GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
RAJYA SABHA
STARRED QUESTION NO. 317
ANSWERED ON 23/03/2026

URBAN FLOODING AND WATER CONSERVATION STRATEGIES

***317. SHRI UJJWAL DEORAO NIKAM:**

Will the Minister of HOUSING AND URBAN AFFAIRS be pleased to state:

(a) the specific steps taken by Government to reduce or prevent the recurring issues of urban flooding and water logging in major cities;

(b) the manner in which Government plans to conserve and augment groundwater resources through its existing urban development schemes;

(c) whether Government has formulated a long-term plan to address the discharge of untreated sewage into water bodies;

(d) if so, the details thereof; and

(e) the manner in which water quality assessment is being conducted under the AMRUT mission across various States, the details thereof?

ANSWER

THE MINISTER OF HOUSING AND URBAN AFFAIRS
(SHRI MANOHAR LAL)

(a) to (e): A Statement is laid in the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PART (a) TO (e) OF STARRED QUESTION NO. 317 DUE FOR ANSWER IN THE RAJYA SABHA ON 23 MARCH, 2026 REGARDING "URBAN FLOODING AND WATER CONSERVATION STRATEGIES"

(a): Water and Sanitation is State subject and Management of urban flooding falls under the purview of the State Governments and the Urban Local Bodies (ULBs)/ Urban Development Authorities, who are responsible for maintaining the drainage and sewerage system. Government of India supplements the efforts of the States through schematic interventions/ advisories. It provides financial and technical support to the States to strengthen Urban Planning ecosystem.

Usually, increased incidence of high intensity rainfall in short duration is mainly responsible for urban floods, which is further compounded by unplanned growth, encroachment of natural water bodies, inadequate sewer systems, inadequate rainwater drainage systems, encroachments, etc.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) launched in the year 2015, inter alia, has a component on storm water drainage, which involved construction and improvement of drains/ storm water drains in order to reduce and eliminate flooding and creating green spaces and parks. Under AMRUT, 838 Storm Water Drainage projects worth ₹3017.13 crore have been taken up and 3,798 water logging points have been eliminated so far.

Further, 2,522 green spaces and park projects worth ₹1,604.13 crore have been taken up by the States/UTs under AMRUT and 5,286 acres of permeable green space area have been developed so far through these projects.

Under AMRUT 2.0, projects for green spaces and parks and rejuvenation of water bodies are taken up by the States. Under AMRUT 2.0, proposals of the States/ UTs for 2,991 water body rejuvenation projects worth ₹6,083.32 crore covering around 1,21,800 acres of area and 1,665 green spaces and park projects worth ₹1,103.71 crore covering 13,893.82 acre, have been approved.

Besides, under AMRUT and AMRUT 2.0 sewerage and septage management projects have been undertaken, which inter alia help in evacuation of storm water. Under AMRUT, as updated by State/UTs on AMRUT portal, 889 sewerage/septage management projects have been grounded, which has led to creation of 22,477 km length of sewer network. Under AMRUT 2.0, the State/UTs have taken up 584 Sewerage and Septage Management projects covering 34,559 KM of sewer network.

The Ministry of Housing & Urban Affairs (MoHUA) has published the following documents/advisory guidelines for improving urban drainage and flood management:

i. Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2014 (https://mohua.gov.in/upload/uploadfiles/files/URDPFI%20Guidelines%20_Vol%20I(2).pdf)

ii. Standard Operating Procedure (SOP) for Urban Flooding (https://mohua.gov.in/upload/uploadfiles/files/SOP%20Urban%20flooding_5%20May%202017.pdf)

iii. River Centric Urban Planning Guidelines in 2021 to enable cities in the development of conjunctive water management approaches including nature-based solution (https://mohua.gov.in/upload/uploadfiles/files/RCUP%20Guidelines.pdf)

iv. Guidance Document on Creation of Rain Water Harvesting Parks (https://mohua.gov.in/pdf/6566e1048ab41guidance-document-on-rainwater-harvesting-parks-final.pdf)

v. Manual on Storm Water Drainage System (https://mohua.gov.in/publication/manual-on-storm-water-drainage-systems--2019.php)

The Government has launched the Urban Flood Risk Management Programme (UFRMP) under the National Disaster Mitigation Fund (NDMF) in 2021. This initiative specifically targets seven major metropolitan cities namely, Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad, Ahmedabad, and Pune, with a total allocation of ₹2,500 crore. The UFRMP Phase II, with a budget of ₹2,200 crores, targets flood risk mitigation in eleven cities (Tier-II cities) namely, Guwahati, Patna, Kanpur, Trivandrum, Visakhapatnam, Bhubaneswar, Bhopal, Jaipur, Indore, Lucknow, and Raipur with an allocation of Rs. 222.22 crore each [INR 200 Cr from NDMF (90%) and INR 22.22 Cr from State share (10%)] to assess flood risks, develop preparedness plans, establish multi-hazard frameworks, and enhance community resilience.

(b): AMRUT/ AMRUT 2.0 promotes source sustainability, aquifer recharge, and scientific groundwater management. AMRUT 2.0 advocates preparation of Aquifer Management Plan by the States/ UTs, which focuses on maintaining positive groundwater balance in urban aquifer systems.

Rejuvenation of water bodies to augment water sources is one of the main components of AMRUT 2.0. The admissible elements under this include strengthening/ rejuvenation of aquifers/ community wells, harvesting the rainwater through storm water drains into water body (which is not receiving sewage/ effluent), etc. Under AMRUT 2.0, 2,991 water body rejuvenation projects worth ₹6,083.32 crore covering around 1,21,800 acres of area have been approved.

490 water supply schemes in AMRUT cities are drawing 6,700 MLD of surface water under AMRUT thereby preventing groundwater extraction.

Shallow Aquifer Management (SAM) initiative under AMRUT 2.0 was launched as a pilot project across 9 diverse Indian cities. The initiative aimed to demonstrate the effectiveness of strategic interventions in managing shallow aquifers, focusing on aquifer mapping, construction and restoration of recharge structures, and integration of groundwater management into urban planning frameworks. Under SAM 2.0, 75 additional cities have been covered.

Under AMRUT 2.0 Reforms, Municipal Corporation and Urban Local Bodies are incentivized for creating artificial recharge and storage structures under the Jal Sanchay Jan Bhagidari (JSJB) initiative launched under National Water Mission's Jal Shakti Abhiyan: Catch the Rain. Under this initiative, there is provision for incentive of ₹2 crore each for the top 10 Municipal Corporations, ₹1 crore each for the next 10 Municipal Corporations and ₹0.40 crore each for the 50 ULBs (other than Municipal Corporations). The incentive amount can be utilized by Municipal Corporation/ ULBs for water conservation structures and water conservation awareness activities, including capacity building of stakeholders.

(c) & (d): AMRUT 2.0 has been envisaged to promote circular economy of water through development of city water balance plan for each city focusing on recycle/ reuse of treated sewage, rejuvenation of water bodies and water conservation.

Under AMRUT, States/ UTs have taken up 889 sewerage / septage management projects worth ₹34,471.1 crore. A total of 5,178 MLD of STP capacity has been created under AMRUT projects of which 1,437 MLD capacity has been developed for recycle/reuse. Under AMRUT 2.0, the State Water Action Plans (SWAPs) comprising of 584 sewerage/ septage management projects with a total cost of ₹65,624.98 crore have been approved so far, covering 6,649 MLD sewage treatment plant capacity of which around 1932 MLD is for recycle/reuse.

Through AMRUT/ AMRUT 2.0 and in convergence with the States, 182 lakh sewer connections (including households covered through Fecal Sludge and Septage Management) have been provided in AMRUT Cities, thus mitigating the sewerage flow into the water bodies.

Further, "Jal Hi AMRIT" initiative has been launched under AMRUT 2.0 reforms, which aims to incentivize States and Union Territories (UTs) to efficiently manage sewage treatment plants for recyclable treated water meeting environmental standards on sustained basis. The focus of this initiative is building capacity and incentivizing qualitative improvements in the treated discharge effluent. To institutionalize circularity, Water Resource Recovery Cells (WRRCs) have been established in 25 States/ Union Territories under this initiative to plan, monitor, and scale resource recovery interventions.

Swachh Bharat Mission – Urban (SBM-U) 2.0 launched on 1st, October, 2021 includes a new component 'Used Water management (UWM)'. Under UWM component, financial assistance is provided to the Urban Local Bodies (ULBs) with population less than 1 Lakh for setting up of STPs/ STP-cum-FSTP and laying Interception and Diversion (I&D) structures including provision of pumping stations and pumping main/gravity main upto STP, to ensure that all used water is safely collected, treated and reused to feasible extent. Under SBM, 10,877 MLD sewerage treatment capacity has been approved.

(e): Management and maintaining the quality of water as per the applicable standards in urban areas is also the responsibility of State Government/ Urban Local Bodies (ULBs).

To ensure safe drinking water supply to the urban households, AMRUT/AMRUT 2.0 supports, rehabilitation and upgradation of water supply network and creation/augmentation of Water Treatment Plants (WTPs) plants. Under AMRUT/ AMRUT2.0, a total of 93,457.51 km of water pipeline network has been laid/ replaced. So far, 6140 Million Litre per Day (MLD) of WTP capacity has been approved under AMRUT, of which, 5,429 MLD WTP capacity has been created. Under AMRUT 2.0, 11,395 MLD WTP capacity has been approved so far. These treatment plants are generally equipped with inhouse lab facilities or have tie up with the Labs for regular water quality testing.

Further, AMRUT 2.0 Mission promotes 24x7 water supply with quality assurance, Drink from Tap (DfT) quality water in selected District Metered Areas (DMAs)/wards, online water quality monitoring, sensors and Supervisory Control and Data Acquisition (SCADA), community participation, especially Women Self Help Groups (SHGs), in water quality testing.

407 projects with 1,153 DMAs benefitting 16.72 lakh Households have been approved in 348 ULBs under AMRUT 2.0. 258 water supply schemes have smart monitoring systems such as SCADA system under AMRUT, and 1,422 water supply projects under AMRUT 2.0 has provision for SCADA system.

Under AMRUT Mitra initiative, women Self Help Groups are engaged for water quality testing in the field by the ULBs.

Drinking water quality arrangement in urban areas is governed by standards and guidelines issued by the Bureau of Indian Standards (BIS) primarily IS 10500: Drinking Water - Specification. The Ministry has published Manual on Water Supply and Treatment Systems (Drink from Tap) in March 2024 (https://mohua.gov.in/publication/manual-on-water-supply-and-treatment-systems---drink-from-tap---march-2024.php), for reference by the States/ ULBs for designing and implementation of the water supply projects. Details of the sanitary survey and the methodology to carry out water quality testing have been explained in Section 7.9 of Chapter 7: "Water Quality Testing and Laboratory Facilities" in Part A of this manual.

The Ministry has also issued an advisory in November, 2024 to formulate a Water Quality Monitoring strategy at the State or City level. The advisory "Strengthening Water Quality Monitoring in Cities through Community Participation" (https://amrut.mohua.gov.in/assets/Water-Quality-Monitoring-WQMIS-Advisory-Final.pdf) aims to strengthen the institutional capacity for citywide monitoring of drinking water quality in urban areas along with Digital Display Boards for water quality parameters for public information & awareness.

ULBs/ Parastatal conduct testing of water at Water Treatment Plants (WTPs) and household levels as per applicable norms. As reported by the States/UTs on the AMRUT 2.0 platform during the period from 1st January, 2024 to 31st December, 2024, a total of 3,32,170 water quality samples out of 3,35,278 samples tested at WTPs and 22,18,838 samples out of 22,45,200 samples tested at the household level were found compliant for the parameters E. coli, Arsenic and Fluoride.

*****