

**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
RAJYA SABHA
UNSTARRED QUESTION NO. 1651
ANSWERED ON 03/08/2026**

URBAN FLOODING IN INDIAN CITIES

1651. DR. MEDHA VISHRAM KULKARNI:

Will the Minister of *Housing and Urban Affairs* be pleased to state:

- (a) whether Government has assessed the increasing incidence of urban flooding in major cities caused by inadequate storm-water drainage, encroachment of water bodies, unplanned urbanisation and extreme rainfall events and if so, the details thereof;
- (b) the number of cities identified as highly vulnerable to urban flooding, State-wise; whether any city-wise assessment has been made of economic losses, infrastructure damage and disruption of public services during the last five years; and
- (c) the measures taken, funds allocated and progress achieved in restoring water bodies, strengthening drainage networks, promoting flood-resilient urban planning and implementing early warning systems to mitigate urban flooding?

ANSWER

**THE MINISTER OF STATE IN THE MINISTRY OF HOUSING AND URBAN AFFAIRS
(SHRI TOKHAN SAHU)**

(a) and (b): 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.

The drainage systems in most Indian cities are designed based on average rainfall pattern in a city over previous decades. In case, rainfall records are not available, rainfall intensity is usually adopted in the range of 12 mm/hr – 20 mm/hr. The intensity of rainfall varies from city to city and designing of storm water drainage needs a city-specific approach. 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, etc.

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Ministry of Housing and Urban Affairs (MoHUA) has not conducted any specific study to assess the economic losses, infrastructure damage and disruption of public services caused by urban floods, city-wise.

(c): 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://www.mohua.gov.in/static/uploads/2025/10/1813403503fbec280e7648c0ae692512.pdf>) & (<https://www.mohua.gov.in/static/uploads/2025/10/dd392b7781e668614ae0446cfd114bc6.pdf>)

(ii) Manual on Storm Water Drainage System (<https://www.mohua.gov.in/static/uploads/2025/10/8a2456c722036d78c72a698898ef846d.pdf>)

(iii) Standard Operating Procedure (SOP) for Urban Flooding (<https://www.mohua.gov.in/static/uploads/2025/11/580e35ec9fae474aaa96bec087e76553.pdf>)

(iv) River Centric Urban Planning Guidelines in 2021 to enable cities in the development of conjunctive water management approaches including nature-based solution

(<https://www.mohua.gov.in/static/uploads/2025/10/eb2bdfc0d54766fbbc52e56fe77ca687.pdf>)

(v) Guidance Document on Creation of Rain Water Harvesting Parks (<https://www.mohua.gov.in/static/uploads/2025/10/b0b5705fe04d5c0c9c33187aeef85823.pdf>)

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 ₹3022.39 crore have been grounded by the States/Union Territories (UTs) of which 824 Storm Water Drainage projects worth ₹2,530.69 crore have been completed. Further, 2,522 green spaces and park projects worth ₹1,604.13 crore have been grounded by the States/UTs under AMRUT and 5,400 acres of permeable green space area have been developed 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, States/ UTs have taken up 2,951 water body rejuvenation projects worth ₹6,003.34 crore covering around 1.21 lakh acres of area of which 1,095 projects worth ₹1,053.14 crore have been completed. 1,649 green spaces and park projects worth ₹1,087.12 crore covering around 12,750 acre have been taken up by the States/ UTs, of which 946 projects worth ₹353.44 crore have been completed.

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, 888 sewerage/septage management projects worth ₹34,471.71 crore have been grounded. Similarly under AMRUT 2.0, the State/UTs have taken up 605 Sewerage and Septage Management projects worth ₹71,133.01 crore. Under AMRUT/ AMRUT 2.0, a total of 28,589 km of sewer network has been laid.

The National Disaster Management Authority (NDMA) is the nodal authority for implementation of the Urban Flood Risk Management Programme (UFRMP). Based on the recommendations of the XV Finance Commission, an amount of ₹2,500 crore has been earmarked under the National Disaster Mitigation Fund (NDMF) for UFRMP for the period 2021–26. The programme extends to phase – II that has an allocation of a total amount of ₹2444.42 crore

- Phase I (Most Flood-Prone Metro Cities): The programme covers seven cities. An allocation of ₹500 crore each has been earmarked for Mumbai, Chennai, and Kolkata, while ₹250 crore each has been allocated to Bengaluru, Hyderabad, Pune, and Ahmedabad.
- Phase II (Tier-II Cities): The programme extends to eleven additional cities: Guwahati, Patna, Kanpur, Trivandrum, Vishakhapatnam, Bhubaneswar, Bhopal, Jaipur, Indore, Lucknow, and Raipur with a sum of ₹222.22 crores to each city.

The programme comprehensively aims to strengthen flood resilience through coordinated urban planning, improved drainage infrastructure, and targeted structural and non-structural flood mitigation interventions.

In the Urban Flood Risk Management Programme (UFRMP) Phase I, a total of ₹2500 crore was earmarked from NDMF for seven major metropolitan cities. The D/o Expenditure has released the first instalment (except Chennai who got their 2nd instalment), to all seven cities. In October 2025, the High-Level Committee (HLC) approved phase II of Urban Flood Risk Management Programme (UFRMP) for 11 additional cities with a total outlay of ₹2200 crores. Number of projects sanctioned, NDMF/State share, and funds released are as under:

City	Mitigation Measures	NDMF share (in Cr. ₹)	State share (in Cr. ₹)	Total Budget (in Cr. ₹)	Released (NDMF share) (in Cr. ₹)
Phase - I					
Mumbai (Maharashtra)	6	500	207.71	707.71	150
Pune (Maharashtra)	9	250	36.69	286.69	75
Hyderabad (Telengana)	4	250	69.53	319.53	75
Kolkata (West Bengal)	6	500	150.43	650.43	150
Bengaluru (Karnataka)	12	238.72	36.28	275	71.616
Ahmedabad (Gujarat)	6	243.90	31.10	275	73.17
Chennai (Tamil Nadu)	5	500	61.29	561.29	331.5
Total	48	2482.62	593.03	3075.65	926.286
Phase - II					
Guwahati (Assam)	8	180	20	200	54