainable" rates and up to 70% of India's water supply is "contaminated" 'Therefore, *water resource available to the country should be brought within the category of utilizable resources to the maximum possible extent.*

Therefore, existing scenario necessitates formulation of guidelines for restoration of water bodies keeping in view (i) to make pollution free water bodies and to meet the desired water quality criteria; (ii) to preserve excess water during monsoon, (iii) to restore and augment storage capacities of water bodies (iv) to serve and enhance ground water recharge; (v) increased availability of water for different intended purposes etc., These guidelines are only indicative guidelines and limited to restoration of ponds, lakes, polluted rivers or streams and divided into two parts i.e., stagnated surface water bodies such as ponds, lakes and rolling surface water bodies such as rivers or streams. However, concerned stakeholders are advised to conduct detailed gap analysis to enable to include related action plans for restoration of water bodies for ensuring compliance to Hon'ble NGT order dated 10.05.2019. For understanding aspects relating to restoration of water bodies, the documents already published or issued by Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD & GR), Ministry of Housing and Urban Development also be referred as given at Sl. No. 7 References of these indicative guidelines.

This requires an understanding on the status of the water bodies, their suitable use, need for management and conservation so that they serve as a good

resource for future, potential strategies for long-term management especially in the urban areas, which are facing severe water shortage. It should include (i) Recognition Phase, (ii) Restoration Phase; (iii) Protection Phase; (iv) Improvement Phase and (v) Sustenance phase

2. Recognition Phase

Identification and recognition of the problem (inventory of existing and lost water bodies (due to encroachment, pollution, diversion etc.), analysis of cause of the problem and its effect and development of alternative solutions of problem as detailed below: -

2.1 Collection and maintenance of historical information relating to the water bodies

Based on the records available or remote sensing data or GIS maps, interaction with the public living in the vicinity of the water body, following information relating to the water bodies should be collected and records maintained by the concerned department in the State/UT: -

2.1.1 Stagnated water bodies such as ponds/lakes

A. Geographical details of the water body: - GPS Location and address of the water body, size or dimensions, area, elevation above mean sea level, ownership of the water body, boundaries with earmarking, map of water body (Digital map or remote sensing or satellite map over the years/National Wetland Atlas) with salient features

B. Hydrological description of the water body: - area, category of lake or pond (natural or man-made), average and maximum depth of stored water (during monsoon and non-monsoon period), total storage capacity, main source of water (rainfall/groundwater seepage/catchment

runoff/direct or indirect flow from any river or stream or creek), water permanence (permanent or intermittent), destination of excess water from pond or lake, purpose used to serve (like drinking water source, fisheries and agriculture or cultivation of aquatic food plants, recreational and aquatic sports, ground water recharge, act as a sink for sediments, habitat for noteworthy animal species, migratory birds or any other purpose), status of lakes or ponds in terms of % open water and aquatic vegetation.

C. *Catchment Description*

- Details on natural drains or flood channels and their flows contributing to water accumulation.
- Major Towns, total population living around the water body, any sewage contribution from the towns, total sewage generation, total no. of existing STPs and their treatment capacities, if any.
- Major industrial clusters or estates contributing to pollution in water body, total no. of industries (sector-wise), sector-wise total industrial effluent generation, existing industrial effluent treatment capacity [(both captive and Common Effluent Treatment Plants (CETPs)], if any.
- Total waste generation (waste like municipal solid waste, plastic waste, industrial hazardous waste, construction and demolition waste), existing provision for collection, transportation, treatment and disposal practices in the vicinity;
- Any other relevant information such as: - (i) Declared Wetland Ramsar sites, (ii) Bio-diversity details such as flora and fauna biodiversity (list of plant species, list of animal species, species of conservation significance (rare, endangered, threatened, endemic species), major plant invasive alien species and extent of invasion, major animal invasive alien species and extent of invasion.

2.1.2 River or streams

A. *Digital map* of river under consideration with its tributaries showing salient features.

B. *Geographical and Hydrological description of polluted river*

Origin of the river and confluence with any other water body, length of travel of the river before confluence with any other water body, velocity of flow (in m/sec), average cross-sectional area (in m²), average depth of flow (in m) during monsoon and non-mon-soon period, volume of flow or discharge (in m³/sec), tributaries of the river under consideration for restoration, GPS location details of all the tributaries and drains confluence with the river or stream; drains or channels contributing to river pollution;

C. *Catchment description*

- Purpose used to serve by the river or streams
- Major towns along the banks of the river, town-wise total population (with projection for the next 20 years), total water consumption (both supply by local or urban bodies and the ground water consumption), total sewage generation pattern, no. of STPs and the treatment capacity.
- Major industrial estates or clusters along the banks of the river, Industry-sector –wise no. of industries, total water consumption, total industrial effluent generation and existing mechanism for treatment of industrial effluent.
- GPS location details of STPs, CETPs and their capacities, if any
- Ground water status, its utilization and the quality.

- Agricultural practices and the control measures with respect to agricultural runoff.
- Flora and fauna including biodiversity etc.

Also, water being state subject, the State Government or Union Territory Administration should assign the task of maintaining historical records pertaining to each water body to concerned Department in the State/UT and also to designate one responsible Department to enable to take necessary remedial actions as and when situation demands.

2.2 Digital Mapping of all the collected information

All the collected information to be located on the map and such details to be periodically updated and maintained by the concerned department in the State/UT.

- 3. Restoration Phase** includes declaring the 'designated best use' in order to formulate strategies and to decide degree of treatment required for restoration of such water body, if required, selection of best solution to problems identified and application of the solution to the problems of the land which vary from case-to-case, to achieve the designated best use water goals as detailed below: -.

3.1 Designation of water body for its use by the State/UT

The landscape of India is dotted with large number of lakes, reservoirs and wetlands. Historically, the water bodies such as ponds or lakes have met water demands of the population for centuries and a community management system had sustained them for a long period of time.

In a water body or its part, water is subjected to several types of uses. Depending on the types of uses and activities, water quality criteria have been specified to determine its suitability for a particular purpose. Among the various

types of users there is one use that demands highest level of water quality or purity and that is termed as “Designated Best Use” in that stretch of water body. Based on this, water quality requirements have been specified for different uses in terms of primary water quality criteria. The Primary Water Quality Criteria for bathing water already prescribed under Environment (Protection) Rules, 1986.

Every pond, lake, river or stream falling under the jurisdiction of the concerned Department of the State Government or UT Administration is required to declare for its ‘designated best use’ in order to formulate strategies and to decide degree of treatment required for restoration of such water body, if required. In the absence of such information, it would be difficult for the regulatory authorities to formulate the strategies to be prepared in case restoration of such water bodies is required.

Water being the State subject, such list of water bodies with designated best use with all the relevant information collected by the concerned Department of the State/UT Administration is required to be submitted to the concerned State Pollution Control Board (SPCB)/Pollution Control Committee (PCC), Central Pollution Control Board (CPCB) as well as MoEF & CC, MoWR, RD & GR.

3.2 National Restoration Goals (Ponds, Lakes and Rivers)

‘Water quality criteria-designated best use’ water quality parameters as given at **Annexure-I** is required to be followed as ‘National Restoration Goals (for Ponds, Lakes or Rivers)’. However, this national restoration goals or criteria given at Annexure-I is only indicative and national restoration goals issued from time to time need to be followed for restoration of water bodies.

Monitored water quality of the water body (lakes and ponds) for relevant parameters (monitored at least 8 times in a year) (average mean value) is compared with the ‘National Restoration Goals’. In case of ponds or lakes, if the monitored water quality of the selected water body is complying at least i.e.,

6 out of 8 times to the designated best use water quality parameters, then such pond or lake is fit for the 'designated best use' and if not then requires remedial measures for its restoration. *This criterion is applicable only in case of ponds and lakes.*

*In case of rivers or streams, the criteria issued from time to time by CPCB for categorization of monitoring location need to be followed and accordingly, the strategies to be formulated for its restoration to achieve at least bathing water quality criteria. Criteria for categorization of river monitoring location is ~~are~~ given in **Annexure-II**. **This criterion is to screen the potential locations having pollution (w.r.t bathing water quality parameters i.e., BOD and Faecal Coliform only) and requires more comprehensive examination to identify all the possible sources of pollution.***

3.3 Steps to be followed for restoration of stagnated polluted ponds or lakes

Conservation and restoration requires a systematic and comprehensive plan to study selective and representative freshwater ecosystems. Details of the study should include the status of ponds or lakes or rivers, their suitable use, management and conservation so that they serve as a good resource for future use and formulation of strategies for long-term management especially in the urban areas.

3.3.1 World Lake Vision

The World Lake Vision has been developed by International Lake Environment Committee (ILEC), Japan (<https://www.ilec.or.jp/en/pubs/>), in collaboration with UNEP , aiming at illuminating the growing crisis in management of lake ecosystem, articulating principles to guide the transition towards managing lakes for their sustainable use and to provide a practical blueprint for ensuring long-term health of lakes and integrity of their survival and economic development. The Seven Principles of Sustainable Lake Management are:

- A harmonious relationship between humans and nature is essential for the sustainable use of lakes.
- A lake drainage basin is the logical starting point for planning and management actions for sustainable lake use.
- A long-term, preventive approach directed to preventing the causes of lake degradation is essential.
- Policy development and decision making for lake management should be based on sound science and best available information.
- The management of lakes for their sustainable use requires the resolution of conflicts among competing users of lake resources taking into account the needs of present and future generations and of nature.
- Citizens and other stakeholders should be encouraged to participate meaningfully in identifying and resolving critical lake problems.
- Good governance, based on fairness, transparency and empowerment of all stakeholders, is essential for sustainable lake use.

The restoration of any water body should be considered only based on the needs and its utilities. *General steps to be followed for restoration of water bodies includes following: -*

3.3.2 Assessment of water quality of the selected water body

Water quality of all the designated best use water bodies are required to be monitored for relevant parameters and as per frequency prescribed under 'guidelines for water quality monitoring 2017' by Ministry of Environment, Forest and Climate Change (MoEF & CC). *Wherever, frequency is not suggested, water bodies are required to be monitored following the standard protocols for collection of samples by the concerned department at least once in a month or but not less than 08 months in a year (covering pre and post-monsoon period)*

3.3.3 Need for restoration of water body

The monitored values of the water body is analyzed based on the criteria suggested under these guidelines or criteria issued from time to time by CPCB for identification of polluted lakes or ponds or rivers or streams and decision be taken for restoration of water body. The criteria suggested for river monitoring location is to use for initial screening and identification of potential hotspots on the river. A comprehensive examination of water quality is required for identifying sources.

3.3.4 Identification of sources of pollution, quantification and assessing detailed gap analysis

Following steps to be followed for identification of sources of pollution, its quantification and for carrying out detailed gap analysis

A. Desk Review and Reconnaissance Survey

Identification of various sources contributing to pollution in ponds or lakes—need to be carried out based on desk survey (available information or data/ google map/ historical records) and physical reconnaissance survey (based on physical visual observations, interactions with the local public etc.,) for identification and ascertaining the sources of pollution of ponds or lakes. All the possible sources of pollution should be identified which may be

- open channels or drainage channels contributing untreated sewage or untreated or partially treated effluent discharge from existing sewage treatment plant in the vicinity (or)
- any untreated industrial effluent discharges either from the individual industry or any common effluent treatment plant (CETP) located in the vicinity (or)

- improper disposal of solid waste (plastic waste/ municipal solid waste/industrial hazardous waste/sludges from septic tanks or sewage treatment plants (STPs) or hazardous waste disposal from common effluent treatment plants (CETPs) (or)
- Run off from nearby agricultural fields, if any.
- Social and cultural misuse of ponds or lakes by local communities especially for immersion of idols during festival seasons.
- Any open-defecation around the ponds or lakes by the people living in the vicinity due to lack of sanitary facilities in their dwellings or colonies and fencing all around such water body.
- Physical condition of weed growth and necessity for dredging- Aquatic plants growing in ponds and lakes are beneficial for fish and wildlife as they provide food, dissolved oxygen, and spawning and nesting habitat for fish and waterfowl. Aquatic plants can trap excessive nutrients and detoxify chemicals. However, dense growths (over 25% of the surface area) of algae and other water plants can cause (i) Fish kills; (ii) Fish flavor problems; (iii) Pond water odor problems; (iv) Drinking water taste problem and (v) Stunted fish growth.
- Silting or sediments in the ponds or lakes due to improper disposal of waste including construction and demolition waste or silt contribution from drainage channels which reduces storage capacity and accumulation of contaminated sludges.
- Status of aesthetic conditions around the water body
- Condition of the banks or bunds, spill over (provision to ensure smooth flow of excess floods on downstream especially during monsoon period) or flood channels including obstructions if any.

- Encroachment of waterbodies due to urbanization
- Condition of Eutrophication of lakes or ponds due to inadequate measures (due to indiscriminate discharge of Industrial effluents, runoff from agricultural fields, refuse and discharge of sewage, domestic wastes like food remnants, soaps, detergents cause depleted levels of dissolved oxygen in water lead to a situation where other aquatic life-forms cannot survive).
- Available In-situ available technological options for restoration of ponds or lakes (such as aeration, bio-remediation) in lakes or plants)

B. Detailed gap analysis

Detailed gap analysis to be made w.r.t municipal sewage, industrial effluent and waste management with a projection of at least 15 to 20 years, existing infrastructure for management of municipal sewage, industrial effluents and waste management in the catchment area of the water body under consideration for its restoration including volumetric flow details of all the channels or drains contributing to pollution in water body, as detailed below: -

- ***Sewage management:*** - Total population (with projected population at least for the next 20 years) living around the water body, total water consumption (taking into account both water supply by local/urban bodies as well as ground water consumption), total sewage generation (with projected generation quantities), total no. of existing STPs and their treatment capacities and the observed gap with regard to the sewage management (gap may be estimated in the catchment of waterbody).

- **Industrial effluent management:** - Industrial clusters or estates contributing to pollution in water bodies, total no. of industries, estimation of total water consumption by the industries, total industrial effluent generation, existing treatment capacity (both captive and common effluent treatment plants (CETPs), gap in industrial effluent management and the requirement for captive or common effluent treatment plants

- **Waste Management:** - waste-wise total waste generation, existing provisions for collection, transportation, treatment and disposal (in compliance to the concerned rules) with their capacities and waste-wise gap analysis and the requirements for their management

C. Identification of other associated issues which requires attention as a part of restoration of pond or lake

Apart from identification of all possible pollution sources, detailed gap analysis, additional measures required on case-to-case basis to be identified especially in case of ponds or lakes w.r.t the following aspects: -

- Buffer Zone development maintenance and the existing activities within the buffer zone.
- Feasibility for Bio-diversity park in case adequate land is available in the vicinity of ponds or lakes.
- Greenery development in the vicinity of the ponds or lakes.
- Introduction of recreation facilities such as paddle boats, building jetty.
- Machinery and the man power requirement for maintenance of

the restored water body.

- Existing provision for disposal of waste arising from the desiltation and de-weeding activity of a pond or lake.
- Awareness and training requirements.
- Any other related measures required also be analyzed for inclusion of such actions while making action plans for restoration of water body (E.g., aesthetic point of view, bins for rubbish management which may be generated due to visitors).

4. **Protection Phase** that takes care of the general health of the water body and ensures normal functioning. A long-term, preventive approach directed to preventing the causes of waterbody degradation is essential.

4.1 Preparation of action plans

Action plans to be prepared based on the historical information collected, desk review, reconnaissance survey conducted, detailed gap analysis for ensuring additional measures required for restoration of water body (vary from case-to-case) covering both direct and indirect measures with specific time targets and the organization responsible for implementation of action plans with budget estimates. Action plans should include covering following aspects: -

- A. Sewage Management:** - for management of sewage inflow if any (which is causing eutrophication of lake or pond) by having adequate infrastructure for treatment of sewage through adequate capacity of sewage treatment plants (STPs) or combination of other low cost treatment technologies for ensuring discharge norms notified under Environment (Protection) Act, 1986 and same should be ensured by an individual generator of sewage as well as by the concerned local or urban body.

B. Industrial effluent management: - for management of industrial effluent inflow by having adequate infrastructure for treatment of industrial effluent in the form of captive industrial effluent treatment plants or through common effluent treatment plants by the respective industry contributing to the pollution of water bodies and same also should be ensured by the respective State Industrial Development Corporations or State Pollution Control Board (SPCB) or Pollution Control Committee (PCC). Adoption of state-of-the technologies for production processes and for ensuring treatment of generated industrial effluent (feasibility adoption of zero liquid discharge).

C. Management of waste

- Adequate infrastructure should be ensured for management of wastes (such as municipal solid waste, industrial hazardous waste, construction and demolition waste, plastic waste, e-waste) in accordance with the respective provisions notified under the Environment (Protection) Act, 1986, by all the concerned.
- Periodic physical removal of improperly disposed wastes (such as municipal solid waste, construction and demolition waste, plastic waste, industrial hazardous waste, human and animal night soils) by the concerned local or urban body.

D. De-siltation

- Periodic removal of nutrient enriched accumulated sludges in ponds and lakes helps in ground water recharge potential, removal of contaminated sediments as well as increases storage capacity of lakes or ponds.

- Sediments removed from the ponds or lakes should be stored in a designated area (till moisture is completely drained out) at a suitable distance away from ponds or lakes and such dried sediments should be removed immediately so that sediments will not become a part of ponds or lakes once again especially in the event of any rain fall. Depending on the characteristics, such sediments after draining may be used as manure (complying to the manure quality prescribed under Solid Waste Management Rules, 2016 as amended from time to time or disposed of in accordance with the relevant provisions notified under Environment (Protection) Act, 1986.

E. De-weeding

- **Periodic dredging** (once in three months) of 80 % of dense and thickly covered aquatic plants viz., floating plants such as algae, duckweed, watermeal, water hyacinth; submerged plants such as milfoil, hydrilla, water lettuce, curly-leaf pondweed, clasping-leaf pondweed, coontail, sago pondweed, water lily, water shield etc., bottom sediment, and associated nutrients should be carried out. De-weeding methods include: -
 - **Preventive measures**
 - such as proper design and construction of ponds or lakes including levelling and smoothing of banks
 - **Manual or physical control measures**
 - Manual or physical control measures such as non-chemical and non-motorized measures be taken for removal of weeds (manual harvesting) using hand pulling, rakes, cutters, benthic barriers, drawdown, aeration, shading and weed rollers as these measures are typically very low, however, such measures

are labor intensive and are therefore better suited to small, less established weed populations. Hand pulling and raking may result in turbid or murky water and may create plant fragments that can subsequently spread to new sites.

➤ **Mechanical control measures**

- Using motor-driven under water weed cutters or floating weeds, rotovators essentially large-scale underwater rototillers for tilling up lake or pond sediments as well as to chop and loosen plant roots, or draglines (in case of underwater pond or lake dredging) (or) dry-land excavation machinery such as bulldozers (in case of drained ponds or lakes) shall be used (or)
- Limiting the amount of sunlight available to aquatic plants by floating black plastic sheeting on the water surface (or) use of dark-colored and nontoxic water dyes (such as nigrosine, aniline and aqua-shade)

➤ **Biological controls** i.e., introducing aquatic animals and plants that eat or compete with waterweeds. Herbivorous animals (those that eat plants) include a wide variety of insects, snails, crayfish, tadpoles, turtles, fish (sterile, triploid grass carp), ducks, geese, and swans which can be stocked in ponds or lakes to consume aquatic plant.

➤ **Application of common aquatic herbicides for control of lake or pond weeds**

Use of herbicides is not recommended as it may kill fish in ponds or lakes. Herbicides should be used in a controlled and systematic way under the supervision of the expert and general herbicides that may be used for weed control are as given below-

- *For Algae (microscopic, filamentous, Chara) control- Herbicides such as copper sulfate, copper chelates, endothall,, simazine)*
- *Submerged Plants (coontail, watermilfoil, pondweeds such as sago, curlyleaf, leafy) control- Herbicides such as Endothall, Diquat, simazine, fluridone may be used*
- *Free-floating plants (duckweed, watermeal) control:- Herbicides such as Diquat, simazine may be used*
- *Rooted-floating plants such as (waterlilies, spanerdock) control- Herbicides such as Glyphosate and 2,4,-D may be used*
- *Emergent plants (cattails, perennial grasses, and broadleaves) control: - Herbicides such as Glyphosate may be used*

F. Prohibition of discharges or disposal of waste or washing activity and action against violators

- Ban on discharge of industrial effluent or sewage or waste (such as municipal solid waste or industrial hazardous waste or plastic waste or construction and demolition waste or sludges from septic tanks/ STPs/CETPs) into lakes or ponds or drainage channels connected with ponds or lakes or open defecation in the vicinity as well as washing of clothes or wading of cattle
- Stringent actions be taken against violating industry by the SPCB/PCC as per provisions under Water (Prevention and Control of Pollution) Act, 1974 as well as Environment (Protection) Act, 1986

- Levying of fine or Environmental Compensation on the violators for improper disposal of sewage or industrial effluent or wastes into lakes or ponds.

G. Stabilization of earthen bunds and the drainage channels as well as silt and soil erosion control measures

- Stabilization of earthen embankments, shore line protection with vegetative or rock riprap to avoid soil erosion and the inflow drainage channels with the stone revetment or pitching so as to avoid rapid seepage or leakages
- All the inflow drainage channels should be provided with suitable silt barriers or sediment traps or sediment detention basins at suitable intervals for control of silt especially during monsoon.
- Also, at all the outfalls of drainage channels, suitable strains or traps should be provided to control inflow of all the floating materials and periodic removal of floating materials should be ensured.

H. Protection drainage basin including preservation of drainage channels

A lake or pond drainage basin is the logical starting point for planning and management actions for sustainable lake or pond use. A long-term, preventive approach for preventing the causes of degradation is essential.

- Historically the drainage channels which used to carry natural runoff from the drainage basin and presently carrying either untreated municipal sewage or industrial effluent or both and contributing to pollution of water bodies eventually due to encroachment in view of urbanization. All such drainage channels need to be restored by interventions such as (i) stoppage of inflow of untreated municipal

sewage or industrial effluent. If required, interaction and diversion of untreated sewage or industrial effluent from such drainage channels by routing through properly designed dedicated sewerage network to ensure conveyance and for ensuring treatment and disposal through STPs/CETPs. Feasibility of in-situ treatment of treated sewage and industrial effluent within drainage channels and prior to the inflow into the water bodies also be explored by the concerned authorities.

- Major channels running from the larger watersheds should be identified based on the historical data and such drainage channels should be preserved and protected with suitable buffer land without any impervious cover. This aspect should be ensured by the State Local/ Urban Development/Town Planning authorities while planning or expansion of a locality.

I. Removal of encroachments and blockades

- The State Government or UT Administration should maintain records pertaining to the boundaries of each pond or lake in the respective State/UT and necessary steps should be taken and ensured removal of all encroachments in the water body spread area/water body boundary as and when required.
- Removal of encroachments in the drainage channels should be carried out periodically to facilitate enhancement in aeration naturally in the water body
- Refrain from granting any consent for establishment for large scale projects in the catchment areas.

- Pond or lake boundary should be provided with fence (permanent / temporary fencing) to avoid unauthorized entry.

J. Flood Control Measures

- Excess floods from drainage basin be controlled with a provision of properly designed 'spill way' with a provision of controlled gates for smooth flow of excess water or run off during monsoon.
- Remove all encroachments (lake bed, storm water drains) to prevent calamities related to floods and to facilitate inter connectivity of water bodies.
- Removal all blockades at inlet or outlets should be ensured to avoid stagnation or blockage of storm water.

5. Improvement phase that deals with overall improvement in the water body and its uses including resolution of conflicts among competing users of lake resources taking into account the needs of present and future generations and of nature.

5.1 Adoption of In-situ techniques for in-situ remediation of ponds or lakes

A. *Physical treatment approaches*

Aeration (using surface aerators or , submerged aerators or a combination of both may be used to increase the dissolved oxygen in the water body, which is used by microorganisms to degrade the pollutants. Aeration also aids in mixing the different thermal layers of the water body, resulting in de-stratification, exposing the lower-most layers to atmospheric air. The need and extent of aeration is calculated based on the water quality parameters, depth of water body, ambient temperatures, wind conditions

etc.). Apart from aeration, methods such as wastewater diversion, periodic de-weeding and sediment dredging, proper maintenance of drainage channels or feeder channels also helps in increase in dissolved oxygen)

B. Chemical treatment approaches

Flocculation using chemicals like alum and neutralizing chemicals especially during acidification (increase in pH level of the stagnated water body)

C. In-situ techniques

- *Using aquatic plants* (Macrophytes such as water hyacinth (*Eichhornia crassipes*) and water lettuce (*Pistia stratiotes*), Whorl-leaf watermilfoil (*Myriophyllum verticillatum*), pondweed (*Potamogeton* spp.), common reed (*Phragmites communis*), cattail (*Typha latifolia*), duckweed (*Lemna gibba*) and canna (*Canna indica*)
- *Using aquatic animals* such as clams, snails and other filter-feeding shellfish
- *Using biological techniques* may be used to decompose, transform and absorb water pollutants. However, concentration and frequency of dosing of the microbial cultures is decided based on the volume of the water body, water quality parameters, ambient temperatures and extent of algal growth [as per literature (i) an enzyme namely Phycoplus and the nutrients are mixed thoroughly and sprayed into the pond within 2-3 weeks' time significance difference may be seen; (ii) treatment method based on hydroponics technique that cleans the lake by absorbing nutrients dissolved in the water and thereby supporting living species inside the lake; (iii) floating

treatment wetlands (FTW) which are artificial islands made of chemically inert materials, gravel having floating characteristics with plants that stay afloat on the lake or ponds such as wetland plants, water hyacinth, mosquito repellents and ornamental plants like cattails, bulrush, citronella, canna, hibiscus, fountain grass, flowering herbs, tulsi and ashwagandha) which helps in cleaning the lake or pond through hydroponics system, (iv) Introduction of mixture of nutrients to grow algae formed by diatoms (the most basic, single-cell life form found in water bodies) which helps in release of oxygen into water and in turn aerobic bacteria present in water body helps to break down the organic matter and convert the pollutants to base constituents and also reduces odors from the lakes or ponds. The diatoms are eaten by zooplanktons that are, in turn, consumed by fish].

5.2 Drainage basin management

- Drainage basin management includes control of non-point sources, structural and land treatment measures (regular monitoring of structures and systems and carrying out necessary rehabilitation and modernization programmes), interception and diversion of nutrients, sediments control (terracing, contour farming, grassed water ways, prior to reaching stagnated water body.
- Crop management, crop residue management and creation of shelter belts, good Irrigation practices, run off control provisions from agriculture runoff laden with excess fertilizers and pesticides

5.3 Green or Buffer Zone

- Buffer Zone around a lake or pond (at least 50 to 100 m periphery) should be maintained as green belt zone or no activity zone and no activity is allowed within the buffer zone by the concerned Departments in the State/UT. In case, any activity presently existing within the buffer zone (50 to 100 m), such as residential or commercial or industrial activity should take necessary measures to prevent discharge of any wastes into the water body.
- Within the buffer zone, no impervious cover is allowed and mainly plantation with a dense population of deeply rooted plants, trees, shrubs and grasses should be created so as to absorb nutrients (which promotes aquatic plant growth and a shift in the water quality) that comes directly from the anthropogenic activities.

5.4 Creation of biodiversity environment

In case the water body happens to be a site for the visit by migratory birds the number and type of trees by the side of the water body and water channels have also to be monitored to ensure adequate shelter as well as suitable environment for egg laying and propagation of bird species.

5.5 Monitoring of Implementation of action plans for restoration of ponds or lakes

The action plans are to be prepared and submitted to CPCB for seeking approval. The action-plan should include activity-wise action points, specific time lines, organization responsible for implementation, budget estimates as well as Program Evaluation and Review Technique (**PERT**) chart for implementation of action plans within the specified timelines, Upon approval of action plans for restoration

of ponds or lakes, thereafter, execution of action plans to begin and to be mentioned on monthly basis by the Monitoring Committee to be constituted under the Chairmanship of Principal Secretary (Environment) of the respective State Government or Union Territory Administration. The monitoring committee should review the progress on implementation of the action plans at least once in three months and apprise the Chief Secretary of the State/UT periodically.

A model lake restoration technique is given at **Figure 1** and a model flow chart for restoration of Ponds or Lakes is given in **Figure 2**.

LAKE OR POND RESTORATION TECHNIQUES

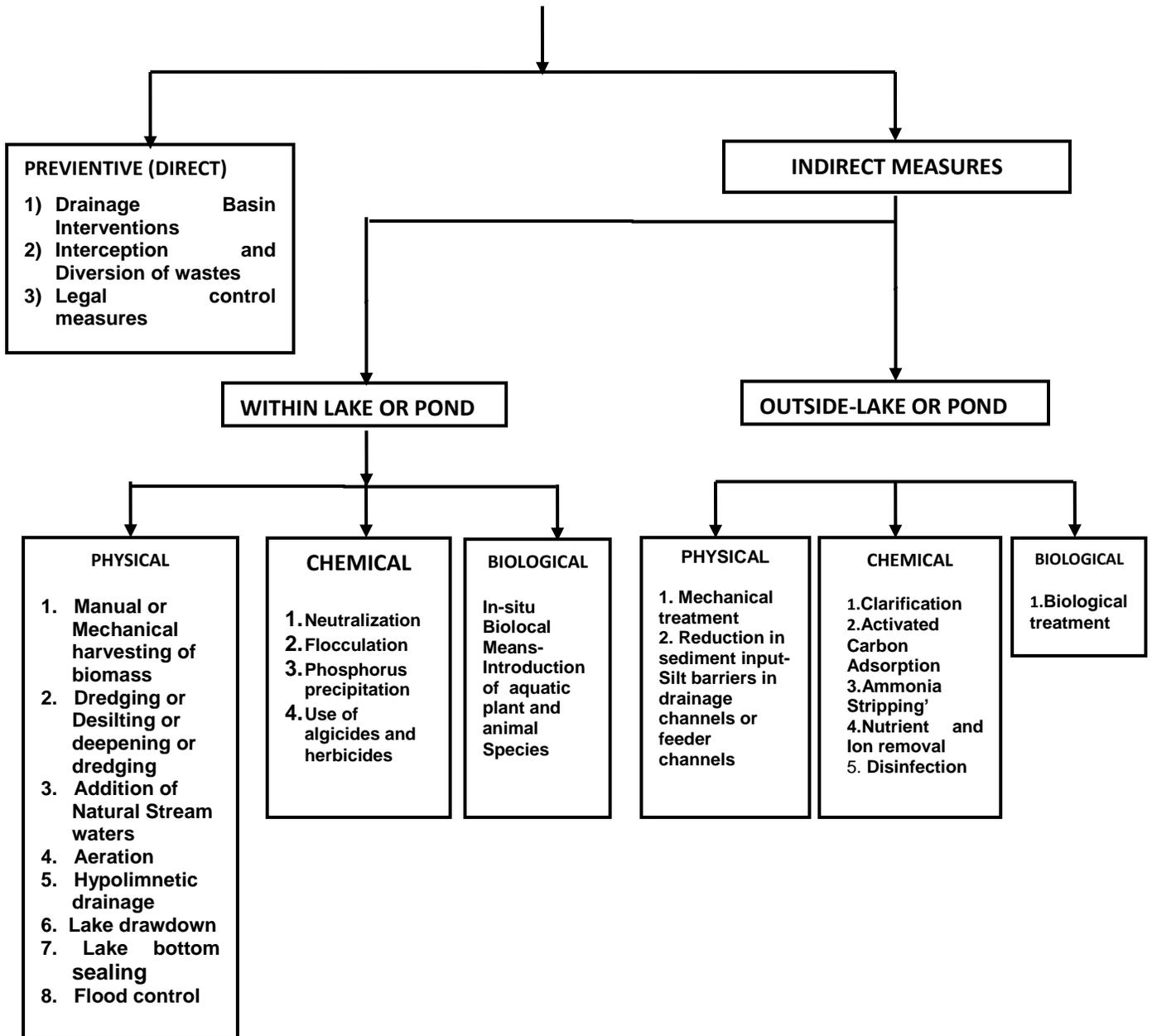


Figure 1. A Model Lake or Pond Restoration Technique

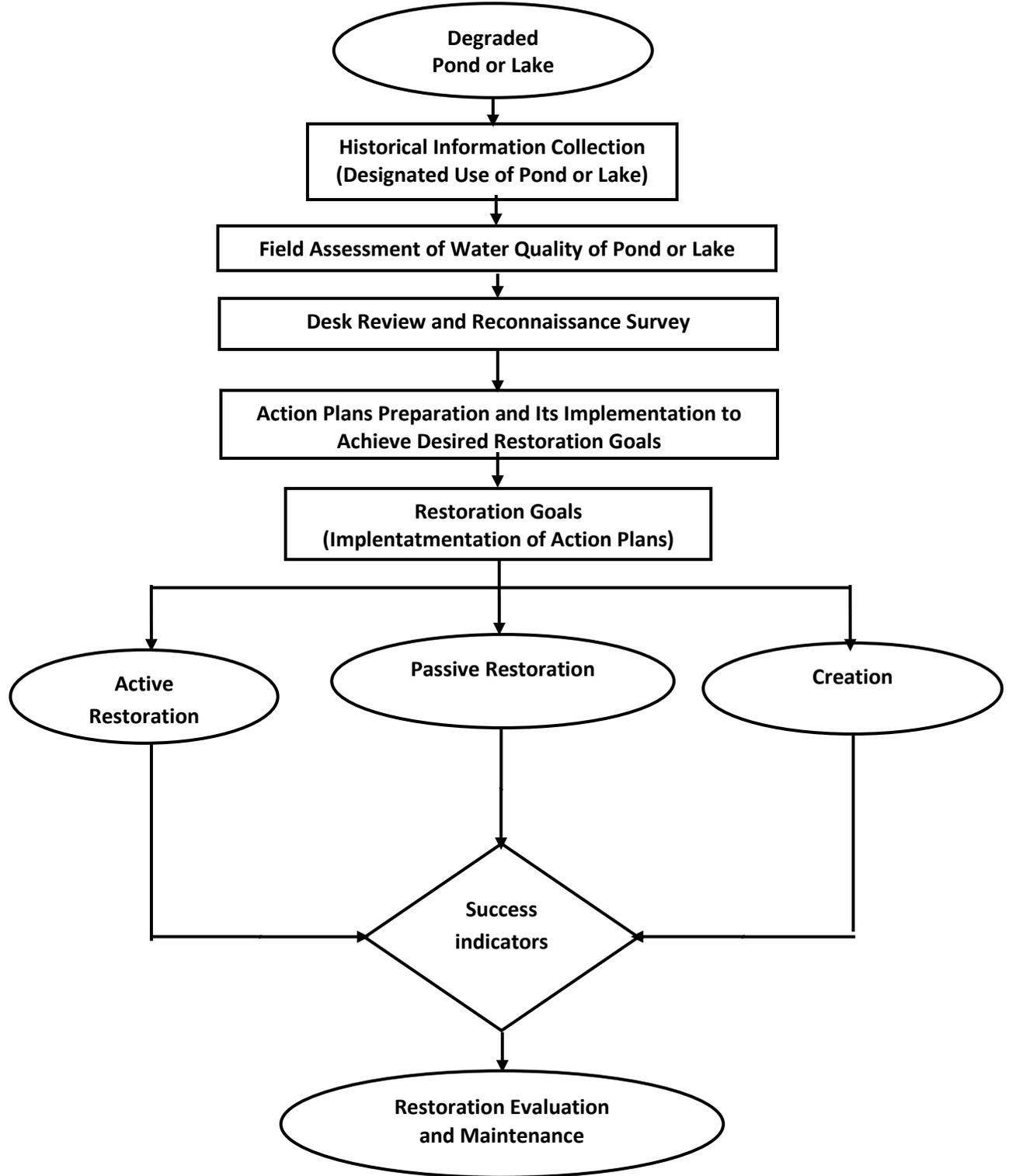


Figure 2. Model Flow Chart for Restoration of Pond or Lake

5.6 Steps involved in preparation of Action Plan for rejuvenation of polluted river stretches

A. Background Information (Refer to Sl. No. 2.1.2)

- (i) Digital map of identified polluted river with its tributaries
- (ii) Geographical and hydrological description of polluted river
- (iii) Catchment description- uses of river, towns, cities and villages, industries (sector-wise no. of industries), ground water status and its utilisation, agricultural practices, flora and fauna etc.

B. Water Quality of River and Its Tributaries

- (i) Water quality of river and its tributaries (at least for five years)
- (ii) Quality assigned as per modified Water Quality Criteria (**Annexure-I**)

C. Identification of Causes of Pollution in Catchment Area of the River

➤ Industrial Pollution

- (i) List of water polluting industries, industry sector-wise: water consumption, effluent generation and quantity of industrial effluent discharged into river
- (ii) Status on granting of Consent under Water (Prevention and Control of Pollution) Act, 1974
- (iii) Status on granting of authorization under the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016 as amended (as applicable)
- (iv) Compliance status and action taken (Placing in public domain)
- (v) Final disposal mode of treated industrial effluents (i.e., disposal on land or drain or ZLD or drain connected to CETP etc.,)
- (vi) Performance status of captive Effluent Treatment Plants (if applicable)
- (vii) Existing Common Effluent Treatment Plants (CETPs) and their performance status.
- (viii) Regulation of small scale industries/tiny units'/service units discharging effluents/sludge disposal into drains/landfill or any other mode of disposal

➤ Ground water management

- (i) Status of ground water level-reserves in the catchment area of river under consideration
- (ii) Blocks identified as over exploited, critical, semi-critical and safe (as per Central Ground Water Board (CGWB) if any)

- (iii) Status of permissions granted by Central Ground Water Board (CGWB) to the industries and other Development projects in the catchment area of river.
- (i) Compliance of conditions stipulated by CGWB and subsequently by SPCB.
- (ii) Ground water sources (Hand –pumps, Wells, Tube Wells) identified in the catchment area of the river and the characteristics (at least for the period of two years);
- (iii) Ground water sources (Hand –pumps, Wells, Tube Wells) identified as non-potable for human consumption in river stretch with Geo-genic/or polluted due to industries.
- (iv) Compliance on ground water charging imposed by Rain Water Harvesting Mechanism.
- (v) Existing mechanism for supply of potable water to the human population in the affected areas.
- (vi) Health deformities /clinical reports in polluted river stretch areas in view of ground water contamination.

➤ **Sewage treatment and disposal: -**

- (i) Cities, towns and villages located on the bank of river stretches discharging sewage effluents through drains into the river.
- (ii) Quantification and pollution load of sewage generated by a city/town/village.
- (iv) Status of septage management.
- (v) Listing of drains carrying sewage and trade effluents joining river and determining flow and characteristics with details of catchment contributing sources (drainage maps from major /minor irrigation development of State/or local body).
- (vi) Existing sewage treatment capacities and performance of Sewage Treatment Plants and their compliance Status
- (vii) Final mode of disposal of treated sewage as well as sludge management

➤ **Waste management in the catchment area of river: -**

- (i) Area-wise Hazardous waste generation, treatment and final mode of disposal and the existing infrastructure.
- (ii) Area-wise Status on municipal solid waste generation, treatment and final mode of disposal and the existing infrastructure
- (iii) Area-wise Status on bio-medical waste generation, treatment and final mode of disposal and the existing infrastructure
- (iv) Any other waste generation, treatment and final mode of disposal and the existing infrastructure

➤ **River catchment information**

- (i) Regulation of Flood Plain Zone
- (ii) Encroachment in Flood Plain Zone
- (iii) Plantation status
- (iv) Flow data of river/tributary

➤ **Gap Analysis and Identification of the problems in the identified polluted river catchment: -**

- (i) Sewage generation, existing infrastructure with treatment capacities and the observed gaps w.r.to infrastructure for sewage management
- (ii) Industrial effluent generation, existing infrastructure with treatment capacities and the observed gaps w.r.to infrastructure for industrial effluent management
- (iii) Waste generation, existing infrastructure with treatment capacities, designed life of the treatment and disposal facilities as applicable and the observed gaps w.r.to infrastructure for waste management
- (iv) Any other relevant issues

(Note: - All the details such as river and its tributaries, area-wise population, sources and water consumption quantities, sewage generation, existing infrastructure for sewage management and the gaps observed, area-wise industries (industry sector-wise no. of industries), sources of water and water consumption quantities (industry-sector-wise), industrial effluent generation, existing infrastructure for treatment (like Captive ETPs, CETPs), final mode of disposal of industrial effluents, waste generation and its management with existing infrastructure, characteristics of river and its tributaries, identified contaminated ground water resource areas has to be detailed in the map preferably a digital map)

D. The River Rejuvenation Action Plan:-

After having complete based information as detailed under earlier paras A to D above, Action Plans on each Activity with time-lines can be framed. The key components of action plan may follow the suggested points as given the Table below:

S. No	Key Activity and Components		Agency to perform the task	Proposed Specific Time Frame for implementation of action plan
1	Industrial Pollution Control			
	(a)	Inventorisation of water polluting industries	SPCB	
	(b)	Grant of consents	SPCB	
	(c)	Compliance verification	SPCB/ District Magistrate (DM)	
	(d)	Planning for CETP (as applicable)	SPCB+ State Industries Department or of Industries	
	(e)	Insisting on ZLD measures, recycling/reuse of treated industrial effluents	SPCB	
	(f)	Prohibition of disposal of effluents into drains except during rainy season subject to complying to effluent discharge norms for disposal in surface water.	SPCB + DM	
	(g)	Covering small and tiny units and not allowing discharge of effluents either individually or combined	SPCB+ Local Body/ Urban Body	
	(h)	Publishing list of defaulting industries in local newspapers and involving public in reporting deliberate discharges (without entering in the premises-backyard water and reporting running of industry against the closure orders.	SPCB + DM	
	(i)	Hazardous or Non Hazardous Waste Management Plan and no dumps anywhere except at identified locations	SPCB + DM	
	(j)	Reporting Non-Compliance of CGWB	SPCB +	

		conditions and closure of Non complying units.	CGWB	
	(k)	Levying compensation or fines for non-compliances as empowered to UPPCB under the Hon'ble NGT Order Dtd. 13/07/2017 in Ganga Matter in case of Tanneries.	SPCB	
	(l)	Other Action as relevant	SPCB + Concerned Agency of State	
2	Ground Water Protection			
	(a)	Declaration of Polluted Blocks	CGWB	
	(b)	Embargo on Water pollution /over-abstraction of industries as per block status	CGWB	
	(c)	Rain water harvesting	Local Body + DM	
	(d)	Identification of Geo-genic contamination (as applicable)	CGWB	
	(e)	Identification of industries discharging industrial effluent illegally and levying fine on such industries including closure of such industries	SPCB + CGWB	
	(f)	Remediation of contaminated ground water (due to discharge of industrial /sewage) with the recovered funds from the default industry	SPCB + CGWB	
	(g)	Capping of contaminated tube wells and Potable water supply through alternate measures in the affected areas of groundwater	Water Supply Department	
3	Sewage Management			
	(a)	Identification of cities, towns and villages discharging sewage into river/tributary	State Local and Urban Development and Executing Agencies	
	(b)	Identifying drains joining river and their quantification and characterizations of pollution load		
	(c)	Preparation of Detailed Project Report (DPR) for interception and diversion (I & D) of drains to sewage treatment plant (STP) for which suitable site to be identified and plan for utilization of treated sewage.		

	(d)	Execution of STP works and necessary infrastructure and ensuring household sewer connection for full utilization of STP		
	(e)	Regular cleaning of drains and prohibiting disposal of garbage/plastic and filthy material into drains including dairy waste		
	(f)	Restoration of natural drains for carrying only storm water (but not sewage)	Local and Urban Bodies + State Water Resources + State Irrigation Department + SPCB	
	(g)	Ensuring utilization of treated sewage for beneficial use such as agriculture, construction activity, washing/flushing/cleaning, industrial cooling etc.,	Local and Urban Bodies + State Irrigation Department + SPCB	
	(h)	Interception and Diversion of sewage from Drains and connectivity to STPs	Local and Urban Bodies	
4	Flood Plain Zone (FPZ) Protection			
	(a)	Demarcation of FPZ and not permitting encroachments	State Irrigation Department	
	(b)	Adopting good irrigation practices to conserve water	State Irrigation Department /DFO	
	(c)	Plantation and bio-diversity parks in FPZ	State Forest Department	
5	E-Flow			
	(a)	E-Flow determination/gauging	State Irrigation Department	
	(b)	Regulation of flow from barrages	State Irrigation Department	
6	Health Impact Assessment Reports-Treatment Services			

	(a)	Epidemiological survey in the catchment to find out water-born diseases/ health issues	State Health Department	
	(b)	Providing treatment services to the diseased persons in the catchment area		
7	Education and Awareness			
	(a)	Regular involvement of educational institutions for creating awareness and conservation programmes	State Education Department with concerned Departments	
8	Funding for execution of Action Plans			
	(a)	Pooling of financial resources of state and central assistance	State Finance Commission/ MoUD and MoWR, RD & GR	

E. Monitoring of Implementation of Action Plans for Rejuvenation of Polluted River Stretches:-

- (i) In compliance with Hon'ble NGT Order dated 20/09/2018 (OA No. 673 of 2018), State/UT Level 'River Rejuvenation Committee (RRC)' constituted firstly has to ensure timely preparation of action plans (before 20/11/2018).
- (ii) Prepared actions plans need to be submitted to CPCB for random scrutiny as well as for approvals.
- (iii) Thereafter, execution of action plans to begin and to be mentioned on monthly basis by the 'RRC' under overall supervision of the Principal Secretary (Environment) of the respective State Government or Union Territory Administration.

A model flow chart for rejuvenation of polluted river is given in **Figure 3**

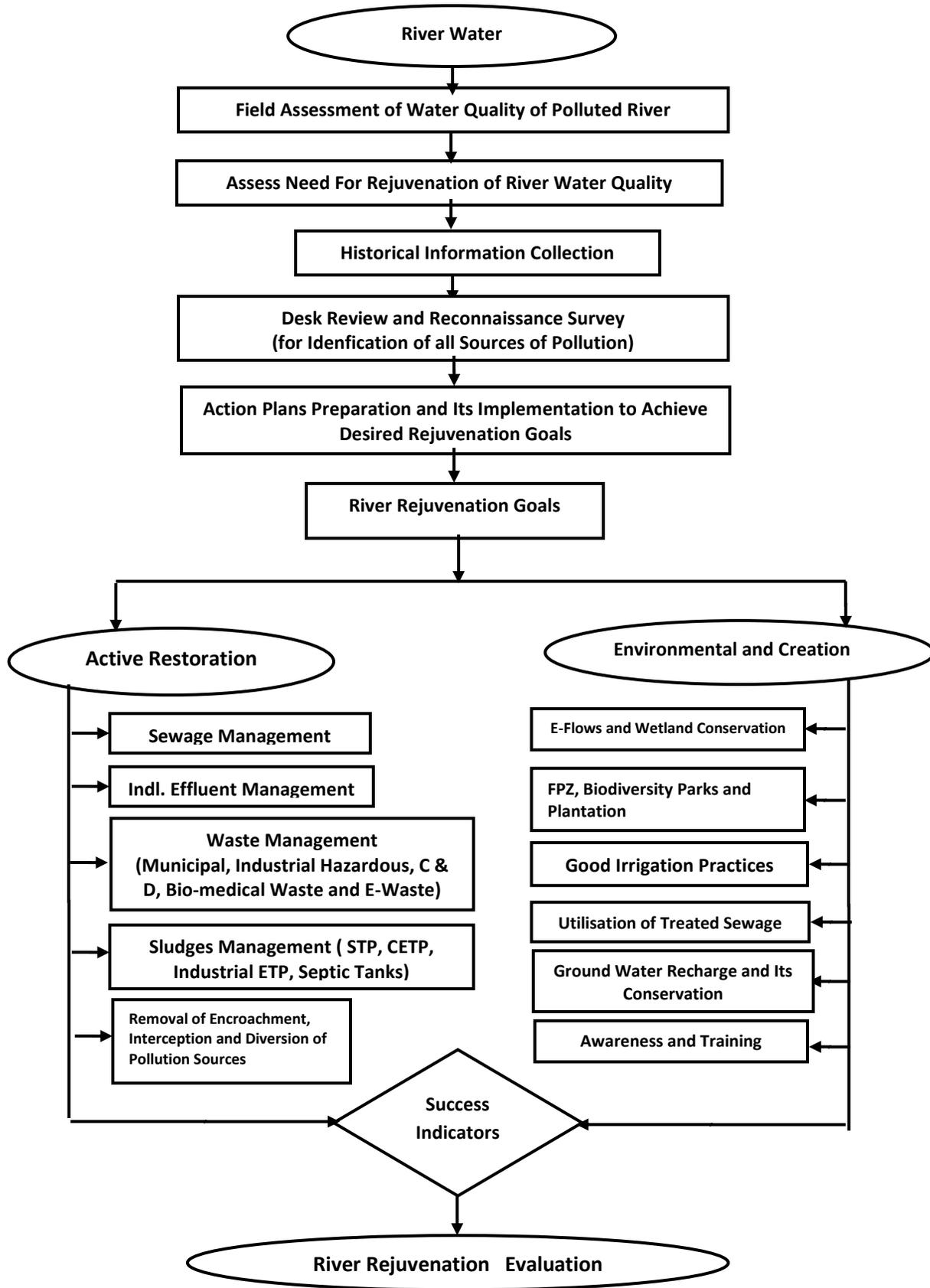


Figure 3. Model Flow Chart for Rejuvenation of Polluted Rivers

6. Sustenance Phase

Good governance, based on fairness, transparency and empowerment of all stakeholders, is essential to sustain the restoration efforts. Also, ownership of each waterbody should be decided, as most of them face indefinite sustenance due to multiplicity of administrative control and/or lack of specific action by singular authority. The in charge authority should treat the water body as 'natural resources', to act as the potential catalysts to better civic health, provide recreation, improve tourism, possibly meet water-needs of local people, etc. Such gains shall be attained only after the water bodies are treated on eco system based approach.

6.1 Awareness

Awareness for citizen's groups, resident welfare associations, local organizations, activist groups, green organizations, political organizations, educational institutions and government agencies in protection of the water bodies should be organized periodically by the concerned authorities through campaigns, electronic media in vernacular languages also be ensured by the concerned authorities

6.2 Training

Organizing periodic trainings through identified and reputed institutions for all the concerned on aspects relating to maintenance during post- restoration phase of the water body.

6.3 Promoting Public Participation

Promoting active public participation (with the help of schools, colleges and universities, NGOs) for identifying and resolving critical lake or pond problems as

well as periodic maintenance and restoration of water body from aesthetic and restoration point of view should be organized.

6.4 Dissemination of Information

Water quality of the pond or lake should be displayed at the main entrance of the pond or lake boundary and such water quality data also connected to the servers of concerned custodian State Department (s) as well as State Environment Department, respective State Pollution Control Board (SPCB)/Pollution Control Committee (PCC). Display boards also should be provided at all the salient points on '**Do's and Don'ts**' for the public.

6.5 Recreational Centre

Creation of pond or lakes can be converted into recreational centers with boating activities, walkways and benches for visitors on charge basis so as to generate revenue for operation and maintenance of the lake or pond areas

7. References

- Parliamentary Standing Committee Report 2016-“Repair, Renovation and Restoration of Water Bodies- Encroachment on Water Bodies and Steps Required to Remove the Encroachment and Restore the Water Bodies” (https://eparlib.nic.in/handle/123456789/65926?view_type=browse)
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<http://mohua.gov.in/upload/uploadfiles/files/Advisory%20on%20Urban%20Water%20Bodies.pdf>

- OA No. 200 of 2014 Titled M.C. Mehta Vs Union of India -(River Ganga) Order of HON'BLE NGT Dated 10/12/2015; and 13/07/2017.
- OA No. 231 of 214 Titled Doaba Paryavaran Samiti Vs State of UP & Ors. (on river Hindon) Order of HON'BLE NGT Dated 08/08/2018
- OA No. 673 of 2018 Titled News item published in "The Hindu" authored by Shri Jacob Koshy titled "More river stretches are now critically polluted: CPCB" Order of HON'BLE NGT Dated 20.09.2018, 19.12.2018 and 08.04.2019

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Annexure-I

Water Quality Criteria-Designated Best Use

Designated-Best-Use	Class of Water	Criteria
Drinking Water Source without conventional treatment but after disinfection	A	Total Coliforms Organism in MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20C 2mg/l or less
Outdoor bathing (Organised)	B*	Faecal Coliform in MPN/100ml: 500 (desirable) and 2500 (Maximum Permissible) Faecal streptococci in MPN/100 ml: 100 (desirable) and 500 (maximum Permissible) pH between 6.5 to 8.5 Dissolved Oxygen: 5mg/l or more Biochemical Oxygen Demand 3 Day BOD, 27 ° C: 3mg/l or less
Drinking water source after conventional treatment and disinfection	C	Total Coliforms Organism MPN/100ml shall be 5000 or less pH between 6 to 9 Dissolved Oxygen 4mg/l or more Biochemical Oxygen Demand 5 days 20C 3mg/l or less
Propagation of Wild life and Fisheries	D	pH between 6.5 to 8.5 Dissolved Oxygen 4mg/l or more Free Ammonia (as N) 1.2 mg/l or less
Irrigation, Industrial Cooling	E	pH between 6.0 to 8.5 Electrical Conductivity at 25 °C micro mhos/cm Max.2250 Sodium Absorption Ratio Max. 26 Boron Max. 2mg/l

* ***Class B as per Primary Water Quality Criteria for Bathing Water (Water Used for Organised Outdoor Bathing) as per Environment (Protection) Rules, 1986***

Annexure-II**CRITERIA FOR CATEGORISATION OF
RIVER MONITORING LOCATION****1. Introduction**

Water Quality monitoring is an essential component to maintain and restore the wholesomeness of resources by way of prevention and control of pollution as prescribed under the Water (Prevention and Control of Pollution) Act, 1974. However, the Water (Prevention and Control of Pollution), Act, 1976 does not define the level of wholesomeness to be maintained or restored in different water bodies of the country. In view of the said reason, the Central Pollution Control Board (CPCB) has tried to define the wholesomeness of water in terms of safe human uses, and thus, taken human uses of water as base for identification of water quality objectives for different water bodies in the Country. It is considered ambitious to maintain or restore all natural water body at pristine level which is possible only by taking proper control measures. The level and degree of treatment required can be decided depending on the categorization of the polluted river locations/stretch, as per the criteria detailed below:-

2. Categorization of River Monitoring Location

The water quality data is required to be analyzed and primarily mean or average values of Biochemical Oxygen Demand (BOD) and Faecal Coliform (FC) need to be estimated. Then, based on the total score estimated for the parameters BOD (weightage- 70 %) and FC (Weightage- 30 %), based on the criteria, the monitoring location is categorized as 'polluted' location. The polluted monitoring locations in a continuous sequence are defined as 'polluted river stretch'. However, actual self-purification distance need to be estimated based on the requisite input parameters which depend on the case-to-case and the local conditions.

The monitoring locations may be categorized in five classes from Category I to Category –VI. i.e., critically polluted to Good or Fit for Bathing i.e., Category –I indicates 'critically polluted'; Category-II indicates 'severely polluted'; Category-III indicates 'moderately polluted', Category –IV indicates 'less polluted', Category – V indicates 'Good' or Fit for Bathing'

Above suggested criteria is intended only for categorization of the river monitoring locations. However, if any State/UT desires to identify any other water body such as lakes, tanks may also apply these criteria depending on the need and the requisite achievable goals for rejuvenation of such water bodies.

Table 1 to Table 3 gives the mean or average BOD/Faecal Coliform values or range and the corresponding scores as well as categorization of the monitoring location

Table 1. Observed Mean or Average BOD Value in mg/l and corresponding BOD Score

S. No	Mean or Average BOD (Weightage-70 %)	
	Mean or Average BOD (in mg/l)	BOD Score (X)
1	> 48	100
2	24-48	80
3	12-24	60
4	6-12	40
5	≤ 6	20

Table 2. Observed Mean or Average Faecal Coliform (in MPN/100 ml) and corresponding FC Score

S. No	Mean or Average Faecal Coliform (Weightage -30 %)	
	Mean or Average Faecal Coliform (in MPN/100 ml)	FC Score (Y)
(1)	> 5,00,000	100
(2)	5000 to 5,00,000	80
(3)	5000 to 50,000	60
(4)	500 to 5000	40
(5)	≤500	20

Table 3. Total Score and corresponding Category of River Monitoring Location

S. No	Total Score* (Z')	Category Priority Class of the Monitoring location	Category of Monitoring location
(1)	81-100	Category -I	Critically Polluted
(2)	61-80	Category--II	Severely Polluted
(3)	41-60	Category -III	Moderately Polluted
(4)	21-40	Category -IV	Less Polluted
(5)	≤ 20	Category -V	Good or Fit For Bathing

Note:

- (i) *Above criteria must be considered only for the river locations having monitored at least for 2 years and 8 observations in each year covering at least pre-monsoon and post-monsoon period;*

- (ii) *Above criteria is a preliminary screening criteria for categorizing monitoring locations. However, comprehensive assessment needs to be done by States/UTs to arrive at the extent of contamination;*
- (iii) *Please refer to the procedure for estimation of Total Score given in S.No 3.;*

- 2.1 Criteria for Category- I – Critically Polluted:** - If the Total score is 81-100, then the monitoring location is categorized as '**Critically Polluted**'.
- 2.2 Criteria for Category- II – Severely Polluted:** - If the Total score is 61-80, then the monitoring location is categorized as '**Severely Polluted**'
- 2.3 Criteria for Category- III-Moderately Polluted:** - If the Total score is 41-60, then the monitoring location is categorized as '**Moderately Polluted**'
- 2.4 Criteria for Category-IV –Less Polluted:** - If the Total score is 21-40, then the monitoring location is categorized as '**Less Polluted**'.
- 2.5 Criteria for Category -V-Good or Fit for Bathing:-**If the Total score is ≤ 20 , then the monitoring location is categorized as '**Good or Fit for Bathing**'.

*For easy understanding, flow chart given in **Figure 4** and steps for calculating the total score may also be referred in the subsequent paras:-*

- 3. Steps for calculating total score and categorizing of monitoring location : -**
 - (i) *Depending on the average BOD measured value, assign the BOD score (X) as given in **Table 1**.*
 - (ii) *Similarly depending on the average FC measured value, assign the FC Score (Y) as given in **Table 2**.*
 - (iii) *Total score (**Z**) is estimated as: BOD Score (**X**) X (Weightage of BOD i.e., 70 %) + FC Score (**Y**) X (Weightage for FC i.e., 30 %). and*
 - (iv) *Now compare calculated Total Score (Z) with the **Z'** Value given in the **Table 3** and the monitoring location is categorized suitably.*

For easy understanding following examples may be referred in the subsequent paras.

E.g. (1): At a particular monitoring location, the average values of BOD and the FC values are observed as 6 mg/l and 9000 MPN/100 ml respectively. Then, the total score is calculated as

- X is the BOD Score corresponding to the mean BOD value of 6 mg/l as per **Table 1** = 20
- Y is the FC Score corresponding to the average FC value of 9000 MPN/100 ml as per **Table 2** = 60
- Calculated Total Score (**Z**) = **X X Weightage of BOD + Y X Weightage of FC** i.e., $20 \times 0.7 + 60 \times 0.3 = 14 + 18 = 32$.
- Compare 39 value with the **Z'** values given in **Table 3** to decide on the *Priority* Category of the Monitoring Location. In this case, monitoring location is Category-IV i.e., 'Less Polluted',

E.g.(2): At a particular monitoring location, the average value of BOD and the FC values are observed as 2 mg/l and 45 MPN/100 ml respectively. Then, the total score is calculated as

- X is the BOD Score corresponding to the average BOD value of 2 mg/l as per **Table 1** = 20
- Y is the FC Score corresponding to the average FC value of 45 MPN/100 ml as per **Table 2** =20
- Calculated Total Score (**Z**) is calculated as = **X X Weightage of BOD + Y X Weightage of FC** i.e., $20 \times 0.7 + 20 \times 0.3 = 20$
- Compare 20 value with the **Z'** values given in **Table 3** to decide on the Category of the Monitoring Location. In this case, monitoring location is Category-V i.e., 'Good' or Fit for Bathing

E.g. (3): At a particular monitoring location, the average value of BOD and the FC values are observed as 2 mg/l and 550000 MPN/100 ml respectively. Then, the total score is calculated as

- X is the BOD Score corresponding to the average BOD value of 2 mg/l as per **Table 1** = 20

- *Y is the FC Score corresponding to the average FC value of 550000 MPN/100 ml as per **Table 2** = 100*
- *Calculated Total Score (**Z**) = $X \times \text{Weightage of BOD} + Y \times \text{Weightage of FC}$ i.e., $20 \times 0.7 + 100 \times 0.3 = 44$.*
- *Compare 100 value with the **Z'** values given in **Table 3** to decide on the Category of the Monitoring Location. In this case, monitoring location is Category-III i.e., Moderately Polluted'*

E.g.(4): *At a particular monitoring location, the average value of BOD and the FC values are observed as 45 mg/l and 400 MPN/100 ml respectively. Then, the total score is calculated as*

- *X is the BOD Score corresponding to the average BOD value of 45 mg/l as per **Table 1** = 80*
- *Y is the FC Score corresponding to the average FC value of 400 MPN/100 ml as per **Table 2** = 20*
- *Calculated Total Score (**Z**) = $X \times \text{Weightage of BOD} + Y \times \text{Weightage of FC}$ i.e., $80 \times 0.7 + 20 \times 0.3 = 62$.*
- *Compare 100 value with the **Z'** values given in **Table 3** to decide on the Category of the Monitoring Location. In this case, monitoring location is 'Category-II i.e., Severely Polluted'*

E.g (5): *At a particular monitoring location, the average values of BOD and the FC values are observed as 24 mg/l and 200000 MPN/100 ml respectively. Then, the total score is calculated as*

- *X is the BOD Score corresponding to the mean BOD value of 24 mg/l as per **Table 1** = 60*
- *Y is the FC Score corresponding to the average FC value of 200000 MPN/100 ml as per **Table 2** = 80*
- *Calculated Total Score (**Z**) = $X \times \text{Weightage of BOD (70 \%)} + Y \times \text{Weightage of FC (30 \%)}$ i.e., $60 \times 0.7 + 80 \times 0.3 = 42 + 24 = 66$.*
- *Compare 90 value with the **Z'** values given in **Table 3** to decide on the Category of the Monitoring Location. In this case, monitoring location is Category-II i.e., 'Severely Polluted',*

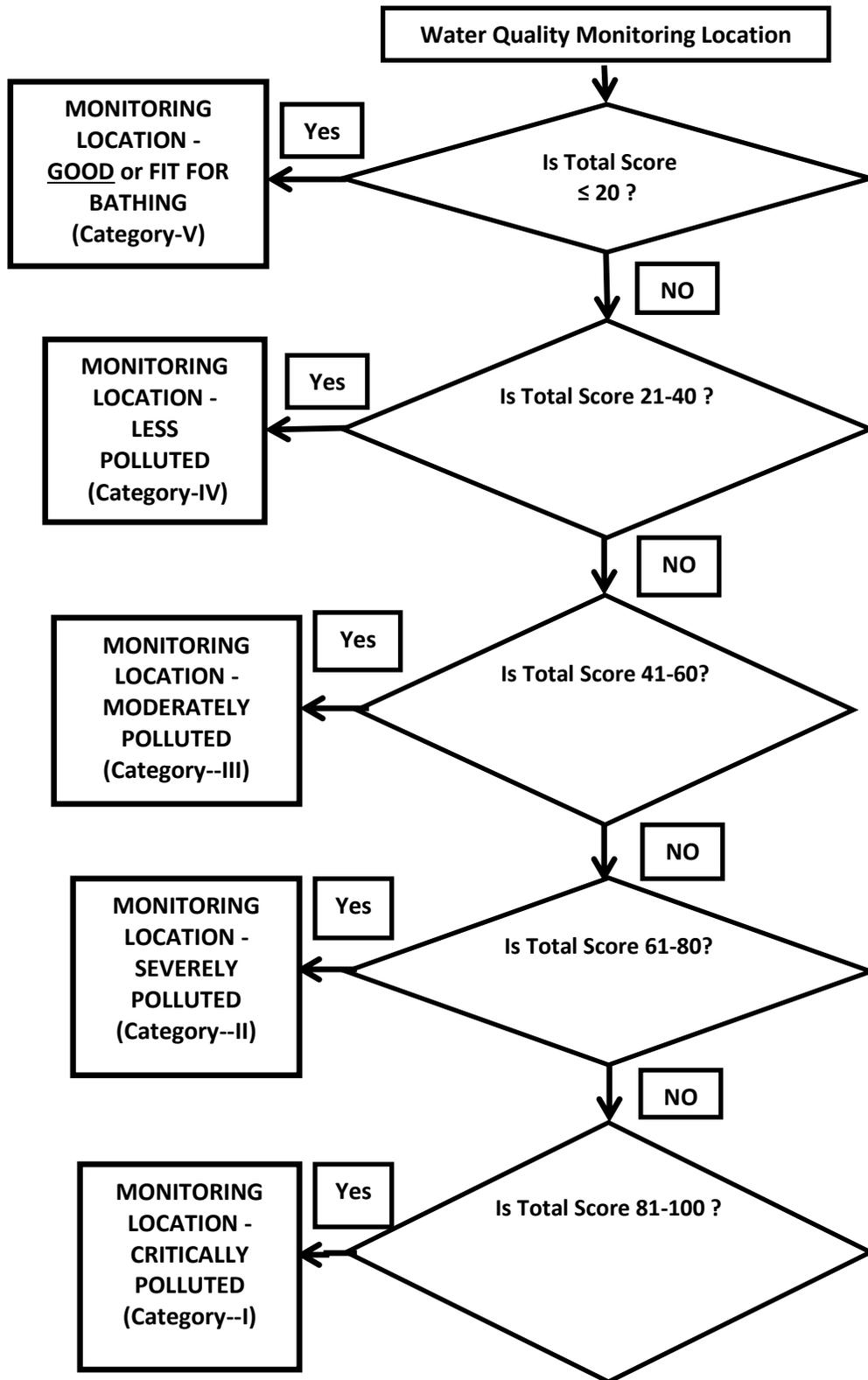


Figure 4. Flow Chart Showing Criteria for Categorization of River Monitoring Location



Ministry of Housing and Urban Affairs
Government of India



Swachh Bharat Mission - Urban 2.0



Making Cities Garbage Free

Operational Guidelines
October 2021



“ ... स्वच्छ भारत मिशन २.० का लक्ष्य है
गार्बेज फ्री शहर, कचरे के ढेर से पूरी तरह मुक्त,
ऐसा शहर बनाना ... ”

Shri Narendra Modi

Prime Minister of India

[Excerpt from the address of the Prime Minister on the occasion of launch of Swachh Bharat Mission – Urban 2.0, on 1st October, 2021]

MESSAGE FROM HON'BLE UNION MINISTER

हरदीप एस पुरी
HARDEEP S PURI



सत्यमेव जयते



आज़ादी का
अमृत महोत्सव

आवासन और शहरी कार्य मंत्री
पेट्रोलियम एवं प्राकृतिक गैस मंत्री
भारत सरकार
Minister of
Housing and Urban Affairs; and
Petroleum and Natural Gas
Government of India

Message

The Swachh Bharat Mission – Urban launched in October 2014 by the Hon'ble Prime Minister resulted in the most fundamental behavioural change brought about in Urban India, primarily because the Mission was not implemented as a Government programme but as a "Jan Andolan".

The second phase of SBM-Urban launched by Hon'ble Prime Minister on 1 October 2021, with a total outlay of ₹1,41,600 crores – nearly 2.5 times of the SBM-Urban - is a reaffirmation of the confidence placed on us by the people of India to take them to the next level of Swachhata over the next five years. The fact that the SBM-Urban 2.0 has been launched during India's 75th anniversary of independence, under the overall ambit of Azadi ka Amrit Mahotsav, provides an added historical significance to Urban India's tryst with sanitation and swachhata.

In this context, I am happy to see the operational guidelines for SBM-Urban 2.0 issued by the Ministry of Housing & Urban Affairs, which is not only a testament to how far we have travelled in our quest for a clean India but also provides Urban Local Bodies and State Governments with comprehensive directions to fast track their journey towards becoming "Garbage Free cities" by 2026.

New Delhi
25 October 2021


(Hardeep S Puri)

MESSAGE FROM HON'BLE MINISTER OF STATE

कौशल किशोर
KAUSHAL KISHORE



सत्यमेव जयते



आवासन और शहरी कार्य राज्य मंत्री
भारत सरकार
Minister of State, Housing & Urban Affairs
Government of India

महात्मा गाँधी जी ने जिस स्वच्छ भारत का स्वप्न देखा था, आज उसे माननीय प्रधानमंत्री के मार्गदर्शन और स्वच्छ भारत मिशन के द्वारा पूरा किया जा रहा है। आज हमारा शहर पहले की अपेक्षा ज्यादा साफ, सुंदर और स्वस्थ हो गया है। आज स्वच्छ भारत एक मिशन ही नहीं, बल्कि एक जन आंदोलन बन गया है। आज स्वच्छ भारत मिशन 1.0 की सफलता और जन भागीदारी को देखते हुए तथा देश को और भी बेहतर और सशक्त बनाने के लिए हमारे माननीय प्रधानमंत्री जी ने 1 अक्टूबर 2021 को स्वच्छ भारत मिशन 2.0 की शुरुआत की है।

स्वच्छ भारत मिशन 2.0 में ठोस अपशिष्ट प्रबंधन, प्रयुक्त जल प्रबंधन, फीकल स्लज मैनेजमेंट, सैनिटेशन जैसे अन्य कई विषयों पे ध्यान दिया जाएगा। इस मिशन के तहत अर्बन लोकल बॉडीज, उनके कर्मचारी और हमारे सफाई मित्र की क्षमता निर्माण पे विशेष ध्यान दिया जाएगा। स्वच्छ भारत मिशन 2.0 न केवल अर्बन लोकल बॉडीज बल्कि देश को भी सस्टेनेबिलिटी की दिशा में ले जाएगा।

इन सब को ध्यान में रखते हुए आज मैं गर्व से कहना चाहता हूँ कि स्वच्छ भारत मिशन 2.0 की गाइडलाइंस, जोकि एस.बी.एम-अर्बन मिशन प्रबंधन विभाग के द्वारा लांच किया गया है, जो न केवल शहर बल्कि देश को एक नए आयाम की तरफ ले जाएगा। आने वाले समय में हम सब देशवासी मिलकर इस स्वच्छ भारत मिशन 2.0 को सफलतापूर्वक अपनाएंगे और देश को पूर्ण रूप से स्वच्छ और स्वस्थ बनाएंगे।

जय हिन्द।

MESSAGE FROM SECRETARY – MoHUA

दुर्गा शंकर मिश्र
सचिव
Durga Shanker Mishra
Secretary



भारत सरकार
आवासन और शहरी कार्य मंत्रालय
निर्माण भवन, नई दिल्ली-110011
Government of India
Ministry of Housing and Urban Affairs
Nirman Bhawan, New Delhi-110011

Foreword

The last seven years has witnessed a radical change in the Urban sanitation scenario in India. Our cities, streets, neighbourhoods have become visibly cleaner, and there has been a marked positive change in attitudes and mindsets of citizens towards 'swachhata'. In fact, Swachh Bharat Mission has emerged as the largest behavioural change programme in the world.

In order to sustain the outcomes achieved under SBM-Urban, we have now embarked on the second phase of our swachhata to realise the vision of Hon'ble Prime Minister. In the second phase, our efforts towards complete Solid Waste Management will continue, with greater focus on issues such as remediation of all legacy dumpsites, where approximately 15,000 acres of land can be reclaimed through remediation of 16 crore tonnes of legacy wastes, setting up Construction & Demolition (C&D) waste plants and procuring mechanical sweepers in large cities, setting up Material Recovery Facilities and waste processing plants, and strengthening of Plastic Waste Management through focus on reuse and recycle of plastic waste and reduction in single use plastic usage, in order to achieve the ultimate vision of Garbage Free cities. Additionally, a new component has been added in this phase - that of used water management, in smaller cities (with less than 1 lakh population). Over the next 5 years, our focus will be on ensuring that no untreated used water is discharged into open lands and water bodies and significant amounts of treated waste water are reused. Parallely, we will be focusing on formalising the informal sector of waste collectors and sanitation workers by integrating them into the formal waste management chain, capacity building, especially for smaller ULBs, and sustaining the *Jan Andolan* i.e. for large scale citizens engagement

I hope that States/UTs and Urban Local Bodies (ULBs) will find these guidelines extremely helpful, to facilitate speedier implementation towards achieving the vision of "Garbage Free" India.

Durga Shanker Mishra

New Delhi
25TH October, 2021

MESSAGE FROM NATIONAL MISSION DIRECTOR, SBM (URBAN)

रूपा मिश्रा
संयुक्त सचिव एवं मिशन निदेशक
ROOPA MISHRA
Joint Secretary & Mission Director
Swachh Bharat Mission - Urban



भारत सरकार
आवासन और शहरी कार्य मंत्रालय
निर्माण भवन, नई दिल्ली-110011
GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
NIRMAN BHAWAN, NEW DELHI-110011

Preface

The success story scripted under Swachh Bharat Mission - Urban over its 7-year journey has poised urban India for its leap into the next level of 'Swachhata'. Swachh Bharat Mission - Urban 2.0, launched by Hon'ble Prime Minister on 1st Oct 2021 on the eve of Swachhata Divas has raised the aspirations of citizens, with the ambitious vision of creating "Garbage Free Cities".

2. For time-bound realization of this vision, it was felt necessary to further streamline existing systems and processes so that States/UTs, ULBs and parastatal bodies can duly accelerate the pace of implementation. The new guidelines are based on the following principles: (a) saturation approach with inclusion and "people first" at its core - to ensure that every category of citizen is covered; (b) ease of governance - where Mission is completely technology-agnostic, with sufficient flexibility and discretion given to States/UTs; (c) transparency and accountability - through extensive use of digital interventions for ease of user access and real-time information flow; (d) equity - to ensure that smaller ULBs are provided with adequate opportunities to improve their cleanliness status; and (e) outcome focused - by emphasizing on capacity building and behavior change, and financial support tied to achievement of specific deliverables; to ensure that the Mission's vision is realized, within the defined time frame of 2021-26.

3. These guidelines have evolved after multiple rounds of stakeholder consultations, and incorporating their feedback. This is a dynamic document which can be supplemented from time to time based on the changes in ground realities. I sincerely hope that these Guidelines will constitute the bedrock to achieve the goals of SBM-U 2.0 that will in turn shape the face of urban transformation in India, and collectively, we will realise the vision of "Garbage Free Cities".

(Roopa Mishra)
Joint Secretary & National Mission Director
Swachh Bharat Mission-Urban

New Delhi
26th October 2021

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION.....	7
CHAPTER 2: OVERVIEW OF SBM-U 2.0	15
CHAPTER 3: MISSION MANAGEMENT STRUCTURE.....	25
CHAPTER 4: FUNDING PATTERN	31
CHAPTER 5: TOILETS (IHHL, COMMUNITY/PUBLIC TOILETS, URINALS)	37
CHAPTER 6: SOLID WASTE MANAGEMENT.....	43
CHAPTER 7: USED WATER MANAGEMENT.....	53
CHAPTER 8: IEC & BEHAVIOR CHANGE.....	69
CHAPTER 9: CAPACITY BUILDING, SKILL DEVELOPMENT & KNOWLEDGE MANAGEMENT	73
CHAPTER 10: IT ENABLED GOVERNANCE.....	81
ANNEX 1: LIST OF ULBs ELIGIBLE FOR C&D WASTE PROCESSING AND MECHANISED SWEEPING FUNDING.....	87
ANNEX 2: CITY SOLID WASTE ACTION PLAN (CSWAP)	92
ANNEX 3A: CITY SANITATION ACTION PLAN (CSAP): FOR TOILETS	104
ANNEX 3B: CITY SANITATION ACTION PLAN (CSAP): FOR USED WATER MANAGEMENT.....	107
ANNEX 4: STATEWISE ALLOCATION OF FUNDS.....	112
ANNEX 5: OUTPUT-OUTCOME INDICATORS	114
ANNEX 6: CHECKLIST FOR PROPOSAL PREPARATION.....	119
ANNEX 7: IEC ACTION PLAN.....	127
ANNEX 8: CAPACITY BUILDING ACTION PLAN	129
ANNEX 9: FEATURES OF ASPIRATIONAL TOILETS.....	131
ANNEX 10: BASIS OF COSTING FOR SWM COMPONENTS, CT/PTs AND USED WATER COMPONENTS.....	133

INTRODUCTION

Provides an overview of achievements of SBM–Urban, so far, and introduces SBM Urban 2.0.

1.1 Background

The Sustainable Development Goals (SDGs) place significant emphasis on sanitation, cleanliness and hygiene. There is evidence globally that better sanitation, hygiene and cleanliness helps in effective control of various vector borne diseases, parasite infections and nutritional deficiencies. There have been studies linking cleanliness and hygiene with reduction in respiratory disorders, gastrointestinal diseases (especially diarrhea), psychological issues and allergic conditions.

Decades ago, Mahatma Gandhi said that *'sanitation is more important than political freedom'*. The launch of Swachh Bharat Mission on 2nd October 2014 by the Hon'ble Prime Minister Shri Narendra Modi was a historic moment for India. It not only placed the issue of sanitation at the centre of the Government's developmental agenda, but also sent out a resounding message- through the Prime Minister's address from the ramparts of the Red Fort.

Swachh Bharat Mission (Urban) (SBM-U) had three major objectives: (a) achieving 100% Open Defecation Free (ODF) status, (b) ensuring 100% scientific Solid Waste Management

(SWM), and (c) behavior change through *'Jan Andolan'*, by 2nd October 2019, in all statutory towns. The outlay of the Mission was ₹62,009 crores, including GoI share of ₹14,623 crores, and minimum State share of ₹4,874 crores. Balance funds (₹42,535 crores) were to be generated through individual beneficiary contribution, PPP and other sources.

1.2 Achievements

This Mission has achieved significant levels of success against the above objectives, with massive engagement of citizens across all categories of society.



1.2.1 India's journey in Solid Waste Management: the launch of SBM-U, coupled with the promulgation of SWM Rules 2016 C&D waste rules, Plastic Waste Management rules etc, all combined to set the stage for India

to accelerate its progress on effective Solid Waste Management. Where unsightly heaps of garbage dotting the urban landscape, wreaking havoc on citizens' health used to be a common phenomenon prior to 2014, today there have been noteworthy improvements. Cities have become visibly cleaner, thanks to the fleet of more than 2.5 lakh collection vehicles that travel from door to door, collecting household and other solid waste. Source segregation of waste, which was negligible earlier, have now captured the imagination of citizens and being adopted by more and more households. An enabling eco-system has been created through policy reforms designed to encourage conversion of waste to value added products. Awareness has also been generated on critical issues such as source segregation of waste, effective management of construction & demolition waste, reduction in single-use plastic usage, etc.



The results are there for all to see. At the time of its launch, the Municipal Solid Waste (MSW) treatment capacity was 26,000 TPD of waste (18%). This has been enhanced substantially in the last 7 years, and presently, waste processing capacity stands at nearly 1 lakh TPD (70%).

Door to door collection and source segregation have gone up from negligible levels in 2014 to cover 86,228 wards (97%) and 72,493 wards (85%) respectively. Economically weaker sections of society, especially women self-help group members from urban poor communities have more livelihood options, and over 90,000 informal waste workers have been formalized into the waste management value chain.

1.2.2 India's ODF journey: Urban India has become Open Defecation Free (ODF) under SBM-Urban: a fitting tribute to Mahatma Gandhi's vision. Not only has the sanitation objective of the Mission been fulfilled, but lakhs of citizens, especially women, have been provided dignity and safety, and significant reduction in vector borne diseases with consequent improvement in health parameters have been experienced, setting Urban India on the path of holistic cleanliness. Sanitation workers and SafaiMitras, a largely ignored section earlier, have become a key stakeholder for the Mission, with initiatives being taken to ensure safe, healthy and improved living conditions for them, and providing them with



better livelihood options, dignity and respect. In terms of tangible outcomes, all Urban areas of 35 States/ UTs have become ODF (except 1 ULB of West Bengal), i.e. 4,371 ULBs (out of 4,372) have become ODF. This has been achieved through the construction (including under construction) of 66.86 lakh Individual Household Toilets (113% progress), and 6.40 lakh seats of Community/ Public toilets (CT/ PT) (126% progress).



1.2.3 Third party assessments & standardized protocols: In order to sustain the ODF status and ensure that no slippage occurs, MoHUA has introduced the ODF+ and ODF++ protocols. ODF+ protocol focuses on O&M of CT/ PTs by ensuring their functionality and proper maintenance for continued usage. ODF++ protocol focuses on addressing safe containment, evacuation, transportation and processing of fecal sludge from toilets and ensuring that no untreated sludge is discharged into open drains, water bodies or in open fields.

Water+ protocol helps ensure that no untreated waste (used) water is discharged into the open environment or water bodies. Till 2nd October 2021, 3,309 cities have been certified ODF+, 960 cities have been certified ODF++, and 9 cities have become Water+, through third party verification.



1.2.4 Behavior change through Jan Andolan: SBM-U has emerged as the largest urban sanitation behaviour change program in the world and has been able to accelerate India's progress in ensuring availability and sustainable management of water and sanitation for all (SDG 6). Under SBM-U, the sanitation discourse has been brought onto the centre stage of the nation's development agenda and has helped to transform a government mandate into a 'Jan Andolan'. Through the personal leadership and involvement of the Prime Minister, SBM has been able to put the sanitation discourse into a 'Jan Andolan', a people's movement. Massive mass media campaign, intensive outreach programs, stringent monitoring of Information, Education and Communication (IEC) fund spend, multiple stakeholder involvement including by celebrity brand ambassadors and influencers have been the pillars of its behavior change strategy. However, the major trigger for

behaviour change has been the ownership that people from the community have taken when it comes to leading and sustaining change on the ground. Through a judicious use of traditional, digital, social media campaigns and intensive interpersonal communication, SBM-U has been able to activate all categories of citizens

- community volunteers, youth, students, home makers, senior citizens, celebrities, elected representatives, media and the industry. Till date, over 20 crore citizens have been engaged in the Mission, which is testimony to the 'Jan Andolan' that has been created.



1.2.5 Innovations

A variety of innovations have contributed to the success of the first phase of the Mission, as given below.

1.2.5.1 Swachh Survekshan: An innovative survey conducted by the Ministry of Housing and Urban Affairs (MoHUA) under the SBM-U, to rank cities on various sanitation and cleanliness parameters. The survey has been successful in enthusing cities with a spirit of healthy competition towards the concept of 'swachhata'. Swachh Survekshan has now emerged as one of the largest Urban sanitation surveys in the world, with participation from crores of citizens. As on 2nd October 2021, 6 rounds of surveys have been conducted, in which Indore has been adjudged the cleanest city for four years in a row. The 7th edition has now been announced, and is set to kick-off.

1.2.5.2 Star rating protocol for Garbage free cities: The protocol, based on various SWM parameters follows a SMART framework – Single metric, Measurable, Achievable, Rigorous verification mechanism and Targeted towards outcomes. The indicators include all components of SWM, viz. source segregation, scientific processing of waste, dumpsite remediation, penalties & spot fines for littering, compliance by bulk waste generators, cleanliness of drains & water bodies, plastic waste management, and managing construction & demolition waste, etc. which are critical for cities to achieve garbage free status. Till date, 6

cities have been rated as 5-star cities, 86 cities as 3-Star and 65 cities as 1-Star.

1.2.5.3 *Citizen connect through ICT initiatives:*

- MoHUA has partnered with Google to map all public toilets on Google maps, thereby improving ease of access of sanitation facilities to citizens. Till date, more than 65,500 public toilet blocks across more than 3,100 cities are accessible through Google maps covering more than 70% of India's urban population.



- More than 2 crore citizens have downloaded Swachhata App (citizens' grievance redressal platform for all sanitation and waste management related complaints). Nearly 2.22 crore complaints have been registered and 2.08 crore complaints have been resolved with more than 90% resolution rate.



- MoHUA has deployed e-learning platform to train municipal functionaries across India. The platform hosts over 175 modules on various topics covering sanitation and waste management. More than 90,000 municipal employees and other users have actively used the platform, and successfully completed over 8.8 Lakh certifications (including 7.56 lakh certifications to govt. employees).

1.2.5.4 *Swachhata becomes everybody's business:*

The Mission engaged with a wide variety of stakeholders, from celebrities as brand ambassadors, engaging with influencers in society, partnering with industry partners and corporate entities, as well as social entrepreneurs, citizens, students and youth, women SHG groups, homemakers and senior citizens, to make 'swachhata' everybody's business.

1.2.5.5 *Equity, inclusiveness, addressing special requirements:*

In order to ensure that benefits of the Mission accrue to every citizen in an equitable and inclusive manner, standardized protocols were put in place. For example, the ODF+ protocol specified mandatory gender-friendly, child-friendly, divyang-friendly features to be included in every CT/PT. These protocols, along with mapping of all CT/PTs on Google maps ensured that every citizen's needs were catered to, with nobody left behind.

1.3 Need for SBM-U 2.0

NSSO had undertaken an impartial assessment of the Mission in 2018. In its report of the 76th Round (with theme of Drinking Water, Sanitation, Hygiene and Housing Conditions of India: July – December 2018), the study found that 98% of toilets are being used in urban areas. Further, NITI Aayog has evaluated various Centrally Sponsored Schemes, including SBM-U, in its report dated 18th January 2021. Its recommendations include the following:

- need for continued investment in IHHLs and CT/PTs;
- need for focusing on entire sanitation value chain for inclusive sanitation, which also includes collection, containment, treatment, disposal and recycling of faecal waste and waste water;
- need for managing different types of solid wastes (including plastic, C&D and sanitary waste);
- need for budgetary support for disposal of legacy waste, management of plastic waste, C&D waste.



The above recommendations suggest, inter alia, the need for Mission to continue.

Moreover, the achievements under SBM-Urban need to be sustained in the long run with creation of adequate infrastructure, and their implementation needs to be accelerated manifold.

Hence, SBM-U 2.0 is needed, with the following areas of focus:

- to achieve the vision of a “Garbage Free” Urban India, more focus is required to be given to issues such as source segregation, collection & transportation, and processing, including effective management of Construction & Demolition waste, plastic waste management including reduction in single use plastic, and remediating all legacy dumpsites;
- to sustain the ODF status and prevent slippage, there is a need to ensure that all fecal sludge and waste(used) water are safely contained, transported, processed and disposed off, so that no untreated fecal sludge or used water pollutes the ground or water bodies;
- intensified focus is required to be given to IEC and behavior change through citizen outreach and *jan andolan*, as well as capacity building and skilling of all relevant stakeholders, towards achieving the Mission’s objectives.

1.4 Mission is now being extended for a period of 5 (five) years, from 1st October 2021 to 1st October 2026, as Swachh Bharat Mission (Urban) 2.0 (SBM-U 2.0), for completing the work remaining, institutionalizing 'swachh' behavior and making it sustainable. The Government of India in partnership with States/ UTs and ULBs is committed to make all cities '**Garbage Free**' under SBM-Urban 2.0 in order to contribute to the achievement of the Sustainable Development Goals (SDG) 2030, which will ultimately improve the quality of life and ease of living of urban populations, thus leading to urban transformation.

SBM-U 2.0 will be implemented by MoHUA through States/ UTs in all statutory towns (as per Census 2011, and statutory towns added subsequent to that), in accordance with these guidelines.



OVERVIEW OF SBM-U 2.0

Sets out the overall approach for achieving the Mission's vision of creating a "Garbage Free" Urban India.

Salient features of SBM-U 2.0 including Mission components, funding pattern and guiding principles are detailed in the following sections.

2.1 Mission : Overall Vision, and Specific Objectives

SBM-U 2.0 will be implemented with a vision of achieving "Garbage Free" status for all cities. This will involve the following:

- all households and premises segregate their waste into "wet waste" (from kitchen and gardens) and "dry waste" (including paper, glass, plastic, and domestic hazardous waste and sanitary waste wrapped separately);
- 100% door to door collection of segregated waste from each household/ premise;
- 100% scientific management of all fractions of waste, including safe disposal in scientific landfills;
- all legacy dumpsites remediated and converted into green zones;
- all used water including fecal sludge, especially in smaller cities are safely contained, transported, processed and disposed so that no untreated fecal sludge and used water pollutes the ground or water bodies.

In order to achieve this vision, the following specific objectives are targeted to be achieved:

In order to achieve this vision, the following specific objectives are targeted to be achieved:

- a) Sustainable Solid Waste Management
 - i. ensuring cleanliness and hygiene in public places to make all cities clean and garbage free, with 100% scientific processing of MSW;
 - ii. reducing air pollution arising out of SWM activities;
 - iii. phased reduction in use of single-use plastic.
- b) Sustainable Sanitation and treatment of used water
 - i. holistic Sanitation, with end-to end solutions (from discharge, containment, evacuation, transportation to safe disposal of all effluents from toilets);
 - ii. treatment of used water¹ before discharge into water bodies, and maximum reuse of treated used water;
 - iii. eradication of hazardous entry into sewers and septic tanks, and sustaining

¹ Henceforth, wastewater will be referred to as 'used water' in the document and in all subsequent communications.. All formal communication on wastewater management from Centre, States/ UTs and ULBs may refer to "used water management" instead of wastewater management.

- elimination of manual scavenging, through mechanization of sewer and septic tank cleaning operations;
- c) awareness creation along with large scale citizen outreach to create ‘jan andolan’, and institutionalize ‘swachh’ behavior.
- d) create institutional capacity to effectively implement programmatic interventions to achieve mission objectives

2.2 Mission Components for Funding

2.2.1 Sustainable Solid Waste Management

Objective: To make all cities clean and garbage free, with 100% scientific processing of Municipal Solid Waste

The following components would be eligible for funding:

- i. setting up of waste processing facilities such as MRFs, transfer stations, composting plants, bio methanation plants, RDF processing facilities, plastic waste processing facilities, waste to electricity, sanitary landfill, etc.
- ii. procuring mechanized sweeping equipment and setting up processing facilities for effective management of Construction and Demolition (C&D) waste (in 154 cities - as per list given in **Annex 1**)
- iii. bio-remediation/ capping of all legacy dumpsites in all ULBs

Note: No Central Government funds will be available for cost of setting up primary collection & transportation (C&T) systems, including modernization of existing systems.

2.2.2 Sustainable Sanitation

Objective: To sustain Open Defecation Free status in all Statutory towns

The eligible components for funding are (i) construction of Individual Household Latrines (IHHL), (ii) construction of Community and Public Toilet (CT and PT) seats, and (iii) construction of urinals, along with retrofitting of insanitary toilets.

2.2.3 Used water management

Objective: To ensure that no untreated fecal sludge or used water is discharged into the environment, and all used water (including sewerage and septage, grey water and black water) is safely contained, transported and treated, along with maximum reuse of treated used water, in all cities with less than 1 lakh population.

The following components would be eligible for funding:

- i. desludging equipment, for scheduled and need-based desludging of all septic tanks;
- ii. interception and diversion of drains (I&D) (including last mile connectivity for nearest sewer network);
- iii. construction of Sewage Treatment Plants (STPs)/ STP cum Fecal Sludge Treatment plants (FSTPs) for used water treatment.

2.2.4 IEC/ BCC

Objective: To ensure awareness creation along with large scale citizen outreach to intensify 'Jan Andolan' and institutionalize swachh behavior and related set of actions, towards achieving the vision of "Garbage Free" cities

The following components would be eligible for funding:

a) National Level – A part of the overall IEC funds would be retained by MoHUA for the following:

- i. hiring of professional IEC/ BCC agency (on an outsourced basis) for developing IEC strategies, collaterals, content and tools and managing Social Media outreach;
- ii. dissemination of national level campaigns regarding various components of SBM Urban;
- iii. promotion of national level initiatives such as Swachh Survekshan, ODF+/ ODF++/ Water+ and Garbage Free certifications etc;
- iv. organisation of national level people centric events to raise advocacy for Garbage Free India.

b) State/ ULB level – the balance funds can be utilized at State/ULB for:

- i. dissemination of State/ ULB level campaigns regarding various components of SBM-U 2.0, including through interpersonal communication

- ii. empanelment and engagement of NGOs/ CBOs/ CSOs for grassroots mobilization and sensitization regarding SBM-U 2.0;
- iii. promotion of good practices at household/ individual level, collectives, RWAs, schools/ colleges, market associations etc;
- iv. organization of promotional events (such as 'plog' runs, mass triggering activity, competitions etc.) related to SBM-U 2.0.

2.2.5 Capacity Building (CB)

Objective: To create institutional capacity to effectively implement programmatic interventions to achieve mission objectives

The following components would be eligible for funding:

a) National Level – A part of the overall CB funds would be retained by MoHUA for the following:

- i. establishment of Center of Excellence (CoE);
- ii. funding Chair Professor positions in selected academic institutes and selected areas of expertise;
- iii. training of PHE officials and technical staff of MoHUA
- iv. engaging knowledge partners, empaneling and hiring professional organizations to provide handholding and capacity building support to States/ UTs and ULBs;

- v. creation and maintenance of eLearning portal;
 - vi. hiring of technical experts and professional agencies for smooth implementation of Mission, development and maintenance of ICT initiatives, creating videos and documentation for good practices, conducting national/ international exposure visits etc;
 - vii. funding Innovative pilots/ Startups as identified by relevant expert committees (subject to approval of NARC);
 - viii. organizing workshops and lectures;
 - ix. procuring third party vendors for field assessments and certifications for Swachh Survekshan, ODF+/ ODF++/ Water+ protocols, Garbage Free Star Rating protocols, etc;
 - x. procurement of Mission Management Unit (MMU);
 - xi. hiring interns for supporting SBM-U 2.0 at various levels;
 - xii. creating and supporting digital outreach tools such as Swachhta App 2.0, Swachh Manch 2.0, etc;
 - xiii. skill development activities as required;
 - xiv. any other activity required for creating institutional capacity
- b) State level- the following components would be eligible for funding:
- i. procurement of Program Management Unit (PMU) at State/ UT level;
 - ii. procurement of vendors/ agencies for Information & Communication Technology (ICT) initiatives, carrying out gap analysis, social audits, conducting workshops, lectures, exposure visits etc;
 - iii. hiring young professionals and interns for augmenting their internal human resources and also integrating the youth with SBM-U 2.0;
 - iv. hiring of NGOs/ CBOs/ CSOs for grassroots capacity building;
 - v. hiring technical institutions for training of manpower at State/ UT levels.
- c) ULB level- the following components would be eligible for funding:
- i. hiring young professionals and interns for augmenting their internal human resources and also integrating the youth with SBM-U 2.0;
 - ii. procurement of vendors/ agencies for ICT initiatives, carrying out gap analysis, social audits, conducting workshops, lectures, exposure visits etc;
 - iii. hiring of NGOs/ CBOs/ CSOs for grassroots capacity building.
- It may be noted Administrative and Office expenditure in a year should be kept as a proportion of actual expenditure / output rather than as a percentage of indicative outlay.

2.3 Duration of the Mission

The Mission will be in force for five years, from 1st October 2021 to 1st October 2026.

2.4 Mission Coverage: Cities and Target Population

All Statutory towns in India will be covered under the Mission

2.5 Mission Implementation:

Memorandum of Understanding: States/ UTs and ULBs have signed a tripartite Memorandum of Understanding (MoU) with MoHUA. This MoU represents collective intent of MoHUA, State/ UT and ULBs for creating “Garbage Free Cities”, through focus on complete source segregation, complete processing of all waste fractions, including processing of construction & demolition waste, plastic waste along with phased reduction of single use plastic, and remediation of all legacy dumpsites. MoHUA, States/ UTs and ULBs shall align themselves to the roles and responsibilities as per the MoU.

2.6 Mission Strategy: Guiding Principles

Drawing on learnings from SBM-U, the following guiding principles and strategies are proposed to be adopted for implementing components of SBM-U 2.0, towards achieving the ultimate vision of a “Garbage Free” Urban India.

2.6.1 Jan Andolan: Equity and Inclusion at the heart of ‘swachhata’

- a) Bringing citizens to the centre of the Mission, by engaging all categories of citizens (e.g. women and homemakers, students and youth, senior citizens and retired personnel, religious leaders, social media influencers, celebrities and brand ambassadors, SHG groups, market and other industry associations, RWAs, elected representatives, etc.);
- b) All Self-help groups, especially women SHGs, either affiliated to Government programmes (e.g. NULM, NHM) or otherwise, to be used for ground level/ community level facilitations and interpersonal communication initiatives under SBM-U 2.0;
- c) Women leadership to be promoted in various phases of sanitation and waste management, from planning to O&M;
- d) ULBs to give special focus on sanitation and waste management needs of the urban poor (especially slum dwellers) and other vulnerable groups (senior citizens, girls, pregnant and lactating mothers, especially abled, third gender groups, migrants, homeless, construction labour etc.);
- e) All infrastructure created under the Mission, be it toilets, and waste processing facilities, as well as work places to have gender friendly and divyang-friendly features, for ease of access for all;

- f) All infrastructure/ assets created under the Mission to be disaster resilient.
- g) Recyclers and scrap dealers (both formal and informal sectors) to be integrated into the SWM recycling value chain;
- h) Continued focus on behaviour change, with focus on functional outcomes (e.g ODF sustainability, regular desludging of septic tanks, ensuring cleanliness and hygiene in public and community toilets, and source segregation of household waste);
- i) Ensuring safety and well-being of sanitation workers, through
- i. Elimination of hazardous entry for sewer and septic tank cleaning through mechanization of cleaning operations, provision of protective gear/ PPE kits to sanitation workers, etc;
 - ii. Setting up of helpline numbers to enable citizens to register their request/ complaints and suggestions regarding desludging of septic tanks;
 - iii. Enabling social welfare benefits for all sanitation workers (formal, informal and contractual) such as life and health insurance, supporting formation of sanitation workers' collectives;
 - iv. Mandatorily setting up Responsible Sanitation Authority (RSA) and Sanitation Response Units (SRUs) covering all ULBs.
- v. All categories of Sanitation workers to be given special focus through recognition as Champion safaimitras, and institutionalizing mechanisms for identifying and acknowledging their services.

2.6.2 Competition for Impact: Leveraging healthy competition among cities, with special focus on ULBs of aspirational districts

The Swachh Survekshan in SBM-Urban has demonstrated how a competitive monitoring framework can help to accelerate implementation, while also evolving into a governance tool. This approach will be continued through annual ranking survey Swachh Survekshan, for continuous monitoring and enabling agile governance for delivery of sanitation and waste management services to all citizens, including in aspirational districts.

2.6.3 Swachhata Standards

MoHUA has introduced several standardized protocols which include the ODF, ODF+, ODF++, Water+ and Star Rating Protocol for Garbage Free Cities to ensure standardized outcomes in sanitation and solid waste management across Urban India under SBM-U. These protocols have provided a standard uniform framework to evaluate cities on 'Swachhata' criteria and is acting as a guiding document for cities and city representatives. These standardized protocols (ODF+, ODF++, Water+, Star Rating protocol for Garbage

Free Cities, etc) with independent third-party assessment and certification will be continued for standardization of Mission outcomes.

2.6.4 Capacity Building

Building capacity for sustainable outcomes and aligning ULBs with Mission will be taken up in a focused manner, through:

- i. Strengthening of e-Learning and other proven platforms to build institutional and individual capacities in technical as well as governance aspects;
- ii. Focus on skill development in the sanitation and waste management sector.

2.6.5 Partnerships

The Mission will actively engage with all development partners, knowledge partners, sector partners and industry to leverage their support and assistance to accelerate Mission outcomes on the ground, as well as to strengthen institutional capacities in the SWM and Used water management sectors.

2.6.6 Digital Enablement

Robust ICT enabled governance, already a key feature under SBM-Urban, will be continued with intensified focus, to enable real-time monitoring of assets, to ensure their full capacity utilization, and make the Mission **digital and paperless**. It shall be mandatory for all projects and services to deploy digital tools to provide real time data on efficiency parameters in the operation phase.

2.6.7 Technology promotion, innovation and encouragement for social enterprises

The Mission will encourage adoption of locally innovated, cost-effective solutions and business models in sanitation and solid waste management by small scale and private entrepreneurs and start-ups, through investments in R&D, technology challenges, and facilitation for inclusion in GeM, in order to take forward the government's vision of an "AatmaNirbhar Bharat", and "Make in India".

2.6.8 Focus on planning:

ULBs will be required to draw up and submit various action plans, based on gap analysis, viz.

- a) City Solid Waste action plans (CSWAP) including inter-ministerial convergence with Government of India programs such as SATAT (MoPNG) (refer **Annex 2** for action plan format);
- b) City Sanitation Action Plans (CSAP) for sanitation and for sewage and septage Management (refer **Annex 3A and 3B** for action plan format), including inter-ministerial convergence with Government of India program of Namami Gange (National Mission for Clean Ganga);
- c) States/UTs would be required to aggregate the action plans to charter the overall journey for **Garbage Free** cities.

2.6.9 Focus on functional outcomes and their monitoring

A key feature of the Mission will be Outcome - based fund releases, where first and second instalments of funds of Central share will be released to States/ UTs subject to achievement of specified targets/ outcomes by States/ UTs and ULBs. The SBM-U MIS portal will be capturing ground-level data to monitor the extent to which the guiding principles are being taken forward in practice.

2.6.10 Urban-Rural convergence

Infrastructure projects will be taken up on cluster basis to cater to groups of neighboring ULBs and rural areas, so that common waste processing facilities are utilized efficiently.

2.6.11 Creation of enabling environment, through:

- creation of Model RFPs that States/ UTs and ULBs can refer to prepare their tender documents;
- facilitating procurement by States/ ULBs through GeM;
- encouraging start-up ecosystem/ Public Private Partnership in the States/ ULBs: Under SBM-U 2.0, 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, etc. can be leveraged, while for used water Management, revenue streams such as compost from fecal waste, sale of recycled waste water, etc. can be leveraged for PPP projects.

2.6.12 Leveraging 15th Finance Commission Grants (both tied and untied) to achieve outcomes

Under 15th FC, cities with 10 lakh population and above are provided with a Challenge Fund of ₹13,029 crores over a 5-year period for meeting service level benchmarks on sanitation and Solid Waste Management. Further, out of total grant of ₹82,859 crore for ULBs with less than 10 lakh population, 40% of grants are untied, while 60% is tied to national priorities including sanitation and Solid Waste Management. States/ UTs and ULBs should leverage the 15th FC grants in addition to the SBM-U funds, for meeting Mission outcomes. However, it is to be noted that 15th FC grants shall not be used by State/ UTs to meet their minimum share, as given in Table 4.5.2.

2.6.13 Aligning with National Missions and National Priorities:

The SBM-Urban 2.0, through its implementation components will strive to align with national priorities, Missions and programmes, a few indicative examples of which are given below:

- dust mitigation through C & D waste management would align with **National**

Clean Air Program (NCAP);

- focus on encouraging start-ups and social entrepreneurs as part of the Mission's private sector engagement strategy would dovetail with mandates of **Start-up India & Make In India**;
- given its intensified focus on digital enablements to accelerate Mission outcomes and citizen outreach, and integrated approach for monitoring all Mission outcomes, the Mission will be aligning with the mandates of **Digital India, National Urban Digital Mission (NUDM)** and **Smart Cities Mission**;
- intensified focus on capacity building with skill development at its core will be aligning to mandates of **Skill India**;
- special focus on Ganga towns and accelerating their Solid Waste Management initiatives will align with the **Namami Gange** programme;
- special focus on bio-methanation of wet waste is proposed to be undertaken in alignment with the **SATAT** programme of Ministry of Petroleum & Natural Gas;
- focus on sanitation workers and SafaiMitras to ensure their safety, well-being and improved livelihood options will align with the mandates of **Ministry of Social Justice and Welfare**;
- additionally, Mission will work to ensure that all government offices, work places and premises adhere to the standards of Garbage Free protocol, so that 'swachhata'

and Garbage Free becomes everybody's business.

2.7 Overall Funding

The estimated cost of implementation of SBM-U 2.0 for its various components is **₹1,41,600 crores**. The Government of India share will be **₹36,465 crores**. The balance amount shall be contributed by individuals as beneficiary contribution, States and UTs/ ULBs/ Private Sector under PPP. Wherever private sector funding is not available, State/ UT will need to provide the necessary funds. Balance funds are to be generated through various other sources of funds including Corporate Social Responsibility (CSR) funds from public/ private sector, external assistance etc.

2.8 Mission Outcomes

The following measurable outcomes are expected to be achieved by the end of the Mission tenure:

- All statutory towns are certified at least 3-star Garbage Free, or higher;
- All statutory towns become at least ODF+;
- All statutory towns with less than 1 lakh population become at least ODF++;
- At least 50% of all statutory towns with less than 1 lakh population become Water+.

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MISSION MANAGEMENT STRUCTURE

Sets out the overall approach for creating a multi-level governance structure that is empowered to facilitate speed and ease of implementation, including fund release, along with adequate oversight and checks for quality .

SBM-Urban 2.0 will have a four-tier mission management structure as follows:

3.1 National Level

3.1.1 National Advisory and Review Committee (NARC)

NARC, headed by Secretary-MoHUA and comprising representatives of SBM-Grameen and other relevant line ministries will be notified by MoHUA. NARC will consist of the following members:

- i. Secretary – MoHUA: Chairman
- ii. National Mission Director, SBM-Urban (MoHUA): Member Secretary
- iii. Joint Secretary & Financial Advisor, MoHUA: Member
- iv. Advisor/ Joint Advisor, CPHEEO: Member
- v. Director, NIUA: Member
- vi. Members from :
 - a. Ministry of Jal Shakti / Department of Drinking Water and Sanitation (DDWS);
 - b. Ministry of Environment, Forests & Climate Change;
 - c. Ministry of Chemicals and Fertilizer;
 - d. Ministry of Petroleum & Natural Gas;
 - e. Ministry of New & Renewable Energy;
 - f. Ministry of Social Justice;

- g. Department of Expenditure;
- h. NITI Aayog;
- i. DAVP (Ministry of I&B);

The Chairman-NARC may, at his discretion, induct any other members based on requirement.

NARC will meet at least twice a year. The functions of NARC will be:

- i. overall planning for Mission progress;
- ii. reviewing and approving State/ UT action plans to achieve SBM-U 2.0 targets;
- iii. advising States/ UTs to explore avenues for innovative resource mobilization of private financing and leveraging land for PPP in sanitation projects;
- iv. approving installments and release of installment of funds for States / UTs by Central Government under SBM (Urban) 2.0;
- v. facilitating inter-ministerial convergence for accelerating Mission progress;
- vi. monitoring outcomes and performance of projects sanctioned under SBM (Urban) 2.0;
- vii. any other issue which may be referred to it by the Government.

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.

3.1.2 National Mission Directorate (NMD)

- 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;
- NMD will be the overall in-charge of all activities related to SBM-U 2.0 and will be supported by a suitable team of officers at the National Mission Directorate. Further, NMD will be Member-Secretary of NARC;
- NMD shall be supported by a dedicated Project Management Unit (PMU)/ Technical Support Unit (TSU) with adequate numbers of experts and support staff mainly on an outsourced basis. Technical support to NMD to achieve Mission objectives will be provided by Central Public Health & Environmental Engineering Organisation (CPHEEO).

3.2 State Level

3.2.1 State High Powered Committee (SHPC):

- SHPC under the chairpersonship of the State's Chief Secretary, and with members drawn from concerned departments shall be responsible for the management of SBM-Urban 2.0 at the State/ UT level;
- An indicative composition of SHPC is given below:
 - i. Chief Secretary: Chairman;
 - ii. Principal Secretary (Urban Development): Member;

- iii. Principal Secretary (Public Health & Engineering): Member;
- iv. Principal Secretary (Finance): Member;
- v. Principal Secretary (Housing): Member;
- vi. Principal Secretary (Environment & Forest): Member;
- vii. Chairman – State Pollution Control Board: Member;
- viii. Representative of MoHUA: Member;
- ix. Mission Director of SBM-Grameen at State/ UT level: Member;
- x. State Mission Director: Member Secretary;

The SHPC may co-opt/ induct any other members based on requirement.

- The SHPC will play a majorly strategic role, including oversight of regulatory compliances, and will include:

► Planning

- i. approving overall plan for achieving SBM objectives;
- ii. planning for fund flow in the short, medium and long term;
- iii. planning for additional resource mobilization;
- iv. selection of clusters so that common infrastructure could be shared between a group of cities/ towns/ contiguous rural areas;
- v. planning for encumbrance free land to be made available for setting up necessary infrastructure.

- ▶ Review and Implementation of project progress
 - i. ensuring convergence of action for sanitation and waste management in the urban and rural areas of the State and bringing about inter-departmental coordination for this purpose;
 - ii. conducting independent review and monitoring during execution of projects;
 - iii. ensuring timely audits of funds released and reviewing the “Action Taken Reports” on various audit reports of the mission and other similar reports.
- ▶ Capacity building of stakeholders
 - i. facilitating capacity building of parastatal bodies that would help ULBs to implement used water management;
 - ii. reviewing the progress of capacity building initiatives, IEC and public awareness activities under the mission.
- ▶ Miscellaneous
 - i. addressing violation of norms and conditions;
 - ii. reviewing legal issues, if any;
 - iii. taking up any other matter relevant for the efficient implementation of the mission, or matters referred to it by the SBM National Mission Directorate.

3.2.2 State Level Technical Committee (SLTC):

For review and sanctioning of projects, there will be a State Level Technical Committee (SLTC), under the Chairpersonship of

Principal Secretary – Urban Development, and State Mission Director- SBM as Convenor. An indicative composition of SLTC is given below:

- i. Principal Secretary: Chairman;
- ii. State Mission Director: Convenor;
- iii. Pr. Secretary in charge of SBM-Grameen: Member;
- iv. Pr. Secretary (PHE): Member;
- v. Pr. Secretary (Finance): Member;
- vi. Pr. Secretary (Environment & Forest): Member;
- vii. Representative, SPCB: Member;
- viii. Representative of MoHUA: Member;
- ix. Representative of relevant parastatal entities.

The SLTC may co-opt/ induct any other members based on requirement.

The role of SLTC will include:

- i. preparation of State action plans with annual timelines to create ULBs ODF+, ODF++, Water+, 3-star Garbage Free;
- ii. helping ULBs to prepare ULB level CSAP and CSWAP for sanitation, used water and SWM for all cities covered under SBM-Urban 2.0;
- iii. facilitating use of IT enabled tools and solutions for preparation of DPRs;
- iv. reviewing DPRs and projects relating to Sanitation, Solid Waste Management, used water management, IEC and CB as recommended by the ULBs;
- v. approving projects for uploading on Proposal Tracking System (PTS) for fund release.

It is recommended that the SHPC meet at least twice a year, or more, while SLTC meets at least once in 3 months, or more frequently, based on frequency of receipt of proposals from ULBs.

3.2.3 SBM State Mission Directorate

- 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 SHPC, and Convenor to the SLTC;
- The State Mission Directorate shall be supported by a dedicated PMU on deputation/ outsourced basis. The funding for the same can be met from the Capacity building funds under SBM-U 2.0 allotted to State/ UT.

Role of State Mission Director will include the following:

- i. creating / notifying 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;
- ii. reviewing CSAP, CSWAP for all cities covered under SBM-U 2.0;
- iii. putting up consolidated State level plan (summation of all ULBs' plans) in terms of physical and financial targets, to SLTC
- iv. planning for additional resource mobilization;
- v. developing IT enabled tools and solutions for preparation of DPRs, or facilitate use of existing tools provided by MoHUA for DPR preparation;

- vi. planning for fund flow in the short, medium and long term under guidance of SHPC;
- vii. recommending proposals for release of instalments of funds for projects under the Mission;
- viii. ensuring convergence of action for sanitation in the state and bring about inter-departmental coordination for this purpose as and when required;
- ix. ensuring timely audits of funds released and review the "Action Taken Reports" on various audit reports of the mission and other similar reports;
- x. empaneling agencies for conducting independent review and monitoring during execution of projects;
- xi. technical scrutiny of DPRs received from ULBs and facilitating convening of SLTC meetings under chairmanship of principal secretary(UD);
- xii. supporting Additional Chief Secretary/ Principal Secretary/ Secretary (Urban Development) in developing and placing agenda for SHPC meetings.
- xiii. any other matter relevant for the efficient implementation of the mission, or matters referred to it by the SBM-U 2.0 National Mission Directorate.

3.3 District Level

- A District Level Committee (DLC) under the Chairpersonship of the District Collector will be set up at the District headquarters;
- The DLC will be responsible for overseeing all aspects of convergence between SBM-

Urban 2.0 with SBM-Grameen, while implementing the respective Missions.

3.4 ULB Level

- The Municipal Commissioner (MC)/ Executive Officer (EO) of a ULB shall be the administrative authority responsible for implementing all components of the Mission at the ULB level.
- The MC/ EO will also be responsible for smooth and seamless implementation of all Mission components.
- The responsibilities of the MC/ EO will include the following:
 - i. facilitating capacity building of Municipal staff;
 - ii. conducting gap analysis and preparation of CSAP and CSWAP;
 - iii. preparation of DPR;
 - iv. coordinating with State for getting sanctions from SHPC/ SLTC, and fund release for projects;
 - v. implementing projects in a time-bound manner, along with continuous monitoring to ensure sustained functionality;
 - vi. collection of user charges for ensuring financial sustainability of operations;
 - vii. awareness and citizen engagement;
 - viii. setting up City Sanitation Committees with participation of selected citizen representatives for periodically reviewing and monitoring efficient functioning of assets created.

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Direct Benefit Transfer | Centrally Sponsored Schemes | Central Sector Schemes | Others

Direct Benefit Transfer

Transferring subsidies directly to the people through their bank/Post office account is Direct Benefit Transfer. It aims to timely transfer of benefit to the citizen by bringing efficiency, effectiveness, transparency and accountability in the Government system. Through the DBT Government intend to achieve electronic transfer of benefits, reduce delays in payments and most importantly, accurate targeting of beneficiaries, thereby curbing leakages and duplication.

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PLEASE CHOOSE THE SECTOR FOR WHICH YOU WANT TO INITIATE PROPOSAL

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- Solid Waste Management
- Used Waste Water Management
- IEC
- Dumpsite Remediation
- Mechanical Sweeping
- Capacity Building

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FUNDING PATTERN

Sets out the overall principles for release of funds by Centre to States/ UTs, and leveraging of 15th FC grants by States/ UTs and ULBs to augment their fund availability for various Mission components.

Fund allocation under SBM-U 2.0 to States/ UTs, along with entry conditions for ULBs to receive funding, fund sharing pattern and method of leveraging funds from other sources to fund Mission components are outlined below in this chapter.

4.1 Entry level conditions

In order to participate in SBM-U 2.0, the following entry conditions would need to be mandatorily fulfilled by States/ UTs and ULBs:

- 4.1.1 aligning property tax floor rates with market rates, with periodic revisions in line with GSDP, as recommended by 15th FC * (refer Note below)
- 4.1.2 levy and collection of user charges for services provided, to recover operational costs, with periodic increase; * (refer note below)
- 4.1.3 adoption of Public Financial Management System (PFMS) by all ULBs.

* **Note:** Notification of property tax floor rate by States / UTs along with its adoption by ULBs and notification of user charges to recover a component of operational cost will be made mandatory conditions for Central Assistance. The States/UTs will have to implement them in first two years from launch of continuation Mission to be eligible for Central assistance from third year onwards

For user charge collection against 4.1.2 above, ULBs may, at their discretion, cross-subsidise urban poor families and economically weaker sections, the quantum of subsidy to be decided by the ULB.

4.2 State Nodal Account (SNA) and PFMS

To receive funds under SBM-U 2.0, all transactions will have to be made through DBT and/ or EAT modules, as applicable. In this respect, revised procedure for fund release as per Ministry of Finance OM number F. No. 1(13) PFMS [FCD/ 2020 dated 23rd March 2021, or as updated from time to time, will be applicable.

4.3 Public Private Partnership (PPP)

4.3.1 Under SBM-U 2.0, 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, etc. can be leveraged, while

- for waste water Management, revenue streams such as compost from fecal waste, sale of recycled waste water, etc can be leveraged for PPP projects.
- 4.3.2 All ULBs must first explore possibility to take up the projects in a PPP mode (including cluster level projects catering to ULBs of varying population categories) for the above reasons. Government of India funds as per prescribed funding pattern will be available for claiming VGF. Payment of VGF from Central assistance will be 50% of the gap funding subject to maximum of 30% of project cost, or as could be the prevalent Central government guidelines. This could be paid in normal PPP mode or Hybrid Annuity Model (HAM) through escrow account. Government of India guidelines for financial support to PPP projects under VGF scheme can be referred for this purpose.
- 4.3.3 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.
- 4.3.4 For cluster projects taken up on EPC mode, the fund release will be on pro-rata basis, depending on population category of ULBs proposed to be covered under the cluster.
- 4.3.5 State Governments can also add or generate funds for ULBs as additional funds over and above the minimum share prescribed for each component, required to make the projects viable.
- 4.3.6 Adequate funds will be released on acceptance of the proposal of the State Government for Toilets, SWM and Used water management projects.
- 4.3.7 States will release the Central Government share of VGF after adding their share in conformity with the contractual requirements of the project taken up on PPP mode.
- 4.3.8 In case State Government feels that a project is not suitable to be taken under PPP methodology, it may then consider the GoI share (as per funding pattern) to be treated as Grant from GoI 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. Government of India guidelines for posing, implementation & monitoring of Externally Aided Projects (EAP) can be referred for this purpose.
- 4.4 **Allocation of funds:**
- 4.4.1 The mission will be implemented with the following classification of funds for various components:

S. No.	Classification	Total Amount for Mission Period (₹ in crore)
1.	Project Fund (for sanitation, SWM and Used water management)	1,25,430
	• For SWM	39,837
	• For sanitation	5,610
	• For used water Management	79,983
2.	Public Awareness & IEC Activities	6,271
3.	Capacity Building & A&OE	3,763
4.	Committed Liability (Carried over from SBM-U)	6,136 *
5.	TOTAL OUTLAY	1,41,600

* It may be noted that the 'Committed liabilities' will only be valid for release till 31st March 2023, beyond which the unclaimed amount would lapse.

4.4.2 The funding for SWM has been decided in a manner as to leverage the investments already made under SBM-Urban in SWM, whereas for used water management, the funding has been decided keeping in view the fact that it is a new component, requiring considerable ground work to be done.

- 90%:10% for ULBs in NE/Himalayan States,
- 100% for UTs without legislature,
- 80%: 20% for UTs with legislature,
- 25%: 75% for 10 lakh plus ULBs
- 33%: 67% for ULBs with 1 lakh to 10 lakh population (both included),
- 50%: 50% for ULBs with less than 1 lakh population

The structure of fund sharing among Centre and States/ UTs for various components are given below:

4.5 Fund Sharing

The Centre: State distribution of the Project fund will be as under:

4.5.1 For IHHLs

S. No	Type of State/ UT	Central Share per unit (₹)	State/ UT share per unit (₹)
1.	UTs without legislature	4,000	1,333 (to be borne by Centre)
2.	UTs with legislature	4,000	1,333
3.	North East and Hilly States	10,800	1,200
4.	Other States	4,000	2,667

Note: - The estimated cost of IHHL is assumed to be ₹30,000 per unit

4.5.2 For CT/ PT/ Urinals/Used water management / SWM

SI No	Type of State/ UT	Central Share per unit * (%)	Minimum State/ UT share per unit (%)	Balance (from 15 th FC funds, ULB share, pvt sector share)
1.	UTs without legislature	100	0	-
2.	UTs with legislature	80	20	-
3.	North East and Hilly States	90	10	-
4.	Other States: ULBs with population of above 10 lakh	25	16	59
5.	Other States: ULBs with population between 1 - 10 lakh (both included)	33	22	45
6.	Other States: ULBs with population of less than 1 lakh	50	33	17

4.5.3 For IEC and CB

SI No	Type of State/ UT	Central Share (%)	State/ UT share (%)
1.	UTs without legislature	100	0
2.	UTs with legislature	80	20
3.	North East and Hilly States	90	10
4.	Other States	60	40

4.5.4 It is to be noted that the Central share of funds will be released in two (2) / three (3) instalments. Release clauses for each component have been detailed out in the respective chapters for each component. For IHHL, release clauses for 2 instalments are described in Section 5.1.6.1 and 5.1.6.2; for CT/PT/Urinals, the clauses are described in 5.2.7.3 and 5.2.7.4; for SWM, the clauses are described in Sections 6.9.2, 6.9.3 and

6.9.4; for used water management, the clauses are described in Sections 7.10.2.1, and 7.10.2.2, and 7.10.2.3; for IEC, the clauses are described in Sections 8.7.3 and 8.7.4; and for CB, the clauses are described in Sections 9.16.3 and 9.16.4.

4.6 Others

4.6.1 The total funds allocated for IHHL, CT/ PT and Urinals will be part of a

- consolidated package, with States/ UTs having the flexibility to interchange their fund requests between any type of toilet. It may be noted that 25% of the allocated amount will be kept aside as ‘floating funds’ at GoI for sanitation, to cater to additional funding requests from States/ UTs for additional toilets (IHHL, CT/ PT/ Urinals)
- 4.6.2 For the balance amounts required for all the above component, States/ UTs and ULBs will need to leverage 15th FC funds, private sector participation or any other source of funds.
- 4.6.3 MoHUA will endeavour to earmark at least 10% of total fund allocation for each year for NE and Himalayan States.
- 4.6.4 Distribution of Project Fund across States/ UTs are at **Annex 4**. The distribution is calculated on the basis of weighted average of (a) percentage of urban population of State to total urban population of India (90% weightage), and (b) percentage of area of State to total area of India (10% weightage).
- 4.6.5 Sanction of projects (DPR):
- 4.6.5.1 Projects will be sanctioned by SLTC as prescribed in these guidelines.
- 4.6.5.2 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 already sanctioned and ongoing under State and central schemes and externally-aided programmes/projects.
- 4.6.5.3 For Detailed Project Reports (DPRs) to be prepared for project sanction, fund release and monitoring, the cost of DPR preparation and their vetting through empaneled agencies/ institutes for the projects under the Mission shall be reimbursed from the project funds of respective components. Cost of DPR preparation should be discovered through open competition, and subject to an upper limit as may be prescribed separately by MoHUA from time to time.
- 4.6.5.4 States/ UTs will be required to present their consolidated action plan for achieving all Mission components to NARC within 6 months of submitting their State vision for the specific component.
- 4.6.5.5 States/ ULBs are encouraged to use IT-enabled solutions for DPR preparation.
- 4.6.6 Emerging/ innovative solutions and technologies may be shared by States and ULBs for consideration by the Technology Evaluation Committee (TEC) for Solid & Liquid waste management set up by MoHUA. Some of these potential technologies would be extended financial support to test them on pilot basis subject to recommendations of the TEC, and approval of NARC.

4.6.7 Amendment in nature of projects:

- 4.6.7.1 The SLTC will have the flexibility to re-determine the targets for IHHLs and CT/ PTs/ Urinals, subject to State-wise overall funds envelope (sum of allocation for IHHL and CT/ PTs for the entire mission period) remaining unchanged.
- 4.6.7.2 Under special circumstances, States/ UTs may change nature (costing, type) of projects for which funds have already been released by MoHUA, but before actual expenditure is incurred. In order to effect such changes, the amendments of the project should be approved by SHPC and sent to MoHUA for concurrence, before the revised project is implemented.
- 4.6.7.3 States/ UTs may also redistribute released funds among its ULBs, subject to SHPC approval of such redistribution, and subsequent concurrence by MoHUA, before actual expenditure. This will ensure fungibility of funds and optimum utilization of resources towards achieving the Mission objectives.

TOILETS (IHHL, COMMUNITY/PUBLIC TOILETS, URINALS)

Sets out a saturation approach to ensure that every citizen of Urban India has access to safe sanitation infrastructure, along with access to safe containment facilities for fecal sludge.

5.1 Individual Household Latrines (IHHL)

5.1.1 Target Group

The target group for construction of Individual Household Latrines (IHHLs)/ Toilets is:

- (i) new independent households;
- (ii) all new households who might have migrated to urban areas;
- (iii) all households with previous access to community toilets, who might want to have their own facility;
- (iv) all households with insanitary latrines.

5.1.2 Selection of Beneficiary Households

5.1.2.1 Selection of Beneficiary Household shall be as per following guiding principles:

- i. ULBs to conduct gap analysis to evaluate the number of new IHHLs required;
- ii. In case a family has received funds for construction of IHHL under any earlier scheme, the same family would not be eligible to receive funds for toilets again;
- iii. A ULB which has been declared at least ODF+ may also request funds under SBM-U 2.0 provided the survey reveals the need for additional IHHL units.

5.1.2.2 Eligible beneficiary households will be provided toilets under this scheme irrespective of whether they live in authorized/ unauthorized colonies or notified/ non-notified slums. Under SBM-U 2.0, tenure security issues are to be de-linked from benefits.

5.1.3 Construction & Design

5.1.3.1 Household toilets constructed will have two main structures: (i) toilet superstructure (including pan and water closet), and (ii) substructure with septic tank and soak pit (on-site treatment system), or a connection to an existing underground sewerage system. The on-site disposal system comprising of a septic tank with soak pit will be designed as per IS -2470 Pt-1 & 2 (in the event that a sewerage system is not available within 30 meters from the proposed household toilet).

5.1.3.2 Wherever a sewerage system is available within 30 metres from the proposed household toilet, only the toilet superstructure may be constructed and toilet connected to the existing sewerage system. In case there are more than one house beyond 30 meters from nearby sewer line, ULB will endeavor to connect these houses with nearby sewerage system by pooling resources

- from beneficiary households including from State/ UT & ULB's shares.
- 5.1.3.3 All IHHL being constructed should be built in tandem with water supply arrangements in ULBs. Beneficiaries will be responsible for the operation and maintenance of the household toilets. Additionally, ULBs may explore innovative household toilet models brought out by private sector players/ entrepreneurs, as long as they meet the accepted scientific standards of safe disposal.
- 5.1.4 **Operation & Maintenance**
ULB will need to carry out periodic desludging of pits (as per ODF++ protocol) to prevent slippage or slide-back to OD practices.
- 5.1.5 **Application for IHHL**
- 5.1.5.1 ULB must ensure Aadhar seeding of all IHHL beneficiaries. All financial incentives (government and/ or private) for this component will be deposited directly (by electronic clearing service) into the Aadhar-linked bank accounts of the beneficiary households;
- 5.1.5.2 Application for IHHL may either be made through UMANG app, or through the mSBM app and uploaded online on the SBM portal. Final verification of the construction of the household toilet should be supported by location- based technologies, wherein geo-tagged photographs of the construction, along with the applicant are taken.
- 5.1.5.3 These photographs must be uploaded through the UMANG or mSBM app, to the SBM-Urban 2.0 MIS;
- 5.1.5.4 The ULB shall verify each application for genuineness of requirement before releasing any funds. Verification of the application should be completed within 7 working days of its submission by the beneficiary.
- 5.1.6 **Fund Release Mechanism for IHHL** (as mentioned in section 4.5.4)
- 5.1.6.1 50% of the Central Government funds will be released to the State/ UT as 1st instalment, on fulfilment of the entry conditions given in Section 4.2, and following additional condition:
- ULBs to upload their latest progress data on the MIS portal.
- 5.1.6.2 The remaining 50% of Central Government funds as 2nd instalment shall be released to the State/ UT, along with fulfilment of following conditions:
- Documentary evidence of 50% completion of construction target (State/ UT level);
 - State has expended 75% of State/ UT share;
 - UC submitted by State / UT for 75% of first instalment released.
- 5.1.6.3 States/ UTs to invite private sector funds/ CSR to the maximum extent possible for any additional IHHL that may be required.

5.2 Community Toilets (CTs)/ Public Toilets (PTs) & urinals

5.2.1 Target Group

While CT/ PTs and Urinals have been constructed under SBM-U, it is expected that there will still be some households which are at considerable distances from the nearest CT. Higher influx of floating population is also expected in Urban areas. Hence, additional number of CTs, PTs and Urinals will be targeted for construction under SBM-U 2.0 for better accessibility and functionality, even if ULB is at least ODF+ certified. In this context, it may be noted that ULBs should prioritise IHHL access for all households, and only in cases of land constraints should CTs be provided, with seats earmarked for selected families so that they the families feel a sense of ownership and maintain them as their own.

5.2.2 Location of CTs, PTs, Urinals

5.2.2.1 ULBs will need to identify all possible Open Defecation/ Open Urination vulnerable points (yellow spots) (“OD/ OU hot spots”) and make provisions for adequate numbers of CTs/ PTs and Urinals at easily accessible distances, which in turn will lead to elimination of hotspots.

5.2.2.2 ULBs should ensure that:

- i. every household dependent on CTs has access to one within a maximum

distance of 500 metres from their homes, and

- ii. every public place (bus stops, petrol pumps, metro stations, market places, religious and tourist locations, health centres, citizen centres) has at least one PT/ Urinal available within 500 metre distance, and that the facilities are kept clean, functional and open for public use.

5.2.3 Aspirational toilets

ULBs will have to provide additional **PTs in all tourist destinations/ places with high footfall/ iconic cities/ religious destinations, etc.** It is suggested that these additional PTs be made in “aspirational category”, with the following indicative features:

- a) Walls and floors are clean and stain / graffiti free
- b) Low height toilets/Indian toilets and basins for children
- c) Plants / shrubs in the vicinity of toilet complex are well maintained
- d) Space earmarked for advertisement for revenue generation
- e) Hand dryer / paper napkin available
- f) Ladies’ toilets have vending machine for sanitary napkins
- g) Incinerator facility available for disposal of used sanitary napkins for toilet having > 10 seats

h) Toilet identification number, name of ULB under which jurisdiction toilet is covered, ward number and maintenance authority prominently displayed for each toilet block

i) SMS based feedback with number displayed on which SMS has to be sent

Annex 9 details out all the features that are required for a toilet to be as “aspirational toilet”.

5.2.4 Central assistance as per the norms outlined in paragraphs 5.2.5.2 & 5.2.5.3 below will be provided for such PTs. ULBs will be required to indicate the additional footfall expected at these tourist locations while preparing the DPRs for fund release.

5.2.5 Construction & Design

5.2.5.1 Care should be taken to ensure that all CT/ PT/ Urinals being constructed under SBM-U 2.0 are built in tandem with water supply arrangements of the ULB. These facilities should also have adequate provision for separate toilets & bathing facilities for men, women, transgenders, and the disabled, as provided in the ODF+ protocol.

5.2.5.2 CT/ PT 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 system) shared by all the toilet seats along with facilities for hand wash.

5.2.5.3 The norms for connection of the superstructure to an on-site system or connection to an underground sewerage system as defined in paragraph 5.1.3 above will apply here.

5.2.6 Operation & Maintenance

There should be a digital system for capturing user feedback on a regular basis, multiple times per day, for each CT/ PT, with each feedback tagged to a unique user ID. Additionally, the Swachhata App may be used to provide feedback/register complaints regarding poorly maintained or non-functional CT/ PTs.

5.2.7 Fund Release Mechanism for CT/ PT/ Urinals (as mentioned in section 4.5.4)

5.2.7.1 Central government funds for the construction of CT/ PT seats & Urinals will be in the following form:

- 90% for ULBs in NE/ Himalayan States,
- 100% for UTs without legislature,
- 80% for UTs with legislature,
- 25% for 10 lakh plus ULBs,

- 33% for ULBs with 1 lakh to 10 lakh population (both included),
- 50% for ULBs with less than 1 lakh population

5.2.7.2 The unit cost of CTs/ PTs will be calculated at ₹1,50,000 per seat, and at ₹2,50,000 per seat for aspirational PTs, while base unit cost of Urinals will be calculated at ₹32,000 per seat wherein the VGF/ Grant will be as per the proportions given in paragraph 5.2.5.1 above. ULBs may also provide mobile toilets or eco-friendly toilets for use as CT/ PTs.

5.2.7.3 The **1st instalment** of 40% of allotted Central share from MoHUA will be released to the State/ UT provided the entry conditions specified in Section 4.2, and following additional conditions are satisfied:

- City Sanitation Action plans (CSAP) Part 1 (approved by SLTC) along with gap analysis;
- ULB to upload their latest progress data on the MIS portal
- declaration from Municipal Commissioner/ EO of ULB that all existing CTs/ PTs & Urinals in the ULB are fully functional, with provision for water;
- SLTC approved & complete proposals for a city (based on gap analysis), along with O&M plans for at least 5 years for maintaining functionality of CT/ PT;

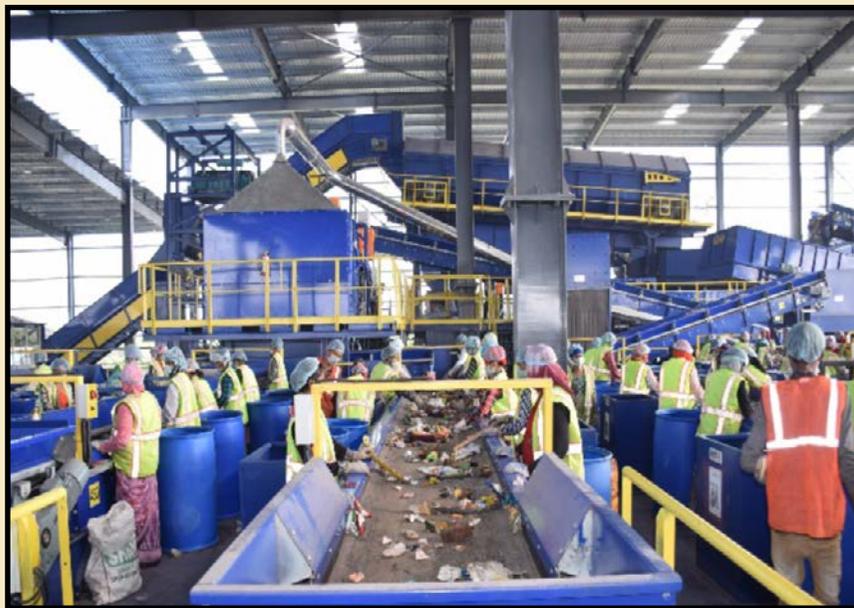
- ULB has provided for encumbrance free land for construction of the CT/ PT complexes and Urinals.

5.2.7.4 The **2nd instalment** of 60% of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the following conditions are satisfied:

- Documentary evidence of 30% completion of construction target;
- UC for 75% of first instalment fund released;
- State has expended 75% of its allotted share;
- City has been certified as ODF+ (or above) at least once.

5.3 Expected Outcome

It is envisaged that at the end of the Mission, all ULBs will become ODF+.



SOLID WASTE MANAGEMENT

Sets out the overall approach to be taken by ULBs to put in place systems and processes to ensure that Urban India becomes Garbage Free.

6.1 Municipal Solid Waste and its management

Approximately 1,32,000 Metric Tonnes of MSW is generated from all urban areas of the country, which translates to about

300-550 grams per person per day. The waste generation is higher in larger cities and lower in smaller cities. The general trend of per capita waste generation is as follows:

S. No.	ULB Population Class	Typical Per Capita Waste Generation (in grams)
1.	>10 Lakh	550
2.	1 to 10 Lakh	450
3.	< 1 Lakh	300



6.1.1 Components of MSW Management:

The table below gives a tabular depiction of various components of Solid Waste management systems:

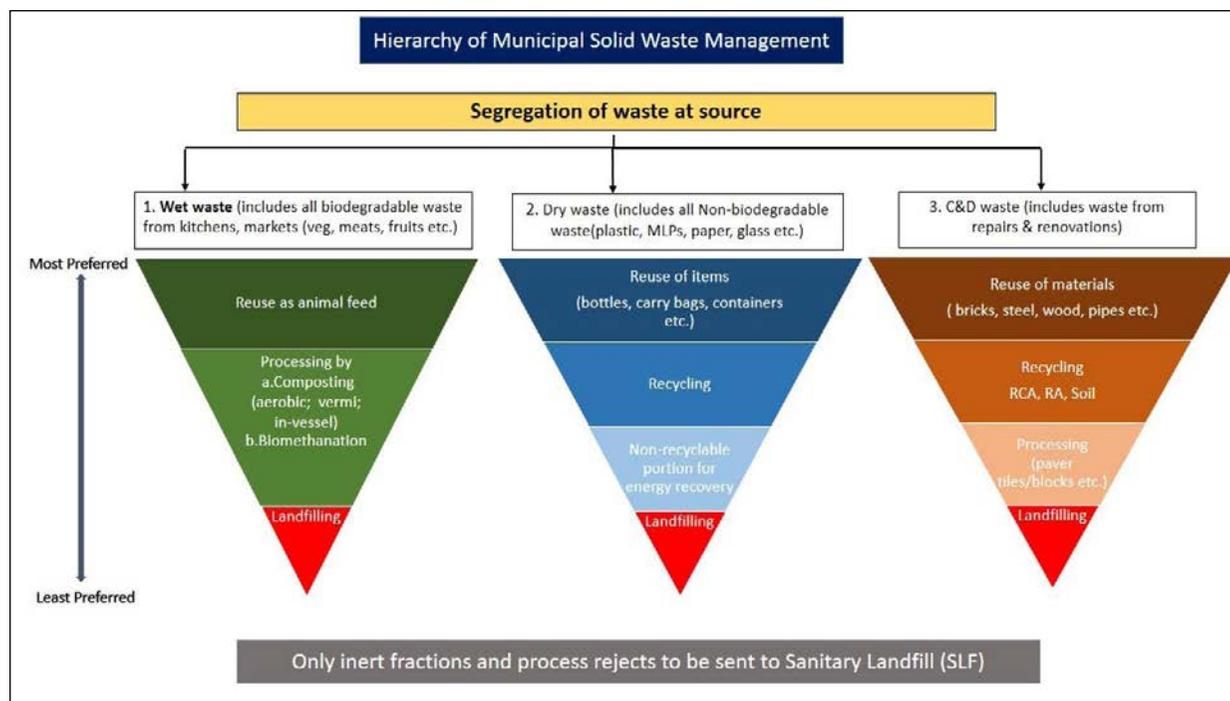
S. No.	Components	Description
1.	Source Segregation	Source Segregation of waste at the place of its generation in following categories is fundamental to MSWM: <ul style="list-style-type: none"> • Biodegradable wastes (wet waste - food waste, fruits & vegetables and parts thereof, meats, etc.), • Non-biodegradable wastes (dry waste - plastics, paper, cardboard, rags, glass, metal, wood and inert waste, etc.) • Sanitary waste and disposables thereof • Domestic hazardous wastes (such as aerosol cans, paint material, discarded medical supplies etc.) • Construction & Demolition waste • Generators of E-waste (including fluorescent and mercury containing bulbs & lamps) shall not mix e-waste with any other waste but deposit the same at e-waste collection centre
2.	Door to Door Collection	Collection of solid waste from the door step of households, apartments, housing societies, shops, commercial establishments, offices, institutional or any other non-residential premises, including collection of such waste from entry gate or a designated location on the ground floor in a housing society, multi storied building or apartments, large residential, commercial or institutional complex or premises;
3.	Separate transportation	Transportation of the segregated waste collected from source premises in specially designed, partitioned and covered transport vehicles, to the respective processing facilities.
4.	Waste Processing	Processing of different fractions of MSW i.e. dry, wet, C&D and plastic as per Solid Waste Management Rules 2016. Processing is to be done differently for different categories of waste.

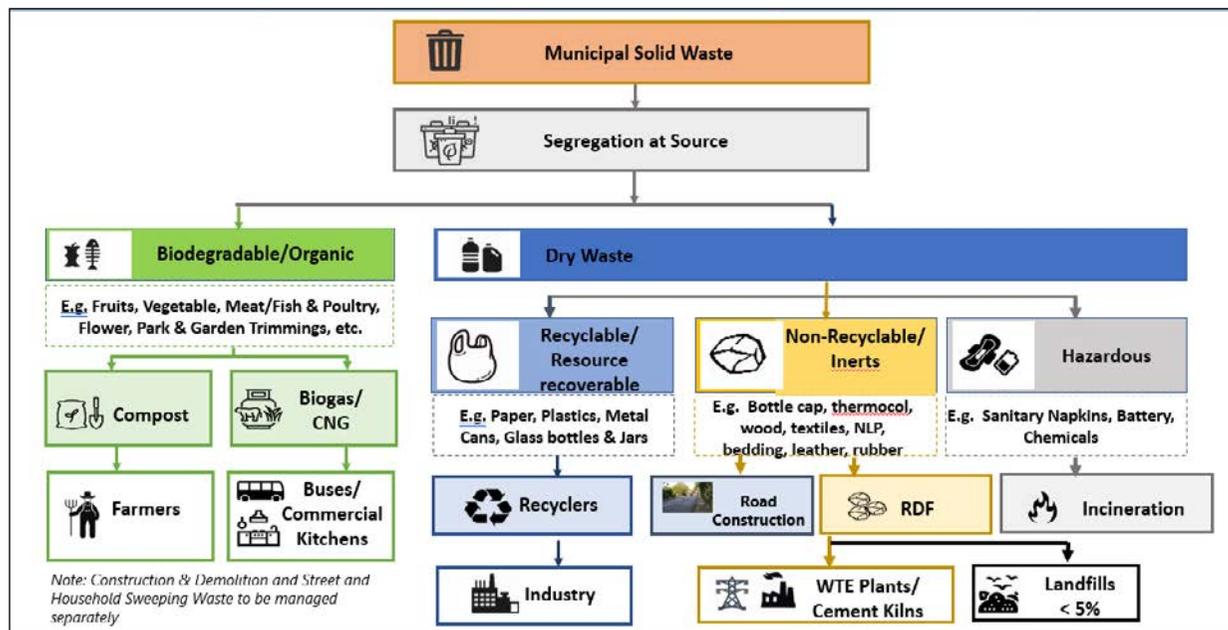
S. No.	Components	Description
4(i).	Wet Waste	<ol style="list-style-type: none"> 1. Home / Family sized Decentralized Composting Community /larger Decentralized (Less than 5 TPD) composting facilities 2. Centralized composting facilities (More than 5 TPD) 3. Bio-methanation - most suited for segregated wet waste like food waste from hotels/restaurants, and waste from dairy, vegetable market, meat/fish markets, mela waste etc.
4(ii).	Dry Waste	<ol style="list-style-type: none"> 1. Material Recovery Facility (MRF) is a facility where non-compostable solid waste can be temporarily stored and processed by authorized agencies for further segregation, sorting and recovery of recyclables/non-recyclables/inert such as segregation of plastic, glass, metal, paper, clothes etc. The recyclable fraction like plastics and metals are to be sent to authorized recyclers. 2. The non-recyclable/ combustible waste is to be sent to Waste to Energy plant/ Cement Kilns as Refuse Derived Fuel (RDF). <ol style="list-style-type: none"> i. Incinerators: Sanitary napkins and Diapers are to be separated, specially marked and sent to a bio-medical waste/ waste to electricity plant for incineration. ii. Waste to Electricity plants: The combustible fraction of waste out of MRF/ Processing Facilities which is non-recyclable and has calorific value of 1,500 Kcal per kg and above can be used in waste to electricity plants.
4(iii).	Sanitary Landfill	<p>Only the inert waste (mostly from street sweeping) and process rejects (in no case should this exceed 20% of total waste) which are not suitable for any of the above dry and wet waste treatment processes can be sent to sanitary landfills.</p> <p>It is recommended that SLFs are set up as separate business entities levying tipping/ gate fee as per the quantity and quality of waste received at the facility. Free use of SLF / LF may not be allowed, to increase the processing & recycling efficiency by the ULBs and its contractors.</p>

S. No.	Components	Description
4(iv).	C&D Waste	Construction & Demolition (C&D) waste is generated whenever construction/ demolition activity takes place such as building roads, bridges, highways, flyovers, subway and redevelopment of old structures. It consists mostly of inert, non-biodegradable material such as concrete, soil, steel, wood & plastics, bricks & mortar etc. C&D waste is sorted into different streams and sent to C&D waste processing plant.
5.	Bulk Waste Generators	All Bulk waste generators have to manage their own wet waste and also make own arrangements for dry waste management.
6.	User Fee	Suitable User Fee and relevant penalty provision needs to be notified by all ULBs as per Rule 15 (ze) (zf) of SWM Rules 2016 on the lines of advisory circulated by MoHUA.

6.1.2 Hierarchy and Process Flow of Municipal Solid Waste Management:

The basic principles involved in scientific solid waste management are given below which is called the Hierarchy of Integrated Solid Waste Management (ISWM).





Process Flow of Municipal Solid Waste Management

6.2 General Principles for Designing of Waste Processing Facilities:

6.2.1 The composition of Municipal Solid Waste in India is as follows:

- Organic / compostable fraction: 40 – 60%;
- Recyclable/ Resource Recoverable fraction: 20 – 30%;
- Non-Recyclable/ Combustible (RDF): 10 – 20%;
- Construction & Demolition (C&D) waste & unusable combustible: 5 – 15%.

6.2.2 City Solid Waste Action Plan (CSWAP):

The vision of SBM 2.0 for scientific MSWM is that cities will ensure

segregation of waste at source, process waste in segregated fractions, recover resources and recycle to the maximum extent and minimize landfilling to 20% or less (including reject material coming out of processing). Cities must be seen to be clean 360°, duly remediating the legacy dumpsites. Further, Cities with non-conforming air quality need to replace the common manual street sweeping with air quality friendly mechanical sweeping and process the C&D wastes as well.

6.2.2.1 As a first step in fulfilling the vision, ULBs will prepare the CSWAP duly identifying the projected waste generation, segregation as wet and dry

waste, the available processing capacity and the gap thereof. The CSWAP should also capture the gaps in dumpsite remediation, mechanical sweeping and C&D waste processing facilities. Funds will be available for addressing the assessed gaps.

6.2.2.2 Cluster of ULBs can also be considered for creation of common infrastructure, keeping in mind the techno-commercial viability. For ULBs with population of more than 3 lakh (including ULB clusters), it is recommended that the wet waste will be processed using Bio-methanation, to produce biogas/bio-CNG for higher economic returns.

6.2.3 CSWAP will identify sanitary landfills (SLFs) which shall be set up preferably on cluster model. In order to ensure economies of scale and operational efficiency, State/ UTs may encourage creation of common infrastructure to cater to a group of small ULBs and their surrounding rural areas (in convergence with SBM-Grameen), including shared O&M of the infrastructure. In this SLF matter, the “one-district-one-operator” approach may also be considered.

6.3 The templates of CSWAP for various funding components of SWM is at Annex 2. The targeted outcomes of scientific MSWM will also be brought out in the CSWAP such as:

- timelines for implementation of required infrastructure
- timelines for achieving stages of Star Rating under GFC protocol. A minimum 3 Star Rating will be achieved before the end of mission.

6.4 As achieving the mandatory GFC 3 Star Rating is linked to the creation of required infrastructure identified in the CSWAP, Cities and States /UTs need to examine strategic implementation plans. Bottlenecks such as land and environmental clearances need to be taken up in parallel with administrative and financial approvals so that the grounding of project works is not delayed. States/ UTs may develop a matrix of implementation issues for all their ULBs and select ULBs for their annual Action Plans which will mature to immediate implementation.

6.5 SBM 2.0 interventions in MSWM envision discrete project categories such as (i) MSW processing plants (ii) Legacy Dumpsites Remediation (iii) C&D Waste Processing plants (iv) Mechanical Sweepers and (v) SLFs which can be implemented simultaneously as independent projects, and also have vastly different implementation characteristics and different sets of vendors/contractors. Cities and States/ UTs need to link such different implementation

factors into their Annual Action Plans. Considering these factors, the State / UT SBM Urban Mission Directorates are advised to prepare immediately ULB-wise CSWAPs and the corresponding implementation schedules.

6.6 Cities and States/ UTs can also develop implementation strategies responsive to the annual Swachh Survekshan to improve their rankings therein.

6.6.1 CSWAPs prepared duly incorporating the planned phasing of different modules will be the input for State/ UT Annual Action Plan and will be part of the proposal taken to SHPC for approval. State SBM Urban Mission Directorate will combine all CSWAPs and furnish the State Action Plan for achieving the mandatory 3 Star Rating of all ULBs in the State, spread across the 5 years of Mission. The State/ UT Annual Action Plans covering all ULBs will be approved in the first three years of mission, leaving a cushion of two years for implementation of outputs and achieving the mandated outcomes.

6.6.2 CSWAPs will also identify sanitary landfills (SLFs) which shall be set up preferably on cluster model. In order to ensure economies of scale and operational efficiency, State/ UTs may encourage creation of common

infrastructure to cater to a group of small ULBs and their surrounding rural areas (in convergence with SBM-Grameen), including shared O&M of the infrastructure. In this matter, the “one-district-one-operator” approach may also be considered. Relevant CSWAPs will be part of the proposal taken to SLTC for approval. State SBM Mission Directorate will combine all CSWAPs and furnish the timeline for achieving the mandatory 3 Star Rating of all ULBs in the State, spread across the 5 years of Mission.

6.6.3 ULBs are to prepare DPRs for Solid Waste Management in consultation with State Governments, in compliance with MoHUA checklist (**Annex 6**). Smaller cities can be formed into clusters to become viable entities for economies of scale and to attract private investment. State Governments may handhold ULBs in preparing DPRs for SWM by engaging agencies/ institutions for this purpose. The DPRs should be ideally bankable, having a viable financial model. DPRs should be aligned with the guiding principles, SWM Rules 2016, CPHEEO Manuals and MoHUA Advisories.

6.6.4 Co-processing - Cement plant / RDF: For RDF produced from non-recyclable fraction of dry waste, the first priority should be given to using it in nearby

cement plants or other similar industries (as alternative fuel).

- 6.6.5 It is stressed that waste to electricity projects are financially and operationally viable only with assured input of minimum 150 – 200 tonnes per day (TPD) of non-recyclable, high-calorific value segregated dry waste (RDF). Ideally, only ULBs with population of 10 lakhs and above (individually or in cluster) may opt for waste to electricity projects. While approving Waste to Electricity projects, ULBs are advised to ensure adequate quantity of waste/ RDF of specified calorific value. In this respect, ULBs may refer to the waste processing flowchart given under para 6.1.2 for recommended processing options for various waste fractions.

- 6.7 State Government can engage qualified institutes/ organizations for the technical and economic appraisal for project DPRs recommended by ULBs.

6.8 Governance and Administrative provisions:

- i. While considering projects under SWM, it will be ensured that there is no duplication in terms of funding under any other scheme or programme.
- ii. States/ UTs shall be free to choose the technology for SWM projects. MoHUA would be technology-

agnostic as far as project funding is concerned, subject to overall allocation for State/ UT.

- iii. MoHUA shall, from time to time, bring to the notice of the States/UTs, through Advisories and Manuals, and other consultative mechanisms, various technology options available in the field.
- iv. States/ UTs and their ULBs are recommended to use the GeM (government e-market place) portal for procuring waste management equipment.
- v. The State Governments are recommended to put in place a single-window clearance system for SWM projects for ease of setting-up of facilities in timely manner and encourage private sector participation.

6.9 Funding mechanism for the SWM projects (as mentioned in section 4.5.4):

The GoI contribution for setting up MRFs, transfer stations, waste processing plants (including C& D waste processing plants), procurement of mechanized sweeping equipment and bio-mining of legacy dumpsites shall be as follows:

- 90% for ULBs in NE/ Himalayan States
- 100% for ULBs in UTs without legislature

- 80% for ULBs in UTs with legislature
- 25% for other 10 lakh plus ULBs
- 33% for other ULBs with 1 lakh to 10 lakh population (both included)
- 50% for other ULBs with less than 1 lakh population

6.9.1 Components that can be funded include the following (as given in section 4.5.4):

i. In all statutory towns:

- Setting up of waste processing facilities such as MRFs, transfer stations, composting plants, bio methanation plants, RDF processing facilities (for ULBs with 5 lakh population and above), plastic waste processing facilities, waste to electricity, sanitary landfill, etc.
- Remediation and land recovery of legacy dumpsites

ii. In 154 ULBs (NCAP cities +> 5 lakh population ULBs as per list given in **Annex 1**)

- Procuring mechanized sweeping equipment.
- Setting up processing facilities for effective management of Construction and Demolition (C&D) waste.

6.9.2 The **1st instalment of 40%** of allotted Central share from MoHUA will be released to the State, provided the entry conditions specified in Section 4.2, and following additional conditions are satisfied:

- SLTC approved CSWAP for respective modules (viz. C&D, Mech. Sweeping, Legacy dumpsites, MRF+waste processing) and action plans for respective component submitted;
- Receipt of SLTC approved proposals for a city along with O&M arrangements for at least 5 years, and its funding arrangements;
- Land identified & earmarked for setting up SWM facility/ facilities.

6.9.3 The **2nd instalment of 40%** of allotted Central share from MoHUA will be released to the State, provided the following conditions are satisfied:

- UC submitted for 75% expenditure of Central and State share of first instalment;
- Physical progress of at least 25% should have been completed in each of the sub components (such as processing plants, MRFs, SLFs, legacy dumpsite remediation, etc.)

- Receipt of documentary evidence of completion of construction of SWM facilities and their functionality with funds received under SBM-U earlier.
- 6.9.4 The 3rd instalment of 20% of allotted Central share from MoHUA will be released to the State, provided the following conditions are satisfied:
- UC submitted for 75% expenditure of Central and State share of second instalment
 - City is at least 1-star certified as per Star Rating Protocol for Garbage Free Cities, and is segregating at least 60% of its municipal solid waste at source;
 - Physical progress of at least 60% should have been completed in each of the sub components (such as processing plants, MRFs, SLFs, legacy dumpsite remediation, etc.)
- 6.10 **Outcomes (in all statutory towns):**
- i. 100% Door to Door collection;
 - ii. 100% source segregation of MSW;
 - iii. 100% waste processing (in separate fractions of Wet , Dry, C&D waste);
 - iv. Safe, quantified and scientific disposal of inert waste and processing rejects to Scientific Landfills;
 - v. Legacy waste in dumpsites is remediated;
 - vi. C&D Waste management in all 154 non-attainment cities under Nation Clean Air Program (NCAP) and remaining cities >5 lakh population is achieved;
 - vii. All cities achieve at least 3-Star Garbage Free rating.

USED WATER MANAGEMENT

Sets out the overall approach to be taken by ULBs to put in place systems and processes to ensure that no untreated waste/used water is discharged into water bodies, along with reuse of treated used water.

7.1 Used water management

In the current scenario in India, only 40% of urban population have access to sewerage system, while the remaining 60% is dependent on unregulated on-site sanitation systems.

In the first phase of SBM (U), there were no funds earmarked for waste water management for towns. Based on learnings from the seven years, used water management for towns less than 1 lakh population has been newly added as a component under Swachh Bharat Mission-Urban 2.0 and Govt of India's AMRUT 2.0

Mission has funds earmarked for used water treatment including Faecal Sludge management, for cities with more than 1 lakh population.

Some basic definitions & terms used under this chapter are as given below for ready reference.

7.2 Components of Used Water Management Systems

The table below gives a tabular depiction of various components of domestic used water management systems:

S. No.	Components	Description
1.	Sewage (Used Water)	Used Water comprises of the following two components: Grey Water from kitchens, bathrooms, wash basins etc. Black Water from toilets & urinals. These may sometimes be mixed with other municipal flows such as surface water and storm water.
2.	Generation of Domestic Used Water	Generation of Domestic Used water: GOI/States/UTs endeavor to provide 135 Litres per capita per day (LPCD) of potable water through various Missions/ programmes. Of this, 80% (108 LPCD) is expected to be generated as used water.
3.	Management of Used Water	Management of Used Water includes collection, conveyance, treatment & recycling/ disposal of all the above stated flows.

S. No.	Components	Description
4.	Collection	Grey water from kitchens, bathrooms, wash basins etc. and black water from toilets shall be collected and let into the nearby sewer (i.e off-site sanitation system) or into the onsite sanitation systems (septic tanks with soak pits)
5.	Conveyance	
5.1.	Off-site System	Offsite System consists of sewage conveyance and treatment at STP
5.1.1	Interception & Diversion drains	This is a system of intercepting & collecting sewage from municipal drains (where sewer network is absent) and to divert it to STP for treatment.
5.1.2	Sewer network	<p>Sewer network consists of continuous pipes laid underground, mostly along roads, to collect sewage from households and other establishments.</p> <p>Central portion of city area often characterized by high population density is designated as Core Sanitation Zone (CSZ) which is suitable/ viable for laying of sewer network.</p> <p>The outskirts of a city often characterized by sparse population density is designated as fringe areas. These areas are often based on on-site sanitation system, as laying of sewer network is often unviable.</p>
5.2.	On-site System	Onsite treatment system (OTS) is a privately owned and maintained sewage disposal system (other than municipal body) that treats used water and produces partially treated water. However, some packaged onsite sewage treatment systems are also available.
5.2.1	Septage (from septic tanks with soak-pits)	In on-site systems, the fecal sludge and black water is accumulated in septic tank and soak pit, situated within the premises. Periodically, specialized collection vehicles will be used for desludging the septic tanks and transporting the same for treatment.
6.	Treatment	Sewage is treated in STP and faecal sludge can be treated either at STP or STP-cum-FSTP or standalone FSTP. Further, the treatment may be centralized or decentralized treatment.
6.1.	STP	Sewage Treatment Plants (STP) are used for treatment of used water coming out from Domestic, Commercial, institutional establishments etc.

S. No.	Components	Description
6.2.	Faecal Septage Treatment Plants (FSTPs)	Faecal Septage Treatment Plants (FSTPs) are used for treatment of faecal septage being periodically removed from septic tanks of domestic, commercial, institutional establishments etc. to maintain their efficiency.
6.3.	STP-cum-FSTP	Septage can be economically treated at STPs with certain minor modifications saving CAPEX, OPEX & land requirement.
7.	Recycle/ Disposal	The treated used water may be used by ULB either for self-consumption, or sold, for the following purposes: <ol style="list-style-type: none"> 1. Non-potable purposes like flushing toilets, gardening etc. 2. Agricultural purposes 3. Horticulture purposes 4. Industrial purposes 5. Municipal purposes like dust mitigation, road washing, construction activity, etc. 6. Water body rejuvenation It is targeted to recycle and reuse at least 20% of treated used water for above mentioned purposes.
8.	User Fees	Suitable user fees matching the cost of sewage management to be levied ensuring long term sustainability and assured service delivery. Levied user charges should be sufficient to recover fully/ partial O&M cost for running the facility uninterruptedly. Along with user charges, suitable penalty provisions to be notified in ULB bylaws.

7.3 Used water as new component under SBM-U 2.0

SBM-U 2.0 provides funds to address the issue of used water management including the safe containment, transportation and disposal of faecal sludge and septage from toilets, for cities with population of less than 1 lakh. It will help to holistically manage approximately 13,000 MLD of sewage generated from the notified Class II - VI towns of the country, as shown in Table 7.1:

Class of Cities based on Population		No. of Cities*	Total Population @ 2011 Census [in crore]	STP capacity reqd (in MLD) (after adjusting for 23% decadal growth of population)	Average capacity (in MLD)
Class II	50,000-99,999	535	3.65	4,498	5.5
Class III	20,000-49,999	1,439	4.46	5,494	3.5
Class IV	10,000-19,999	1,233	1.2	2,826	.70
Class V	5,000-9,999	541	.43		
Class VI	<5,000	153	.05		
Total		3,901	10.42	12,818 (approx. 13,000)	

*- For purpose of estimation, Census 2011 figures are considered with suitable population projections. However, all Statutory towns will get funding support from SBM (U).

7.4 Objectives

Inclusion of used water management component under SBM-U 2.0 will help to achieve following two objectives:

- all used water is safely collected, treated and reused to feasible extent and no untreated used water is discharged into water bodies or the open environment;
- all faecal matter and septage is properly collected, treated and by-products reused.

7.5 Focus Areas under used water management

To achieve the objective of treating used water before discharge into water body/ overland, the following will be the major areas of focus under SBM 2.0, and will be eligible for Central share of funding:

- setting up of Sewage Treatment Plants (STPs)/ STP-cum-FSTP;
- laying Interception and Diversion (I&D) structures including provision of pumping stations and pumping main/gravity main upto STP;

- iii. procuring adequate numbers of septic tank desludging equipments;
- iv. deploying Digital (IT enabled) tools for real time monitoring of efficiency parameters during the operational phase of STPs and allied equipments.

7.6 Project components eligible for funding

7.6.1 Used Water Project Components eligible for central funding

The project components to be funded by GOI is given below.

1. **Sewage Treatment Plant:** State/ULB will be free to adopt any proven technology, as brought out in the CPHEEO Manual/MoHUA Advisories from time to time. However, for smaller ULBs, nature-based technologies in suitable combinations may be adopted. Relevant components for integration of septage treatment at STP such as desludging ramp, screens, solid/ liquid separation chamber, pumping etc, will be admissible components for Central funding as part of STP.

2. **Interception and diversion drains/ outfall sewer/ trunk main sewer:** Interception and diversion drain component is eligible for funding for conveying municipal dry weather flow upto STP/ STP cum FSTP through an outfall sewer/ trunk sewer from existing/ upcoming sewer network leading to the Sewage treatment facility.

3. Sewer & Septic tank cleaning machines

Desludging/ cleaning equipments will be eligible for funding provided that SLTC confirms that (a) the Private Sanitation Service Operators (PSSOs) are unlikely to be available to undertake this task at the particular ULB and (b) the State/ ULB will be engaging operators on contract to run them.

7.6.2 Used Water project components to be fully funded by States/ULBs

1. **Sewer Network-** The entire cost of sewer network being set up in the towns to be borne by the State/ UT & ULB including those of tied 15th Finance Commission(FC) Grants. The arrangements in terms of funds and timelines need to be delineated and explained to SLTC while sanctioning of projects and also communicated to the National Mission Directorate, at the time of claiming central share of funds for STPs/ STP cum FSTP and I&D infrastructure in any town. It is expected that each ULB will use 15th FC tied Grants/ SFC Grants and their own resources to suitably convey sewage from the households through sewer networks to ensure robust and environmentally conscious sanitation approach. As an interim arrangement due to fund constraints or any other reasons existing and improved municipal pucca drains could be used as means of conveyance. Use of tied 15th FC grants towards development of sewage conveyance network would be monitored by Ministry in accordance with 15th FC guidelines.

Further, to promote planned urbanization with requisite basic services, it is advised that in new green field developments in and around towns, provision of sewerage network along with decentralized sewage treatment facilities should be ensured. This will avoid construction of individual septic tanks and soak pits.

2. Strengthening of Municipal Drains

As an interim arrangement, till sewers are laid in town, strengthening of drainage networks is to be taken up and intercepted into existing/upcoming sewer network, wherever feasible, or brought to I & D point from where, sewage/sullage can be conveyed to STP/ FSTP cum STP.

As in the case of sewer network, the arrangements being contemplated in terms of funds including tied 15th FC Grants and timelines need to be delineated and explained to SLTC, while sanctioning of projects, and also communicated to the National Mission Directorate, at the time of submission of funds request towards STPs and I&D infrastructure. As explained above, in this case also funds mobilized out of 15th FC tied Grants/ SFC Grants and State/ULB's own resources would be monitored in adherence to 15th FC guidelines.

7.7 Mission Governance at State level

7.7.1 Sanctioning of Proposals and Mission Monitoring

While administering, approving and monitoring various related proposals of Used water management, SLTC to ensure the following and place before SHPC for approval:

i) **Annual progress plan for achieving Mission targets in respect of ODF++ and Water+.**

ii) **Sanctioning of City Sanitation Action plans (CSAP) part 2, including year-wise overall action plan for its approval.**

iii) **Seamless project implementation:** All Used water management projects are planned in an integrated manner, where Interception & Diversion of drains, STP and/ or STP- cum-FSTP construction and at least 5-years O&M of the constructed infrastructure are the responsibility of the same vendor/ operator and to be awarded in a single package.

iv) Ensuring that projects are planned in a manner that the envisioned Mission objectives of “no untreated used water discharged into water bodies” are met in totality.

v) For robust O & M of assets created, the “one-district-one-operator” approach may also be explored, if other wise found suitable to State/UT.

vi) **Cluster/ clubbing of ULBs:**

In order to ensure economies of scale and operational efficiency, State/ UTs may encourage creation of common infrastructure to cater to a group of small nearby ULBs and their surrounding rural areas (in convergence with SBM-Grameen), including shared O&M of the infrastructure, where found feasible.

vii) **Recycle & Reuse:** The projects must provide for recycle and reuse of treated used water. The recycle and reuse projects should be formulated in such a way so as to be financially sustainable.

viii) **Land availability:** SLTC will ensure timely land availability to take up implementation of projects particularly STPs.

ix) **Use of IT enabled Tools/ Computer software:** States / ULBs are encouraged to use IT-enabled tools/ computer software for design of various project components, its cost estimation & overall DPR preparation, to the extent feasible.

x) Policy and leveraging funds from various sources, private sector, capacity building etc.

xi) Constitution of State level Technical Committee(SLTC) under Principal Secretary (UD) for technical appraisal and sanctioning of projects submitted after detailed examination by engaged Technical Agency/Institutes.

xii) The DPRs submitted by ULBs to state Mission directorate will be required to be systematically scrutinized by technical institutes/ agencies, engaged for the purpose, from techno-economic angle and submitted to SLTC for technical sanction before submitting the same to SHPC for Financial & Administrative Sanction as outlined in Chapter 3.

7.8 Mission Implementation Strategy

7.8.1 City Sanitation Action Plan (CSAP) – Part 2

As a first step, ULB will be required to prepare the CSAP Part 2. The CSAP Part 2 is expected to contain information on sewage management, specifically details of existing

sewer networks, STPs, STP cum FSTPs, FSTPs and details of main municipal drains, etc, along with gap analysis in respective infrastructure and proposed projects along with block cost estimate, as per standard template provided at **Annex 3B**.

Gap Analysis: CSAP Part 2 must contain a gap analysis in sewage management and prospective projects to be taken up under SBM-U 2.0 along with its prioritization. The tentative block cost estimate for components like STP, sewer networks, pumping stations and I&D drains etc. are to be prepared with suitable zoning.

7.8.2 Broad DPR preparation approach

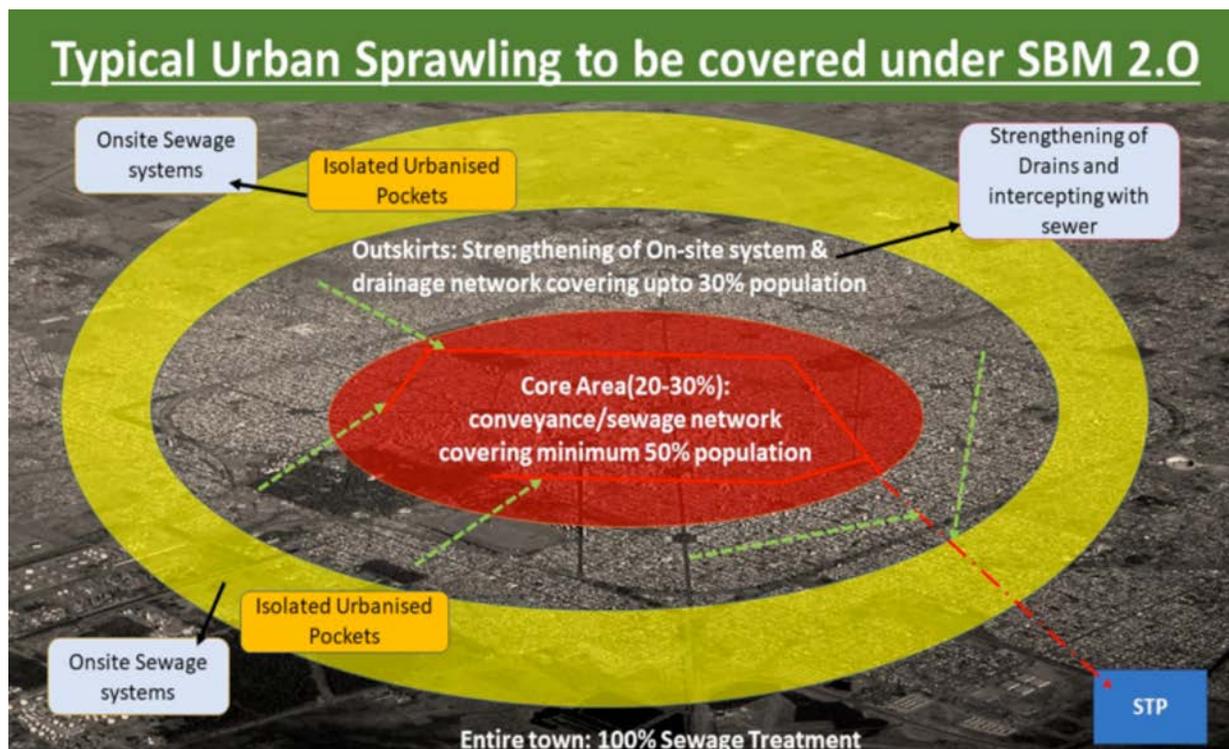
Broad DPR preparation approach is outlined below for two possible field scenarios:

A) Sound foundation for sanitation in ULBs using sewer network based robust used water management approach followed by Sewage treatment facility.

B) Where, States/ULBs, instead decides to adopt, municipal pucca drains based used water conveyance system, as interim arrangement, followed by I&D and Used Water and Septage treatment facility.

7.8.3 DPR Preparation approach adopting sewer network & STP

State/ ULB will be required to prepare DPR as identified in CSAP, following the CPHEEO Manual on Sewerage & Sewage Treatment Systems, 2013/ Advisories published by Ministry from time to time. For guidance on



the type of Infrastructure [sewerage, drainage, I&D and STP etc.] to be considered while preparing DPRs for various class of towns, the schematic layout may be considered:

1. **Sewer Network in Core Sanitation Zone:** ULBs to identify its “**Core Sanitation Zone (CSZ)**”, defined as a zone which has at least 50% of the town’s current population settled over an area comprising about 20-30% of the town’s spread (please refer diagram given above). The CSZ will be provided with a sewer network to connect it directly to the STP.

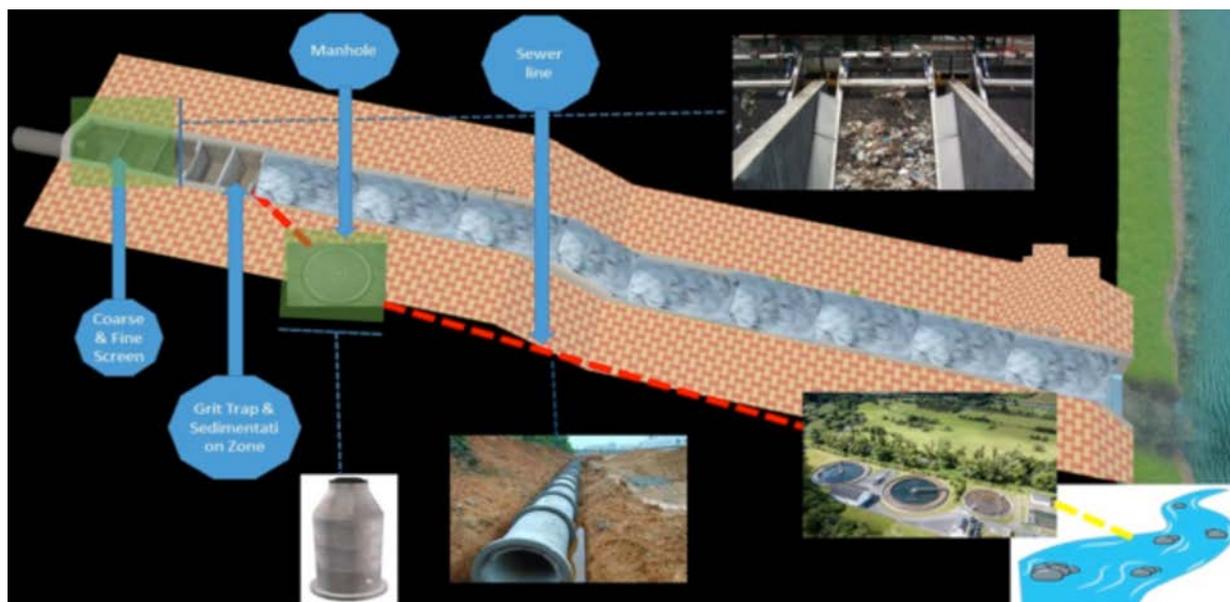
The cost of the CSZ sewer network will be borne entirely by the State/ ULB from 15th FC Grants/ SFC Grants/ their own funds etc. States/ UTs are expected to encourage the ULBs to identify any suitable area in the city to provide with

a sewer network. City can expand network coverage based on necessity and availability of resources over the time.

For upcoming new green field developments in and around towns, the provision of sewerage network along with decentralized sewage treatment facilities should be factored in planning.

2. **Intercepting used water from open drains to Sewer network:**

State is also required to **strengthen existing open drains** carrying sullage and connect the same to the sewer network, wherever feasible, after providing suitable I&D structures like coarse screen, grit chamber, fine screen and settling basin etc. before intercepting into sewer network.



3. Approach for Fringe Areas

- For inhabitants residing in fringe areas outside the CSZ, the town authorities may work out economically judicious solutions, opting between continuing with onsite disposal systems (septic tanks with soak pits) and providing localized community level sewage treatment plants for grey/ black water where feasible or conveying it to STP depending on economics. The septage from these households will continue to be safely hauled to a designated STP under professional arrangements.
- It is advised that the fringe areas may try to strengthen their onsite disposal arrangements by providing for soak pits where they are missing and forcing the septic tank effluent into the ground, adhering to design norms.

4. Provision for adequate Used Water Treatment Facility in each ULB:

It may be noted that each ULB needs to plan for adequate used water (grey water + black water) treatment facility with provision to treat septage as well. Creating adequate used water treatment facility is an important component and aligned with mission objective to ensure that used water is discharged to water body or over land only after proper treatment ensuring compliance to environmental discharge standards. This is necessary to comply with Legal and Regulatory requirements under Hon'ble NGT O.A no. 673/2018 and Honb'le Supreme court WP(C) 375.2012. as well as WATER (Prevention and Control of Pollution) Act 1974.

Accordingly, all towns will need to prepare a DPR containing the provision of minimum one STP (for 70% of current population).

5. STP Technology:

As regards selection of Used water treatment technology, it will be open to ULB/State Government to select **any proven technology** as brought out in the CPHEEO Manual/Advisories from time to time. In case States come across any other technology not listed in CPHEEO Manual/Advisories, the same should be referred to CPHEEO for evaluation and inclusion in the Advisories. State Governments are encouraged to select nature-based sewage treatment technologies (alone or in combination of two to attend desired treated effluent quality), where feasible, to economise Capex & Opex.

In this context, it may be mentioned that global experiences have established STPs to be the most effective method for treating used water (grey water and black water). Hence, States/UTs may take informed decisions regarding technology to be used for treating their used water so that the Mission's objective of "no untreated used water polluting water bodies" is realized.

7.8.4 Municipal pucca drains based used water conveyance system, followed by I&D and Used Water Treatment Facility

i. Urban Drains of various sizes comprising tertiary, secondary and primary tributaries

(main drains) discharge sewage into natural water bodies. During dry weather (when it is not raining), almost the entire flow in urban drains consists of

- a. raw sewage from toilets not connected to a sanitary disposal system,
- b. partially treated effluent from existing septic tanks, and
- c. other onsite management systems where soak pits are not provided or are blocked.

ii. As an interim arrangement, till sewers are laid or in the periphery outside core area of town where providing sewerage system is uneconomical, strengthening of drainage networks can be taken up by ULBs and intercepted in the sewer network wherever feasible, so as to efficiently convey sewage/sullage to STP in the town.

iii. Sullage Diversion (I&D) Plan leading to Used Water Treatment Facility

All tertiary and secondary drains will be provided with bar screens to trap floating debris, as per the following norms:

- Drain upto 1 metre width cross section – at every 1000 metre
- Drain above 1 metre width cross section- as per the local engineer's assessment.
- On primary drain, before outfall into a water body, there should be at least two bar screens within 2 km before discharge point into the water body.
- Proper periodic (daily) cleaning mechanism for drains to avoid overflowing in case of choking, especially by safai karmacharis.

iv. **Repair & Maintenance of drains:** ULBs will also need to repair all surface drains to maintain continuity so that the discharge is not dissipated through a breach or overflow.

The dry weather discharge flowing in the drains needs to be intercepted by ULB at suitable locations so that at least 50% of the current sewage generation in the town is collected and conveyed to the Used Water Treatment Facility. This criterion is a mandatory condition for sanctioning Used Water Treatment Facility for any ULB. Pumping arrangements are permitted, if absolutely necessary. However, gravity sewers are preferred.

7.8.5 Faecal sludge treatment approach

In the towns/ those parts of town not covered with sewer network, ULBs need to have in place adequate mechanism for **faecal sludge treatment**. The approach to treat the faecal

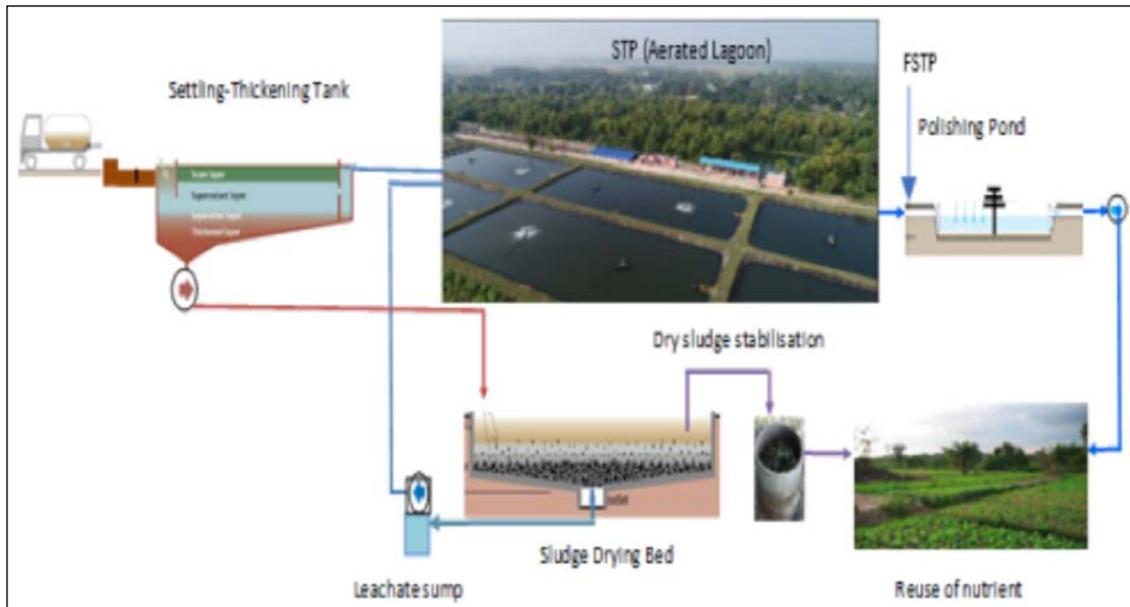
sludge may follow the hierarchy/ order of priority given below:

- **Town with existing STP:** Wherever STP is available, faecal sludge is to be co-treated with sewage in STP by constructing septage unloading facility coupled with Solid liquid separator by way of retrofitting. Liquid so separated would be pumped at inlet of STP and settled sludge can be put to sludge drying bed. If septage has low solid content ($< 3\%$), it can be even directly injected at inlet of STP after ensuring suitable ratio of dilution as detailed out in “On-site and Off- site sewage management systems” advisory brought out by MoHUA. It is explained in figures a and b above.

- **Town without STP:** In ULBs where no Used Water Treatment Facility is available, ULBs will need to ensure that Used water generated in its jurisdiction is properly collected, conveyed and



STP-cum-FSTP to treat sewage and faecal sludge in the same facility



Process Diagram of STP-cum-FSTP in the same facility

treated to environmental discharge standards before its discharge into water body/ over land. While planning for new Used Water Treatment Facility, faecal sludge management may be factored in such a manner that it is co-treated in the facility itself as mentioned above. This will result in reduced Capex & Opex and would also save precious land, thereby, promoting sustainability and improved service delivery. In newly notified smaller ULBs, where there is no STP and no FSTP, it is advised to plan and implement used water treatment facility with facility to co-treat faecal sludge. Further, till STP facility is created, faecal sludge can be transported to nearby STP having facility to co-treat faecal sludge to economise Capex & Opex.

• **Town with FSTP but without STP:** In towns having standalone FSTPs, although it provides facility to treat faecal sludge from septic tanks, desludged once in 3 years, it is not capable of treating Greywater from kitchens, bathrooms and washings etc, which is in huge quantity compared to septage and generated on daily basis. It also contains major share of pollution load generated from households/ commercial establishments etc. In a majority of cases, septic tanks do not have soak pits and black water from septic tank finds its way to municipal drains subsequently, polluting water bodies. This comes out on continuous basis from septic tanks and there is no treatment available for it, under faecal septage treatment facility. In

such ULBs, State will need to draw up a plan to collect grey water as well as black water from septic tanks and suitably collect and treat to meet environmental discharge standards before release into a water body or over land.

It also need to be ensured by States/ ULB that untreated used water (grey water and / or black water) is not discharged or allowed to percolate into ground water which has potential to pollute ground water and cause environmental degradation.

Where the existing FSTPs are available, the same can be utilized to treat septage from peri-urban area/ rural areas. However, since it is not designed to treat used water generated in the ULB area, separate used water collection and treatment infrastructure need to be created by each ULB to safely treat used water to the environmental discharge standards before its release in compliance with Honb'le NGT O.A. no. 673 of 2018.

7.9 Recycle & Reuse

The treated used water may be used by ULB either for self-consumption, or sold, for the following purposes:

1. Non-potable purposes like flushing toilets, gardening etc.
2. Agricultural purposes
3. Horticulture purposes
4. Industrial purposes
5. Municipal purposes like dust mitigation, road washing, construction activity, etc.

Efforts may be made to utilize as much used water as feasible, but not less than 20%. Circularity in used water has many advantages over conventional system of treating and discharging into water body or over land.

7.10 Fund release:

7.10.1 Funding Pattern

Central share for above mentioned components will be disbursed as per following cost sharing pattern:

- 90% for ULBs in NE/Himalayan States,
- 100% for UTs without legislature,
- 80% for UTs with legislature,
- 50% for ULBs with less than 1 lakh population

This will follow suitable ULB wise cost capping as mentioned in Annex- 10

7.10.2 Outcome-based fund release (as mentioned in section 4.5.4)

The Central government fund for used water management will be released in three (3) instalments with each instalment to be released based on achievement of specific milestones / outcomes as mentioned below:

- 7.10.2.1 The **1st instalment of 40%** of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the entry conditions specified in Section 4.2, and following additional conditions are satisfied:
- i. Responsible Sanitation Authority (RSA) notified across the State/ UT at District level/ in big municipal corporations;

- ii. Submission of City Sanitation Action plans (CSAP) part 2 (approved by SHPC) for sewage management along with gap analysis;
- iii. Receipt of SLTC approved proposals for a city along with at least 5 years' O&M contract post commissioning, and its funding arrangements;
- iv. Annual progress plan of State/UT of ODF++ and Water+ cities;
- v. Action plan for revamping all non-functional existing STPs/FSTPs in ULBs having less than 1 lakh population (if any- as recorded in the City MIS).
- vi. ULB has provided for encumbrance free land for setting up STP/ STP-cum- FSTP.

7.10.2.2 The **2nd instalment of 40%** of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the following conditions are satisfied:

- i. Functional Sanitation Response Units (SRU) set up;
- ii. UC submitted for 75% of first instalment of Central and State shares;
- iii. Portion of O&M being recovered through user charges;
- iv. City is certified ODF+ at least once;
- v. State will certify along with geo-tagged photos and other documentary evidence that:
- vi. Work has commenced for the drainage system development/ installation/ revamping duly completed (with geo-tagged photos and other documentary evidence);
- vii. The Interception & Diversion drain &

related conveyance system has reached 20% physical progress;

viii The STP/FSTP (in case of co-treatment) sub-project has achieved at least 10% physical progress on ground.

ix. Existing STP/FSTPs are made functional to treat used water, at least to the level as per their original design.

x. Work awarded for non-functional STPs/ FSTPs requiring major repairs/ rehabilitation.

7.10.2.3 The **3rd instalment of 20%** of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the following conditions are satisfied:

- i. UC submitted for 75% of second instalment of Central and State shares;
- ii. The Interception & Diversion drain & related conveyance work has been completed to the extent of at least 80% of physical process;
- iii. The STP sub-project work has been completed to the extent of atleast 60%;
- iv. Non-functional STPs/FSTPs made functional.

It may be noted that proposals should be in compliance with checklist provided in **Annex 6**.

7.11 Expected Outcomes

The following outcomes are envisaged under SBM-U 2.0 for used water management:

- i. All statutory towns with < 1 lakh population will become ODF++ certified.

ii. 50% of all statutory towns with < 1 lakh population will become Water+ certified.

States/UTs would be required to develop road map to achieve and sustain above outcomes and progress would be monitored periodically.



IEC & BEHAVIOR CHANGE

Sets out the overall approach to be adopted to ensure awareness creation along with large scale citizen outreach to intensify ‘Jan Andolan’ and institutionalize swachh behavior and action , for achievement of “Garbage Free” cities, and sustaining the gains of urban sanitation

8.1 The IEC & Behaviour Change initiatives under SBM 2.0 will be based on the learning that the achievements of SBM-U in the last 7 years largely rest on people’s participation, made possible through systematic communication at multiple levels. The Jan Andolan created under SBM-Urban was triggered by the Hon’ble Prime Minister and managed to engage with nearly 20 crore urban citizens. With the momentum created by the SBM, citizens have realised that sanitation impacts their lives in so many ways that it needs to be everybody’s agenda. The scale of impact that behavioral choices around sanitation have on people’s lives and society at large makes the issue of sanitation both personal and social. Under SBM-U 2.0, this aspect will assume far greater criticality, and will need to become the soul of the Mission. Accordingly, IEC and BCC under SBM-U 2.0 will require a more intensified and focused approach to ensure participation and active engagement from each and every citizen and every stakeholder. In fact, people’s participation will be foundational to achieving the Mission’s vision of Garbage Free cities. The IEC and BCC strategy would thus have to be innovatively reformatted to cater to the Mission’s vision

of Garbage Free cities in accordance with the objectives under SBM-U 2.0.

8.2 IEC and BCC strategy:

8.2.1 MoHUA will disseminate a National Level Communication Strategy to be implemented at Central, State and ULB levels. This will be done in close consultation with States, other stakeholders, domain experts and after taking into account relevant studies of the past and present. Additionally, States and ULBs would also be advised to design their own communication strategy.

8.2.2 MoHUA will hold periodic consultations among States for mutual learning and exchange of best IEC practices.

8.2.3 Detailed studies will need to be taken up by States/ UTs to identify triggers for behavior change among communities, which would form the basis of their IEC and BCC strategy and initiatives to be undertaken.

8.2.4 ULBs would need to engage citizen volunteer (depending on the size of the ward), who will be the designated interpersonal

communicator(s) to engage with each household in the ward on regular basis. The role of these volunteers would be critical in bringing about and sustaining behaviour change at the ground level with respect to key sanitation and waste management practices. The volunteers could be engaged through community structures already working in the ward such as NULM, NUHM, ASHA, Anganwadis, Self-Help Groups (SHGs), Non-Governmental Organizations (NGOs), youth/ women's groups, Community-Based Organisations (CBOs), RWAs, and other similar bodies, or from among general citizens (e.g. teachers, senior citizens, retired personnel, etc) who have influence in the community/ ward.

8.2.5 The role of the citizen volunteer would be to sensitise households on how their role would be critical to make their cities Garbage Free, trigger among them a sense of intolerance to garbage, alert them to the benefits of a clean surrounding and specify the behaviors they can adopt to contribute to that vision.

8.2.6 For achieving Garbage Free outcomes, households and citizens would need to be sensitized about:

- i. segregating their household waste into two bins;
- ii. taking ownership to maintain cleanliness of their immediate neighbourhoods;
- iii. educating others about the importance of cleanliness;
- iv. harmful effects of single use plastic and triggered to reduce their usage;

8.2.7 For sanitation and used water management, households and citizens would need to be sensitized about:

- i. the harmful effects of grey and black water from kitchens and toilets not being safely contained, transported and managed
- ii. maintaining community toilets in a functional manner,
- iii. providing feedback after using public toilets
- iv. calling for periodic desludging of their septic tanks

8.2.8 ULBs should facilitate formal creation and registration of all citizen residential areas into RWAs/ CBOs/ Slum Development Associations or equivalent, to strengthen ULB's last mile connect with every household.

8.2.9 ULBs should set up City Sanitation Committees with participation of selected citizen representatives for periodically reviewing and monitoring the efficient functioning of assets created.

8.3 States and ULBs may make use of existing IEC material designed at the national level, in addition to developing their own creative content, depending on the local and cultural context.

8.4 States will make sure that at least three comprehensive multi-media campaigns are created and placed in public domain: 1. in favour of garbage free city 2. Usage and maintenance of toilets, especially public and community toilets 3. Safe disposal of used water.

8.5 States will locate opportunities to converge SBMU campaigns with other highly visible major campaigns for gaining collateral impact

8.6 States and ULBs will coordinate with locally resourceful organizations/ enterprises so that they partake in SBM-U 2.0 messaging in a significant manner and add to the overall communication.

8.7 Fund Sharing (as mentioned in Section 4.5.4)

8.7.1 The Centre: State fund sharing for this component will be as given below:

- 90:10 for ULBs in NE/Himalayan States;
- 100% for UTs without legislature;
- 80:20 for UTs with legislature;
- 60:40 for other States/ UTs

8.7.2 A total of 5% of the total allocation for project components of the overall budget will be earmarked for this component. Of this earmarked amount, 80% of the Central share will be released to States/ UTs/ ULBs to design and undertake IEC/ BCC interventions. Out of this released amount, half the amount must be allocated to ULBs by respective State/ UT. The remaining 20% per cent will be earmarked for the National Mission Directorate to draw up a national campaign and develop standard campaign tools for effective awareness and communication.

8.7.3 The **1st instalment** of 40% of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the entry conditions specified in Section 4.2, and following additional conditions are satisfied:

- SLTC approved IEC action plan for State submitted (as per Annex 7).

8.7.4 The **2nd instalment** of 60% of allotted Central share from MoHUA will be released to the State/ UT for a ULB provided the following conditions are satisfied:

- UC submitted for 75% expenditure of Central and State share;
- 50% Progress against action plan;
- City certified ODF+;
- City certified at least 1-star with 60% source segregation.

8.7.5 Expenditure on national Newspaper and TV is not an admissible item under this component for the State Government or for the ULBs.

8.7.6 Under no circumstance shall the IEC fund be utilized for purchase of vehicles, construction and maintenance of buildings, creation of posts and payment of salary of municipal staff, and purchase of furniture and fixtures.

8.7.7 While approving IEC proposals, SHPC should ensure that at least 80% of the funds requested are for ground -level behavior change initiatives through inter-personal

communication, rather than for merely messaging and awareness activities.

8.7.8 In light of the experience of the past, it is advised that ULBs will need to report expenditure on IEC to the State Mission every month and States in turn will provide information on monthly expenditure in IEC to SBMU Mission at MoHUA through the designated portal. For further release of funds to States, at least 75 % of utilization of funds earmarked for IEC would be considered essential.

8.8 Outcomes

It is expected that outcomes of the IEC and BCC initiatives would lead to:

- i. all households segregating their household waste into two bins and ensuring its due disposal
- ii. all citizens sensitized about non-acceptability of garbage in any form in their vicinity and acting for its due disposal
- iii. all citizens sensitized about harmful effects of usage of single use plastic and triggered to reduce their usage
- iv. all citizens sensitized about necessity for getting septic tanks periodically desludged and acting accordingly

CAPACITY BUILDING, SKILL DEVELOPMENT & KNOWLEDGE MANAGEMENT

Sets out the overall approach to be adopted by ULBs for building the capacities and skills of all stakeholders, preeminently of the ULBs, in order to ensure effective ground level implementation, for achieving the vision of “Garbage Free” cities and towns, and for meeting all other objectives of SBM-U 2.0.

9.1 Urban Local Bodies (ULBs) are mandated by the Constitution of India, under Twelfth Schedule, to carry out functions related to water supply and sanitation. The first phase of the Swachh Bharat Mission was successful in meeting its aims and objectives to make India an ODF country, but also brought to light qualitative and quantitative shortfalls in the capacities of the key personnel engaged in the implementation of the Mission. With the launch of SBM-U 2.0, it has become imperative to develop a cadre of professionals at the ULB level and also at the State level to work towards the specific objectives of the Mission, and sustain the gains made in last seven years. Identifying the need to make the Mission truly people-centric and stakeholder-owned, SBM-U 2.0 will focus on comprehensive capacity building across the pyramid of stakeholders engaged in program implementation, and most importantly at the ULB level. This would include components for which funding is available within the mission, and other related areas where funding is available through convergence with other schemes, including leveraging of AMRUT 2.0 and other relevant

Mission/ Programme funds such as SBM-Grameen, Namami Gange, Ministry of Social Justice and Empowerment, etc.

9.2 In line with these goals, there is a requirement for a focused approach to capacity building and stakeholder development. Thus, MoHUA will conceptualize a National Capacity Building and Skill Development Strategy to be implemented at the Central, State/UT and ULB levels. States/UTs and ULBs will be required to identify relevant administrative and technical officials (both senior level officials and field-level functionaries, including sanitation workers and *SafaiMitras*) for training and draw up a quarterly training calendar for them. It will be the responsibility of the State Mission Director to ensure that the identified officials undergo adequate capacity building to ensure the success of SBM-U 2.0 at the State and ULB level. Another key component of the National Strategy Document would be a robust mechanism of assessments and certifications for the capacity building and skill development training imparted, which would also include independent evaluations.

9.3 Capacity Building and Skill Development

The capacity building and skill development initiatives under SBM-U 2.0 will focus on the selected key stakeholders in the sanitation and waste management value chain, who will be trained in the following key priority areas, with support from the professional organizations that will be partnered at the Central and State/UT level as per the procedures laid down in the National Capacity Building and Skill Development Strategy document under SBM-U 2.0.

9.3.1 State Government and Parastatal Officials

- Focus on institutionalizing holistic leadership development and change management by facilitating customized capacity building and training through workshops, online training and short-term technical courses.

9.3.2 Administrative Officials of ULBs:

- Focus on developing implementation capacity and change management functionalities by creating targeted capacity building training, e-learning courses and online workshops.
- Comprehensive approach to human resource development with a sensitization towards the social, economic and technological environment for effective implementation and service delivery under the Mission.

9.3.3 PHE and Technical Officials of the ULBs

- Technical officials and staffs will be provided hands on technical training, access to e-learning courses, workshops, field visits and knowledge exchange exposure visits to enhance their capacity to effectively implement objectives of SBM-U 2.0. Courses will be focused on the latest technologies, which are sustainable, environmentally friendly, and context appropriate.

- In addition to trainings developed towards enhancing the technical knowledge and skill sets, the PHE and technical officials will also be imparted trainings to sensitize them with the citizen centric and social aspects of the Mission, with the intent of inculcating a holistic human centered approach to all interventions under the Mission.

9.3.4 SafaiMitras and Sanitation Workers:

- Focus on the skill development of SafaiMitras and sanitation workers, and the promotion of entrepreneurship across the value chain in the sanitation sector, in partnership with Ministry of Skill Development & Entrepreneurship, NSDC and respective Sector Skill Councils.
- Conducting a skill gap study to develop an understanding of the human resource requirement in the sector, demand and supply scenario of skilled people, skilling gaps in the existing workforce and recognition of skills of the informal workers.

- Training and orientation of Master Trainers for conducting the trainings on relevant subject areas in sanitation.
- Institutionalizing a robust framework for undertaking Recognition of Prior Learning (RPL) based assessments and providing certifications, in consonance with the NSQF, to the SafaiMitras and sanitation workers to recognize the existing skill sets and to ensure that a high quality of training is imparted for further progression.
- A special emphasis will be laid on imparting training to the sanitation workers to build their technical knowledge and skill sets for operating advanced equipment and safety gears.

9.3.5. NGOs, Educational and Skilling Institutes and other organizations

- Focus on engaging diverse sets of organizations such as NCC, NSS, NYK, Skill Institutes along with schools and colleges to impart targeted Capacity Building training. The training will be centered upon enabling these organizations to become ambassadors of the Mission and to contribute towards the implementation of initiatives under the focus areas of SBM (U)- 2.0, with a special emphasis on those components, which are to be executed in a campaign mode, such as Garbage Free Cities, maintenance of community/public toilets, safe disposal of wastewater and reduction of plastics, amongst others.

9.4 Center(s) of Excellence (CoE) focusing on capacity building, research, and innovation in key thematic areas of sanitation and waste management, will be established at the national level in partnership with eminent knowledge institutions. The mandate of the CoE will be to provide leadership & technical training, policy guidance, develop best practices, and other relevant activities on sanitation and waste management issues, in line with the aims and objectives of the Mission.

9.5 Chair Professor position(s) will be established at select academic institution(s) of national repute in the field of sanitation and waste management, with funding support from the Centre.

9.6 For building the capacities of technical officials at Central, State/UT and ULB level, (in-service engineers, other technical officials) regular master level training programs and short-term courses under PHE training will be implemented at the national level by MoHUA.

9.7 Government, Non-Government, educational and professional Institutions of repute and with prominent experience in the field of Capacity Building, particularly in sanitation and waste management will be empaneled as 'Swachhta Knowledge Partners' (SKPs), to support the design and delivery of training modules and workshops on capacity building and skill development, to ensure effective implementation of the Mission. The Swachhta Knowledge Partners will be selected

and onboarded as per the procedures laid down in the National Capacity Building and Skill Development strategy document.

9.8 MoHUA will establish strategic collaborations under the Mission with key development sector organizations, having prominent sectoral expertise, knowledge and implementation experience across thematic areas. The development sector partner organizations will play a pivotal role in providing technical assistance at the Central level and handholding support to States/UTs and ULBs in implementing capacity building and skill development interventions under the Mission.

9.9 To promote affordable and scalable modern technologies suitable to different geographical conditions, a national level technical committee will be set up at MoHUA under the Mission exclusively for promoting research & development, innovations and entrepreneurship in the field of sanitation and waste management.

9.10 A part of Central funds will be used to pilot innovative projects/ start-ups in sanitation and SWM sectors, in partnership with States/ UTs, reputed institutes of national importance, etc.

9.11 States/UTs will also be encouraged to set up incubators to provide support to entrepreneurship, innovation and private sector participation.

9.12 Swachhata Technology Challenges, hackathons, etc. will be conceptualized and implemented in collaboration with the key private sector organizations, towards encouraging startups and social business ventures to develop innovative digital solutions and business models in the sanitation and waste management sector. The Challenges will encompass diverse thematic areas and endeavor to achieve the dual objective of identifying and leveraging key enabling technologies while also encouraging and recognizing local entrepreneurs and technology solutions at the national level.

9.13 Knowledge Management

9.13.1 A comprehensive Knowledge Management Framework will be institutionalized to augment the capacity building initiatives under the Mission. As a part of this, the relevant knowledge materials such as training modules literature, videos, plans and reports developed by the ULBs during the implementation of various initiatives across focus areas of the Mission, will be consolidated and uploaded onto the SBM-U e-Learning portal for ease of use and access by all stakeholders. Further, the training and the technical material developed for trainings will be made available via the SBM-U e-Learning platform.

9.13.2 States/ UTs will be encouraged to set up technical cells within premier academic/ technical institutions to facilitate Research & Development.

9.13.3 As part of the training needs analysis, it is suggested that ULBs ascertain the gaps and deficiencies in the available training material and aim to fill those gaps by suitably revising the existing material or developing new modules if required, before conducting the trainings for relevant stakeholders.

- Materials used for training in workshops, capacity building courses and other technical courses shall be uploaded on SBM-U e-learning portal for ease of use and access.
- The States / UTs and ULBs shall be free to add their own resource materials to the SBM-U e-learning platform. It is suggested that ULBs revise and update the training material at regular intervals.

9.14 Human Resource Support under SBM (U) 2.0:

9.14.1 In addition to enhancing the capacities of the key officials and sanitation workers,

there is a pertinent need for dedicated human resources with specialist knowledge and skills in order to strengthen the implementation of the various components of the Mission. Towards this, dedicated human resource units have been envisaged at the State/UT level, the details on which have been elaborated below.

9.14.2 At the State/UT level, a dedicated Program Management Unit (PMU) will be set up under the Mission to ensure effective implementation of the SBM-U 2.0. Parastatal bodies supporting ULBs in implementation of Mission components may be supported with human resources as per the requirements.

9.14.3 The Program Management Unit at the State/UT level should ideally consist of the following human resources. The State/UT shall have the flexibility of expanding the PMU with additional specialists based on their specific requirements.

State Level PMU (With more than 100 ULBs)	State Level PMU (With less than 100 ULBs)
1. SWM expert - 1	1. SWM expert- 1
2. Waste-Water expert - 1	2. Waste-Water expert - 1
3. Procurement Specialist - 1	3. Procurement Specialist - 1
4. Capacity Building Specialist - 1	4. Capacity Building Specialist - 1
5. IEC Specialist - 1	5. IEC Specialist - 1
6. M & E Specialist - 1	6. IT and M & E Specialist - 1
7. IT Specialist - 1	7. Additional specialist - 1
8. Documentation Specialist - 1	(As per requirement)
9. Additional specialist - 1 (As per requirement)	

9.14.4 A specialized program will be conceptualized and implemented for engaging students from academic and technical institutions as young professionals and interns for supporting interventions under SBM U 2.0 at the National as well as the State/UT level. The selected young professionals and interns will be deputed to select projects across focus areas under the Mission, for a stipulated time, and will play a pivotal role in augmenting the internal human resources of the departments while also strategically integrating the youth with SBM-U 2.0.

9.14.5 The ULBs will be provided with the flexibility to hire Young Professionals and interns to augment their internal human resources for key project implementation activities under the Mission. Additionally, State may provide human resource support from their own share of funding for implementation of key mission components under SBM (U) 2.0.

9.15 Funding Mechanism

9.15.1 The Centre: State fund share for this component will be as given below:

- 90%:10% for ULBs in NE/ Himalayan States,
- 100% for UTs without legislature
- 80%: 20% for UTs with legislature,
- 60%: 40% for other States/ UTs.

9.15.2 A total of 3% of the total allocation for project components will be earmarked for the component of Capacity Building, Skill

Development and Knowledge Management. Out of the Central share for this component, 67% will be earmarked for States/ ULBs to conduct capacity building and skill development initiatives. The remaining 33% will be earmarked for MoHUA. It may be noted that Administrative and Office expenditure in a year should be kept as a proportion of actual expenditure / output rather than as a percentage of indicative outlay.

9.15.3 The disbursement of the Central Assistance will be as follows- **1st instalment of 40%** of allotted Central share from MOHUA will be released to the State/ UT for a ULB provided the entry conditions specified in Section 4.2, and following additional conditions are satisfied:

- SHPC approved CB action plan for State submitted (as per **Annex 8**).

9.15.4 The **2nd instalment of 60%** of allotted Central share from MOHUA will be released to the State/ UT for a ULB provided the following conditions are satisfied:

- 40% of identified State Officials/ Parastatal Officials/ ULB Officials trained (in some format of training);
- 40% of Sanitation workers identified for skill development completed training;
- All informal sector workers (including those in sewer and septic tank cleaning) identified and integrated by ULB;
- City certified ODF+;
- City certified at least 1-star with 60% source segregation;

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

9.15.6 States/ UTs/ ULBs may take assistance of PSUs and Corporates through CSR for implementing capacity building programs

9.15.7 States/ UTs and ULBs, if they so wish, may use the CB funds to upgrade/ strengthen their existing institutes / entities to provide capacity building support to the State/ ULB.

9.15.8 States shall propose extensive capacity building activities, including training of administrative and technical staffs, conducting skill gap analysis, skill development training programs for sanitation workers to be implemented in a Mission- mode manner, which will enable the progressive achievement of objectives of SBM-U 2.0 in a time-bound manner. These will be specified in the comprehensive annual action plan prepared by each State/UT and approved by SHPC. At least 50% of this fund, in each annual plan, as approved by SHPC must go to the ULBs for activities at the ULB level.

9.15.9 The SLTC will approve State training plan comprising the following:

- Training Need Analysis (TNA) for Capacity Building and Skill Gap Analysis for Skill Development;
- Training Modules and Tools;
- Institutions to impart training, and cost of training;
- Mandatory Inclusion of areas identified by CPHEEO;
- Training Calendar;
- Evaluation of training.

9.16 Expected Outcome

It is expected that outcomes of the Capacity Building, Skill Development and KM initiatives would lead to improvement in capacities, knowledge, skills, leadership development and change management competencies of ULB officials and Sanitation workforce connected with implementation of Mission, through Workshops, Seminars, Trainings, etc.

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#LooReview

GVP Details

GVP Adman Form

Garbage Vulnerable Point

G Wing, NBO Building, Nirman Bhawan, New Delhi, Delhi 110011, India

Near Udyog Bhawan Metro Gate Number 2

It is mainly due to metro passengers.

GVPs List in a ward

Ward List

Action Image Progress Image

Address: behind Jyotiska mall New Delhi
GVP ID: 800442-4F681-00001
Pic Taken Today
Updated On: 2019-08-03 14:43:15

Calculate Image Get Details

Directions to GVP

Map

Monitor to Transform GVP

Details

Category: Garbage Vulnerable Point
Lat: 28.5000000
Log: 77.8999999
Date Time: 2019-08-04 10:08:06

Address: behind Jyotiska mall New Delhi

Comment (Optional)

Truly cleaned by Municipality People are not supporting Waste collected don't collect by citizens

IT ENABLED GOVERNANCE

Enumerates the various digital enablements developed for maximising citizen outreach, along with facilitating a transparent and an objective monitoring and evaluation of Mission progress, to ensure a smooth and seamless user experience by all stakeholders, and making the Mission paperless, towards ensuring standardization of outcomes across all ULBs.

10.1 Digital interventions will support different stages of SBM-U implementation in a paperless manner, across all components, starting from conceptualization, implementation, and real-time online monitoring of functional assets to be created under different components of the Mission, such as STP, MRF etc, and other key indicators of progress for the Mission. The ICT and GIS enabled tools and systems will also be leveraged in the evaluation of the interventions.

10.2 MoHUA has developed various workflow based, web enabled IT-enabled applications and mobile applications in order to ensure a transparent and robust citizen-centric engagement, Mission governance, Mission implementation, along with facilitating collaborations amongst key stakeholders & capacity building.

10.3 The various IT-enabled applications that will be mandatorily deployed for all implementation components of the Mission, including the monitoring of the progress of the Mission, are briefly described:

10.3.1 **SBM-U Integrated platform:** MoHUA has developed a comprehensive platform that provides an integrated experience for States/UTs and ULBs and enabled fact-based decision-making at various levels of governance. The portal allows ULBs to create city profiles (ward, area, workforce, vehicles, BWGs, Non BWGs, vendor details, etc.), upload details of city infrastructure and assets (e.g. processing plants, landfills, dumpsites, water bodies, storm water drains, STP/FSTP etc.) and report their sanitation and waste management progress on a monthly/periodic basis through a single sign-on approach. The platform standardizes information across States/ULBs and ensures a single source of truth and data consistency across levels.

10.3.2 **Swachhata App:** This is a Mobile based application that enables citizens to register sanitation related complaints and enables the ULBs to address the citizen's grievances efficiently and effectively. The app plays a pivotal role in scaling demand and ensuring transparency and accountability in sanitation

service delivery. In its updated version, the App will, in addition to taking feedback, also engage with citizens for validating the information regarding the city's progress on improving sanitation outcomes, in a time-bound manner. The App is available on both Google Play & IOS platforms.

10.3.3 SBM Toilets on Google Maps and CT/PT feedback system - To improve access to, and thereby their usage, of community and public toilets, MoHUA has partnered with Google to map all CT/ PTs on Google maps, as SBM Toilet. In its updated version, citizens can also provide feedback and rate these public toilets which, in turn, will lead to better cleanliness and maintenance of these facilities.

10.3.4 Geo spatial enabled Project Proposal Creation and Tracking System: This application has been designed to enable States/ ULBs to upload their SHPC-approved project proposals (along with the documentation as per the checklist circulated by the National Mission Directorate) for the release of Central share by MoHUA, dissemination of funds by States/ UTs (i.e. Central share + State share) to respective ULBs, and subsequently, digitally tracking the project's progress and functionality. MoHUA, States/ UTs and ULBs would be able to receive and transmit documents in electronic mode with a facility of system-generated alert messages (SMS & e-mail), for greater transparency. The GIS-based monitoring & controlling of the project would support Mission governance, through periodic online uploading of photographs of progress on

project site, along with its geo coordinates.

10.3.5 Annual GFC Rating, Swachh Survekshan & ODF Assessments through an integrated module: An integrated system is being designed to capture online data for assessment, digital tools to conduct self-assessment, uploading of documents required for desktop assessment. The Assessor App for use by third party agency is also an integral part of the platform. This integration will help in minimizing the assessment duration and also optimize the documents requirement, especially where similar documents are required across multiple protocols and assessments.

10.3.6 GIS Mapping of SBM-U assets and infrastructure: MoHUA has developed web and mobile applications that will enable all ULBs to draw their city boundaries, ward boundaries, assets (CT/ PT, processing plants, STP, FSTP, etc.) boundaries, map existing geo spatial data and collect geo-location of all facility points in existence. This GIS application provides a wide range of capabilities such as data visualization, analysis, understanding and insight into city or ULBs' activities, both current and planned.

10.3.7 Dashboard and Analytics platform: This is a stakeholder requirement-based analytical dashboard for monitoring the progress of SBM-U 2.0, with inbuilt data standardization and validation mechanism that ensures informed decision making. The dashboards at ULB, State and National level will provide a unified experience with accumulated data points. It is planned to be supported by

AI-driven components such as Chatbot and predictive analytics.

10.3.8 E-Learning Platform: The current pandemic has demonstrated the importance of digital medium to ensure that the process of learning continues uninterrupted. The E-learning platform takes care of the training needs of the frontline workers, ULBs, mission officials, agencies and citizens, at a time and place of their convenience. Moreover, the e-learning platform has a modular, incremental approach with training/ learning modules customized to different audiences and levels.

10.3.9 14420 Helpline – In a bid to reduce incidences of unsafe manual entry into sewers and septic tanks, and promote their cleaning through mechanized means, MoHUA, through Department of Telecommunications (DoT), has been given a short code “14420” as the National Helpline number across all telecom service providers, for registering citizens’ complaints on this issue.

10.4 Other digital initiatives: A list of additional IT-enabled modules under development or planned for the future as per of digital roadmap of the Mission is summarised below:

10.4.1 Swachh Nagar and IoT based asset monitoring: to provide ease of monitoring waste management lifecycle at ULB, State and Central levels. It is envisioned that the solution would generate large amounts of data to

accelerate the progress in solid and liquid waste management in the mission.

10.4.2 Document Management System - System is used to receive, track, manage and store documents exchanged at various levels and encourage paperless communication.

10.4.3 IEC activities tracking system - Facilitating ULBs to track and trace the planned IEC activities for citizen outreach.

10.5 Evaluation Mechanisms

The aforementioned digital solutions will also play a pivotal role in enabling the holistic evaluation of the outcomes and outputs under SBM (U) 2.0.

10.5.1 The National Mission Director would conduct periodic reviews in the form of monthly reviews (through VC) with each State and select ULBs (as required). Further, periodic visits would also be conducted by officials of MoHUA / NMD, etc. to monitor on-ground progress, understand challenges and identify good practices adopted by States/ULBs.

10.5.2 The National Mission Directorate will engage appropriate third-party independent agencies for conducting certifications/ assessments of cities as per the ODF+/ODF++/ Water+ protocols and the Garbage Free Star Rating system. Background data for the same shall be taken from the Mission MIS, and any additional requirements would be communicated to States/cities from time to time.

10.5.3 The National Mission Directorate will undertake an annual ranking exercise - Swachh Survekshan. The survey has a comprehensive list of *Swachhata* parameters with a robust methodology to competitively rank the cities on initiatives undertaken and progress made, towards enhancing the cleanliness and improving the sanitation service delivery chain, both in terms of quality of safely managed services and access to such services. The methodology of the survey will be revised on an annual basis and would be released to States/ UTs/ ULBs prior to on-field assessments.

10.5.4 States / UTs would need to submit an output-outcome plan (as per format given in **Annexure 5**), and thereafter submit quarterly progress on the same format.

10.5.5 Other tools such as impact studies, third party evaluations may also be instituted by National Mission Directorate.

10.5.6 After 18 months, a comprehensive evaluation of the Mission's progress will be undertaken to effect mid-term correction and align the Mission to achieve its objectives.

10.6 States/ UTs need to ensure that the information provided by ULBs is correct by periodic review of the information provided by their ULBs and signing off on the data submitted, to signal their approval/ confirmation of the ULB data. It may be noted that MoHUA will only be accepting those ULBs' data for further action that has been confirmed/validated by the respective State/UT.

10.7 States/ ULBs are also encouraged to periodically conceptualize and launch suitable ICT platform to create awareness among citizens to provide feedback on mission outcomes through communication channels like social media, IVR, mobile app, email, WhatsApp, website, etc. The innovative solutions, if found feasible and successful, can be suitably replicated, and scaled up.

10.8 The various IT enabled applications will be eligible activities for funding under the capacity building head of the Mission.

10.9 Digital components pertaining to monitoring of efficiency/ operational outcomes of SBM-U project components (Sanitation, Wastewater Management & SWM) will be funded under the respective component heads.

ANNEXES

ANNEX 1: LIST OF ULBs ELIGIBLE FOR C&D WASTE PROCESSING AND MECHANISED SWEEPING FUNDING

(As referred in Chapters 2 and 7)

S. No.	State Name	ULB Name	Status of City	Population
1	Andhra Pradesh	GVMC Visakhapatnam	NAC	>20 Lakhs
2	Andhra Pradesh	Vijayawada	NAC	10-20 Lakhs
3	Andhra Pradesh	Guntur	NAC	5-10 lakhs
4	Andhra Pradesh	Nellore	NAC	5-10 lakhs
5	Andhra Pradesh	Kurnool	NAC	5-10 lakhs
6	Andhra Pradesh	Rajahmundry	NAC	3-5 Lakhs
7	Andhra Pradesh	Anantapur	NAC	3-5 Lakhs
8	Andhra Pradesh	Ongole	NAC	3-5 Lakhs
9	Andhra Pradesh	Vizianagaram	NAC	3-5 Lakhs
10	Andhra Pradesh	Eluru	NAC	1-3 Lakhs
11	Andhra Pradesh	Kadapa	NAC	1-3 Lakhs
12	Andhra Pradesh	Chittoor	NAC	1-3 Lakhs
13	Andhra Pradesh	Srikakulam	NAC	1-3 Lakhs
14	Assam	Guwahati	NAC	10-20 Lakhs
15	Assam	Silchar	NAC	1-3 Lakhs
16	Assam	Nagaon	NAC	1-3 Lakhs
17	Assam	Sibsagar	NAC	<1 Lakh
18	Assam	Nalbari	NAC	<1 Lakh
19	Bihar	Patna	NAC	>20 Lakhs
20	Bihar	Gaya	NAC	5-10 lakhs
21	Bihar	Muzaffarpur	NAC	3-5 Lakhs
22	Chandigarh	Chandigarh	NAC	10-20 Lakhs
23	Chhattisgarh	Raipur	NAC	10-20 Lakhs
24	Chhattisgarh	Bhilai Nagar	NAC	5-10 lakhs
25	Chhattisgarh	Korba	NAC	3-5 Lakhs
26	Delhi	South Delhi (Sdmc)	NAC	>20 Lakhs
27	Delhi	North Delhi (N-Dmc)	NAC	>20 Lakhs
28	Delhi	East Delhi (Edmc)	NAC	>20 Lakhs
29	Gujarat	Ahmedabad	NAC	>20 Lakhs
30	Gujarat	Surat	NAC	>20 Lakhs
31	Gujarat	Vadodara	NAC	>20 Lakhs
32	Gujarat	Rajkot	NAC	10-20 Lakhs

S. No.	State Name	ULB Name	Status of City	Population
33	Gujarat	Bhavnagar	Non-NAC	5-10 lakhs
34	Haryana	Faridabad	NAC	10-20 Lakhs
35	Haryana	Gurgaon	NAC	10-20 Lakhs
36	Himachal Pradesh	Baddi	NAC	<1 Lakh
37	Himachal Pradesh	PaontaSahib	NAC	<1 Lakh
38	Himachal Pradesh	Sunder Nagar	NAC	<1 Lakh
39	Himachal Pradesh	Nalagarh	NAC	<1 Lakh
40	Himachal Pradesh	Parwanoo	NAC	<1 Lakh
41	Himachal Pradesh	Damtal	NAC	<1 Lakh
42	Himachal Pradesh	Kala Amb	NAC	<1 Lakh
43	Jammu And Kash- mir	Srinagar	NAC	10-20 Lakhs
44	Jammu And Kash- mir	Jammu	NAC	5-10 lakhs
45	Jharkhand	Dhanbad	NAC	10-20 Lakhs
46	Jharkhand	Ranchi	NAC	10-20 Lakhs
47	Jharkhand	Jamshedpur	NAC	5-10 lakhs
48	Karnataka	Bruhat Bengaluru Mahanagara Palike	NAC	>20 Lakhs
49	Karnataka	Hubli-Dharwad	NAC	10-20 Lakhs
50	Karnataka	Mysore	Non-NAC	10-20 Lakhs
51	Karnataka	Gulbarga	NAC	5-10 lakhs
52	Karnataka	Devanagere	NAC	5-10 lakhs
53	Kerala	Thiruvananthapuram	Non-NAC	10-20 Lakhs
54	Kerala	Kozhikode	Non-NAC	5-10 lakhs
55	Kerala	Kochi	Non-NAC	5-10 lakhs
56	Madhya Pradesh	Indore	NAC	>20 Lakhs
57	Madhya Pradesh	Bhopal	NAC	>20 Lakhs
58	Madhya Pradesh	Jabalpur	NAC	10-20 Lakhs
59	Madhya Pradesh	Gwalior	NAC	10-20 Lakhs
60	Madhya Pradesh	Ujjain	NAC	5-10 lakhs
61	Madhya Pradesh	Dewas	NAC	3-5 Lakhs
62	Madhya Pradesh	Sagar	NAC	3-5 Lakhs
63	Maharashtra	Greater Mumbai	NAC	>20 Lakhs
64	Maharashtra	Pune	NAC	>20 Lakhs
65	Maharashtra	Nagpur	NAC	>20 Lakhs
66	Maharashtra	Thane	NAC	>20 Lakhs

S. No.	State Name	ULB Name	Status of City	Population
67	Maharashtra	Pimpri Chinchwad	Non-NAC	>20 Lakhs
68	Maharashtra	Nashik	NAC	10-20 Lakhs
69	Maharashtra	Kalyan Dombivali	Non-NAC	10-20 Lakhs
70	Maharashtra	Vasai Virar	NAC	10-20 Lakhs
71	Maharashtra	Aurangabad	NAC	10-20 Lakhs
72	Maharashtra	Navi Mumbai	NAC	10-20 Lakhs
73	Maharashtra	Solapur	NAC	10-20 Lakhs
74	Maharashtra	Mira-Bhayandar	Non-NAC	10-20 Lakhs
75	Maharashtra	Bhiwandi Nizampur	Non-NAC	5-10 lakhs
76	Maharashtra	Amravati	NAC	5-10 lakhs
77	Maharashtra	Nanded Waghala	Non-NAC	5-10 lakhs
78	Maharashtra	Kolhapur	NAC	5-10 lakhs
79	Maharashtra	Ulhasnagar	NAC	5-10 lakhs
80	Maharashtra	Sangli	NAC	5-10 lakhs
81	Maharashtra	Jalgaon	NAC	5-10 lakhs
82	Maharashtra	Akola	NAC	5-10 lakhs
83	Maharashtra	Latur	NAC	3-5 Lakhs
84	Maharashtra	Chandrapur	NAC	3-5 Lakhs
85	Maharashtra	Jalna	NAC	3-5 Lakhs
86	Maharashtra	Badlapur	NAC	1-3 Lakhs
87	Meghalaya	Byrnihat	NAC	<1 Lakh
88	Nagaland	Dimapur	NAC	1-3 Lakhs
89	Nagaland	Kohima	NAC	1-3 Lakhs
90	Odisha	Bhubaneswar	NAC	10-20 Lakhs
91	Odisha	Cuttack	NAC	5-10 lakhs
92	Odisha	Rourkela	NAC	3-5 Lakhs
93	Odisha	Balasore	NAC	1-3 Lakhs
94	Odisha	Kalinga Nagar/Byasanagar	NAC	<1 Lakh
95	Odisha	Angul	NAC	<1 Lakh
96	Odisha	Talcher	NAC	<1 Lakh
97	Punjab	Ludhiana	NAC	>20 Lakhs
98	Punjab	Amritsar	NAC	10-20 Lakhs
99	Punjab	Jalandhar	NAC	10-20 Lakhs
100	Punjab	Patiala	NAC	5-10 lakhs
101	Punjab	Pathankot/DeraBaba	NAC	1-3 Lakhs
102	Punjab	Khanna	NAC	1-3 Lakhs

S. No.	State Name	ULB Name	Status of City	Population
103	Punjab	Gobindgarh	NAC	1-3 Lakhs
104	Punjab	NayaNangal	NAC	<1 Lakh
105	Punjab	DeraBassi	NAC	<1 Lakh
106	Rajasthan	Jaipur	NAC	>20 Lakhs
107	Rajasthan	Jodhpur	NAC	10-20 Lakhs
108	Rajasthan	Kota	NAC	10-20 Lakhs
109	Rajasthan	Bikaner	Non-NAC	5-10 lakhs
110	Rajasthan	Ajmer	Non-NAC	5-10 lakhs
111	Rajasthan	Udaipur	NAC	5-10 lakhs
112	Rajasthan	Alwar	NAC	3-5 Lakhs
113	Tamil Nadu	Chennai	NAC	>20 Lakhs
114	Tamil Nadu	Coimbatore	Non-NAC	>20 Lakhs
115	Tamil Nadu	Madurai	NAC	10-20 Lakhs
116	Tamil Nadu	Tiruchirappalli	NAC	10-20 Lakhs
117	Tamil Nadu	Salem	Non-NAC	10-20 Lakhs
118	Tamil Nadu	Thoothukudi	NAC	3-5 Lakhs
119	Telangana	Greater Hyderabad	NAC	>20 Lakhs
120	Telangana	Warangal	Non-NAC	10-20 Lakhs
121	Telangana	Nalgonda	NAC	1-3 Lakhs
122	Telangana	Patencheru	NAC	1-3 Lakhs
123	Telangana	Sangareddy	NAC	<1 Lakh
124	Uttar Pradesh	Lucknow	NAC	>20 Lakhs
125	Uttar Pradesh	Kanpur	NAC	>20 Lakhs
126	Uttar Pradesh	Ghaziabad	NAC	>20 Lakhs
127	Uttar Pradesh	Agra	NAC	>20 Lakhs
128	Uttar Pradesh	Meerut	NAC	10-20 Lakhs
129	Uttar Pradesh	Varanasi	NAC	10-20 Lakhs
130	Uttar Pradesh	Allahabad	NAC	10-20 Lakhs
131	Uttar Pradesh	Bareilly	NAC	10-20 Lakhs
132	Uttar Pradesh	Moradabad	NAC	10-20 Lakhs
133	Uttar Pradesh	Aligarh	Non-NAC	10-20 Lakhs
134	Uttar Pradesh	Saharanpur	Non-NAC	5-10 lakhs
135	Uttar Pradesh	Gorakhpur	NAC	5-10 lakhs
136	Uttar Pradesh	Noida	NAC	5-10 lakhs
137	Uttar Pradesh	Firozabad	NAC	5-10 lakhs
138	Uttar Pradesh	Loni (Npp)	Non-NAC	5-10 lakhs
139	Uttar Pradesh	Jhansi	NAC	5-10 lakhs
140	Uttar Pradesh	Raebareli	NAC	1-3 Lakhs

S. No.	State Name	ULB Name	Status of City	Population
141	Uttar Pradesh	Khurja	NAC	1-3 Lakhs
142	Uttar Pradesh	Gajraula	NAC	<1 Lakh
143	Uttar Pradesh	Anpara	NAC	<1 Lakh
144	Uttarakhand	Dehradun	NAC	5-10 lakhs
145	Uttarakhand	Kashipur	NAC	1-3 Lakhs
146	Uttarakhand	Rishikesh	NAC	<1 Lakh
147	West Bengal	Kolkata (M Corp.)	NAC	>20 Lakhs
148	West Bengal	Haora (M Corp)	NAC	10-20 Lakhs
149	West Bengal	Durgapur	NAC	5-10 lakhs
150	West Bengal	Asansol	NAC	5-10 lakhs
151	West Bengal	Raniganj	NAC	5-10 lakhs
152	West Bengal	Siliguri	Non-NAC	5-10 lakhs
153	West Bengal	Haldia	NAC	1-3 Lakhs
154	West Bengal	Barrackpore	NAC	<1 Lakh

NAC: Non attainment city under NCAP

Non-NAC: not NAC, but included under “5 lakh and above” category

ANNEX 2: CITY SOLID WASTE ACTION PLAN (CSWAP)

(As referred in Chapter 2 and 6)

ULB's City Profile: (demographic and waste generation details)

1.	Name of the ULB:			
2.	Name of the District, State/ UT:			
3.	No. of Municipal Zones in ULB:			
4.	No. of wards in the ULB:			
5.	Population & Households in the ULB as per 2011 Census:			
	Population (P_0)		Households(HH_0)	
6.	Population & Households in the ULB as per current scenario:			
	Population (P_1)		Households(HH_1)	
7.	Projected Population & Households in the ULB @2025			
	Population (P_2)		Households(HH_2)	
8.	Institutional & Governance framework			
			Yes / No	If no, action to be taken to notify & timeline
	a	Regulatory Framework	Whether Municipal SWM Bylaws notified? (conforming to SWM Rules 2016)(furnish details)	
			State SWM Strategy & Plan (available / not available)	
	b	Institutional Arrangement	Roles and Responsibilities for dealing with MSWM services.	
	c	Governance Reforms -	Implementation of e-governance in ULBs (available / not available)	
	d	ICT based Governance	ICT based monitoring of MSWM operations, services and complaint redressal (furnish details)	

9. MSWM Service Level Benchmarks				
	Indicator	Benchmark	Before implementation of project(s)	After implementation of project(s)
1.	Household level coverage of SWM services	100%		
2.	Efficiency of collection of municipal solid waste	100%		
3.	Extent of segregation of municipal solid waste	100%		
4.	Extent of municipal solid waste recovered	80%		
5.	Extent of scientific disposal of municipal solid waste	100%		
6.	Efficiency in redressal of customer complaints	80%		
7.	Extent of cost recovery in SWM services	100%		
8.	Efficiency in collection of SWM-related user charges	90%		
--	Notified User Fee for MSWM services (provide details)			

Current MSW Management:

1.	Current MSW total generation in TPD (A): _____ TPD= Tonnes per day	Per Capita generation in gms: _____ (A x 10 ⁶ / P ₁)				
2.	Total waste collected (TPD): _____					
3.	No. of wards & % of wards practicing source segregation:					
	<table border="1"> <thead> <tr> <th>No of wards</th> <th>% of wards</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	No of wards	% of wards			
No of wards	% of wards					
4.	No. of wards & % of wards practicing 100% door to door waste collection:					
	<table border="1"> <thead> <tr> <th>No of wards</th> <th>% of wards</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	No of wards	% of wards			
No of wards	% of wards					
5.	Total quantity transported in TPD to:					
	<table border="1"> <thead> <tr> <th>Processing Plants</th> <th>SLF</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Processing Plants	SLF			
Processing Plants	SLF					

6.	Secondary collection points/Transfer Stations (TS) (only if TS is/ are existing, otherwise not applicable)																											
	<table border="1"> <thead> <tr> <th>Waste stream</th> <th>Number of TS</th> <th>Capacity of TS (in TPD)</th> </tr> </thead> <tbody> <tr> <td>Wet waste</td> <td></td> <td></td> </tr> <tr> <td>Dry Waste</td> <td></td> <td></td> </tr> </tbody> </table>	Waste stream	Number of TS	Capacity of TS (in TPD)	Wet waste			Dry Waste																				
Waste stream	Number of TS	Capacity of TS (in TPD)																										
Wet waste																												
Dry Waste																												
7.	On basis of Waste Characterization, quantity of segregated waste generated (in TPD), of given waste streams																											
	<table border="1"> <thead> <tr> <th>MSW Waste Stream</th> <th>Quantity in TPD</th> <th>% of MSW</th> </tr> </thead> <tbody> <tr> <td>Wet waste</td> <td></td> <td></td> </tr> <tr> <td>Dry Waste</td> <td></td> <td></td> </tr> <tr> <td>Sanitary Waste</td> <td></td> <td></td> </tr> <tr> <td>Domestic Hazardous Waste</td> <td></td> <td></td> </tr> <tr> <td>Other wastes (Drain Silt & Inert)</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <th>C&D Waste</th> <th>Qty in TPD</th> <th>% of MSW</th> </tr> <tr> <td>Total C&D Waste generated</td> <td></td> <td>(expressed as % of A at row 1 above)</td> </tr> </tbody> </table>	MSW Waste Stream	Quantity in TPD	% of MSW	Wet waste			Dry Waste			Sanitary Waste			Domestic Hazardous Waste			Other wastes (Drain Silt & Inert)						C&D Waste	Qty in TPD	% of MSW	Total C&D Waste generated		(expressed as % of A at row 1 above)
MSW Waste Stream	Quantity in TPD	% of MSW																										
Wet waste																												
Dry Waste																												
Sanitary Waste																												
Domestic Hazardous Waste																												
Other wastes (Drain Silt & Inert)																												
C&D Waste	Qty in TPD	% of MSW																										
Total C&D Waste generated		(expressed as % of A at row 1 above)																										
8.	Total quantity of MSW currently processed (B) in TPD:																											
9.	Total design capacity* available of all types of processing plants in TPD: *All existing, under construction, approved and defunct plants (defunct plants that have not been written off) Note: This capacity will be equal to or greater than (B)																											
10.	Operation & Maintenance and Recovery of SWM fees Issues Prepare statement of previous 5 years O&M costs incurred in ULB for O&M and the collections of SWM use fees and analyses for sustainability of O&M																											

Assessment of requirement of processing plants/facilities:

A	Projected waste generation@2025 in TPD:
	Per capita generation for calculating waste generation:
	ULBs > 10 lakh population@550 gms/capita:
	ULBs 1 lakh -10 lakh (both included) population@450gm/capita:
	ULBs <1 lakh population@300gm/capita:

B	Projected Waste generation streams for year 2025:			
	Waste stream	Fraction in MSW (indicative–can be changed as per actuals in ULB)	Projected waste generation in TPD	% of MSW
	Wet Waste	55%		
	Dry Waste	35%		
	Domestic Hazardous waste	Minor		
	Other Waste(Drain Silt & Inert)	10%		
To SLF (not more than)	20%			

Other components of MSW Management

C	Sanitary Landfill (SLF) (Filling CELL for 5 years only)	
	Waste sent to SLF restricted to 20% of total Municipal	
	SLF capacity for 5 years duly adding extra volume for daily cover, top cover etc. (as per Manual on MSWM) Tonnes/cum/day	

D	Estimated cost for proposed components as per GAP analysis			
	Waste Management Component	Total proposed requirement (gap projected @2025)	Estimated cost/ tonne (per machine for MRSs)	Proposed estimated cost
	Wet waste processing			
	Dry waste processing			
	C&D waste processing			
	Dumpsite Remediation			
	Sanitary Landfill			
	Transfer Station			
Mechanical Road Sweepers (MRSs)				

Financing Planning of Fund Required for Addressing the GAPs (Rs. in Crore)

	Waste management Item	Total Proposed Cost	ACA under SBM-U 2.0	State Govt. Fund	ULB fund	Other Fund (PPP, others)
1.	For wet waste processing					
2.	For Dry waste processing					
3.	For C&D waste processing					
4.	For Dumpsite Remediation					
5.	For Sanitary Landfill					
6.	For Transfer Station					
7.	For Mechanical Road Sweepers					
	Grand Total					

Items not required/applicable in the particular ULB may be deleted

Module 1: MSW Processing GAP analysis & Action Plan

M1.1 GAP Assessment for 100% Processing of MSW at ULB level

Processing Facility proposals	Existing Plants Capacity (TPD)*	Status of Current Capacity- Deficit/ Surplus	GAP Projected @2025 (TPD)
Mixed Waste Processing Facility (continue to be used for either Wet OR Dry Waste) – Data taken for assessing capacities			No new mixed waste plant will be allowed
Composting Plants (for WET waste)			
Bio-methanation Plants (for WET waste)			
Material Recovery Facilities MRF- (for DRY waste)			
Standalone RDF Plants (for DRY waste downstream of MRFs)(not part of composting plants)			
Waste to Electricity (RDF based – only for ULBs > 10 lakh)			
Others (describe the nature of plants, feed stock should be source segregated waste)			

*(Operational/Under Constn. / in Tender Process, Non-Functional good condition)

Explanation for calculating the **GAP**.

Many ULBs have installed composting plants receiving mass waste, without segregation at source, but carry out segregation within the process. Such plants shall continue to be utilized for either wet or dry waste, for full design capacity with segregation at source. It will result in proposing plants for other waste stream only.

Additional process may be added down the line to process RDF if not already being done in such plants.

After the GAP analysis, actions need to be taken for preparation of DPRs; Identifying & earmarking land; documents for tenders etc.

M1.2 ULB level Action Plan for achieving 100% scientific MSW Processing

Processing Facility proposals	Proposed Plant Capacity (TPD)	Estimated Cost	Plant Commissioning Date
Composting Plants (for WET waste)			
Bio-methanation Plants (for WET waste)			
Material Recovery Facilities MRF- (for DRY waste)			
Standalone RDF Plants (for DRY waste downstream of MRFs)(not part of composting plants)			
Waste to Electricity (RDF based – only for ULBs > 10 lakh)			
Others (describe the nature of plants -feed stock should be source segregated waste)			
TOTAL			
<i>Other Proposals part of MSW</i>			
Construction of SLF			
Construction of TS, if required (ULBs >5lakh and haulage of fully load- ed vehicles is > 15Km)			
TOTALs			

M1.3 ULB commitment timelines for Certification under Garbage-free Cities Star Rating

S.No.	GFC Star Rating Certification	Committed Date
1.	1-Star GFC Rating Certification	
2.	3-Star GFC Rating Certification	(mandatory before 31.3.2026)
3.	5-Star GFC Rating Certification	These Certifications are beyond the mandatory requirement under SBM 2.0. ULBs are encouraged to get these certifications.
4.	7-Star GFC Rating Certification	

**M1.4 State/ UT – Consolidated Financial Action Plan for MSW Processing:
Financials in Rs. Crore**

	FY 2021-22	FY 2022-23	FY 2023-24	TOTAL (equal to SBM 2.0 SWM allocation, Processing part only)
Action Plan Amount				
No. of ULBs covered*				All ULBs in the State/ UT covered in APs by 2023-24

* Detailed ULB-wise, plant-wise Action Plan statement is to be furnished
Action Plan approvals to be obtained by 31.3.2024 for all ULBs

**M1.5 State / UT – Consolidated Certification- cum-Implementation Action Plan (only
First time GFC Certifications to be considered)**

Certification	Before SBM 2.0	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
No. of ULBs rated 1-Star				All ULBs to be 1-Star rated by 31.3.2023		
No. of ULBs rated 3-Star*						
No. of ULBs with 100% waste processing						

* All ULBs to become 3-Star GFC Rated before 31.3.2026

Module 2: Legacy Waste Dumpsites Remediation Action Plan

M2.1 ULB's Dumpsite Remediation Plan (applicable only if ULB has an existing dumpsite(s))

Total quantity of existing legacy waste in tonnes	
Land occupied by the dumpsite, Acres	
Proposed method for remediation*	
Action plan for recoverable material	
Indicative Uses/ Utilization of Segregated Material	
Land to be recovered, Acres (extent of land from which waste is completely removed)	
End uses of remediated dumpsite area	
Estimated Cost for Remediation	
Most likely date for complete remediation (not beyond 31.3.2023 for ULBs < 10 lakhs and 31.3.2024 for ULBs > 10 lakhs)	

* to be compliant with extant NGT and Court orders

M2.2 State/ UT- Consolidated Financial Action Plan for Dumpsite Remediation:

Financials in Rs. Crore

	FY 2021-22	FY 2022-23	TOTAL (equal to SBM 2.0 allocation for dumpsite remediation for the State / UT)
Action Plan Amount			
No. of ULBs covered*			All ULBs in the State/ UT
Action Plan approvals to be obtained by <u>31.3.2022</u> for all ULBs <10 Lakh and by <u>31.3.2023</u> for all ULBs >10 lakh			
* Detailed ULB-wise, dumpsite-wise Action Plan statement is to be furnished			

M2.3 State/ UT - Consolidated Dumpsite Remediation Implementation Action Plan

Remediation	Before SBM 2.0	By 31.7.2022	By 31.3.2023	By 31.3.2024	TOTAL
No. of ULBs completing remediation					All ULBs in the State/ UT to complete remediation by 31.3.2024

Module 3: C&D Waste Processing Action Plan (only for 154 non-complying (NCAP cities) and 5-lakh size ULBs)

M3.1 ULBs Gap Assessment for Processing of Construction and Demolition Waste (Applicable for ULBs > 5 lakh population and/or 154 Non-attainment cities)

Estimated C&D Waste generated @ 50gm/capita of total Municipal Solid Waste in TPD	
Add 25% extra for bulk C & D waste generators, depositing with ULB	
Add 20% over and above	
Total C&D waste currently generated in TPD	
Existing capacity of C&D waste processing plant available in TPD	
Proposed capacity in TPD for 2025	

M3.2 State/ UT – Consolidated Financial Action Plan for C&D Waste Processing: Financials in Rs. Crore

C&D Waste Processing	FY 2021-22	TOTAL (equal to SBM 2.0 allocation for C&D Waste Plants)
Action Plan Amount		Approvals to be obtained by 31.3.2022 for all the ULBs concerned in one go, thus prioritizing control of air pollution
Detailed Statement of ULB-wise C&D waste processing plant proposals are to be furnished		

M3.3 State/ UT– Consolidated C&D Waste Processing Plants Implementation Action Plan

Setting up C&D Waste Processing Plants	Before/ Outside SBM 2.0	By 31.7.2022	By 31.3.2023	TOTAL
No. of ULBs				All ULBs > 5lakh + NCAP ULBs in the State/ UT to complete the plants by 31.3.2023

Module 4: Mechanical Road Sweepers Action Plan (only for 154 non-complying (NCAP) and 5-lakh size ULBs)

M4.1 Mechanical Road Sweepers (Applicable only for ULBs > 5 lakh population and/or 154 Non-attainment cities) - Assessment for a ULB:

Length of road to be swept daily(Only those roads which are 4-lane or more lanes)	
Detailed calculation of mechanical sweeping required in Lane-KMs	
Proposed no. of Machines required to sweep the length	
No. of Machines currently operating /existing	
Current requirement of machines (nos)	

M4.2 State/ UT – Consolidated Financial Action Plan for Mechanical Road Sweepers: Financials in Rs. Crore

	FY 2021-22	TOTAL (equal to SBM 2.0 allocation for Mechanical Road Sweepers)
Action Plan Amount		Approvals to be obtained by 31.3.2022 for all the ULBs concerned in one go, thus prioritizing control of air pollution
<i>Detailed Statement of ULB-wise Mechanical Road Sweepers proposals are to be furnished</i>		

M4.3 State Government / UT Administration – Consolidated Mechanical Road Sweepers Implementation Action Plan

Equipping ULBs with Mech. Road Sweepers	Before/Outside SBM 2.0	By 31.7.2022	By 31.3.2023	TOTAL
No. of ULBs				All ULBs > 5lakh + NCAP ULBs in the State/ UT to complete procurement of MRSs by 31.3.2023

STATE/ UT ANNUAL ROADMAP

I. State/ UT Annual Action Plans (Financial)

(Aggregate of action plans mentioned at M1.4, M2.2, M3.2 and M4.2 above)

	FY 2021-22	FY 2022-23	FY 2023-24	TOTAL
Sub-Action Plans:				
MSW Processing				
Dumpsite Remediation				
C&D Waste Processing				
Mechanical Road Sweepers				
Cumulative Action Plan TOTAL				(equal to SBM 2.0 allocation)
No. of ULBs covered				All ULBs in the State/ UT are to be covered in Action Plans by FY 2023-24 leaving adequate time for implementation

II. Roadmap for Deliverables:

MSWM compliances	Before SBM 2.0	By 31.3.2022	By 31.3.2023	By 31.3.2024	By 31.3.2025	By 31.3.2026
No. of ULBs with -						
100% MSW processing						(All ULBs)
100% Dumpsite Remediation				(all ULBs concerned)	-----	-----
100% C&D Waste processing			(all ULBs concerned)	-----	-----	-----
Mechanical Road Sweeping			(all ULBs concerned)	-----	-----	-----
* All ULBs to become 3-Star GFC Rated before 31.3.2026						

III. Roadmap for Garbage Free City (GFC) Star Rating Certifications:

Certification	Before SBM 2.0	By 31.3.2022	By 31.3.2023	By 31.3.2024	By 31.3.2025	By 31.3.2026
No. of ULBs with GFC 3-Star Certification (mandatory under SBM 2.0) or higher certification						(All ULBs)

ANNEX 3A: CITY SANITATION ACTION PLAN (CSAP): FOR TOILETS

(As referred in Chapters 2 and 7)

To be filled in by all ULBs

S. No	Description	Particulars	Detailed description	Remarks
A	GENERAL INFORMATION			
1	Location and Physical aspects			
1.a	Location	Name of the City, District, State		
1.b	Physical Aspects	Municipal Area in sq. km and Class of Town		
		Number of Wards		
		Geographical description -Hilly area, river, Environmental sensitive area etc.		
1.c	Maps	Map depicting administrative boundaries, roads and railways, water bodies, Important land-marks etc. (if not available, to be prepared)		
		Topo-Sheet (ref: Survey of India, Scale - 1:50000)(if not readily available, get it)		
2	Demography and Growth pattern			
2.a	Population	Census data - Latest census data and previous census data (population projection for 2025, 2040 and 2055)		
		Slum population <ul style="list-style-type: none"> Population Households Density 		
		Non slum population <ul style="list-style-type: none"> Population Households Density 		
		Floating population <ul style="list-style-type: none"> Population per day (if available from tourism department) 		
		Decadal Population growth rate (in %)		
3	Land Use information and Development			
3.a	Land Use pattern	Land use classification in the city- [Area under residential, commercial, Institutional, open areas, slums (available / not available)]		
		Details of Population and projected growth		
3.b	Maps	Map depicting the existing land use - residential, commercial, Institutional, slums, green cover, open land etc. (available / not available)		

B TECHNICAL INFORMATION: Information regarding Sanitation infrastructure facilities				
4 Access to Toilet (Ward-wise information to be made available)				
4.a	Individual Toilet	<ul style="list-style-type: none"> Number of Sanitary toilets Number of insanitary toilets (single pit, twin pit, insanitary, dry, pour flush) septic tank without soak away 		
	Community toilet	<ul style="list-style-type: none"> Number of households dependent Number and Location of toilet blocks Number of seats per block Functional status Septic tank without soak away 		
	Public toilet and urinals	<ul style="list-style-type: none"> Number and Location of toilet & urinal blocks Number of seats per block Functional status Septic tank without soak pit 		
	Open defecation	<ul style="list-style-type: none"> Location of OD spots 		
4.b	Operation and maintenance	Notified rates of User charges (Rs) <ul style="list-style-type: none"> For community toilets For public toilets 		
		Responsible agency for O&M [By in-house arrangement or outsourced]		
		Complaint redressal system		
4.c	Service Level Benchmark (100%)	Access to toilet (% coverage)		
4.d	Maps	Map depicting the Location of public and community toilets (if not available, the same to be depicted)		
C INSTITUTIONAL AND GOVERNANCE				
5 Institutional framework				
5.a	Regulatory Framework	Whether Municipal Sanitation Bye Laws notify tariff for sanitation services. (details)		
		State Sanitation Strategy (available / not available)		
5.b	Institutional Arrangement	Roles and Responsibilities for dealing with sanitation services.		
5.c	Governance and Reforms -	Implementation of e-governance in ULBs (available / not available)		

D	CAPACITY ENHANCEMENT:		
6	Capacity Management		
6.a	Human Resource Development	Details of the personnel engaged in sanitation services along with roles and responsibilities.	
		Outsourcing of staff and services (available / not available)	
E	GAP ANALYSIS:		
7.a		Analyze the projected requirement of sanitation infrastructure/facilities in 2025,	
7.b		Identify the available infrastructure in good condition	
7.c		Analyze the gap in various areas and suitably club as part of a project/DPR <ul style="list-style-type: none"> IHHL/CT/PT/Urinals 	

Funding requirement				
Total fund required	Central share	State share	ULB share	Others (pl specify)

ANNEX 3B: CITY SANITATION ACTION PLAN (CSAP): FOR USED WATER MANAGEMENT

(As referred in Chapters 2 and 7)

(To be filled in only for Cities below 1 Lakh Population, as referred in Chapters 2 and 6)

S.No.	Description	Particulars	Detailed description	Remarks
A	GENERAL INFORMATION			
1	Location and Physical aspects			
1.a	Location	Name of the City, District, State		
1.b	Physical Aspects	Municipal Area in sq. km and Class of Town		
		Number of Wards		
		Geographical description - Hilly area, river, Environmental sensitive area etc.		
1.c	Maps	Map depicting administrative boundaries, roads and railways, water bodies, Important landmarks etc. (if not available, to be prepared)		
		Topo-Sheet (ref: Survey of India, Scale - 1:50000) (if not readily available, get it)		
2	Demography and Growth pattern			
2.a	Population	Census data - Latest census data and previous census data (population projection for 2025, 2040 and 2055)		
		Slum population <ul style="list-style-type: none"> Population Households Density 		
		Non slum population <ul style="list-style-type: none"> Population Households Density 		
		Floating population <ul style="list-style-type: none"> Population per day (if available from tourism department) 		
		Decadal Population growth rate (in %)		
3	Land Use information and Development			

3.a	Land Use pattern	Land use classification in the city– [Area under residential, commercial, Institutional, open areas, slums (available / not available)]		
		Details of Population and projected growth		
3.b	Maps	Map depicting the existing land use - residential, commercial, Institutional, slums, green cover, open land etc. (available / not available)		
B	TECHNICAL INFORMATION: Information regarding Used water infrastructure facilities			
4	Details of existing sewage infrastructure			
4.a		Brief description of existing sewage infrastructure in the town: (i) TPs (ii) FSTPs (iii) Existing sewers (iv) Drains (v) Number of cesspool tankers (govt./private) (vi) Funding Agencies & amount		
5	Sewage Management			
5.a	Sewage Generation	<ul style="list-style-type: none"> Estimated sewage generation (in MLD for 2025, 2040, 2055) 		
5.b	Collection and Conveyance	<p>NETWORK COVERAGE</p> <ul style="list-style-type: none"> Present population covered with sewerage network Present population uncovered with sewerage network <p>SEPTAGE</p> <ul style="list-style-type: none"> Status of scheduled desludging (by ULB/ Licensed operator) <p>Drainage</p> <ul style="list-style-type: none"> Number of drains with length & material of construction etc. (width more than 75 cm) carrying sewage into the surface water body or open land Status of drains with or above 75 cm width (covered/uncovered) Number of outfall locations along with estimated quantity of sewage (dry weather) being discharged into surface water body or open land <p>Outfall location</p> <ul style="list-style-type: none"> Mention the location of outfall points (river/ Natural drain/surface water body/ open land) 		

5.c	Treatment (Septage, Used water)	<p>Used water treatment (including cotreatment) – Are the used water treatment facility available (yes/no) If 'yes'</p> <ul style="list-style-type: none"> • Treatment technology and Capacity (MLD) • Current capacity utilization–under/over (MLD) • Quantity of used water treated (MLD) • Quantity of septage co-treated (KLD) • Reuse (treated used water, sludge, biogas) Information along with respective quantity 		
		<p>Septage treatment Are the septage treatment facility available (yes/No) – If 'yes'</p> <ul style="list-style-type: none"> • Quantity of septage to be treated (KLD) • Treatment technology and Capacity (KLD) • Current utilization - under/over (KLD) • Reuse (treated used water, sludge, biogas) Information along with respective quantity 		
5.d	Operation and Maintenance	<p>For existing septage collection, conveyance and treatment facility</p> <ul style="list-style-type: none"> • Responsible agency • User charges for desludging, conveyance and disposal per household (Rs) • O&M cost for the treatment facility (Rs) • Cost recovery (%) 		
		<p>For existing used water collection, conveyance and treatment facility</p> <ul style="list-style-type: none"> • Responsible agency • Household sanitation tariff – Monthly (Rs) • Conservancy tax as part of property tax • O&M cost for the conveyance and treatment facility (Rs) • Cost recovery (%) 		

5.e	Service Level Benchmark - Present	Indicators	Benchmark	Before implementation of project	After the implementation of project
		Coverage of Sewerage Network	100%		
Collection efficiency of Sewerage Network	100%				
Adequacy of Sewage Treatment Capacity	100%				
Quality of sewage treatment	100%				
Extent of Reuse and Recycling of Sewage	20%				
Extent of cost recovery in sewage/ used water management	100%				
Efficiency in redressal of customer complaints	80%				
Efficiency in Collection of sewage / used water Charges	90%				
Access to toilets	100%				
Scheduled desludging	100%				
Notified tariff for desludging					
5.f	Maps	Map depicting the coverage of existing sewer network coverage and onsite system			
		Access to toilets			
		Scheduled desludging			
		Notified tariff for desludging			
C	INSTITUTIONAL AND GOVERNANCE				
6	Institutional framework				

6.a	Regulatory Framework	Whether Municipal Sanitation Bye Laws notify tariff for sanitation/sewage services (details)		
		State Sanitation Strategy (available / not available)		
6.b	Institutional Arrangement	Roles and Responsibilities for dealing with sanitation/ sewage services.		
6.c	Governance and Reforms -	Implementation of e-governance in ULBs (available / not available)		
D	CAPACITY ENHANCEMENT:			
7	Capacity Management			
7.a	Human Resource Development	Details of the personnel engaged in sanitation services along with roles and responsibilities.		
		Outsourcing of staff and services (available / not available)		
E	GAP ANALYSIS:			
8.a		Analyze the projected requirement of used water infrastructure/facilities in 2025,		
8.b		Identify the available infrastructure in good condition		
8.c		Analyze the gap in various areas and suitably club as part of a project/DPR <ul style="list-style-type: none"> • Sewer network • Septage conveyance • STP cum FSTP • Recycle and reuse potential 		
F	CONCLUSION	On above lines identify various DPRs/ plan for projects related to <ul style="list-style-type: none"> • I&D and STP cum FSTP • Sewer network • Storm water drainage system • Recycle and reuse projects • Gap in human resources for execution and O&M etc. 		

Funding requirement				
Total fund required	Central share	State share	ULB share	Others (pl specify)

Roadmap for achieving Mission outcomes

Target/Year	2021-22	2022-23	2023-24	2024-25	2025-26	Remarks
Cities ODF++						
Cities Water+						

ANNEX 4: STATEWISE ALLOCATION OF FUNDS

(As referred in Chapter 4)

For toilet construction and SWM components, the allocation of funds has been done on the basis of weighted average of urban population of State/ UT to total urban population of statutory towns, and area of State to total area of country. For Used water management, the allocation of funds has been done on the basis of total population of < 1 lakh ULBs in State / UT to total population of < 1 lakh ULBs in the country. All population figures are based on Census 2011 figures.

S. No.	Name of State/ UT	Central share allocation (₹ in crores) for:					
		Toilet construction		Used water Management	Solid Waste Management	IEC	CB
		Floating fund	State allocation				
1.	ANDAMAN AND NICOBAR ISLANDS		0.5	0.0	5.5	1.7	0.9
2.	ANDHRA PRADESH		47.1	694.1	458.1	142.4	71.6
3.	ARUNACHAL PRADESH		1.0	79.3	33.2	10.3	5.2
4.	ASSAM		14.2	315.7	118.3	36.8	18.5
5.	BIHAR		37.9	666.5	341.1	106.0	53.3
6.	CHANDIGARH		3.3	0.0	28.5	8.9	4.5
7.	CHHATTISGARH		19.1	414.6	200.1	62.2	31.3
8.	DADRA AND NAGAR HAVELI & DAMAN and DIU		1.1	23.1	4.8	1.5	0.7
9.	DELHI		52.8	0.0	436.1	135.6	68.1
10.	GOA		2.9	56.9	12.3	3.8	1.9
11.	GUJARAT		83.0	806.9	701.4	218.0	109.6
12.	HARYANA		28.5	284.4	226.9	70.5	35.4
13.	HIMACHAL PRADESH		2.2	101.0	36.5	11.3	5.7
14.	JAMMU & KASHMIR		10.3	226.4	131.7	40.9	20.6
15.	JHARKHAND		25.6	236.8	174.9	54.4	27.3
16.	KARNATAKA		76.1	1,128.6	709.3	220.5	110.8
17.	KERALA		51.4	521.7	205.8	64.0	32.2
18.	LADAKH		0.7	34.1	19.0	5.9	3.0
19.	MADHYA PRADESH		64.7	1,229.5	617.5	192.0	96.5

20.	MAHARASHTRA	IHHL/CT/ PT/Urinals	163.8	1,484.8	1,438.1	447.1	224.7
21.	MANIPUR		2.5	58.7	23.9	7.4	3.7
22.	MEGHALAYA		1.9	40.8	16.8	5.2	2.6
23.	MIZORAM		1.8	48.1	22.2	6.9	3.5
24.	NAGALAND		1.8	60.3	19.0	5.9	3.0
25.	ODISHA		22.6	491.0	209.8	65.2	32.8
26.	PUDUCHERRY		2.7	25.5	20.4	6.3	3.2
27.	PUNJAB		33.5	589.0	294.2	91.5	46.0
28.	RAJASTHAN		54.9	916.1	541.8	168.4	84.6
29.	SIKKIM		0.5	9.8	6.2	1.9	1.0
30.	TAMIL NADU		112.5	1,999.7	807.4	251.0	126.1
31.	TELANGANA		43.9	463.1	381.9	118.7	59.7
32.	TRIPURA		3.1	48.4	23.0	7.2	3.6
33.	UTTAR PRADESH		143.4	2,117.2	1,235.9	384.2	193.1
34.	UTTARAKHAND		9.8	203.0	89.0	27.7	13.9
35.	WEST BENGAL		93.8	507.9	577.7	179.6	90.3
	RETAINED AT MOHUA			-		790.2	782.4
	TOTAL		405	1,215	15,883	10,168	3,951

ANNEX 5: OUTPUT-OUTCOME INDICATORS

(As referred in Chapter 10)

Outputs (2021-26)				Outcomes (2021-26)					
Output	Indicator(s)	Target	Year-wise Target	Out- come	Indica- tor (s)	Target	Year-wise Target		
1. Sustainable Sanitation									
1.1 Construction of Community Toilets/ Public Toilets (2,70,000 seats)	Total number of CT/PT constructed	Number of CT/PT constructed	Y1:		ODF+ Status (All cities declared ODF+)	Total number of Cities/ towns declared ODF+	Number of Cities/ towns declared ODF+ in the country	Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	
1.2 Construction of Urinals (50,000 nos.)	Total number of Urinals Constructed	Number of Urinals Constructed	Y1:					Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	
1.3 Construction of IHHL (50,000 nos.)	Total number of IHHL constructed	Number of IHHL Constructed	Y1:					Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	
2. Solid Waste Management									
2.1 Upgradation of system of Segregation, collection and transportation (All Cities)	Total number of cities with upgraded segregation, collection and transportation system	Number of cities with upgraded segregation, collection and transportation system / number of wards covered by 100% source segregation	Y1:		Garbage Free Ratings for the Cities (All cities)	Total number of Cities/ Towns Declared at least 3 star rated	Number of Cities/ Towns Declared at least 3 star rated	Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	
2.2 Construction of Material Recycling Facilities (MRFs) (All Cities)	Total number of Cities with MRFs installed	Number of Cities with MRFs installed	Y1:					Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	

2.3 Processing of Waste (dry and wet waste) (All Cities)	Scientific Processing of Waste gener- ated in all the cities	Number of cities with 100% scien- tific process- ing of waste / quantity (tonnes per day) of generated waste being scientifically processed	Y1:							
			Y2:							
			Y3:							
			Y4:							
			Y5:							
2.4 Processing of Construction and Demolition Waste (Non- Attainment Cities and other cities with population of 5 lakh and above)	Scientific Processing of C&D waste in Non- Attainment Cities	Number of Non-At- tainment Cities with Scientific Processing of C&D Waste / quantity (Tonnes per day) of C&D waste processing for which plants com- missioned	Y1:					Y3:		
			Y2:							
			Y3:							
			Y4:							
			Y5:							
2.5 Biomining and Capping of Dumpsites (>10 Lakh Population Cities)	(a) Biomining of waste from dumpsites of all cities.	Number of Cities with biomining of waste / Quantum (in lakh tonnes) of waste reme- diated in dumpsites	Y1:					Y4:		
			Y2:							
			Y3:							
			Y4:							
			Y5:							
	(b) Biomining and Capping of dumpsites in Cities with 10 lakh & above popu- lation	Number of Cities with 10 lakh & above pop- ulation with Capping of Dumpsites / Quantum (in lakh tonnes) of waste reme- diated in dumpsites	Y1:							
			Y2:							
			Y3:							
			Y4:							
			Y5:							
2.6 Mechanized Road Sweeping (Non-Attain- ment Cities and other cities with population of 5 lakh and above)	Mecha- nized road sweeping in Non-Attain- ment cities	Number of Non- Attainment cities with Mechanized road sweeping.	Y1:					Y5:		
			Y2:							
			Y3:							
			Y4:							
			Y5:							

1. Used water Management (only for cities with population of below 1 lakh)									
3.1 Installation of Sewage Treatment Plants (STPs/ FSTPs)	Installation of STPs/FSTPs in cities with less than 1 lakh population.	Number of cities with less than 1 lakh population having installed STPs/FSTPs	Y1:		ODF++ Status All Class II cities and below and Water+ Status (in 50% of Class-II and below cities)	Total number of Cities ODF++ Water+	Number of Cities ODF++ Wate		
			Y2:						
			Y3:						
			Y4:						
			Y5:						
3.2 Procurement and O&M of Septic Tank Cleaning Vehicles	Provision of Scheduled cleaning of septic tanks in all the cities of less than 1 lakh population	Number of cities of less than 1 lakh population with provision of scheduled cleaning of septic tanks	Y1:					Y1:	ODF+ +
			Y2:					Y1:	Water+ +
			Y3:					Y2:	ODF+ +
			Y4:					Y2:	Water+ +
			Y5:					Y3:	ODF+ +
3.3 Improvement of Sewerage and Septage Management in cities with less than 1 lakh Population	Total Sewerage Treatment plants (STPs) capacity added/installed	Total STPs capacity to be achieved in five years	Y1					Y3:	Water+ +
			Y2					Y3:	ODF+ +
			Y3					Y3:	Water+ +
			Y4					Y4:	ODF+ +
			Y5					Y4:	Water+ +
	Total FSSM Capacity added/installed	Total FSTPs capacity to be achieved in five years	Y1					Y4:	ODF+ +
			Y2					Y4:	Water+ +
			Y3					Y5:	ODF+ +
			Y4					Y5:	Water+ +
			Y5					Y5:	Water+ +

4. IEC and Capacity Building	Campaigns on Radio, TV, Social Media, and e-learning training workshops	Cover 100% population in Urban Area	Y1:		Awareness generation and behavioural change vis-à-vis importance of hygiene and sanitation in public health. The outcome is not quantifiable, however, effective communication and awareness would lead to greater public participation and citizen involvement in creating garbage free and Open Defecation Free cities, and ultimately, make Swachh Bharat Mission into a 'jan andolan'. 100% population sensitized about the Mission	Number of citizens participated in Star Rating for GFC, Swachh Manch, Swachhata App Downloads	Cover approx. 30% people connected with GTL, Swachhata App, Helpline, Swachh Manch.	Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	

	Number of Workshops conducted such as Regional/ National level Workshops, Star Rating Garbage free protocol, NIUA workshops on Sanitation and SWM, etc.	Number of ULBs covered with Capacity Building (All cities)	Y1:		Improvement in skills, knowledge and capacities, leadership development and change management competencies developed of ULB officials connected with implementation of Mission, through Workshops, Seminars, Trainings, etc.	Number of ULB officials trained	Cover all ULB officials	Y1:	
			Y2:					Y2:	
			Y3:					Y3:	
			Y4:					Y4:	
			Y5:					Y5:	
			Y2:						
			Y3:						
			Y4:						
			Y5:						

ANNEX 6: CHECKLIST FOR PROPOSAL PREPARATION

(As referred in Chapter 6,7)

Check List for Scrutiny for Solid Waste Management Projects seeking funding from Swachh Bharat Mission (Urban) 2.0

1.	Name of the Project:																				
2.	Name of the ULB, District, State/UT:																				
3.	No. of wards of the ULB:																				
4.	Present Status of SWM:																				
	a.	MSW generation in TPD:																			
	b.	Per capita waste generation:																			
	c.	% of wards practising source segregation:																			
	d.	% of wards practising door to door collection:																			
	e.	Quantity of MSW being processed in TPD:																			
	f.	% of waste being processed:																			
	g.	% of waste dumped /landfilled																			
5.	Waste Quantification with the waste streams of the current year records																				
	<table border="1"> <thead> <tr> <th>Waste streams</th> <th>Current year (TPD)</th> <th>% of MSW</th> </tr> </thead> <tbody> <tr> <td>Wet Waste</td> <td></td> <td></td> </tr> <tr> <td>Dry Waste</td> <td></td> <td></td> </tr> <tr> <td>Sanitary Waste</td> <td></td> <td></td> </tr> <tr> <td>Domestic Hazardous Waste</td> <td></td> <td></td> </tr> <tr> <td>Other Waste(Drain Silt & Inert)</td> <td></td> <td></td> </tr> </tbody> </table>			Waste streams	Current year (TPD)	% of MSW	Wet Waste			Dry Waste			Sanitary Waste			Domestic Hazardous Waste			Other Waste(Drain Silt & Inert)		
Waste streams	Current year (TPD)	% of MSW																			
Wet Waste																					
Dry Waste																					
Sanitary Waste																					
Domestic Hazardous Waste																					
Other Waste(Drain Silt & Inert)																					
6.	Details of existing/on-going/proposed scheme in the project area (Please enter brief details project wise)																				
7.	Details of existing design capacity of processing facilities (including under construction, tendered, non-functional)																				
	<table border="1"> <thead> <tr> <th>Waste Processing Unit</th> <th>Existing Design Capacity</th> </tr> </thead> <tbody> <tr> <td>Composting Plants</td> <td></td> </tr> <tr> <td>Bio-methanation Plants</td> <td></td> </tr> <tr> <td>Material Recovery facility</td> <td></td> </tr> <tr> <td>Material Recovery facility with RDF</td> <td></td> </tr> <tr> <td>Waste to Electricity</td> <td></td> </tr> </tbody> </table>			Waste Processing Unit	Existing Design Capacity	Composting Plants		Bio-methanation Plants		Material Recovery facility		Material Recovery facility with RDF		Waste to Electricity							
Waste Processing Unit	Existing Design Capacity																				
Composting Plants																					
Bio-methanation Plants																					
Material Recovery facility																					
Material Recovery facility with RDF																					
Waste to Electricity																					
8.	Population Details																				
	<table border="1"> <thead> <tr> <th>2011 Census</th> <th>Current Year 2021</th> <th>Projected 2025</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			2011 Census	Current Year 2021	Projected 2025															
2011 Census	Current Year 2021	Projected 2025																			
9.	Implementing Agency:																				

10.	Operating Agency:						
11.	City Sanitation Plan (CSP) status: Approved/Not approved						
12.	Recycling agencies whether/ which have in partnership with ULBs etc. (brief details to be mentioned)						
13.	Status of Solid Waste Management Service Level Benchmarks						
	S. No.	Indicator	Unit	Baseline before project	Reliability of measurement	After project	Reliability of measurement
	1	Household level coverage of SWM services	%				
	2	Efficiency of collection of municipal solid waste	%				
	3	Extent of segregation of municipal solid waste	%				
	4	Extent of municipal solid waste recovered	%				
	5	Extent of scientific disposal of solid waste	%				
	6	Efficiency in redressal of customer complaints	%				
	7	Cost recovery of SWM services	%				
	8	Efficiency in collection of charges	%				
For Integrated Solid Waste Management							
14.	Per capita waste generation :						
	ULBs > 10 lakh population@550 gm/capita:						
	ULBs 1 lakh -10 lakh (both included) population@450gm/capita:						
	ULBs <1 lakh population@300gm/capita:						
15.	Projected Quantity of Waste Generation for 2025 in TPD as per waste/capita: TOTAL:						

16.	Projected Waste generation streams for year 2025:				
	Waste stream		Fraction	Proposed waste generation in TPD	% of MSW
	Wet Waste		55%		
	Dry Waste		35%		
	Domestic Hazardous waste		Minor		
	Other Waste(Drain Silt & Inert)		10%		
	To SLF		20%		
17.	Details of Proposed Components				
	a. Proposed capacity of processing facilities for Integrated Municipal Solid Waste Management (as applicable):				
	Waste Processing Unit		Existing Design Capacity (inclusive of the under construction/ tendered/non-functional /approved units)	Required Capacity	
	Composting Plants				
	Bio-methanation Plants				
	Material Recovery facility with RDF				
	Waste to Electricity				
	b. Transfer Stations (applicable only for ULBs with >5 lakh population)				
	Existing capacity in (TPD)		Proposed Capacity in (TPD)		
	Wet Waste		Dry Waste		
	c. Sanitary Landfill (SLF)				
	Proposed quantity of waste sent to SLF (restricted to 20% of total MSW) in TPD				
	Proposed capacity of SLF (Tonnes/Cum/day)				
	Proposed design Year of SLF -5 years tenure				
	d. Dumpsite Remediation(applicable only if Dumpsite is existing)				
	Total quantity of existing legacy waste				
Details of Proposed method for remediation					
Cost of per tonne of waste remediation proposed					
End uses of remediated dumpsite area					
Indicative Uses/ Utilization of Segregated Material					
e. Construction and Demolition Waste Management (applicable only for ULBs >5 lakh and NCAP cities)					
C&D waste generation in TPD (restricted to 50gm/capita of total MSW generated)					
C&D waste generation (Bulk waste generators) (@ 25% of the total C&D waste generation)+20% extra in TPD					
Total Processing Capacity proposed in (TPD)					

	<p>f. Mechanical Road Sweepers (applicable only for ULBs >5 lakh and NCAP cities) * Rate of mechanical sweeping 80 Km-Lane per Shift</p> <table border="1"> <tr> <td>Proposed length of Road to be swept/day (only 4 or more lane roads)</td> <td></td> </tr> <tr> <td colspan="2">Detailed calculation of mechanical sweeping required in Lane-KMs (please attach)</td> </tr> <tr> <td>Proposed no. of Machines required to sweep the length</td> <td></td> </tr> <tr> <td>No. of Machines currently operating /existing</td> <td></td> </tr> <tr> <td>Current requirement of machines (nos)</td> <td></td> </tr> </table> <p>*All mechanical sweepers are to be procured from GEM portal or centralized State agency.</p>	Proposed length of Road to be swept/day (only 4 or more lane roads)		Detailed calculation of mechanical sweeping required in Lane-KMs (please attach)		Proposed no. of Machines required to sweep the length		No. of Machines currently operating /existing		Current requirement of machines (nos)																	
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Annual Revenue generation (Rs. in lakhs)																											
21.	<p>Land Acquisition:</p> <p>(a) Whether entire land required for all components of the project in possession of the Implementing Agency:</p> <p>(b) If not, time required for acquiring land:</p> <p>(c) Whether Right of Way required from other Government Agencies such as Railways, Defence and State Departments.</p> <p>(d) Whether Resettlement and Rehabilitation involved? If yes, whether R&R project/plan approved and funds allocated?</p>																										
22.	Whether the required Statutory clearances (to be identified) have been obtained – yes/no																										

Certificate (to be furnished by ULB/ State officials):

Certified that the facts and figures mentioned have been duly verified and found to be correct

Signatures of responsible officers	(Officer 1/ULB)	(Officer 2/ULB)	(Officer 3/State)
------------------------------------	-----------------	-----------------	-------------------

**Check List for Preparation of Sewerage and Faecal Sludge & Septage Management (FSM)
DPR seeking funding under Swachh Bharat Mission (Urban) 2.0**

S.No.	Description	Remarks												
1.	Introduction													
i.	Background (Description of SBM 2.0, State and City)													
ii.	Location and connectivity of City													
iii.	Temperature, Rainfall and climate details of the city													
iv.	Topography and natural resources													
v.	Soil strata													
vi.	Depth of water level													
vii.	Socio economic conditions:													
	<table border="1"> <thead> <tr> <th>S.no.</th> <th>Census Year</th> <th>Population</th> <th>Decadal growth rate</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.no.	Census Year	Population	Decadal growth rate									
	S.no.	Census Year	Population	Decadal growth rate										
viii.	Objectives of the project (describe the goals of SBM 2.0 which are targeted through proposed project)													
ix.	Structure of the report indicating contents/chapters													
2.	Existing Infrastructure of the town													
i.	Status of water supply in the town (describe the coverage, supply hours, quality, supply rate etc.)													
ii.	Status of sewerage system of city (describe the existing sewerage zones, existing infrastructure etc.)													
iii.	Status of existing drainage system of the city (describe the number and capacity of the drains, outfall location etc.)													
iv.	City road network													
v.	Details of important surface water bodies, rivers natural drains etc. (intended recipient of sewage)													
3.	Population Projection and sewage generation													
i.	Population projection (for base-2025, Intermediate-2040,and ultimate-2055 year)													
ii.	Ward wise population projections													
iii.	Water demand													
iv.	Sewage generation													
4.	Gap Analysis and prioritization													
i.	Necessity of the project													
ii.	Population covered under this project													
iii.	Water demand and sewage generation of the project area													

iv.	Key map of project area within ULB map																											
5.	Proposed project components																											
i.	Sewerage System and its components (DPR should contain the following) <ul style="list-style-type: none"> • Zoning under the project area • Proposed sewerage network (summary of pipes including length, material, dia etc.) • STP – design, capacity, technology, design year, input and output parameters, please mention if implementation in modules is considered) 36 • Details of Sewage pumping station, if any • Length of trunk sewer • Provision of reuse and recycle of treated used water • Life cycle cost assessment of treatment plant 																											
ii.	Faecal sludge and septage management components <ul style="list-style-type: none"> • Population covered under FSM component • STP cum FSTP – design scheme, capacity, technology, design year, input and output parameters, please mention if implementation in modules is considered) • Provision of reuse and recycle of treated used water • Number of cesspool tankers proposed along with desludging schedule 																											
iii.	Interception & diversion works and Strengthening of drainage system <ul style="list-style-type: none"> • Proposed length of drains (having width more than 75 cm) identified for strengthening and improvement • Methodology for identification • Number and capacity of the drains identified to be tapped • Details of pumping arrangement, if any • Details of outfall locations which are covered under this project • Details treatment facility if proposed separately 																											
6.	Operation and Maintenance																											
i.	General																											
ii.	O&M components <ul style="list-style-type: none"> • Direct manpower cost • Direct electricity/energy cost • Direct chemical cost • Direct expenses on repairs of STP/FSTP/Pumps/sewer conveyance and others. • Direct cost on mechanical devices 																											
iii.	<p>Operation & Maintenance cost and revenue generation details (O & M Framework – existing & proposed)</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Sewerage Tariff (in Rs.)</th> </tr> <tr> <th>Existing</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Residential</td> <td></td> <td></td> </tr> <tr> <td>Commercial</td> <td></td> <td></td> </tr> <tr> <td>Institutions</td> <td></td> <td></td> </tr> <tr> <td>Industries</td> <td></td> <td></td> </tr> </tbody> </table> <p>Please specify whether it is included as conservancy tax within property tax.</p> <table border="1"> <thead> <tr> <th></th> <th>Existing (average of last 5 years)</th> <th>Proposed</th> </tr> </thead> <tbody> <tr> <td>Annual O & M cost (Rs. in lakhs)</td> <td></td> <td></td> </tr> <tr> <td>Annual Revenue received (Rs.in lakhs)</td> <td></td> <td></td> </tr> </tbody> </table>		Sewerage Tariff (in Rs.)		Existing	Proposed	Residential			Commercial			Institutions			Industries				Existing (average of last 5 years)	Proposed	Annual O & M cost (Rs. in lakhs)			Annual Revenue received (Rs.in lakhs)			
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	Please specify in case of desludging of septic tanks.			
		User fee (in Rs.)		
		Existing	Proposed	
	By ULB			
	By Private operator			
iv.	Service level benchmarking			
	Indicators	Benchmark	Before implementation of project	After the implementation of project
	Coverage of Sewerage Network	100%		
	Collection efficiency of Sewerage Network	100%		
	Adequacy of Sewage Treatment Capacity	100%		
	Quality of sewage treatment	100%		
	Extent of Reuse and Recycling of Sewage	20%		
	Extent of cost recovery in sewage/ used water management	100%		
	Efficiency in redressal of customer complaints	80%		
	Efficiency in Collection of sewage / used water Charges	90%		
	Access to toilets	100%		
	Scheduled desludging	100%		
Notified tariff for desludging				
7.	Environmental Assessment of the project			
i.	Environmental compliance requirements			
ii.	Applicable legislations			
iii.	Identified environmental impacts from the project			
iv.	Mitigation and enhancement measures			
v.	Environmental budgetary provision			
vi.	conclusion			

8.	Training and Institutional	
i.	Proposed capacity building works under the project	
ii.	Details of Institutional framework, if proposed	
9.	Implementation schedule	
10.	Statutory permissions/ Clearances	
11.	Cost Estimates	
i.	Cost basis for proposed works (component-wise) (as far as possible State schedule of rate are to be considered)	
ii.	O&M cost	
iii.	Provisional sum	
iv.	Cost for environmental and social management	
v.	Cost for capacity building works	
vi	Per Capita Cost(overall &component-wise)	

ANNEX 7: IEC ACTION PLAN

(As referred in Chapter 8)

1. City Profile

1	Name of the ULB:	
2	Name of the District, State/ UT:	
3	No. of Municipal Zones in City:	
4	No. of wards in the ULB:	
5	Population & Households in the ULB as per 2011 Census:	
	Population	Households
6	Population & Households in the ULB as per current scenario:	
	Population	Households
7	Projected Population & Households in the ULB @2025	
	Population	Households

2. Proposed IEC and Behavior Change interventions by the ULB

Proposed IEC initiatives					
	Key themes/messages of the Mission amplified through the initiatives	Details of the activities undertaken (including communication materials developed and communication platforms used)	Target audience	Expected outcomes/ desired behavior change	Timeline
1	SWM (Source Segregation, Home Composting etc) / Waste Water Reuse etc	Advertisements in local print and electronic media			
2		Running radio jingles on the local FM/community radios			
3		Swacchhagrahis conducting meetings with the ward members (specify number of meetings)			
4		Swacchata Captains facilitating meetings with key opinion influencers (specify details of influencers engaged)			

5		Workshops for engaging school children (specify the number of locations)			
6		Communication collaterals put up at strategic locations across the ward (specify the number of locations)			
Proposed Initiatives for citizen engagement					
Number of Swacchata leaders and Swacchagrahis identified for formal nomination					
Number of Citizen Sanitation Committees proposed to be set up					

3. Financial overview

S. No	Description of the activity	Tentative expenditure (in ₹)	ACA under SBM-U 2.0	State Govt. Funds	ULB Funds	Other Funds (PPP, others)
1	Development of outdoor collaterals					
2	Advertisements in print, electronic media and FM/ community radios					
3	Monthly workshops/events with local community members and representatives					
4	Other activities					
Total tentative expenditure (in ₹)						

ANNEX 8: CAPACITY BUILDING ACTION PLAN

(As referred in Chapter 9)

1. City Profile

	Name of the ULB:	
	Name of the District, State/ UT:	
	No. of Municipal Zones in City:	
	No. of wards in the ULB:	
	Population & Households in the ULB as per 2011 Census:	
	Population	Households
	Population & Households in the ULB as per current scenario:	
	Population	Households
	Projected Population & Households in the ULB @2025	
	Population	Households

2. Training for Capacity Building of identified Stakeholders

S. No	Identified Stakeholders	Total Number	Areas for Training
1.	Municipal Officials		
	Technical staffs/PHE officials		
	NGOs, Educational and other institutes identified		
	Institutes identified for conducting CB Training		
	Master Trainers Identified for conducting CB Training activities		
<p>Before beginning with trainings, ULBs are to conduct a Training Needs Analysis to identify relevant gaps and design appropriate programs and modules for imparting the training.</p> <p>ULBs are to attach the following details in the CB Action Plan:</p> <ol style="list-style-type: none"> 1. Quarterly training calendar carrying a description of activities as well as targeted groups 2. Training plan to also detail method of delivery of training (virtual, in person, e-learning, etc) 3. Monitoring and Evaluation Framework 4. Name and contact details of stakeholders who will attend the training 			

3. Training for Skill Development of the identified stakeholders

S. No	Identified Stakeholders	Total Number	Areas for Training
	Sanitation workers and SafaiMitras identified for Skill Development trainings		
	Training Institutes identified for conducting Skill Development trainings		
	Master Trainers identified for conducting Skill Development trainings		

Before beginning with trainings, ULBs are to conduct a Skills Gap Analysis to identify relevant gaps and skill needs to design appropriate modules for imparting the training.

ULBs are to attach the following details in the CB Action Plan:

1. Quarterly training calendar carrying a description of activities as well as targeted groups
2. Training plan to also detail method of delivery of training (virtual or in person)
3. Monitoring and Evaluation Framework

4. Financial Overview

S. No.	Activities to be Conducted (Representative List)	Tentative Expenditure (in ₹)	CA under SBM-U 2.0	State Govt. Funds	ULB Funds	Other Funds (PPP, others)
1	Training Needs Analysis					
2	Trainings for Municipal Officials					
3	Trainings for Technical/ PHE Officials					
4	Trainings for NGOs/ CSOs					
5	Skills Gap Analysis					
6	Trainings for sanitation workers and SafaiMitras					
7	Development of Manuals/documentation					
Tentative Total Expenditure (in ₹)						

ANNEX 9: FEATURES OF ASPIRATIONAL TOILETS

(As referred in Chapter 5)

Features of aspirational toilets
All toilet seats and urinals clean and usable at all times
Wash basin(s) clean and usable at all times
Availability of water
Adequate ventilation facility (vents, slanted glass slats and/or exhaust fan)
Premises are well lit at all times, both within and outside , with each seat having its own light point, and all light points functional
Functional bolting arrangements on all doors
Untreated faecal sludge/septage and sewage from the toilet is not discharged and/or dumped in drains, open areas or water bodies
Toilet floor is swept and mopped at all times
Mirrors , if available, are clean and polished
Available and regularly cleaned (covered) litter bins , with bins available with each toilet seat
Available and operational soap/soap dispenser
Usable taps and fittings, with no leakage OR water tank in or outside the structure with water available in it at all times during opening hours
Gender-segregated, distinct entrances for males and females, if both facilities available in single block
Entrance/ accessibility (like ramp, stairs) to toilet block is barrier free, including those for specially abled persons
Premises are visible to passersby, with clear signage, and the area within 3m from each direction of the structure is not encroached by unauthorized construction and vendors
Staff is provided with necessary supplies of consumables, cleaning equipment, protective gear and inventory, and there is no stock out for longer than 24 hours
Roster being maintained for regular cleaning and maintenance and a caretaker is on duty at all times during open hours
Public/Community Toilet is visible on Google Maps toilet locator as 'SBM Toilet'
Name and contact details of the following are displayed prominently - Supervisor, Supervisor's agency and area Sanitary Inspector(Contact number will be checked whether it is working or not)

Complaint registration and redressal mechanism (Swachhata App, Swachhata helpline 1969) is in place and is functional, with all complaints, maintenance issues or incidents resolved within 24 hours of registration
Air freshener applied
Walls and floors are clean and stain / graffiti free
Low height toilets/Indian toilets and basins for children
Plants / shrubs in the vicinity of toilet complex are well maintained
Space earmarked for advertisement for revenue generation
Hand dryer / paper napkin available
Ladies' toilets have vending machine for sanitary napkins
Incinerator facility available for disposal of used sanitary napkins for toilet having > 10 seats and also to the toilets adjacent to women college and hostels
Toilet identification number, name of ULB under which jurisdiction toilet is covered, ward number and maintenance authority prominently displayed for each toilet block
SMS based feedback with number displayed on which SMS has to be sent
Bathing facility available

ANNEX 10: BASIS OF COSTING FOR SWM COMPONENTS, CT/PTs and USED WATER COMPONENTS

(As referred in Chapter 4)

Costing for Solid Waste Management

S.No	Component	Nos/ Population	Unit Cost	Total Cost Rs in Crore	Central Share	State/ULB Share	Private Share
1.	Solid Waste Management (through MRF, transfer stations, processing facilities, remediation of legacy waste dumpsites through Biomining & Scientific Landfilling, etc).	42.86 Crores	Rs 605/ Capita	25930	16336	7675	1919
2.	C&D Waste Processing	17.14 Crores	Rs 35/ Capita (Rs 3.5 Crore/10 Lakh Pop- ulation)	600	378	111	111
3.	Mechanised Sweeping for combating air pollution	Total of 816 machines	Rs 55 lakh per machine (average)	449	283	166	0
4.	Collection & transportation including modernization of existing system.	42.86 Crores	Rs 300/ capita	12858	0	2572	10286

Cost Estimate of SWM requirements proposed under SBM 2.0 (Aggregated for all ULBs)							
				Qty,TPD	Rate	Unit	Amount
I. MSW Treatment Plants					Rs.Crore		Rs.Crore
a.	Compost Plants			30658.38			
		say		30,700.00	11.50	100 tpd	3,531
b.	BioMethanation Plants			15,063.96			
		say		15,100	18.00	100 tpd	2,718
c.	MRF-cum-RDF Plants			45,152.98			
		say		45,200	8.50	100 tpd	3,842
d.	WtE Plants (RDF based)(Elec- tricity)			9,647.23			
		say		9,700	18.00	100 tpd	1,746
						Subtotal	11,837
II. SLF facilities for all ULBs				40,938.05			
		say		41,000	6.50	100 tpd	2,665
III. Transfer Stations for ULBs> 5lakh population							
	120358.63 TPD	40%		48,143.45			
		say		48,200	4.50	100 tpd	2,169
V. C&D Waste management in all 102 NA cities + remaining 5 lakh cities							
	10409	say		10,000	6.00	100 tpd	600
VI. Dumpsites remediation in all ULBs- 3 Categories							
a	>10 Lakh	754	Lakh MT	754	550.00	Per MT	4147
b	1-10 lakh	519	Lakh MT	519	550.00	Per MT	2855
c	<1 lakh	400	Lakh MT	400	550.00	Per MT	2200
						Subtotal	9,202
TOTAL							26,472
Contingencies & rounding off (0.22%)							58
GRAND TOTAL							26,530

Rupees Twenty- Six thousand Five hundred Thirty Crore only

Costing calculations for CT/PTs:

The following section provides estimate of a 5 seat PT prepared by M/s Sulabh International which has constructed and running thousands of PTs across the country. The estimate was prepared for Bareilly Nagar Nigam in UP in FY 2019-20 following Schedule of Rates for FY 2018-19. Considering even one year cost escalation @6%, per seat cost works out to approx Rs 1.69 lakh. This justifies the cost of Rs 1.5 lakh per seat considered for Mission period 2021-2026.

Cost of 5 seat PT complex (2018-19 rate) = Rs 7,96,515

Cost escalation for one year @ 6% per annum = Rs 8,44,306

Cost per seat of PT/CT = Rs 1.69 lakh

This justifies the cost per seat adopted at Rs 1.5 lakh.

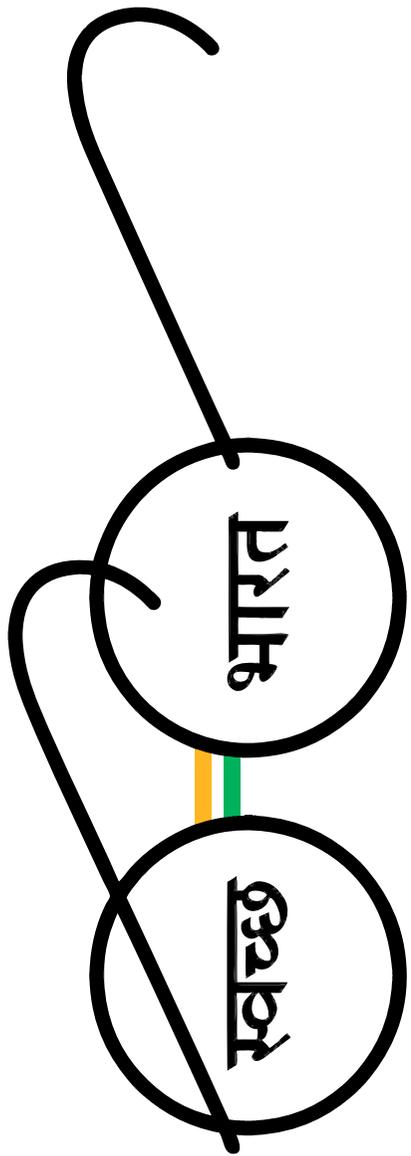
Costing calculations for Used water management

The Central share (as per eligible funding pattern) for STPs and I&D drains, for each notified town in the State/UT, will be governed by the following maximum per capita allocations:

Class of town	Maximum limit of per capita allocation for STP and I&D (including Central share + State/UT/ULB share)
II	₹3,000
III	₹2,000
IV	₹2,000
V	₹2,000
VI	₹2,000
For NE & hilly States	Class II - ₹4,000
Class III and below- ₹3,000	

This will ensure that allocation of funds is uniform across all eligible ULBs. However, depending on needs at ground, States/UTs may sanction higher per capita funds for some town's projects, within the State/UT's overall funds allocation for used water component (Central + State share), provided that State/UT ensures that all the towns in Class II to VI are also covered with suitable sewage collection and treatment facilities.

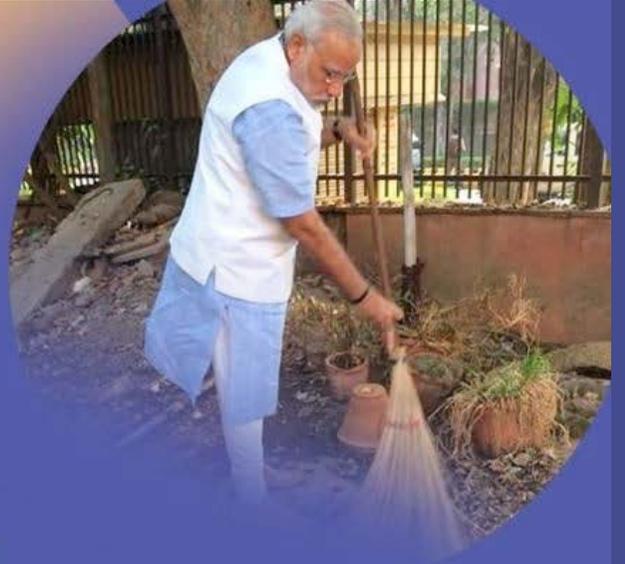
In no case should allocated used water funds for all notified towns in the state be utilized in some selected towns while others are left unattended. In such a scenario, Central share allocation would be proportionately restricted commensurate to the number of towns attended.



एक कदम स्वच्छता की ओर

“

आज इतने दशकों बाद,
स्वच्छता आन्दोलन ने एक बार
फिर देश को नए भारत के सपने के साथ जोड़ने का
काम किया है। और ये हमारी आदतों को बदलने
का भी अभियान बन रहा है और हम ये न भूलें कि
स्वच्छता यह सिर्फ एक कार्यक्रम है, स्वच्छता ये
पीढ़ी दर पीढ़ी संस्कार संक्रमण की एक जिम्मेवारी
है और पीढ़ी दर पीढ़ी स्वच्छता का अभियान चलता
है, तब सम्पूर्ण समाज जीवन में स्वच्छता का
स्वभाव बनता है।



'मन की बात' में प्रधानमंत्री नरेंद्र मोदी, 26 सितम्बर 2021



सत्यमेव जयते

**Ministry of Housing and Urban Affairs
Government of India**

Clean Air, Clean Water, Clean Land

No. T-12/2015-16/1086/NMCG

National Mission for Clean Ganga

Ministry of Water Resources, River Development & Ganga Rejuvenation
Government of India1st Floor, Major Dhyan Chand

National Stadium New Delhi – 110002

Dated: 19th May 2017

To,
The Project Director, SPMG
UP State Ganga River Conservation Agency
Government of Uttar Pradesh
2, Lal Bahadur Shastri Marg
Lucknow-226001

Sub: Administrative Approval and Expenditure Sanction for the project on “Interception, Diversion & Sewage Treatment Plants (STP) Works” For Naini (District G) & Phaphamau (District F) in Allahabad city and Jhunsi Area of Allahabad district under Namami Gange Programme at an estimated cost of ₹ 767.597 Crores (Rupees Seven Hundred Sixty Seven Crores Fifty Nine Lakhs Seventy Thousand only) under Hybrid Annuity based PPP mode.

Sir,

I am directed to convey the Administrative Approval and Expenditure Sanction for the project on “Interception, Diversion & Sewage Treatment Plants (STP) Works” For Naini (District G), Phaphamau (District F) and Jhunsi Area District: Allahabad Under Namami Gange Programme at an estimated cost of ₹ 767.597 Crores (Rupees Seven Hundred Sixty Seven Crores Fifty Nine Lakhs Seventy Thousand only) with 100% central funding with the following major project components.

a. Naini (District G)

- Construction of Nala Tappings - 05 Nos.
- Sewage Pumping Stations (New) - 3 Nos.
- Rising Main (300 + 800 + 900 mm) – (950 + 700 + 200 m).
- Interceptor/ Trunk Sewer (1400 + 1600 mm) – 6335 m (3840 + 2495 m).
- Trunk Sewer (350 + 600 mm) – 3190 m (350 + 2840 m).
- Construction of STP 42 MLD (14 + 14 + 14) - 01 no.
- Effluent channel (1600 mm) – 1 km.

b. Phaphamau (District F)

- Construction of Nala Tappings - 02 Nos.
- Sewage Pumping Stations (New) - 2 Nos.
- Rising Main (350 + 500 mm) – 750 + 50 m.
- Trunk Sewer (500 + 600 + 800 mm) – 985.08 m (144.36 + 245.47 + 595.25 m).
- Construction of STP 14 MLD (7 + 7) - 01 no.

- Effluent channel (1000 mm) – 1.1 km.
- c. **Jhunsi:**
 - Construction of Nala Tappings - 13 Nos.
 - Sewage Pumping Stations (New) - 2 Nos.
 - Rising Main (600 mm) - 570 m.
 - Ghat Sewer Line/ Interceptor/ Trunk Sewer (200 + 250 + 300 + 400 + 800 mm) – 2700 m (585 + 520 + 240 + 255 + 1100).
 - Gravity Main/ Trunk Sewer (900 mm) – 3198 m.
 - Construction of STP 16 MLD (8+8) - 01 no.
 - Effluent channel (900 mm) – 2 km.
- d. **For all I/ D and STP Works:**
 - Online Monitoring for STP - 06 Nos. (Inlet & Outlet)
 - Solar Power Plant – 1 MW (Naini), 500 KW (Phaphamau) & 200 KW (Jhunsi).
 - Micro Hydro Power Plant – 500 KVA (Naini), 2.5 KW (Phaphamau & Jhunsi).
 - O & M for I/ D and STP Works – 15 years.

2. The summary of project cost is given below and detailed cost break-up is at Annexure-I.

Sl.No	Description of Work	Estimated Cost in ₹ Lakhs		
		Naini	Phaphamau	Jhunsi
A	Costs to be borne by Central Government			
1	Capital Works Cost	14447.21	4999.57	7635.09
2	Miscellaneous Items (ESMP, GAAP, CPO, Power Connection & Labour Cess)	434.71	225.56	271.55
3	Project Preparation & supervision Charges (limited to 4% max for each)	1155.78	399.966	610.808
	Total Capital Cost - Subtotal (1+2+3)	16037.70	5625.10	8517.44
4	15 Year's O & M Cost	21771.19	10918.76	13889.46
	Total Project Cost	37808.89	16543.86	22406.91
	Total			76759.66

3. Administrative Approval and Expenditure Sanction for the project is granted subjected to the conditions as per Annexure –II.
4. The period of completion of the project is 36 (Thirty Six) months from the date of this sanction, including bidding process, award of work, as per Annexure – III, and 15 years Operation & Maintenance.
5. The grantee institution i.e. 'Uttar Pradesh Rajya Ganga Nadi Sanrankshan Abhikaran', the State Programme Management Group (SPMG), is an agency of the State Government constituted with the objective of serving as the dedicated institution for effective implementation of the NGRBA programme activities at the State level, and the State is responsible in the long term for the conservation and health of the State's stretch of the river Ganga.
6. The 'Uttar Pradesh Jal Nigam' is the executing agency for the project to take up the I/ D and STP Works pertaining to pollution abatement of the River Ganga in the identified areas of Allahabad, Uttar Pradesh along river Ganga on hybrid annuity based PPP model.
7. The compliance with the observations of TPA, NMCG & World Bank will be ensured by UPJN. Further, UPJN may ensure that there are no overlaps with the works being

undertaken by GOUP and obtain necessary NOCs, including land availability, from the State required for the project before awarding the contract.

8. The project will be implemented on hybrid annuity based PPP mode.
9. Any procurement of goods, works and consultancy if required by UPJN as part of implementing the project proposal shall be made strictly as per the prevailing procurement guidelines of Govt. of India/NGRBA framework / World Bank guidelines (if applicable).
10. The project will be funded under EAP Component -World Bank assisted project (Component A of Namami Gange), subject to the NOC received from World Bank, otherwise the funding will be from National Ganga Plan. The NMCG/Government of India reserves the right to withdraw the sanction at any stage, if it is convinced that the fund has not been properly utilized or appropriate progress is not being made.
11. In case of violation of any of the conditions of the letter of award or in case of closure or dissolution of the executing agency, the Government shall take possession of all the assets of the organization acquired out of the Government funds and use them in any manner deemed appropriate or to recover from the organization the value of such assets at its discretion.
12. This AA&ES is issued based on the appraisal and sanction of the Executive Committee (EC) vide its 3rd meeting held on 11th May 2017, and under the financial powers delegated vide OM No. 1 (3)/PF.II/2001 dated 15.11.2007 amended vide OM number 24(35)/PF-II/2012 dated 29/08/2014 of the Ministry of Finance (Deptt. Of Expenditure), with the approval of Director General – National Mission for Clean Ganga and concurrence of Director (Finance) vide Dy. No. 325/ED-Finance (NMCG) dated 17.05.2017.

Yours faithfully,

(Nityananda Ray)

Deputy Secretary, SMD

Copy forwarded for information & compliance of below mentioned conditions to:-

- 1) The Chief Secretary, Government of Uttar Pradesh, Lucknow-226001.
- 2) The Managing Director, UP Jal Nigam, 6-Maharana Pratap Marg, Lucknow, 226001

Copy forwarded for information to:-

- 1) PS to Hon'ble Minister (WR, RD & GR), Shram Shakti Bhawan, N. Delhi-110001
- 2) PPS to Secretary, MoWR, RD & GR, Shram Shakti Bhawan, New Delhi-110001
- 3) PS to Director General, NMCG
- 4) Executive Director (Finance), NMCG, N. Delhi
- 5) Executive Director (Projects), NMCG, N. Delhi
- 6) Executive Director (Technical), NMCG, N. Delhi
- 7) Executive Director (Admin), NMCG, N. Delhi
- 8) NMCG Officials / Sanction Folder /Guard File/Computer Cell, MIS/ NMCG.

(Nityananda Ray)

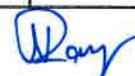
Deputy Secretary, SMD

Annexure-I

**Summary of cost of the project proposal of
"Interception, Diversion & Sewage Treatment Plants (STP) Works" For Naini (District G) &
Phaphamau (District F) in Allahabad city and Jhunsi Area District of Allahabad district
under Namami Gange Programme**

a. Naini:

Sl.No	Description of Work	₹ in Lakhs
A	Interception & Diversion Works	
1	9.525 km trunk sewer line	4552.9
2	Nala Tapping works (5 nos.)	75.61
3	Main Sewage Pumping Station (42.5/ 60.0 MLD Avg.)	1124.5
4	Rising Main from MPS to STP (900 mm, 200 m)	53
5	Mawaiya Sewage Pumping Station (33.5/ 45 MLD Avg.)	1027.41
6	Rising Main from SPS to Trunk Sewer (800 mm, 700m)	180.31
7	Mahewaghat SPS (2.5/ 3.5 MLD Avg.)	613.1
8	Rising Main from SPS to Trunk Sewer (300 mm, 950 m)	126.11
	Sub Total (A)	7752.94
B	Sewage Treatment Plant	
1	Sewage Treatment Plant (42 MLD)	5670
2	Effluent disposal arrangement (1600 mm, 1 km)	409.27
3	Installation of 1.0 MW capacity Solar Power Plant	600
4	Installation of 500 kVA capacity Micro Hydro Power Plant	15
	Sub Total (B)	6694.27
	Sub Total (A+B)	14447.21
C	Miscellaneous Items	
1	Communication & Public Outreach	45
2	GAAP	30
3	Environmental Mitigation Plan (EMP)	80
4	UPPCL Charges	135.24
5	Labour Cess @ 1%	144.47
	Sub Total (C)	434.71
	Sub Total (A+B+C)	14881.92
D	Project Preparation & Supervision	
1	Project Preparation (subject to the ceiling of 4% of A+B)	577.89
2	Project Supervision (subject to the ceiling of 4% of A+B)	577.89
	Sub Total (D)	1155.78
	Total Capital Works (A+B+C+D)	16037.70
E	15 Year's O & M Cost	21771.19
	Total Project (Naini) Cost	37808.89

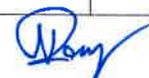


b. Phaphamau:

Sl. No	Description of Work	₹ in Lakhs
A	Interception & Diversion Works	
1	0.985 km trunk sewer line (500 – 800 mm)	371.87
2	Nala Tapping works (2 nos.)	49.95
3	Shantipuram Main Sewage Pumping Station (14.0/ 21 MLD Avg.)	1007.39
4	Rising Main from MPS to STP (500 mm, 50 m)	11
5	Basna Sewage Pumping Station (5.5/ 8.0 MLD Avg.)	716.46
6	Rising Main from SPS to 350 mm Ø Trunk Sewer (750 m)	73.2
	Sub Total (A)	2229.87
B	Sewage Treatment Plant	
1	Sewage Treatment Plant (14 MLD)	2100
2	Effluent disposal arrangement (1000 mm, 1.1 km)	362.2
3	Installation of 500 KW capacity Solar Power Plant	300
4	Installation of 2.5 KW capacity Micro Hydro Power Plant	7.5
	Sub Total (B)	2769.7
	Total (A+B)	4999.57
C	Miscellaneous Items	
1	Communication & Public Outreach	25
2	GAAP	20
3	Environmental Mitigation Plan (EMP)	40
4	UPPCL Charges	90.56
5	Labour Cess @ 1%	50
	Sub Total (C)	225.56
	Total (A+B+C)	5225.13
D	Project Preparation & Supervision	
1	Project Preparation (subject to the ceiling of 4% of A+B)	199.983
2	Project Supervision (subject to the ceiling of 4% of A+B)	199.983
	Sub Total (D)	399.966
	Grand Total Capital Works (A+B+C+D)	5625.10
E	15 Year's O & M Cost	10918.76
	Total Project (Phaphamau) Cost (A+B+C+D+E)	16543.86

c. Jhunsi:

Sl.No	Description of Work	₹ in Lakhs
A	Interception & Diversion Works	
1	2.7 km Ghat sewer line (200-800 mm)	563.81
2	Nala Tapping works (13 nos.)	266.78
3	Main Sewage Pumping Station (16/ 20 MLD Avg.)	916.61
4	Rising Main from MPS to STP (50 m, 600 mm)	13.81
5	Shastri Bridge SPS (16/ 20 MLD)	977.16
6	Rising Main from SPS (570 m, 600 mm)	142.23
7	3.198 Km Diversion Trunk Sewer (900 mm)	1762.28
	Sub Total (A)	4642.68
B	Sewage Treatment Plant	



1	Dismantling existing 1.5 MLD ADA Trivenipuram STP	30
2	Sewage Treatment Plant (16 MLD)	2400
3	Effluent disposal arrangement (2.0 km, 900 mm)	434.91
4	Installation of 200 KW capacity Solar Power Plant	120
5	Installation of 2.5 KW capacity Micro Hydro Power Plant	7.5
	Sub Total (B)	2992.41
	Sub Total (A+B)	7635.09
C	Miscellaneous Items	
1	Communication & Public Outreach	25
2	GAAP	20
3	Environmental Mitigation Plan (EMP)	40
4	UPPCL Charges for 16 MLD SPS & 16 MLD MPS	110.2
5	Labour Cess @ 1%	76.35
	Sub Total (C)	271.55
	Sub Total (A+B+C)	7906.64
D	Project Preparation & Supervision	
1	Project Preparation (subject to the ceiling of 4% of A+B)	305.404
2	Project Supervision (subject to the ceiling of 4% of A+B)	305.404
	Sub Total (D)	610.808
	Sub Total (A+B+C+D)	8517.448
E	15 Year's O & M Cost	13889.46
	Total Project (Jhusi) Cost of DPR	22406.91

Total Project Cost (Naini, Phaphamau & Jhusi) in crore rupees	767.60
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Land required for SPS has been identified and will be purchased by the State/ Allahabad Nagar Nigam at its own cost. State/ Executing Agency has kept provision of ₹ 4.2 Crores (Naini), ₹ 4.0 Crores (Phaphamau) and ₹ 2.4 Crores (Jhusi) in the DPR towards land acquisition.

Annexure-II**Conditions on Administrative Approval and Expenditure Sanction for the project on Interception, Diversion & Treatment Works" For Naini (District G) & Phaphamau (District F) in Allahabad city and Jhunsi Area of Allahabad district under Namami Gange Programme****1.0 General Conditions:**

- i. 'Uttar Pradesh Ganga Nadi Sanrakshan Abhikaran', the State Programme Management Group (SPMG), which is a registered society, shall be responsible for overall planning, management and effective implementation of the project at state level.
- ii. 'Nagar Nigam, Allahabad' i.e. 'Municipal Corporation of Allahabad' shall be the Urban Local body (ULB) responsible for ensuring commitment to ownership, commitment to reforms for sustainable O & M, and community involvement.
- iii. The Uttar Pradesh Jal Nigam (UPJN) shall be the Executing Agency (EA) of the project to be implemented under the guidance of the SPMG, in coordination and consultation with the ULB and overall monitoring of the National Mission for clean Ganga (NMCG) as per provisions laid down in the NGRBA programme framework.
- iv. The project will be executed in Hybrid Annuity based PPP model and needs to be suitably aligned with the 'Strategic Sanitation Plan'/ 'City Sanitation Plan'/ 'Master Plan' for Allahabad city. Also, synergy shall be ensured with other Central/State sponsored programme like JnNURM, UIDSSMT etc. in the city of Allahabad to avoid any overlap / duplication.
- v. The cost towards 15 years Operation and Maintenance (O & M) has been included in the project cost. However, Operation and Maintenance (O & M) of the project in Hybrid Annuity based PPP model for the period beyond 15 years will be responsibility of the State Government/ Urban Local Body. Sustainable revenue generation from beneficiaries, re-use of treated effluent and waste to energy etc. shall be encouraged.
- vi. State Government shall submit a final DPR including ESAMP in accordance with the TPA / NMCG / World Bank observation before bidding including compliance to the following:
 - a. The detailed project implementation plan, detailed design and engineering of the project shall be undertaken by UPIN based on extensive survey and investigation before execution. Disaster management concerns shall also be taken into account while executing the project.
 - b. Quotation for solar power plant needs to be obtained.
 - c. Cost breakup needs to be provided for micro hydro power plant.
 - d. Outfall drain level needs to be provided.
 - e. Bye pass arrangements need to be provided in case of any failure of STP.
 - f. Sections of gravity main and outfall channel need to be provided.
 - g. Hydraulic gradients and energy lines need to be provided for the flow in proposed sewers.
 - h. Justification of 1000 mm diameter pipe and effluent channel rate analysis needs to be submitted.
 - i. Quotation needs to be provided for STP for which per MLD cost is too high (about 21 Cr. for 14 MLD, i.e. 1.5 Cr. per MLD).



- j. BOD in the two drains is too low (Shantipuram drain BOD: 40.0 mg/L, Basna drain BOD: 36.2 mg/L). As per the GPS coordinates of the drains available in the DPR, it appears that one of the drain is a canal/river. The main issue with the water quality of drains is high Coliform. To address this issue, the tender may be called on technology neutral basis.
- k. An undertaking to be provided by UPJN that trunk sewer being proposed is not being proposed in any other scheme.
- l. It must be ensured that all foundations are above High Flood Level. Proper soil testing needs to be ensured before any construction.
- vii. State Government / Executing Agency shall comply with all the observations of TPA/ NMCG/ WB before bidding and during implementation wherever possible.
- viii. State Government / Executing Agency shall generate wastewater flow data (drain), wastewater characteristics and river water quality monitoring through actual monitoring and analysis at regular intervals (at-least monthly basis).
- ix. State Government/ Executing Agency shall appoint a Transaction Advisor in consultation with NMCG for facilitating the bidding process on Hybrid Annuity based PPP model.
- x. State Government/ Executing Agency shall follow the applicable procurement procedures (WB present guidelines if funded under WB Assisted Project).
- xi. State Government/ Executing Agency shall ensure reuse of treated water from Naini STP to Meja Thermal Power Plant of NTPC and also explore potential reuse of the treated water from other STPs as well.
- xii. All components of the project shall be completed within specified time limits and the resources and outputs and outcomes are to be ensured as envisaged in the approved project. Completion Report shall be submitted to NMCG on completion of the project.
- xiii. Any additional component relevant for project or any component require modification or deletion, may be added or modified or deleted as the case may be, only with the prior approval of the Competent Authority.
- xiv. Any project cost overrun or time overrun will be brought in the notice of NMCG. Decision of cost overrun and time overrun will be granted based upon discussion in Executive Committee (EC) of NMCG. Cost overrun, if any will be borne by the Central Government.
- xv. Staffs that may be employed for preparation, execution or operation of the project by the EA are not to be treated as employees of the SPMG/ NMCG. The deployment of such staff at the time of completion or termination of the project will not be the concern or responsibility of the SPMG/ NMCG.
- xvi. Optimal utilization of the assets relating to the project and created under Ganga Action Plan or any other Central/ State Plan shall also be ensured by the SPMG/ EA/ ULB.
- xvii. All data, records, documents and material related to the project shall be stored properly and catalogued by the SPMG/ EA for reference and retrieval including regular uploading/ disclosure/ updating of such data on website.
- xviii. The State/ SPMG/ EA shall ensure that all provisions of the RTI Act 2005 are adhered to as far as information pertaining to the project is concerned.
- xix. The State/ SPMG/ ULB shall ensure that public is informed in the State/ city of Allahabad regarding implementation of the project and soliciting their co-operation and views as applicable.
- xx. For the provisions made under IEC activities, the SPMG shall make suitable arrangements with Nagar Nigam, Allahabad for executing the 'Communication and Public Outreach'



programme under its supervision towards sensitization of people for abatement of pollution and conservation of river Ganga.

- xxi. Conditions / commitments indicated in this Approval, Executive Committee Memorandum, Minutes and other documents including those to be fulfilled before finalizing the bid document(s) shall be strictly adhered to in the project implementation and management. The SPMG will ensure fulfillment of such conditions before finalizing the bid(s) by the EA. Copies of EC Memorandum, Minutes, appraisal reports, observations and other related documents are already circulated.

2.0 The release of funds is subject to the following terms and conditions:-

2.1 Annual Plan and Procurement Plan:

- i. The Annual Plan and yearly Procurement Plan shall be prepared by the month of November every year for the next financial year as per the provisions made in the NGRBA programme framework and submitted by the SPMG to the NMCG for necessary approval and budget allocations.
- ii. The SPMG shall furnish to the NMCG annually a report of its work within three months from the closing of the respective financial year.

2.2 Financial Aspects:

- i. Funds shall be made available to the agencies strictly as per the 'Financial Management Manual (FMM)' of the NGRBA programme framework.
- ii. The SPMG/ ULB shall take all necessary legal and executive measures to ensure adequate resources available for operation & maintenance of the assets created under the Project to fulfill its mandate.
- iii. The funds released for the project shall be held in an interest earning NGRB project bank account of the SPMG (the mother account). The interest thus earned shall be credited to the project and reflected in the Interim Un-Audited Financial Reports (IUFRs) from time to time and shall be adjusted towards future funds release for the project. For any diversion of funds, the signatory of the bank account(s) shall be held responsible.
- iv. The SPMG/ EA are not permitted to seek or utilize funds for the same purpose from any other organization (Government, semi-Government, autonomous or private) without prior approval of the competent authority.
- v. The sanctioned amount should be spent exclusively thereon as per the scope of the project and within the stipulated time. For carrying forward any work(s)/ activities beyond the specified time limit prior approval of the NMCG should be obtained.
- vi. It is the responsibility of the SPMG/ EA/ ULB to ensure that the assets are exclusively used for the purpose for which the grant is sanctioned and to maintain the assets and their records properly.
- vii. All the assets acquired/created out of the grants shall not be disposed of, encumbered, or utilized for any purpose other than that for which sanctioned without prior approval of the Government.



2.3 Audit:

- i. The Comptroller & Auditor General of India (the External Auditor) at his discretion shall have the right of access to the project related books and accounts of the SPMG/ EA for the purpose of Audit.
- ii. The books of accounts of the grantee, relating to this grant, shall be open to Audit by the Internal Auditor of the SPMG and the External Auditor.
- iii. The overall auditing arrangements to cover both periodical internal and annual external audit of project shall be ensured as per the 'Financial Management Manual (FMM)' of the NGRBA programme framework.

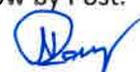
2.4 Flow of Funds:

The fund releases by the NMCG shall be remitted by Electronic transfer to the SPMG account. The fund shall flow from the SPMG account to a separate sub-project specific zero balance bank account (the 'child account') of the EA in the same bank of SPMG. The following details may be kept updated from time to time to enable electronic remittance:-

- i. Bank account details of EA, both in figures and words, to SPMG.
- ii. Bank account details of EA and SPMG both in figures and words to NMCG.
- iii. MICR Code and IFSC Code of the Bank Branch (es).
- iv. Necessary authorization by the SPMG to its Bank to receive the remittances on its behalf and to issue necessary bank receipt to the NMCG's bank for receipt of funds.
- v. Necessary authorization by the EA to its bank and under such authorisation, to issue payment instruction to pay contractors / suppliers / service providers for undertaking project activities.
- vi. The NMCG Bank will transfer funds from the NMCG's account to the SPMG account on submission of Interim Un-Audited Financial Report (IUFR) and other documents/ information as prescribed in the Financial Management Manual (FMM), of the NGRBA programme framework.
- vii. The SPMG Bank will transfer funds from the SPMG's account (mother account) to the child account of EA as soon as payment instruction is issued by the EA to its banker for transfer funds to contractors / suppliers / service providers account on the same date through 'Real Time Gross Settlement (RTGS)' and thus at the end of any given day, the EA child account will always have a zero balance.

2.5 Submission of Monthly and Quarterly Physical Progress Report (MPPR / QPPR):

- i. The Monthly Physical Progress Reports (MPPRs) shall be submitted by the 5th day of every month regularly by the EA to the SPMG and by the 10th day of every month regularly by the SPMG to the NMCG. The Quarterly Physical Progress Reports (QPPRs) shall be submitted to the Uttar Pradesh State Ganga River Conservation Authority' and NMCG within 30 days from the end of each quarter.
- ii. The MPPRs in standard format, to be developed by the EA in consultation with SPMG, shall be signed by at least two designated officers of the EA, one of whom will be Chief Project Coordinator, UPJN and also by at least two designated officers of the SPMG, one of whom will be the Programme/ Project Director.
- iii. The signing officers will indicate her/ his name and designation in full in capital letters and affix official seal under the signature. While MPPR submitted by fax will be acceptable for commencement of processing the case, ink-signed MPPR must follow by Post.



- v. Consistency between physical progress and expenditure shall be maintained and reasons for substantial variations i.e., more than 10% shall be appropriately explained against each item.

2.6 Submission of Accounting and Financial Reports (AFR) by the EA:

- i. The EA shall furnish monthly 'Accounting and Financial reports (AFRs)' by the 10th day of every month with all relevant documents and materials as per the 'Financial Management Manual (FMM)' of the NGRBA programme framework after commencement of the project to the SPMG and by the 20th day of every month regularly by the SPMG to the NMCG.
- ii. The 'Accounting and Financial Report (AFR)' in standard format, to be developed by the EA in consultation with SPMG, shall be signed and stamped by the Head of the Accounts Department and Head of the Organization, UPJN.
- iii. The name and designation of the officers signing the AFR shall be clearly mentioned in full and in capital letters. While AFR submitted by fax will be acceptable for commencement of processing the case, ink-signed AFR must follow by Post.
- iv. As part of the AFR, the EA shall submit the followings to the SPMG:
 - v. Invoices of suppliers/ contractors against which online payment instructions issued by the EA in the previous month.
 - vi. A list of invoices received and not paid during the previous month.
 - vii. A list of contracts signed during the previous month.

2.7 Submission of Utilisation Certificates (UCs):

- i. The quarterly Utilisation Certificates (UCs) in the prescribed format (GFR 19A & 19B) shall be furnished by the EA to the SPMG in respect of grant-in-aid received during the various quarters within 30 days from the end of quarter, duly signed and stamped by the Head of the Organisation, Head of the Accounts Department and field level functionary at executive engineer level / Principal Investigator, as applicable.
- ii. The SPMG shall submit quarterly UCs, duly countersigned and stamped by the Head of the SPMG and the State authorities within 15 days on receipt of the same from the EA.

2.8 Inspection and Monitoring:

- i. The 'Uttar Pradesh State Ganga River Conservation Authority' and its Standing Executive Committee shall ensure close monitoring and evaluation of progress of the project, and also monitor implementation performance of the EA.
- ii. The SPMG shall ensure appointment of agency (ies) for third party inspection (TPI)/ evaluation of the project strictly as per letter No. A-12012/2/2010-NRCD-II dated 1^{6th} September, 2010. The EA through the SPMG shall submit copies of the TPI Reports along with their responses/comments to the NMCG. Releases of funds will be subject to compliance of TPI reports.
- iii. City level Citizen's Monitoring Committees (CMC) shall be constituted in the Allahabad city to serve as a transparency mechanism on flow of project / programme related information to citizens and key stakeholders and to garner their feedback on project / programme processes, as described in the NGRBA programme framework. Social audit will be conducted by the CMC as per the provisions of the NGRBA programme framework.

- v. NMCG may depute any person to visit the SPMG/ EA for the purpose of monitoring its work and accounts of the SPMG. Full co-operation shall be provided by the EA to the persons deputed for inspection.
- v. Time and cost overrun leading to delay in implementation of projects is viewed with serious concern by the Central Government and as per instructions contained in Cabinet Secretary's D.O. letter No. 261/1/10/2000-Cabinet, dated June 4, 2001 read with Planning Commission's D.O. letter No. O-14015/2/98-PAMD, dated 19.08.1998 (kindly visit NGRBA website/ 'Project Monitoring' for details), mandatory review of the project must be carried out from time to time so as to assess the expenditure trend and time schedule of the project and appropriate action against those responsible for delay shall be taken, in accordance with the instructions.
- vi. The Director General, NMCG may monitor overall progress of project periodically from time to time.



