

## Executive Summary

Solid Waste Management (SWM) is an organized process of segregation, collection, storage, transportation, processing and disposal of solid waste in an environmentally sustainable manner. Today SWM is an aggravating problem in urban areas leading to different kinds of environmental problems and adverse social impacts within urban areas.

The various waste management rules which were framed during 2016 under the Environment (Protection) Act, 1986 provide a legal framework for disposal and management of waste. Guidelines for preparation of comprehensive plan for the prevention, control or abatement of pollution by using scientific waste management have been issued by Government of India from time to time.

The Performance Audit of Solid Waste Management in Urban Areas covering the period from April 2016 to March 2022 was conducted to assess the efficiency and effectiveness of solid waste management in Uttar Pradesh. The major audit findings are given in the following paragraphs:

The State policy, which should have been prepared within one year from the date of notification (April 2016) of the SWM Rules, 2016 was actually prepared in June 2018. Further, SWM plan was prepared in only three out of 45 test-checked Urban Local Bodies (ULBs). SWM related bye-laws were framed in only 12 ULBs out of 45 test-checked ULBs. The bye-laws framed by these ULBs lacked uniformity. The ULBs had also reported similar figures for solid waste generation over multiple years raising concerns about the reliability of the data provided. State Government neither issued operational guidelines for waste pickers nor initiated the scheme for their registration. The shortage of sanitary workers was addressed in 35 test-checked ULBs through outsourcing, in remaining test checked (seven) ULBs shortage remained even after outsourcing of sanitary workers. Besides, there was shortage of supervisory staff in test-checked ULBs.

Awareness (IEC&PA) activities were conducted through wall painting and hoardings. Moreover, IEC&PA activities through social media and mass communication were also adopted in four and two test-checked ULBs respectively. Against proposed 112 training programmes for capacity building of human resources in ULBs, only 53 training programs were organised due to delay in administrative approval by the State Government and inadequate funding.

During 2016-22, percentage of fund released to ULBs vis-a-vis available fund under SWM component ranged between zero and 63 *per cent*. Further, this percentage was zero to 20 *per cent* and three to 62 *per cent* respectively in Capacity Building and Administrative & Office Expenses (CB & AOE) and IEC&PA components, leaving a substantial unutilised balance during all years of the audit period at the level of State Mission Director (SMD), Swachh Bharat Mission (SBM) (Urban). Moreover, State Government had released funds to the SMD with a delay ranging from 55 to 236 days and 11 to 1,098 days under SWM and CB & AOE

components respectively during the period 2017-21. Test-checked ULBs utilised SBM (Urban) fund under SWM, CB &AOE and IEC which ranged from zero to 25 *per cent*, 17 to 60 *per cent* and 36 to 55 *per cent* respectively during the years 2016-22.

Test-checked ULBs were collecting and transporting mixed waste to the plant, landfill or dumpsite. No instances of source segregation were found during the public survey of households in the test-checked ULBs. Waste deposition centres for domestic hazardous waste (DHW) were not set up in any of the test-checked ULBs. Material Recovery Facility (MRF) centres for sorting of recyclable material from solid waste could not be made functional in 38 test-checked ULBs despite the passage of more than three years since the release of fund. Further, 89 *per cent* test-checked ULBs did not have weighbridge facilities for weighing of waste. Only 67 *per cent* tippers had partitions for the collection of segregated waste. Inadequate coverage of households (HHs) under door-to-door collection (DTDC) was noticed in test-checked ULBs. Due to erroneous gap analysis at SMD level during the year 2019-20, excess provision for tricycles and LCV/mini tippers was made in seven test-checked ULBs.

Range of waste processed against waste collected during 2016-22 at the State level and at test-checked ULBs level was 26 to 71 *per cent* and zero to 63 *per cent* respectively. Against 32 solid waste processing plants sanctioned under various schemes during 2005-15, only 20 plants were established by the executive agency of which only 15 plants were operational. Further, 36 processing plants were sanctioned under SBM (Urban) scheme in 2021-22. Of these, the civil work of 19 plants was completed. However, these could not be made functional due to non-release of fund for the purchase of machinery. In remaining 17 plants, civil work was not completed (July 2023). Land allocated for SWM was deficient as per norms in 36 ULBs. Estimation of legacy waste was completed in 72 out of 651 ULBs revealing a total of 84,57,782 metric tons of legacy waste dumped. However, the quantity of legacy waste in the remaining 579 ULBs was not assessed.

State Level Advisory Body was formed in January 2017 to review the implementation of SWM Rules, 2016 and only six out of 10 prescribed meetings were held during 2017-22. UPPCB prepared annual report with deficient details/information, which resulted in the unavailability of the required data on the category wise quantity of bio-medical waste, viz., yellow, red, white and blue and the details of treatment and disposal methods (such as incineration, autoclave, etc.). Significant number of occupiers handling bio-medical waste ranging from 17 to 43 *percent* in the State, were operating without proper authorization. The existing capacity for disposal of plastic waste was 722.50 tonnes per day (TPD) against estimated generation of 1,030 TPD plastic waste in the State during 2020-21. UPPCB did not receive any application for authorization for construction and demolition (C&D) waste processing facility during 2016-21. Test-checked ULBs, except Nagar Nigam Ghaziabad and Nagar Nigam Lucknow, failed to manage the disposal of C&D waste.

### **Recommendations**

- *The State Government needs to devise better information systems on generation, collection and processing of solid waste to assist ULBs in preparation of SWM plans for effective waste management.*
- *The State Government should ensure that bye-laws incorporating the provisions of SWM Rules, 2016 are framed and implemented by ULBs in a time bound manner.*
- *The State Government should ensure proper utilisation of funds for Information, Education & Communication and Public Awareness (IEC&PA) activities to effectively sensitize citizens for behavioural changes in managing solid wastes.*
- *Funds earmarked by the State Government for SWM projects should be released to ULBs within the stipulated time and it should be ensured that the funds do not remain parked with the State Government.*
- *The State Government should encourage segregation of waste at source by devising a system for incentivising waste generators and collectors for segregation of waste and should prevent mixing of segregated waste during various stages of SWM through strict monitoring and implementation regime.*
- *Use of Material Recovery Facility centres should be ensured with proper functioning and weighbridge facilities.*
- *The State Government should ensure that there is proper arrangement for door-to-door collection of solid waste and all the households in the ULBs are covered by door-to-door collection services.*
- *The State Government should ensure scientific disposal of the solid waste generated regularly and legacy waste dumped in the ULBs at the earliest.*
- *The State Government should ensure the operation of solid waste processing plants sanctioned to various ULBs under the various schemes.*
- *The State Government should ensure proper collection, transportation and processing/disposal of bio-medical waste, e-waste, plastic waste and C&D waste. They should also ensure proper implementation of the respective Waste Management Rules in ULBs.*
- *The State Government should ensure that the prescribed monitoring meetings are conducted and issues raised in State/District level meetings should be implemented effectively.*