



WASTE MANAGEMENT

1. City demonstrates reduction of waste generation in last 5 years
2. Extent of recyclables recovered and SCF/RDF Utilized
3. Recycled Aggregates & Recycled Concrete Aggregates derived from City C&D waste are utilized.
4. Greenhouse Gases (GHGs) emission reduced due to improved Municipal Waste processing and treatment facilities
5. Scientific Landfill is available with city as per SWM Rules, 2016
6. Scientific landfill closure considers landfill gas management



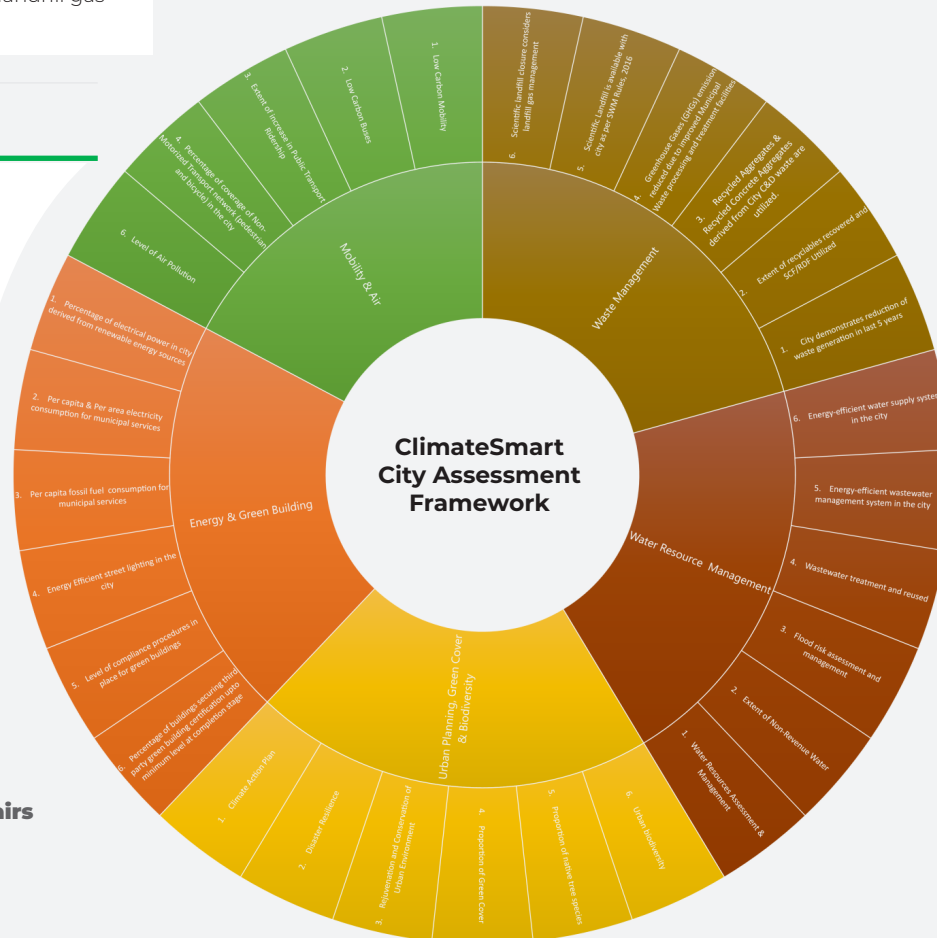
WATER RESOURCE MANAGEMENT

1. Water Resources Assessment & Management
2. Extent of Non-Revenue Water
3. Flood risk assessment and management
4. Wastewater treatment and reused
5. Energy-efficient wastewater management system in the city
6. Energy-efficient water supply system in the city



MOBILITY AND AIR

1. Low Carbon Mobility
2. Low Carbon Buses
3. Extent of increase in Public Transport Ridership
4. Percentage of coverage of Non-Motorized Transport network (pedestrian and bicycle) in the city
5. Clean Air Action Plan (Pollutant Monitoring, Planning and Implementation)
6. Level of Air Pollution



ClimateSmart Cities Ministry of Housing and Urban Affairs

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Ministry of Housing
and Urban Affairs
Government of India



Smart City
MISSION TRANSFORM-NATION



ClimateSmart Cities

ASSESSMENT
FRAMEWORK

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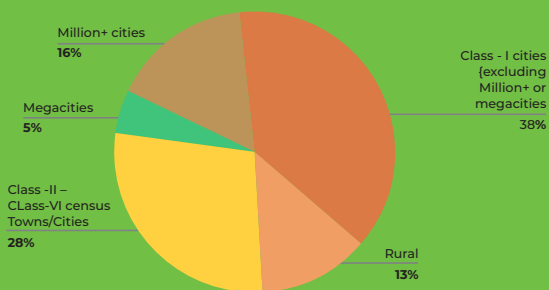
On behalf of
Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety
of the Federal Republic of Germany

niua
National Institute of Urban Affairs

Cities are engines of growth and centres for economic, social & cultural development. They are also the biggest consumers of energy, and at risk due to the density of human population and the impacts of Climate Change. India's economic growth story and urban population increase reflects the same story, but at an enhanced scale and faster pace. Hence, Urban India's approach towards growth will play a big role in the course of global climate response.

44% of India's rapidly growing carbon emissions have urban origins, emanating from transport, industry, buildings and waste contributing towards climate change. This makes our cities vulnerable and imposes huge risks towards increased water stress, heat island effect, increased frequency and severity of extreme weather events such as urban floods/ draughts. Further, curbing air quality deterioration pose serious challenges for city administrators as 43 smart cities in India is already facing poor air quality.

Within urban areas the megacities, metrocities and class I cities generate 59% of the GHG emission in the country and they would need to lead the way in making cities climate resilient and sustainable



Contribution in Urban - Rural GHG Emissions

Source: Climate Change Impacts, Vulnerability and Adaptation in Urban Settlements; Draft Report: Preparation of India's Third NATCOM to the UNFCCC, NIUA, 2013



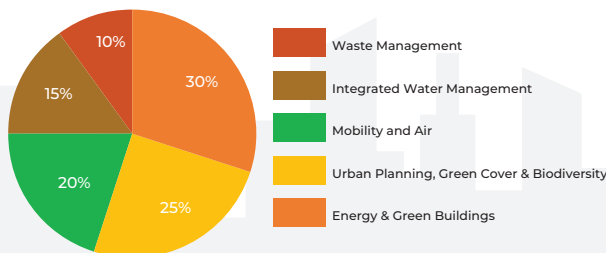
60 crore

of country's population is expected to reside in urban areas by 2030

The Smart Cities Mission of the Ministry of Housing and Urban Affairs, Govt. of India was launched for 100 cities with the objective to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a light house to other aspiring cities

Taking the serious Climate Change issues into consideration, the Ministry of Housing and Urban Affairs has initiated the "ClimateSmart Cities Assessment Framework" for the 100 Smart Cities. This is a first-of-its-kind cities assessment framework on climate relevant parameters, including those of the recently launched National Clean Air Programme. The objective is to provide a clear roadmap for the cities and in effect, urban India as a whole, towards combating Climate Change while planning and implementing their actions including investments.

This assessment framework is developed after an extensive consultative process and reviewing already existing frameworks and other assessment approaches adopted throughout the world. The framework has 30 diverse indicators across five



categories namely; (i) Energy and Green Buildings, (ii) Urban Planning, Green Cover & Biodiversity, (iii) Mobility and Air Quality, (iv) Water Resource Management and (v) Waste Management

The ClimateSmart Cities Assessment Framework will serve as a tool for cities to assess their present situation and will facilitate cities to adopt, implement and disseminate the best practices adopted by our cities and further to set standards in comparison to the international efforts towards the green, sustainable and urban resilient habitats.

SECTORS AND INDICATORS



ENERGY & GREEN BUILDINGS

1. Percentage of electrical power in city derived from renewable energy sources
2. Per capita & Per area electricity consumption for municipal services
3. Per capita fossil fuel consumption for municipal services
4. Energy Efficient street lighting in the city
5. Level of compliance procedures in place for green buildings
6. Percentage of buildings securing third party green building certification upto minimum level at completion stage



URBAN PLANNING, GREEN COVER & BIODIVERSITY

1. Climate Action Plan
2. Disaster Resilience
3. Rejuvenation and Conservation of Urban Environment
4. Proportion of Green Cover
5. Proportion of native tree species
6. Urban biodiversity