

**GOVERNMENT OF INDIA
MINISTRY OF HOUSING AND URBAN AFFAIRS
RAJYA SABHA
STARRED QUESTION NO. 11
ANSWERED ON 20/07/2026**

MITIGATING THE URBAN HEAT ISLAND EFFECT IN INDIAN CITIES

***11. MS. SWATI MALIWAL:**

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

- (a) whether Government has undertaken any assessment of urban heat stress in major cities, including the National Capital Territory of Delhi and the key findings thereof;
- (b) the details of the measures being taken to incorporate urban heat island mitigation strategies, including cool roofs, enhanced green cover, shaded public spaces and other climate-resilient infrastructure, into urban planning and building frameworks under centrally sponsored schemes and;
- (c) whether Government proposes to further strengthen and promote city-level heat resilience plans, including ward-level implementation, to enhance protection for vulnerable groups such as construction workers, street vendors and the details thereof?

ANSWER

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

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

STATEMENT REFERRED TO IN REPLY TO PART (a) TO (c) OF STARRED QUESTION NO. *11 DUE FOR ANSWER IN THE RAJYA SABHA ON 20 JULY, 2026 REGARDING “MITIGATING THE URBAN HEAT ISLAND EFFECT IN INDIAN CITIES”

(a) to (c) As per the 12th Schedule of the Constitution of India, urban planning falls within the purview of the State Governments and Urban Local Bodies (ULBs)/Urban Development Authorities at the city level. Government of India supplements the efforts of States through schematic interventions, advisories, guidelines, financial assistance and technical support for strengthening the urban planning ecosystem.

As per inputs received, National Disaster Management Authority (NDMA) has formulated 'National Guidelines for Preparation of Action Plan-Prevention and Management of Heat Wave' in 2019. As per the guidelines, cities should carry out vulnerable assessments to identify major factors contributing to urban heat island effect and include suitable mitigation measures in their Heat Action Plans (HAPs). Heat Action Plans (HAPs) have been prepared by 23 states, 195 districts and 64 cities.

Further, National Disaster Management Authority's Advisory has issued an advisory on “Protecting Informal Workers during Heatwaves in Indian Cities”. The Advisory outlines measures relating to health, safety and gender-sensitive adaptation. States and Union Territories have been recommended to incorporate the needs of street vendors and other outdoor workers into Heat Action Plans through measures such as shaded vending zones, hydration facilities, cooling centers, flexible working hours and timely dissemination of heat alerts.

- https://ndma.gov.in/sites/default/files/PDF/Reports/NDMA_Advisory_for_Protecting_Informal_Workers_during_Heatwave.pdf

As reported by NCT of Delhi, as part of the revision of the Delhi State Action Plan on Climate Change (SAPCC 2.0), a comprehensive climate vulnerability assessment has been undertaken using IMD data (1991-2020) and Intergovernmental Panel on Climate Change (IPCC) AR6 climate scenarios. The assessment identified increasing heat waves and rising temperatures as one of the two major climate vulnerability hotspots for Delhi. The study projects a rise in summer maximum temperatures by about 1.5°C under SSP (Socio-Economic Pathways) 2-4.5 and up to 2.1°C under SSP 5-8.5 by mid-century, along with an increase in the frequency of very hot days. South Delhi

has been identified as the most climate-vulnerable district, while New Delhi is the least vulnerable. The assessment further recognizes urban heat stress as a significant risk to public health, infrastructure, and livelihoods. The revised Delhi SAPCC incorporates several measures to mitigate Urban Heat Island (UHI) effects and improve urban climate resilience. It includes installation of cool roofs in buildings, development of cooling corridors and expansion of urban green infrastructure, integration of UHI management into urban planning and infrastructure development, promotion of eco-friendly redevelopment of public infrastructure and strengthening storm-water drainage, restoration of wetlands and urban waterbodies, and flood-resilient infrastructure to improve climate resilience. It envisages strengthening city-level heat resilience through implementation of the Delhi Heat Action Plan, including early heat warning systems, vulnerability assessment and mapping, public awareness, capacity building, protection of vulnerable groups, promotion of cool roofs, urban green spaces and other climate-resilient infrastructure and strengthened heat-health surveillance and emergency response systems.

As per inputs from Ministry of Environment, Forests and Climate Change (MoEFCC), the India Cooling Action Plan (ICAP) released by MoEFCC, provides an integrated vision for sustainable cooling across sectors with the overarching goal of providing sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits. The Plan seeks to reduce cooling demand, improve energy efficiency and promote better technology option which contribute towards enhancing climate resilience.

MoHUA has issued various advisories and guidelines to States and cities for promoting compact and green urban development, green infrastructure and climate-responsive urban planning. These include:

- i. Urban Green Guidelines, 2014
<https://www.mohua.gov.in/static/uploads/2025/11/689e6289b1b686d234805891a3c82ace.pdf>
- ii. Urban and Regional Development Plans Formulation and Implementation Guidelines, 2014
<https://www.mohua.gov.in/static/uploads/2025/10/1813403503fbec280e7648c0ae692512.pdf>

The Urban and Regional Development Plans Formulation and Implementation Guidelines provide for green-city planning components and micro-climate-responsive measures, including orientation of streets and buildings, creation and conservation of water bodies, provision of open spaces and vegetation, semi-pervious ground cover, green buildings, solar-responsive design and promotion of green roofs.

Various schematic interventions for urban heat mitigation have been carried under AMRUT and AMRUT 2.0. 4,171 park projects covering 18,168 acres have been approved, of which 3,458 parks covering 11,119 acres have been developed. Further, 2,960 waterbody projects covering approximately 1.21 lakh acres have been approved, of which 1,104 projects covering 18,535 acres have been completed. Also, 346 green mobility projects have been completed (473 kms of pedestrian/walkways/cycling tracks) and 99 lakh LED streetlights have been installed that has lead to 665 Cr kWh annual savings and 46 lakh tonnes CO₂ reduction.

Additionally, 7.65 lakh saplings have been planted under the *AMRUT MITRA* “Women for Trees” in 2025-26. Such measures contribute to enhancement of urban green cover, improvement of local microclimates and reduction of heat stress.

Under AMRUT 2.0, a pilot has been started “Building Heat Resilient Cities: A Strategic Pilot for Urban India” programme, for scientific assessment of urban heat mitigation in 12 cities, namely Bengaluru, Bhopal, Dehradun, Ghaziabad, Gwalior, Gurugram, Guwahati, Jodhpur, Ludhiana, Nashik, Vadodara and Visakhapatnam. The assessment identifies the principal drivers of urban heat stress, map priority heat-vulnerable areas and provide city-specific recommendations for urban greening, water-sensitive planning, passive cooling and other heat-mitigation and adaptation measures in these cities.

States have been incentivized under the ‘Scheme for Special Assistance to States for Capital Investment’ (SSASCI) from 2022 to 2025 to promote climate sustainability through urban planning and policy interventions like strengthening natural ecosystems of urban areas, sponge city planning, conservation of water bodies, urban forests and promotion of green and blue infrastructure to mitigate urban heat stress.
