



मुंबई
CLIMATE
ACTION PLAN

BRIHANMUMBAI MUNICIPAL CORPORATION
**CLIMATE BUDGET
REPORT: FY 2026-27**



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Photo by Hardik Joshi

Executive Summary



The Mumbai Climate Action Plan (MCAP), published on 13th March 2022, outlines a strategic roadmap to make Mumbai a net-zero and climate-resilient city by 2050. To achieve its climate goals and secure a resilient future, it is essential for Mumbai to make planned and strategic budgetary allocations towards these goals amidst a range of development priorities. Climate change poses increasing risks to the city's infrastructure, housing, public health, environment, economy and urban services. In Mumbai, urban heat, urban flooding, air pollution, coastal risk, and landslides, are five key climate risks.

For the last three years, Brihanmumbai Municipal Corporation (BMC) is leveraging climate budgeting to accelerate implementation of the MCAP. The climate budget process integrates the 24 action tracks, across six MCAP

sectors- (i) Energy and Buildings, (ii) Integrated Mobility, (iii) Sustainable Waste Management, (iv) Urban Greening & Biodiversity, (v) Air Quality and (vi) Urban Flooding & Water Resource Management within the budgeting framework. This ensures that public finances are incrementally and strategically directed to climate-responsive planning and action across the city.

In its first year of climate budgeting, kickstarted institutionally in 2023 for budget allocations for FY 2024-25, BMC focused on institutionalising the process within its budgeting system. Over the last three years it has enabled cross-departmental conversations on integrating climate considerations in their planning and decision-making process. This report is the result of the third year of the climate budgeting cycle which is carried out for FY 2026-27. The

process in this cycle incorporates key learnings from the last two cycles and strengthens cross-departmental coordination, data collection, and impact assessment. Section 1.3, Chapter 1, highlights learnings from the previous cycles, followed by the process adopted for Climate Budgeting for FY 2026-27 in Section 1.4.

Building on the learnings from previous climate budgeting cycles, the BMC initiated the exploration of ward-level climate budgeting approaches through a pilot across four Zone II wards- G/N, G/S, F/N, and F/S. Recognizing the importance of localized planning and implementation for effective climate action, sensitization sessions were conducted with the pilot wards to strengthen understanding of climate-responsive planning and budgeting processes. Learnings from these sessions are highlighted in Section 1.4.

The BMC has further strengthened the integration of climate considerations into its capital expenditure planning for FY 2026-27. The BMC has allocated ₹48,164.28 crore towards capital expenditure, of which an estimated ₹20,730.04 crore has been identified as climate-aligned, which is 43.04% of the total capital expenditure budget. This marks a notable increase from FY 2025-26, when climate-aligned expenditure was ₹16,321.33 crore (37.81% of the capital budget). Additionally, for FY 2026-27, 10.56 crore from the revenue budget is climate-aligned.^[i] Additionally, ₹5,387.49 crore, accounting for 11.17% of the capital expenditure budget, has been allocated towards larger infrastructure

and construction projects that integrate a few components aligned with the Mumbai Climate Action Plan (MCAP), such as LED lighting, plantations and landscaping, rooftop solar systems, and decentralized sewage treatment plants. The increase in this year's amount is attributed to the inclusion of climate-relevant expenditures from new activities undertaken by BMC departments and increase in allocation towards ongoing climate-aligned works, particularly those under the urban flooding and water resource management sector. The climate budget allocation across the six MCAP sectors are detailed out in Chapter 4.

As per the analysis done under Monitoring, Evaluation, and Reporting process for Climate Budget FY 2025-26, BMC achieved 77.91% financial progress on its FY 2025-26 Climate Budget and 85.84% on the additional budget incorporating MCAP components.

The BEST Undertaking budget considered for climate budgeting is provisional and currently under revision based on Standing Committee's feedback. For FY 2026-27, the climate budget for the BEST Undertaking is estimated at ₹4,622.14 crore under operational expenditures, ₹3,941.06 crore in subsidies under the deficit head, and ₹1 crore under capital expenditures. Out of the total estimated operational expenditure of ₹8,637.15 crore, climate-aligned operational expenditures of ₹4,622.14 crore, account for 53.51%. The figures presented are subject to revision following finalisation of the BEST Undertaking budget.

Mumbai's climate budget, including allocations by the BMC and BEST, for the year 2026-27 is ₹ 20,731.04 crore in capital expenditures and ₹ 4632.70 crore in revenue expenditures.

^[i] This includes allocations only for procurement of biomedical waste bags and bins, conducting tree census, and concession on bus fares for persons with disabilities.



Butterfly garden at Marol Urban Forest | Photo by Sayali Lokare, WRI India

1. Climate Budgeting in Mumbai



On 5 June 2024, World Environment Day, the Brihanmumbai Municipal Corporation (BMC) released Mumbai’s first-ever Climate Budget Report, making it the first Urban Local Body (ULB) in India—and the fourth city globally, after Oslo, London, and New York City—to publish a dedicated climate budget. The report was developed through a climate budgeting process led by BMC’s Environment and Climate Change Department, with technical and knowledge support from WRI India and C40 Cities.

By integrating climate priorities and targets from the Mumbai Climate Action Plan into the municipal budgeting framework, the initiative marked an important step toward strengthening climate governance, mainstreaming climate action across departments, and enhancing the city’s resilience. Since 2024, the BMC has continued to undertake and further strengthen the climate budgeting process, and the Climate Budget Report for FY 2026–27 will mark the third cycle of this effort. While 2024 marked the first year in which the process was formally institutionalized and published through a

dedicated Climate Budget Report, the journey of Mumbai’s climate budgeting began in 2021.

1.1. Overview

Mumbai has been one of 13 global cities participating in C40 Cities’ Climate Budgeting Programme^[1] since September 2021. The objective of joining the programme was to explore, develop, implement, and improve the use of climate budgeting as a tool to operationalize the Mumbai Climate Action Plan and mainstream climate action through existing governance processes.

BMC is leveraging climate budgeting as a governance system to allocate resources to climate-relevant measures and projects on an annual basis. Designed to be both collaborative and iterative, climate budgeting fosters institutional sensitisation, interdepartmental engagement, and deliberation. It enables the integration of climate priorities into the city’s planning and budgeting cycles, embedding a ‘green, climate lens’ into municipal governance and advancing climate-forward implementation practices.

“Climate budgeting is a governance system that mainstreams climate commitments and considerations into decision-making on policies, actions and budget. This is done through integrating climate goals and targets from the CAP in the financial budget process and assigning responsibility for implementation, monitoring, evaluation and reporting across the city government”.^[2]

About Mumbai Climate Action Plan^[3]

Published on 13 March 2022 by the Brihanmumbai Municipal Corporation, the Mumbai Climate Action Plan (MCAP) is the city’s roadmap to becoming a net-zero and climate-resilient city by 2050. The plan outlines strategies to reduce greenhouse gas emissions and strengthen adaptation measures to address growing climate risks, in alignment with the goals of the Paris Agreement.^[2]

1.2. Objectives

The key objectives for Mumbai’s climate budgeting process are to:



1. Disseminate Mumbai’s climate commitments and priorities through an official governance-based process.



2. Ensure implementation of actions and recommendations highlighted in the Mumbai Climate Action Plan (MCAP) and identify current budget items that already align with the 24 action tracks across six MCAP sectors.



3. Understand existing municipal budgets using a ‘climate lens’ to assess opportunities for mainstreaming and gain practical insights on how existing budget items can be made more climate-friendly when implemented on the ground.



4. Enable monitoring, tracking and evaluation of the MCAP’s goals and targets on an annual basis to report progress.



5. Identify potential climate projects and activities that can be cross financed through external financing mechanisms.

The Climate Budget Report is intended to help decision-makers, government departments, climate practitioners, researchers, businesses, community organisations, and citizens understand Mumbai’s climate priorities and planned actions for FY 2026–27. It also serves as a reference for multilateral institutions, banks, and other financing agencies to identify opportunities to support Mumbai’s climate goals through climate and green finance.

1.3. Reflections from the Climate Budgeting Process

Over the past few years, the Brihanmumbai Municipal Corporation’s climate budgeting process has evolved into an important platform for coordination, communication, and institutional learning across departments. The process has helped strengthen a shared understanding that climate action is a collective city-level responsibility requiring coordinated efforts across sectors. Through regular consultations and discussions, departments have reflected on how ongoing projects and business-as-usual processes can be implemented in more climate-sensitive and environmentally sustainable ways, while also identifying opportunities for undertaking new climate-aligned projects and stronger interdepartmental collaboration. Over time, sector-specific studies, improved understanding of the kind of data that need to be maintained and the strengthened technical capacity of the expanded Environment Department have further helped improve the quality and depth of department-wise recommendations.

Each year, the climate budgeting team also develops a guidance document, discussed through these consultations, to support BMC departments in identifying potential climate-aligned projects within their respective mandates for integration into the municipal budgeting process. Over the last three years, the process has included more than 150 consultations, including both BMC interdepartmental engagements, engagement with external Mumbai parastatal agencies, and one-on-one discussions, leading to increased participation and ownership across departments.



Fig 1 | Meeting with parastatal agencies at Env & C. C. department

In the FY 2025–26 Climate Budget Report, the scope of the climate budgeting process was expanded through four key approaches:

1. The process-initiated engagement with Mumbai’s parastatal agencies to strengthen citywide climate budgeting efforts, with nine agencies participating in the consultation process. These consultations helped build an understanding of the overlaps and interlinkages across sectors such as public transport, energy, and housing, many of which fall outside the direct purview of the BMC. The interactions also served to sensitise participating agencies to the objectives and sectoral priorities of the Mumbai Climate Action Plan (MCAP), while enabling discussions on how their existing mandates and functions could align with climate action goals. As a first step emerging from this process, the budget of the Brihanmumbai Electric Supply and Transport (BEST) Undertaking was included in the Climate Budget Report FY 2025-26, and BEST continues to be part of this year’s Climate Budget Report as well.

2. The Climate Budget Report FY 2025-26 introduced an assessment framework to integrate adaptation, resilience, and equity indicators to assess the broader impacts of climate actions on people, nature, and climate, alongside mitigation outcomes. This approach has now been integrated into the climate budgeting framework and continues to be reported in this year's Climate Budget Report as well. The framework helped departments build a broader understanding of the local impacts and co-benefits of their projects and activities, encouraging officials to look beyond financial and physical progress indicators and better connect their work with wider climate resilience, environmental, and community-level outcomes. The process also highlighted gaps in the availability of certain climate-relevant data and impact indicators across departments. As the climate budgeting process evolves, the Environment and Climate Change Department will continue working with departments to strengthen data collection and enable more structured and granular climate impact reporting over time. As a broader institutional process, integrating these systems into existing departmental workflows will require sustained engagement and gradual institutionalisation.

3. The Brihanmumbai Municipal Corporation piloted a Monitoring, Evaluation, and Reporting (MER) framework to strengthen the tracking of climate-related progress and implementation under the Mumbai Climate Action Plan. The pilot helped assess how the system could be implemented more efficiently and how climate-related data could be collected and organised in a more structured manner. Similarly, this year, a MER process was undertaken to assess the progress of the Climate Budget FY 2025–26, with the quarterly MER system implemented

during the pilot phase being modified to a six-monthly (biannual) reporting process. A summary of the process and assessment can be found in Chapter 5.

4. The report incorporated climate-relevant projects supported through external funding sources such as Finance Commission grants, DPDC funds, and CSR support to provide a more comprehensive view of climate action across the city and continues to be reported in this year's Climate Budget Report as well.

Through the consultations and implementation experience over the past two years, the Env. & C. C. department recognised the importance of ward-level engagement in identifying local priorities, understanding vulnerabilities, and facilitating context-specific climate-responsive interventions. Building on this understanding, and with support from WRI India as a knowledge partner, this year the climate budgeting process explored ward-level engagement. The process and key learnings from this exercise are discussed in the following section.

A more detailed overview of the climate budgeting processes followed over the previous two years is available in the earlier Climate Budget Reports published on the MyBMC portal.

1.4. Process for Climate Budgeting 2026-27

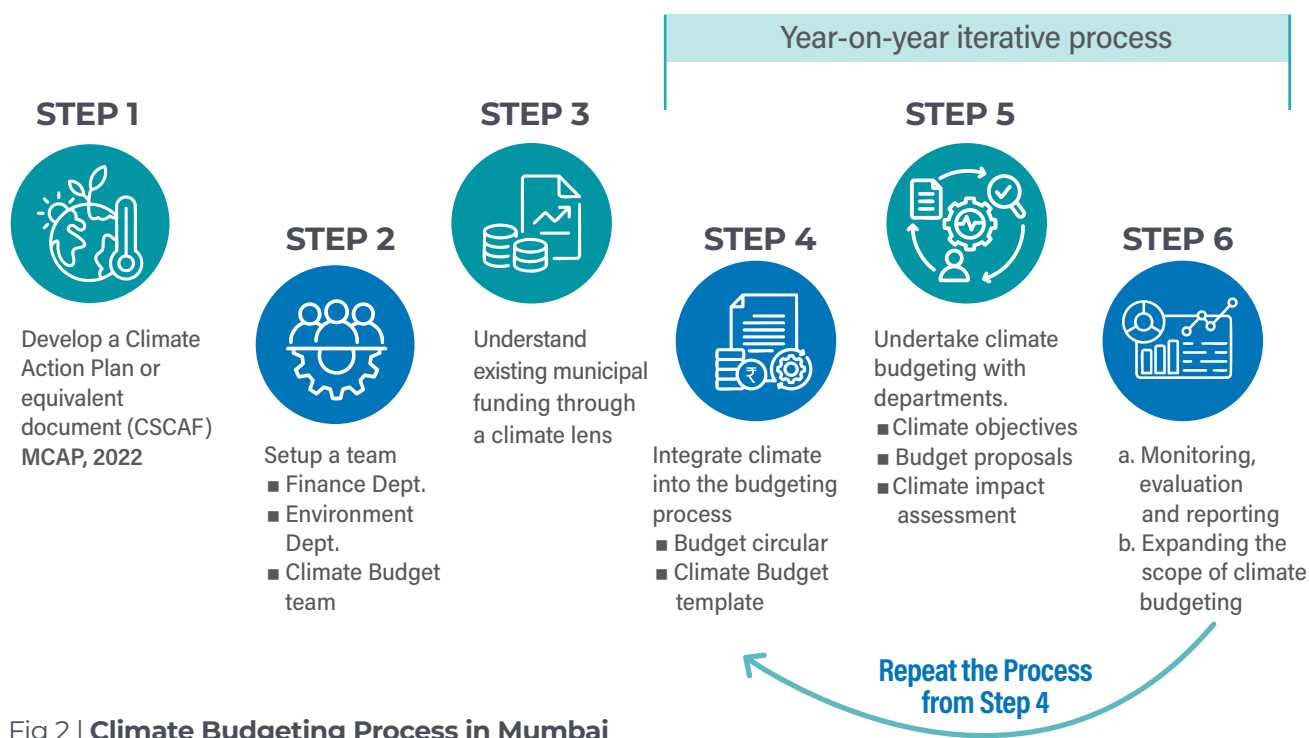


Fig 2 | Climate Budgeting Process in Mumbai

Mumbai’s climate budgeting process is anchored by the Brihanmumbai Municipal Corporation (BMC)’s Environment and Climate Change Department. The process for the Climate Budget for the FY 2026–27 cycle was initiated in September 2025. The 27 BMC departments and two sections of BEST (Electric Supply and Transport) that participated in the previous Climate Budget FY 2025–26 cycle were also included in the FY 2026–27 cycle. Officials from these departments were briefed on the priorities of the Mumbai Climate Action Plan (MCAP), including how their work aligns with MCAP sectors, and were provided an overview of the FY 2025–26 Climate Budget Report. Each department also received a list of suggested climate measures and improvement areas for consideration under the FY 2026–27 cycle.

Building on the quarterly Monitoring, Evaluation, and Reporting (MER) system introduced in the previous year to assess the progress of the FY 2024–25 Climate Budget, the mechanism was revised based on feedback received from departments. For FY 2025–26 activities, a half-yearly MER mechanism was adopted to enable more consolidated reporting while reducing the frequency of data collection, thereby easing the reporting burden on departments and allowing for more substantive analysis of the reported data.

In September 2025, similar to the FY 2025–26 cycle, the BMC’s Finance Department incorporated the “climate budget template” into the official budget circular for FY 2026–27. Departments were requested to refer to the MCAP’s 24 action tracks (see Annexure 1)

while planning new projects for the upcoming financial year and to map relevant budget items against these tracks, including implementation details such as quantity, timelines, phases, locations and expected impacts. A structured and iterative data collection process was undertaken through interdepartmental meetings and one-

on-one consultations. These engagements helped departments better understand the climate budgeting framework, address queries, complete the templates, and report on allocations from previous financial years. Data related to adaptation and resilience outcomes was also collected as part of the process.



Fig 3 | Kick-off meeting Climate Budgeting FY 2026-27 with 27 BMC departments and BEST Undertaking



Fig 4 | Kick-off meeting for ward-level engagement for Climate Budgeting FY 2026-27

To strengthen localized climate action, this year a ward-level sensitization approach was adopted.

Ward-level sensitization and capacity building for localized climate action: Building on the foundations established in the previous climate budgeting cycles, the Brihanmumbai Municipal Corporation (BMC) explored possible ways in which climate budgeting could be taken up at the ward level. WRI India supported the Env. & C. C. in planning, designing, and facilitating ward-level consultations. For this, four wards, G/N, G/S, F/N and F/S under Zone II, were selected for a pilot. Recognizing that effective climate action requires localized planning and implementation, sensitization sessions were conducted for these four wards. These engagements aimed to deepen understanding of the Mumbai Climate Action Plan (MCAP), climate risks identified through the Climate Risk and Vulnerability Assessment (CRVA), and the integration of climate considerations into day-to-day work.

Ward officials were encouraged to identify location-specific vulnerabilities, such as flooding hotspots, heat-prone areas and infrastructure gaps, and align proposed interventions with relevant MCAP action tracks, while also developing a list of projects that could be undertaken within the ward. Since the ward-level budgeting process differs from the central departmental budgeting process- being largely lump-sum in nature, primarily focused on operational and maintenance requirements, and designed with flexible budget heads to enable timely response to urgent civic works- one of the key objectives of these sessions was to understand how climate budgeting as a tool could be meaningfully integrated within existing ward-level planning and budgeting systems.

Discussions therefore focused on identifying opportunities for wards to undertake implementation-oriented projects aligned with the MCAP while also addressing existing service delivery priorities and operational challenges.



Fig 5 | Ward-level sensitization meeting conducted in F/S ward office

Key learnings from these sessions were:

1

Ward-level planning and budgeting processes are primarily driven by BMC’s core mandate of ensuring efficient service delivery, maintaining infrastructure and services, and addressing operational gaps through iterative year-on-year improvements to strengthen functionality and responsiveness.

2

Engaging local elected representatives (councilors) alongside ward officials is important for aligning climate-responsive interventions with local development priorities, improving community responsiveness and ownership, and strengthening implementation support at the neighbourhood level, as elected representatives play a critical role in identifying local priorities, communicating community needs, and facilitating implementation at the community level.

3

Further capacity-building efforts for ward-level officials are required to strengthen their ability to identify local climate vulnerabilities, conceptualize climate-responsive interventions, and develop well-defined project proposals aligned with MCAP priorities.

4

Institutionalized mechanisms are needed to enable wards to leverage alternative funding sources, such as CSR, through structured coordination processes and guidance on accessing and utilizing external funding opportunities for localized climate action initiatives. In this context, BMC’s recently launched “Participate Mumbai” portal, through which citizens, NGOs and corporates can volunteer or contribute CSR funds for projects related to education, health, environment and social welfare, was seen as a viable platform for enabling more collaborative implementation approaches and leveraging partnerships and CSR opportunities to design and plan more holistic and locally responsive climate projects going forward.

As immediate next steps, the process will focus on co-developing a list of potential on-ground climate projects in collaboration with ward-level officials, presenting the objectives of the MCAP and identified project opportunities to elected representatives, and further supporting wards in identifying and strengthening climate-focused interventions.

2. Mumbai Climate Action Plan (MCAP) Overview



The MCAP provides a detailed understanding of Mumbai’s context; climate risks and vulnerabilities; greenhouse gas inventory; future emission scenarios and pathways to a 1.5°C scenario for Mumbai; sectoral priorities, goals, actions, and implementation strategies; governance and institutional structures; and how to track progress. This section summarises Mumbai’s climate risks, emission scenarios and 24 key action tracks as highlighted in the MCAP.

2.1. Climate Risks and Vulnerability Assessment

The Climate & Air Pollution Risks and Vulnerability Assessment (March 2022) evaluates Mumbai's climate risks based on historic data, mapping differential risk exposure and vulnerabilities across neighbourhoods at the ward level.

The MCAP 2022 identifies five key climate risks in the context of Mumbai, (i). Urban Heat, (ii). Urban Flooding, (iii). Landslides, (iv). Coastal Risks, and (v). Air Pollution..

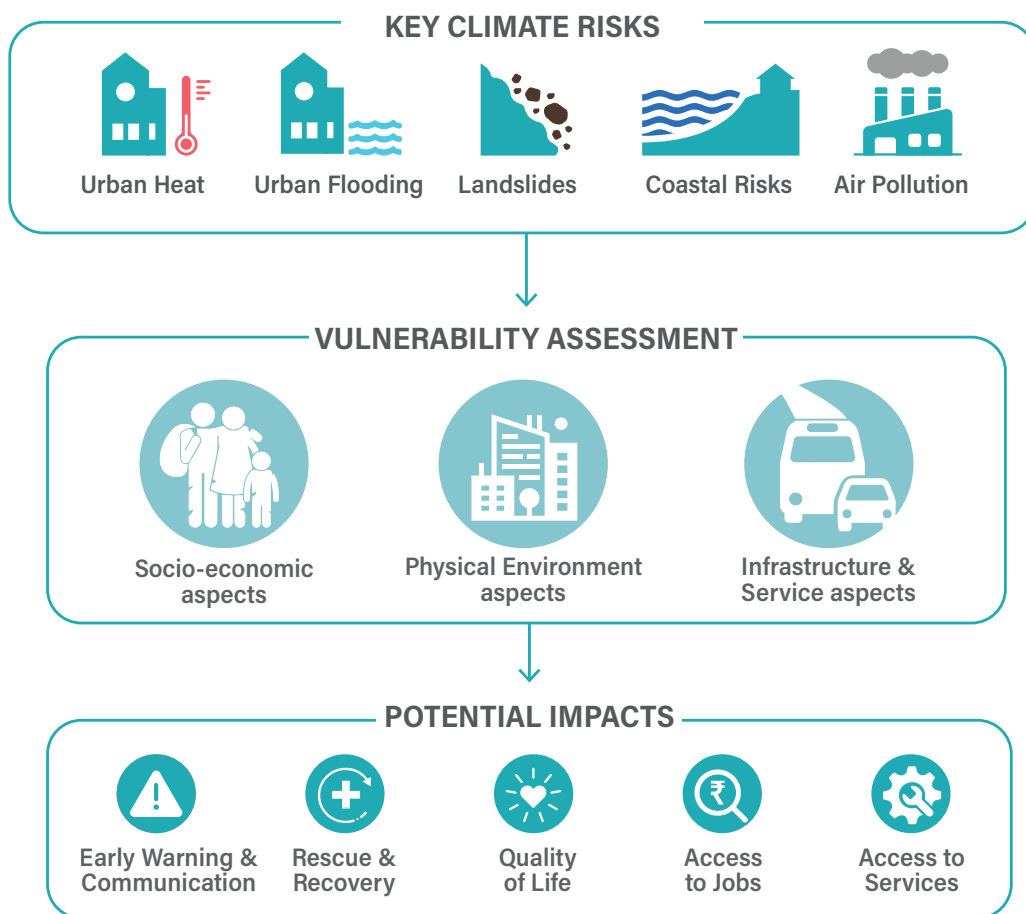


Fig 6 | Graphical representation of Mumbai’s Climate Risk and Vulnerability Assessment framework

2.2. Greenhouse Gas Inventory

The Greenhouse Gas (GHG) Inventory for Mumbai analyses emissions across sectors and sources, covering carbon dioxide, methane, and nitrous oxide. Aligned with the Global Protocol for Community-Scale Greenhouse Gas Inventories (GPC) BASIC standards, it provides the evidence base for mitigation planning, policy development, and progress tracking under the Mumbai Climate Action Plan.

As detailed in the previous Climate Budget Report for FY 2025–26, Mumbai has completed the update of its citywide GHG inventory for 2022–23, along with a revision of the 2019–20 baseline inventory using the latest available data.^[4] The assessment was undertaken by BMC’s internal team, with technical guidance from C40 Cities, and incorporated data from 15 agencies.^[ii]

For detailed methodology, process documentation, and trend analysis please refer to Chapter 2, Sub-section 2.3 of the Mumbai Climate

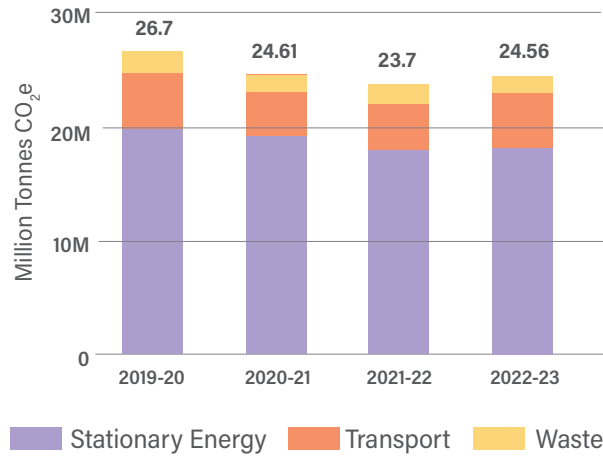


Fig 7 | Mumbai’s GHG emissions for 2019-20, 2020-21, 2021-22, & 2022-23

Budget Report FY 2025–26. The updated assessment provides a more accurate and comprehensive reflection of Mumbai’s emissions profile and strengthens consistency for tracking progress over time. Following the revision, Mumbai’s 2019–20 baseline emissions stand at 26.75 million tonnes CO₂e, revised from the earlier estimate of 23.42 million tonnes CO₂e used during the development of the MCAP. The 2022–23 inventory records total emissions of 24.56 million tonnes CO₂e, with per capita emissions of 1.86 tonnes CO₂e.

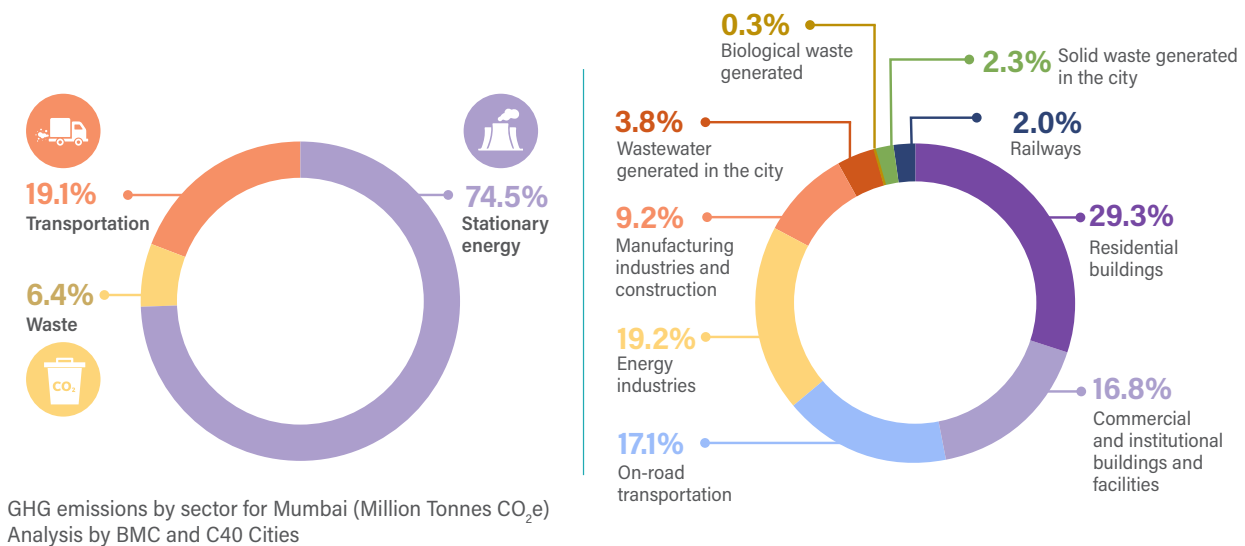


Fig 8 | GHG Emissions for 2023 and emissions from sub sectors

^[ii] These agencies included electricity DISCOMs- Adani, TATA Power, Maharashtra State Electricity Development Corporation Limited, BEST Undertaking, Mumbai Metro One Pvt Ltd, Monorail - MMRDA, Western Railways, Central Railways, state level coordinator at Bharat Petroleum Corporation Ltd. (for all Oils Marketing Companies and energy industries), Mahanagar Gas Limited, Ration Controller - Food, Civil Supplies and Consumer Protection Department and relevant BMC departments.

2.3. GHG emission scenario

The pathways scenario exercise provides the evidence based on which the city has set strategies for the energy, transport, and waste sectors in MCAP. Mumbai has an overarching mitigation target of reaching net-zero emissions by 2050. Interim and long-term commitments include a 30% emission reduction by 2030, a 44% by 2040 and net zero by 2050 against base year emissions (2019).

If no actions are taken, emissions are expected to increase 170% between 2019 and 2050. The most ‘ambitious yet achievable’ trajectory for Mumbai forecasts a 27% reduction in emissions to by 2030 and a 72% by 2050, as highlighted in the MCAP. Figure 10 shows the various scenarios, including the updated target trajectory based on the recent GHG inventory update.

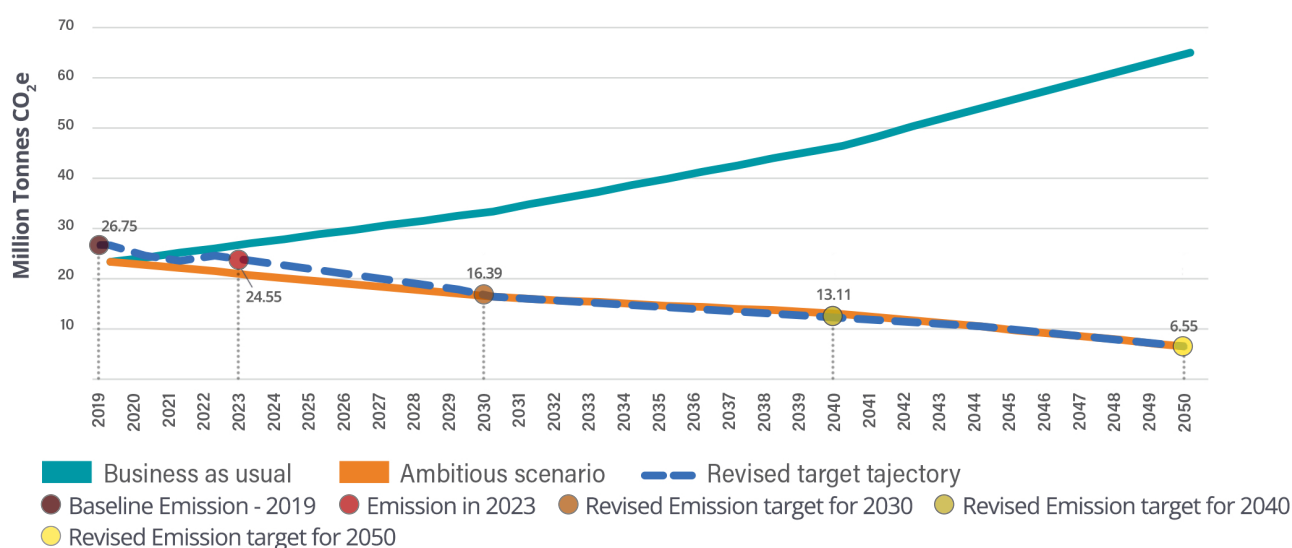


Fig 9 | MCAP Emission Scenarios-Revised Target Trajectory[iii]

2.4. Priority Sectors and Action Tracks

The MCAP identified 6 priority sectors and 24 action tracks to focus on addressing the impacts and causes of climate change in Mumbai. The list of sectors and action tracks is provided in Annexure 1. These priority sectors and action tracks have served as a basis in the BMC’s budget circular and templates, to anchor and identify climate measures by departments throughout the climate budgeting process.



Energy & Buildings



Integrated Mobility



Sustainable Waste Management



Urban Greening and Biodiversity



Air Quality



Urban Flooding & Water Resource Management

[iii] Note- While the Business-as-Usual and Ambitious scenarios are based on baseline emissions, the revised target trajectory reflects actual emissions from updated GHG inventories

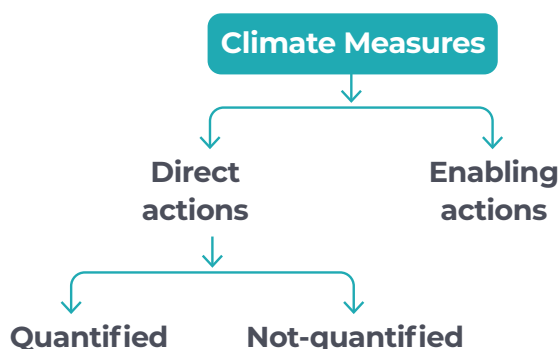


Malabar Hill Elevated Nature Trail | Photo by Ariane Shah and Khushi Sheth

3. Climate measures for FY 2026-27



The Environment and Climate Change Department undertook a timely, systematic, and collaborative approach to formulate Mumbai’s climate budget. Climate impact of mapped budget activities submitted by various departments, linked to the 24 MCAP action tracks across six priority sectors were assessed, grouped, and categorised into the following types of actions: –



How to read climate measures under Climate Budget FY 2026-27

This chapter presents a list of the climate measures undertaken by the Brihanmumbai Municipal Corporation (BMC) and the Brihanmumbai Electric Supply and Transport (BEST) Undertaking, as outlined in the FY 2026-27 budget.

Categorization of Climate Measures: The climate measures in this chapter are classified into three categories: Direct Actions-Quantified, Direct Actions-Not Quantified, and Enabling Actions- each represented by separate tables. The rationale and definitions for each category are further elaborated in the sub-chapters dedicated to them.

New, ongoing and recurring activities in the climate budget: New climate initiatives and projects undertaken in FY 2026-27 are highlighted and indicated with a star (★). These are entirely new projects or activities planned and budgeted for implementation in this year. The non-highlighted activities are ongoing projects or activities, implemented year on year in a phased manner, with allocations in FY 2026-27 for a specific phase. The list also includes activities under recurring budget heads that are undertaken annually by departments. These may involve implementing similar initiatives in new locations, using updated technologies, introducing upgrades, or advancing through new phases of ongoing work. By clearly distinguishing between new and ongoing activities, this chapter aims to provide a transparent view of the city’s climate efforts and their financial allocations.

3.1. Direct Actions – Quantified

Direct Action - Quantified encompasses the planned measures and activities, directly leading to greenhouse gas emission reduction. Based on the data and specifications available through consultations with the departments, the table below includes the activities for which it has been possible to estimate quantified potential greenhouse gas emission reductions using methodologies highlighted in Greenhouse Gas Protocol for Cities (GPC), CIRIS tool and Intergovernmental Panel on Climate Change (IPCC) emission factor database.

3.1.1. BMC Budget

Table 1 includes direct actions that can be quantified, their alignment with the MCAP action tracks and associated emission reduction potential.

Table 1 | **Direct Actions – Quantified**

Sr. No.	Activity	Alignment with MCAP	Potential Emission Reduction Metric tonne tCO ₂ e/ year ^[iv]
Solid Waste Management (SWM) Department			
1. ★	Providing SWM Facility in F/N ward	3.2 Decentralized waste management	2,693
2. ★	Setting up Dry Waste management processing Centre	3.2 Decentralized waste management	for 300 TPD - 80,811 for 500 TPD - 1,34,685
3. ★	Setting up a New Waste Segregation Centre	3.2 Decentralized waste management	673
4.	Technological Upgradation of Mahalaxmi Refuse Transfer Station	3.1 Reducing landfill waste	30,660
5.	Solid Waste Management at Deonar Dumping Ground - Development of Waste to Energy (WTE) Project at the Deonar Dumping Ground (DDG) - Biomining project at Deonar Dumping Ground	3.3. Remediation and scientific management of landfills	1,83,911.82 1.106 per MT of landfill waste bio-mined* * Over the complete lifecycle of a biomining project.

★ Indicates new climate measures

^[iv] "tCO₂e" represents metric tons of carbon dioxide equivalent, a unit measuring greenhouse gas emissions. It enables comparison of various gases' global warming potentials by equating them to the amount of CO₂ that would cause equivalent warming over a standard timeframe, often 100 years.

Sr. No.	Activity	Alignment with MCAP	Potential Emission Reduction Metric tonne tCO ₂ e/ year ^[iv]
Solid Waste Management (SWM) Department			
5.	Dumpsite Reclamation Project at Mulund Dumping Ground (MDG)	3.3. Remediation and scientific management of landfills	51,66,000** ** Calculated for the complete lifecycle of the dumpsite reclamation project
Mechanical and Electrical (M&E) Department			
1.	Providing PNG Gas connections in Mahalakshmi Dhobighat	5.1. Curb the pollution concentration level by 20-30% by 2030	150
2.	Upgradation of the High Mast System	1.2. Transition To Clean Fuels And Resource Efficiency	1273.7
3.	Installation Of Solar Panel Systems At Various Peripheral Hospitals		441.4
4.	Carbon Cutter system	5.1. Curb the pollution concentration level by 20-30% by 2030	903.18
Water Supply Projects (WSP) Department			
1.	Development of Renewable Hybrid Energy Project Facilities at HSBT Middle Vaitarna Dam	1.1. Decarbonizing Mumbai's electricity generation mix	53.707.85

Sr. No.	Activity	Alignment with MCAP	Potential Emission Reduction Metric tonne tCO ₂ e/ year
Hydraulic Engineers (HE) Department			
1. ★	Provision of new streetlights with LED luminaire at Middle Vaitarna Dam in O.C. Division.	1.2. Transition To Clean Fuels And Resource Efficiency	1.99
City Engineers Department			
1.	Solar power generation at various new municipal building constructions	1.1. Decarbonizing Mumbai's electricity generation mix	469.55
2.	Replacement of conventional lighting with LED lighting in various reconstruction projects	1.2. Transition to clean fuels and resource efficiency in buildings	469.09
3.	Installation of a Building Management System in proposed redevelopment of Material Testing Laboratory		45.11
Deonar Abattoir			
1.	Piped Natural Gas-based Incinerators at slaughterhouse premises	5.1. Curb the pollution concentration level by 20-30% by 2030	184
School Infrastructure Cell (SIC) (Part of Education Department)			
1. ★	Replacement of conventional lighting to LED lighting at municipal schools	1.2. Transition to clean fuels and resource efficiency in buildings	For 9 W - 806.16
			For 18 W - 726.86
			For 36 W - 567.42
			For 48 W - 487.75

3.1.2. BEST Undertaking Budget

Sr. No.	Activity	Alignment with MCAP	Potential Emission Reduction Metric tonne tCO ₂ e/ year
Electric Supply Section			
1. ★	Procurement of renewable energy for the electricity supply mix	1.1. Decarbonizing Mumbai's electricity generation mix	2,195,15,147
Transport Section			
2. ★	Wet leasing of Electric Buses	2.3 100% municipal and private zero emission vehicles by 2050	12601.04

The detailed description of the climate measures and activities in Table 1 | Direct Actions - Quantified can be found in Annexure 2. Calculations of potential emission reductions for the Direct Actions- Quantified can be found in Annexure 3.

3.2. Direct Actions - Not Quantified

Direct Action – Not quantified encompasses measures and activities vital for reinforcing climate initiatives within the city. These planned actions over the next year shall contribute to long-term climate action by strengthening the city’s infrastructure and service distribution systems, thereby bolstering resilience to climate risks, and laying the groundwork for future emission reductions.

Several of these measures are difficult to quantify due to the absence of standardised methodologies, limited availability of granular data, or the context-specific nature of their impacts. For instance, interventions related to increasing green open spaces and urban greenery, strengthening water supply and sewerage networks, or improving wastewater treatment and disposal systems generate broad environmental and resilience benefits that are often difficult to translate into a single measurable

emissions or climate indicator. In several cases, projects may also be at the proposal, planning, or feasibility stage, where technical specifications and implementation details are still evolving, making quantification difficult at this stage. Additionally, some projects currently have limited data availability, which is reflected through low-confidence classification under the data quality column.

To address these challenges, the report includes adaptation, resilience, and equity indicators to help capture the broader impacts and co-benefits of these actions on people, nature, and climate. The table below outlines the budgeted activities, their alignment with the MCAP action tracks, reported indicators, data quality classifications, and the potential co-benefits of these initiatives. Co-benefits have been identified using the United Nations Sustainable Development Goals (SDGs) framework and internal technical assessment.

Framework for Adaptation, Resilience and Equity-focused measures: The impacts of Direct Actions – Not Quantified are presented in terms of benefits to People, Nature, and Climate. This approach is inspired from the Intergovernmental Panel on Climate Change’s Sixth Assessment Report (AR6)^[5], particularly the Working Group II contribution, which emphasizes the interconnectedness of climate, ecosystems and biodiversity, and human societies.

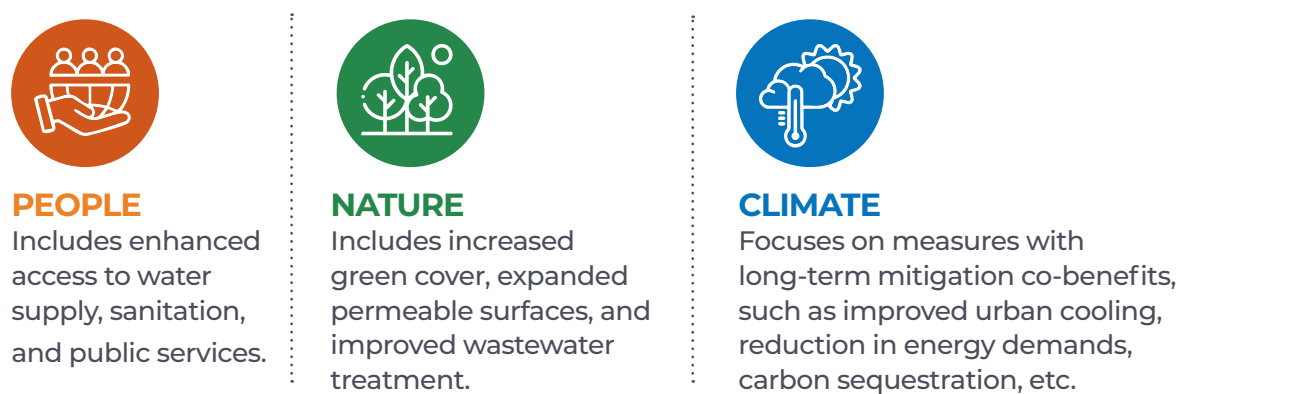


Fig 10 | **Framework for Adaptation, Resilience and Equity-focused measures**

This enhanced approach was adopted to provide a clearer, more structured understanding of how adaptation and resilience measures contribute to the city’s climate goals. These complement the co-benefits identified for every measure, which convey the long-term social, economic and environmental benefits to citizens.

3.2.1. BMC Budget

Key for Table 2 | Direct Action – Not quantified

Data quality classification:

Up to 25% Low	25%- 75% Medium	75%-95% High
100%-Complete		

P/F stage- Project is in a planning/ feasibility stage

Indicates that data is used as proxy to report impact on People, Nature, & Climate.








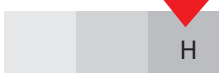
Impact categories


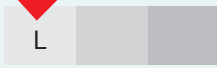





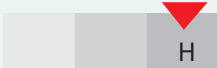
	People	Nature	Climate
Direct Impact	P	N	C
Indirect/possible Impact	P	N	C








★ Indicates new climate measures


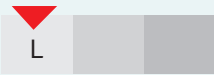





Table 2 | Direct Actions – Not Quantified






Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality Co-benefits
Disaster Management Department				
1.	Setting up and operating Viewing Centre in 24 Wards P	6.6. Disaster risk and impact reduction	No. of disaster management initiatives planned: 2[#] Existing viewing centres: 24 <i>Number of people benefitted</i>	<div style="text-align: center;"> M </div> <hr/> Sustainable communities and city, disaster preparedness
Solid Waste Management (SWM)				
1.	Construction of prefabricated toilets and convenience toilets across the city P	6.5. Clean, safe and accessible toilets	<i>No. of toilets planned</i> <i>No. of people with increased access to sanitation</i>	<div style="border: 1px solid #ccc; padding: 5px; text-align: center; margin-bottom: 10px;"> P/F stage </div> Good health and wellbeing, gender equality








Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Solid Waste Management (SWM)				
2.	Installation of sanitary napkin vending machines and incinerators in public toilets 	6.5. Clean, safe and accessible toilets	No. of vending machines planned: 1800 units[#] <i>No. of people with increased access to sanitation</i>	 Gender equality, good health and wellbeing, & sustainable waste management
3.	Capital Receipts (SBM) -Construction of new toilets 	6.5. Clean, safe and accessible toilets	No. of toilets (community and private) planned: 19787 (4673 IHHLs and 15114 CTs)[#] <i>No. of people with increased access to sanitation</i>	 Good health and wellbeing, gender equality
4.	Setting up dry waste collection sheds 	6.5. Clean, safe and accessible toilets	No. of locations where dry waste collection sheds are planned - 7 <i>Quantity of segregated dry waste collected and processed</i>	 Good health and wellbeing
5.	Construction of community toilets in all wards 	6.5. Clean, safe and accessible toilets	No. of toilets planned: 559 toilets with 14166 seats No. of people with increased access to sanitation: 4,24,980	 Good health and wellbeing, gender equality




Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Mechanical and Electrical Department				
1. ★	Upgradation of Municipal Power Laundry and Tunnel Laundry Units 	1.2. Transition to clean fuels and resource efficiency in buildings	<i>No. of hospitals upgraded</i> <i>Litres of wastewater reused</i>	 Sustainable building
2.	Installation of Sewage Treatment Plants at peripheral hospitals 	6.3. Reducing pollution and restoring aquatic ecosystems	No. of STPs planned: 2 Volume of wastewater treated by decentralized systems: 50 KLD	 Sustainable building and communities
3.	Setting up of Sewage Treatment Plant/ Effluent Treatment Plant at major hospitals and various speciality hospitals  	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Volume of wastewater treated by decentralized systems</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Improved hygiene, prevent spread of diseases
Hydraulic Engineering (HE)				
1. ★	Construction of Auxiliary Water Tanks in various wards in City Area 	6.4. Safe and affordable drinking water	No. of wards to benefit: 1 (A ward) Capacity of the tanks: 10.5 lakh litres No. of people with improved access to water: 13,009	 Improved access to public services







Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Hydraulic Engineering (HE)				
2. ★	Remodelling & Reconstruction of Sewerage Treatment plant at Bhandup Complex 	6.3. Reducing pollution and restoring aquatic ecosystems	Volume of wastewater to be treated- 30 CMD	 Better ecosystem
3. ★	Installation and Strengthening of Water Treatment, Distribution and Allied Infrastructure Works 	6.4. Safe and affordable drinking water	No. of wards to benefit: 4 (R/S, R/N, H, K) Population benefited: approx. 23.5 lakh	 Improved access to public services
4. ★	Setting up Chlorinator at Bhandup Complex 	6.4. Safe and affordable drinking water	<i>Number of population benefitting</i> <i>Daily energy savings achieved through upgraded chlorination system (kWh/day)</i>	Improved access to public services
5. ★	Strengthening of pakka and Kaccha Channel across Tulsi lake road 	6.1. Build flood resilient systems and infrastructureer	<i>Length of drainage channels strengthened and number of culverts reconstructed</i> <i>Reduction in flooding</i>	 Reduction in externalities to livelihoods, employment, homes






Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Hydraulic Engineering (HE)				
6. ★	Chlorine Neutralization System at Pise 	6.4. Safe and affordable drinking water	<i>Operational readiness and compliance of chlorine neutralization system</i> <i>Quantity of leaked chlorine gas treated/neutralized during incidents</i>	 Improved access to public services
7.	XVFC-Improvement of water supply 	6.4. Safe and affordable drinking water	No. of wards to benefit: 3 (R/S, R/N, H/W)# Total length of all pipes planned: 6,237 meters# <i>No. of people with improved access to water</i>	 Improved access to public services
8.	Hill slope stabilisation and allied works in various locations 	6.6. Disaster risk and impact reduction	No. of people with improved water security: 23.94 lakhs No. of locations identified for stabilization: 6 hill reservoirs and 10 interventions	 Reduction in externalities to livelihoods, employment, homes
9.	Replacement of defective sluice valves	6.4. Safe and affordable drinking water	<i>Estimated volume of water conserved</i>	 Improved access to public services












Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Hydraulic Engineering (HE)				
10.	Safety measures for water supply network 	6.4. Safe and affordable drinking water	<i>Length of water mains protected</i> <i>No. of people with increased water security</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Reduction in wastage of fresh water and water loss
11.	Laying/ replacing water mains at various locations across the city 	6.4. Safe and affordable drinking w	No. of wards expected to benefit: 18# No. of people expected to benefit: more than 15000* *Estimate only available for Madam Cama Road in A ward	<div style="display: flex; align-items: center; margin: 0 auto;"><div style="border: 1px solid gray; padding: 2px; margin: 0 5px;">L</div><div style="width: 20px; height: 10px; background-color: gray; margin: 0 5px;"></div><div style="width: 20px; height: 10px; background-color: gray; margin: 0 5px;"></div></div> Reduction in wastage of fresh water and water loss
12.	Construction of storage tanks with pumping arrangements in Eastern Suburbs 	6.4. Safe and affordable drinking w	<i>No. of people with improved access to water</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Improved access to public services, & better quality of life
13.	Work of attending leakages and contamination within the water distribution system 	6.4. Safe and affordable drinking w	<i>No. of people with improved access to water</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Improved health, reduction in water loss, & better quality of life




Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Hydraulic Engineering (HE)				
14.	Improvement and plantation in various garden plots at Bhandup complex and along Trunk Mains 	4.1. Increase vegetation cover and permeable surface	Area under plantation: 87,266 sqm <i>No. of native species planted</i> <i>Scientific approach to greening</i>	 <hr/> Enhanced biodiversity, quality of life, improved health
Planning Department				
1.	Development of Adhar Kendra, Working Women Hostel & Care Centre 	1.2 Transition to clean fuels and resource efficiency	<i>Capacity of solar installed</i> <i>No. of LED streetlights planned</i>	 <hr/> Sustainable cities
Sewerage Projects (SP)				
1.	XVFC- Rejuvenation of water bodies 	6.3. Reducing pollution and restoring aquatic ecosystems	No. of water bodies planned to be rejuvenated: 2 lakes in progress, 1 completed <i>Area of the lakes being rejuvenated</i>	 <hr/> Climate resilience, enhanced biodiversity
2.	Diversion of dry weather flow 	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Volume of wastewater from stormwater drains diverted to sewer lines</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> <hr/> Avoid waterborne disease, better health










Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
3.	Providing and laying of sewer lines N	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Length sewer lines planned</i> <i>Increased capacity of city's sewerage network</i>	 Avoid waterborne disease, better health
4.	Planning of sewer line network and STPs at various locations in Mumbai C	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Length of sewer lines planned</i> <i>Volume of wastewater treated</i>	P/F stage Avoid waterborne disease, better health
5.	Rejuvenation of Poisar, Dahisar, Walbhat and Oshiwara rivers N	6.3. Reducing pollution and restoring aquatic ecosystems	No. of rivers planned to be rejuvenated: 4 <i>Volume of water undergoing treatment</i>	 Avoid waterborne disease, better health
Public Health Department				
1.	Climate change and pollution related health risk training P	5.3. Community health resilience through decentralized planning and awareness	<i>No. of health professionals trained</i> Frequency of training for monsoon and air pollution related health risks: 2 –3 per year	 Increased awareness, good health and wellbeing
Health Infrastructure Cell (under Public Health Department)				
1.	Reconstruction of Chandanwadi Electric Crematorium in C Ward	1.2. Transition to clean fuels and resource efficiency in buildings	<i>Capacity of the crematorium</i>	P/F stage Reduction in local air pollution and smoke emissions








Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Gardens				
1. ★	Provision for beautification of E.F.G. H.H. Cross road in C ward 	4.1. Increase vegetation cover and permeable surface	Area proposed for beautification: 500 sq. mtr Number of trees/plants to be added: 50 nos <i>No. of people with access</i>	 Better air quality, enhancing groundwater, good health
2.	Beautification of spaces below flyovers through greening/placemaking 	4.3. Equitable access to green open spaces	Area developed under bridges: 400 sq.m Number of trees/plants proposed: 150 nos Number of sites improved: 3	 Sustainable Cities
3.	Development and upgradation of new gardens 	4.1. Increase vegetation cover and permeable surface	No of gardens proposed - 1 <i>No. of people with access to green open spaces</i> <i>Area planned for beautification</i>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">P/F stage</div> Better air quality, enhancing groundwater, good health
4.	Beautification of central medians & traffic islands 	4.1. Increase vegetation cover and permeable surface	<i>No. of central medians considered for greening</i> No. of wards planned to receive benefits: 26 <i>Total area of all central medians planned</i> <i>Scientific greening approach adopted</i>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">P/F stage</div> Better air quality, enhancing groundwater, good health

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Gardens				
5.	XVFC- Greening of public and residential areas in Mumbai 	4.1. Increase vegetation cover and permeable surface	<i>Total area restored through greening</i> <i>No. of people with access to green open spaces</i> <i>Scientific greening</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Better air quality, enhancing groundwater, good health
6.	Open Space Management Scheme 	4.3. Equitable access to green open spaces	No. of wards to receive benefits: 26[#] <i>No. of people with improved access green open spaces with sports facilities</i>	 Sustainable Cities, Good health and wellbeing
Garden Infrastructure Cell (GIC)				
1.	Development and upgradation of various Recreational Ground (RG), Playground (PG), and Garden plots 	4.3. Equitable access to green open spaces	<i>No. of R.G., P.G., and gardens plots to be upgraded</i> <i>Area planned to be upgraded</i> <i>No. of people with improved access to green open spaces</i>	 Sustainable Cities, Good health and wellbeing

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Water Supply Projects (WSP)				
1. ★	Construction of water transmission main and development of Clear Water Pumping Station (CWPS) 	6.2. Localized water conservation and efficiency	<i>Length of water main constructed</i> <i>No. of wards with improved water supply</i> <i>No. of people expected to benefit</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Enhanced water security
2.	Construction of tertiary treated water conveyance tunnels  	6.2. Localized water conservation and efficiency	<i>Volume of treated water reused</i>	<div style="text-align: center;"> M</div> Resource efficiency
3.	Desalination Plant for augmentation of Mumbai's water supply 	6.4. Safe and affordable drinking water	Volume of water projected to be supplied from the plant: 400 MLD[#] <i>No. of people expected to benefit</i>	<div style="text-align: center;"> M</div> Reduction in wastage of fresh water, prevention of water-borne diseases
4.	Construction of Dam across river Gargai and allied works 	6.4. Safe and affordable drinking water	Additional water storage capacity created: 440 MLD <i>No. of people expected to benefit</i>	<div style="text-align: center;"> M</div> Reduction in wastage of fresh water, prevention of water-borne diseases
5.	Recycling/ reuse of wastewater to potable water at Colaba Wastewater Treatment Plant  	6.4. Safe and affordable drinking water	Volume of wastewater projected to be recycled: 12 MLD	<div style="text-align: center;"> M</div> Resource efficiency

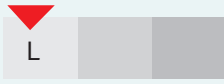


Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Water Supply Projects (WSP)				
6.	Construction of tunnels for drinking water conveyance P	6.4. Safe and affordable drinking water	Length of tunnel planned to be constructed: 8.797km No. of wards planned to receive improved water supply: 6# <i>No. of people with improved access to water</i>	 Reduction in wastage of fresh, prevention of water-borne diseases
7.	Replacement of old mains P	6.4. Safe and affordable drinking water	No. of location planned to receive improved water supply: 2 <i>No. of people with improved access to water</i>	 Reduction in use of fresh water sources, improved access to basic service
8.	Development of new Water Treatment Plant at Bhandup Complex N	6.2. Localized water conservation and efficiency	Expected capacity of the new WTP: 2000 MLD <i>No. of people expected to benefit</i>	 Good health, and overall well-being
Storm Water Drain (SWD) Department				
1.	Widening and training of Mithi River and other Nalla systems P	6.1. Build flood resilient systems and infrastructure	<i>Expected increase in river and nalla capacities</i> <i>No. of neighbourhoods and people safeguarded</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Reduction in externalities to livelihoods, employment, homes








Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Storm Water Drain (SWD) Department				
2.	XVFC- Construction of Sewage Treatment Plant near Dahisar River 	6.3. Reducing pollution and restoring aquatic ecosystems	No. of STPs: 2 Amount of wastewater projected to be treated: 6.5	 Better ecosystem
3.	Design and construction of modernized and fully automated package/ Modular Sewerage Treatment plants based on MBR technology along Dahisar, Poisar and Oshiwara-Walbhat rivers.  	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Volume of wastewater treated</i>	 Better ecosystem
4.	Widening and training of the stormwater drains, and operation and maintenance of the SWD network across the city 	6.1. Build flood resilient systems and infrastructure	<i>No. of projects planned for drain improvement</i> <i>No. of neighbourhood and people expected to be safeguarded</i>	 Reduction in externalities to livelihoods, employment, homes
5.	Planning and construction of balance stretches 	6.1. Build flood resilient systems and infrastructure	No. of projects planned for balance stretches improvement: ~8	 Reduction in externalities to livelihoods, employment, homes









Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Storm Water Drain (SWD) Department				
6.	Diversion/Loop construction in various drains 	6.1. Build flood resilient systems and infrastructure	No. of projects planned to enhance flood resilience ~4	 L
				Reduction in externalities to livelihoods, employment,
7.	Improvement and upgradation work in existing stormwater drainage network 	6.1. Build flood resilient systems and infrastructure	<i>No. of projects planned to enhance flood resilience</i>	 L
				Reduction in externalities to livelihoods, employment, homes
Roads and Traffic Department				
1.	Provision for walkable footpaths 	2.2 Access to non-motorized transport (NMT) and infrastructure	<i>Length of footpaths improved</i> <i>No. of people with improved access to pedestrian friendly footpaths</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div>
				Road safety, universal access, quality of life
Bridges Department				
1.	Construction, reconstruction, repairs and maintenance of Foot Over-bridges on roads and Railways, Pedestrian Subways and skywalks 	2.2 Access to non-motorized transport (NMT) and infrastructure	<i>Total length of all infrastructural units planned</i> <i>No. of people with improved access to pedestrian- friendly footpaths</i>	 L
				Road safety, universal access, quality of life

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Deonar Abattoir				
1. ★ C	PNG-based animal crematoriums	1.1 Transitioning Mumbai's electricity generation mix to renewable sources	<i>Capacity of crematorium</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Cleaner and energy-efficient operations
2.	Refurbishments to the Effluent Treatment Plant at Deonar Abattoir N C	6.3. Reducing pollution and restoring aquatic ecosystems	Volume of wastewater treated and repurposed: 1.3 MLD	<div style="background-color: #cccccc; padding: 5px; text-align: center;">Complete</div> Resource efficiency, improved hygiene, prevent spread of diseases
3.	Modern technology slaughter line with blood coagulator N C	3.1 Reducing landfilled waste	Amount byproduct (blood) repurposed: 20000 litres	<div style="background-color: #cccccc; padding: 5px; text-align: center;">Complete</div> Resource efficiency, improved hygiene
City Engineers Department				
1. ★	Construction of various buildings in the city (i. R/C Ward Office ii. R/N Ward Office iii. K/E Ward Office iv. Dormitory for relatives of cancer patients)	1.3 Low carbon buildings	Number of buildings to be constructed - 4 <i>No. of citizens benefitted</i> <i>Solar rooftop capacity proposed</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Sustainable buildings and city








Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Improvement schemes (As reported under City Engineers)				
1.	Construction/ Redevelopment of various property,	1.1. Decarbonizing Mumbai’s electricity generation mix	No of wards: 24 Beneficiaries: Citywide	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div>
★	i. Improvement of Slum under Integrated Slum Improvement Programme ii. Planning and redevelopment of residential tenements in M/E Ward iii. Redevelopment of Municipal Property at Vikhroli Parksite Layout <div style="display: flex; justify-content: center; gap: 10px;"> <div style="background-color: #f4a460; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">P</div> <div style="background-color: #76c7a0; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">N</div> <div style="background-color: #66a6e0; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">C</div> </div>	1.2 Transition to clean fuels and resource efficiency. 6.2 Localise water conservation and efficiency 4.1. Increase vegetation cover and permeable surfaces		Sustainable buildings, cities, and communities
City Engineers (Building Maintenance) Department				
1.	Clean construction practices in building repair and maintenance works <div style="background-color: #f4a460; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">P</div>	5.1. Curb the pollution concentration level by 20-30% by 2030	<i>No. of clean construction practices followed: In accordance with BMC’s 28-point guidelines</i> <i>No. of neighbourhoods and people benefitted</i>	<div style="display: flex; align-items: center;"> <div style="background-color: #f4a460; width: 10px; height: 10px; margin-right: 5px;"></div> <div style="background-color: #ccc; width: 20px; height: 20px; border: 1px solid #ccc; display: flex; align-items: center; justify-content: center;">L</div> </div> Better quality of life, improved health, sustainable buildings and city

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Sewerage Operations (SO) Department -				
1. ★	Procurement of Oil Free Air Compressors, Vehicle-Mounted Suction Machines, Power Rodding Machines, dewatering pumps, Power Bucket Machines C	6.5 Ensure clean, safe and accessible sanitation	Number of purchased machines: 4 each	 Avoid water-borne disease, better health, resource efficiency
2.	Efficiency enhancements in sewerage operations, infrastructure upgrades, replacement of screens and flow control systems, and modernization of ventilation systems at key pumping stations C	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Improved efficiency in sewage carrying and processing capacity</i>	 Avoid water-borne disease, better health, resource efficiency
3.	Procurement of instruments to strengthen wastewater quality monitoring C	6.3. Reducing pollution and restoring aquatic ecosystems	<i>No. of instruments planned to be installed</i> <i>No. of locations where the instruments will be installed</i>	 Avoid water-borne disease, better health, resource efficiency

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Sewerage Operations (SO) Department -				
4.	Refurbishment of sewage treatment plant 	6.3. Reducing pollution and restoring aquatic ecosystems	Capacity of STP planned to be refurbished: 10.3 MLD	 Avoid water-borne disease, better health, resource efficiency
5.	Rehabilitation of lagoons using bioremediation technology 	6.3. Reducing pollution and restoring aquatic ecosystems	No. of lagoons planned to be rehabilitated: 2	 Avoid water-borne disease, better health, resource efficiency
6.	Rehabilitation of sewer lines 	6.3. Reducing pollution and restoring aquatic ecosystems	No. of wards with planned rehabilitation projects: 21 Length of sewer lines proposed to be rehabilitated: 97.4km <i>Increase in carrying capacity of the sewer network</i>	 Avoid water-borne disease, better health, resource efficiency
7.	Systematic cleaning of sewer lines 	6.3. Reducing pollution and restoring aquatic ecosystems	<i>Total length of sewer lines planned to be cleaned</i>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">P/F stage</div> Avoid water-borne disease, better health, resource efficiency

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Mumbai Sewerage Disposal Project (MSDP)-				
1.	Design, construction, operation, and maintenance of Wastewater Treatment Facility at various locations 	6.3. Reducing pollution and restoring aquatic ecosystems	Volume of wastewater treated: 2,464 MLD No. of locations with planned WwTF: 7	 Better health and ecosystem
2.	Design and implementation of Malad and Versova Influent Pumping Stations 	6.3. Reducing pollution and restoring aquatic ecosystems	Capacity of the planned pumping stations: 2120 MLD <i>Quantity of water treated in the treatment facility</i>	 Better health and ecosystem
3.	Diversion of Dry Weather Flow from Bapat Nalla and Safed Pul Nalla to Dharavi Wastewater Treatment Plant 	6.3. Reducing pollution and restoring aquatic ecosystems	Amount of wastewater to be treated: 168 MLD	 Better health and ecosystem
4.	Recycling and reuse of wastewater 	6.2. Localized water conservation and efficiency and efficiency	Projected volume of water reused for non-potable use: 1233 MLD	 Resource efficiency, better groundwater and aquifers


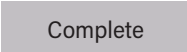

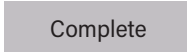
Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Environment and Climate Change Department-				
1. ★ C	Net Zero Emission Initiatives	1.2. Transition to clean fuels and resource efficiency in buildings	No. of buildings planned No. of interventions planned	P/F stage
				Sustainable buildings, cities, and communities
2. ★ N C	Green Building Initiatives as per IGBC Standards	1.3. Low carbon buildings	No. of green buildings proposed Estimated energy savings	P/F stage
				Sustainable buildings, cities, and communities
3. ★	Cool Roof Solutions	4.2. Reduce urban heat island effect	No. of buildings covered Estimated cooling energy savings	P/F stage
				Sustainable buildings, cities, and communities
4. P N C	Development of Urban Greening/ Urban Forest to reduce urban heat island effect	4.1. Increase vegetation cover and permeable surface	Area planned for greening Scientific approach to greening: Yes No. of native trees planted	P/F stage
				Better ecosystems, climate resilience, good health and well-being
5. P N C	Nature Based Solutions project/ Climate Resilient Projects	4.1. Increase vegetation cover and permeable surface	No. of wards expected to benefit Area developed through blue-green solutions	P/F stage
				Better ecosystems, climate resilience, good health and well-being

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Environment and Climate Change Department-				
6.	Provision for installation of Renewable Energy Systems at various municipal properties/ locations 	1.1. Decarbonizing Mumbai's electricity generation mix	<i>No. of systems planned to be installed</i> <i>Amount of energy generated through renewable energy systems</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Sustainable communities and cities
7.	Various measure for road dust suppression 	5.1. Curb the pollution concentration level by 20-30% by 2030	<i>Amount of dust particles expected to be reduced</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Sustainable communities and cities
8.	Battery operated Dust Suction Machines 	5.1. Curb the pollution concentration level by 20-30% by 2030	No. of battery-operated dust suction machines planned: 100 No. of Machines Planned for Installation in Each Ward: 4 <i>Projected improvement in air quality</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">M</div> Sustainable communities and cities
9.	Carbon Cutter for Diesel Generator for municipal properties 	5.1. Curb the pollution concentration level by 20-30% by 2030	<i>No. of carbon cutter planned to be installed</i> <i>No. of pollutants expected to be reduced</i>	<div style="border: 1px solid black; padding: 5px; text-align: center;">P/F stage</div> Sustainable communities and cities
10.	Provision for Hyperlocal Sensor based Network Monitoring System 	5.2. Increase information availability through monitoring	No. of sensors planned to be deployed across the city: 75[#]	<div style="border: 1px solid black; padding: 5px; text-align: center;">M</div> Climate resilience

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Transport Department				
1. ★	Mobile Toilets P	6.5 Ensure clean, safe and accessible toilets	No. of toilets planned: 24 <i>No. of people with increased access to sanitation</i>	 Good health and wellbeing, gender equality
2. ★	Installation of automated vehicle washing system N	6.2 Localize Water Conservation and efficiency	Use of recycled water- 60% Use of fresh water- 40%	 Water Conservation & Reuse
Mumbai Coastal Road Department				
1. ★	Provision for Construction works of Public Toilet & Police Chowky along side Coastal Road P	6.5. Clean, safe and accessible toilets	No. of public toilets planned: 6 nos	 Good health and wellbeing, gender equality
2. ★	Provision for Construction of World Class Central Public Park P N C	4.3. Equitable access to green open spaces	Area of planned garden: Race course plot (A,B,C) total: 120.62 acres Botanical garden: 31.36 acre Topiary garden: 60.90 acres City forest: 11.76 acres	 Better air quality, enhancing groundwater, good health

3.2.2 BEST Undertaking Budget

Table 2 | Direct Actions – Not Quantified

Sr. No.	Activity	Alignment with MCAP	Indicators for A&R	Data Quality
				Co-benefits
Transport Section				
1.	Subsidized public transport services to commuters 	2.1. Improve public transport ridership	Projected Ridership for the Financial Year: 4861600 passengers Estimated Increase in Ridership: 2751512 passengers	 Universal Access Sustainable Communities and City
2.	Establishing public electric vehicle charging stations 	2.3 100% municipal and private zero emission vehicles by 2050	No. of locations enabling access to zero-emission mobility: 3 No. of charging stations: 14	 Sustainable Communities and City

The detailed description of the climate measures and activities in Table 2 | Direct Actions - Not Quantified can be found in Annexure 2.

3.3. Enabling Actions

Enabling actions encompass measures implemented by various departments at an institutional level to develop climate-forward and focused policies. This entails building capacities, and mainstreaming climate into the existing governance system and facilitating progress towards climate resilience.

Additionally, it involves encouraging research and external expertise to drive climate innovation and support adoption of nature-based solutions such as green-blue infrastructure, cleaner fuels (e.g. electric vehicles (EVs), solar panels), sustainable sewerage management, and so on.

3.3.1 BMC Budget

Table 3 | Enabling Actions

Sr. No.	Activity	Alignment with MCAP
Environment and Climate Department		
1.	Provision for development of an Early Warning & Decision Support System for Air Pollution in Mumbai	5.2 Increase information availability through monitoring
2.	XV FC- Air pollution hotspots identification and hotspot action plan	2.3 100% municipal and private zero emission vehicles by 2050
3.	Aquifer Mapping, Geomorphological Studies, and Identification of Groundwater Percolation Hotspots to enhance Rainwater Harvesting and Groundwater Recharge initiatives	6.2 Localized water conservation and efficiency
4.	Provision of IT Infrastructure for the strengthening of the Environment & Climate Department (GIS Mapping, MIS, Advanced Software, etc.)	5.2 Increase information availability through monitoring
Disaster Management Department		
1.	★ Detailed Seismic Microzonation and Multi-hazard Vulnerability & Risk Assessment for Mumbai City & Suburbs	6.6. Disaster risk and impact reduction
Development Planning (DP) Department		
1.	Land acquisition for planning of new reserved open spaces (Recreation Grounds/ Playgrounds- R.G./P.G./ Municipal schools with playgrounds)	4.3. Equitable access to green open spaces

Sr. No.	Activity	Alignment with MCAP
Sewerage Operations (SO) Department		
1.	Condition assessment of Gravity Sewer Lines	6.3. Reducing pollution and restoring aquatic ecosystems
Mumbai Sewage Disposal Project (MSDP)		
1.	Feasibility Study for Conversion of Waste Sludge into Bio-Fertiliser and Other Beneficial Products	6.3. Reducing pollution and restoring aquatic ecosystems
Roads and Traffic Department		
1. ★	XV FC- Expert services to enhance performance of Fully Adaptive Traffic Control (FATC) Signals in city	5.1. Curb the pollution concentration level by 20-30% by 2030
Health Infrastructure Cell (HIC) (part of Public Health Department)		
1. ★	Provision for Emergency Disaster Control Center in K.B.Bhabha Hospital Kurla.	6.6. Disaster risk and impact reduction

3.3.2 BEST Undertaking Budget

Table 3 | Enabling Actions

Sr. No.	Activity	Alignment with MCAP
Electric Supply Section		
1.	Demand Side Management measures	1.1. Decarbonizing Mumbai's electricity generation mix

The detailed description of the climate measures and activities in Table 3 | Enabling Action can be found in Annexure 2.

4. Budgetary Allocations for Climate Measures in FY 2026-27

Brihanmumbai Municipal Corporation (BMC): The BMC has allocated ₹48,164.28 crore for capital expenditure in FY 2026-27, of which an estimated ₹20,730.04 crore has been allocated for climate-aligned activities, accounting 43.04% of the total capital expenditure budget. An additional ₹5387.49 crore has been allocated towards activities that integrate components aligned with the Mumbai Climate Action Plan (MCAP) such as utilizing LED lights, plantations/landscaping, rooftop solar, and decentralised sewage treatment plants in larger construction projects, accounting for

11.17% of the capital expenditure budget. The increase in this year’s amount is attributed to the inclusion of climate-relevant expenditures from new activities undertaken by BMC departments and increase in allocation towards ongoing climate-aligned works, particularly those under the urban flooding and water resource management sector. Additionally, for FY 2026-27, ₹10.56 crore from the revenue budget is climate-aligned. This includes allocations only for procurement of biomedical waste bags and bins, conducting tree census, and concession on bus fares for persons with disabilities.

Fig 11 | Percentage Split of Climate Budget, out of BMC’s Municipal Capital Budget FY 2026-27

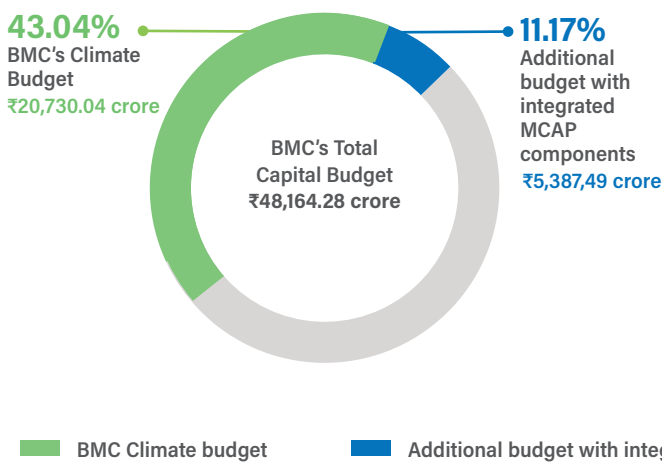


Fig 12 | Comparison of Climate Budget FY 2024-25, FY 2025-26, FY 2026-27

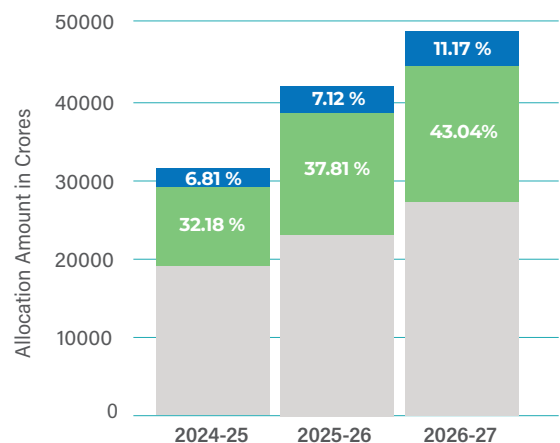
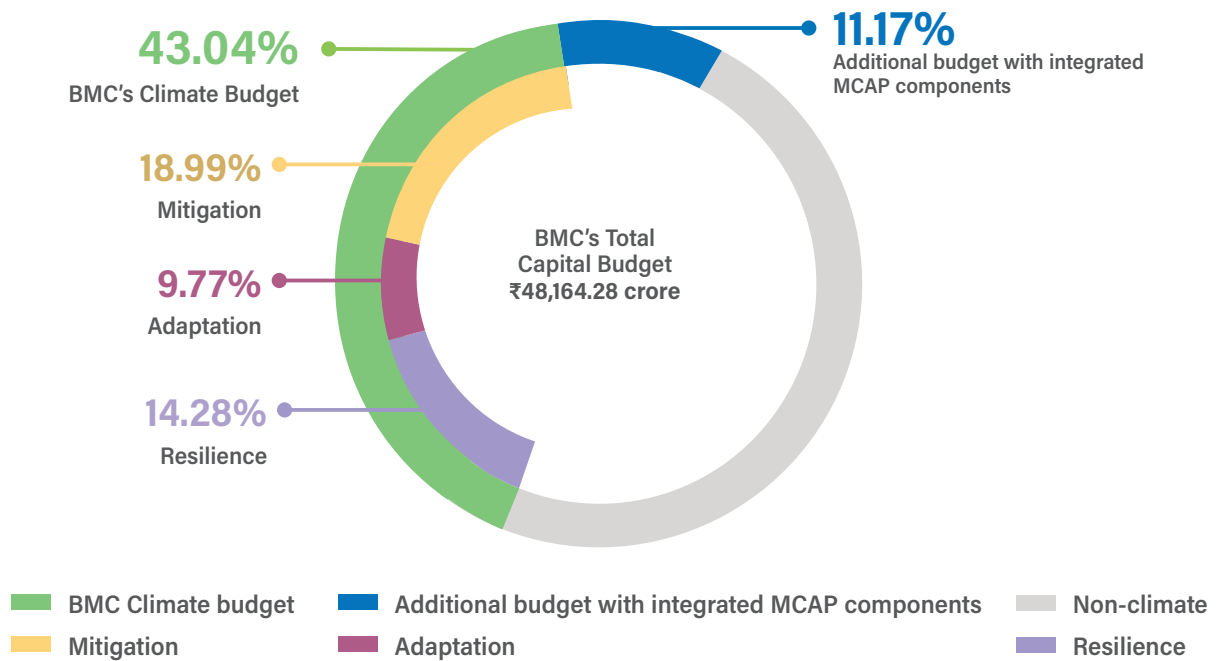


Fig 13 | Percentage split of BMC's climate budget FY 2026-27 across Mitigation, Adaptation and Resilience



BEST Undertaking: The BEST Undertaking's climate budget is expected to be Rs. 4622.14 crore in operational expenditure, Rs. 1 crore in capital expenditure, and Rs. 3941.06 crore in subsidies presented as a deficit. Therefore, out of the Rs. 7885.41 estimated operational expenditure of BEST, 61.27% is estimated to be climate-aligned.

Note: These numbers are provisional as BEST Undertaking's budget is yet to be approved.

Table 4 | **Mumbai’s climate budget, including allocations by the BMC and BEST, for the year 2026-27 is ₹ 20,731.04 crore in capital expenditures and ₹ 4632.70 crore in revenue expenditures**

Sr. No.	MCAP Sector	Sources of fund	CAPEX Budgetary Allocation B.E. (2026-27) (in crores)	% split w.r.t. total climate budget	OPEX Budgetary Allocation	Subsidy
1.	Energy & Buildings	BMC	156.67	0.76%	-	-
		BEST	1.00		940.36	-
2.	Integrated Mobility	BMC	65.00	0.31%	5.00	-
		BEST	-		3681.78	3941.00
3.	Sustainable Waste Management	BMC	968.15	4.67%	0.56	
4.	Urban Greening and Biodiversity	BMC	1369.36	6.61%	5.00	
5.	Air Quality Management	BMC	90.85	0.44%		
6.	Urban Flooding & Water Resource Management	BMC	18080.01	87.21%		
TOTAL (BMC & BEST Undertaking)			20731.04	100%	4632.70	3941.00

Similar to the last two cycles, there is significant budgetary allocation across all MCAP sectors this year. While the highest allocation has been towards the Urban Flooding and Water Resource Management sector, allocations for the Urban Greening and Biodiversity and Air Quality Management sectors have also increased notably compared to FY 2025–26. The prominence of the Urban

Flooding and Water Resource Management sector reflects its alignment with the BMC’s core urban service delivery mandate, which includes water supply, sanitation, sewage and wastewater management and stormwater management. This sector spans six key action tracks: building flood-resilient infrastructure; promoting localised water conservation and efficiency; reducing pollution and restoring

aquatic ecosystems; providing safe and affordable drinking water; ensuring access to clean, safe toilets; and mitigating disaster risks and impacts. The increase in the Urban Greening and Biodiversity allocation can be attributed to the higher allocation towards acquisition of land under Section 61 of the Mumbai Municipal Corporation Act for reservations under obligatory duties. These reservations will be particularly under the functions of parks and gardens, playgrounds, and municipal schools with playgrounds. Ensuring land availability for public open spaces is an important enabling measure aligned with Action Track 4.3:

Equitable Access to Green Open Spaces. It is also a critical component for expanding and sustaining green spaces in the future.

In contrast, sectors such as energy transition and grid decarbonisation—while critical to broader climate goals—fall largely outside the jurisdiction of the BMC and therefore have limited actionable scope under the current governance structure. However, the inclusion of the BEST Undertaking has led to an increase in allocations to the Energy and Buildings and Integrated Mobility sectors.

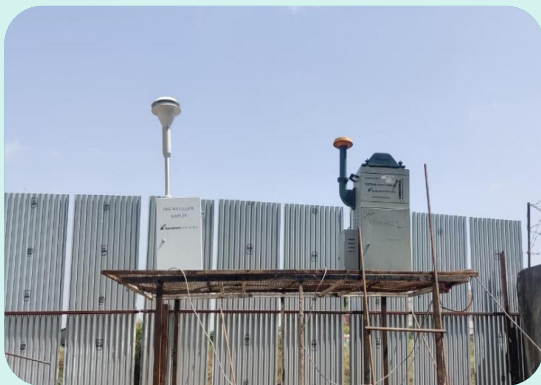


Eco-STP (Sewage Treatment Plant) at Marol Urban Forest | Photo by Sayali Lokare, WRI India

Other key climate actions undertaken by BMC

The BMC is supporting implementation of climate activities across the city through other measures, including: the Standard Operating Procedure (SoP) for energy conservation and reduction in electricity expenses by 10%, 28-points guidelines for air pollution mitigation^[6], Universal Footpath Policy^[7], Greening Mumbai manual^[8], and Mumbai Air Pollution Mitigation Plan^[9].

Since 2025, BMC has been promoting eco-friendly festivals through sustainable and environmentally responsible practices during public celebrations. Free distribution of 'shadu' soil encouraged idol makers to adopt eco-friendly materials for Ganesh and Durga idols, while immersion of idols in artificial ponds was promoted to reduce water pollution. In 2025, 298 artificial ponds were created across the city, significantly increasing eco-friendly immersions. Additionally, 10,800 liters of eco-friendly colors for idols were distributed to sculptors/ murtikars across all wards. Further, an 'Eco-friendly Festival Project' is proposed for scientific processing and recycling of immersion waste to strengthen sustainable festival management practices in Mumbai.



BMC, through its Environment & Climate Change Department, has operationalised a city-wide technology-driven construction air pollution monitoring network across Mumbai. As part of the initiative, Sensor-Based Air Quality Monitors and LED display systems have been installed at construction sites to enable indicative and hotspot-level monitoring of PM₁₀ and PM_{2.5} emissions generated from construction activities. A Central Air Quality Monitoring Dashboard System, developed in collaboration with the Council on Energy, Environment and Water (CEEW), has also been operationalised for real-time aggregation, visualisation, and monitoring of construction-site air quality data across Mumbai. The system enables ward-wise and site-specific monitoring of pollution hotspots and supports targeted enforcement and mitigation measures. Until May 2026, out of 3093 ongoing construction sites within BMC limits identified through the AutoDCR portal and data collected from ward-level, Sensor-Based Air Quality Monitors have been installed on more than 90% of construction sites. These sensors have been successfully integrated with the Central Air Quality Monitoring Dashboard System. The initiative represents one of the largest hyperlocal construction air pollution monitoring networks undertaken by an Urban Local Body in India and forms a key component of BMC's data-driven air pollution mitigation and environmental governance framework.

BMC has developed an Implementation Pathway for Addressing Heat Risks in Buildings Sector for Identified Hotspots in Mumbai^[10], with technical assistance from C40 Cities and Tarutium Global Consulting, to support implementation of heat resilience targets under the Mumbai Climate Action Plan (MCAP). The study identified heat hotspots across Mumbai through spatial analysis, field assessments, and stakeholder consultations, and developed a phased strategy focused on retrofitting existing buildings, integrating heat-resilient design and material choices in new developments, neighbourhood-level cooling interventions, and institutional integration for implementation. The pathway recommends measures such as cool roofs, passive design strategies, energy-efficient systems, shading, green cover expansion, and heat-resilient material specifications, while also emphasising worker safety during extreme heat. It further recommends governance coordination, integration in construction approvals and procurement systems, pilot implementation in municipal buildings, and dedicated monitoring and budgeting mechanisms to mainstream heat resilience across Mumbai's building sector.

BMC has prepared a Net Zero Municipal Buildings Action Plan^[11] through a collaboration between C40 Cities and Alliance for an Energy Efficient Economy, assessing the energy consumption and emissions profile of municipal buildings and identifying priority areas for improvement. The plan provides a roadmap for transitioning BMC's building portfolio toward net-zero energy and carbon targets by 2050. For existing buildings, the focus is on

net-zero energy through energy-efficiency retrofits, rooftop solar PV, and green power procurement, while new buildings target net-zero carbon through passive design, efficient appliances and systems, low-carbon materials, rooftop solar and clean energy integration. The roadmap combines phased implementation targets, innovative financing mechanisms, governance structures, and MRV systems to support large-scale adoption across schools, municipal offices, hospitals, and auditoriums. The report was launched by the Hon. Minister of Environment and Climate Change, Government of Maharashtra, during Mumbai Climate Week.

As India advances towards the vision of Viksit Bharat 2047, sustainable and climate-resilient urban infrastructure has emerged as a core priority. In response to increasing urbanization pressures and environmental challenges, the Government of India is promoting market-based financing mechanisms, including municipal bonds, to enable Urban Local Bodies (ULBs) to mobilise resources for green infrastructure. The Union Budget 2026-27 further reinforces this approach by announcing an incentive of ₹100 crore for a municipal bond issuance of ₹1,000 crore. Aligned with this national agenda, the BMC has undertaken a landmark initiative to issue Municipal Bonds/Green municipal bonds to mainly focus on projects aligning with the city's climate goals. To operationalise this, BMC has released a Request for Proposal (RfP) to engage merchant banking services to structure and manage an issuance of up to Rs. 9500 crores. This move underscores Mumbai's commitment to put its Climate Action Plan targets into motion.

Mumbai Climate Week 2026, held from February 17–19, 2026, marked India’s first dedicated platform focused on accelerating citizen-driven climate action for Mumbai, India, and the Global South. The event was centred around three interlinked themes: Food Systems, Urban Resilience, and Energy Transition. BMC co-hosted the Mumbai Climate Week 2026. The event witnessed wide participation and provided an opportunity for the BMC to engage more deeply with leadership, elected representatives, and citizens by showcasing key climate projects and communicating their associated environmental and social benefits. BMC also set up an exhibition stall showcasing the environmental and climate action initiatives undertaken by the Corporation. As part of this exhibition, an interactive engagement activity was organized, enabling citizens to interact with municipal officers and take pledges towards adopting more sustainable lifestyles.



Carbon Disclosure Project is a world’s leading environmental disclosure system for companies, cities, states, and regions to measure and manage their environmental impacts. Cities disclose their climate risks, needs, and opportunities; with an aim to attract investment for priority projects; and showcase replicable, high-impact solutions. In 2025, a total of 738 cities were scored, of which 120 cities received an ‘A’ rating. The CDP’s 2025 Cities A List demonstrates what climate leadership looks like in practice. Among these, Mumbai received an ‘A’ rating, placing it among the leading global cities recognized for their climate disclosure and environmental leadership.

The Youth Engagement initiative is organised under the National Clean Air Programme (NCAP) to strengthen youth participation in air pollution mitigation and sustainable urban development in Mumbai. The initiative focuses on awareness and action related to urban dust management, sustainable construction practices, green urban design, and cleaner public spaces through workshops, campus activities, field visits, awareness campaigns, and community engagement programmes. The programme has engaged students from more than 50 colleges through Environment and Climate Change related activities, monthly workshops, and IEC initiatives aimed at empowering eco-warriors and promoting

Mission LiFE among future generations. The initiative aims to develop responsible citizens and encourage active participation towards creating a cleaner, healthier, and climate-resilient Mumbai in alignment with the objectives of NCAP and the Mumbai Climate Action Plan (MCAP).

In 2026, BMC through its Gardens Department has initiated the process of conducting a comprehensive citywide tree census. The census captures detailed information on individual trees, including approximately 22–29 attributes such as species name, girth, height, health condition, and precise geolocation using latitude-longitude mapping. As part of efforts to improve tree risk assessment and conservation practices, BMC is also piloting the use of Ground Penetrating Radar (GPR) technology to assess root structure and tree stability. In parallel, drone-based surveys are being conducted to monitor and assess the city's green cover. This initiative is contracted to enable the creation of a robust, geospatially enabled database to inform urban greening, biodiversity conservation, and climate resilience efforts across Mumbai.

BMC, with support from WRI India, is facilitating the transition of Mumbai's bakeries from conventional to clean fuels while minimizing livelihood impacts. Led by the Environment and Climate Change, Public Health, and Building & Factory departments, the initiative has established a coordinated governance framework involving over 20 agencies to support implementation and stakeholder engagement. As part of the effort, awareness and capacity-building programmes reached

more than 750 bakery owners and operators through workshops and camps. A ready reckoner (in Marathi, Hindi, and English) was also developed and distributed, providing guidance on the benefits of clean fuel adoption, required modifications, and available support mechanisms. Of the 593 bakeries assessed, 239 were already using clean fuels, while 354 relied on conventional fuels. Through targeted outreach and technical support, 252 of these 354 bakeries (71.1%) successfully transitioned to clean fuels, contributing to improved air quality and reduced emissions across the city.

To strengthen citizen participation in solid waste management and promote sustained cleanliness practices across the city, BMC has launched the 'Mumbai Swacchata Sankalp 365' campaign, a year-long cleanliness initiative encouraging housing societies, schools, hospitals, gardens, and commercial establishments to adopt and demonstrate best practices in waste management. The campaign aims to improve source segregation, on-site composting, recycling, waste reduction, and overall cleanliness standards. Performance will be assessed through a transparent third-party evaluation process, and cash prizes will be awarded to recognize and incentivize

5. Monitoring, Evaluation and Reporting (MER) for Climate Budget 2025-26

5.1 Objectives and integration process

Building upon the pilot exercise undertaken last year, the Environment and Climate Change Department revised the Monitoring, Evaluation, and Reporting (MER) process for the current cycle based on feedback received from participating departments. To improve feasibility and reporting efficiency, departments suggested that data collection be conducted on a biannual basis, with reporting undertaken once every six months instead of quarterly. Revised MER templates were accordingly prepared and shared with departments. One-on-one consultations were also conducted with departments to provide guidance and support for the MER data collection and reporting process.

The objective of the MER process is to enable departments to systematically track, and report expenditures, implementation progress, and outcomes associated with climate-relevant projects and activities. The process will also support the tracking of progress against key Mumbai Climate Action Plan (MCAP) indicators, strengthening the use of the municipal budget as a tool for monitoring climate investments, and informing the prioritization and planning of future climate actions across departments.

The section below provides a summary of the progress of the Climate Budget for FY 2025–26.

5.2 Summary

5.2.1 Progress of Climate Budget FY 2025-26

BMC's Climate Budget for FY 2025–26 included ₹16,321.33 crore under capital expenditure and ₹5.63 crore under revenue expenditure. In addition, ₹3,074.08 crore was allocated towards larger capital works projects that include climate-related components aligned with the Mumbai Climate Action Plan (MCAP), such as rainwater harvesting systems and sewage treatment plants.

Financial achievement is calculated for ₹16,022.34 crore capital expenditure. The remaining ₹298.99 crore capital expenditure pertains to specific projects—such as hospital infrastructure and non-motorized transport works—where only the climate-related portion of the project cost was included in the climate budget. For example, in the Redevelopment of Bhagwati Hospital Complex project (R/C Ward), only climate-related components such as Integrated Building Management Systems and Solar Water Heating Systems were considered. However, expenditure and project progress for these projects are currently tracked only at the overall project level and not separately for the climate-related components. Therefore, expenditure specifically attributable to climate-related interventions could not be separately identified and has not been included in the financial achievement calculation. Revenue expenditure progress is also presently not being tracked.

Financial Progress

- Budget Estimate for FY 2025–26 (BE): ₹ 16,022.34 crore
- Revised Estimate FY 2025-26 (RE): ₹ 16,242.75 crore
- Total Expenditure as of March 31, 2026: ₹ 12,654.54 crore

Financial Achievement (%): Total Expenditure as of March 31, 2026 / Revised Estimate of Climate Budget FY 2025-26 (RE) = **77.91%** of the allocated Climate Budget (RE 2025-26) utilized

Physical Progress of Climate Budget Fy 2025-26

Colour	Status	Number of activities	Expenditure details as of 31st March 2026
	Completed / Nearing Completion / On Track	143	₹ 2384.12 crore
	Ongoing with partial completion	195	₹ 10239.75 crore
	Tender Invited/ tender Initiated	42	₹ 26.12 crore
	Token Provision	60	₹ 4.3 crore
	Cancelled	19	₹ 0.15 crore

5.2.1 Progress of of Additional Budget with Integrated MCAP Components

The FY 2025-26 climate budget had also identified an additional 7.12% budget that had been allocated towards general infrastructure projects—such as new buildings or reconstruction works—that, while not labelled as climate projects, include important climate-friendly features from the Mumbai Climate Action Plan, such as utilizing LED lights, plantations/landscaping, rooftop solar, and sewage treatment plants in new constructions. The progress of those activities is as follows:

Financial Progress

- Total 7.12% Additional Capital Budget incorporating the MCAP Components FY 2025–26 (BE): ₹ 3074.08 crore
- Revised Estimate of Climate Budget FY 2025-26 (RE): ₹ 3570.58 crore
- Total Expenditure as of March 31, 2026: ₹ 3065.13 crore

Financial Achievement (%): Total Expenditure as of March 31, 2026 / Revised Estimate of Climate Budget FY 2025-26 (RE) = **85.84 %** of the additional budget (RE 2025-26) utilized

Physical Progress of additional budget with integrated MCAP components

Colour	Status	Number of activities	Expenditure details as of 31st March 2026
■	Completed / Nearing Completion / On Track	2	₹ 0.92 crore
■	Ongoing with partial completion	20	₹ 3060.88 crore
■	Tender Invited/ tender Initiated	6	-
■	Token Provision	4	₹ 3.27 crore
■	Cancelled	2	-



5.2.3. BEST Undertaking Budget

Electric Supply

For Electric Supply works, figures presented correspond to FY 2025–26.

- Total Climate Budget Estimate for FY 2025–26 (BE): Rs. 2 crore under capital expenditure and Rs. 475.46 crore under operating expenditure.
- Total Expenditure reported as of March 31, 2026 (Actual): **Rs. 436.77 crore** under operating expenditure.






Transport

For Transport works, expenditure figures presented correspond to Actual FY 2024–25. While climate budget reporting for Transport activities commenced in FY 2025–26, the expenditure figures for FY 2024–25 have been presented for recurring expenditure heads to provide indicative expenditure trends for ongoing climate-relevant services and operations.


- Total Climate Budget Estimate for FY 2025–26 (BE): Rs. 744.79 crore under capital expenditure, Rs. 2787.88 crore under operating expenditure, and Rs. 2517.86 crore under subsidies.
- Total expenditure reported as of March 31, 2025 (Actual FY 2024–25): Rs. 1529.295 crore under operating expenditure and Rs. 2517.86 crore under subsidies.



As the budget estimates and expenditure figures correspond to different financial years and expenditure categories, a direct assessment of financial achievement against the allocated climate budget has not been presented. This is because the BEST Undertaking budget is currently provisional and in the process of finalization.



Physical Progress


Colour	Status	Number of activities
	Completed / Nearing Completion / On Track	2
	Ongoing with partial completion	1
	Tender Invited/ tender Initiated	NA
	Token Provision	2
	Cancelled	NA



5.2.4 MCAP Outputs achieved from FY 2025-26 Budget Expenditure [ix]



Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
Potential Annual Greenhouse Gas Emissions Saving based on Completed Works (where available)			FY 2025-26: 5.59 million tonnes CO2e
			-
Energy and Buildings			
BE 2025-26 - CAPEX- BMC- ₹ 226 crore OPEX BEST- ₹ 475.46 crore Expenditure as of March 31, 2026 (estimated)- CAPEX- BMC- ₹ 122.95 crore OPEX- BEST Undertaking ₹ 436.77 crore 	1.1 Decarbonizing Mumbai's electricity generation mix	Units of renewable energy in electricity mix (BEST Undertaking)	FY 2025-26: Renewable power purchased: 1739.13 Million Units As of FY 2024-25: <ul style="list-style-type: none"> Renewable energy- 8.59 lakh MWh, Non- renewable energy- 31.43 lakh MWh
		No. of MW renewable energy capacity installed in municipal buildings	FY 2023-24: <ul style="list-style-type: none"> 0.055 MW (4 schools, 1 municipal building) FY 2024-25: <ul style="list-style-type: none"> 0.453 MW (4 municipal buildings, 5 schools, 3 gardens)
			-
		Buildings with Solar PV installed (BEST Undertaking)	-
	1.2 Transition to clean fuels and resource efficiency in buildings	Transition of laundry steam generation systems from conventional fuels to PNG-based systems	FY 2025-26 <ul style="list-style-type: none"> 40 connections (Mahalakshmi Dhobighat) replacing approx 60 tonnes/year of traditional fuel
		Number of environmentally friendly cooling systems installed in municipal buildings	FY 2024-25: <ul style="list-style-type: none"> 55 AC units having 134-a refrigerant
			-
		Number of green buildings/ No. of ECBC-compliant buildings	FY 2025-26: <ul style="list-style-type: none"> 1 ward building certified (G/S)
			-
			FY 2025-26:


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)	
			City wide status	
		Energy efficiency measures	<ul style="list-style-type: none"> HVAC (Water Cooled Chiller System) Chiller System- 1 project Integrated Building Management System (IBMS)- 2 projects Solar Water Heating system- 1 project Replacement of traditional lights to LED lighting- 4 projects 	
		-		
Sustainable Mobility				
BE 2025-26 CAPEX- BMC- ₹237.48 crore BEST- ₹ 744.78 crore BEST OPEX- 2787.88 crore Subsidies- ₹ 2132.51 crore Expenditure as of March 31, 2026 - BMC- CAPEX- ₹ 8.97 crore (reported) BEST Undertaking- NA 	2.1 Improve Public Transport Ridership	Average Annual Bus Service Ridership	-	
		FY 2024-25:	<ul style="list-style-type: none"> 2828357 riders 	
			Number of Persons with Disabilities benefiting from subsidised bus services	FY 2025-26: <ul style="list-style-type: none"> BEST Undertaking- 337935 4.67 Lakh tickets reimbursed on an average per month
		2.2 Access to non-motorized transport (NMT) and infrastructure	Length in Kilometres of Walking and Cycling Infrastructure (km)	FY 2023-24: <ul style="list-style-type: none"> 40.67 km Footpaths improved 18 km along trunk mains newly built
	FY 2024-25: <ul style="list-style-type: none"> 1.66 km FOB/Skywalks reconstructed/repaired 			
				FY 2025-26: <ul style="list-style-type: none"> Footpath improvements in Zones I and II 10 pedestrian bridge projects (minimum estimated achievement)
	2.3 100% municipal and private zero emission vehicles by 2050	% of EV Buses of All Buses	FY 2025-26: 221 wet-leased buses received FY 2025-26: <ul style="list-style-type: none"> 1313/ 2787 fleet (47.11%) 	
		% of EVs in Municipal Vehicles	FY 2023-24 and FY 2024-25: <ul style="list-style-type: none"> 41 EV cars procured 	
			As of FY 2024-25: <ul style="list-style-type: none"> 18% of Municipal Personal Carriers (cars) are EVs 	
			FY 2024-25:	


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
		No. of EV Charging Stations in the City	<p>City wide status</p> <ul style="list-style-type: none"> 17 Charging Stations for municipal use <p>FY 2025-26:</p> <ul style="list-style-type: none"> 2 charging stations for public use by BEST <p>FY 2025-26:</p> <ul style="list-style-type: none"> BEST Undertaking: 53 charging stations operational for Public Use; <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> 25 charging stations for municipal use; 483 total public charging stations in city
Sustainable Waste Management			
<p>BMC-</p> <p>BE 2025-26- ₹ 322.49 crore</p> <p>RE 2025-26- ₹ 375.47 crore</p> <p>Expenditure as of March 31, 2026 - ₹ 206.81 crore</p> <div style="text-align: center;">  </div>	3.1 Reducing landfilled waste	Enhancement in waste processing capacity	<p>FY 2024-25:</p> <ul style="list-style-type: none"> Construction and Demolition Waste- 1200 TPD (2 plants) Domestic Hazardous Waste- 24 TPD (8 units) Decentralised bio-methanation plant- 2 TPD <p>FY 2025-26:</p> <ul style="list-style-type: none"> Quantity of C&D waste processed: 197373 MT <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> Estimated waste generation- 6640 TPD (4820 wet waste, 1820 dry waste) Waste collected- 6638 TPD Installed Processing Capacity <ul style="list-style-type: none"> Bioreactor landfill- 6000 TPD Dry waste- 688.2 TPD (1 MRF+ 47 dry waste centres) Wet waste- 570 TPD (1 composting plant, 1 vermicomposting plant and 3 OWCs) Refuse Derived Fuel (RDF)- 1000 TPD Operational capacity: <ul style="list-style-type: none"> Bio-reactor landfill- 5298.71 TPD


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			<p>City wide status</p> <ul style="list-style-type: none"> o Dry waste - 688.2 TPD o Wet waste- 537.5 TPD o RDF- 544.8 TPD <p>Waste going to landfill- 850 TPD (12.8% of collected waste)</p>
	3.2 Decentralized waste management - Recycle/ Compost at the local level	Manure generation from composting/ % of organic waste composted	<p>FY 2023-24:</p> <ul style="list-style-type: none"> ● 2433.28 MT from organic waste convertor at markets ● Rebate of Rs.67500/- per month to BMC
		Informal workers included in SWM process	-
			<p>As of FY 2024-25:</p> <ul style="list-style-type: none"> ● Informal waste workers included in dry waste processing centres- 840
		% of recovery through Decentralized waste management (segregation, recycling and composting)	<p>As of FY 2024-25:</p> <ul style="list-style-type: none"> ● Installed capacity: <ul style="list-style-type: none"> o Dry waste centres- 47 o Daily waste intake capacity- 188.2 TPD o Area- 78662 sq.m. o Weighing- 40 o Shredding-8 o Baling- 11 ● Wet waste: <ul style="list-style-type: none"> o Vermicomposting- Cooper Hospital- 1 TPD o Bio-methanation- 2 units- 4 TPD
	3.3 Remediation and scientific management of landfills	% of Remediation of all existing dumpsites and scientific disposal of waste	<p>FY 2025-26:</p> <ul style="list-style-type: none"> ● Mulund dumpsite remediation- 58.68 lakh MT
		Landfill gas captured at Kanjurmarg Bioreactor Landfill Facility	<p>As of FY 2024-25:</p> <ul style="list-style-type: none"> ● Daily Average of Landfill Gas Collected: 13280 M³


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
		(landfill with final cover and active gas collection)	<ul style="list-style-type: none"> • Daily Average of Landfill Gas Flared: 7345 M³ • Daily Average of Electricity Generated: 10641 Units • 95% gas collection efficiency (GHG inventory 2022-23)
Urban Greening and Biodiversity			
<p>BMC</p> <p>BE 2025-26 - ₹ 383.75 crore</p> <p>RE 2025-26- ₹ 329.95 crore</p> <p>Expenditure as of March 31, 2026 - ₹ 201.38 crore</p> 	<p>4.1. Increase vegetation cover and permeable surface</p> <p>4.2. Reduce urban heat island effect</p> <p>4.3. Equitable access to green open spaces</p>	<p>Central Medians/Traffic Islands Vegetated and Beautified</p> <p>Green cover expansion</p> <p>R.G., P.G, and Garden Plots developed/beautified/upgraded in Mumbai City and Suburbs</p> <p>Area acquired for Public Open Spaces</p>	<p>-</p> <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> • 515 central medians/traffic islands across the city • Area- 252645 sqm (25.2 ha) <p>FY 2024-25:</p> <ul style="list-style-type: none"> • 3.2 acres of Forest Development in Marol – planting 700 indigenous trees and 199 species of flora <p>FY 2025-26:</p> <ul style="list-style-type: none"> • High-density plantation: 21,373 trees planted across 13,850 sq. m. using the Miyawaki method (CSR projects) • 550 persons trained on technical and scientific greening approaches • Number of Miyawaki/Urban Forest projects implemented in the city- 64 <p>FY 2024-25:</p> <ul style="list-style-type: none"> • 291273.14 sq.m. (32 plots) <p>FY 2025-26 (minimum estimated achievement):</p> <ul style="list-style-type: none"> • 159929.37 sq.m. (25 plots) <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> • Total no. of plots: 1790 • Area: 6255235 sq.m. (625 ha) <p>FY 2024-25:</p> <ul style="list-style-type: none"> • 8604.56 sq.m. <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> • Total Open Space: 659262.53 sq.m. (65.93 ha) • Total of Open Space + other infrastructure: 30030.95 sq.m. (3 ha)


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status <ul style="list-style-type: none"> Total reserved area for green open spaces in the city planned for acquisition: 1911 ha
		Per Capita Open Space	<p style="text-align: center;">-</p> <ul style="list-style-type: none"> 6.13 sq.m. Open Space/Per Capita - planned in RDDP 2034 As of FY 2024-25: <ul style="list-style-type: none"> Existing Scenario - 2.37 sq.m. Open Space/Per Capita
		% Residents within a 5-min walk to a park	<p style="text-align: center;">-</p> <ul style="list-style-type: none"> Spatial assessment- RDDP 2034 Map 24- pg. 418¹
Air Quality			
BE 2025-26- ₹ 102.25 crore RE 2025-26 - ₹ 62.94 crore Expenditure as of March 31, 2026 - ₹ 32.73 crore 	5.1 Curb the pollution concentration level by 20-30% by 2030	Number of bakeries converted to clean fuel use	FY 2025-26: <ul style="list-style-type: none"> Bakeries that have converted to clean fuel use: 252 / 354 (baseline) 82.7% bakeries in BMC limits using clean fuel
		Number of eco-friendly incinerators	FY 2023-24 and 2024-25: <ul style="list-style-type: none"> 9 Piped Natural Gas (PNG) incinerators with Air Pollution Control Systems (APCS) (including 1 animal incinerator)
		Air Pollution Control Systems at crematoriums	FY 2024-25: <ul style="list-style-type: none"> 6 installed + 3 retrofitted FY 2025-26: <ul style="list-style-type: none"> 1 installed (carbon cutter system) As of FY 2024-25: <ul style="list-style-type: none"> PNG pyres with APCS- 31 Electrical pyres with APCS- 8 Wood pyres- 207 Wood pyres with Air Pollution Control (APC) systems- 204
		Number of mechanical power sweeping machines purchased	Previous FYs: <ul style="list-style-type: none"> 7 e-sweepers FY 2025-26: <ul style="list-style-type: none"> 9 e-sweepers As of FY 2024-25:


Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
	5.2 Increase information availability through monitoring		City wide status
			<ul style="list-style-type: none"> 9% tools for mechanised sweeping
		Air Quality Monitoring at Construction Sites	FY 2025-26: Number of sensor-based air quality monitors integrated with the Central Air Quality Monitoring Dashboard System: 2568
		No. of monitoring stations installed per year	FY 2025-26: 85.48% construction sites in BMC limits installed sensor-based air quality monitors
		Population covered by monitoring and modelling systems	FY 2022-23: <ul style="list-style-type: none"> 5 no. Continuous Ambient Air Quality Monitoring Stations (CAAQMS) 5 no. CAAQMS stations (BMC) 14 no. CAAQMS stations (MPCB) 9 no. CAAQMS stations (IITM) Total - 28
Urban Flooding & Water Resource Management			
BE 2025-26 - ₹ 15048.43 crore RE 2025-26 - ₹ 15388.83 crore Expenditure as of March 31, 2026 - ₹ 12141.7 crore	6.1 Build flood resilient systems and infrastructure	Flood resilient infrastructural units in the city	FY 2025-26 (minimum estimated achievement) <ul style="list-style-type: none"> 3 Holding Tanks - Milan Subway, Andheri (30,000 m³ capacity); St. Xavier Playground, Dadar (28,000 m³ capacity); and Pramod Mahajan Garden, Dadar (36,000 m³ capacity) 8 rehabilitation and reconstruction projects 3 retaining walls 3 training, widening and augmentation 1 new construction As of FY 2024-25:

Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
			<ul style="list-style-type: none"> ● Storm water drainage network: <ul style="list-style-type: none"> ○ Major nallahs (> 1.5 m dia.): 281.01 km ○ Minor nallahs (< 1.5 m dia.): 1039.06 km ○ Mithi River nallahs: 19.1 km ○ Drains (arch/box; roadside open; closed pipes or dhapa): 3290.56 km ○ 6 major pumping stations; 10 mini pumping stations + 1 Pumping station at Dharavi T Junction with Gate Pump Technology ● Current planned works: <ul style="list-style-type: none"> ○ Projects under BRIMSTOWAD-II undertaken to support the management of rainfall, of 50 mm/hour intensity and a run-off coefficient of 1. (30/38 planned works completed)
		Flooding spots tackled	FY 2024-25: 25 FY 2025-26: 10
			As of FY 2024-25: <ul style="list-style-type: none"> ● Total flooding spots – 498 ● Flooding spots tackled till date- 403
		Volume of rainwater harvesting structures created at municipal properties (water retention capacity created)	FY 2025-26: <ul style="list-style-type: none"> ● 4 rainwater harvesting pits in schools FY 2024-25: <ul style="list-style-type: none"> ● 8595 cu.m.
Volume of water reused/recycled through decentralised treatment	FY 2023-24: <ul style="list-style-type: none"> ● 40 MLD (reused at Panjrapur Water Treatment Plant) As of FY 2024-25: <ul style="list-style-type: none"> ● 55.3 MLD 		

Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
	6.3 Reducing pollution and restoring aquatic ecosystems	Waterbodies rejuvenation	FY 2025-26: <ul style="list-style-type: none"> ● Dingeshwar Lake: Rejuvenation, diversion of dry weather flow and beautification completed.
		Powai Lake: FY 2023-24: <ul style="list-style-type: none"> ● Sewage ingress prevention: <ul style="list-style-type: none"> ○ 16 gates at outfall points replaced ○ 2 barge-monitored aspirator aerators ○ Outfalls meeting discharge standard FY 2024-25: <ul style="list-style-type: none"> ● 7 floating aerator fountains installed ● 6 Dissolved Oxygen monitoring stations being operated 	
		-	
		Installed Wastewater Treatment Capacity	FY 2022-23 & 2023-24: 2 STPs- 9 MLD
			As of FY 2024-25: 9 STPs- 2740.5 M.L.D.
		Enhancement in level of wastewater treatment	FY 2022-23 & 2023-24: <ul style="list-style-type: none"> ● 37 MLD (Colaba STP) FY 2024-25: <ul style="list-style-type: none"> ● Rehabilitation with Bioremediation technology of lagoons at Versova, Ghatkopar, Bhandup and Malad, until all planned WWTF enhancements completed. ● Outfalls of aerated lagoons meeting discharge standards Planned enhancements with commissioning dates in WWTFs: Versova- 180 MLD- 04/07/2026 Ghatkopar- 337 MLD- 04/07/2026 Bhandup- 215 MLD- 22/08/2026 Worli- 500 MLD- 04/07/2027 Bandra- 360 MLD- 04/07/2027 Dharavi- 418 MLD- 04/07/2027 Malad- 454 MLD- 04/07/2028

Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
		Volume of centrally treated water	FY 2022-23 & 2023-24: <ul style="list-style-type: none"> 36 MLD
		Improvements in sewage network	As of FY 2024-25: <ul style="list-style-type: none"> 9 STPs- 1384.61 MLD FY 2024-25: <p>Man entry sewer lines (diameter > 900 mm)- 3.5 km rehabilitated</p> <ul style="list-style-type: none"> Non- man entry sewer lines (diameters < 900 m) - 42 budget activities pertaining to laying sewer lines completed (over 70 distinct project works) 23.8 km sewer lines laid (available for 19 budget activities) As of FY 2024-25: <ul style="list-style-type: none"> 96.28 km (man entry- 45.79 km) sewer lines rehabilitated till date Man entry sewer lines length - 181 km Non- man entry sewer lines length- 1899 km Total sewer network in Mumbai- 2080 km
		Number of suction machines purchased for sewer cleaning	FY 2024-25: <ul style="list-style-type: none"> 5 FY 2025-26 (minimum estimated achievement): <ul style="list-style-type: none"> 7 robotic sewer cleaning machines 26 vehicle mounted desilting machines 4 modified power bucket machines 6 dewatering auto prime pumps 2 DGPS base stations and 8 handheld rovers As of FY 2024-25: <ul style="list-style-type: none"> 84 suction machines
		Eco-friendly festival	FY 2025-26: <ul style="list-style-type: none"> 98% of Ganesh Idol immersions were successfully diverted to 298 artificial lakes
		6.4 Safe and affordable drinking water	Primary network improvements

Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
			<ul style="list-style-type: none"> Carrying capacity- 9.89 ML (available for 1 project) <p>FY 2024-25:</p> <ul style="list-style-type: none"> 1 project completed
		Water Treatment	<p>As of FY 2024-25</p> <ul style="list-style-type: none"> Primary network (water source to treatment plant)- 500 km Secondary network (treatment plant to service reservoir)- 1000 km Tertiary network (from service reservoir to service connections)- 6000 km <p>FY 2024-25:</p> <ul style="list-style-type: none"> Works completed to strengthen primary network, upgrade chlorine motive water lines, and water reclamation—enhancing treatment efficiency at: <ul style="list-style-type: none"> Bhandup WTP: Rated Capacity 2,810 MLD (1,910 MLD + 900 MLD) Panjarapur WTP: Rated Capacity 1,365 MLD <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> 4 Water Treatment Plants- 4283 MLD
		Water storage and distribution (tertiary network)	<p>FY 2024-25:</p> <ul style="list-style-type: none"> 36 unique project works related to distribution completed 3 Kg/Hr Electro Chlorination Plant at Pali Hill Reservoir. <p>FY 2025-26:</p> <ul style="list-style-type: none"> Completed works related to leakage and contamination reduction, laying and replacement of water mains, removal of stub mains and bunch connections, upgrades to water storage tanks and pumping systems, and online boosting. Supply improvements in wards A, B, E, H/East, H/West, K/East, K/West, L, M/East, M/West, N,

Financial Progress	MCAP Action Tracks	Monitoring Indicators	Key Outputs by Financial Year (FY)
			City wide status
			<p>P/South, P/North, R/South, R/Central, R/North, S & T wards.</p> <p>As of FY 2024-25:</p> <ul style="list-style-type: none"> Water demand- 4664 MLD Water supply- 4000 MLD Connection Holders- 4,08,492 66.6% slum connections
	6.5 Clean, safe and accessible toilets	Number of new toilets developed	<p>FY 2024-25:</p> <ul style="list-style-type: none"> 50 community toilet blocks (~1000 seats) <p>FY 2025-26:</p> <ul style="list-style-type: none"> 113 toilet blocks (2373 toilet seats) (Slum Sanitation Programme- Lot 12)
			<p>As of FY 2024-25:</p> <ul style="list-style-type: none"> Total Community toilets in Mumbai- 8173 <p>FY 2025-26:</p> <ul style="list-style-type: none"> Under Slum Sanitation Programme- Lots 10, 11 and 12- >943 toilet blocks (21373 toilet seats)
			<p>FY 2024-25:</p> <ul style="list-style-type: none"> 558 10% planned coverage in community toilets 80% coverage in schools
	6.6 Disaster risk and impact reduction	Coverage of viewing centres	-
			<ul style="list-style-type: none"> 24 wards
	City Resilience	Dispensary Cooling Rooms for heat relief	-
			<ul style="list-style-type: none"> 90

5.3. Completed Works through Other Sources of Funds

Wards

In July 2025, BMC's G/South Ward Office received the prestigious Indian Green Building Council (IGBC) Gold Certification, valid for a period of three years, in recognition of its implementation of sustainable and environmentally responsible building practices. Key interventions undertaken at the facility include the installation of a 20 kW solar power system, a 10 kilolitre-per-day sewage treatment plant for on-site wastewater recycling, and a 131 cubic metre rainwater harvesting system. The building also incorporates LED lighting, water-efficient fixtures with floor-wise flow meters, 100% waste segregation supported by an organic composting unit, and the use of eco-friendly cleaning agents, contributing to improved resource efficiency and environmental performance.

XV Finance Commission Grants (2020–2026)

Recognizing the growing importance of climate action and air quality improvement, the XV Finance Commission established the Air Fund and Water Fund to support city-level initiatives. Mumbai is utilizing these funds - channelled via BMC's Environment and Climate Change Department partial and full implementation of key climate and environmental measures.

XV Finance Commission Air Fund

Total Allocation (FY 2020-21 to FY 2025-26): ₹1240.25 Cr

Funds Received (FY 2020-21 to FY 2025-26): ₹1052.32 Cr

Key completed initiatives, among others:

- Procurement of 685 electric buses (of 2,100) and 50 electric double-decker buses (of 200) through BEST Undertaking.
- Installation of PNG-based crematoriums at 8 locations including Shivaji Park, Jogeshwari, Sion, and others, with 2 additional sites ongoing.
- Deployment of Outdoor Dust Mitigation Units (ODMUs) and Dust Monitoring Systems at 5 locations by the SWM department.
- Solar power installations of 80 kW capacity at ward-level offices and for street lighting.
- Installation of 5 Continuous Ambient Air Quality Monitoring Stations (CAAQMS) across the city.
- Development of Green Cover/Space, Green Medians, etc at various locations in Mumbai.

XV Finance Commission - Improvement of Water Supply, Sanitation & SWM

Total Allocation (FY 2020-21 to FY 2025-26): ₹ 2141.58 Cr

Funds Received (FY 2022-23): ₹ 980.44 Cr

Key initiatives:

- Rainwater harvesting systems installed at various MCGM facilities – gardens, hospitals, schools, and ward offices of total capacity 8514 cu.m. (Completed)
- Rejuvenation of urban water bodies, including Sion Lake, Sheetal Lake, and Dingeswar Lake
- Construction of 25 Suvidha Kendras – Smart Sanitation Facilitation Centres across the city
- 180 MLD Versova Wastewater Treatment Facility with 50 % Recycling & Reuse Facility.
- Improvement to the sewerage system in key areas

Several ongoing projects under both funds are detailed in Chapter 3. Disbursements for FYs 2023–24, 2024–25, and 2025–26 are performance-based.

Corporate Social Responsibility Funds

Key initiatives:

- High-Density Plantations (Miyawaki Method)- 26,550 trees planted across 13,850 sq. m at Marol (K/S ward), Gorwaswadi Maidan (R/S ward), Pt. Dindayal Upadhyay Marg Powai (S ward), Govandi near Police Station (M/E ward).
- Solar benches installed at Jogger’s Park, Bandra (H/W ward).
- Dustbins, garden fencing and benches made from recycled plastic supplied at Swatantrya Sainik Garden (M/W ward).

Following the pilot implementation of the MER process last year and its continuation in the current cycle, the need for improved standardization of departmental data reporting processes was identified. Accordingly, efforts are being undertaken to strengthen and streamline reporting formats and data collection practices across departments, which will continue to be adopted and refined in subsequent reporting cycles.

6. Way Forward



As the Climate Budget process enters its third year, the focus is gradually evolving toward strengthening institutionalization, implementation, and integration across governance systems. Building on the learnings and progress made through departmental consultations and continued leadership engagement, the process continues to support the mainstreaming of climate considerations within municipal planning, budgeting, procurement, and project implementation systems. Continued refinement of methodologies and integration of climate-responsive approaches into routine processes are envisioned to strengthen long-term ownership across departments. Additionally, continued leadership engagement and gradual evolution of procurement and financial systems is expected to further institutionalize climate-responsive planning and implementation within the municipal governance framework.

The engagement and data collection process for climate budgeting continues to remain extensive and iterative; however, it has enabled greater ownership of the Mumbai Climate Action Plan (MCAP) across BMC departments, leading to increased dialogue and efforts to undertake climate-aligned projects and activities. Engagement with parastatal agencies, initiated in the previous cycle, a step toward broader citywide climate governance, have supported coordination across agencies and enabled a more comprehensive understanding of climate-related actions and investments across the city. However, integrating multiple agencies into a common climate budgeting framework remains a systemic challenge due to differing mandates, administrative structures and leadership, and

budgeting processes across institutions. BMC will continue encouraging parastatal agencies to undertake climate budgeting exercises to better assess the climate alignment of their work and identify opportunities for strengthening climate action and inter-agency coordination.

Climate action areas that currently receive comparatively lower allocations—such as passive thermal comfort measures in buildings, expansion of green cover to address urban heat stress, and strengthening community health resilience through decentralized planning approaches—are envisioned to receive greater focus in the coming years.

The continuation of the Monitoring, Evaluation, and Reporting (MER) framework, which was piloted in the previous cycle and adapted further this year, along with reporting across adaptation, resilience and equity indicators, represents an important step toward strengthening accountability and improving the assessment of climate action outcomes. Future iterations of the process will focus on refining indicators, improving departmental reporting systems, and strengthening the linkage between financial allocations, implementation progress, and measurable climate outcomes. Therefore, strengthening the collection, management, and reporting of climate-relevant data across departments will remain an important area of focus to enable long-term assessment of climate outcomes and impacts.

The development of more structured and standardized systems for climate-related data collection and reporting will be undertaken going forward to support improved tracking of climate interventions over time, while also



strengthening evidence-based decision-making, interdepartmental coordination, and outcome-oriented climate action.

This cycle marked an important step toward deeper climate mainstreaming through pilot ward-level engagement aimed at advancing more localized climate action. As ward-level administrative and budgeting systems differ from central departmental processes, pathways for integrating climate considerations at the ward level will continue to be explored. This is envisioned to be undertaken through identification of local climate priorities and by moving from broader budgeting and planning exercises toward project identification and development in subsequent cycles. Sensitization workshops conducted with ward officials during this cycle helped build understanding of the process and initiated discussions on possible pathways for institutionalization at the local level. Going forward, strengthening localized climate governance and implementation readiness will remain important areas of focus. Further, planned engagement with ward-level administrative systems and local representatives is expected to support improved identification of area-specific climate priorities and enable more equitable climate-aligned budget allocations across the city.

Additionally, BMC has been undertaking efforts to strengthen engagement with private

entities and citizens. Through the Participate Mumbai initiative led by the Deputy Municipal Commissioner (Zone II), efforts are being undertaken to create more structured channels for engagement between the municipal corporation, private sector entities, CSR initiatives, and citizens. The platform is envisioned to support more systematic investment in city-level projects while also enabling greater citizen participation and volunteer engagement. Similarly, initiatives such as the Mumbai Clean League, anchored by the Solid Waste Management Department, aim to strengthen citizen engagement toward decentralized and sustainable solid waste management practices while fostering greater civic participation and awareness. Continued youth engagement initiatives led by the Environment and Climate Change Department are also expected to support wider climate awareness, capacity building, and participation in climate action processes across the city

Through continued mainstreaming of climate considerations within municipal systems through climate budgeting, improved data and monitoring systems, and wider engagement across departments, agencies, communities, and citizens, BMC aims to support a more integrated, inclusive, resilient, and coordinated pathway toward achieving the goals of the Mumbai Climate Action Plan.

Annexure 1



MCAP Goals and Targets

MCAP Sector/ Action Track	Target	2030	2040	2050
Energy & Buildings				
1.1 Decarbonising Mumbai's electricity generation mix to renewable sources	% share of total grid electricity from renewables	50%	70%	90%
1.2 Transition to clean fuels and resource efficiency in buildings	% of total buildings with solar PV installed	10%	20%	40%
	Residential water flow technology in buildings (% low flow fixtures)	20%	40%	60%
	LED lighting in commercial and residential buildings (%)	100%	100%	100%
	Commercial cooling system technology (% of high efficiency chillers)	38%	59%	80%
1.3 Low carbon buildings	4.3. Equitable access to green open spaces	50%	50%	50%
1.4 Passive design strategies to improve resilience in buildings	4.3. Equitable access to green open spaces	50%	50%	50%
Integrated Mobility				
2.1 Improve public transport ridership				
2.2 Access to non-motorized transport (NMT) and pedestrian infrastructure	% Mode share for public transport and NMT w	73%	78%	85%
2.3 100% municipal and private zero emission vehicles by 2050	% Electrification of passenger automobiles	35%	70%	96%

MCAP Sector/ Action Track	Target	2030	2040	2050
Integrated Mobility				
	% of electrification of all buses	100%	70%	90%
	(2026-27)	100%	100%	50%
	% of electrification of all two-wheelers, taxis and autorickshaws	40%	70%	100%
	% of electrification of all private four-wheelers by 2050	35%	60%	96%
2.4 Zero emission freight	(2026-27)	100%	100%	50%
	% of electrification of light duty trucks and 2W freight	40%	70%	100%
	% of electrification of medium and heavy-duty trucks	15%	30%	46%
Sustainable Waste Management				
3.1 Reducing landfilled waste	% of Reduced waste disposed to landfill sites	30%	40%	50%
3.2 Decentralized waste management - Recycle/Compost at the local level	% of paper recycled	20%	40%	80%
	% of plastic recycled	20%	40%	80%
	% of organic waste composted	20%	40%	60%
	% Wastewater treated by tertiary treatment	10%	15%	17%
	% of recovery through Decentralized waste management (segregation, recycling and composting)	40%	60%	80%

MCAP Sector/ Action Track	Target	2030	2040	2050
Sustainable Waste Management				
3.3 Remediation and scientific management of landfills	% of Remediation of all existing dumpsites and scientific disposal of waste	100%	100%	100%
	% landfill gas captured	20%	30%	50%
Urban Greening and Biodiversity				
4.1 Increase vegetation cover and permeable surface	% of Increase in vegetation cover and permeable surface of the city surface area to tackle flood- and heat-related disaster risk	30-40%	45%	47%
4.2 Reduce urban heat island effect	Reduce heating effect and increase permeable surface to 100% by 2050 along the city streetscape	40%	60%	100%
4.3 Equitable access to green open spaces	Equitable distribution of open spaces and increase per capita open space	4 sqm per capita	6 sqm per capita	6 SQM PER
4.4. Restore and enhance biodiversity in the city				
Air Quality				
5.1 Curb the pollution concentration level by 20-30% by 2030	% of curbing the pollution concentration to improve air quality, keeping 2019 as the base year	20%-30%	70%	96%
5.2 Increase information availability through monitoring				
5.3 Community health resilience through decentralized planning and awareness				

MCAP Sector/ Action Track	Target	2030
Urban Flooding & Water Resource Management		
6.1 Build flood resilient systems and infrastructure		
6.2 Localized water conservation and efficiency	% of city's water demand met through localized water conservation and efficient use initiatives	50%
6.3 Reducing pollution and restoring aquatic ecosystems		
6.4 Safe and affordable drinking water	Access to safe and affordable drinking water for all	100%
6.5 Clean, safe and accessible toilets	Provide clean, safe and accessible toilets to all	100%
6.6 Disaster risk and impact reduction		

Annexure 2

Detailed description of climate measures for FY 2026-27

Solid Waste Management (SWM) Department

**Direct
Actions –
Quantified**

The Solid Waste Management (SWM) department is undertaking the work of providing an SWM facility in the F/N ward to improve monitoring and management of wet and dry waste. The facility will benefit approximately 25,000 people and has a processing capacity of 10 TPD, supporting waste diversion from landfill and reduction in methane emissions, with an estimated emission reduction potential of approximately 2,693.7 tCO₂e per year.

The work of setting up a Dry Waste Management Processing Centre is proposed to facilitate segregation and recycling of dry waste, will serve all 25 wards, benefiting a population of approximately 4,86,90,273 with a processing capacity of 300–500 TPD. The work will support diversion of waste from landfill, reducing methane emissions by approximately 80,811 to 1,34,685 tCO₂e per year.

The SWM department is planning to set up a new Waste Segregation Centre to facilitate segregation of municipal waste. The facility will serve a population of approximately 5.5 lakh and has a processing capacity of 2.5 TPD, supporting waste diversion from landfill and reduction in methane emissions, with an estimated emission reduction potential of approximately 673.43 tCO₂e per year.

The department is planning technological upgradation of Mahalaxmi Refuse Transfer Station (MRTS). This station will help mechanically segregate recyclables from 700 tons of municipal solid waste received at the facility, resulting in further potential reduction of upto 30,660 tCO₂e annually. Additionally, under Modernisation and Technological Upgradation of SWM Process, BMC has proposed comprehensive modernisation of Versova and Gorai Refuse Transfer Stations.

The work of Development of Waste to Energy (WTE) Project at the Deonar Dumping Ground (DDG) undertaken by the SWM Department, includes design, construction, operating and maintenance of waste to energy plant being set up at Deonar Dumping Ground across 10.47 Ha of land and a capacity to convert 600 TPD of municipal solid waste to generate about 7 MW of electricity daily. This will potentially reduce 1,87,096.08 tCO₂e emissions annually. Part of the work is being carried out using XV Finance Commission’s Water Fund. Additionally, as per the Consent to Establish (CTE) conditions, solar power-based illumination for the plant is currently under the planning stage. The project also includes the development of a green belt across 33% (3.46 hectares) of the project’s open space area, in compliance with CTE requirements. The plant is expected to be commissioned by June 2026.

<p>Direct Actions – Quantified</p>	<p>The Bio-mining Project/ Bioremediation at Deonar Dumping Ground uses a scientific bio-mining method, certified by the Central Pollution Control Board, of excavation, treatment, segregation, and utilisation of aged municipal solid waste also known as legacy waste. Along with its purpose of reducing the greenhouse gases emissions and being a zero-emission process itself, the method also allows for resource recovery by extracting recyclable components of waste like metal, recyclable plastic, etc. One MT of legacy waste has the potential to prevent 0.738 tCO₂e potential emission reduction. The work is expected to be completed by March 2029.</p> <p>An area of 24 ha of landfill land will be reclaimed using bioremediation method under the Dumpsite Reclamation Project at Mulund Dumping Ground (MDG), clearing 70 lakh MT of waste resulting in potential emission reduction of 51,66,000 tCO₂e, of which 58.68 lakh MT has been cleared by March 2026.</p>
<p>Direct Actions – Not Quantified</p>	<p>The SWM department has taken the initiative to install sanitary napkin vending machines in public toilets with incinerators in women’s public and community toilets across Mumbai, through a pay-and-use model. These machines are IoT-enabled and monitored through a central control room. About 1800 more vending and incineration machines are planned to be installed over the current and next financial year.</p> <p>Using capital receipts under the Swachh Maharashtra Mission (SBM), the department is undertaking construction of new toilets, both individual household latrines (IHHLs) and community toilets. The project comprises construction of 594 toilet blocks with approximately 15,114 toilet seats across Mumbai. Out of the proposed works, 113 toilet blocks comprising 2,373 toilet seats have been completed, while 130 toilet blocks comprising 2,730 toilet seats are currently under progress. Additionally, under the IHHL component, 4,673 toilet seats are funded and ongoing, of which 1,100 toilet seats have been completed.</p> <p>Based on site context, bio-toilets with biodigester tanks will be used. These systems break down waste into reusable water and gas, offering a sludge-free, low-maintenance alternative to septic tanks with better waste treatment and no risk of clogging.</p> <p>Setting up dry waste collection sheds in wards are managed by local waste workers or ward associations. Some centres are also used for wet waste, depending on local needs. These centres help reduce landfill waste and lower greenhouse gas emissions. SWM department has set up sheds in 47 locations across the city with weighing, shredding and baling facilities.</p> <p>Additionally, BMC has signed Memorandum of Understanding with Mahanagar Gas Limited (MGL) for setting up Bio-CNG plant at Deonar Dumping Ground. Currently, approval for execution of Concession Agreement upto 500 TPD MSW is under process. The plant is expected to be commissioned by October 2027.</p>



Mechanical & Electrical (M&E) Department

Direct Actions – Quantified

The work of replacement of coal, wood, cotton stock, and kerosene fuel sources, by providing 40 PNG Gas connections at Mahalakshmi Dhobighat, is currently ongoing. The gas lines will mainly be used to boil water for laundry work. These efforts will potentially reduce emissions by 150 tCO₂e annually.

Under the upgradation of the High Mast System, the M&E Department will replace approximately 2,400 units of 400-Watt metal halide/ High Pressure Sodium Vapour (HPSV) streetlights with 150-Watt Smart LED Flood Light High Mast streetlights, saving up to 70% energy.^[13] This will potentially reduce 1,273.7 tCO₂e emissions annually. Out of the 2,400 units, 1620 units have been already upgraded, the work of upgradation of 480 units will be undertaken in FY 2026-27.

The department has also undertaken the work of installation of solar panel systems at various peripheral hospitals. A total of 385kW of solar panel systems will be installed across a rooftop area of approximately 38,500 sq.m generating 441.4 MWh of energy yearly, reducing 817.29 tCO₂e of potential emissions annually.

Carbon cutting system, referred to as a Retrofit Emission Control Device (RECD), installed at Shivaji Park cemetery, is a machine that works on the principle of electrostatic precipitation. It captures particulate matter of 2.5 microns and 10 microns and has an efficiency of 80–90% CCM (cubic centimetres per minute) as per Automotive Research Association of India (ARAI) certification. This net zero machine reduces the gases emitted at source like Carbon Monoxide by 90 %, Carbon Dioxide by 70 %, Hydrocarbons by 46 %, Sulphur Oxide by 67 %, and Nitrogen Oxide by 65%. It also captures carbon dioxide and converts it into calcium, thereby potentially reducing carbon emissions by 903.18 tCO₂e annually.

Direct Actions – Not Quantified

The M&E department is undertaking Upgradation of Municipal Power Laundry and Tunnel Laundry Units. This project aims to improve operational efficiency in municipal hospital facilities through adoption of energy-efficient systems and optimized water management practices, including wastewater reuse.

The department is undertaking the Installation of Sewage Treatment Plants (STPs) at peripheral hospitals, as well as major and speciality hospitals. At present, construction and installation of 25 KLD ETP/STP plants are in progress at Bharatratna Dr. Babasaheb Ambedkar Municipal General Hospital (BDBA-MCH) and Mata Balak Hospital. The treated water from these STPs will be used for gardening purposes. Similarly, the work of installation of STPs in speciality hospitals and major hospitals is planned in this year, the project is in feasibility stage.

Water Supply Project (WSP) Department

Direct Actions – Quantified

The development of the Hydro Electric Power Plant & Floating Solar PV Power Project at Hinduhridaysamrat Shivsenapramukh Balasaheb Thackeray Middle Vaitarna Dam is ongoing. Out of the 26.5 MW capacity of the Hybrid Power plant, the capacity of the Hydro Electric Power Plant is 20 MW and that of the Floating Solar PV Power Plant is 6.5 MW. This project will result in a potential emission reduction of 53,707.85 tCO₂e. Floating solar PV systems will generate clean energy, boost the dam's power capacity, and help reduce water evaporation. As they are installed over existing reservoirs, no additional land is needed for power generation.

Direct Actions – Not Quantified

The department has been undertaking extensive work to improve the overall water supply and treatment in the city. This largely involves constructing/reconstructing essential water supply infrastructure.

The Water Supply Projects (WSP) Department is undertaking the Construction of Water Transmission Main by replacing existing 2400mm dia and 2750 dia by new 3000 mm dia. M.S. water main from Gundavali (Bhivandi) to Modaksagar. This project is expected to benefit approximately 6–7 million people by improving water transmission capacity and operational efficiency.

The department has commenced work on a proposed 200 MLD Desalination Plant (expandable to 400 MLD) to augment the city's water supply, and the process for obtaining initial clearances is in progress. The project is envisioned as the first desalination plant globally to utilize 100% green (renewable) energy through a hybrid model comprising solar, wind, and Renewable Energy Certificates (RECs) for its operations, enhancing both sustainability and cost efficiency, while diversifying water supply source from conventional to non-conventional mode.

The Gargai Dam construction project adopts Roller Compacted Concrete technology, enabling the utilization of fly ash by replacing up to 65% of cement content, thereby reducing the carbon footprint and promoting sustainable development. This project will include the transplantation of all affected trees, representing a first-of-its-kind initiative to minimize environmental impacts while preserving green cover. This project will ensure an additional 440 MLD water supply for citizens of Mumbai.

Among the new works, the department is constructing tertiary treated water conveyance tunnels from the Ghatkopar Wastewater Treatment Facility(WwTF) to the Bhandup WwTF. This project is part of a broader strategy to augment Mumbai's water supply by converting treated wastewater into potable water. Additionally, the department has proposed the work for recycling and reuse of wastewater to potable water at Colaba Wastewater Treatment Plant. Under this, 12 MLD Advanced Tertiary Treatment Plant (ATTP) at Colaba is being developed on pilot basis.

Water Supply Project (WSP) Department

**Direct
Actions –
Not
Quantified**

As part of efforts to construct water supply tunnels and replace old mains for a more efficient water system, following work is underway:

1) Tunnels from the Yewai Master Balancing Reservoir to Kasheli in Tal. Bhiwandi, and from Kasheli to Mulund Octroi Naka.

Key pipeline replacements include:

1) Replace old twin Tansa Mains (2 x1450 mm dia.) with a single 2000 mm dia. MS pipeline from Maroshi to Sahar Village.

Following works are being carried out to develop Water Treatment Plants (WTPs): (1) A 2000 MLD WTP at Bhandup Complex, along with a 2000 MLD Clear Water Pumping Station (CWPS) and implementation of pumping station performance management systems, to replace the existing 1910 MLD plant nearing the end of its design life; and (2) a 910 MLD WTP at Panjrapur to treat raw water by replacing two compartments of existing WTP.

Infrastructure improvements also include the demolition and reconstruction of culverts along the Municipal Service Road at the Pise-Panjrapur Complex—comprising 38 box culverts, 4 slab culverts, and 6 minor bridges. Additionally, a 455 MLD pumping station is being developed at Pise to strengthen water supply operations.

The department is also undertaking structural repairs for reservoirs (Powai high level, Powai low level, Ghatkopar,) and improvements to upgrading water supply main lines to improve supply in H/West, R/South and R/North wards through the XV Finance Commission funds. On completing these structural repair works, the life of the reservoir will be enhanced by approximately 15 to 20 years.

Transport Department

**Direct
Actions –
Not
Quantified**

The Transport Department is undertaking the provision of 24 Mobile Toilets to improve sanitation facilities in temporary, emergency, and high-demand areas across the city. This initiative will support climate resilience by reducing health risks, improving sanitary conditions, and strengthening emergency response preparedness.

The Transport Department is undertaking the Installation of Automated Vehicle Washing System to promote water conservation and improve operational efficiency. The proposed system will enable the reuse of approximately 60% recycled water while limiting the use of fresh water to 40%, thereby reducing freshwater consumption and supporting sustainable water management practices.

Hydraulic Engineer (HE) Department

Direct Actions – Quantified

The Hydraulic Engineers Department is planning to install new street lighting infrastructure at Middle Vaitarna Dam premises in areas where no existing luminaires are currently available. The proposed system includes 15 Nos. of 100W energy-efficient LED street light luminaires integrated with a time-controller-based control system to optimise energy consumption, improve illumination, and enhance safety and accessibility within the premises. The installation of these LED street lights is estimated to result in an annual GHG emission reduction of 1.99 tCO_{2e}.

Direct Actions – Not Quantified

The Hydraulic Engineers Department is undertaking the Construction of Auxiliary Water Tanks in Various Wards within the City Area to strengthen safe and affordable drinking water infrastructure. The project will benefit 1 ward (A Ward) with a total storage capacity of 10.5 lakh litres and is expected to improve access to water for approximately 13,009 people. This initiative aims to enhance water security, improve distribution efficiency, and support climate resilience through strengthened urban water infrastructure.

The Hydraulic Engineers Department is undertaking the Reconstruction of the Existing Sewerage Treatment Plant (STP) at Bhandup Complex (30 CMD capacity) to improve sewage treatment efficiency. The project will ensure proper treatment of wastewater generated within the premises, thereby reducing environmental pollution.

The Hydraulic Engineers Department is undertaking the Installation and Strengthening of Water Distribution Treatment and Allied Infrastructure Works to improve safe and affordable drinking water access across 4 wards (R/S, R/N, H, and K Wards). The project is expected to benefit approximately 23.5 lakh people by enhancing water distribution efficiency.

The Hydraulic Engineers Department is undertaking the construction of an Elevated Storage Reservoir at Labour Quarters, Bhandup Complex, to improve water storage and distribution efficiency. This project will benefit around 1,060 residents and help reduce water wastage through better supply management, with provision for energy-efficient pumping systems. The project is currently at the planning stage.

The project of setting up Chlorinator at Bhandup Complex involves upgrading the existing chlorination system treating approximately 1,910MLD of water supply, thereby improving disinfection quality and operational efficiency for a significant portion of Mumbai's population dependent on this supply. Under the existing system, achieving a chlorine dosing rate of 140 kg/hr requires operation of five chlorinators simultaneously due to limited dosing accuracy. The proposed high-precision chlorination system will achieve the same dosing requirement using only four chlorinators, ensuring accurate and consistent chlorine dosing while preventing over- and under-chlorination and

**Direct
Actions –
Not
Quantified**

supporting compliance with water quality standards. The upgraded system is also expected to result in estimated energy savings of approximately 180 kWh per day, reducing operational energy consumption and associated environmental impacts.

The department is undertaking strengthening of pakka and Kachcha Channel across Tulsi lake road. The work involves channelizing rainwater and surface runoff into Tulsi Lake, along with strengthening deteriorated pakka channels and reconstructing culverts over kachcha channels. These interventions will improve stormwater flow and help minimise the risk of flooding within the Sanjay Gandhi National Park area in Borivali.

The department is undertaking installation of a floating pump at Middle Vaitarna Dam to supply approximately 0.02 MLD water for around 70 maintenance and security staff. The project will ensure reliable water supply without impacting reservoir capacity.

The department is undertaking construction of storm water drain near chlorination and filter plant areas at Panjrapur. The project will prevent water accumulation during heavy rainfall, reduce health risks, and improve drainage conditions for staff.

The project, Chlorine Neutralization System at Pise, involves replacement of the existing chlorine neutralization (scrubber) system installed for emergency containment and treatment of accidental chlorine gas leakages from chlorine drum storage areas. Upon detection of chlorine leakage through electronic gas sensors, the system automatically activates blowers to draw contaminated air into a sealed duct network connected to a packed scrubber tower. The leaked chlorine gas is neutralized using a caustic Sodium Hydroxide (NaOH) solution, converting it into Sodium Hypochlorite, salt, and water before safe discharge of treated air through the scrubber chimney. The system operates only during major leakage incidents, typically for 45–60 minutes per event, and is maintained as a mandatory industrial safety infrastructure in compliance with Directorate of Industrial Health & Safety (DISH) norms for chlorine storage facilities.

Using XV Finance Commission's Air Funds, the department is improving water supply infrastructure in the H/W, R/S & R/N Wards wards by replacing old pipelines in Bandra West, Dahisar East, and Kandivali East. Key works include new mains from S.V. Road to Ambedkar Road in Bandra, 770m of 450 mm pipe replacement in Dahisar, and laying a 900 mm pipe over 1,540m in Kandivali.

To ensure responsible transfer/ carrying of water and minimise wastage, the department has also undertaken efforts to address leakages and contamination within the water distribution system.

The work of hill slope stabilisation and allied works in various locations involves,

1. Malabar Hill Reservoir Area

- Interventions: Slope stabilization (~21,000 sqm), RCC compound/retaining wall construction safeguarding ~124,752.09 sqm, and new storm water

**Direct
Actions –
Not
Quantified**

drainage (SWD) network.

- Beneficiary Areas: Nariman Point, Cuffe Parade, New Fort, Colaba, Navy Nagar, Girgaon, Siri Road, Backbay, Kalbadevi, Dhobitalao, Thakurdwar, Tardeo, Pedder Road, Military Area, Raghavji Road, Carmichael Road, Nepean Sea Road, Walkeshwar, and Little Gibbs Road.
- Estimated Population Benefitted: ~1.94 lakh people.

2. Borivali Hill Reservoir Area

- Interventions: Slope stabilization (~27,650 sqm).
- Beneficiary Areas: Borivali, Kandivali, and Dahisar.
- Estimated Population Benefitted: ~5 lakh people.

3. Malad Hill Reservoir Area

- Interventions: Slope stabilization (~27,000 sqm), RCC compound/retaining wall safeguarding ~18,200 sqm, and new SWD network for foothill settlements.
- Beneficiary Areas: Malad, Jogeshwari, Kurar Village, and Goregaon.
- Estimated Population Benefitted: ~9 lakh people.

4. Pali Hill Reservoir Area

- Interventions: Slope stabilization and safeguarding of ~3,850 sqm of reservoir premises.
- Beneficiary Areas: Foothill slum settlements around Pali Hill and nearby Vile Parle areas.
- Estimated Population Benefitted: ~3 lakh people.

5. Bhandarwada Hill Reservoir No. 3

- Interventions: Reconstruction of defunct reservoir and slope stabilization (~11,151 sqm).
- Beneficiary Areas: E Ward

6. Raoli High Hill Reservoir Area

- Interventions: Slope stabilization (~3,566 sqm) and RCC compound/retaining wall safeguarding ~12,600 sqm.
- Beneficiary Areas: Sion Koliwada, CGS Colony, Wadala, BPT areas, and commuters along Mukundrao Ambedkar Road.
- Estimated Population Benefitted: ~5 lakh people.

The department is carrying out the replacement of defective sluice valves to prevent the loss of valuable potable water. Efforts are underway to protect BMC's water mains from damage due to illegal sand removal near Anjur-Kasheli.

The project involves construction of Gabion Toe Walls in the Anjur Kasheli section



of the O.C. Division to protect MCGM water transmission mains from erosion and scouring caused by unauthorized sand removal in creek areas. The intervention includes installation of rock-filled galvanized wire mesh gabions, rubble soling, compaction, backfilling, and site restoration to stabilize slopes and safeguard critical water supply infrastructure.

The work of attending leakages and contamination involves detection and rectification of underground watermain leakages and contamination through sounding, visual inspection, and camera-based internal assessment of pipelines. Corroded pipeline sections are replaced during repair works, followed by monitoring of the repaired site for 24 hours to ensure effective rectification. The intervention supports uninterrupted and safe water supply for residents across the concerned wards/zones.

Markets Department

**Direct
Actions –
Not
Quantified**

A combined Sewage Treatment Plant (STP) of 134 KLD (CMD) and Effluent Treatment Plant (ETP) of 60 KLD (CMD), with a forced ventilation and odour control system is proposed at Mahatma Jyotiba Phule Market market, covering design, supply, installation, testing, commissioning, and 24/7 operations for one year. The system includes advanced components like RMBR, anaerobic reactors, dewatering units, and chemical dosing to ensure efficient wastewater and effluent management. The department also makes provisions for the repairs and reconstruction of toilets at municipal markets.

Mumbai Fire Brigade

**Direct
Actions –
Not
Quantified**

The department is working to develop a drill tower cum multifacility training simulator for fire safety training at Thakur Village fire station in Kandivali. It will train firefighters to deal with situations of extreme heat and smoke. Firefighters will be trained in the use of modern equipment, safety protocols in confined spaces, and adaptable emergency response techniques. The simulator's capacity to replicate varying fire scenarios will significantly strengthen the city's resilience to fire-related disasters.

The department is also constructing and redeveloping fire brigade stations at Mulund, Chembur, Kurla, Kanjurmarg, Marol and other locations. Additionally, in FY 2023-24, the Mumbai Fire Brigade department has added six EV sedan cars in its fleet.

City Engineers

**Direct
Actions –**

**Not
Quantified**

The Municipal Corporation proposes construction of the following municipal buildings and ward offices across the city:

- i. Construction of Building for Dahisar Ward Office in R/North Ward
- ii. Proposed Municipal Ward Office at Aajgaonkar Plot, Western Express Highway, Jogeshwari (E), K/E Ward
- iii. Proposed Construction of Municipal Ward Office Building for R/Central Ward at S.V. Road, Borivali (West)
- iv. Provision for Construction of Dormitory for Relatives of Cancer Patients

These buildings will be planned and constructed by incorporating sustainable design principles, and low-carbon building materials.. The projects will consider applicable Action Tracks related to sustainable buildings, energy efficiency, resource conservation, and climate-resilient urban infrastructure.@

Slum Improvements- Maintenance (as reported under City Engineers)

**Direct
Actions –**

**Not
Quantified**

The Municipal Corporation proposes undertaking construction and redevelopment of various properties across the city, including:

- i. Improvement of Slum under Integrated Slum Improvement Programme
- ii. Planning and redevelopment of residential tenements in M/E Ward
- iii. Redevelopment of Municipal Property at Vikhroli Parksite Layout

These projects will include improvement and upgradation of civic infrastructure such as sewer lines, storm water drainage lines, internal roads, sanitation facilities, and other essential urban services. The works will be implemented by incorporating sustainable planning approaches, climate-responsive infrastructure, and low-carbon building materials. The projects will consider applicable Action Tracks related to resilient housing, sustainable urban infrastructure, resource efficiency, and improvement of living conditions in vulnerable urban areas.@

Chief Engineer- Building Maintenance Department

**Direct
Actions –**

**Not
Quantified**

The Building Maintenance Department undertakes structural repairs, renovations, and upkeep of municipal buildings, markets, fire stations, cemeteries, housing colonies, and public amenities, ensuring safety, functionality, and heritage preservation across the city. The department follows clean construction practices in accordance with

BMC’s 28-point Air Pollution Mitigation Guidelines.

1. The entire building under construction is enclosed with green cloth/jute sheet/ tarpaulin to prevent dust spread.
2. Sprinkler systems installed and used throughout construction activity.
3. Anti-smog machines installed at all sites.
4. Independent air quality measuring devices installed and monitored scrupulously.
5. Water sprinklers used to settle dust during demolition.
6. Marble cutting, grinding, and other such works done only in enclosed premises.
7. Construction debris transported in vehicles covered with tarpaulin; no overloading permitted.
8. Vehicle tires cleaned and sprinkled with water before leaving site; vehicles are washed after daily work.

@ In ensuring adoption of sustainable practices across projects having this symbol, the departments will adhere to a set of core principles:

- Utilizing LED lights to enhance energy efficiency and reduce electricity consumption.
- Designating areas within sites for plantation and landscaping to increase green cover and promote local biodiversity.
- Implementing systems to capture and utilize rainwater effectively and manage stormwater runoff.
- Installing rooftop solar panels on selected buildings to harness solar energy for electricity generation, contributing to renewable energy adoption and lowering carbon emissions.
- Establishing Sewage Treatment Plants (STPs) to conserve and efficiently manage water by treating wastewater onsite and reuse for irrigation or flushing.

Budget provisions for these projects are part of the additional budget incorporating MCAP components.

Disaster Management Department

**Direct
Actions –
Not
Quantified**

The department has undertaken the work of supplying, installing, training and construction and operation of Viewing Centres in 2 new wards Control rooms created ward offices viz. K/North & P/East under the Mumbai City Surveillance (MCS) Project. Operational 24/7, already present in 24 wards, these viewing centres at the ward offices will enable close surveillance to ensure that quick action can be taken in case of any disaster.

Enabling Actions

The department is undertaking the Seismic Microzonation and Multi-Hazard Vulnerability & Risk Assessment (MHVRA) project, a scientific initiative designed to identify and map risk zones at the ward level. By shifting from single-hazard responses to an integrated resilience strategy, the project specifically addresses compounding and cascading risks, such as the simultaneous occurrence of landslide and flood. This study identifies vulnerable areas by mapping multi-hazard zones alongside dense slum clusters, dilapidated buildings, and critical infrastructure like hospitals and utilities. Ultimately, these ward-wise risk maps allow the BMC to prioritize mitigation efforts and enhance emergency readiness across the city’s most high-risk locations.

Education Department

Enabling Actions

This department is undertaking an environment conservation programme, including distribution of ‘Eco Warriors’ educational books, which will be implemented in BMC schools for students from Std. 5th to Std. 8th during the academic year 2026–27 to promote environmental awareness, ecological conservation and sustainable practices among students from an early age.

School Infrastructure Cell (SIC) (part of Education Department)

Direct Actions – Quantified

The Education Department is undertaking LED lighting works at Municipal Schools as part of repair and energy-efficiency improvement measures. Approximately 3% of the total allocated budget has been earmarked for installation of energy-efficient LED lighting systems across 167 municipal schools, covering 16,700 fixtures split equally across four capacities — 9W, 18W, 36W, and 45W — to reduce electricity consumption and improve resource efficiency in municipal buildings. The estimated annual GHG emission reductions are 806.16 tCO_{2e} (9W LED), 726.86 tCO_{2e} (18W LED), 567.42 tCO_{2e} (36W LED), and 487.76 tCO_{2e} (45W LED), resulting in a total annual emission reduction of 2,588.20 tCO_{2e}. In addition, recharge pits are proposed to facilitate rainwater percolation and support localised water conservation.

Environment and Climate Change Department

**Direct
Actions –
Not
Quantified**

The department is implementing Net Zero Municipal Buildings Action Plan under Net Zero Initiatives & Green Building Initiatives as per IGBC standards across various municipal buildings including municipal schools, hospitals, ward offices, fire brigade offices and garages. The initiatives will include replacement of conventional lighting with LED fixtures, replacement of conventional fans with Brushless Direct Current (BLDC) fans, installation of solar rooftop systems, rainwater harvesting systems, enhancement of water efficiency measures, and incorporation of sustainable building practices and energy-efficient systems. The project aims to improve resource and energy efficiency, reduce electricity consumption and environmental impacts, promote renewable energy use, and support development of sustainable and climate-responsive municipal infrastructure.

The department will be undertaking implementation of Cool Roof Solutions through application of high albedo heat reflective coatings on municipal properties/buildings across Mumbai. The initiative aims to reduce heat absorption and indoor temperatures in buildings, improve thermal comfort, reduce cooling energy demand and support mitigation of urban heat island effect.

With strengthened human resources and an enhanced budget, the Environment and Climate Change Department is laying critical groundwork by scaling up air pollution mitigation strategies and initiating pilot projects in key focus areas, with the aim of refining its priorities and implementation strategies over time.

The department is collaborating with IIT Kanpur on the Mumbai Air Network for Advanced Sciences (MANAS) project, which will deploy 75 hyperlocal sensors as part of a citywide Hyperlocal Sensor-based Ambient Air Quality Monitoring (SAAQM) network. Data from this network will feed into an advanced real-time analytics dashboard at Mumbai's Integrated Command and Control Center (ICCC), aiding decision-making and timely interventions.

The department has made budget provisions for more concrete measures for prevention of air pollution in Mumbai across various sources. Budget allocations are made to support the installation of stack monitoring systems for bakeries and hotels, the development of eco-friendly pyre systems at crematoriums, and the deployment of air pollution control (APC) systems on diesel generators used in hospitals and other municipal premises.

Urban greening/urban forests are also key components of the department's climate strategy and budget is earmarked for urban greening/ urban forest projects aimed at mitigating the urban heat island effect.

	<p>The department is piloting a few Nature-Based Solutions and Climate Resilient Projects aimed at utilizing natural ecosystems to address urban challenges such as flooding, heat stress, and biodiversity loss, enhancing the city’s climate resilience and sustainability.</p> <p>The department has allocated funds for the installation of renewable energy systems—including solar, wind, and hybrid options—across various municipal properties such as markets, schools, and hospitals.</p>
<p>Enabling Actions</p>	<p>Indian Institute of Tropical Meteorology (IITM), Pune is supporting BMC in developing an Air Quality Early Warning Decision Support system for Mumbai called AIRWISE. The system aims to provide accurate air quality predictions up to 72 hours in advance, identify the contribution of various emission sources—local, regional, and distant—to PM2.5 pollution, and suggest targeted strategies to reduce emissions and prevent air pollution events.</p> <p>The department is utilizing funds from the XV Finance Commission’s Air Fund to strengthen air quality management in the Mumbai Metropolitan Region (MMR). While the National Environmental Engineering Research Institute (NEERI) conducted a study to identify air pollution hotspots within Mumbai city, the Automotive Research Association of India (ARAI) has proposed the development and periodic updation of a gridded emissions inventory for the entire MMR. The inventory will capture emissions across sectors and account for transboundary pollution influences within the region.</p> <p>Under the Ministry of Jal Shakti’s National Aquifer Mapping and Management (NAQUIM) Programme, the department is undertaking aquifer mapping, geomorphological studies, and identifying groundwater percolation hotspots. These efforts are aimed at strengthening rainwater harvesting and groundwater recharge initiatives. The BMC area has been segmented into grids to allow for stratified sampling, and a random selection of existing wells has been conducted for groundwater monitoring. Initial geophysical data collection has been completed, and the next steps involve using GIS and remote sensing to map groundwater potential zones and generate thematic maps. Additionally, aquifer mapping study is being carried out by the department, with support from WRI India, Advanced Center for Water Resources Development and Management (ACWADAM) and Pani Haq Samiti, with an aim of developing a holistic groundwater recharge strategy for Mumbai.</p>



Storm Water Drains (SWD) Department

**Direct
Actions –
Not
Quantified**

The Storm Water Drains Department has used the XV Finance Commissions Funds to execute construction of a Sewage Treatment Plant near the Dahisar river. The project involves the design, construction, and commissioning of two modernized and fully automated package/modular Sewage Treatment Plants (STPs) with capacities of 1.5 MLD and 5 MLD, along the Dahisar River under a Design-Build-Operate (DBO) model. It includes 15 years of operation and maintenance. The scope also includes laying 4.42 km of sewer network, installing 10 interceptors for diversion of dry weather flow (DWF), and constructing 1.16 km of service roads and 1.22 km of roadside drains along both banks of the river.

The design and construction of modernized and fully automated package/ Modular Sewerage Treatment plants on MBR technology along the Dahisar, Poisar, and Oshiwara-Walbhat rivers will involve the construction of sewer networks, access roads, roadside drains, and interceptors. These plants will follow guidelines mandated by the Central Pollution Control Board, monitored by the National Green Tribunal (NGT). The department aims to improve stormwater drainage in the city by widening and training the Mithi River and other nalla systems.

The department, in coordination with the Disaster Management Department, maintains a list of flooding spots in Mumbai based on an assessment of the previous year's rainfall patterns. A flooding spot is a low-lying area that is very likely to record a significant period of water logging during a moderate or heavy spell of rainfall every year. Targeted interventions are planned and implemented ahead of the monsoon season to tackle flooding spots.

The department is undertaking the work of widening and training of the stormwater drains wherein the existing drains are widened to increase their carrying capacity.

Furthermore, holding tanks have been constructed at strategic locations: one at Milan Subway, Andheri (30,000 cubic meters capacity), St. Xavier playground, Dadar (28,000 cubic meters capacity) and Pramod Mahajan Garden, Dadar (36,000 cubic meters capacity), whose RCC columns beams and slab for covering are complete.

Garden Department

**Direct
Actions –
Not
Quantified**

The Garden Department within BMC is responsible for the development and maintenance of gardens, recreational grounds, playgrounds, and the conservation of trees as per 'The Maharashtra (Urban Areas) Protection & Preservation of Trees Act, 1975'.

The Garden Department is undertaking Beautification of Bridges and Optimum Utilization of Spaces Below Bridges at Kemps Corner, Kennedy Bridge, and Belasis Rail Over Bridge. The project includes development of approximately 400

sq. mtr area with plantation of around 150 trees, enhancing public space usability, green cover, and contributing to urban cooling and environmental resilience.

The Garden Department is planning Beautification of Cooperage Garden with provision of illumination, basic lighting infrastructure, and garden development elements to enhance green cover and accessibility to open spaces. This project is at planning stage.

The Garden Department is planning beautification of E.F.G.H.H. Cross Road in C ward, including development of approximately 500 sq. mtr area and plantation of around 50 trees. The project aims to enhance green cover and improve public space accessibility.

Using the XV Finance Commission's Air Fund, the department has undertaken the project of greening of public and residential areas in Mumbai. These areas include open areas, gardens, community places, and housing societies. This will allow increased access to public spaces for people.

This department is also undertaking beautification of central medians and traffic islands across 26 wards to increase vegetation cover on streets. This department will also actively contribute to the Government of Maharashtra's "300 Crore Tree Plantation" initiative across the State. As part of this effort, the department will undertake plantation activities within Mumbai's jurisdiction, supporting enhancement of urban green cover, biodiversity conservation, and climate resilience.

The Garden Department will adopt and implement the Open Space Management Scheme, aiming to allow equitable access to well-equipped sports facilities within municipal playgrounds across 26 wards.

Garden Infrastructure Cell (GIC)

**Direct
Actions –
Not
Quantified**

The GIC department is undertaking development and upgradation of various Recreational Grounds, Playgrounds, and Garden plots. 26 plots have been identified with a total are of 51,954 square metres to be beautified.

Roads and Traffic Department

**Direct
Actions –
Not
Quantified**

The department has made a new provision for walkable footpaths, taking into consideration parameters such as footpath widths, safety concerns, accessibility, routine maintenance, etc., while ensuring accessibility for persons with disabilities. The broader aim in doing so is to improve public health, reduce dependency on vehicles and decongest traffic, implementing BMC's 'Universal Footpath Policy.'

**Enabling
Actions**

Using the XV Finance Commission's Air Fund, the department will assess the performance of existing Fully Adaptive Traffic Control (FATC) systems and convert 70 conventional signals into FATCs. As the current ATC systems have exceeded their useful life, it is necessary to upgrade and install new systems. A consultant will be appointed through a tender to recommend suitable adaptive traffic control technologies, with expert vetting by IIT Bombay. Based on these recommendations, tenders will be invited for the phased installation of new adaptive traffic control systems across Greater Mumbai.

Bridges Department

**Direct
Actions –
Not
Quantified**

The department is engaging in a range of projects pertaining to the construction / demolition and reconstruction / repair / maintenance of foot over bridges (FOBs), FOBs on railways, skywalks and pedestrian subways. The projects are at different stages of conceptualization, approval and implementation. The aim is to ensure structurally-sound, safe, non-motorized transport and enhance the life of the infrastructure with periodical monitoring, structural audit, repairs, and maintenance.

The department will be moving closer to the completion of constructing new / reconstructing pedestrian infrastructure (FOBs, subways and skywalks) of proposed 6.75 km in total lying within the scope of ongoing works. Of this proposed 6.75 km, 1.66 km (available for 12 projects) has already been built.

Key projects include the construction / rehabilitation of skywalks in Bandra East (Bandra station to MHADA office), Borivali East (Borivali Station East to Omkareshwar Mandir, Shrikrishna Nagar Bridge), Kurla West (Taximens colony), Dahisar West (L.T. Road) and Mulund West (Maharana Pratap Chowk); reconstruction and repairs of bridges/FOBs in Zones III, IV and VII; construction of an arm from Cotton Green skywalk to the Cotton Green station; and the improvement of service roads adjacent to the Eastern freeway in M/W ward.

Sewerage Operations Department

**Direct
Actions –
Not
Quantified**

The Sewerage Operations department is-

- Procuring 4 oil-free air compressors for maintenance of sewer lines in the Western Suburbs to support efficient desilting and cleaning operations using clean high-pressure air for blockage removal, while reducing manual intervention and enhancing worker safety.
- Procuring 4 vehicle-mounted suction machines (1.5 m³ capacity) for the Main Sewer City Section to strengthen mechanized sewer cleaning, eliminate manual entry into sewer lines, and improve sanitation services.
- Procuring 4 power rodding machines for sewer cleaning in the Western Suburbs to improve desilting efficiency, reduce manual intervention, and minimize worker safety and public health risks.
- Procuring 4 dewatering pumps for the Western Suburbs to manage sewer overflows and improve drainage conditions through temporary diversion of sewage during blockages, repairs, and monsoon conditions.
- Procuring 4 pairs of power bucket machines for desilting of sewer lines in the Western Suburbs to improve mechanized sewer maintenance efficiency, reduce manual entry, and strengthen sanitation services.

The department is taking up works for efficiency enhancements in sewerage operations and sustaining performance, leveraging technologies and best practices to improve service delivery of existing sewage pumping stations. This includes the replacement of old High Tension (HT), Low Tension (LT) and Motor Center Control (MCC) panels, providing a Ring Main Unit for uninterrupted electrical supply, and providing Variable Frequency Drives for HT motors for energy efficiency.

Comprehensive infrastructure upgrades at key pumping stations include dry pit submersible pumps which remain functional during flooding, high-capacity centrifugal and vertical pump sets of varying capacities, and ones equipped with back pull-out assemblies.

Screens and flow control systems works include replacement of screens and allied works at Chheda Nagar Drop Shaft to prevent floating debris from entering the pumps, and hence waterbodies. Penstock gates and sluice valves are also being replaced at the Dadar pumping station to enable sewage isolation during maintenance.

Refurbishment of a 10.3 MLD capacity STP using Submerged Aerated Fixed Film (SAFF) technology is planned at Mahul Village, Chembur, in M/West Ward. An arrangement has been made between BMC and M/s. HPCL Refinery, Mahul for the sale of treated water. The discharge of treated water, meeting prescribed Maharashtra



Direct Actions – Not Quantified	<p>Pollution Control Board (MPCB) norms, will benefit local ecosystem. Through similar arrangements, the department is supplying 14.8 MLD of treated water for non-potable purposes to entities such as the Hindustan Petroleum Corporation Ltd., Bharat Petroleum Corporation Ltd., municipal gardens, Raj Bhavan and the Navy.</p> <p>The work of rehabilitation of lagoons using bioremediation technology has been completed at Versova, Ghatkopar, Bhandup and Malad wastewater treatment facilities, with work ongoing at Lovegrove and Bandra. Bioremediation uses specially selected microbes to naturally break down pollutants and clean contaminated lagoon sites. This project has used a tested microbial consortium from IIT-Roorkee, resulting in reduced sewage pollutant parameters up to the discharge standards prescribed by MPCB. The eco-friendly, non-toxic, non-pathogenic, non-corrosive, and non-contagious microbial solution poses no health risk to humans, animals, or the ecosystem, and can be implemented without major civil infrastructure, at less capital cost.</p> <p>The rehabilitation of rising mains at Churchgate, Matunga, Mazgaon and Banganga pumping stations will improve the reliability and efficiency of wastewater conveyance infrastructure, reduce the risk of leakages and sewer overflows, enhance pumping performance, and strengthen overall sewerage and sanitation services in the surrounding areas.</p> <p>As part of systematic sewer cleaning efforts, the department is procuring Modified Power Bucket Machines, Robo Vehicles, grab-type manhole desilting machines, and portable manhole cover lifters to strengthen mechanized sewer maintenance and reduce manual intervention. Additionally, sewer cleaning operations are being implemented through a PPP model involving complaint redressal, sewer desilting, and CCTV inspection of sewer lines based on defined operational targets.</p>
Enabling Actions	<p>The work of condition assessment of Gravity Sewer Lines include inspection and evaluation of underground sewer pipelines that carry sewage through gravity flow (without pumping). The work involves internal inspection of gravity sewer lines using CCTV and specialized cameras to identify cracks, corrosion, blockages, leakages, silting, and structural defects, assess hydraulic performance and remaining service life of pipelines, map and document sewer network conditions, and recommend repair, rehabilitation, desilting, or replacement measures. The objective of this assessment is to improve sewer network reliability, prevent sewer overflows and flooding, reduce contamination risks, and support efficient wastewater management infrastructure across the city.</p>

Sewerage Projects Department

**Direct
Actions –**

**Not
Quantified**

The sewerage system of Greater Mumbai is organized into seven zones: Colaba, Worli, Bandra, Versova, Malad, Bhandup, and Ghatkopar.

Using the XV Finance Commission's Water Fund, the department has undertaken the task of rejuvenation of 3 water bodies on pilot basis. These include Sion Lake, Sheetal Lake, and Dingeswar Lake, of which Dingeswar Lake project is now complete. The work of Rejuvenation of Swami Vivekanand Sarovar (Bandra Talao) and its operation and maintenance for 3 years being carried out by Assistant Commissioner H/West ward. The work includes desilting, sewer works, setting up of pretreatment units, and mobile treatment units. The work of providing and laying different dia. pipe by open cut & HDD method alongwith interceptors for diversion of DWF (Dry Weather Flow) along Powai Lake in 'S' ward alongwith operation & maintenance of the interceptors, screening system and gates for a total period of 6 years is already undertaken to divert 8 MLD to Bhandup Pumping Station and as on date about 90% work is completed and rest of the work is under progress. The balance 8 MLD flow is to be treated at proposed STP at Powai and the said work is being executed by MSDP Department. These efforts will help protect Mumbai's natural resources and safeguard the aquatic ecosystem.

A consultant has been appointed to prepare a DPR on diversion of dry weather flow coming into major nallas within the BMC jurisdiction, thus causing pollution of seas/creeks. An action plan for the said work and checking site feasibility is in progress.

The Sewerage Project department is also undertaking the work of providing and laying new sewer lines and diversion of sewer lines within the B.M.C. limit. The department is additionally upsizing existing sewer lines in MHADA layouts in Western Suburbs, Eastern Suburbs, and the City area. Major works are ongoing in Colaba, Bandra, Khar, Santacruz, Andheri, Jogeshwari, Goregaon, Malad, Kandivali, Borivali, Dahisar, Kurla, Chembur, Govandi, Mankhurd, Trombay, Ghatkopar, Powai, Vikhroli, Bhandup, and Mulund. Key corridors include S.V. Road, LBS Marg, JVLR, Western Express Highway service roads, Eastern Express Highway, Sewri-Chembur Road, RC Marg, Link Road, and Andheri-Kurla Road.

The work of providing and laying new sewer lines in various locations across the city will be carried out using trenchless technologies such as micro-tunnelling, H.D.D., pipe pushing technique, etc. These methods drastically reduce environmental damage, including disturbance to existing soil ecosystems and ground cover, when compared to traditional open-cut construction techniques.

The rejuvenation of the Poisar, Dahisar, Walbhat and Oshiwara rivers is being carried out to improve the water quality, river health, and riverine and riparian ecosystems. The said work is being executed by the Storm Water Drains (SWD) department.



Mumbai Sewerage Disposal Project (MSDP) Department

Direct Actions – Not Quantified

The Mumbai Sewerage Disposal Project department, responsible for creating facilities for disposal of municipal sewage, has undertaken upgradation of various Wastewater Treatment Facilities (WwTF) in Mumbai, with upto secondary level treatment. The capacities and locations of the WwTF are as follows: 500 MLD in Worli, 360 MLD in Bandra, 418 MLD in Dharavi, 180 MLD in Versova, 454 MLD in Malad, 337 MLD in Ghatkopar, and 215 MLD in Bhandup. These WwTF will treat municipal wastewater as per the latest effluent discharge standards of Hon. National Green Tribunal (NGT). As per these norms, 50% of treated water will be disposed into the sea and the rest will be treated further upto tertiary level for recycle and reuse for non-potable purposes. These 7 WwTFs will be commissioned by July 2026 to July 2028. Versova WwTF is expected to be commissioned by the next year and utilises XV Finance Commission's Water Fund. These new WwTFs are in addition to the construction of Colaba WwTF, which was completed and commissioned in April 2020 and is meeting the latest effluent discharge standards of NGT.

Furthermore, the department is constructing new Malad and Versova Influent Pumping Stations and upgrading existing Influent Pumping Stations at Bhandup and Ghatkopar. These pumping stations will receive raw wastewater from the collection system, remove large trash and debris, and lift the wastewater for treatment in the Wastewater Treatment Facilities.

Under the Mithi River rejuvenation Project, MSDP department is also constructing 2.6 m internal diameter Sewer Tunnel by segmental lining method for intercepting and conveying about 168 MLD Dry Weather Flow of sewage entering into Mithi River from Bapat Nalla and Safed Pul Nalla to the Dharavi Wastewater Treatment Plant for treatment. At Dharavi WwTF, the sewage will undergo treatment before being released into the Mithi estuary near Nature's park.

Enabling Actions

The department has published an Expression of Interest (EOI) on 29.05.2026 to call information from the prospective entities who can provide technologies for conversion of waste sludge into bio-fertiliser (25% dry Class-A sludge which will be generated from the STPs) into sellable products such as land conditioner, fertiliser, low grade fuel, construction material, etc. and suggest and implement revenue generation model for selling and disposing off the sludge products. After evaluation of the data/information/proposals received in response to EOI, suitable solutions will be selected depending upon the cost, footprint required, revenue generation potential, sustainability and circularity. Upon receipt of approval of

the competent authority to the strategic plan so prepared, the department will create a separate project for the execution of the work and invite tenders for appointment of contractors.

Planning Department

**Direct
Actions –
Not
Quantified**

The Planning Department is undertaking the Development of an Adhar Kendra with Skill Development, Multipurpose Hostel for Working Women, Old Age Home, and Care Centre. The project will benefit approximately 176 working women and aims to provide inclusive social infrastructure. Renewable energy systems are also being explored through CSR support to promote sustainable and energy-efficient facilities. .

Development Planning Department

**Enabling
Actions**

The Development Planning Department undertakes land acquisition of plots reserved for open spaces as part of implementing Mumbai's Revised Development Plan 2034 (RDDP 2034)^[12]. Open spaces include gardens, recreational grounds, playgrounds, municipal schools with playgrounds, and access streets. The RDDP 2034 made provisions for 7,834.41 ha (6.13 sq.m. per capita). Of this, 1,892.22 ha is reserved public open space targeted for acquisition.

Land is acquired through multiple legal mechanisms: possession or transfer of government and Vacant Land Tenancy land; purchase notices with compensations, Land Acquisition and Rehabilitation (LAR) proceedings, and suo moto acquisitions. Accommodation Reservation (AR) under DCPR is a mechanism that allows a Development Plan reservation on a privately owned plot to be shifted to another suitable plot of the same owner, thereby facilitating implementation of public amenities without immediate land acquisition. This helps BMC achieve significant cost savings by reducing expenditure on acquisition, compensation, and related legal proceedings while ensuring effective implementation of Development Plan proposals. These processes involve notifying the land under the Land Acquisition Act, obtaining Joint Measurements (JM) to define the land boundaries, issuing awards, and making compensation payments through the Special Land Acquisition Officer (SLAO). Procedural steps include obtaining legal clearances, resolving ownership disputes, issuing compensation awards, and securing approvals across administrative levels. Even after possession is taken, formalities such as mutation of land records (Property Card corrections) and final award declarations may continue.



Public Health Department

**Direct
Actions –
Not
Quantified**

The Public Health Department routinely organises 2–3 training sessions in a year for healthcare professionals to help build their capacity to manage health risks related to climate change and pollution. To strengthen heat resilience and ensure access to cooling spaces during extreme heat events or heat-related health concerns, the Aapla Dawakhana dispensaries/ clinics are equipped with air-conditioned rooms, which serve as cooling centers. Aapla Dawakhana offer a range of healthcare services, including general medicine, specialities, and diagnostic services at a subsidized rate.

Health Infrastructure Cell (HIC) (part of Public Health Department)

**Direct
Actions –
Not
Quantified**

Reconstruction of Chandanwadi Electric Crematorium in C Ward to adopt cleaner and energy-efficient cremation systems, reducing emissions and supporting sustainable urban infrastructure.

**Enabling
Actions**

Provision for an Emergency Disaster Control Center at K.B. Bhabha Hospital, Kurla, to enhance disaster preparedness, enable rapid response during climate-related emergencies, and strengthen resilience of critical healthcare infrastructure.

Deonar Abattoir

**Direct
Actions –
Quantified**

The Deonar Abattoir has introduced dual-chamber piped Natural Gas-based incinerators at slaughterhouse premises designed for safe and environmentally responsible disposal of carcasses. The system features a primary combustion chamber operating at 800–850°C for burning organic waste, and a secondary chamber at 1050–1100°C to oxidize gases and minimize harmful emissions. It includes a flue gas treatment system to control PM, SO_x, and NO_x emissions, and a heat exchanger unit to improve energy efficiency.

PNG-based systems are significantly cleaner than traditional wood-fired crematoriums, eliminating wood use and producing minimal smoke, ash, and greenhouse gases, while complying with MPCB air quality standards.

Deonar Abattoir

**Direct
Actions –
Not
Quantified**

At the abattoir, PNG-based animal crematoriums are proposed in Zone I, Zone III, Zone VI, and Zone VII. The installations will be equipped with Air Pollution Control Systems (APCS), including scrubber units, to minimize emissions in compliance with MPCB norms. The system will operate on cleaner fuel (PNG) and incorporate energy-efficient technology to reduce environmental impact.

The Deonar Abattoir's Effluent Treatment Plant (ETP), operational since 2004 with a capacity of 1.3 million litres per day (MLD), is built to ensure that effluent meets MPCB discharge standards. It follows a multi-stage treatment process—starting with primary screening and grit removal, followed by biological treatment using the activated sludge process, and concluding with tertiary clarification and filtration. Sludge is dewatered and disposed of in accordance with environmental regulations. The treated water, with significantly reduced Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) levels, is reused for non-potable purposes such as floor cleaning, equipment washing, and landscaping irrigation within the abattoir premises, and is also provided to the local ward office for road cleaning. This strengthens the facility's commitment to reducing freshwater consumption, lowering operational costs, preventing water pollution, promoting environmental compliance and circular water use. Budget provision is made for the refurbishments to the Effluent Treatment Plant at Deonar Abattoir, to replace the primary clarifier and secondary aerator.

The abattoir will install a modern slaughter line with an automated Blood Coagulator and Dryer system to safely and efficiently process slaughterhouse blood, with a capacity of 20,000 litres per batch. The advanced plug-and-play system separates blood from wastewater—sending wastewater to the Effluent Treatment Plant—and uses an eco-friendly, high efficiency electric boiler to dry the coagulated blood. The dried coagulated blood is repurposed as a high-protein ingredient for animal feed, used in organic fertilizers due to its nitrogen content, and processed into protein supplements for pet food and aqua feed. The system supports cleaner operations, better waste management, and circular use of byproducts.

Mumbai Coastal Road Project

**Direct
Actions –
Not
Quantified**

Provision has been made for the Construction of Public Toilet along the Coastal Road, & Police Chowky. This initiative aims to improve public sanitation, support hygiene infrastructure, and enhance safety and accessibility for citizens.

Provision has been made for the Construction of a World Class Central Public Park on the Race Course plot (A, B, C) covering a total area of 120.62 acres. The project includes a Botanical Garden (31.36 acres), Topiary Garden (60.90



acres), and a City Forest (11.76 acres). This initiative will enhance urban green cover, support biodiversity, improve air quality, and provide recreational space, contributing to climate resilience and sustainable urban development.

Wards

**Direct
Actions –
Not
Quantified**

E and M/West wards are utilizing funds from the XV Finance Commission for 25 kW solar panels - at the E ward Municipal Office Building, and at General Arunkumar Vaidya Swimming Pool and BMC Schools in M/West ward.

BEST Undertaking- Electric Supply Division

**Direct
Actions –
Quantified**

The BEST Undertaking periodically submits its Resource Adequacy Plan (RAP) to the Maharashtra Electricity Regulatory Commission (MERC). The plan includes a demand forecast, medium- and short-term resource adequacy plans, and a power procurement strategy, including plans for procurement of renewable energy. The demand forecast is developed using a Multi Linear Regression (MLR) model, which incorporates meteorological and economic variables—such as temperature, precipitation, and State GDP—along with values to account for seasonality and trends. Future values of these inputs were projected using ARIMA time-series methods. BEST also considers the impact of electric vehicle adoption and rooftop solar expansion on future demand.

In its Report on Resource Adequacy (Generation) (December 2025), BEST has projected a likely optimal capacity mix for future years till 2035-36, which can meet anticipated demand reliably. Based on the study, the likely total projected contracted capacity requirement for the year 2035-36 is around 2430 MW which consists of 456 MW from coal, 92 MW from gas, 152 MW from hydro, 343 MW from Wind, 791 MW from solar, 224 MW from Distributed Renewable Energy (DRE), 77 MW of PSP (6 hours), 180 MW of Battery Energy Storage System (4 hours) and 115 MW of Short-Term Open Access (STOA).

By March 2026, BEST had successfully procured 864.63 Mu Solar, 106.27 Mus Wind, and 768.23 Mus hydro. Renewable energy procurement for FY 2026-27 is further planned to be enhanced as follows- 1190.58 Mu Solar, 1048.54 Mu Wind, and 780.34 Mu. Hydro i.e. total 3,019.46 Mu.

BEST Undertaking is actively promoting rooftop solar adoption among its consumers, with or without subsidies, and is currently implementing the PM Surya

	<p>Ghar Muft Bijli Yojana. This national scheme offers subsidies and concessional loans for residential rooftop solar installations. By March 2026, 645 consumers had rooftop systems installed, generating approximately 11.48 million kWh of renewable energy annually.</p>
Enabling Actions	<p>Consultancy services for Demand Side Management (DSM) measures, focused on promoting energy efficiency and reducing peak electricity demand through consumer education, load research, energy audits, and technology upgrades, have carried forward to FY 2026–27. The scope of work includes appointment of consultants for conducting load research; preparation and submission of Detailed Project Reports (DPRs); obtaining MERC approvals; development of action plans; appointment of aggregators; implementation support; appointment of Independent Verification Agencies (IVAs); IVA evaluation and certification; submission of status reports to MERC; and achievement of the Demand Flexibility Procurement Obligation (DFPO) target. The initiative aims to achieve a peak demand reduction target equivalent to 1.5% of the total recorded peak demand for FY2025–26. Major planned activities include replacing conventional street lighting with energy-efficient LED lamps to improve energy efficiency and reduce electricity consumption.</p>

BEST Undertaking Transport Section

Direct Actions – Quantified	<p>BEST Undertaking is expanding its electric bus fleet through a combination of direct purchases and wet lease arrangements under the Gross Cost Contract (GCC) model. This expansion is being supported by BEST’s own budget, BMC grants, and the XV Finance Commission’s Air Fund.</p> <p>BEST Undertaking is currently focused on completing its planned orders of 2542 single decker electric AC buses, 120 double decker electric AC buses and 426 midi electric buses as per its revised estimate for FY 2025-26. New bus purchase estimates shall be made on receipt of BMC’s grant.</p> <p>In FY 2026-27, 63 single-decker AC, 1500 midi electric AC, and 10 DD open deck buses are planned for procurement by wet lease. Estimated to potentially reduce 12,601.04 tCO₂e annually.</p> <p>As of now, BEST operates a fleet of 2787 buses, of which 2538 are on wet lease, including 1313 Electric buses and 1225 CNG buses.</p> <p>Through these measures, BEST plans to achieve a total fleet size of 11,425 buses by March 31, 2027—comprising 3,337 owned buses and 8,088 wet-leased buses. The projected fleet mix will be 87.13% electric, 10.72% CNG, and 2.14% diesel—</p>
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	<p>moving BEST significantly closer to its target of a complete zero-emission fleet by 2026-27. These fleet enhancements are expected to support an increase in annual ridership, with BE 2026-27 estimating 48.61 lakh passengers, with ridership more than doubling since last year.</p>
Direct Actions – Not Quantified	<p>The Undertaking provides subsidized public transport to a wide range of commuters, including freedom fighters, persons with total blindness, students up to Class XII, persons with physical disabilities, mentally challenged students, accredited press reporters, and senior citizens—through both tickets and bus passes. For FY 2026–27, the subsidy amount is projected at INR 3,941.06 crore. The subsidies for persons with disabilities are reimbursed by BMC, estimated to be INR 12.70 crore.</p> <p>To expand charging infrastructure for both public and private EVs, BEST has an agreement in place with M/s. Reliance BP Mobility Ltd. since 2022 for the installation, operation, and maintenance of EV charging stations across Mumbai and its suburbs. BEST Undertaking has established public electric vehicle charging stations at 53 key locations (276 chargers) across Mumbai city and the suburban district. This charging infrastructure includes a mix of fast (60 kW) and slow (22–30 kW) chargers to cater to different charging needs of 2-Wheeler, 3-Wheeler, private e-cars and delivery vans. Out of these, 51 charging stations are operational, with 2 having become operational in FY 2025-26, 3 are under development. Under this public-private partnership, BEST earns ₹11.22 per unit of electricity consumed for EV charging and ₹2,000 per parking slot per month in land rental. In FY 2026-27, revenue collection of ₹ 7.25 crores is estimated.</p>



Annexure 3



Solid Waste Management Department

CH₄ emissions from Per MT of Municipal Waste

The average composition of Brihanmumbai Municipal Waste is as follows-

Food Waste (organic- wet)	72.60 %
Wood, clothing (organic- dry)	3.51 %
Sand, stone, and fine earth	17.37 %
Plastic	3.24 %
Paper and recyclables (including metals)	3.28 %
Management of landfill considered	Uncategorized

(Source- Report of NEERI,2016)

The table below shows the emission reductions for 1 MT of waste.

Source	Total GHGs (metric tonnes CO ₂ e) CH ₄
Direct release of landfill gas to atmosphere	0.738

Source: CIRIS tool [

Methane generated using methane commitment method (GPC Chapter 8.3.2, Page 92)

Quantity of waste (in MT)	tCO ₂ e
1	0.738

1. Providing SWM Facility in F/N Ward (New Project in FY 2026-27)

Specifications:

Waste Processing - 10 TPD (Tons Per Day)

Calculations:

Potential emissions from 300TPD of landfill waste.

10 TPD x 365 days = **3,650** tons annually

CH₄ emissions from per MT of Municipal Waste = 0.738 tCO₂e

The table below shows the emission reductions for 3,650 T of waste.

Therefore, potential emission reduction through preventing 10TPD of landfill waste is **2,693 tCO₂e**.

Quantity of waste (in MT)	tCO ₂ e
1	0.738
3,650	2,693

2. Setting up Dry Waste management processing Centre (New Project in FY 2026-27)

Specifications:

A) Waste Processing - **300 TPD** (Tons Per Day)

Calculations:

Potential emissions from 300TPD of landfill waste.

300 TPD x 365 days = **1,09,500** tons annually

CH₄ emissions from per MT of Municipal Waste = 0.738 tCO₂e

The table below shows the emission reductions for 1,09,500 T of waste.

Therefore, potential emission reduction through preventing 600TPD of landfill waste is **80,811 tCO₂e**.

Quantity of waste (in MT)	tCO ₂ e
1	0.738
1,09,500	80,811

Specifications:

B) Waste Processing - **500 TPD** (Tons Per Day)

Calculations:

Potential emissions from 500TPD of landfill waste.

500 TPD x 365 days = **1,82,500** annually

CH₄ emissions from per MT of Municipal Waste = 0.738 tCO₂e

The table below shows the emission reductions for 1,82,500 T of waste.

Therefore, potential emission reduction through preventing 600TPD of landfill waste is **1,34,685 tCO₂e**.

Quantity of waste (in MT)	tCO ₂ e
1	0.738
1,82,500	1,34,685

3. Waste Segregation Centre to be Developed (New Project in FY 2026-27)

Specifications:

Waste Processing – **2.5 TPD** (Tons Per Day)

Calculations:

Potential emissions from 300TPD of landfill waste.

2.5 TPD x 365 days = **912** annually

CH₄ emissions from per MT of Municipal Waste = 0.738 tCO_{2e}

The table below shows the emission reductions for 912 T of waste.

Therefore, potential emission reduction through preventing 10TPD of landfill waste is **673 tCO_{2e}**.

<u>Quantity of waste (in MT)</u>	<u>tCO_{2e}</u>
<u>1</u>	<u>0.738</u>
<u>912</u>	<u>673</u>

4. Technological Upgradation of Mahalaxmi Refuse Transfer Station (Ongoing Project in 2026-27)

Specification:

Current MSW received: 700 TPD

After modernisation:

Municipal solid waste is mechanically segregated
 Recyclables recovered
 Reduced landfill burden

Assumption:

Out of 700 TPD, 60% is considered Wet Waste and 40% Dry waste

Considering 40% dry waste diverted from landfill

Annual Dry waste handled: 700 TPD×0.4×365=1,02,200 MT/year

Calculations:

CH₄ emissions avoided by preventing dry waste from being landfilled.

Emission factor for dry municipal solid waste diverted from landfill (uncategorised):

= **0.3 tCO_{2e}/MT**

(Source: CIRIS tool, based on methane commitment method as per GPC Chapter 8.3.2, Page 92)^[16]

The table below shows the emission reductions for 1,02,200 MT/year of waste, avoided from landfill.

Source	Total GHGs (metric tonnes CO_{2e})
	CH ₄
Direct release of landfill gas to atmosphere	30,660

Therefore, the estimated annual emission reduction from modernisation of Mahalaxmi Refuse Transfer Station is **30,660 tCO_{2e}**.

<u>Quantity of waste (in MT)</u>	<u>tCO_{2e}</u>
1	0.3



Total energy generated from 8 MW by the WtE plant per day for a year (assuming that it runs for 12 hours),

$$7 \text{ MW} \times 12 \text{ hours/day} \times 365 \text{ days/year} = 30660 \text{ MWh}$$

Therefore, projected emission avoided,

$$= \text{Total energy generated per year} \times \text{weighted emission factor}$$

$$= 30660 \text{ MWh} \times 0.727 \text{ tCO}_2/\text{MWh} = 22,289.82 \text{ tCO}_2$$

Therefore, total carbon emission reduction from development of Waste to Energy Project at Deonar Dumping Ground (A + B) is **1,83,911.82 tCO₂e**.

- *Biomining of legacy waste at Deonar Dumping Ground*

Calculations:

Assuming 1MT of legacy waste being bio-mined i.e 1 MT of waste being avoided in the landfill.

The table below shows the emission reductions for 1 MT of waste.

Source	Total GHGs (metric tonnes CO ₂ e)
	CH ₄
Direct release of landfill gas to atmosphere	0.738

Source: CIRIS tool

Methane generated using methane commitment method (GPC Chapter 8.3.2, Page 92)^[14]

6. Dumpsite Reclamation Project at Mulund Dumping Ground (MDG) (Ongoing Project in 2026-27)

Specifications:

Quantity of waste- 70 lakh MT, 70,00,000 MT

Calculations:

CH₄ emissions from per MT of Municipal Waste = 0.738 tCO₂e

The table below shows the emission reductions for 70 lakh MT of waste, avoided from landfill.

Source	Total GHGs (metric tonnes CO ₂ e)
	CH ₄
Direct release of landfill gas to atmosphere	51,66,000

Therefore, potential emission reduction by removal of 70 lakh MT landfilled waste is **51,66,000 tCO₂e**.

Quantity of waste (in MT)	tCO ₂ e
1	0.738
70,00,000	51,66,000

Mechanical and Electrical (M&E) Department

1. Providing PNG Gas connections in Mahalakshmi Dhobighat (Ongoing Project in 2026-27)

Specifications:

40 gas connections are proposed to be installed at Mahalakshmi Dhobighat to replace traditional fuels such as coal, wood, cotton stock, and kerosene waste.

Assumptions:

- Average baseline fuel per connection/day = 5 kg of mixed biomass/fossil fuel (coal/wood/cotton/kerosene waste)
- Daily use per connection = 5 kg × 40 connections = 200 kg/day
- Annual use = 200 kg/day × 300 days = 60,000 kg/year = 60 tonnes/year
- Composite emission factor for mixed traditional fuels (based on IPCC average for wood/coal/kerosene): 2.5 tCO₂e/tonne
- PNG (replacement fuel) has lower emission intensity and cleaner combustion. Only avoided emissions from fuel replacement are considered.

Calculations:

<u>Parameter</u>	<u>Value</u>
Traditional Fuel Replaced	60 tonnes/year
Emission Factor	2.5 tCO ₂ e/tonne
Total Emissions Avoided	150.00 tCO ₂ e/year

Remarks:

- Gas-based heating systems offer improved thermal efficiency and significantly reduced particulate, NO_x, and unburnt hydrocarbon emissions.
- The project enables a clean-energy transition for informal workers and aligns with air quality improvement goals in dense urban service zones.

2. Upgradation of High Mast System (Ongoing Project in FY 2026-27)

Specifications:

Number of lights to be replaced – 2400

Metal Halide/ High Pressure Sodium Vapour (HPSV) bulb streetlights- 400 W

Smart LED flood light high mast- 150 W

Calculations:

Weighted average emission factor of Indian Grid for FY 2023-24 (including renewable energy sources) = 0.727 tCO₂/MWh

Electricity saved each mast light= 400 W – 150 W = 250 W

Total energy saved for 2400 number of lights,

= 250 W x 2400 = 60,00,00 W = 0.6 MW

Assuming operation of 8 hrs for 365 days,

Total energy saved for a year = 0.6 MW x 8 hrs x 365 days = 1752 MWh

Therefore, potential emission avoided = 1752 MWh x 0.727 tCO₂/MWh= 1273.704 tCO₂

Number of lights replaced	Potential tCO ₂ e reduced
1	0.53
2400	1273.7

3. Installation of solar panel systems at various peripheral hospitals (Ongoing Project in 2026-27)

Specifications:

Capacity of solar panel system to be installed- 385 KW

Calculations:

Weighted average emission factor of Indian Grid for FY 2023-24 (including renewable energy sources) = 0.727 tCO₂/MWh

Capacity utilization factor (CUF) of a solar = 18%

For a year, 385 KW x 24 hrs x 365 days x 0.18 = 607068 KW = 607.1 MWh

Projected emission avoided = 607.1 MWh x 0.727 tCO₂/MWh= 441.4 tCO₂e

Solar panel system to be installed (KW)	Potential tCO ₂ e avoided
1	1.15
385 KW	441.4

4. Carbon Cutter System (Ongoing Project in 2026-27)

Specifications:

Retrofitted to wood pyre cremation system.

Flue gases reduction at source

Carbon Monoxide	90%
Carbon Dioxide	70%
Hydrocarbons	46%
Sulphur Oxide	67%
Nitrogen Oxide	65%

Calculations:

Average wood used per cremation = 300 kg = 0.3 T

GHG Emissions = Wood used per cremation x Emission factor for wood

GHG Emissions per cremation:

Units	CO ₂	CH ₄	N ₂ O	Total
tCO ₂ e	0.683	0.046	0.007	0.736

Net zero machines reduce the other flue gases emitted at source, 70% Carbon dioxide and 65% Nitrogen Oxide at source i.e., tCO₂ = 0.683 x 0.70 = **0.4781**

Therefore, total potential emission reduction per cremation,

Units	CO ₂	CH ₄	N ₂ O	Total
tCO ₂ e	0.4781	0.046	0.005	0.566

Based on 2022-23 data, the number of cremations at cemetery where installation of carbon cutter system is proposed = 1707

Therefore, total potential emission reduction with proposed carbon cutter system would be **903.18 tCO₂e**.

Units	CO ₂	CH ₄	N ₂ O	Total
tCO ₂ e	816.12	78.52	8.54	903.18

Water Supply Project (WSP) Department

1. Development of Renewable Hybrid Energy Project Facilities at HSBT Middle Vaitarna Dam (Ongoing Project in FY 2026-27)

Specifications:

Capacity of Hydro Electric Power Plant= 20 MW

Capacity of Floating Solar PV= 6.5 MW

Calculations:

Annual Energy generated (MWh) = Capacity (MW) x Hours in a Year x Capacity Factor

For Hydro Electric Power Plant,

Capacity Factor of Hydro Electric Power Plant = 40 %

Therefore, annual energy from 20MW Hydro Electric Power Plant = $20 \times 24 \times 365 \times 0.40 = 70,080$ MWh

Projected emission avoided = $70080 \text{ MWh} \times 0.727 \text{ tCO}_2/\text{MWh} = 50,948.16 \text{ tCO}_2$

For Floating Solar PV System,

Capacity Factor of Solar PV Power Plant = 17-25 %, assuming 20%^[16]

Therefore, annual energy from 6.5 MW Floating Solar PV Power Plant = $6.5 \times 24 \times 365 \times 0.20 = 11,388$ MWh

Projected emission avoided= $11,388 \text{ MWh} \times 0.727 \text{ tCO}_2/\text{MWh} = 8,279.08 \text{ tCO}_2$

The total potential emission reduction by developing the hybrid power plant at Middle Vaitarna Dam is $59,227.24 \text{ tCO}_2$.

	Energy Generation (MWh)	Projected emission (tCO ₂) avoided
	1	0.727
Hydro Electric Power Project	70,080	50,948.16
Floating Solar PV Project	11,388	8,279.08

Hydraulic Engineers Department

1. Provision of new streetlights with LED luminaire at Middle Vaitarna Dam in O.C.

Division (New Project in FY 2026-27)

Quantity of LED street light luminaires: 15 Nos.

LED luminaire capacity: 100W

Assumption

Baseline as 150W HPSV (High Pressure Sodium Vapour) conventional street light

Operation: 10 hrs/day × 365 days/year

Grid Emission Factor: 0.727 tCO₂/MWh

Calculations:

Saving per luminaire = 150W – 100W = 50W = **0.05 kW**

Energy saved per luminaire/year = 0.05 × 10 × 365 = 182.50 kWh = **0.1825 MWh**

Emission avoided per luminaire/year = 0.1825 × 0.727 = **0.1327 tCO₂e**

Total energy saved (15 Nos.) = 0.1825 × 15 = **2.7375 MWh**

Total emission avoided = 2.7375 × 0.727 = **1.9902 tCO₂e**

Energy Generation (MWh)	Projected emission (tCO ₂) avoided
1	0.727
2.7375	1.9902

Therefore, total annual GHG emission saving from provision of new LED street lights at Middle Vaitarna Dam = **1.99 tCO₂e**

City Engineers Department

1. Solar power generation and appliances at various new municipal building constructions (Ongoing Project in 2026- 27)

a) Proposed Redevelopment of Material Testing Laboratory & Asphalt Plant Office, Worli

Specifications:

Installed solar rooftop capacity – 170 kW

Calculations:

Annual energy generation = 170 × 24 hrs × 365 days × 0.18 = **268056 kWh = 268.05 MWh**

Weighted average emission factor of Indian Grid for FY 2021–22 = **0.727 tCO₂/MWh**

Projected emission avoided = 268.05 × 0.727 = **194.87 tCO₂e**

Energy Generation (MWh)	Projected emission (tCO ₂) avoided
1	0.727
268.05	194.87

b)Redevelopment of Open Plot Known as 600 Tenements Deonar, M/E Ward – Installation of Solar Panel

Specifications:

Installed rooftop solar capacity – 235 kW

Calculations:

Annual energy generation = $235 \times 24 \text{ hrs} \times 365 \text{ days} \times 0.18 = 370548 \text{ kWh} = 370.54 \text{ MWh}$

Weighted average emission factor of Indian Grid for FY 2023–24 = **0.727 tCO₂/MWh**

Projected emission avoided = $370.54 \times 0.727 = 269.38 \text{ tCO}_2\text{e}$

Energy Generation (MWh)	Projected emission (tCO ₂) avoided
1	0.727
370.54	269.38

c)Proposed Construction of Fire Brigade Station on Land of Amenity Space at Village Kanjurmarg, L.B.S. Road, S Ward – Installation of Solar Water Heater

Specifications:

Solar Water Heater Capacity – **1000 litres per day (LPD)**

Assumptions:

- 1,000 LPD system offsets electric geyser/heater load
- Daily heating demand = ~2 kWh per 100 litres , so for 1000 L = **20 kWh/day**
- Annual heating energy saved = $20 \times 365 = 7,300 \text{ kWh} = 7.30 \text{ MWh}$
- Indian Grid Emission Factor = **0.727 tCO₂/MWh**

Calculations:

Projected emission avoided = $7.30 \times 0.727 = 5.30 \text{ tCO}_2\text{e}$

Energy Saved (MWh)	Projected emission (tCO ₂) avoided
1	0.727
7.30	5.3

Therefore, total annual GHG emissions saving from solar power generation and appliances at various new municipal building constructions = $194.87 + 269.38 + 5.3 = 469.55 \text{ tCO}_2\text{e}$

2. Replacement of conventional lighting with LED lighting in various reconstruction projects (Ongoing Project in FY 2026-27)

Assumptions for these calculations: Traditional lighting fixtures consume 3 times more electricity than LED

a) Reconstruction of Swimming Pool and Sports Complex near Odeon Mall

Specifications:

Number of LED Bulbs – 633 Nos.

Electricity consumption – 35,476 W = 35.476 kW

Calculations:

Assumed baseline traditional load = $35.476 \times 3 = 106.43$ kW

Electricity saved annually = $(106.43 - 35.476) \times 8 \text{ hrs} \times 365 \text{ days}$

Electricity saved annually = $70.954 \times 8 \times 365 = 206.99$ MWh

Projected emission avoided = $206.99 \times 0.727 = 147.96$ tCO₂e

Energy saved (MWh)	tCO₂e avoided
1	0.727
206.99	150.48

b) Redevelopment of Municipal Property at Vikhroli Parkside Layout in N Ward

Specifications:

LED Bulbs – 1661 Nos.

Electricity consumption – 37,590 W = 37.59 kW

Calculations:

Assumed traditional lighting load = $37.59 \times 3 = 112.77$ kW

Electricity saved annually = $(112.77 - 37.59) \times 8 \text{ hrs} \times 365 \text{ days} = 219,336.6 \text{ kWh} = 219.34$ MWh

Emission factor = 0.727 tCO₂/MWh

Projected emission avoided = $219.34 \times 0.727 = 159.46$ tCO₂e

Energy saved (MWh)	tCO₂e avoided
1	0.727
219.34	159.4

c) Redevelopment of Open Plot Known as 600 Tenements, Deonar, M/E Ward

Specifications:

LED Bulbs – 2,500 Nos.

Electricity consumption – 37.5 kW

Calculations:

Assumed traditional lighting load = $37.5 \times 3 = 112.5$ kW

Electricity saved annually = $(112.5 - 37.5) \times 8 \text{ hrs} \times 365 \text{ days} = 219,000 \text{ kWh} = 219.00$ MWh

Emission factor = 0.727 tCO₂/MWh

Projected emission avoided = $219.00 \times 0.727 = 159.21$ tCO₂e

Energy saved (MWh)	tCO₂e avoided
1	0.727
219.00	159.21

Therefore, total annual GHG emissions saving from replacing conventional lighting with LED lighting in various reconstruction projects = $150.48 + 159.4 + 159.21 = 469.09 \text{ tCO}_2\text{e}$

1. Installation of a Building Management System in proposed redevelopment of Material Testing Laboratory (Ongoing Project in FY 2026-27)

Specifications:

Building Management System (BMS) with energy optimization features linked to lighting, HVAC, and equipment scheduling.

Estimated load under BMS control – 170 kW

Assumptions:

- BMS systems typically reduce energy consumption by 10–15% through smart controls.
- For conservative baseline estimate, assume 10% savings on controlled load.
- Daily usage assumed = 10 hours/day
- Annual energy saved = $170 \times 10\% \times 10 \text{ hrs/day} \times 365 \text{ days} = 170 \times 0.10 \times 10 \times 365 = 62,050 \text{ kWh} = 62.05 \text{ MWh}$

Calculations:

Emission factor = $0.727 \text{ tCO}_2/\text{MWh}$

Projected emission avoided = $62.05 \times 0.727 = 45.11 \text{ tCO}_2\text{e}$

Energy Saved (MWh)	Projected emission (tCO ₂) avoided
1	0.727
62.05	45.11

Therefore, total annual GHG emissions saving from installing the Building Management System (BMS) = **45.11 tCO₂e**

Deonar Abattoir Department

1. Piped Natural Gas-based Incinerators at slaughterhouse premises (Ongoing Project in FY 2026-27)

Specifications:

- Technology: Dual-chamber high-temperature cremation with flue gas treatment
- Installed capacity: 500 kg/hr
- PNG consumption per cremation: $\leq 85 \text{ SCM}$

Assumptions:

- PNG Emission Factor (CIRIS, IPCC-based): $2.0 \text{ kg CO}_2/\text{SCM}$
- Emission factor for firewood (IPCC 2006 Guidelines): $1.747 \text{ tCO}_2/\text{tonne}$
- Traditional wood-based cremation emission: 0.262 tCO_2 per carcass ($150 \text{ kg firewood} \times 1.747 \text{ tCO}_2/\text{ton}$)
- PNG-based cremation emission: $85 \text{ SCM} \times 2.0 \text{ kg} = 170 \text{ kg CO}_2 = 0.17 \text{ tCO}_2$ per carcass

- Net emission avoided per carcass = $0.262 - 0.17 = 0.092 \text{ tCO}_2\text{e}$

Projection for Future Capacity Utilisation:

If operated at moderate scale for 2,000 cremations/year,
 Projected emission avoided = $0.092 \times 2,000 = 184.00 \text{ tCO}_2\text{e/year}$

Cremations (Nos.)	Avoided Emission per Unit (tCO ₂ e)	Total Projected Emission Avoided (tCO ₂ e)
2,000	0.092	184.00

Therefore, total annual GHG emissions saving from the PNG-based incinerator = 184.00 tCO₂e

School Infrastructure Cell (SIC) (Part of Education Department)

1. Replacement of Conventional Lighting to LED lighting at Municipal Schools (New Project in FY 2026-27)

Specifications:

Total schools = 167
 100 bulbs per school → 16,700 fixtures total
 Split equally → 4,175 fixtures per type
 Conventional bulb = 100W
 Hours = 8 hrs/day
 Emission factor = 0.727

9W LED

Saving = $100 - 9 = 91\text{W} = \mathbf{0.091 \text{ kW}}$
 Energy saved/fixture = $0.091 \times 8 \times 365 = \mathbf{265.72 \text{ kWh}}$
 Total energy saved = $265.72 \times 4,175 = \mathbf{1,108.88 \text{ MWh}}$
 Emission reduction = $1,108.88 \times 0.727 = \mathbf{806.16 \text{ tCO}_2\text{e}}$

Energy saved (MWh) tCO ₂ e avoided	Energy saved (MWh) tCO ₂ e avoided
1	0.727
1,108.88	806.16

2. 18W LED

Saving = $100 - 18 = 82\text{W} = \mathbf{0.082 \text{ kW}}$
 Energy saved/fixture = $0.082 \times 8 \times 365 = \mathbf{239.44 \text{ kWh}}$
 Total energy saved = $239.44 \times 4175 = \mathbf{999.82 \text{ MWh}}$
 Emission reduction = $999.82 \times 0.727 = \mathbf{726.86 \text{ tCO}_2\text{e}}$

Energy saved (MWh) tCO ₂ e avoided	Energy saved (MWh) tCO ₂ e avoided
1	0.727
999.82	726.86

3. 36W LED

Saving = 100 - 36 = 64W = **0.064 kW**

Energy saved/fixture = 0.064 × 8 × 365 = **186.88 kWh**

Total energy saved = 186.88 × 4175 = **780.22 MWh**

Emission reduction = 780.22 × 0.727 = **567.42 tCO₂e**

Energy saved (MWh) tCO ₂ e avoided	Energy saved (MWh) tCO ₂ e avoided
1	0.727
780.22	567.42

4. 45W LED

Saving = 100 - 45 = 55W = **0.055 kW**

Energy saved/fixture = 0.055 × 8 × 365 = **160.60 kWh**

Total energy saved = 160.60 × 4175 = **670.51 MWh**

Emission reduction = 670.51 × 0.727 = **487.76 tCO₂e**

Energy saved (MWh) tCO ₂ e avoided	Energy saved (MWh) tCO ₂ e avoided
1	0.727
670.51	487.76

Therefore, replacement of conventional lighting with LED fixtures in municipal schools is estimated to result in annual energy savings and emission reductions as follows:

9W LED: 1,108.88 MWh energy savings and **806.16 tCO₂e** reduction

18W LED: 999.82 MWh energy savings and **726.86 tCO₂e** reduction

36W LED: 780.22 MWh energy savings and **567.42 tCO₂e** reduction

45W LED: 670.51 MWh energy savings and **487.76 tCO₂e** reduction

BEST Undertaking (Ongoing FY 2026-27)

Electric Supply Section

1. Procurement of renewable energy for the electricity supply mix

Specifications:

BEST has proposed procurement of green power from solar, wind, and hydroelectric sources through SECI, IEX, REC, and bilateral procurement mechanisms. The electricity replaces grid supply and avoids emissions based on the Indian grid emission factor.

Assumptions:

- Emission factor for grid electricity (India, FY 2021–22): 0.727 tCO₂e/MWh
- Only avoided emissions from grid displacement are considered (no double counting of REC)

Calculations:

Source	Energy Procured (Mu)	Energy Procured (MWh)	Emission Factor (tCO ₂ e/MWh)	Emission Avoided (tCO ₂ e)
RE - Solar	1190.58	1190580	0.727	865,551.66
RE – Non-Solar (Wind, via SECI+IEX)	1048.54	1048540	0.727	762,288.58
RE – Hydro (IEX + TPC)	780.34	780340	0.727	567,307.18
Total	3,019.46	3019460		2,195,15,147

Remarks:

- This procurement displaces equivalent units of grid electricity and directly contributes to scope 2 emissions reduction in municipal operations.
- Actual emission factor can be updated based on CEA revision or DISCOM-specific data.

Transport Section

1. Wet leasing of Electric Buses

As stated in BEST Undertaking’s budget book, the planned procurement of owned buses is proposed as an alternative to CNG buses. For wet leasing as well, it is assumed that CNG buses will be replaced.

Assumptions & Emission Factors:

CNG: 2.75 kgCO₂/kg

Electricity: 0.727 kgCO₂/kWh

CNG bus efficiency:

23-seater = 3.0 km/kg;

39-seater = 2.7 km/kg

EV efficiency: 0.85 km/ kWh

Annual mileage:

23-seater = 50,000 km;

39-seater = 60,000 km

Wet Lease of Electric Buses - FY 2026-27

Bus Type	SD Electric AC (23-seat)
Quantity of Buses	63
Annual km per Bus	60,000 km
Fuel Replaced	CNG
CNG Use Replaced per Bus	$60,000 \div 3 = 20,000$ kg
GHG from CNG	$20,000 \times 2.75 = 55,000$ kg = 55 tCO _{2e}
Electricity Use per Bus	$(60,000 \div 0.85) \div 1,000 = 70.59$ MWh
GHG from EV Use	$70.59 \times 0.727 = 51.32$ tCO _{2e}
Net GHG Avoided per Bus	$55.00 - 51.32 = 3.68$ tCO _{2e}
Total GHG Avoided	$63 \times 3.68 = 231.84$ tCO _{2e}

Bus Type	MIDI Electric AC (39-seat)
Quantity of Buses	1500
Annual km per Bus	50,000 km
Fuel Replaced	CNG
CNG Use Replaced per Bus	$50,000 \div 2.7 \approx 18,519$ kg
GHG from CNG	$18,519 \times 2.75 = 50,928$ kg = 50.93 tCO _{2e}
Electricity Use per Bus	$(50,000 \div 0.85) \div 1,000 = 58.82$ MWh
GHG from EV Use	$58.82 \times 0.727 = 42.76$ tCO _{2e}
Net GHG Avoided per Bus	$50.93 - 42.76 = 8.17$ tCO _{2e}
Total GHG Avoided	$1500 \times 8.17 = 12,255$ tCO _{2e}

Bus Type	DD Electric AC (39-seat)
Quantity of Buses	10
Annual km per Bus	70,000 km
Fuel Replaced	CNG
CNG Use Replaced per Bus	$70,000 \div 2.7 \approx 25,925.9$ kg
GHG from CNG	$25,925.9 \times 2.75 / 1000 = 71.30$ tCO _{2e}



Bus Type	DD Electric AC (39-seat)
Electricity Use per Bus	$(70,000 \div 0.85) \div 1,000 = 82.35$ MWh
GHG from EV Use	$82.35 \times 0.727 = 59.87$ tCO _{2e}
Net GHG Avoided per Bus	$71.3 - 59.87 = 11.43$ tCO _{2e}
Total GHG Avoided	$10 \times 11.43 = 114.2$ tCO _{2e}

Total GHG Emission Avoided in FY 2025-26:Leased SD Electric AC: 231.84 tCO_{2e}Leased MIDI Electric AC: 12,255 tCO_{2e}Leased DD Electric AC: 114.2 tCO_{2e}Grand Total = 12,601.04 tCO_{2e}**2. Wet leasing of Electric Motor Vehicles (On-going FY 2026-27)****Specifications:**

141 electric vehicles (EVs) have been taken on wet lease for official municipal use.

Assumptions:

- Annual average distance travelled per car: 18,000 km/year
- Baseline fuel type considered: Petrol
- Petrol vehicle fuel efficiency: 14 km/litre
- Emission factor for petrol: 2.31 kg CO₂/litre
- EV efficiency: 0.15 kWh/km
- Grid emission factor (India, CEA 2023–24): 0.727 tCO₂/MWh

Stepwise Calculations:

A. Petrol GHG Emission per Vehicle per Year

$$= (18,000 / 14) \times 2.31 = 2,970 \text{ kg CO}_2 = 2.97 \text{ tCO}_2\text{e}$$

B. EV GHG Emission per Vehicle per Year

$$= (18,000 \times 0.15) \text{ kWh} = 2,700 \text{ kWh} = 2.70 \text{ MWh}$$

$$= 2.70 \times 0.727 = 1.96 \text{ tCO}_2\text{e}$$

C. Net GHG Avoided per Car per Year

$$= 2.97 - 1.96 = 1.01 \text{ tCO}_2\text{e/car/year}$$

Total GHG Avoided for 141 Cars:

$$= 0.8108 \times 141 = 114.32 \text{ tCO}_2\text{e/year}$$

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