MIRA BHAYANDAR
MUNICIPAL CORPORATION



Environment Status Report 2024 - 25

Mira Bhayandar Municipal Corporation secured first rank in the country in the population group of 3 to 10 lakhs under the **"Swachh Survekshan 2024"** campaign conducted as part of the Government of India's **Swachh Bharat Mission 2.0.**



Pre-Monsoon Deep Cleaning Campaign



DECLARATION

The "Environmental Status Report (ESR) 2024–2025" of the Mira Bhayandar Municipal Corporation has been prepared based on studies, analysis, and information compiled across various environmental aspects of the city. This report encompasses several environmental factors, including air quality, water resources, river status, biodiversity, waste management, distribution of green spaces, energy consumption, and urban development.

The maps and photographs presented in this report have been used solely for informational and reference purposes. They are not drawn to scale and appropriate official sources must be consulted for precise geographical verification.

The information utilized for this report has been compiled from various departments of the Mira Bhayandar Municipal Corporation, the Maharashtra Pollution Control Board (MPCB), Maharashtra State Electricity Distribution Company Limited (MSEDCL), as well as various government and public websites. Analyses and records from previous years' reports have also been utilized in preparing this report. Cooperation from all relevant departments has been obtained to ensure the reliability and transparency of the information presented in this report.

Readers are requested to note that efforts have been made to provide complete information wherever available. This report is primarily intended for educational, research, and governmental purposes. Before officially using any information contained in this report, permission must be obtained from the concerned departments.

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Gyanjyoti Savitribai Jyotiba Phule Garden



Executive Summary

In accordance with the provisions of the 74th Constitutional Amendment of India and Section 67(A) of the Maharashtra Municipal Corporation Act, 1949, the Mira-Bhayandar Municipal Corporation (MBMC) has prepared and submitted the Environmental Status Report (ESR) for the year 2024–25. The report is structured on the internationally accepted DPSIR framework (Drivers – Pressures – State – Impact – Response) to assess the environmental implications of rapid urbanisation, population growth and infrastructure development, and to evaluate the effectiveness of mitigation and management measures adopted by the Municipal Corporation.

Mira-Bhayandar has evolved from traditional Koli and Agri settlements into a rapidly urbanising municipal corporation, primarily due to its proximity to Mumbai and improved regional connectivity. The city is well connected through the Western Railway suburban corridor, Western Express Highway, Ghodbunder Road, and is further strengthened by infrastructure projects such as Metro Line-9 and the Bhayandar–Vasai "Janhavi" Ro-Ro ferry service initiated in 2025. The population of the city has increased from 0.809 million in 2011 to an estimated 1.182 million in 2025, with a high literacy rate exceeding 90%. Despite this growth, nearly 60% of the total geographical area falls under eco-sensitive and non-developable zones, including mangroves, salt pans and the Sanjay Gandhi National Park, making environmental conservation a critical planning priority.

With respect to urban infrastructure and basic services, significant improvements have been recorded in water supply, sanitation, solid waste management and energy efficiency. The per capita water supply has increased to 211 LPCD, water quality from 36 service reservoirs confirms compliance with IS 10500:2012 drinking water standards. To control water pollution, 9 sewage treatment plants (STPs) with a total capacity of 107 MLD are operational, with additional capacity under progress under AMRUT 2.0. Treated wastewater meets MPCB norms and is safely discharged or reused; however, pollution in creeks and certain lakes due to sewage intrusion and religious activities remains a key concern requiring continuous monitoring and intervention.

Air quality management remains one of the most critical environmental challenges for the city. Emissions from the transport sector, construction activities and energy consumption contribute significantly to particulate matter concentrations, especially at identified hotspots along highways and major junctions. Under the National Clean Air Programme (NCAP), MBMC has implemented several mitigation measures, including induction of 57 electric buses, installation of EV charging stations, deployment of mist spray machines and mechanical road sweepers, strengthening of real-time air quality monitoring systems, and extensive roadside plantation. These interventions have resulted in measurable improvement in Air Quality Index (AQI) at several locations, though sustained efforts are required to achieve long-term compliance with national standards.

Noise pollution, particularly in commercial areas, railway station surroundings and high-traffic corridors, frequently exceed CPCB prescribed limits. To address this issue, the Municipal Corporation is promoting the use of electric vehicles, installing noise barriers, implementing "No Horn" and "No Honking" zones, enforcing silence zones near schools and hospitals, and strictly regulating loudspeakers and vehicular noise, especially during festivals and public events.

Considering the water, air, and noise pollution during festivals such as Ganesh Utsav, Navratri, and

Diwali, the Municipal Corporation has implemented measures like artificial immersion ponds, promotion of eco-friendly clay idols, designated limited firecracker sale zones, and extensive awareness campaigns. Initiatives such as "Bappa Maza Shadu Cha" and "Majhi Vasundhara" campaign is helping to increase awareness among citizens to celebrate environment friendly festivals.

For sustainable development, the city has undertaken several initiatives under "Majhi Vasundhara" and NCAP, including tree plantation, development of green spaces, LED street lighting, solar energy projects, RRR centers (Reduce, Reuse, Recycle), plastic-free campaigns, organic waste processing, and e-crematorium facilities. Active participation from citizens, NGOs, and educational institutions has been a major strength of these initiatives.

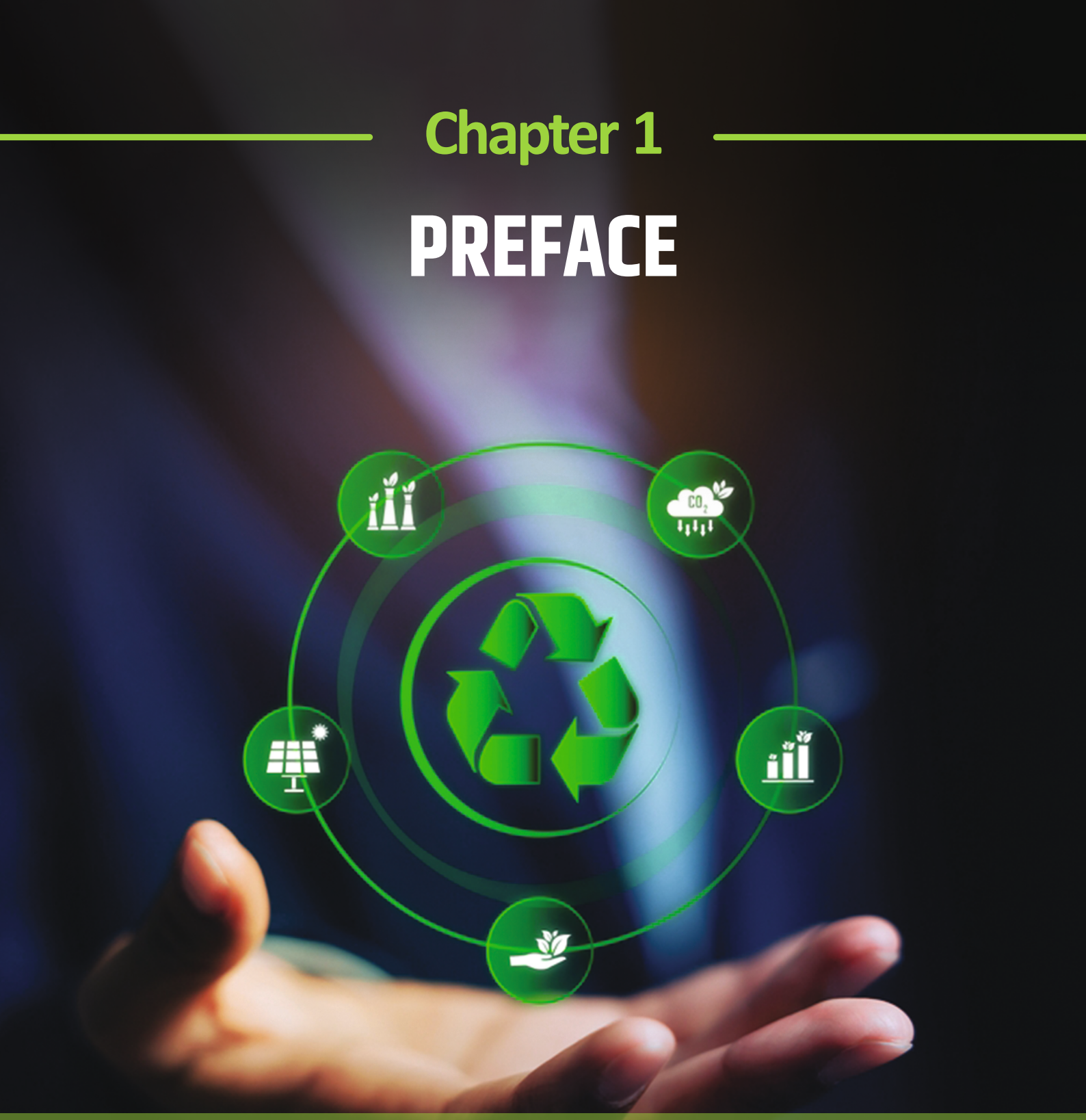
The Climate Action Plan (2024–2047) prepared for the city is a key component of the report, with a target of achieving net-zero carbon emissions by 2047. To reduce emissions in sectors such as energy, transport, and waste management, emphasis has been placed on renewable energy, energy-efficient buildings, and the use of electric vehicles.

According to the Environmental Performance Index (EPI), the city has achieved a satisfactory score of 62.8%. However, increasing green cover, reducing air pollution, and aligning environmental improvements with urban development remain major future challenges. Addressing these gaps will require active participation from administration, technology, and citizens.

Overall, this Environmental Status Report clearly reflects the commitment of the Mira-Bhayander Municipal Corporation towards environmental protection, sustainable development, and mitigating the impacts of climate change. By integrating planned development, modern technology, and public participation, the report will serve as an effective guide to lead the city towards a cleaner, safer, and environmentally sustainable future.

Chapter 1

PREFACE



Under the 74th Constitutional Amendment Act of 1992, all Class-A cities are required to publish an annual Environmental Status Report (ESR). This amendment entrusted municipal corporations with greater responsibilities regarding environmental protection and sustainable development. Additionally, Section 67A of the Maharashtra Municipal Corporations Act mandates that urban local bodies in Maharashtra prepare and submit this report annually.

The growing population, expansion of roads, transportation, sewage and increasing construction activities are major contributors to pollution. The impact of pollution on air, noise, water and soil in the city is identified, and measures to reduce pollution are detailed in this report. The social and economic development of the city depends on the efficient management of basic infrastructure, which directly influences the environmental quality of the city.

This report includes the current status of environmental management in Mira-Bhayandar city for the year 2024-25, along with information on areas where preventive measures are necessary. The report has been prepared in line with the issues of environmental problems, pressures arising from development, their impacts and the responsive steps taken by the administration. It has been developed according to the guidelines of the Maharashtra Pollution Control Board and based on the DPSIR (Driver–Pressure–State–Impact–Response) framework.

1.1 DPSIR Methodology

In June 2009, as per the guidelines issued by the Maharashtra Pollution Control Board (MPCB) and the Environment Department, Government of Maharashtra, it was suggested that while preparing the Environmental Status Report (ESR), the key environmental factors of the city should be analyzed using the DPSIR framework: Driving Force, Pressure, Status, Impact, and Response.

This report is used to evaluate the environmental performance of the city. It also serves as a guiding tool for effectively incorporating environmental aspects into future development plans.

1 Driving Forces

The factors that drive city development and growth create environmental pressures. For Eg: increasing population, industrialization, urbanization, rising transportation, construction, and tourism activities. etc.

2 Pressure

The direct impacts of human activities on the environment and natural resources are called pressures. Examples include air pollution, water pollution, soil erosion and increasing waste. etc.

3 Status

Information that reflects the current condition of the city's environmental resources. For Eg: water quality, air quality, noise levels, soil analysis extent of greenery, and the state of flora and fauna.

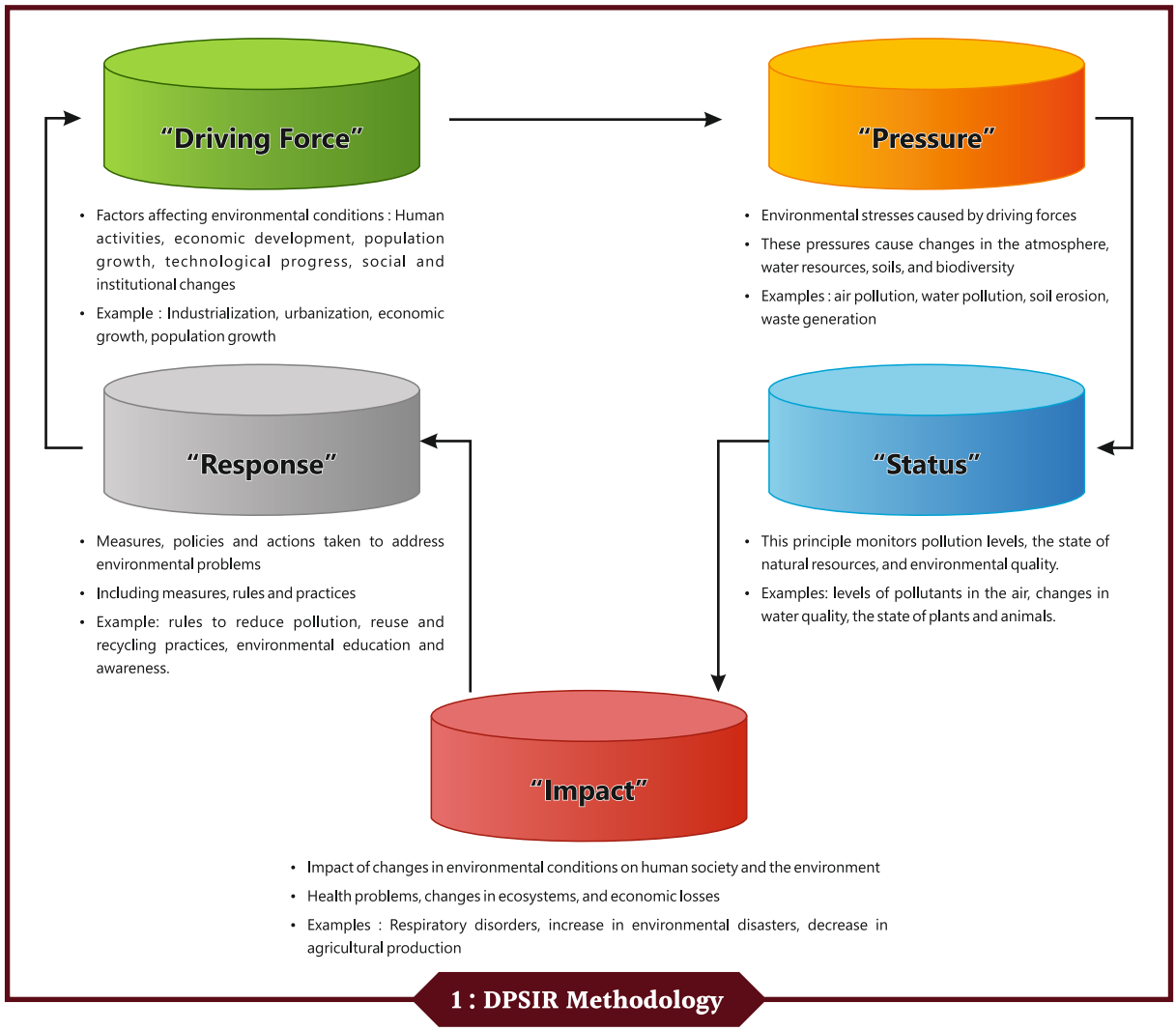
4 Impact

The effects of changes in environmental conditions on human society and the environment. For Eg: adverse impacts on human health, reduced agricultural production, and an increase in environmental disasters.

5 Response

Measures or policies undertaken to reduce environmental problems. For Eg: laws and regulations to control pollution, environmental protection campaigns, reuse and recycling practices, etc.

Let us be mindful of cleanliness and keep our city healthy and beautiful.

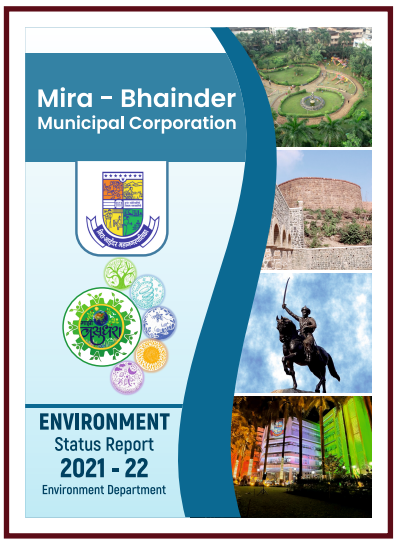


1 : DPSIR Methodology

1.2 Objectives of Environmental Status Report 2024-25

- **Comprehensive understanding of the city's environmental condition :** To present the current environmental status of Mira-Bhayandar city by analyzing air quality, water resources, noise level, soil quality and biodiversity.
- **Measurement and analysis of pollution levels :** To measure and conduct an in-depth analysis of the present levels of pollution in air, water, noise and other environmental components.
- **Assessment of pollution impacts :** To understand the direct and indirect effects of pollution on human health, animal life, plants, soil ecosystems, flora, fauna, and overall biodiversity.
- **Review of implemented environmental policies :** To evaluate how environmental policies and regulations at national and local levels are being implemented.
- **Recommendations for improvement measures and policies :** To suggest necessary measures for improving environmental conditions-such as pollution control strategies, adoption of eco-friendly technologies, reuse and recycling programs and initiatives for water and energy conservation.
- **Public awareness and participation :** To enhance environmental awareness among citizens, encourage their active participation in environmental protection and implement participatory projects and initiative

1.3 Environmental Status Report of the Last 3 Years







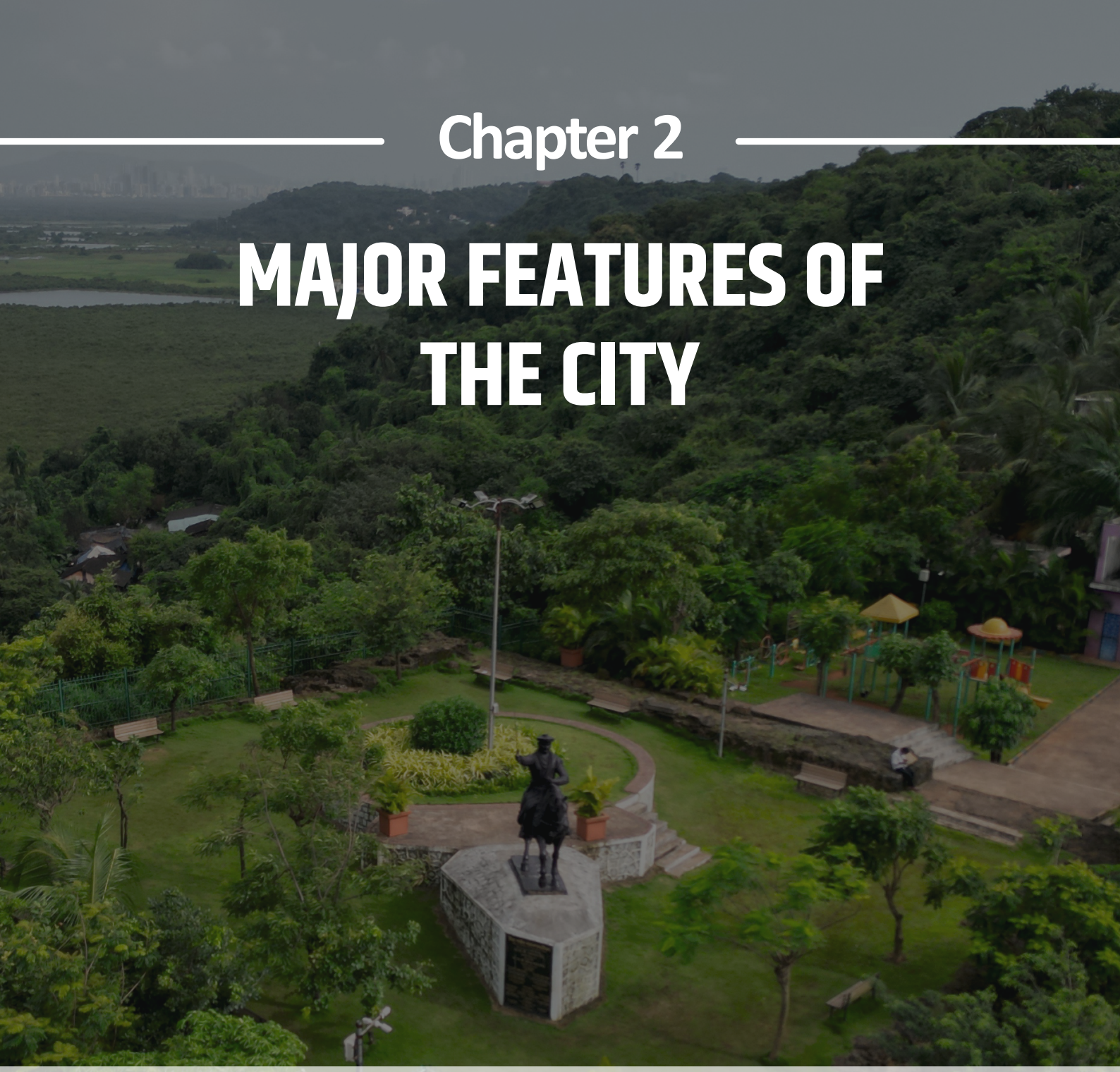
1 : Overview of the Environmental Status Report of the Last Three Years

Sr. No.	Aspects	2021-22	2022-23	2023-24
1.	City Water Supply	STEM : 86 M.L.D. MIDC. : 110 to 112 M.L.D.	STEM : 86 M.L.D MIDC. : 125 M.L.D Total : 211 M.L.D.	STEM : 86 M.L.D MIDC. : 125 M.L.D Total : 211 M.L.D
2.	Total Sewage	94 M.L.D	160 M.L.D	160 M.L.D
3.	Total Sewage Treatment Plants (STP) in City	8 /10	8 /10	9/10
4.	Total Solid Waste	500 Metric Ton	450 to 500 Metric Ton	450 to 500 Metric Ton
5.	Total Solid Waste Processing Centers	1	1	1
6.	Total Number of Buses	74 (Diesel Buses)	74 (Diesel Buses)	74 (Diesel Buses) 12 Electric Buses
7.	No. of Clay Ganesh Idols Immersed	-	1720	2068
8.	No. of Gardens	79	-	96
9.	Air Quality (AQI Average)	74.5	74.41	97.92
10.	Notable Work Done Under NCAP	• A cycle track was developed in the city. • Two machines procured for dust and air pollution control – Mist Spray Machine	• To reduce air pollution, 2 mist spray machines and 3 trolley-mounted mist spray machines were purchased. • 3 sweeping machines purchased for road cleaning.	• EV charging station completed at Kanakia Bus Depot. • To reduce air pollution, 12 electric buses have been put into operation. • CNG and electric crematorium systems installed.

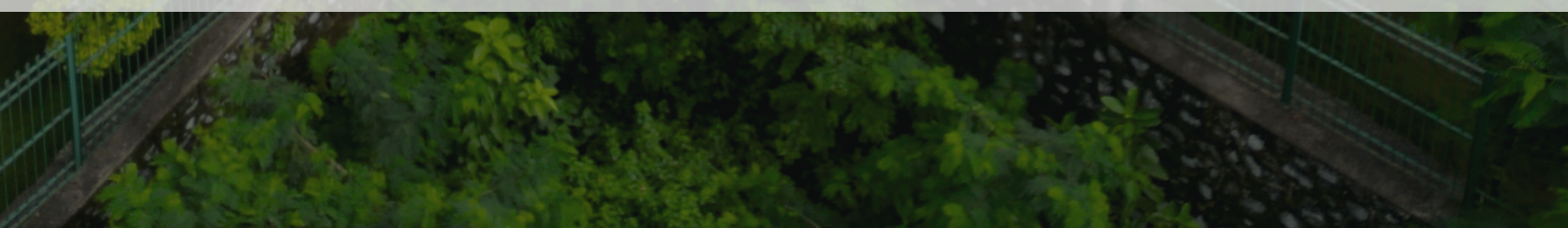
Leave plastic behind, connect with nature!

Chapter 2

MAJOR FEATURES OF THE CITY



Mira-Bhayandar City began with settlements of the Koli and Agri communities. The early lifestyle here was based on mud houses, bicycles and bullock carts. After the expansion of railway services and the availability of land at affordable rates compared to Mumbai, a large-scale migration of citizens took place into the city. As a result, agricultural lands and orchards were replaced by planned (and in some places, unplanned) settlements. Today, the city has modern commercial complexes (malls), contemporary restaurants, excellent educational facilities, and wide employment opportunities. Metro transport, smart city amenities, and eco-friendly initiatives are proposed for the future. However, this development must be carried out while maintaining environmental balance. Preserving the city's historical and cultural heritage, improving civic services and creating an inclusive city for all are the next objectives.



Administration and Establishment

The Mira-Bhayandar Municipal Corporation (MBMC) was established on 28 February 2002. It is the administrative body of the city, with its headquarters located in Bhayandar. Due to the city's rapid development and proximity to Mumbai, the population is continuously increasing. This has put pressure on civic service facilities, yet the municipal corporation is striving to provide maximum services to citizens.

- **The Mira-Bhayandar Municipal Corporation (MBMC) was established on 28 February 2002.**
- **The development plan of Mira-Bhayandar city was approved on 14 May 1997 and came into effect on 15 July 1997.**

Development Plan

The development plan of Mira-Bhayandar city was approved on 14 May 1997 and came into effect on 15 July 1997. For some specific areas (such as Mauje Uttan, Pali, Chowk, Tarodi, Dongri, and Morva), the MMRDA (Mumbai Metropolitan Region Development Authority) has been appointed as the special planning authority.

Tourism and Historical Importance

Mira-Bhayandar has many natural and historical tourist attractions. Bhayandar Chowpatty, Jesal Park Chowpatty, Ghodbunder Fort, Chimaji Appa Fort, Velankanni Beach, are great places to visit in the evening and local parks equipped with children's play areas, offering beautiful views of Vasai Creek, Fort and Islands. The Ghodbunder Fort, built by the Portuguese in 1530, is a significant historical monument. Velankanni and Uttan are scenic beaches that add to the city's charm.

Modern Facilities

Mira-Bhayandar city is equipped with various modern amenities such as: Pramod Mahajan Hall, Biodiversity Park, Swimming Pool , City Parks, Hinduhridaysamrat Balasaheb Thackeray Art Gallery, Bharat Ratna Gaansamragni Lata Mangeshkar Natya Gruha Auditorium , Chimaji Appa Park.

2.1 City Population



According to the 2011 Census

8,09,378 Population



Total Literates : **6,56,293**
Male : **3,56,434**
Female : **2,99,859**



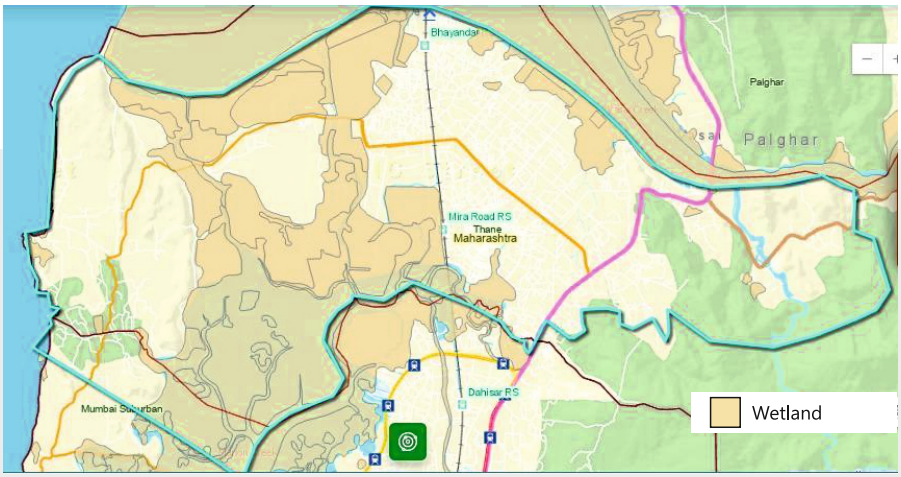
The Sex Ratio

886 Females per 1000 Male

According to the 2011 Census, the population of the city was approximately 8,09,378 and the estimated population in 2025 is 1,182,000. Based on the 2011 population data, the total number of literates in Mira-Bhayandar city was 6,56,293, of which 3,56,434 were males and 2,99,859 were females. The average literacy rate of Mira-Bhayandar city was 90.98%, with male literacy at 93.09% and female literacy at 88.59%.The sex ratio of Mira-Bhayandar city was 886 females per 1000 males.

2.2 Geographical Structure

Mira-Bhayandar city is located in the northern part of the Konkan division of Maharashtra State. The city lies between latitude 19°17'39.56"N and longitude 72°51'16.43"E. The average elevation of Mira-Bhayandar city above sea level is 3 meters. To the east lies the Sanjay Gandhi National Park, to the north is the Vasai-Virar city, to the south is Mumbai city and to the west is the Arabian Sea. Geographically, the city falls within the volcanic terrain of the Deccan region. The areas of Uttan, Ghodbunder and the eastern part of the city are hilly regions. In contrast, the Mira Road area in the west has flat terrain, which has led to the formation of marshy and waterlogged land.



2 : Wetland Map of Mira Road (As per Wetland Notification 2017)

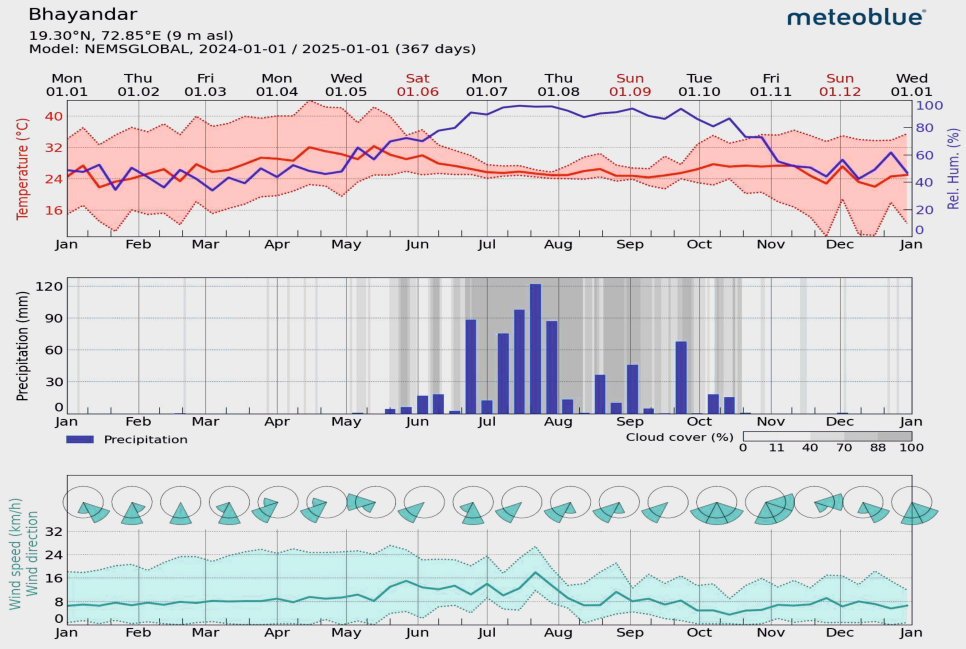
2.3 Climate

Since the Mira-Bhayandar city is located along the seashore, the climate here is humid and hot.

2.3.1 Temperature

The average maximum temperature in the city ranges between 26°C and 37°C throughout the year. The highest temperatures are recorded from March to May. During summer, the maximum average temperature has been noted at 37°C, while the minimum is around 22°C. In winter, the maximum temperature reaches 33°C, and the minimum drops to 16°C. Over the year, there is an approximate variation of 6.8°C in average temperature. In recent years, temperatures have shown an upward trend, and the intensity of summer has increased further.

2.3.2 Rainfall



3. Climate of Mira-Bhayandar City

In Mira-Bhayandar city, the monsoon season lasts from June to September. The annual average rainfall in the surrounding areas is 3670.4 mm, with the highest rainfall of 800 mm recorded in July. Most of the rainfall in this region occurs due to the Southwest Monsoon winds, though occasionally, during winter, some rainfall is also recorded due to the Northeast Monsoon winds.

In Mira-Bhayandar, the period from March to May is characterized by a hot and humid summer. During this time, the average daytime maximum temperature ranges between 33°C and 38°C, with the highest temperatures recorded in May. The average night time minimum temperature remains between 25°C and 28°C. Following this, the monsoon season begins from June to September. During the monsoon, humidity levels are extremely high (80% to 90%) and wind speeds are also stronger. From December to February, the city experiences winter, with daytime temperatures ranging from 27°C to 31°C and nighttime temperatures between 18°C and 23°C. During this season, humidity levels range from 40 % to 60 %.

2.4 Regional Connectivity

2.4.1 Roads

Mira-Bhayandar city is well connected to other parts of the region through railways and roads. The Ghodbunder Road (State Highway SH-42) is an important route that connects the Mumbai–Agra National Highway (NH-3) and the Mumbai–Ahmedabad National Highway (NH-48).The Western Express Highway (WEH), a 25.33 km long, well-developed expressway, serves Mumbai and cities in the MMR (Mumbai Metropolitan Region). It is the busiest and most important highway in the Mumbai Metropolitan Area, linking the city to NH-48. This highway connects the northern part of Mumbai to the western suburbs.In Mira-Bhayandar, the Maharashtra State Road Transport Corporation (MSRTC) provides inter-district bus services to various districts such as Thane, Palghar, Mumbai suburbs, Raigad, Ratnagiri, and Sindhudurg.

The city also has its own internal public transport service – Mira-Bhayandar Municipal Transport (MBMT), operated through Private companies, namely M/s. Mahalaxmi City Bus Operator (diesel buses) and M/s. Transvolt Mira Bhayandar Private Limited (electric buses). Since Mira-Bhayandar is a suburb of Mumbai, the MBMT bus service is mainly available up to suburban railway stations, and it also serves as the primary public transport system within the city.



4 : Mira- Bhayandar Double-Decker Flyover

In Mira-Bhayandar city, a flyover has been constructed from S.K. Stone Junction to Shivar Garden. The flyover is 850 meters long and has two lanes, each 17 meters wide, which has helped in ensuring smooth traffic flow.The flyover shares 21 common pillars with Metro Line-9, leading to effective utilization of space. It also includes an up-ramp of 122.6 meters and a down-ramp of 153 meters, making vehicle movement more convenient.

2.4.2 Railway

Mira-Bhayandar city is located on the Western Railway line. All local trains running between Mumbai and Virar, as well as some express trains on certain routes, halt at Bhayandar station. Mira Road Railway Station lies on the Western Suburban Line of Mumbai Railways, between Borivali and Bhayandar stations. Mira Road station has 4 platforms, while Bhayandar station has 6 platforms.



5 : Bhayandar Railway Station

2.4.3 Metro

During the construction of the Mira-Bhayandar Metro route, it was divided into three smaller corridors, Line 7: Dahisar (East) to Gundavali, Line 7A: Gundavali to Chhatrapati Shivaji Maharaj International Airport – Terminal 2 , Line 9: Subhash Chandra Bose Stadium to Dahisar (East)

The total length of this route is 31.045 kilometers, connecting the Mira-Bhayandar area to the Chhatrapati Shivaji Maharaj International Airport via Dahisar (East) and Andheri (East).Construction of Line 7 began in August 2016, while work on Line 7A and Line 9 started in March 2020. This metro corridor is elevated, and there are a total of 10 elevated stations along the entire route.

Line 7
Dahisar (East) to Gundavali

Line 7A
Gundavali to Chhatrapati Shivaji Maharaj International Airport - Terminal 2

Line 9
Subhash Chandra Bose Stadium to Dahisar (East)

Metro



Line 7 began in
August 2016

Line 7A and Line 9 started in
March 2020

10 Total Stations | **10** Elevated Stations

	Metro Station		Length (km)
9	Subhash Chandra Bose Stadium	Kashigaon	11.38
	Kashigaon	Dahisar (East)	
7	Dahisar (East)	Aarey	16.495
	Aarey	Gundavali	
7A	Gundavali	Chhatrapati Shivaji Maharaj International Airport – Terminal-2	3.17
		Total	**31.045**

2.4.4 Airport

Mira-Bhayandar city does not have air services. Chhatrapati Shivaji Maharaj International Airport is located approximately 24 km from the city.

2.4.5 Waterway

The Maritime Board has planned the development of a water transport project to connect the city with Vasai, Borivali, Thane, and Mumbai. This project will help provide easy connectivity, reduce travel time, and promote eco-friendly travel. Proposed waterways include Mumbai to Morva and Gorai to Borivali. These projects are expected to reduce both travel duration and fuel consumption. The Bhayandar–Vasai waterway has already been launched for citizens.

Proposed waterways
Mumbai to Morva
Gorai to Borivali

Operational Waterway
Janhvi
Bhayandar to Vasai

Ro-Ro ferry service for citizens Starting from
01 February 2025

In recent years, the number of vehicles in the Mumbai Metropolitan Region has increased significantly, leading to heavy traffic congestion on connecting roads in Thane, Navi Mumbai, Bhiwandi, Ghodbunder Road, Mira-Bhayandar and Vasai-Virar. With the rise in vehicle numbers, travel time on major highways has increased and traffic jams have become more frequent.

To address this, a Ro-Ro ferry service between Bhayandar and Vasai was launched for citizens on 1 February 2025. This service helps avoid traffic problems and saves valuable time. It makes travel faster, more convenient and environmentally friendly. The ferry, named "Janhvi", is operated by Suvarnadurg Shipping and Marine Services. The Ro-Ro vessel has a capacity to carry 100 passengers, 50 two-wheelers, and 30 four-wheelers at a time. The journey from Bhayandar to Vasai takes about 10 to 15 minutes. The service operates daily from 6:00 AM to 7:00 PM.



6 : Vasai-Bhayandar Ferry (Ro-Ro) Service

2.5 Existing Land Use Classification

To understand the existing land use, the total area has been broadly classified into three categories:

Developed Area : includes land used for residential, commercial, industrial, public-semi-governmental, recreational, public services and transportation.

Developable Area : includes open land and agricultural land.

Undeveloped Area : includes marshes, wastelands, special-use lands, environmentally sensitive zones, water bodies, forests and conservation areas.

In addition to these main categories, the Mira-Bhayandar Municipal Corporation area has been further classified into 479 detailed sub-categories.

2.6 Land Use Distribution

Under the Mira-Bhayandar Development Plan, the total planning area is 6,479 hectares. Table No.1 shows the usage of different types of land.

According to the Existing Land Use Survey :

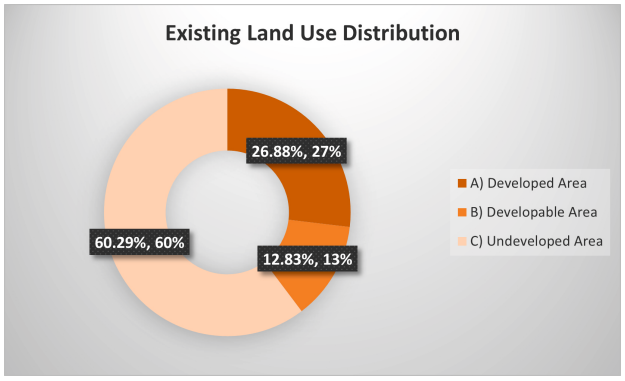
- **Developed Area :** About 26.80% (1,736 hectares) of the total area is developed, 10% (647.62 hectares) – Residential use, 1.05% (67.99 hectares) – Commercial use, 1.85% (120.02 hectares) – Industrial use, 4.79% (310.07 hectares) – Mixed use, 2.02% (130.85 hectares) – Public/semi-governmental use (educational institutions, healthcare services, central and state government properties, etc.), 0.98% (63.78 hectares) – Recreational use (parks, playgrounds, swimming pools, etc.), 0.99% (63.83 hectares) – Transport and communication (traffic management, transport-related facilities, communication services), 4.69% (304.17 hectares) – Roads.

- **Developable Area :** Accounts for 13.84% (896.82 hectares) of the total area, 3.51% (227.68 hectares) – Agricultural land, 10.33% (669.14 hectares) – Open land

- **Undeveloped Area :** Makes up 59.35% (3,845.59 hectares) of the total planning area, 6.12% (396.82 hectares) – Marshland, 39.65% (2,568.66 hectares) – Environmentally sensitive areas (including mangroves and the Sanjay Gandhi National Park)

2 : Existing Land Use Distribution

	Type of Land Use	Area (Hector)	Percentage of Developed Area (%)	Percentage of Total Area (%)
	A) Developed Area			
1	Residential	642.255	36.88	9.91
2	Commercial	66.282	3.81	1.02
3	Mixed	311.285	17.87	4.8
4	Industrial	119.089	6.84	1.84
5	P.S.P - Public / Semi-Government	134.847	7.74	2.08
6	Recreational	70.77	4.06	1.09
7	Public Utilities	22.171	1.27	0.34
8	Transportation & Communication	63.958	3.67	0.99
9	Roads	304.763	17.5	4.7
10	Other	6.188	0.36	0.1
	Total	**1741.6**	**100**	**26.88**
	B) Developable Area			
11	Agricultural Land	169.984	20.45	2.62
12	Open Land	661.285	79.55	10.21
	Total	**831.269**	**100**	**12.83**
	C) Undeveloped Area			
13	Marshy Area	317.915	8.14	4.91
14	Environmentally Sensitive Area	2566.712	65.71	39.62
15	Social Forest	0.409	0.01	0.01
16	Water Body	159.991	4.1	2.47
17	Other	860.856	22.04	13.29
	Total	**3905.88**	**100**	**60.29**



Chapter 3

Urban Basic Infrastructure and Sustainable Development Initiatives



The primary objective of the Municipal Corporation is to provide a clean, healthy, safe, and sustainable quality of life for its citizens. To achieve this, the Municipal Corporation delivers various essential civic services and facilities to meet the daily needs of the residents. For the city's overall development, various departments of the Corporation are continuously active in areas such as water supply, sanitation, solid waste management, healthcare, education, public transport, parks, green space development, and environmental conservation.Additionally, through citizen participation and the use of modern technology, efforts are being made to make service delivery more efficient, transparent, and effective.In essence, the Mira-Bhayandar Municipal Corporation is committed to improving the quality of life in the city through citizen-centric governance, while building an eco-friendly and progressive urban environment.



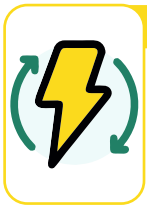
Sanitation and Solid Waste Management

Daily door-to-door waste collection is conducted across all wards using refuse compactor vehicles (Ghantagadi) and sanitation staff. Necessary measures are implemented for waste segregation, processing, and scientific disposal.

Water Supply



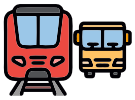
MBMC ensures the supply of pure drinking water to every household across all wards. Regular planning is undertaken to improve the water supply network and maintain a demand-supply balance.



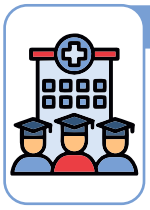
Power Supply

Electricity distribution in Mira Bhayandar is managed by M/s. Adani Electricity Mumbai Ltd., M/s. Tata Power Company Ltd., and Maharashtra State Electricity Distribution company limited (MSEDCL).

Public Transport



Bus services are provided through joint collaborations of the MBMC to facilitate daily commuting. Measures are also taken to reduce traffic congestion.



Education and Healthcare

The city provides access to Municipal and private schools, colleges, and hospitals. Regular health check-up camps, vaccination drives, and public awareness programs are conducted via health centers.

Recreation and Green Zones



Various gardens, playgrounds, and open spaces have been developed for public recreation. The Corporation actively promotes environmental improvement through tree plantation and "Harit" (Green) initiatives.

3.1 Municipal Solid Waste and Solid Waste Management



Daily Waste Generation

450 – 500 MTPD



Compost made from wet waste; RDF produced from dry waste



100% scientific processing of biomedical waste (2024–25)

Large quantities of solid waste are generated daily within the city. Due to urbanization, population growth, and changes in lifestyle, the volume of waste is increasing. This solid waste includes household waste, waste generated from commercial complexes, construction and demolition waste, biomedical waste, and other types of hazardous and non-hazardous waste. Information regarding the waste generated in Mira-Bhayandar city, its disposal, and management is provided below.

3.1.1 Waste Collection in Mira-Bhayandar

The Mira-Bhayandar Municipal Corporation (MBMC) has approved a proposal to install digital smart waste bins in the city. Waste collection in Wards 1, 2, and 3 is managed by Global Waste Management, while in Wards 4, 5, and 6 it is handled by M/s. Konark Company.

Within the MBMC area, about 500 tons of waste generated daily is processed under the Design Build Finance Operate Transfer (DBFOT) model. Across the 24 wards, approximately 450–500 metric tons of waste is generated every day.At Mouje Uttan, waste is currently processed by M/s. Saurashtra Enviro Project Pvt. Ltd., which handles:225–250 TPD (tons per day) of wet waste and approx.150–175 TPD of dry solid waste separately. From the dry waste, non-biodegradable materials are segregated to produce Refuse Derived Fuel (RDF), which is then sold. From the wet waste, compost fertilizer is produced, tested according to FCO standards, and sold by M/s. Saurashtra Enviro Project Pvt. Ltd.

Information on the biomedical waste generated in Mira-Bhayandar city from June 2024 to March 2025 is provided in the table below.

3 : Total Biomedical Waste Generated in Mira-Bhayandar City

Month	Quantity of Biomedical Waste Generated in Local Institutions (Metric Tons)	Quantity of Pre-treated Biomedical Waste in Local Institutions (Metric Tons)	Percentage of Scientifically Pre-treated Biomedical Waste	Quantity of Biomedical Waste Collected in Local Institutions (Metric Tons)
June	23.073	23.073	100%	23.073
July	25.534	25.534	100%	25.534
August	25.736	25.736	100%	25.736
September	23.069	23.069	100%	23.069
October	26.032	26.032	100%	26.032
November	24.382	24.382	100%	24.382
December	24.756	24.756	100%	24.756
January	25.769	25.769	100%	25.769
February	22.961	22.961	100%	22.961
March	23.947	23.947	100%	23.947



3.1.2 Waste Management in Mira-Bhayandar

Sanitary Landfill
90% Excavation Complete.

Plasma Technology Project
70% Complete
(Processing 8 TPD Waste).

7 Biomethanation Plants
Total 100 TPD Capacity.

Solarised Mechanical Composting
100 MTPD Capacity Proposed.

The solid waste generated in Mira-Bhayandar city is processed at Mauje Uttan. A Sanitary Landfill (SLF) is being developed for the scientific disposal of inert (non-biodegradable) waste resulting from the processing activities. Approval has been accorded for a Plasma Technology processing plant to treat mixed waste. Additionally, to achieve the decentralization of waste within the Mira-Bhayandar Municipal Corporation area, the construction of a Biomethanation Plant is currently in progress. Furthermore, work on a Solarised Mechanical Composting project is underway to process the wet waste generated within the city.

3.1.2.1 Leachate Treatment Plant (LTP) at Mouje Uttan

M/s. Movi Ecoserve Pvt. Ltd. has been appointed for the treatment of leachate generated from the waste at Mauje Uttan. Accordingly, the leachate treatment process is currently operational at the site. Approximately 25 thousand liters of leachate are being treated on a daily basis.

3.1.2.2 Sanitary Landfill Site

M/s. C. D. Transport has been issued a Work Order for the construction of a Sanitary Landfill intended for the scientific disposal of inert waste resulting from waste processing within the Mira-Bhayandar Municipal Corporation area. At present, 90% of the excavation work has been completed by the contractor. Furthermore, the Work Methodology for placing Geo-synthetic Clay Liners and HDPE Sheet Liners has been solicited from the contractor, and the procedural work is in its final stages.

3.1.2.3 Mixed Waste Processing Plant based on Plasma Technology

Under the Maharashtra Suvarna Jayanti Nagarotthan Maha-Abhiyan, approval has been accorded for the processing of mixed waste using Plasma Technology. The contract for processing 8 tons of waste daily via Plasma Technology at the Uttan Waste Processing Plant in Bhayandar (West) has been awarded to M/s. V.D.K. Facility Services Pvt. Ltd. Currently, 70% of the work is complete, and the project is in its final stages.

3.1.2.4 Biomethanation Project (Bio-Gas)

With the objective of achieving waste decentralization within the Mira-Bhayandar Municipal Corporation area, a Work Order has been issued to M/s. Guruji Infrastructure Pvt. Ltd. for the establishment of seven Biomethanation plants with a total cumulative capacity of 100 tons. This includes four plants with a capacity of 10 tons each and three plants with a capacity of 20 tons each, situated at various locations across the city.





7 : Biomethanation Projects in Mira-Bhayandar

4 : Biomethanation Projects in Mira-Bhayandar Municipal Corporation Area

Sr. No	Work Site	Project Capacity	Current Status of Projects
1	Mouje Bhayandar Reservation No. 140	10Ton	The project is implemented
2	Mouje Navghar Reservation No. 122 "D"	20 Ton	The project is implemented
3	Mouje Navghar Reservation No. 122 "D"	10Ton	The project is implemented
4	Mouje Kanakia Reservation Nos. 271, 272, 273	10Ton	The project is implemented
5	Mauje Mahajanwadi Reservation No. 368	20Ton	The construction of the Primary Digester & Main Digester has been completed, while the remaining project construction is in progress.
6	Mauje Penkarpada Reservation No. 353	20Ton	The raft work has been completed, but the project construction is currently halted.
7	Urban Amenities Area – Mouje Mira C.S.No. 1442 to 1446 and other survey numbers, as well as Mira C.S.No. 1723 to 1726 and others, located behind Kashimira Ceramics, Tanvi Developers, and Kashimira Police Station.	10Ton	Work is in progress

3.1.2.5 Solarized Mechanical Composting

Under the Government of Maharashtra's scheme for the "Development of Basic Infrastructure and Amenities," approval has been accorded for the establishment of decentralized composting facilities to process 100 MT of wet waste into organic fertilizer.

Specifically, at Hatkesh STP No. 8, Mira Road (W), a Work Order was issued to M/s. Lahas Green India Pvt. Ltd. for a 20-ton capacity Solarised Mechanical Composting plant, where 90% of the work is complete and the remaining is in the final stages. Similarly, at STP No. 3, Sachin Tendulkar Ground, Bhayandar (E), a Work Order for an identical 20-ton capacity plant has been issued to the same agency, and construction work is currently in progress. Furthermore, the tender process for the establishment of additional 20-ton and 40-ton capacity Solarised Mechanical Composting plants at Reservation No. 353, Penkarpada, Mira Road (E) is currently underway, and project execution is planned to commence shortly.

3.1.3 Review of Solid Waste Management Works Undertaken by Mira-Bhayandar Municipal Corporation (MBMC) for the Year 2024-25

The Mira-Bhayandar Municipal Corporation conducted an on-site inspection of the ongoing construction of Biogas plants in the Kashimira and Mahajanwadi areas. A progress review was carried out, alongside an inspection of the operational Biogas processing plant at Navghar. During the inspection, detailed discussions were held regarding project milestones, technical constraints, green energy generation, and environmental impacts. Furthermore, inspections were conducted at the Chenna River, Srishti Nallah, and Patanbandar Nallah to review the status of desilting, water flow, cleanliness, and the implementation of necessary measures for water pollution abatement.

To evaluate pre-monsoon preparedness, the MBMC inspected the Bhayandar East-West

Culvert Nallah, Balkrishna Ughadi, and the Railway-parallel Nallah at BP Road. This inspection was specifically aimed at reviewing the progress of pre-monsoon desilting and cleaning activities.



8 : Overview of Drainage Cleaning Works in Mira-Bhayandar City

3.2 Water Supply and Sewerage System of the City

Main Sources
Ulhas River and Barvi Dam

Total Water Supply
195 MLD | 116 LPD Per Capita

20% Leakage

1440 Water Samples
100% Potable (Fit for Drinking)

10 STP in the City
(107 MLD operational + 48 MLD in progress)

The Water Supply Department of the Mira-Bhayandar Municipal Corporation (MBMC) is committed to providing safe, potable, and uninterrupted water supply for domestic, commercial, and industrial requirements through various municipal schemes. Primarily drawing raw water from the Ulhas River and Barvi Dam, the city receives a daily supply of 190 MLD for residential areas and 5 MLD for commercial sectors, maintaining an average per capita supply of 116 LPCD. This water is treated using conventional methods at the STEM Water Authority and MIDC Water Treatment Plants (WTP) to ensure compliance with safety standards before distribution.

5 : Water Supply Information

Total Population (2011 Census)	8,11,000
Total Population (2024–25) (Estimated)	14,00,000
Total Water Supply	195 MLD
Main Sources of Water	Ulhas River, Barvi Dam
Water Loss in Supply	20%
Water Supply to Residential Areas	190 MLD
Water Supply to Commercial Areas	5 MLD
Per Capita Average Daily Water Supply	116 Ltr

6 : City Water Distribution Network (2024-25)

Total Length of Water Pipelines (km)	396 Km
Number of Water Treatment Plants	2 (Stem / MIDC)
Number of Pumping Stations	8
Number of Chlorinators and Capacity (by area)	33
Number of Overhead Tanks	33
Number of Ground-level Water Storage Tanks	3
Average Water Supply (Hours/Day)	3
Proposed Water Treatment Plant (Location & Capacity)	218 MLD Suryanagar (MMRDA)

7 : Detailed Table of Water Treatment Plants (2024-25)

Water Treatment Plant	Location	Plant Capacity (MLD)	Process Type	Treated Water Capacity (MLD)
STEM Authority	Temghar	316	Conventional	292
MIDC	Barvi	932	Conventional	932

The Mira-Bhayandar city currently has 36 existing water reservoirs, while 22 water reservoirs are proposed to meet future demands. The specific locations of these reservoirs are detailed in the table below:

8 : Detailed information about water reservoir in the Mira–Bhayandar Municipal Corporation area

Sr. No.	Location of Water Tanks	Existing Water Tanks	Proposed Water Tanks
1	Chena / Chena Kapurbawadi (S. No. 372)	√	
2	Versova	√	
3	Ghodbandar – 1	√	
4	Ghodbandar – 2 (S. No. 326)		√
5	Akruti	√	
6	Vinay Nagar (S. No. 314)		√
7	Civil Sarita (S. No. 320)		√
8	Near Sanghanadevi Temple (S. No. 325)		√
9	Mandvipada (S. No. 365)		√
10	Mahajanwadi (S. No. 368)		√
11	Kashi	√	

Sr. No	Location of Water Tanks	Existing Water Tanks	Proposed Water Tanks
12	Mahajanwadi	√	
13	Penkarpada (S. No. 353)		√
14	MIDC HL	√	
15	MIDC LL	√	
16	Miragaon	√	
17	Pleasant Park (S. No. 355)		√
18	Silver Park – 1	√	
19	Silver Park – 2	√	
20	RNA Kotiyaar (STP Layout)	√	
21	Sector -2	√	
22	Sector -7 (S.No.203)		√
23	Shantinagar Sector-11	√	
24	Sector -7	√	
25	Sector -11	√	
26	Asmita Park -1	√	
27	Asmita Park (S.No.178)		√
28	Asmita Park -2	√	
29	Kanakia Bus Depot (S.No.248)		√
30	Kanakia		√
31	RBK School (S.No.267)		√
32	Near Sport Complex (Queens Park) (S.No 120)	√	
33	Sewage Treatment Plant No.7 (S.No.170)		√
34	Indralok	√	
35	Indralok (S.No 226)	√	
36	Jesal Park Sewage Treatment Plant	√	
37	Navghar -2	√	
38	Navghar -1		√
39	Existing Navghar	√	
40	Near Sport Complex (Goddev) (S.No.120)		√
41	Goddev (Existing Site)		√
42	Narmada Nagar (S.No.122/5A,5B)	√	
43	Near Nazareth Church (S.No.69)		√
44	Sudama	√	
45	Near Motinagar (S.No.71)		√
46	Kamala Park		√
47	Near New Fire Station (S.No.139)	√	
48	Radhaswami(S.No.157)	√	
49	Geeta Nagar	√	
50	Subhashchandra Bose 777		√
51	Morva		√
52	Rai–1 (S.No.50)	√	
53	Rai–2 (S.No.50)	√	
54	Dongri MBR	√	
55	Chowk	√	

Sr. No	Location of Water Tanks	Existing Water Tanks	Proposed Water Tanks
56	Uttan	√	
57	Chavli	√	
58	Light House	√	
	Total	**36**	**22**

A total of 1,440 water samples were collected by the Water Supply Department of Mira-Bhayandar Municipal Corporation. These samples were tested and all 1,440 were found to be potable (safe for drinking).

9 : Water Samples from the Distribution System by the Water Supply Department

Year	Total Samples	Potable	Non-Potable	Quality
2024-25	1440	1440	-	Potable 100%

In the Mira-Bhayandar Municipal Corporation (MBMC) area, there are a total of 10 sewage treatment plants (STPs). Out of these, 9 projects are operational, while 1 project is under progress. Additionally, 4 projects are being implemented under the AMRUT 2.0 scheme. Detailed information is provided in the table below.

10 : Detailed Information of Sewage Treatment Plants in Mira-Bhayandar Municipal Corporation Area

Sr. No.	Department Number	Location of Sewage Treatment Plant	Implementation Date	Capacity (in MLD)
		Executed		
1	Zone No. 2	Near Kasturi Garden, Smashanbhumi Road, Bhayandar (W)	June - 2017	8 MLD
2	Zone No. 3	Near Sai Dwarka Housing Society, Navghar Road, Bhayandar (E)	October - 2023	13 MLD
3	Zone No. 4	Near Mira-Bhayandar Krida Sankul, New Golden Nest Road, Goddev, Bhayandar (E)	January - 2017	12 MLD
4	Zone No. 5	Near Galaxy Hospital, Kanakia Road, Mira Road (E)	March- 2014	17 MLD
5	Zone No. 6A	Shantinagar, Near St. Joseph School, Mira Road (E)	March- 2014	13 MLD
6	Zone No. 6B	Near Shrishti Complex, MHADA Layout, Mira Road (E)	January - 2018	7 MLD
7	Zone No. 6C	Near Ayyappa Temple, Shrishti Road, Shantinagar, Mira Road (E)	March - 2014	11 MLD
8	Zone No. 7	Near Paiyade Hotel, Mira Road (E)	May - 2021	12 MLD
9	Zone No. 8	Near Gaurav Sankalp Building, Ghodbunder, Thane	August - 2017	14 MLD
			Total	**107 MLD**
		Progressing		
1	Zone No. 1	Near Nazareth High School, behind MBMC Office, Nehru Nagar, Bhayandar (W)		8 MLD
			Total	**8 MLD**
		Ongoing Works		
1	Zone No. 4	Near Mira-Bhayandar Krida Sankul, New Golden Nest Road, Goddev, Bhayandar (E)	Construction in progress	10 MLD

Sr. No.	Department Number	Location of Sewage Treatment Plant	Implementation Date	Capacity (in MLD)
		Ongoing Works		
2	Zone No. 5	Near Galaxy Hospital, Kanakia Road, Mira Road (E)	Construction in progress	14 MLD
3	Zone No. 6C	Near Ayyappa Temple, Shrishti Road, Shantinagar, Mira Road (E)	Construction in progress	13 MLD
4	Zone No. 8	Near Gaurav Sankalp Building, Ghodbunder, Thane	Construction in progress	11 MLD
			Total	**48 MLD**

3.2.1 Mira-Bhayandar Municipal Corporation Underground Sewerage Scheme Phase-2 (Part-1) (under AMRUT 2.0)

Cost
₹175.19 Crore

Work
48 MLD STP + Reuse Plant

In view of the anticipated additional water supply of 218 MLD from the Surya Dam, it is imperative to expand the existing underground sewerage network of Mira-Bhayandar city in a phased manner. Accordingly, this project has received Administrative Approval (AA) under the AMRUT 2.0 Mission as per the Government Resolution dated December 07, 2022 (Ref: AMRUT-200/PR.No.320/Navi-33). The total estimated project cost is ₹175.19 Crore. The scope of work involves the construction of four Sewage Treatment Plants (STPs) with a combined capacity of 48 MLD across various sectors of the city, a 5 MLD Tertiary Treatment Plant (Recycling Plant) for water reuse, and the development of associated allied infrastructure.

3.2.2 Mira-Bhayandar Municipal Corporation Underground Sewerage Scheme Phase-2 (Part-2) (Under AMRUT 2.0)

Cost
₹66.81 Crore

Work
6.5 MLD STP + 10 km of Drainage Lines

Administrative Approval has been granted for this project under the AMRUT 2.0 Mission with an estimated expenditure of ₹66.81 Crore. During the State Level Technical Committee (SLTC) meeting held on March 13, 2025, the contractor's bid at the anticipated rates was approved, followed by the issuance of the Work Order.The scope of this project includes the construction of a 6.5 MLD capacity Sewage Treatment Plant (STP) and the laying of approximately 10 km of sewerage network (pipelines). Upon completion, this scheme will provide a robust underground sewerage infrastructure for the majority of urban areas in Mira-Bhayandar, significantly contributing to pollution abatement and the prevention of environmental degradation.

3.3 Power Supply of the City

Electricity Distribution Companies
Adani, Tata Power, MSEDCL

15,970	63	39
Street Lights	High-Mast	Signal Junctions

Solar Panels + Rooftop Solar
604 KW Generation

All street lights converted to LED. | Significant savings in electricity bills due to solar.

The power distribution within the Mira-Bhayandar Municipal Corporation area is primary managed by M/s. Adani Electricity Mumbai Ltd., M/s. Tata Power Company Ltd., and M/s. MSEDCL. The city has a total of 15,970 street and park lights, 63 high-mast lighting systems. Mira-Bhayandar Municipal Corporation has installed solar panels at various locations and the use of LED lighting has reduce electricity consumption and promote energy efficiency.

11 : Detailed Information on Energy Efficiency and Renewable Energy Projects in Mira-Bhayandar City

Sr. No.	Project	2024-25
1	Installation of Solar Panels at various locations within the Mira-Bhayandar Municipal Corporation area.	Estimated cost ₹1,84,00,000/-
2	Installation of an Electric Crematorium at the Hindu Crematorium, Mira Road (East), within the Mira- Bhayandar Municipal Corporation area.	Estimated cost ₹2,37,00000/-

3.3.1 Mira-Bhayandar Municipal Corporation's initiatives for energy efficiency and detailed information related to them

The total area of the Mira-Bhayandar Municipal Corporation is 79.40 sq. km. Electrical maintenance and repair work of municipal properties across various locations in the city, new development projects, installation of new streetlight poles, as well as their maintenance and repairs are carried out by the Electrical Department

3.3.1.1 Street light pole arrangement

The entire street light pole system is managed by the Municipal Corporation. These street light poles were initially under the control of a company contracted by the BEST undertaking of the Mumbai Municipal Corporation during the Gram Panchayat period. Later, the responsibility of this company was taken over by M/s. Reliance Energy Company. Subsequently, the control of M/s. Reliance Energy Company was again taken over by M/s. Adani Electric Company. For this work, the Mira-Bhayandar Municipal Corporation pays the concerned company all the rental charges according to the rental scheme from the Gram Panchayat period. A total of 14,560 street light poles have been installed in the area. All street light poles have been converted to LED. In slum areas and in lanes smaller than 3 meters, street light poles have been installed independently by the Municipal Corporation. These poles are maintained and repaired by the Municipal Corporation. The number of these street light poles is 3000, out of which 1800 street light poles have been converted to LED. This is resulting in savings in electricity consumption.

High-mast lighting has been installed by the Municipal Corporation at different junctions across the city, improving visibility and thereby reducing the risk of accidents. These high-mast lights are also covered under the All-in-Hire Charges Scheme of Adani Electricity Mumbai Limited. As a result, the Municipal Corporation is saving approximately Rs.1.52 lakh in its monthly electricity bill.

3.3.1.2 Solar lights

In several tribal hamlets (Adivasi Padas) and hilly areas of Mira-Bhayandar, there is no regular electricity supply. This makes these areas dark and dangerous for the local residents, as they face a constant risk of attacks by wild animals.

As a solution to this issue, solar-powered lights have been installed in these locations using funds received under the Government of Maharashtra's Special Basic Infrastructure Scheme. This initiative has directly benefited the tribal communities and other residents living in these areas by providing reliable and safe lighting.

12 : Number of solar street light poles in the city

Sr.No.	Location Name	Solar Street Light Pole Number
1.	Shambar Pada	25
2.	Kesari Pada	50
3.	Chena Water Tank	58
4.	Kajupada	56
5.	Belkaripada	48
6.	Patilpada	21
7.	Chena Bridge	45
8.	Nagarpada	10
9.	Mashacha Pada School	04
10.	Mashacha Pada	111
11.	Mhaskar Pada	26
12.	Versova	27
13.	Ghodbunder Jhara Payri	13
14.	Varah Pada	10
15.	Dachkulpada	31
	Total	**535**

3.3.1.3 Solar Rooftop Power Plant

Solar Rooftop Power Plants have been installed and commissioned across various properties owned by the Mira-Bhayandar Municipal Corporation. The solar energy generated is supplied to M/s. Adani Electricity through a Net Metering system, which has resulted in a significant reduction in monthly electricity bills.

13 : Solar roof top panels in the city

Sr. No.	Place Name	Capacity
1.	Mira Road (E) Ghodbunder Bus Depot Engineering Workshop Building	320 KW
2.	Bhayandar (W) Ward Committee No. 02 Office Nagar Bhavan Building	11 KW
3.	Bhayandar (W) Late Kalpana Chawla Fire Station Building	11 KW
4.	Mira Road (E) Ward Committee Office No. 04 Late Vilasrao Deshmukh Bhavan Building	11 KW
5.	Mira Road (E) Ghodbunder Bus Depot Building	11 KW
6.	Bhayandar (W) Municipal School No. 16,17,18	12 KW
7.	Mira Road (E) Kashigaon School No. 04	12 KW
8.	Mira Road (E) Mahila Bhavan Building	15 KW
9.	Bhayandar (W) Municipal Corporation Morwa School	10 KW
10.	Bhayandar (W) Municipal Corporation Murdha School	10 KW
11.	Bhayandar (W) Municipal Corporation Uttan School	10 KW
12.	Bhayandar (W) Municipal Corporation Pali School	10 KW
13.	Bhayandar (W) Municipal Corporation Chowk School	10 KW
14.	Mira Road (E) Municipal Corporation Kajupada School	10 KW
15.	Bhayandar (W) Ward Committee No. 01 Shubham Arcade Building	16 KW
16.	Mira Road (E) Urban Planning Building	15 KW
17.	Mira Road (E) Indira Gandhi Hospital Building	35 KW
18.	Mira Road (E) Mauje Mahajanwadi Late Lata Mangeshkar Theatre	75 KW
	Total	**604 KW**

Solar Water Heating Plants are installed on private buildings as per requirements under various development works within the Mira-Bhayandar Municipal Corporation area. Following the installation, the Corporation conducts a physical site inspection and verifies the system as per the prescribed format. Upon successful verification, a No Objection Certificate (NOC) is issued to the building

3.3.1.4 Signal system

In the Mira-Bhayandar Municipal Corporation area, signal systems and blinker systems have been installed at various junctions to effectively regulate traffic flow and prevent vehicle congestion. These systems ensure the smooth movement of commuters and enhance road safety. The following junctions have fully operational signal systems in place:

14 : City signal system

Sr. No.	Signal system Junction names	Locations
1.	Check Naka Junction	N.H No. 8
2.	Delta Garden Junction	Mira MIDC Mira Road (E)
3.	Pandurang Wadi Junction	Penkarpada Mira Road (E)
4.	Neelkamal Naka Junction	N.H No. 8
5.	Amar Palace Naka Junction	N.H No. 8
6.	Kashimira Junction	N.H No. 8
7.	Pleasant Park Circle Junction	Chhatrapati Shivaji Maharaj Road
8.	Hatkesh Circle Junction	Chhatrapati Shivaji Maharaj Road

Sr. No.	Signal system Junction names	Locations
9.	Silver Park Circle Junction	Chhatrapati Shivaji Maharaj Road
10.	S.K. Stone Circle Junction	Chhatrapati Shivaji Maharaj Road
11.	Kanakia Junction Circle Junction	Chhatrapati Shivaji Maharaj Road
12.	Deepak Hospital Circle	Chhatrapati Shivaji Maharaj Road
13.	Maxus Mall Circle	Bhayandar (West)
14.	Hanuman Temple Circle	Bhayandar (E)
15.	Indralok Circle	Bhayandar (E)
16.	R.B.K School Circle	Mira Road (E)
17.	Seven Square	Bhayandar (E)
18.	Cinemax Circle	Mira Road (E)
19.	Poonam Garden Circle	Mira Road (E)
20.	GCC Club Circle	Mira Road (E)
21.	Jangid Circle	Mira Road (E)
22.	Rasaz Circle	Mira Road (E)
23.	Sector 11 Circle	Mira Road (E)
24.	TMT Bustop Circle	Mira Road (E)
25.	Ayappa Temple Circle	Mira Road (E)
26.	Umakant mishra chowk Circle	Mira Road (E)
27.	Poonam Sagar Circle	Mira Road (E)
28.	Royal Garden Circle	Mira Road (E)
29.	Surya Shopping Center Circle	Mira Road (E)
30.	Chena village	N.H No. 8
31.	Kajupada	N.H No. 8

At the major junctions mentioned above, citizens face daily traffic congestion, resulting in wastage of fuel and time, causing inconvenience. To provide a permanent solution to this problem, a budget is being prepared to convert all junction signal systems into ATC (Adaptive Traffic Control). A proposal will soon be submitted to obtain funds under the Government's HOME@20 initiative.

3.3.1.5 Blinker System

In the Mira-Bhayandar Municipal Corporation area, blinker systems have been installed at various smaller intersections where traffic congestion is not a major issue. These systems are installed based on the recommendations of the Traffic Department to ensure the smooth flow of vehicles and to maintain effective traffic control and safety at these locations.

15 : Blinker system in the city

Sr. No.	Blinker System Junction Names	No. of Poles	Location Name
1.	Ganesh Temple Penkarpada Mira Road (E)	2	Penkarpada Mira Road (E)
2.	Penkarpada Prema Laxman School	2	Penkarpada Mira Road (E)
3.	Penkarpada Aruna Hotel	2	Penkarpada Mira Road (E)
4.	Penkarpada Bombay Bottle	2	Penkarpada Mira Road (E)
5.	Penkarpada Company Gate	1	Penkarpada Mira Road (E)
6.	Delta Garden	2	Mira MIDC Mira Road (E)
7.	M.I.D.C. Road	1	Mira MIDC Mira Road (E)

Sr. No.	Blinker System Junction Names	No. of Poles	Location Name
8.	Saibaba Temple	1	Mira Road (E)
9.	Near Hanuman Temple	2	Miragaon Mira Road (E)
10.	Bhakti Vedanta Hospital	1	Mira Road (E)
11.	Srushti Sector - 1	2	Mira Road (E)
12.	Srushti Sector - 2	2	Mira Road (E)
13.	Near Balaji Hotel	2	Mira Road (E)
14.	Bappa Sitaram Chowk	2	Mira Road (E)
15.	Mira Road Station Area	3	Mira Road (E)
16.	New India Bank	1	Mira Road (E)
17.	Dry lake	2	Mira Road (E)
18.	Royal College	2	Mira Road (E)
19.	Kanakia Police Station	1	Mira Road (E)
20.	Lakshmi Park	2	Mira Road (E)
21.	Near Western Park Bus Stand	1	Mira Road (E)
22.	Sanskruti Building	2	Mira Road (E)
23.	Mangal Nagar Bus Stop	1	Mira Road (E)
24.	Gaurav Sankalp	1	Mira Road (E)
25.	Sarsanghchalak K. S. Sudarshan Chowk	3	Mira Road (E)
26.	Om Shanti Chowk	2	Bhayandar (E)
27.	Cooperative Heights	3	Mira Road (E)
28.	S. K English School	2	Mira Road (E)
29.	Balasaheb Thackeray Ground	3	Bhayandar (E)
30.	Ramdev Park Circle	1	Mira Road (E)
	Total	**54**	

3.3.1.6 Selfie Point and Fountain

Under the Government of India's Swachh Bharat Abhiyan, as part of initiatives to beautify the city, selfie points and fountains have been installed at various gardens, squares, and junctions throughout the Mira-Bhayandar Municipal Corporation area

16 : Selfie point and fountain in the city

Sr. No.	Location Name
1.	Nagar Bhavan Lake
2.	Morwa Lake
3.	Rai Lake
4.	Subhash Chandra Bose Maidan
5.	Bhayandar West Gate Selfie Point
6.	Balaji Nagar Selfie Point
7.	Priyadarshini Garden, Jaisal Park Chowpatty
8.	Jaisal Park Chowpatty Selfie Point
9.	R.N.P Park Garden
10.	Pramod Mahajan Garden
11.	Lt. Yashwantrao Chavan Garden
12.	Lt. Balasaheb Thackeray Garden

Sr. No.	Location Name
13.	Arvind Pendse Garden
14.	Hatkesh Chowk
15.	Khari Lake
16.	Jarimari Lake
17.	Tembha Hospital Selfie Point
18.	Golden Nest Chowk Selfie Point
19.	60 Feet Road Selfie Point
20.	Ramdev Park Garden

3.3.1.7 Elevators

Elevators have been installed at the main administrative office, ward offices, hospital buildings, and various rental housing buildings within the Mira-Bhayandar Municipal Corporation area. The elevators at these specified locations have been established as detailed below, and they undergo regular maintenance and repairs to ensure operational safety.

17 : Elevators in Mira Bhayandar Municipal Corporation area

Sr. No.	Building name	No. of Elevators
1.	Municipal Corporation Head Office	2
2.	Shubham Arcade, Ward Committee 1	1
3.	Nagar Bhavan, Ward Committee 2	1
4.	Vilasrao Deshmukh Bhavan, Ward Committee 4	1
5.	Indira Gandhi Hospital, Ward Committee 5	3
6.	Ward Committee Office 6, Kashimira	1
7.	Vinayak Nagar, Bhayandar (W.)	1
8.	Mahila Bhavan, Marigold, Mira Road (E)	1
9.	Swami Vivekanand Library, Poonam Garden, Mira Road (E)	1
10.	Reservation No. 232, Dispensary Building, Tuberculosis Control, Indralok, Bhayandar (E)	1
11.	Minatai Thackeray Hall, Indralok, Bhayandar (E)	3
12.	Pramod Mahajan Hall, Indralok, Bhayandar (E)	3
13.	Late. Jagannath Nana Shankar Sheth Bus Depot Building, Ghodbunder	2
14.	Police Commissionerate, Ramnagar, Mira Road (E)	1
15.	AIMS Rental Housing Building, Indralok, Bhayandar (E)	2
16.	Man Rental Housing Building, Kashimira	3
17.	Lodha Rental Housing Building, Kashimira	7
18.	Pinakola Rental Housing Building, Mira Road (E)	4
19.	Darvesh Rental Housing Building, Penkarpada, Mira Road (E)	2
20.	S. K. Heights Rental Housing Building, Penkarpada, Mira Road (E)	3

3.4 City transportation facilities

Total buses with MBMC:
131 (74 Diesel + 57 Electric)

Daily passengers
Approximately 97,000
Goal: 1.25 Lakh

New AC e-buses approved
100

Expected CO_2 emission savings due to e-buses
33,704 Ton

Public Transport System plays a crucial role in the sustainable development of the city. Buses or trains can carry many passengers at the same time, which reduces the number of private vehicles on the roads and thereby lowers emissions of smoke, CO_2, NO_x and other pollutants. Public transport consumes less fuel per passenger, ensuring efficient use of energy resources. With fewer private vehicles, traffic congestion decreases, saving time, energy and manpower. Reduced pollution improves air quality in the city and minimizes adverse health effects on citizens. Compared to private vehicles, the use of public transport significantly reduces the city's overall carbon emissions, which is crucial for controlling climate change. The Mira-Bhayandar Municipal Corporation Transport Undertaking (MBMCTU) was established in 2005 under the Maharashtra Municipal Corporations Act. Currently, the Corporation operates a fleet of 131 buses, comprising 74 Diesel buses and 57 Electric buses, as detailed in the table below.

18 : Vehicles operated by Mira Bhayandar Municipal Corporation

Vehicle information	Year		
	2022-23	2023-24	2024-25
No. of buses on diesel	74	74	74
Electric Buses	0	12	57
Total no. of Buses	**74**	**86**	**131**

The municipal transport service currently operates on 24 bus routes. This has greatly benefited citizens commuting to key hubs such as Bhayandar Station (W/E), Mira Road Station (E), Kashimira, Dahisar Metro Station, and Borivali National Park. At present, the daily passengers has reached 97,000, with a target to increase this to 1,25,000 passengers per day. Furthermore, under the 'PM-eBus Sewa' scheme, 100 new AC electric buses have been sanctioned for MBMC.

The total number of vehicles in Mira-Bhayandar stands at 3,19,692. The classification of vehicles based on type and fuel usage is detailed in the table below.

19 : Type of fuel used in vehicles and number of vehicles in Mira-Bhayandar city

Type of fuel	Number of vehicles		
	2023	2024	Jun-25
CNG	1118	1474	1025
Diesel	1936	2212	1458
Diesel/Hybrid	4	13	4
Electric (BOV)	945	651	77
Ethanol	-	4	6
Petrol	16125	17404	10587
Petrol/CNG	1480	1805	1467

Type of fuel	Number of vehicles		
	2023	2024	Jun-25
PETROL(E20)/CNG	-	-	4
PETROL(E20)/HYBRID	-	-	1
Petrol/Ethanol	417	786	2943
Petrol/Hybrid	504	474	208
Petrol/LPG	-	-	-
PURE EV	-	231	421
Strong Hybrid Electric Vehicle	-	97	124
Total	**22,529**	**25,151**	**18,325**

(Source : https://vahan.parivahan.gov.in/vahan4dashboard)

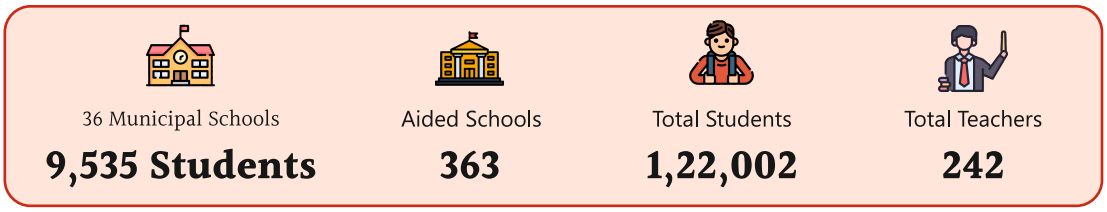
3.4.1 Electric Buses

As part of the National Clean Air Programme (NCAP) launched in 2019 to improve urban air quality, the Mira-Bhayandar Municipal Corporation (MBMC) has procured e-buses. These zero-emission electric buses have been introduced under the Government of Maharashtra's initiative to enhance public transport infrastructure and reduce carbon emissions. These buses are currently being utilized for intra-city travel and are proving to be an effective, eco-friendly alternative to traditional diesel-operated buses. In terms of private adoption, In 2024, 882 electric vehicles were registered, and by October 2025, 498 vehicles were registered.

MBMC is actively promoting clean energy solutions, and the integration of electric buses will make the public transport system more efficient and environmentally sustainable. This initiative is expected to offset a total of 33,704 tonnes of Co_2 emissions. The objective of the National Clean Air Programme (NCAP) is to achieve a 20% to 30% reduction in the concentration of PM10 (particulate matter with a diameter of 10 to 2.5 micrometers) and PM2.5 (particulate matter with a diameter of 2.5 micrometers or less), in next one year. To support this initiative, Central Government has sanctioned Rs.81 crore for the procurement of 57 electric buses for Mira-Bhayandar Municipal Corporation during 2025–26.

3.5 Education and Health facilities

3.5.1 Education Facilities



Cleanliness and Environmental Awareness Initiatives in schools.
24-hour Study Rooms and Libraries are available.

There are a total of 363 aided schools in the Mira-Bhayandar Municipal Corporation area, comprising 220 primary and 143 secondary schools. A total of 1,22,002 students are studying in these schools with 242 teachers serving in government schools.The Municipal Corporation operates 36 schools with 9,535 students and 242 teachers, comprising 142 permanent teachers, 62 Shikshan Sevaks, and 38 contractual teachers. To promote environmental awareness, a proposal has been drafted to develop "Kitchen Gardens" (Parasbag) within school premises or on terraces based on requests from Headmasters. This initiative will be executed through the Garden Department.

20 : Details of Total Schools, Students, and Teachers in Mira-Bhayandar Municipal Corporation Area

School	No. of Schools				No.of Students				No.of Teachers			
	Govern-ment	Private Aided	Private Unaided	Total	Govern-ment	Private Aided	Private Unaided	Total	Govern-ment	Private Aided	Private Unaided	Total
Aided	36	41	286	363	9535	9452	103015	122002	142+62+38			242
Primary	30	21	169	220								
Secondary	6	20	117	143								

The Municipal Corporation has implemented the **"Swachhatechi Pathshala"** (School of Cleanliness) initiative across its schools to foster environmental awareness among students. To further enhance environmental consciousness, such programs are conducted to encourage students and provide them with the necessary motivation to adopt eco-friendly practices.



9 : Schools in Mira Bhayandar city

3.5.1.1 Study Rooms and Libraries

Aspiring Students within the Mira-Bhayandar Municipal Corporation area are actively benefiting from various study centers (Abhyasika) and libraries established by the Corporation. To support students preparing for competitive examinations, these centers provide a quiet and conducive environment and are open 24 hours a day. For enhanced comfort and focus, these facilities have been equipped with Air-Conditioning (AC) systems. The following are the primary study centers and libraries included in this initiative:

21 : Study Rooms and Libraries in Mira-Bhayandar Municipal Corporation Area

Sr. No.	Building Name
1.	Bhayandar (W) Dr. Babasaheb Ambedkar Bhavan (Nagar Bhavan) Library and Study Room
2.	Bhayandar (E) Ward Committee Office No. 03 Library and Study Room
3.	Bhayandar (W), Reservation No. 100 Library and Study Room
4.	Bhayandar (E) Hanuman Nagar Library and Study Room
5.	Mira Road (E) Rashtrapita Mahatma Gandhi Building Library and Study Room
6.	Mira Road (E) Swami Vivekananda Library and Study Room
7.	Bhayandar (E)Savitribai Phule Library and Study Room
8.	Bhayandar (E), Jaisalpark Swami Vivekananda Library and Study Room

3.5.2 Healthcare Facilities

Total Number of Hospitals
177
1 Government + 1 Municipal + 175 Private Hospitals

Total Bed Capacity
3,366

Free Vaccination, Mother-Child Schemes, Janani Suraksha (Maternal Safety), Tuberculosis (TB) and AIDS (Control Programs) are being implemented

The Bharat Ratna Pandit Bhimsen Joshi Hospital, operated by the Government of Maharashtra, is located in Mira-Bhayandar city and has a total capacity of 100 beds. The Mira-Bhayandar Municipal Corporation also runs its own Indira Gandhi Municipal Hospital, which has a capacity of 50 beds. Additionally, there are 154 private hospitals in operation with a combined capacity of 3,216 beds; among these, 21 are maternity homes with a total capacity of 282 beds. The provision of private healthcare services has steadily increased over the past few years.

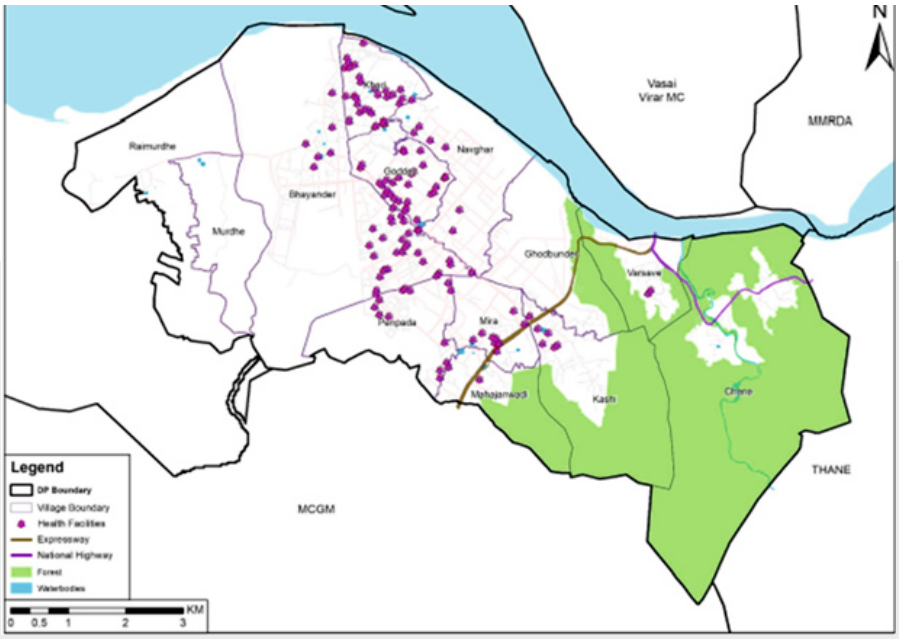
22 : Medical facilities in Mira Bhayandar city

Type of Medical Facility	Number	Bed Capacity
Government Hospital	1	100
Municipal Hospital	1	50
Private Hospital	154	2934
Maternity Home	21	282
Total	**177**	**3366**

The table below provides a brief overview of all the schemes and programs implemented to improve healthcare facilities.

23 : Medical Schemes in Mira Bhayandar City

Sr. No.	Scheme/Program Name	Description
1	Free Vaccination	Free vaccination for pregnant women and children aged 0 to 6.
2	Mother Child Care Scheme	Treatment for women's diseases is provided free of charge.
3	Motherhood Safety Scheme	This scheme encourages pregnant women to give birth in hospital to prevent maternal and infant deaths
4	Savitribai Phule Kanya Kalyan Paritoshik Scheme	Couples from poor families who have undergone family planning surgery after one or two girls are given prizes.
5	Health Checkup	Students of municipal schools are given free health check-ups twice a year.
6	National Bacterial and Waterborne Disease Control Programme	Under this initiative, prompt diagnosis and treatment of water-borne diseases is provided. Further treatment is done after testing blood samples.
7	National Tuberculosis Control Programme	Patients with tuberculosis are given free treatment through the DOTS system.
8	National Leprosy Eradication Programme	Suspected patients are diagnosed and MDR treatment is provided free of charge in case of leprosy.
9	Global AIDS Control Programme	General and pregnant patients are examined at ICTC. If a pregnant woman is found HIV positive, she is referred to an ART center.
10	Motherhood Safety Programme	All related tests and treatment from pregnancy to delivery are provided free of charge to pregnant women and newborn babies.



10 : Healthcare Services in Mira-Bhayandar City

24 : Mira-Bhayandar Municipal Corporation Healthcare Centers, Hospitals, and Addresses

Sr. No.	Health Center, Hospital and Address
1	Uttan Health Center : Uttan Naka, Motha Gaon, Chikhal Khadi
2	Murdha Health Center : Marathi Government School, Murdha Gaon, Uttan Road, Bhayandar (W)
3	Bhayandar (W) Health Center : Near Police Station, Bhayandar (W)
4	Vinayak Nagar Health Center : Maharana Pratap Road, Vinayak Nagar Samaj Mandir, Bhayandar (W)
5	Ganesh Deval Nagar Health Center : Shiv Sena Gali, Bhayandar (W)
6	Bandarwadi Health Center : Near Bus Depot, Bandarwadi Marathi Gujarati MBMC School, Bhayandar (E)
7	Navghar Health Center : In front of Hanuman Temple, Navghar MBMC School, Bhayandar (E)
8	Ideal Park Health Center : In front of Seven Eleven School, Kanakia Mira Road (E)
9	Mira Road Health Center : In front of Sai Ashirwad Hospital, Near Wockhardt Hospital, Bharati Park, Mira Road (E)
10	Penkar Pada Health Center : In front of Shiva Temple, Penkarpada MBMC School, Penkarpada
11	Kashigaon Health Center : Kashigaon Urdu and Marathi MBMC School, Kashigaon
12	Bharat Ratna Indira Gandhi Hospital, Poonam Sagar, Mira Road (E)
13	Urban Health and Wellness Centre Morwa : MBMC School no. 24, Opposite Radha Krishna Temple, Morwa Village, Uttan Road, Bhayandar West 401107
14	Urban Health and Wellness Centre Indralok : Reservation no. 225 Ramdev Woods, Indralok Phase 3, Bhayandar East, Mira Bhayandar 401105
15	Urban Health and Wellness Centre Pali Uttan Nagar : Pali School no. 12, Near Surya Niketan Hospital, Pali Gaon Chowk Road, Bhayandar 401106
16	Urban Health and Wellness Centre Shanti Nagar: Beside Savitribai Phule Mahila Sabha, Shanti Nagar, Sector 8, Mira Road (E) 401107
17	Urban Health and Wellness Centre Kajupada: MBMC School, Kajupada, Near Dutt Mandir Bhayandar 401107
18	Urban Health and Wellness Centre Shanti Park: Near Jangid Estate, Mira Road
19	Urban Health and Wellness Centre Mahajanwadi: Opposite Sanghvi Co. City, Sona Hotel Road, Mira Gaonthan
20	Urban Health and Wellness Centre Ghodbunder: Retibandar, Opposite Shiv Sena Branch, Ghodbunder Mira Road (E)
21	Urban Health and Wellness Centre Kharigaon: Opposite Satya Narayan Mandir, Bhayandar East
22	Roaming Clinic

3.6 Urban Gardens and Parks

Total Green Area
3.38 Lakh Sq. Mtrs.

115	16	17	22
Gardens	Playgrounds	Cremation Grounds	Dividers (Road Dividers/Median Strips)

NCAP Funding
₹7.60 Crores

Urban gardens and parks are essential for maintaining the city's ecological balance. They play a critical role in mitigating the Urban Heat Island effect by lowering local temperatures and improve air quality by absorbing carbon dioxide and releasing oxygen. Furthermore, these green spaces facilitate groundwater recharge by allowing rainwater to percolate into the soil, which in turn helps in flood control. Additionally, gardens provide a vital habitat for various birds, insects, and small wildlife, thereby preserving urban biodiversity. In essence, the city's gardens act as "green lungs," ensuring a healthy environment for all citizens.

The Mira-Bhayandar Municipal Corporation (MBMC) area currently features a total of 115 gardens, 16 playgrounds, 17 cemeteries/crematoriums, and 22 road dividers. The total area of the gardens is 338,459 sq. m., the total area of the playgrounds is 181,656 sq. m., the total area of the crematoriums is 27,662 sq. m., and the total area of the medians is 13,192.2 sq. m. To further enhance these green initiatives, the Garden Department has been sanctioned a fund of ₹7.60 Crores under the National Clean Air Programme (NCAP). The ward-wise details of gardens, playgrounds, cemeteries, and road dividers in the Mira-Bhayandar city area are provided in the table below.

3.6.1 Information about parks, grounds and dividers in Mira Bhayandar city

25 : Information about parks, grounds and dividers in Ward Committee No. 01

Ward Committee No. 01			
Park			
Sr. No.	**Name of the park**	**Address**	**Area (sq. m.)**
1	Chimaji Appa Park	Uttan Chowk, Bhayandar (W)	1903
2	Uttan Dev Lake Park	Velankani Church Road, Uttan Bhayandar (W)	1583
3	Uttan Moh Lake Park	Near St. Joseph High School Uttan, Bhayandar (W)	3365
4	Dharavi Devi Temple Park	Dongri Tarodi Road, Bhayandar (W)	3404
5	Gajanan Sonya Patil Park	Morwa Village, Uttan Road, Bhayandar (W)	1894
6	Suryanarayan Lake Park, Morwa	Morwa Village, Surya Narayan Mandir, Bhayandar (W)	3245
7	Rai Ram Mandir Lake Park	Raigaon, Uttan Road, Bhayandar (W)	2813
8	Balayogi Sadananda Maharaj Park	Near Raigaon Health Office, Uttan Road, Bhayandar (W)	706
9	Rai Gandhi Lake Park	Raigaon, Uttan Road, Bhayandar (W)	1275
10	Shri Gaondevi Park	Murdha Village, Uttan Road, Bhayandar (W)	3517
11	Gyan Jyoti Savitri Bai Phule	Near Murdha Crematorium, Murdha Village, Uttan Road, Bhayandar (W)	2988
12	Murdha Gaondevi Park	Murdha Village, Uttan Road, Bhayandar (W)	5290
13	Gitanagar Park – 1	Gitanagar, Phatak Road, Bhayandar (W)	342

Sr. No.	Name of the park	Address	Area (sq. m.)
14	Rashtrasant Tukdoji Maharaj Udyan	Jai Bhairav Park, Geetanagar Phatak Road, Bhayandar (W)	582
15	Bhayandar (W), Phatak Udyan	Fatak Road, Bhayandar (W)	185
16	"Vrikshamitra" Late. Raghunath Trimbak aka Anna Damle Park	Garden in front of Nagar Bhavan, Bhayandar (W)	1125
17	Dr. Babasaheb Ambedkar Bhavan Park	Bhayandar (W) Nagar Bhavan Office	4452
18	Shri Peerbaba Ramdev Park	Behind 90 Feet Registration Office, Bhayandar (W)	3261
19	Salasar Hanuman Park	Beside Over Bridge, Bhayandar (W)	6789
20	Amritwani Park	Amrutwani Satsang Road, Bhayandar (W)	1360
21	Reservation no. 135 Park	150 Feet Road, In Front of Fire Station, Bhayandar (W)	1683
		Total	**51,762**

Ground

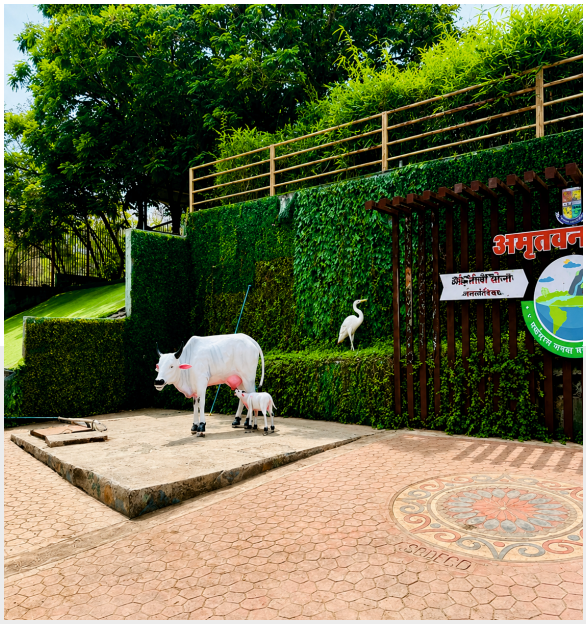
Sr. No.	Name of the Ground	Address	Area (sq. m.)
1	Netaji Subhash Chandra Bose Ground	Uttan Road, Bhayandar (W)	65836
2	Sarsenapati Arun Kumar Vaidya Patangan	Rai Village, Uttan Road, Bhayandar (W)	6616
3	Ground in front of Chimaji Appa Park	Opposite Chimaji Appa Garden, Chowk, Uttan, Bhayandar (W)	7215
		Total	**79,667**

Dividers

Sr. No.	Divider	Address	Area (sq. m.)
1	Divider in front of Netaji Subhash Chandra Bose Ground	Opposite Netaji Subhash Chandra Bose Maidan, Uttan Road Bhayandar (W)	2237.3
2	Divider on Bhayandar (P.) Phatak Road	Opposite Dr. Babasaheb Ambedkar Statue, Phatak Road, Bhayandar (W)	45
3	Link Road Divider (150 Feet Road)	Road below Overbridge	300.6
4	Divider from Netaji Subhash Chandra Bose Ground to Morwa Bal Udyan	Bhayandar (W) Uttan Road	621
5	Divider outside Maharashtra Judicial Academy	Uttan–Gorai Road, Uttan, Bhayandar (West)	803.64
		Total	**4007.54**



11 : Gyanjyoti Savitribai Phule Garden (Reservation No. 269)





12 : Amrutvan Garden (Reservation No. 299)

26 : Information about the parks in Ward Committee No. 02

Ward Committee No. 02			
Parks			
Sr. No.	**Name of Parks**	**Address**	**Area (sq. m.)**
1	Gurugirnar Park	Shiv Sena Lane, Bhayandar (W)	165
2	Ganesh Anand Kranti Nagar Udyan	Ganesh Anand Nagar Udyan, Bhayandar (W)	614
3	Rao Lake Park	Ram Mandir Road, Near Hanuman Mandir, Bhayandar (W)	3850
4	Head Office Park	Station Road, Bhayandar (W)	1478
5	Maharana Pratap Park	Maharana Pratap Road, Bhayandar (W)	1083
6	Saibaba Park	Modi Patel Road, Bhayandar (W)	809
7	Rani Laxmibai Park	Sudama Nagar, Near Water Tank, Bhayandar (W)	477
		Total	**8476**

27 : Information about parks, grounds and dividers in Ward Committee No. 03

Ward Committee No.03			
Parks			
Sr. No.	**Name of Parks**	**Address**	**Area (sq. m.)**
1	Sri Satyanarayana Park	Venkatesh Park, Near Satyanarayana Mandir, Kharigao, Bhayandar(E)	445
2	Kashi Vishwanath Park	R. N. P. Park Jaisalpark, Bhayandar (E)	748
3	Priyadarshini Joggers Park, Udyan	Jaisalpark, Bhayandar (E) Chowpatty	3237
4	Chacha Nehru Children's Park	Jaisalpark, Bhayandar (E)Chowpatty	1238
5	Uncle-Aunt Rose Garden	Jaisalpark, Bhayandar (E) Chowpatty	5229
6	Yashwantrao Chavan Park	Navghar Road, (Saraswati Nagar) Nea Gurudwara, Bhayandar (E)	5058
7	Late Shri Atmaram Patil Park	(Navghar - Old) Navghar Village, Near Datta Mandir, Bhayandar (E)	7877
8	Late Shri Shyamrao Patil Park	(Navghar - New) Opposite S.N College Bhayandar (E)	6894
9	Late Pramod Mahajan Udyan	Chandan Park, Bhayandar (E)	3649
10	Late Gajanan Parashuram Patil	Ward Office 3 Office Bhayandar (E)	1401
11	Ramlila Park	Latakunj Street, Navghar Road, Bhayandar (E)	4169
12	Holly Ball Ground (Block)	Near Balaji Khel Maidan, Jaisalpark, Chowpatty, Bhayandar (E)	584
13	Open Gym for Women (Block)	Near Balaji Khel Maidan, Jaisalpark, Chowpatty, Bhayandar (E)	530

Sr. No.	Name of Parks	Address	Area (sq. m.)
14	Tennis Court (Block)	Near Balaji Khel Maidan, Jaisalpark, Chowpatty, Bhayandar (E)	351
15	Open gym	Near Chacha Nehru Bal Udyan, Jaisal Park, Chowpatty, Bhayandar (E)	226
16	Maa Beti Park	Bhayandar (E)Opposite Shiv Sena Office	55
17	Marathi School No. 08 Garden	Late Prafull Patil Chowk, Indralok Naka	1088.76
18	Sewage Treatment Plant No. 3	Beside Sachin Tendulkar Ground, Navghar	305.75
19	Sewage Treatment Plant	Opposite Ram Kapse Ground, Jesal Park	245
		Total	**43330.51**

Playgrounds			
Sr. No.	**Playgrounds Name**	**Address**	**Area (sq. m.)**
1	Reservation No. 122/C Ground	Navghar Cross Road, Near Gurudwara, Bhayandar (E)	16588
2	Balaji Sports Ground	Jesal Park Chowpatty, Bhayandar (E)	4866
3	Navghar Marathi School No. 13 Playground	Navghar Naka, Bhayandar (E)	3624
4	Kesarinath Patil alias Badshaha Garden	Navghar Village Bhayandar (E)	9313
5	Jesal Park Cricket Ground	Near Dashavidhi Shed, Jaisal Park, Bhayandar (E)	9370
6	Ram Kapse Ground	Jesal Park, Chowpatty, Bhayandar (E)	6394
7	Anand Dighe Ground	Near Shankar Narayan college, Navghar	7548.5
		Total	**57703.5**

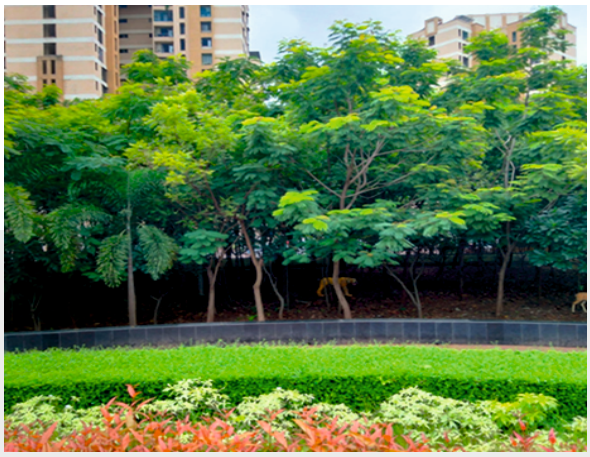
28 : Information about parks , grounds and dividers in Ward Committee No. 04

Ward Committee No.04			
Parks			
Sr. No.	**Name of Park**	**Address**	**Area (sq. m.)**
1	Late Indira Gandhi Lake Garden	Goddev Village, Near Gavdevi Mandir, Bhayandar (E)	3992
2	Ram Rahim Garden	Gitanagar Phase-10, Near Overbridge Mira Road (E)	765
3	Reservation No. 167 Garden	Kanungo Estate Mira Road (E)	2528
4	Garden under the Flyover	Opposite Ration Office, Mira Road	1072
5	Hindu Hridaysamrat Late Shri. Balasaheb Thackeray Garden	Indralok, Mira Road (E)	17082
6	Late Arvind Pendse Garden	Behind Seven Square Hospital, Mira Road (E)	4030
7	Late Rambhau Mhalgi Garden	Ramdev Park Mira Road(E)	8183

Sr. No.	Name of Parks	Address	Area (sq. m.)
8	Reservation No. 242	Opposite Seven Eleven School, Mira Road (E)	11200
9	Reservation No. 256	Opposite Kanakiya Jal Kumbha, Mira Road (E)	1705
10	Reservation No. 299	Opposite Marigold-1, Beverly Park, Mira Road (E)	17076
11	Reservation No. 305	Near No. 15 Bus Stop, Hatkesh Road, Mira Road (E)	5473
12	Reservation No. 261	Kanakia Road, Mira Road (E)	3375
13	Reservation No. 273	Near Seven Eleven Collegiate School, Kanakiya Road, Mira Road (E)	8200
14	Reservation No. 230	Ramdev Park, Mira Road (E)	9872
15	Reservation No. 269	Opposite Lakshmi Park, Kanakiya Road, Mira Road (E)	19745
16	Pramod Mahajan Garden	Indralok, Reservation No. 221, Bhayandar (E)	439
17	Sports Complex	Golden Nest Road, Bhayandar (E)	530
18	Commissioner's Residence Garden	Kanakia, Mira Road (E)	443
19	Survey No. 431	Near Seven Eleven Collegiate School, Kanakia Road, Mira Road (E)	1577
20	Hatkesh Nala Jogging Track	Hatkesh, Mira Road (E)	865
21	Sewage Treatment Center No. 04	Behind Sports Complex, Bhayandar (E)	827
22	Sewage Treatment Center No. 05	Reservation No. 269 Udyancha Bajula, Kanakiya Mira Road, (E)	999
23	Sewage Treatment Center No. 08	15 Bus Stop, Hatkesh, Mira Road (E)	2842
24	Dhamma Samrat Ashok Buddha Vihar	Ramdev Park, Mira Road (E)	2391
25	Reservation No. 314 Garden	Hatkesh, Mira Road (E)	4730
26	Mayor's Bungalow	Brewerly Park, Mira Road (E)	385
27	Butterfly Garden, Ghodbunder	Ghodbunder Village, Ganesh Ghat Temple, Mira Road (E)	392.7
28	Ghodbunder Fort, Ghodbunder Village	Ghodbunder Village, Mira Road (E)	6304
29	Padmavati Lake, Ghodbunder Road	Ghodbunder Road, Mira Road (E)	1443
30	Chhatrapati Shivaji Maharaj Statue, Ghodbunder Chowk	Opposite Western Hotel, Ghodbunder Chowk, Mira Road (E)	524
31	Indralok Water Tank, Bhayandar (E)	Indralok, Mira Road (E)	61.88
32	Kanakia Water Tank, Mira Road (E)	Kanakia Road, Mira Road (E)	123.03
33	Akriti Water Tank, Mira Road (E)	Marigold, Beverly Park, Mira Road (E)	153.27
34	Kashigaon, Water Tank, Mira Road (E)	Kashigaon, Kashimira, Mira Road (E)	122.02
35	Chowk in front of Fountain Hotel	Opposite Fountain Hotel	155
		Total	**139604.9**

Playground			
Sr. No.	**Name of Playground**	**Address**	**Area (sq. m.)**
1	Ala Hazrat Imam Ahmed Raza Khan Maidan (Mira Road Reservation No.170)	Kanugo Estate, Behind Payade Hotel, Mira Road (E)	8316
2	Reservation No. 300	Brewerly Park, Opposite Mary Gold No-1, Mira Road (E)	13230
3	Reservation No. 246	Behind Seven Eleven School, Deepak Hospital Road, Mira Road (E)	16491
4	Reservation No. 220	Indlok, Beside Reservation No. 221, Bhayandar (E)	6775
		Total	**44812**

Divider			
Sr. No.	**Name of Divider**	**Address**	**Area (sq. m.)**
1	Railway Parallel Divider from Overbridge to Nayanagar	Railway Parallel Road Mira Road (E)	1093.8
2	From Mira Road Station to Nayanagar Police Station – 5 Dividers	Nayanagar, Mira Road (E)	438.3
3	Seven Eleven Hospital to Orange Hospital Divider	Mira Road (E)	235.39
4	Queens Park Divider	Queen's Park Mira Road (E)	339
5	Road in front of L. R. Tiwari College	Tiwari College Mira Road (E)	865.83
6	Kanakia Divider	Kanakia Mira Road (E)	1374.45
7	G.C.C. Club to Shanti Vidyanagari	Hatkesh, Mira Road (E)	695
8	Divider on Golden Nest Signal to Sports Complex Road	Bhayandar (E) Golden Nest Road	991.84
9	Kanungo Estate	Kanungo Estate, Mira Road (E)	77
		Total	**6110.61**





13 : Reservation No. 305 Udyan, Mira Road (East)

29 : Information about parks, grounds and dividers in Ward Committee No. 05

Ward Committee No. 05			
Parks			
Sr. No.	**Name of Parks**	**Address**	**Area (sq. m.)**
1	Shaheed Major Kostubh Rane Joggers Park	Behind Poonam Sagar Complex, Mira Road (E)	19659
2	Ahilyabai Holkar Udyan (R.N.A)	Near Srishti Old Bridge, Mira Road (E)	2516
3	Reservation No. 196	Behind Poonam Sagar Complex, Mira Road (E)	2285
4	Rani Laxmibai Udyan	Station Road , Bhayandar (W)	2500
5	Sewage Treatment Centre No. 6C	Near Ayyappa Temple, Poonam Sagar, Mira Road (E)	781
6	Sewage Treatment Centre No. 07	Near Ala Hazrat Maidan, Mira Road (E)	201
7	Asmita New Water Tank, Mira Road (E)	Near Reservation No. 178, Mira Road (E)	56.9
8	Asmita Old Water Tank Mira Road (E)	Opposite N.H. School, Mira Road (E)	151.97
9	Shanti Nagar, Sector-11, Jalkumbh, Mira Road (E)	Shanti Nagar, Sec-11, Mira Road (E)	161.7
10	Shanti Nagar, Sector-02, Water Tank, Mira Road (E)	Shanti Nagar, Sec-02, Mira Road (E)	56
11	Shanti Nagar, Sector-08, Water Tank, Mira Road (E)	Shanti Nagar, Sec-8, Mira Road (E)	109.6
	Total		**28478.17**

Ground			
Sr. No.	**Ground**	**Address**	**Area (sq. m.)**
1	Reservation no. 178 Maidan	Behind Petrol Pump, Parshva Nagar, Near Water Tank, Mira Road East	5558
		Total	**5558**

Dividers			
Sr. No.	**Dividers**	**Address**	**Area (sq. m.)**
1	Mira Road Station to Shristi Divider	Mira Road (E)	1860.4
2	Mira Road Station to S. K. Stone Divider	Mira Road (E)	830.67
3	Behind Chowk, Wockhardt Hospital to Asmita Society Mira Road (E)	Mira Road (E)	16.57
4	Bharti Park, Mira Road (E)	Mira Road (E)	21.78
		Total	**2729.42**

30 : Information about parks, grounds and dividers in Ward Committee No. 06

Ward Committee No. 06			
Parks			
Sr. No.	**Name of Parks**	**Address**	**Area (sq. m.)**
1	Sukala Lake Garden	Dattamandir Road, Penkarpada Village, Po. Mira	11798
2	Chhatrapati Shivaji Maharaj Statue Park	Kashimira Entrance	213
3	Savitribai Phule Garden	Mashacha Pada, Near Saikrupa Complex, Kashimira	5387
4	Satakari Lake Garden	M.I.D.C. Road, Mira Road (E)	5018
5	Reservation No. 329 Garden	Sanghvi Nagar, Mira Road (E)	4343
6	Penkarpada Cemetery Side Garden	Penkar Pada, Mira Road (E)	1843
7	Reservation No. 370	Sanghvi Eco City, Mahajanwadi, Mira Road (E)	3993
8	Reservation No. 357	Pleasant Park Mira Road (E)	3280
9	Reservation No. 368	Sanghvi Eco City, Mahajanwadi, Mira Road (E)	8307
10	Reservation No. 336	Ram Nagar, Mira Road (E)	1337
11	Park Under Kashimira Flyover	Garden under Kashimira Flyover, Mira Road (E)	16189.16
12	Reservation No. 353 Garden	Penkarpada, Mira Road (E)	4010
13	Swimming Pool	Next to Lodha Complex, Mira Gaon, Mira Road (E)	158

Sr. No.	Name of Parks	Address	Area (sq. m.)
14	Urdu School, Pleasant Park	Pleasant Park, Mira Road (E)	416.56
15	Bharat Ratna Gaansamragini Lata Mangeshkar Natya Gruha		189
16	Reservation No. 360, Kashigaon, Near Jarimari Lake, Mira Road (E)	Kashigaon, Near Jarimari Lake, Mira Road (E)	983.4
17	Silver Park Water Tank, Mira Road (E)	Silver Park, Mira Road (E)	127.62
18	M.I.D.C. Water Tank, Mira Road (E)	M.I.D.C., Mira Road (E)	152.13
19	Mahajanwadi, Water Tank, Mira Road (E)	Mahajanwadi, Mira Road (E)	163.52
20	Mira Village, Water Tank, Mira Road (E)	Mira Gaon, Mira Road (E)	142.9
21	Fire Station, Penkarpada, Mira Road (E)	Penkarpada, Mira Road (E)	61.01
22	Jarimari Lake	Kashigaon, Mira Road (E)	5296
		Total	**73408.3**

Ground

Sr. No.	Ground	Address	Area (sq. m.)
1	Reservation no. 365 and 367	Beside St. Xavier's School, Kashigaon, Mira Road (East)	1464
		Total	**1464**

Dividers

Sr. No.	Dividers	Address	Area (sq. m.)
1	Pleasant Park to MIDC Divider	MIDC, Miragaon	764.75
2	Divider in front of Royal College	Mira Road (E)	55.44
3	Sanghavi Nagar Divider	Sanghavi Nagar, Mira Road (E)	144
4	Shrishti Sewage Treatment Plant Side Compound Wall	Srushti, Mira Road (E)	133
		Total	**1097.19**



14 : J. P. Infra Road Divider, Mira Road (East)

3.6.2 Information on Crematoriums in Mira-Bhayandar City

LPG and electric crematoriums have been installed at various locations within the Mira-Bhayandar Municipal Corporation area. This not only saves wood but also protects the environment by reducing smoke emissions. To reduce inconvenience to nearby residents, air exhaust systems have been installed at the crematoriums. Under the NCAP (National Clean Air Programme) fund, a budget of 6.21 crore rupees has been sanctioned for electric crematoriums and scrubbers.

3.6.2.1 CNG and Electric Crematoriums

CNG and electric crematoriums have been installed at Bhayandar (West) Crematorium, Bhayandar (East) Bandarwadi Crematorium, Mira Road (East) Hindu Crematorium, and Penkarpada Crematorium, among others.

Previously, a large amount of wood was required for cremations at these locations, which was also a time-consuming process. However, the installation of these new systems has substantially reduced the use of wood, minimized environmental impact, and made the cremation process more efficient..The Municipal Corporation ensures compliance with the environmental guidelines issued by the Government from time to time.

31 : City cemeteries with electric crematoriums

Sr. No.	Place Name
1.	Bhayandar (W) Crematorium in Mira-Bhayandar Municipal Corporation area
2.	Mira Road (E) Hindu Crematorium in Mira-Bhayandar Municipal Corporation area




15 : CNG and electric crematorium

- **Scrubber**

By installing this system, the significant amount of carbon dioxide produced from the human body during the cremation process is mitigated. Therefore, the carbon dioxide is separated from the smoke and the ash is completely discharged into the water, thereby helping to prevent pollution in the surrounding area.




16 : Scrubber

- **Air Exhaust System**

In most parts of the Mira-Bhayandar Municipal Corporation area, crematoriums are located within residential zones. Previously, complaints were received regarding respiratory issues caused by smoke spreading into the surrounding neighbourhoods during cremations. With the installation of this system, the smoke generated during cremation is released into the air through a 30-meter high chimney. This has significantly reduced smoke-related complaints and provided relief to the local residents




17 : Air Exhaust System

Currently, under the government's National Clean Air Programme (NCAP), proposals have been submitted and funds have been requested for the upcoming year to install electric crematoriums at the Bhayandar (East) Bandarwadi Crematorium and the Ghodbunder Crematorium.

32 : Crematorium in Mira Bhayandar Municipal Corporation area

Sr. No.	Crematorium	Address
1.	Kashimira Crematorium	Kashimira Naka
2.	Penkarpada Crematorium	Penkarpada Village
3.	Dachkul Pada Crematorium	Dachkul Pada, Mira Road (E)
4.	Chena Crematorium	Chena River, Chena Village
5.	Kajupada Crematorium	Kajupada Village, Ghodbunder Road
6.	Miraroad Crematorium	Poonamsagar Road, Mira Road (E)
7.	Pantekdi Crematorium	Vimal Dairy Road, Goddev, Bhayandar (E)
8.	Ghodbunder Village Crematorium	Ghodbundergaon, Ganesh Ghat,
9.	Ghodbunder Village, Ghodbunder Stop Crematorium	Ghodbundergaon, Mira Road (E)
10.	Ghodbunder Retibandar Crematorium	Ghodbunder, Retibandar, Mira Road (E)
11.	Kharigaon Crematorium	(Bandarwadi) Bhayandar (E)
12.	Moksha Muktidham	Navghar Village, Machhimarket Road, Bhayandar (E)
13.	Uttan Crematorium	Uttan Mothagaon, Bhayandar (W)
14.	Late Kashinath Govind Patil Vaikunthdham	Morwa Village, Uttan Road, Bhayandar (W)
15.	Raigaon Crematorium	Rai Village, Uttan Road, Bhayandar (W)
16.	Muktidham	Murdha Village, Uttan Road, Bhayandar (W)
17.	Vaikunthdham Crematorium (Hindu Smashanbhumi)	Bhayandar (W), (Bhola Nagar)

33 : Details of total parks, grounds, Crematorium, and dividers in Mira Bhayandar Municipal Corporation area

Sr. No.	Ward Committee Nos.	Numbers				
		Parks	Ground	Crematorium	Dividers	Water Reservoir/ Junction/ Fire Station
1.	Ward Committee No. 1	21	3	5	5	0
2.	Ward Committee No. 2	7	0	0	0	0
3.	Ward Committee No. 3	19	7	2	0	0
4.	Ward Committee No. 4	35	4	4	9	5
5.	Ward Committee No. 5	11	1	1	4	6
6.	Ward Committee No. 6	22	1	5	4	5
	Total	**115**	**16**	**17**	**22**	**16**

34 : Details of total parks, grounds, cemeteries and dividers in Mira Bhayandar Municipal Corporation area

Sr.No.	Ward Committee Nos.	Area (sq. m.)			
		Parks	Ground	Crematorium	Dividers
1.	Ward Committee No. 1	51579	79667	9177	3203.9
2.	Ward Committee No. 2	8994	0	0	0
3.	Ward Committee No. 3	41691	50155	6354	0
4.	Ward Committee No. 4	139605	44812	664	6110.61
5.	Ward Committee No. 5	28478.2	5558	2702	2729.42
6.	Ward Committee No. 6	68112.3	1464	8765	1148.26
	Total	**338459**	**181656**	**27662**	**13192.3**

3.7 Construction Department

Works carried out by the Construction Department

1. To carry out various civil and electrical development works.
2. To arrange street lights.
3. To maintain the records of the immovable property of the Municipal Corporation up to date.
4. To grant permission to institutions/agencies to dig roads for various public purposes and to recover the cost of road repairs.

Every year, the Municipal Corporation undertakes various projects by making provisions under different budget heads to provide civic amenities in the city. These include roads, drains, sewers, cement concrete roads, parks, playgrounds, crematoriums, schools, public temples, libraries, recreation centers, subways, public facilities, community centers, markets etc. Street lighting and electrical works are also carried out by this department. In addition, maintenance and repair of municipal buildings and the execution of government-approved schemes.

Major works and schemes being undertaken by the Construction Department

1. Conservation and renovation of Ghodbunder Fort.
2. Execution of various roads through the Mumbai Metropolitan Region Development Authority (MMRDA).
3. Construction of a 'Community Hall' at the site of the existing fire station building along Dr. Babasaheb Ambedkar Marg in Bhayandar (West).
4. Construction of an art gallery dedicated to the late Pramod Mahajan at Reservation No. 300 in Mira Road (East).
5. Construction of residential apartments under housing schemes.
6. Development of a market (as per the Development Plan) at Reservation No. 108 in Bhayandar (East).
7. Construction of the Metro-9 line (connecting Dahisar to Mira-Bhayandar, a 9 km stretch) through the MMRDA; the route includes a total of eight stations.
8. Widening and strengthening of the road from Subhash Chandra Bose Ground, Bhayandar (West) to Uttan Village (Phase-2).
9. Construction of an additional fifth floor at the Mira-Bhayandar Municipal Corporation's main office building in Bhayandar (West).
10. Concreting of the road stretching from Shri Golwalkar Guruji Chowk to the late Prafulla Patil Chowk within the Mira-Bhayandar Municipal Corporation area.

3.8 City development

Urban development refers to the planned growth, expansion, and transformation of urban areas to improve citizens' standard of living, quality of life, infrastructure, economic growth, and the environment conditions. It involves the coordinated efforts of government agencies, the private sector, and local communities to create a sustainable, efficient, inclusive and well planned urban environment. The urban development initiatives undertaken in Mira-Bhayandar City are described below.

Infrastructure and Transport Development

Metro Projects : Metro Line 9 (Dahisar East to Mira Road and Bhayandar) will reduce traffic on the Western Express Highway. The expansion of Metro Line 7A and 2A will provide connectivity to Chhatrapati Shivaji Maharaj International Airport.

Roads and Tunnels : Mira Bhayandar Municipal Corporation has commenced the concretisation of 84 km of roads.. The Bhayandar to Thane tunnel route and a 45-meter wide bypass route via Dahisar are in progress. The Thane-Ghodbunder-Bhayandar tunnel and elevated road will soon enter a new tendering process.

Water Supply : The Surya Regional Water Supply Project has commenced to ensure an adequate water supply to the city.

Environmentally Friendly Sustainable Development : A Climate Action Plan (2024–2047) has been developed to achieve environmentally friendly sustainable development. The Climate Action Plan aims for net-zero carbon emissions by 2047. For this, emphasis is being placed on renewable energy, energy-efficient buildings, and improved waste management.

3.8.1 Functions of the Town Planning Department

- Implementation of the Development Plan, acquisition of reserved land plots, scrutiny of construction permit cases in accordance with Development Control Regulations, and other supplementary tasks.
- Providing necessary information including technical assistance/guidance regarding unauthorized constructions and taking action on cases filed by the department.
- Taking action on cases under the Maharashtra Regional and Town Planning (MRTP) Act, 1966:
- The Development Plan for Mira-Bhayandar city (excluding the excluded area) was sanctioned on 14/05/1997 and came into force on 15/07/1997. The Development Plan for the excluded area was sanctioned on 25/08/2000 and came into force on 15/10/2000. Additionally, the Revised Draft Development Plan 2022-37 has been published to invite objections/suggestions. It was published in the Maharashtra Government Gazette as per MBMC/TP/Revised DP Mira-Bhayandar/Section-26 Publication/2587 dated 27/10/2022, and Order dated 28/10/2022.

3.8.2 City Development Plan

The area of Mira-Bhayandar city is 79.40 sq. km., which includes 19 revenue villages. As per Government Order No. TPS-1208/1346/Pr.Kr.267/08/Navi-12, dated 29/08/2009, amendments were made to the Development Control Regulations. Subsequently, the Unified Development Control and Promotion Regulations (UDCPR) under the Maharashtra Regional and Town Planning Act, 1966, were sanctioned on 02/12/2020.

For the six revenue villages within the Mira-Bhayandar Municipal Corporation limits- Uttan, Pali, Chowk, Tarodi, Dongri, and Morva — the Government had appointed MMRDA as the Special Planning Authority. A separate Development Plan for these areas was prepared by MMRDA as per the following letters: IPB-4312/323/CR-23/2013/UD-11 dated 13/05/2013 and IPB

4316/Pr.Kr.257/2016/Navi-11 dated 16/03/2017. Development Control Regulations were implemented for these villages.

As per the notification dated 16/03/2017, the appointment of MMRDA as the Special Planning Authority was cancelled, and these villages were included within the municipal limits. Subsequently, the responsibility for implementing the approved development plan was entrusted to the Municipal Corporation.

A revised development plan for these six villages is being prepared under Section 23 of the Act, and the land survey map for this area was prepared on 26/12/2024.

3.8.3 Rental Housing Scheme

Out of the 27 plots designated for urban infrastructure facilities within the Municipal Corporation area, work has been completed at 9 locations and is in progress at 5 locations. The Honorable High Court has issued a stay order on one site, and 11 urban infrastructure sites remain undeveloped.

3.8.4 MHADA

Provisions for a housing scheme have been made for the area owned by MHADA as per a Floor Space Index (FSI) of 2.50. Accordingly, the MHADA proposal has been sanctioned and work on the said proposal is in progress. Through this project, MHADA has received 2,279 tenements.

3.8.5 Affordable Housing Scheme

In accordance with government regulations, the Affordable Housing Scheme has been sanctioned for four sites. Out of these, construction permits have been issued for two proposals. Under the Affordable Housing Scheme, out of a total of 390 houses, 203 houses located at Mahajanwadi, Uttan have been handed over to the Municipal Corporation.

According to the approvals granted to development proposals in the sanctioned Development Plan for the Mira Bhayandar Municipal Corporation area, the year-wise details of the comparative development charges collected since 2016-17 are as follows.

Year	Provision (₹ Crore)	Recovery (₹ Crore)
2016-17	143	60.13
2017-18	104	28.27
2018-19	50	108.87
2019-20	50	81.81
2020-21	40	40.93
2021-22	125	336.34
2022-23	250	303.69
2023-24	250	233.70
2024-25	150	346.25

Development charges are being collected in accordance with the government regulations dated 01/03/2011. The details of the permissions granted by the Mira-Bhayandar Municipal Corporation regarding building proposals for the year 2016-17 are as follows:

Year	Preliminary Permission	Building Permission	Revised Building Permission	Farmer Certificate	Occupancy Certificate	Total
2016-17	----	11	51	27	48	137
2017-18	2	13	35	34	57	141
2018-19	1	48	97	44	81	271
2019-20	1	35	68	28	47	179
2020-21	1	30	23	32	42	128
2021-22	----	43	87	15	41	186
2022-23	----	61	96	13	68	238
2023-24	----	37	43	3	55	138
2024-25	----	18	70	3	51	142

Chapter 4

Air Pollution



Air pollution refers to the presence of harmful or excessive pollutants in the air.

These components can be natural or man-made and have a negative impact on human health, animals, plants, and the environment.

The major air pollutants include

PM2.5 and PM10 (fine particulate matter) | Nitrogen Dioxide (No2) | Ozone (O3)

Sulphur Dioxide (SO2)I Carbon Monoxide (CO) | heavy Metal Lead (Pb)

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३७ व्या वर्षात प्रगती पथावर
दैनिक
आपला आवाज, आपली शक्ति
कोकण सकाळ

मिरा भाईंदर पालिका आयुक्तांच्या उपस्थितीत डस्ट कंट्रोल यंत्रणा कार्यप्रणालीचे सादरीकरण

शहरातील हवेची गुणवत्ता सुधारण्यासाठी २ डस्ट कंट्रोल यंत्रणा पर्यावरण विभागात दाखल





मीरा-भाईंदरवासीय घेणार
मोकळा श्वास, चांगली हवा

पुढारी

मिरा-भाईंदरमधील धुरळा कमी होणार

महापालिकेत डस्ट कंट्रोल यंत्रणेचा समावेश, वातावरण स्वच्छ राहणार

भाईंदर : पुढारी वृत्तसेवा

मिरा-भाईंदर शहरातील हवेची गुणवत्ता सुधारण्यासाठी केंद्र शासनाने पालिकेला एनकॉर्प कार्यक्रमांतर्गत मंजूर केलेल्या निधीतून २ डस्ट कंट्रोल यंत्रणा खरेदी करण्यात आल्या. त्या यंत्रणांचा मंगळवारी पालिकेत समावेश करण्यात आला असता त्याचे सादरीकरण आयुक्त दिलीप ढोले यांच्या उपस्थितीत पार पाडण्यात आले.

सध्या मुंबईसह राज्यातील महत्त्वाच्या शहरांमध्ये धुळीच्या प्रदूषणाची समस्या उभी ठाकली आहे. त्यावर उपाययोजना करण्यासाठी राज्य सरकारकडून डस्ट कंट्रोल टॉवर्स उभारण्याचा विचार सुरु करण्यात आला आहे. बहुतांशी शहरांचे काँक्रीटीकरण मोठ्याप्रमाणात सुरु आहे. यामुळे परिसरातील आरएमसी (रेडी मिक्स काँक्रिट) प्रकल्पाचा मुद्दा उपस्थित होऊ लागला आहे. या प्रकल्पातून मोठ्याप्रमाणात धुळीचे लोण उठत असल्याने वातावरणातील या धुळीचे प्रमाण कमी करण्यासाठी केंद्र शासनाने १५ व्या वित्त आयोगातून तसेच राष्ट्रीय स्वच्छ हवा (एनकॅप) कार्यक्रमांतर्गत पालिकेला सुमारे ८० कोटीहून अधिक निधी मंजूर करण्यात आला आहे. या निधीतून पालिकेने प्रत्येकी सुमारे ६० लाख रुपये किंमतीची २ डस्ट कंट्रोल यंत्रणा खरेदी केल्या आहेत. तत्पूर्वी पालिकेने याच प्रकारच्या ट्रॉलीवर बसविण्यात आलेल्या



दोन यंत्रणा खरेदी केल्या असून त्या सुरु होण्याच्या प्रतिक्षेत आहेत. या यंत्रणा हवेत पाण्याच्या फवाऱ्याने धुळीचे प्रमाण कमी करून जमिनीची मोठ्याप्रमाणात होणारी धूप कमी करीत असल्याचा दावा प्रशासनाकडून करण्यात आला आहे. यातील मंगळवारी पालिकेत समावेश करण्यात आलेल्या २ यंत्रणांचे आयुक्त दिलीप ढोले यांनी सादरीकरण करण्यात आले.

आग विझवण्यासाठीही वापर

या यंत्रणेद्वारे रस्ते, दुभाजके धूळमुक्त करून ती पाण्याने धुतली जाणार आहेत. तसेच झाडे, उद्यानांमधील गवत, झाडीझुडपे आदींवर जमा होणारी धूळ स्वच्छ करून ती देखील स्वच्छ केली जाणार आहेत. त्याचप्रमाणे हवेत पाण्याचा फवारा मारून वातावरणातील धुळीचे प्रमाण नियंत्रणात आणण्यास मदत होणार आहे. या यंत्रणेचा वापर वातावरणातील धुळीचे प्रमाण कमी करण्यासाठी केला जाणार असला तरी आपत्कालीन परिस्थितीत आग विझवण्यासाठी देखील त्यांचा वापर करता आयुक्तांनी सांगितले.

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मीरा-भाईंदरची हवा मध्यम पातळीवर

हवेची गुणवत्ता सुधारण्यासाठी पालिकेचा ८१ कोटींचा कृती आराखडा तयार

मयूर ठाकूर, लोकसत्ता

भाईंदर : मीरा-भाईंदर शहरातील [illegible] पातळीवर [illegible]. त्यामुळे [illegible] विविध [illegible] असून [illegible] ८१ [illegible] आले [illegible] बाजूंनी [illegible] बाजूने [illegible] वेढलेले [illegible] आणि [illegible] प्रमुख [illegible] वाढत्या [illegible] प्रदूषण [illegible] नोंद [illegible] ची [illegible] वाली [illegible] वाढ [illegible] पित [illegible] रीस्थळ [illegible] परिवहन [illegible] प्रयत्न [illegible] परिवहन [illegible] खं [illegible] विद्युत [illegible] दा [illegible]

नैसर्गिक घटकांचे संवर्धन करण्याची गर

मीरा भाईंदर शहर हे समुद्रकिना वसलेले असल्यामुळे या भागात मोठ्या प्रमाणात ऑक्सिजन देण कांदळवन क्षेत्र आहे. मात्र गेल्या काही वर्षात अनधिकृत बांधकामांच्या उभारणीसाठी या कांदळवन क्षेत्राची कत्तल केली जात असल्याचे दिसून आले. याबाबत पोलीस ठाण्यात गुन्हे दाखल होत असले तरी कोणतीह घट झालेली नाही. या शिवाय संजय गांधी राष्ट्रीय उद्यानात वृक्षतोड करून वाढलेली घुसख आणि जागोजागी झालेली आर ए सी प्लांटची उभारणी या गोष्टी प्रदूषण वाढवण्यास कारणीभूत ठ आहेत. त्यामुळे शासनाने येथील नैसर्गिक घटकांचे संवर्धन करण्यासाठी ठोस उपाय योजना करावी, अशी मागणी पर्यावरणप्रे वर्गाकडून केली जात आहे.

> मीरा भाईंदर शहरातील हवेची गुणवत्ता ही मध्यम म्हणजे चांगल्या स्थिती आहे, परंतु येथील हवा पूर्णतः शुद्ध करण्यासाठी आम्ही स्थानिक महापालिकेला निधी उपलब्ध करून विविध उपक्र सुरू केले आहेत.
> -सतीश पडवळ, अधिकारी, महाराष्ट्र प्रदूषण नियंत्रण मंडळ, ठाणे विभा

पुढारी

स्मशानातील धुरावर आता स्क्रबरचा उतारा

धुरातील कार्बन मोनॉक्साईडचे शुद्ध हवेत रूपांतर होणार

भाईंदर : पुढारी वृत्तसेवा

मिरा-भाईंदर महापालिकेत केंद्र शासनाच्या १५ व्या वित्त आयोगातून प्राप्त झालेल्या निधीतून शहरातील एकूण १४ स्मशानभूमींत वायू प्रदूषण नियंत्रण करण्यासाठी वातावरणात सोडण्यात येणाऱ्या धुरावर स्क्रबर यंत्रणा उभारण्यात आली आहे. या स्क्रबरद्वारे धुरातील कार्बन मोनॉक्साईड शोषून घेऊन हवा सोडण्यात येणार असल्याचा दावा प्रशासनाकडून करण्यात आला.



लोकांची स्मशानातील धुरापासून सुटका होणार

या यंत्रणेद्वारे स्मशानातील धुरातील कार्बन मोनॉक्साईडचे रूपांतर शेवटच्या प्रक्रियेत केले जाणार आहे. या प्रक्रियेत वातावरणात शुद्ध हवा सोडली जाणार असल्याचा दावा प्रशासनाकडून करण्यात आला आहे. हे यंत्रणा सुरू झाल्यानंतर स्मशानभूमी परिसरातील धुराचे प्रमाण कमी होऊन तेथील वातावरण शुद्ध होणार असल्याचा दावा प्रशासनाकडून करण्यात आला आहे. या यंत्रणेमुळे स्मशानभूमी परिसरातील धुराचे प्रमाण कमी होऊन तेथील वातावरण शुद्ध होणार असल्याचा दावा प्रशासनाकडून करण्यात आला आहे.

दैनिक
३७ वर्ष
कोकण सकाळ

मिरा भाईंदर येथील पाच स्मशानभूमीत अत्याधुनिक स्क्रबर यंत्रणा

भाईंदर : महाराष्ट्र शासनाच्या १५व्या वित्त आयोगातील प्राप्त निधितून मिरा भाईंदर महानगरपालिका आयुक्त तथा प्रशासक श्री. दिलीप ढोले यांच्या निर्देशानुसार महापालिका कार्यक्षेत्रातील १४ स्मशान भूमिपैकी सर्वाधिक ५ स्मशान भूमिस अत्याधुनिक स्क्रबर यंत्रणा बसवून कार्यान्वित करण्यात आल्या आहेत.

मिरा भाईंदर महानगरपालिका क्षेत्रात महाराष्ट्राच्या १५ व्या वित्त आयोग अंतर्गत स्वच्छ



मोर्वेस्माइडचे कण स्क्रबर मध्ये जाऊन त्यावर प्रक्रिया करण्यात येणार आहे. त्यामुळे कार्बन मोर्वेस्माइडचे कण स्क्रबर यंत्रणेत जमा होऊन शुद्ध धूर हवेमध्ये ३० मी. उंचीच्या चिमणीद्वारे सोडण्यात येणार आहे. त्यामुळे स्मशानभूमी लगत राहणाऱ्या

'हरित इमारती'साठी मिरा-भाईंदर सरसावले

म. टा. वृत्तसेवा, मिरा-भाईंदर

मिरा-भाईंदरमध्ये 'हरित इमारत' संकल्पनेला चालना देण्यासाठी महापालिकेने पुढाकार घेतला असून, स्वतःपासून कार्यवाही करण्याचा निर्णय घेतला आहे. आणखी तीन [illegible] बांधण्याचे

आणखी तीन पर्यावरणस्नेही इमारती याची पूर्तता आवश्यक

हरित इमारत उभारताना पर्जन्यजल व्यवस्थापन, सौरऊर्जा निर्मिती, कचरा व्यवस्थापन, पाण्याचे बचत, पाण्याचा पुनर्वापर यांसारख्या १४ उपाययोजना करणे अपेक्षित आहे. याची पूर्तता केल्यानंतर भारतीय हरित इमारत परिषद (आईजीबीसी) 'हरित वास्तू' म्हणून



महिन्यांपूर्वी शहरातील पहिली 'हरित वास्तू' म्हणून प्रमाणपत्र प्रदान करण्यात आले आहे.

या, शहरात हरित इमारतींना चालना देण्यासाठी विकासकांना प्रोत्साहन देण्यासाठी एका बैठकीचे आयोजन केले होते. आता विकासकांबरोबर अनौपचारिक न राहता स्वतःपासून कार्यवाही करण्याचा निर्णय पालिकेने घेतला आहे. त्यानुसार सर्वप्रथम तीन मजली पर्यावरणभवन उभारण्यात येणार आहे. या इमारतीत पर्यावरण विभाग, उद्यान विभाग, दिवंगत [illegible] यांचे [illegible] यांचे [illegible] यांचे

वायू प्रदूषणाचे धोके

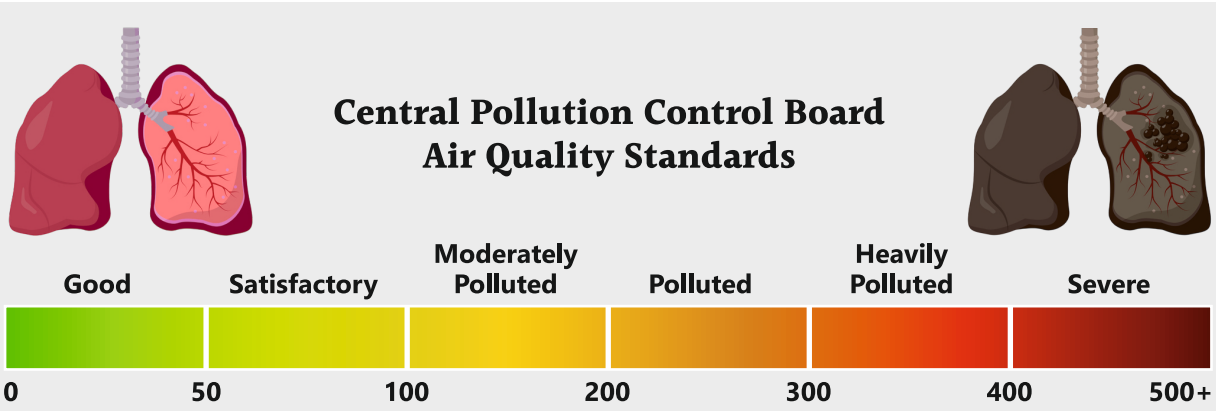
- **Asthma and Respiratory Problems**
- **Heart Disease**
- **Lung Cancer**
- **Developmental Issues in Children**

Sources of air pollution include dust from construction and roads, the burning of coal, diesel, and petrol, agricultural waste, and the use of wood for domestic cooking and heating water, among others. Air pollution can lead to diseases such as asthma and respiratory disorders, lung cancer, and developmental problems in children. To reduce air pollution, we can adopt measures such as using public transport and electric vehicles, implementing clean energy solutions, controlling industrial emissions, planting trees and increasing green cover, regular air quality monitoring, and conducting public awareness and education campaigns.

4.1 Sources of Air Pollution



The Mira Bhayandar Municipal Corporation monitors air quality at 13 major junctions (hotspots) and also conducts air quality checks during festival periods. Mitigation measures to reduce pollution are implemented by the Mira Bhayandar Municipal Corporation under the National Clean Air Programme (NCAP). Furthermore, pollution reduction initiatives are also carried out under the Majhi Vasundhara Abhiyan.



4.2 Monitoring and measuring air pollutants at various junctions in Mira-Bhayandar city

Mira-Bhayandar Municipal Corporation regularly conducts air monitoring and measurement at 13 junctions. In the years 2023–24 and 2024–25, the Corporation examined the air quality and pollutant levels at various locations in the city. The details are provided in the table below.

35 : Monitoring and measuring air pollutants at various junctions in Mira Bhayandar city

Sr. no.	Location	PM10 (µg/m3)	PM2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI	PM10 (µg/m3)	PM2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI
	Standard	100	60	80	80		100	60	80	80	
		2023-24 (Average)					2024-25 (Average)				
1	Kashimira Chowk Near Chhatrapati Shivaji Maharaj Statue.	140	65	30	40.6	127	124	53	27	37	116
2	Bhayandar Police Station (W) Chowk	98	43	25	38	98	117	42	31	28	111
3	Bhayandar (W) Railway Station	103	45	36	40	102	97	41	32	36	97
4	Near Mira Road Railway Station	102	48	32	25	101	99	41	29	24	99
5	Bhayandar (E) Cabin Road	86	50	26	30	86	90	52	22	32	90
6	Bhayandar (E) B.P. Road	85	39	23	29	85	81	32	23	22	81
7	Golden Nest Chowk	90	60	39	23	100	89	50	37	24	89
8	S. K. Stone Chowk	122	30	36	29	108	97	27	31	26	97
9	At Uttan Dhaagi Solid Waste Treatment Project Site	105	44	36	30	103	91	47	32	28	91
10	Uttan Naka (Bus Stop Chowk)	80	50	32	43	83	78	38	28	24	78
11	Near Pali St. Andrew Church	60	32	20	26	60	55	22	19	21	55
12	Kanakia Police Station, Mira Road	78	38	29	34	78	75	35	25	23	75
13	Near Hotel Fountain Chowk	140	72	35	40	142	155	65	29	35	137

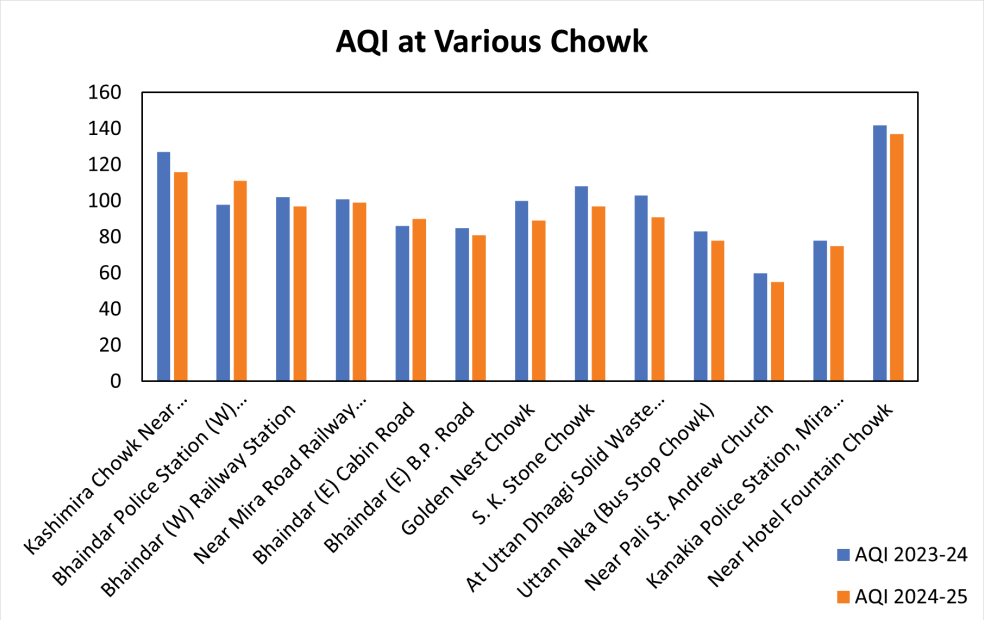
*** Standard: CPCB NAAQ Std.2009**

Conclusion :

Observations and measurements of air quality at various junctions in Mira-Bhayandar city during 2023-24 and 2024-25 revealed that air pollution levels are high at certain locations. At Kashimira Chowk, S. K. Stone Chowk, and Hotel Fountain Chowk, the levels of PM10 and PM2.5 exceed the prescribed standards. In contrast, the air is relatively cleaner near St. Andrew's Church, Pali and at Uttan Naka, where the AQI ranges between 55 to 78. In most locations, the levels of SO2 and NOx pollutants are within permissible limits.The primary causes of pollution in the city are vehicular traffic and construction

activities. To improve air quality, there is a need to implement strict mitigation measures across the city. Notably, the AQI at certain locations shows a decrease in 2024-25 compared to 2023-24.

The Mira Bhayandar Municipal Corporation is implementing several important measures under the National Clean Air Programme (NCAP) to reduce air pollution. These include the procurement of eco-friendly EV buses, controlling road dust using mist spray machines, and conducting Deep Clean Drives to ensure cleanliness in public spaces. Through these initiatives, the Municipal Corporation is continuously striving to improve the city's air quality.



Mira Bhayandar AQI Comparison (Past Years) Year 2023-24 vs. Year 2024-25

18 : Average air quality in the years 2023-24 and 2024-25

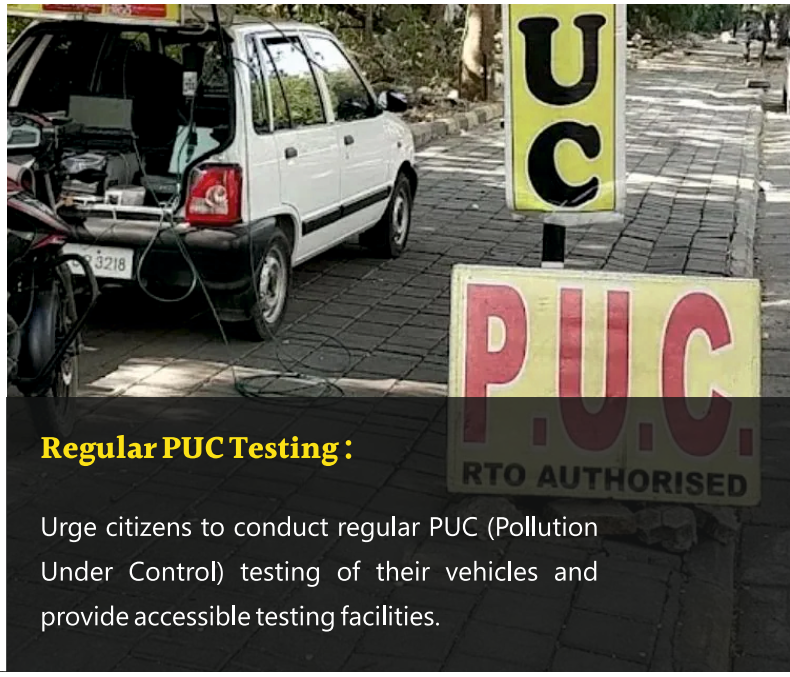
4.3 Measures to Control Air Pollution

To maintain clean air in the city, it is essential to regulate transport, construction, and industrial sources.



Vehicle Restrictions and EV Promotion :

Ban old vehicles that are over 15 years old. Encourage citizens to use Electric Vehicles (EV). The Municipal Corporation itself should maximize the use of EV vehicles.



Regular PUC Testing :

Urge citizens to conduct regular PUC (Pollution Under Control) testing of their vehicles and provide accessible testing facilities.



Road Improvements :

Improve road quality and install signal systems where necessary to avoid traffic congestion. This will prevent vehicles from idling and reduce pollution.



Afforestation :

Undertake large-scale tree plantation along both sides of roads, on dividers, and wherever possible, as trees naturally purify the air.



Ban on Firecrackers :

Impose a ban on firecrackers/skycrackers that increase air pollution and smoke, and create public awareness regarding this.



Transport of Construction Material :

Ensure that vehicles transporting debris or construction waste are completely covered. Impose fines on those who violate these rules.



Dust Control :

Regularly clean dust from roadsides, dividers, and footpaths.



Water Sprinkling :

Use Mist Spray Machines to sprinkle water in areas with high construction and traffic activity so that dust particles in the air settle down.

RMC Plant Regulations :

Make the following measures mandatory for Ready-Mix Concrete (RMC) plants to control air pollution :

- **Green Net :** Use green nets to prevent dust particles from spreading.
- **CAAQMS Machine : I**nstall Continuous Ambient Air Quality Monitoring System (CAAQMS) machines.
- **Dust Collector :** Install systems to suck in and collect dust.
- **Tyre Washing System :** Install a system to wash the tyres of vehicles exiting the plant.
- **Sprinklers :** Install water sprinklers in areas where raw materials are stored.
- **Plant Concreting :** The plant premises should be cemented/concreted (not unpaved) to ensure no dust emission occurs.
- **Tree Plantation :** Plant trees around the periphery of the plant.



Chapter 5

Water Pollution



The contamination of rivers, lakes, seas and wells with harmful substances reduces the quality of natural water sources, making the water unsafe for humans, animals, and plants. This is known as water pollution. In many regions, this pollution occurs because untreated sewage from residential areas is released directly into drains or natural water bodies. Additionally, factories discharge chemicals, toxic elements, and heavy metals into the water. Solid wastes such as Plastics, Thermocol and idol immersion are often dumped directly into lakes and drains. Agricultural fertilizers and pesticides carried away by rainwater carries these chemicals into water sources. During construction and urban development, materials like cement, sand, sludge and chemical wastewater is often discharged in lakes and drainage systems. All these activities contribute to the growing problem of water pollution. Water pollution leads to a decline in water quality. Due to an increase in biodegradable substances in water, the Biological Oxygen Demand (BOD) rises, and because of chemical components, the Chemical Oxygen Demand (COD) also increases

5.1 Sources of Water Pollution

- Excessive use of chemical fertilizers in agriculture increases pollution due to nitrates and phosphates carried along with water.
- Untreated wastewater from housing areas also contributes to the rise in nitrate and phosphate levels. Additionally, the presence of faecal coliform bacteria in the water increases.
- Plastic waste further worsens water contamination. Polluted water can spread diseases like diarrhoea, cholera, skin infections and stomach problems. It also poses serious risks to aquatic life such as fish and frogs, and contributes to eutrophication, a process where excess nutrients cause dense growth of algae in water bodies, ultimately depleting oxygen levels.

Major Causes and Sources of Water Pollution

1 Waste Generated from Industrial Activities

- Heavy Metals – Lead, Mercury, Arsenic, Cadmium
- Chemical Waste – Toxic chemicals released from the textile, paper, and pharmaceutical industries
- Oil and Grease – Leakage from refineries and factories.
- Hospital (Biomedical) Waste – Biomedical waste disposed of without following proper regulations.

2 Sewage and Household Waste

- Untreated sewage
- Infectious germs and bacteria

3 Waste Generated from Agriculture

- Runoff of chemical fertilizers and pesticides: Chemicals like nitrogen, phosphorus, etc., present in fertilizers and pesticides sprayed on crops (e.g., DDT, organophosphates)
- Waste generated from animals
- Silt runoff – Soil erosion from fields obstructs water sources, which reduces sunlight penetration into the water and harms aquatic ecosystems.
- Drainage of saline water – Excess salts accumulated in the soil due to irrigation methods seep into the groundwater, making that water unfit for drinking

4 Plastic Waste

- Plastic enters the water through sewage discharged directly into drains, dustbins, and water sources.
- Micro plastics released from synthetic clothes pollute water sources.
- Marine life suffers by getting entangled in plastic or by consuming it as food.
- Micro plastics can enter our food chain through seafood, posing a serious threat to health.

5 Waste Generated During Cultural Events

- Waste generated during cultural events (such as offerings, used flowers, garlands, idols, etc.) is generally immersed in water, which may lead to pollution.

6 Thermal Waste

- Hot water from power projects and factories is discharged into streams and rivers, due to which the amount of oxygen in water decreases and it becomes difficult for aquatic organisms to survive.

7 Pharmaceutical and Medical Waste

- Antibiotics and medicines released into water bodies increase antibiotic resistance in the human body, due to which antibiotics do not remain effective.
- If infectious waste from hospitals is not treated and disposed of properly, the spread of infectious diseases can occur.

8 Radioactive Waste (Nuclear Waste)

- Radioactive waste is generated from nuclear power plants. If it is not properly processed and disposed of, it can cause long-term genetic and health-related effects on humans and living organisms.

To curb water pollution, measures such as setting up sewage treatment plants (STPs), connecting every home and industry to sewage treatment plants, regular cleaning and aeration of lakes, conducting public awareness campaigns, and imposing bans and strict laws on plastic and other waste can be implemented.

The quality of water in rivers, lakes and creeks coming into the Mira Bhayandar Municipal Corporation area is regularly tested. Also, the quality of water in these water sources is tested before and during Ganeshotsav. There are a total of 10 sewage treatment plants in the Mira Bhayandar Municipal Corporation area, out of which 9 projects are operational and one project is in progress. The quality of water processed in the sewage treatment plants is also regularly tested.

5.2 Water quality of water bodies in the municipal area



Water Bodies

Existing 36 + Proposed 22



Routinely monitoring of quality of water & chlorination of all water bodies



Safe and Good-Quality Drinking Water

The total number of existing water bodies in the Mira Bhayandar Municipal Corporation area is 36 while the number of proposed water bodies is 22. The Municipal Corporation routinely monitors the quality of water in all these water bodies, and chlorination is carried out as part of the maintenance process.

			Place of Water Reservoir						
Parameter	**Units**	**Standard Limits as per IS 10500:2012**	**Subhash Chandra Bose Garden Water Reservoir**	**Morwa Water Reservoir**	**Uttan Water Reservoir**	**Sudama Water Reservoir**	**Goddev Water Reservoir**	**Mira MIDC Water Reservoir**	**Kamla Park Water Reservoir**
Color	HazenUnit	5	1	1	1	2	1	1	1
Temperature	℃	-	26.1	27.1	25.4	27.5	26.4	25.3	22.5
Odor	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
pH	--	6.5-8.5	7.6	7.3	7.4	7.9	7.5	7.8	8.0
Conductivity	µS/cm	Not Specified	308	290	293	252	251	245	264
TDS	mg/lit	<500.00	185	194	205	156	163	152	185
Turbidity	NTU	<1.00	<1	<1	<1	<1	<1	<1	<1
DO	Mg/lit	6.9	6.9	8.4	6.4	7.9	8.0	8.2	7.8
Total Nitrogen	mg/lit	Not Specified	1.7	1.58	2.73	3.2	2.9	4.2	2.7
Total Hardness	mg/lit	<200.00	149.91	181.36	188.85	152.53	110.22	131.68	170.01
Calcium,as Ca	mg/lit	<75.00	32	38	41	38	26	28	45
Magnesium,as Mg	mg/lit	<30.00	17	21	21	14	11	15	14
Total Alkalinity	mg/lit	<200.00	65.45	58.5	56.1	65.9	58.9	62.1	63.8
Mercury,as Hg	mg/lit	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium, as Cr	mg/lit	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Metal-Lead	mg/lit	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Metal-Iron	mg/lit	0.3 mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

***The water quality of the reservoir has been verified against the DRINKING WATER standard IS 10500:2012 Requirement (Acceptable limit)**

Analysis of water quality parameters of the above water bodies :

According to the analysis of the water reservoir, most parameters at the majority of locations meet the IS 10500:2012 standards. **The water reservoir is safe and suitable for drinking.**

5.3 Water Quality in creeks in the municipal area

Ghodbunder and Bhayandar creeks are located in the Mira Bhayandar Municipal Corporation area. The water quality of the creek is regularly monitored. In this, physical and chemical parameters like pH, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Phosphates, Nitrate, Cadmium and Lead were monitored. This information is shown in the table below.



19 : Bhayandar Jetty

36 : Creek Water Quality Testing

Place	Standard	Ghodbander Retibandar Creek	Bhayandar (E) Chowpatti Creek	Bhayandar Dhakka
pH	6.5-8.5	7.6	7.8	8.3
Temp(°C)	-	25.9	26.1	25.9
Dissolved Oxygen (DO) (mg/L)	Min 4mg/L	6.5	6.8	5.6
BOD (mg/L)	-	28.6	35.6	35.3
Free Ammonia	1.2mg/l	0.8	0.35	0.6
Total Phosphates (mg/L)	-	0.3	0.32	0.96
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001
Total Chromium, as Cr (mg/L)	-	<0.05	<0.05	<0.05

***CPCB Standard D (Propagation of Wild life and Fisheries) is referred to assess the Creek water quality**

Conclusion :

The pH of the creek water is within the standard limits, and the concentration of heavy metals is low. However, due to higher levels of BOD and phosphates, some degree of organic pollution is observed. Therefore, appropriate control measures and regular monitoring are necessary to improve water quality.

5.4 Water quality of lakes within the municipal corporation area



Water quality testing in the City

8 Major Lakes



Degree of biological pollution Level

High BOD and COD



Major Causes of Pollution

Disposal of Nirmalya (Offerings) and Sewage Leakage

Water quality tests were conducted on 8 lakes within the Mira Bhayandar Municipal Corporation area. The Municipal Corporation routinely monitors lake water quality and is actively involved in their preservation and conservation efforts.

37 : Lake water quality testing

Parameters	Name of Lakes								
	Standards	Dongri Lake	Indira Gandhi Udyan Lake	Jarimari Lake	Morwa Lake	Naghar Old Lake	Sriram Mandie Lake	Tulsi Lake	Khari Lake
pH	6.5 - 8.5	7.7	7.2	7.3	7.8	7.9	8.1	7.6	8.2
Color(Hazen)	-	1	1	1	1	1	1	1	1
Temp(°C)	-	27.1	27.3	26.8	26.5	27.1	26.8	27.3	26.9
Electrical Conductivity µS/cm	-	212	196	228	195	230	200	216	237
Total Dissolved Solids(mg/l)	-	134	131	166	132	168	133	150	159
Total Suspended Solids(mg/l)	-	17.2	25.8	19.2	15.5	28.8	12.2	26.3	35.2
DO(mg/l)	Min 4 mg/L to support aquaticlife (ClassD)	5.1	4.9	5.2	6.1	5.8	4.8	4.7	5.9
BOD(mg/l)	-	34	29	35	25	30	28	27	32
COD(mg/l)	-	73	41	78	54	63.2	55.9	48.9	49.8
Nitrate(mg/l)	-	0.3	0.28	0.3	0.5	0.3	0.33	0.28	0.25
Calciumas Ca(mg/l)	-	43	36	31	28	30	37	45	32
Magnesiumas Mg(mg/l)	-	13	14	10	21	15	24	19	15
Total Hardnessas CaCO3(mg/l)	-	160.9	147.5	118.6	156.4	136.7	191.2	190.6	141.7
Alkalinity(mg/l)	-	89	85	90	92	95	89	84	87
Ammonical Nitrogen	-	0.58	0.47	0.62	0.75	0.78	0.72	0.39	0.87
Inorganic Phosphate(mg/L)	-	0.012	0.017	0.013	0.024	0.021	0.018	0.024	0.028
Total Phosphate	-	0.21	0.26	0.24	0.3	0.28	0.24	0.32	0.35
Cu(mg/l)	-	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pb(mg/l)	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zn(mg/l)	-	1.95	1.38	1.65	1.5	1.81	2.29	2.02	1.46
Cd(mg/l)	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cr(mg/l)	-	< 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MPN(MPN/100 mL)	-	10.6	12	14.1	10.2	7.7	9.19	9.12	10.26
F.Coli(MPN/100 ml)	-	10	8	15	9	12	15	20	19
E.Coli (MPN/100 mL)	-	25	22	19	26	21	28	25	29

***CPCB Standard D (Propagation of Wild life and Fisheries) is referred to assess the lake water quality**

Conclusion :

Water quality testing was conducted for eight major lakes in the Mira-Bhayandar city. Based on the levels of BOD and COD, a high degree of biological pollution was observed in the lake water. This appears to be primarily due to the immersion of religious offerings (Nirmalya) in the lakes. Low levels of fecal coliform were detected, but the water does not have a foul smell.Overall parameters confirm that the water bodies are suitable for recreational use.

5.5 Information about STP in Mira Bhayandar Municipal Corporation area

Total STP
10

9 Operational STP
107 MLD Capacity

1 STP Under construction
8 MLD Capacity

The Mira Bhayandar Municipal Corporation area has a total of 10 sewage treatment plants, out of which 9 are currently operational, treating 107 MLD of sewage. An additional 8 MLD capacity project is under construction in Bhayandar (West), and work is ongoing on 4 more projects with a combined capacity of 48 MLD under the AMRUT 2.0 scheme. Detailed information is provided in the table below.

Additional STP under AMRUT 2.0
48 MLD

STP Water Quality
MPCB Standard

BOD < 30 mg/L, FC under Control, DO> 5 mg/L

38 : STP in Mira Bhayandar Municipal Corporation area

Sr.No.	Section No.	Location of the sewage treatment plant	Capacity (in MLD)
		Implemented	
1	Zone No. 2	Near Kasturi Garden, Smashanbhumi Road, Bhayandar (W.)	8 MLD
2	Zone No. 3	Near Sai Dwarka Housing Society, Navghar Road, Bhayandar (E.)	13 MLD
3	Zone No. 4	Near Banta's Bar, New Golden Nest Road, Goddev, Bhayandar (E.)	12 MLD
4	Zone No. 5	Near Galaxy Hospital, Kanakia Road, Mira Road (E.)	17 MLD
5	Zone No. 6A	Shantinagar, Near St. Joseph School, Mira Road (E.)	13 MLD
6	Zone No. 6B	Near Shrishti Complex, MHADA Layout, Mira Road (E.)	7 MLD
7	Zone No. 6C	Near Ayyappa Temple, Shrishti Road, Shantinagar, Mira Road (E.)	11 MLD
8	Zone No. 7	Near Payyade Hotel, Mira Road (E.)	12 MLD
9	Zone No. 8	Near Gaurav Sankalp Building, Ghodbunder, Thane	14 MLD
			107 MLD
		In Progress	
1	Zone No. 1	Near Nazareth High School, behind MBMC Office, Nehru Nagar, Bhayandar (W.)	**8**
		Ongoing works	
1	Zone No. 4	Near Banta's Bar, New Golden Nest Road, Goddev, Bhayandar (E.)	10 MLD
2	Zone No. 5	Near Galaxy Hospital, Kanakia Road, Mira Road (E.)	14 MLD
3	Zone No. 6C	Near Ayyappa Temple, Shrishti Road, Shantinagar, Mira Road (E.)	13 MLD
4	Zone No. 8	Near Gaurav Sankalp Building, Ghodbunder, Thane	11 MLD
			48 MLD

The quality of treated water from STP's operating in Mira Bhayandar Municipal Corporation is given in the table below.

39 : Quality of treated water from STP in Mira Bhayandar Municipal Corporation area

Sr. No.	STP Location	pH	O/G	BOD (3 days 27°C)	Free Ammonia (as N)	Nitrates	Dissolved Phosphate (as P)	Dissolved Oxygen	Faecal Coliform	Total Coliform
	Standard	**6.5 to 9.0**	**Not to exceed 5**	**<30**	**<1.2**	**<45**	**<5**	**<5**	**No FC/100 ml**	**200 TC/100 ml**
1	Zone No. 2	7.6	1.2	9.3	0.32	11.2	1.8	6.2	20	210
2	Zone No. 4	7.8	1.1	12.1	0.18	8.9	2.1	5.8	10	213
3	Zone No. 5	7.8	1.3	12.5	0.26	9.8	1.6	6.6	Nil	103
4	Zone No. 6A	7.7	1.8	8.6	0.36	12.2	2.2	5.5	15	116
5	Zone No. 6B	7.7	1.1	15.6	0.19	12.5	1.9	5.3	20	165
6	Zone No. 6C	7.9	1.9	22.3	0.18	11.2	3.2	5.9	18	132
7	Zone No. 7	7.9	1.8	18.2	0.20	11.6	2.6	6.2	16	156
8	Zone No. 8	7.9	1.6	10.9	0.11	12.0	1.6	5.6	12	205
9	Jesal Park	7.9	1.5	9.2	0.16	14.5	1.8	6.4	12	209

The Maharashtra Pollution Control Board (MPCB) has set the following standards for STP. It is mandatory for the Municipal Corporation to operate the STP as per those standards.

Sr. No.	Parameters	Limiting Concentration in mg/l, except for pH
1	pH	6.5 to 9.0
2	Oil & Grease	Not to exceed 5
3	BOD (3 days 27°C)	Not to exceed 30
4	Free Ammonia (as N)	Not to exceed 1.2
5	Nitrates	Not to exceed 45
6	Dissolved Phosphate (as P)	Not to exceed 5
7	Dissolved Oxygen	Not less than 5
8	Faecal Coliform	No FC/100 ml
9	Total Coliform	200 TC/100 ml
10	Floating matter	Nothing obnoxious or detrimental for use purpose
11	Bioassay test on fish	90% survival of fish after first 96 hrs in 100% effluent
12	Colour and Odour	No noticeable Colour or offensive Odour

The water quality analysis of the zone-wise sewage treatment plants (STP) given in the previous table is as follows:

The pH values at all the STPs are within the permissible range of 6.5 to 9.0, indicating that the treated water is well balanced in terms of pH. The Oil & Grease concentration is below 5 mg/L at all locations and is within the permissible limit. The BOD (3 days, 27°C) values at all locations are below the permissible limit of 30 mg/L. The maximum BOD value of 22.3 mg/L was recorded at Zone 6C, which is also within the prescribed limit and indicates that the organic pollution load is adequately controlled.

Free Ammonia (as N) is less than 1.2 mg/L at all sites and the lowest is 0.11 mg/L in Zone 8, which is an indication of good nitrification process. Nitrates is also less than 45 mg/L at all locations though slightly higher at "Jesal Park" (14.5 mg/L) compared to other sites; however, it remains within acceptable limits.

Dissolved Phosphate (as P) is less than 5 mg/L at all locations.At Zone 6C, the Dissolved Oxygen (DO) was recorded as 3.2 mg/L, which is the highest among the other zones. Overall, the DO at all locations is above 5 mg/L, with the highest value of 6.6 mg/L recorded at Zone 5.

Faecal Coliform has been recorded as "Nil" (zero) in Zone 5 which is very good. At other locations it is between 10 and 20 which is below the permissible limit. Total Coliform is within the limit of 200 TC/100 ml at all locations,with the lowest count of 103 TC/100 mL recorded at Zone 5.

Summary : Sewage treatment across all locations is functioning efficiently, with all parameters complying with MPCB standards. The performance of the treatment plants in Zone 5 and Jesal Park is particularly good. Since the water quality parameters meet prescribed standards, the treated effluent from these STPs is safe to be discharged into natural water bodies. However, treated water from sewage treatment plants should be monitored through online monitoring system before it is being discharged into creeks or other natural water resources to ensure effective control of STP operations. This requirement should be formally communicated by the Municipal Corporation to all STP contractors.

5.6 Measures to Control Water Pollution

It is essential to keep water sources clean and ensure the proper use of water.

- **Measures during Festival :** During Ganeshotsav and Navratri, use of clay (Shadu) idols, natural decorations, and immersion in artificial ponds (as mentioned above) should be strictly implemented.
- **Water Source Monitoring :** Water samples from ponds, wells, rivers, and creeks should be regularly tested in laboratories to monitor pollution levels and enable timely corrective actions.
- **Cleaning of Water Bodies :** Regular cleaning of the mentioned water bodies should be carried out.
- **Rainwater Harvesting (RWH) :** Rainwater Harvesting (RWH) systems should be implemented to enhance groundwater recharge and ensure adequate water availability in natural water sources.
- **Wastewater Treatment :** Water samples from Sewage Treatment Plants (STP) and Effluent Treatment Plants (ETP) should be tested regularly. The treated water must be suitable for reuse.
- **Mitigation measures :** Necessary measures should be identified based on the monitoring reports and implemented effectively

Chapter 6

Noise Pollution



Noise pollution is a serious environmental concern in today's era. It refers to excessive and undesirable sound generated in our surroundings. Traffic, industries, loudspeakers used during festivals and celebrations, firecrackers, and heavy musical systems are among the major sources contributing to the increasing levels of noise pollution. This pollution not only affects hearing but also impacts mental and physical health. It can cause insomnia, irritability, high blood pressure, stress, and sometimes even hearing loss. It is particularly harmful to young children, the elderly, and patients. Noise pollution is a major environmental pollutant that directly affects human productivity. Under Sections 268, 290, and 291 of the Indian Penal Code, noise pollution is considered a public nuisance.

Noise pollution is a serious environmental Problem in cities.

Major sources include vehicles, industries, Religious festivals, Djs, loudspeakers, firecrackers and speakers.

Sleep disturbances, stress, irritability, increased blood pressure, and hearing loss.

Children, elderly people, and sick individuals are more affected.

Various laws are applicable with respect to noise pollution, which primarily include the following :

- **Factories Act, 1948 :** This act mentions "hearing loss due to noise" as an occupational disease.
- **Motor Vehicles Act, 1988 :** This Act provides rules related to horns and silencers.
- **Air (Prevention and Control of Pollution) Act, 1981 :** This Act specifies noise standards.
- **Environment (Protection) Act, 1986**
- **Noise Pollution (Regulation and Control) Rules, 2000 :** These rules specify regulations and limits related to loudspeakers/public address systems.

6.1 Sources of Noise Pollution

6.1.1 Vehicular Traffic :

In Mira-Bhayandar city, heavy vehicular movement is the major cause of noise pollution on roads. Continuous honking, engine noise, and movement of heavy vehicles, especially along highways, at Kashimira junction, Mira Road, and Bhayandar station areas, contribute significantly to increased noise levels.

6.1.2 Construction and Demolition Activities :

Noise intensity increases due to large-scale ongoing construction work in the city and the heavy use of machinery such as piling equipments, concrete mixers, and cranes. Continuous noise throughout the day in residential areas near construction sites, adversely affects citizens' health and mental peace.

6.1.3 Social, Religious, and Festive Events :

During major festivals such as Ganeshotsav, Navratri, Diwali, and Holi, loudspeakers, brass bands, firecrackers, and processions are commonly organized across Mira-Bhayandar city. During these periods, noise levels increase significantly and normally exceed the permissible limits.

According to the World Health Organization (WHO), noise levels below 70 dBA are not harmful to living beings but continuous exposure to noise level above 85 dBA for more than 8 hours can be dangerous. The noise limits prescribed by CPCB are provided in Table 42.

40 : The Noise limits set by the Central Pollution Control Board

Types of Zones	Daytime limit dB (A)	Night limit dB (A)
Industrial Zone	75	70
Commercial Zone	65	55
Residential Zone	55	45
Silent Zone	50	40

The Mira-Bhayandar Municipal Corporation (MBMC) regularly monitors noise at 13 locations across various junctions. Additionally, noise monitoring is also carried out by the Municipal Corporation during festival periods.

6.2 Noise levels at different junctions in the municipal corporation area

Noise Monitoring at 13 locations in Mira Bhayandar

Major junctions, Railway stations & highways are highly sensitive area

Noise levels exceed the Prescribed standards at various locations

Increase in Noise Levels in 2024–25

Mira Bhayandar Municipal Corporation has conducted noise monitoring at 13 locations in the city during the years 2023-24 and 2024-25. The details are given in the table below.

41 : Noise monitoring at 13 locations in the city in 2023-24 and 2024-25

Sr.No.	Location	Zone	Daytime Sound Level (dB) 2023-24	Daytime Sound Level (dB) 2024-25	Standard
1	Kashimira Chowk near the statue of Chhatrapati Shivaji Maharaj	Commercial Zone	73.4	77.7	65
2	Bhayandar Police Station Chowk (W.)	Commercial Zone	59.6	65.4	65
3	Bhayandar Railway Station (W.)	Commercial Zone	61.6	63.7	65
4	Near Mira Road Railway Station	Commercial Zone	94.6	99.4	65
5	Bhayandar Cabin Road (E.)	Commercial Zone	69.8	72.9	65
6	Bhayandar B.P. Road (E.)	Commercial Zone	56.1	61.5	65
7	Bhayandar Navghar Station Road (E.)	Commercial Zone	64.2	68.5	65
8	S.K. Stone Chowk	Commercial Zone	59.4	65.8	65
9	Solid Waste Processing Plant at Uttan Dhavgi	Commercial Zone	44	48.3	65
10	Uttan Naka	Residential Zone	44	49.8	55
11	Near St. Andrew's Church, Pali	Residential Zone	47.6	49.7	55
12	Kanakia Police Station, Mira Road	Commercial Zone	59.5	64.3	65
13	Near Hotel Fountain, Ghodbunder Road	Commercial Zone	72.3	75.4	65

Noise Pollution (Control and Prevention) Rules, 2000

Conclusion :

After observing the daytime noise pollution levels at various locations in Mira-Bhayandar city during the periods 2023–24 and 2024–25, it is evident that at most locations, the noise levels exceed the prescribed standards. Major junctions, railway stations and major roads in the city are proving to be highly sensitive areas in terms of noise pollution. Therefore, there is an urgent need to implement measures such as limiting vehicle horn usage, regulating traffic effectively and conducting public awareness campaigns.

6.3 Measures to control noise pollution

Reducing the increasing noise pollution in the city is extremely important for the health and peace of citizens.

- **Vehicle Regulation :** The use of vehicles older than 15 years should be gradually phased out or banned, as such vehicles cause higher levels of pollution.
- **Regular PUC Inspection :** Regular checking of vehicles for (Pollution under Control- PUC) certificates should be carried out to help control both noise and air pollution caused by vehicles.
- **Promotion of Electric Vehicles :** The purchase and use of Electric Vehicles (EVs) should be encouraged, as they help in reducing both noise and air pollution.
- **Use of Horns :** Unnecessary honking should be strictly avoided. 'No Honking Zones' should be designated within the city, and strict compliance should be ensured.
- **Noise Limits :** During festivals, specific limits and timings for noise amplification should be fixed and strictly followed.
- **Sound Barricading :** Sound barricades should be installed near flyovers, major roads, and residential areas to reduce traffic-related noise levels.

Chapter 7

Soil Environment And Land Use



7.1 Introduction

Soil is the most important factor determining the environmental health and regional development of the Mira Bhayandar Municipal Corporation (MBMC) area. As a dynamic natural resource, it governs critical processes such as nutrient cycling, water infiltration, and the support of local biodiversity. With Mira Bhaindar rapidly transforming from a semi-urban cluster into a high-density urban center, significant stress is being placed on the soil environment. This chapter evaluates the current state of soil quality, the impact of changing land use, and the policy measures needed to reduce soil erosion

7.2 Scope and Drivers of Soil Contamination

In the context of the Mira Bhaindar Municipal Corporation, soil pollution means the presence of such substances in the soil that pose a threat to soil function and pose a risk to human health. The main causes of pollution in this area are as follows:

Anthropogenic Pressure : Construction and Demolition (C&D) waste from high-rise buildings.

Industrial Discharge : Localized impact from the 383+ industrial estates.

Coastal Dynamics : Salinity ingress affecting the "Gaothan" and salt pan areas.

7.3 Classification and Impact of Soil Pollutants

The soil environment in MBMC faces multi-dimensional threats, are classified as follows :

42 : Classification of Soil Pollution, Major Sources and Environmental Impacts

Type of Pollution	Primary Sources	Key Environmental Impacts
Chemical	Industrial effluents, household hazardous waste, legacy waste at Uttan	Reduction in soil pH balance and leaching of chemicals into groundwater
Heavy Metals	E-waste, vehicular emissions, battery disposal	Bioaccumulation of Lead (Pb) and Cadmium (Cd) in the food chain
Biological	Sewage seepage, unmanaged organic waste	Spread of pathogens and destruction of microbial ecosystems
Physical	Construction & Demolition (C&D) waste, plastic waste, soil compaction due to heavy machinery	Reduced soil porosity leading to increased urban flooding (waterlogging)
Salinity	High tide water, salt pan activities (Uttan, Rai, Murdha)	Decline in kharland productivity and destruction of vegetation

7.4 Regional Soil Classification

As per the Maharashtra State Agriculture Contingency Plan, the Mira Bhayandar Municipal Corporation (MBMC) region is divided into four distinct soil types :

43 : Classification and Characteristics of Soil Types in MBMC Area

Sr. No.	Soil Type	Location / Distribution	Key Characteristics
1	Rocky Shallow Soil	Boundary areas of Sanjay Gandhi National Park (SGNP) and internal hills.	Well-drained soils with low nutrient content; limited agricultural potential
2	Medium Deep Grayish Black Soil	Found on Hilly Slopes	This soil supports local 'Varkas' vegetation and has medium fertility.
3	Deep Black Soil	Found in low-lying plains and basaltic valleys.	High clay content with excellent moisture retention capacity.
4	Coastal Saline/ Salt-affected Land	Western coastal belt (Uttan, Pali, Chowk)	Influenced by Arabian Sea; high chloride content; saline nature affects crop suitability

7.5 Land Use Pattern and Urban Transformation

The area of Mira Bhaindar Corporation is 79.40 sq.km. According to the Development Plan (2017-2037), land use is primarily shifted towards construction:

1. **Residential & Mixed Use :** High levels of "Soil Sealing" which prevents natural groundwater recharge.
2. **Industrial :** Concentrated in clusters, requiring stringent soil monitoring for heavy metals.
3. **Eco-Sensitive Zones :** Includes Mangroves and Sanjay Gandhi National Park areas. These act as the city's "Carbon Sinks" and soil stabilizers.
4. **Salt Pans :** These serve as vital buffer zones, though they contribute to high localized soil salinity.

Key Observation : Due to the increasing use of concrete roads and 'paver blocks', the city's natural water absorption capacity (Sponge Capacity) has reduced, leading to an increase in waterlogging.

7.6 Impacts of Soil Degradation

The degradation of the soil matrix has direct socio-economic consequences:

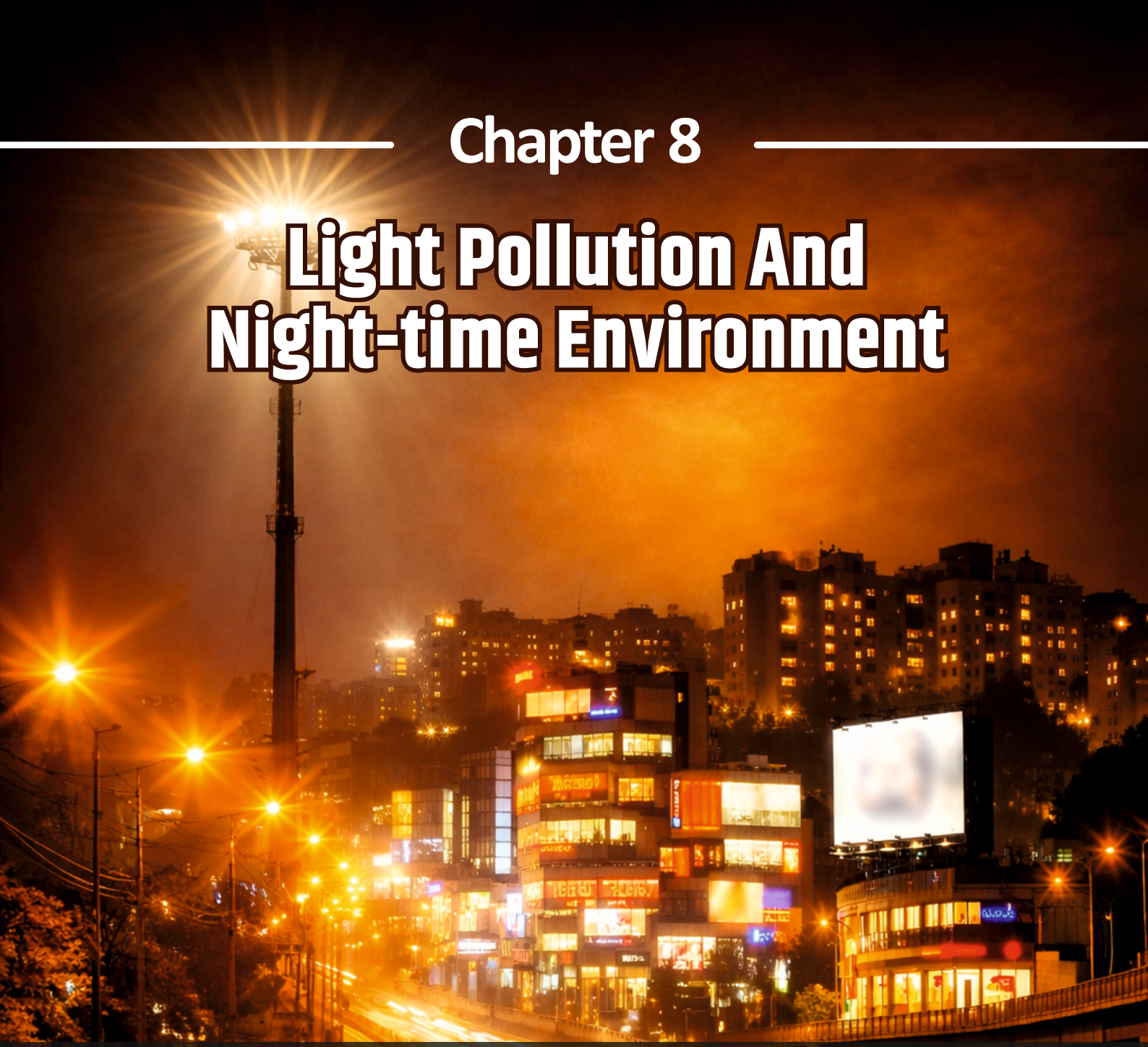
1. **Hydrological Stress :** Loss of infiltration capacity increases storm water runoff.
2. **Agricultural Decline :** Traditional farming in coastal villages is becoming unviable due to salt ingress.
3. **Urban Heat Island (UHI) :** Exposed, degraded soil and paved surfaces increase local ambient temperatures.

7.7 Recommendations for Soil Sustainability

1. **Permeable Infrastructure :** Integration of "Porous Pavements" in new public projects to allow soil-water interaction.
2. **Use of Sewage Treatment plant and Effluent treatment plant before disposal of sewage from Domestic and Effluent from industries :** This will help to reduce pollution direct effect on soil.
3. **Use of Wet waste Management :** Promote segregation of wet waste and Composting in Housing societies. This will help to increase the NPK and organic content of the soil present in the garden area in the society premises.
4. **Miyawaki Urban Forests :** Scaling up the Miyawaki project at the Uttan site to other vacant municipal plots to restore soil microbial life.
5. **Development of Garden pockets/ Traffic coridors with green Beautification :** Increasing green cover in the city will help improve soil quality.Priority should also be given to do vermicomposting in gardens..instead of using chemical fertilizers and pesticides in municipal corporation gardens, locally prepared vermicompost should be used, which will improve soil quality.
6. **C&D Waste Management :** Strict enforcement of the Construction and Demolition Management Rules, 2025 to prevent illegal dumping in mangroves and low-lying lands. Uncontrolled filling in natural soil area should be prevented to conserve the soil.
7. **Salinity Buffers :** Restoration of mangrove belts to act as natural bio-shields to prevent soil erosion and salinity along the coastline.

Chapter 8

Light Pollution And Night-time Environment



8.1 Introduction

Light Pollution refers to unnecessary, excessive, or misdirected artificial lighting that disrupts the natural night light cycle. It adversely affects human health, urban ecosystems, biodiversity, energy consumption, and overall environmental quality. Due to rapid urbanization, commercial activities, road and transport infrastructure, high-rise buildings, illuminated billboards, and the large-scale LED lighting setups, light pollution is emerging as a significant environmental concern in urban areas.

Considering the high population density, mixed land use, and proximity to the creek, mangroves, and coastal ecosystems within the Mira Bhayandar Municipal Corporation (MBMC) area, it is essential to incorporate light pollution analysis into the Environmental Status Report (ESR) for sustainable urban environmental management.

8.2 Sources of Light Pollution in Mira Bhayandar Area

The primary sources contributing to light pollution within the MBMC jurisdiction are as follows:

- **Street Lighting :** Street lights on main and internal roads.
- **High-Mast Lighting :** High-mast lights at junctions and along highways.
- **Commercial Establishments :** Shopping complexes, malls, and outlets.
- **Advertising & Facade Lighting :** Illuminated billboards and exterior building lighting.
- **Residential Lighting :** Decorative and security lighting within residential complexes.
- **Public Infrastructure :** Lighting systems in educational/institutional buildings, transport hubs, and recreational spots.

Light sources of high intensity or without proper shielding, or installed at improper angles result in Skyglow, Glare, Light Trespass, and Light Clutter. These effects are most prominent in densely populated residential and commercial areas.

8.3 Light Pollution Assessment

Due to the rapid urbanization of Mira Bhayandar, "Light Pollution" (changes in the nighttime environment caused by man-made lighting) has become a critical environmental factor. This chapter analyzes Skyglow and Radiance levels from 2012 to 2024. The assessment evaluates the impact of urbanization on the city's ecological zones and public health. The data indicates a significant shift in the city's nighttime environment, creating a need for Sustainable Lighting Policies.

8.3.1 Methodology and Data Source

This assessment utilizes satellite-based 'radiance data' to track the progression of Artificial Light at Night (ALAN).

- **Source :** VIIRS (Visible Infrared Imaging Radiometer Suite) via LightPollutionMap.info
- **Unit of Measurement :** Radiance - nW/cm2*Sr (Nanowatts per square centimeter per steradian).
- **Study Period :** 2012–2024.



Radiance measured in the year 2024 : Maximum 62.37 nW/cm²·sr



Radiance measured in the year 2020 : Maximum 44.06 nW/cm²·sr



Radiance measured in the year 2016 : Maximum 42.33 nW/cm²·sr



Radiance measured in the year 2014 : Maximum 38.76 nW/cm²·sr



Radiance measured in the year 2012 : Maximum 37.69 nW/cm²·sr

44 : 2012–2024: Annual Review of Radiance Intensity

Year	Radiance	Heat Map Signature	Remarks / Interpretation
2012	37.69	Green / Yellow	Baseline urban lighting infrastructure.
2014	38.76	Yellow / Orange	Marginal increase; initial residential expansion.
2016	42.33	Yellow / Orange	Significant increase due to infrastructure projects.
2020	44.06	Yellow / Orange	Sustained growth maintained during the pandemic period.
2024	62.37	Dark Red	Hyper-growth phase; 41.5% increase within 4 years.

8.3.2 Interpretation and Spatial Analysis

Satellite data indicates that over the past 12 years, the city's illumination pattern has transitioned from medium to high-intensity categories:

- **2012-2016 Period (Green to Yellow) :** During this phase, a major portion of the city appeared green to yellow on the map. This represents moderate light intensity, where the night sky remained partially natural, and lighting was primarily confined to arterial roads and early residential pockets.
- **2024 Peak Levels (Dark Red) :** Currently, the central part of the city has entered the 'Red Zone.' This signifies the highest level of artificial light. A radiance value of 62.37 indicates that the intense light emitted from core urban areas is now obscuring the natural night sky.

8.4 Environmental and Social Impacts

8.4.1 Impact on Human Health

Excessive light at night disrupts the human biological clock, leading to sleep issues, eye strain, increased mental stress, and adversely affecting quality of life. Light trespass in residential zones impacts the health and well-being of citizens.

8.4.2 Impact on Biodiversity and Ecosystems

Creeks, mangroves, wetlands, and coastal ecosystems exist in the Mira Bhaindar area. Artificial light at night creates obstacles in the migratory process of birds. Artificial light also disrupts the natural behavior of nocturnal animals and aquatic life. Continuous light in creek and mangrove areas acts as an additional environmental stressor.

8.4.3 Energy Consumption and Climate Change Impacts

Inefficient lighting systems increase unnecessary electricity consumption, indirectly contributing to higher Greenhouse Gas (GHG) emissions. Therefore light pollution is linked to energy conservation and climate change.

8.5 Issues Related to Coastal and CRZ-Sensitive Areas

Given the proximity of the Mira Bhayandar area to coastal and creek ecosystems, artificial light planning requires specialized care. Unregulated lighting in these zones can disrupt natural ecological processes. Therefore, mitigating light pollution in CRZ-sensitive areas is a critical component of preventive environmental management.

8.6 Existing Regulatory and Planning Framework

Currently, independent standards for light pollution are not available in India, and comprehensive studies are limited. Nevertheless, light pollution is a direct consequence of rapid urbanization impacting natural biological cycles. Strategic intervention by Urban Local Bodies (ULBs) will facilitate the development of energy-efficient cities and environment-sensitive lighting systems.

8.7 Management and Mitigation Measures

The following measures are proposed to reduce light pollution in the Mira Bhayandar Municipal Corporation (MBMC) area:

- Implementation of downward-facing and shielded fixtures for street and outdoor lighting.
- Utilization of energy-efficient LED lamps with appropriate correlated color temperatures (CCT).
- Regulation of operational hours for advertisement hoardings and architectural facade lighting.
- Avoidance of high-intensity lighting near creeks, mangroves, and CRZ zones.
- Review and retrofitting of existing lighting infrastructure.
- Incorporation of light pollution provisions within the Development Control Regulations (DCR).

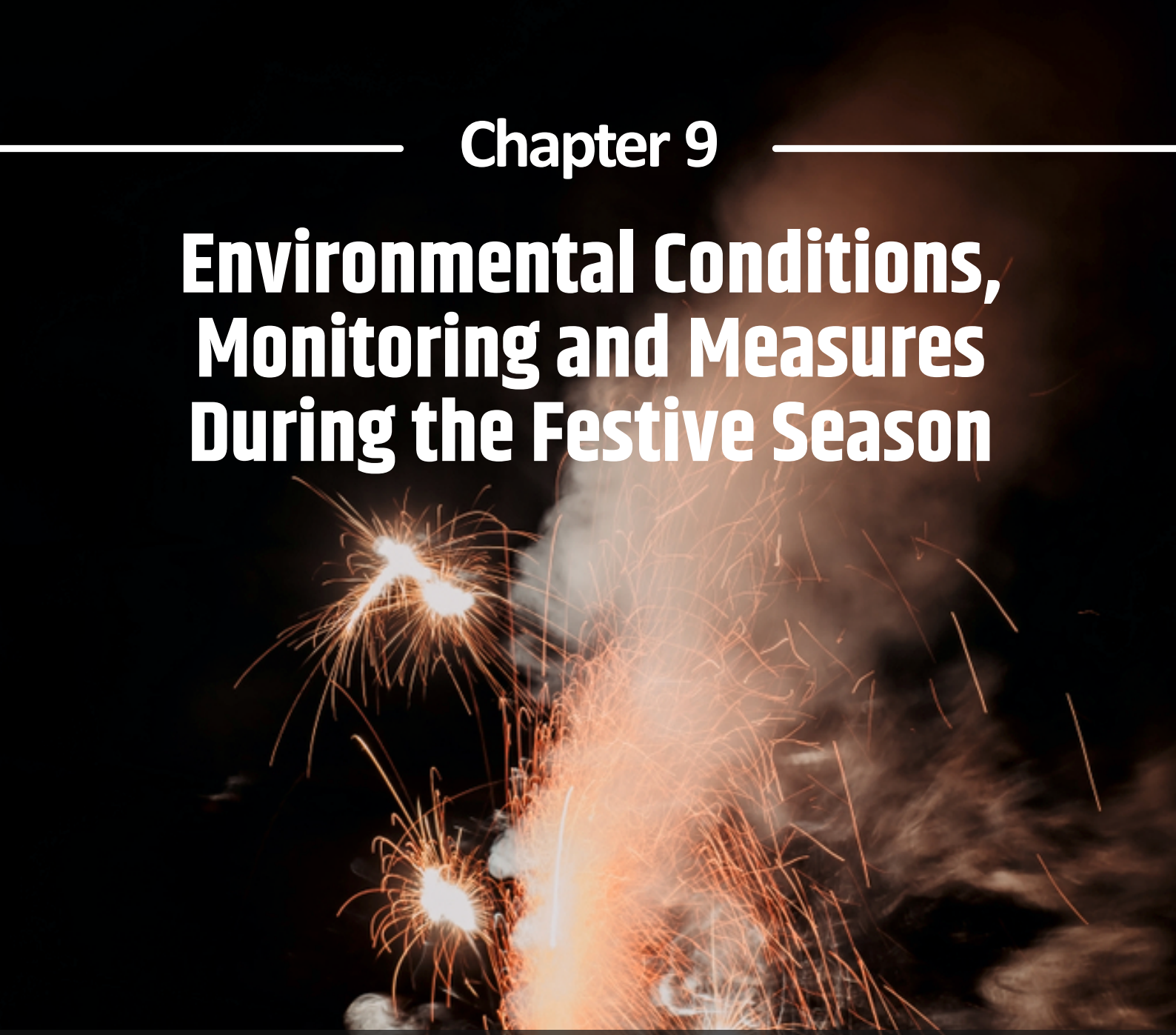
8.8 Conclusion

Including light pollution in the Mira-Bhayandar Environmental Status Report would provide a comprehensive perspective for the city's environmental planning. A detailed study of light pollution would pave the way for future initiatives focused on protecting human health, conserving biodiversity, enhancing energy efficiency, and achieving sustainable urban development. Data indicates a 65.4% increase in light pollution during the study period. While increased light intensity may signify economic progress and safety, it should not come at the cost of environmental health or the well-being of citizens. To ensure sustainable urban development, the Mira-Bhayandar Municipal Corporation needs to transition from conventional lighting to a "smart lighting" system. Smart lighting is an advanced system based on the Internet of Things (IoT) and sensors, capable of automatically switching on, off, or dimming based on external conditions and requirements. Implementing this system in cities is essential, as it leads to significant energy savings.

To ensure sustainable development, Mira Bhayandar Municipal Corporation (MBMC) must transition from traditional lighting to "Smart Lighting" systems. Adopting a formal 'Lighting Master Plan' emphasizing directional shielding, warm spectrum luminaires (below 3000K), and automated dimming schedules is now an ecological necessity rather than a mere recommendation. Integrating "Dark Sky" principles into the city's building bylaws will establish Mira Bhayandar as a modern, safe, and environmentally conscious city.

Chapter 9

Environmental Conditions, Monitoring and Measures During the Festive Season



In the Mira-Bhayandar Municipal Corporation area, various religious, cultural and social festivals are celebrated on a large scale. During these festivals, environmental pollution becomes a serious issue, mainly in the form of noise, air and water pollution.During Diwali, the bursting of large quantities of firecrackers releases toxic gases and smoke particles into the air, increasing air pollution and aggravating respiratory diseases.During Ganeshotsav and Navratri, immersion of Plaster of Paris (PoP) idols in rivers and lakes leads to chemical colors mixing with water, causing water pollution. Additionally, the large loudspeakers and DJs used in processions increase the level of noise pollution. Plastic and thermocol used for festival decorations generate large amounts of solid waste, harming the environment. To address these issues, Mira-Bhayandar Municipal Corporation conducts awareness campaigns, urging citizens to use eco-friendly idols, natural decorative materials and to observe noise limits. Necessary measures are implemented to minimize pollution during festivals.

9.1 Ganesh Chaturthi 2024-25

Ganeshotsav is celebrated with great enthusiasm in the city of Mira Bhayandar.

9.1.1 Pollution during Ganeshotsav

- **Water Pollution :** Water pollution increases due to immersion of POP idols and immersion of Nirmalya in natural reservoirs.
- **Noise Pollution :** During Ganeshotsav, increase in crowd and use of large loudspeakers during processions, causes noise pollution.

9.1.2 Guidelines issued by Mira Bhayandar Municipal Corporation for Ganeshotsav-2024

- Prohibition on the use of POP (Plaster of Paris), thermocol and polystyrene
- Use of idols made of clay and eco-friendly materials
- Ban on plastic-based decorations
- Immersion of idols only after Segregation and proper disposal of floral waste (Nirmalya) and decorative materials from idols
- Complete ban on single-use plastic
- Appeal to perform immersion in artificial ponds
- Compliance with noise pollution regulations

During Ganeshotsav, the Mira-Bhayandar Municipal Corporation emphasized public awareness to reduce pollution. Citizens were urged to follow these guidelines :

- Do not purchase idols made of Plaster of Paris (PoP), thermocol/polystyrene or harmful chemical colors. The height of idols should be less than 4 feet. Idols should be made from eco-friendly materials such as traditional clay (Shadu), paper pulp, etc.
- Public Ganesh Mandals should avoid plastic-based decorations like banners and posters. Instead, they should use cloth, recycled paper or other eco-friendly materials to decorate pandals.
- Floral waste (Nirmalya) should be segregated and disposed of properly.
- Waste Collection Bins: Separate color-coated bins should be used for Floral waste (Nirmalya) and non-biodegradable items.
- Prohibition on the use of single-use plastics such as plastic bags and bottles.
- Public (Sarvajanik) Ganesh Mandals must plan idol immersion only in temporary/artificial ponds constructed by the Municipal Corporation.
- Sound systems should be kept within prescribed limits and loudspeakers must be used only during permitted hours in compliance with noise pollution regulations.

9.1.3 Ganeshotsav- 2024 Observations

Water pollution during Ganeshotsav :

In 2024, the Mira-Bhayandar Municipal Corporation designated a total of 27 immersion sites for Ganpati idols, which included 4 artificial ponds, creeks, beaches, rivers and natural lakes.In 2023, a total of 20,310 Ganpati idols were immersed, of which 2,068 were clay (Shadu) idols and 18,242 were Plaster of Paris (POP) idols.In 2024, a total of 20,668 Ganpati idols were immersed, including 3,192 clay (Shadu) idols

and 17,476 POP idols. This data are given in the table below. This indicates a growing trend among citizens towards choosing eco-friendly clay idols.

45 : Number of idols immersed in Ganpati Visarjan

Sr. No.	Place of immersion	Number of immersed idols			
		Shadu Clay	POP	Shadu Clay	POP
		2023		2024	
1	Hindu Hridaysamrat Nagar Bhavan (Mandali Lake)	101	1026	212	786
2	Rao Lake, Opposite Hanuman Temple	29	263	25	269
3	Murdha Village (Lake)	19	170	74	100
4	Rai Village (Lake)	25	220	80	157
5	Morwa (Lake)	15	134	64	89
6	Morwa Creek (Near Bridge)	1	12	6	2
7	Uttan Ghat	11	98	52	71
8	Bhayandar West Dhakka	89	800	142	847
9	Bhayandar East Chowpatty (New)	200	1618	413	1297
10	Bhayandar East Chowpatty (Old)	91	820	164	1190
11	Navghar New (Lake) –Opposite S. N. College	67	541	304	702
12	Goddev (Lake)	88	794	176	953
13	Shiwar Garden Lake (Old)	252	2043	247	1093
14	Shiwar Garden Lake (New)	92	933	275	1335
15	Sukala Lake, Penkarpada	195	1753	184	1874
16	Miragaon Satkari Lake (M.I.D.C.)	293	2367	87	2647
17	Jarimari Lake (Kashi Janata Nagar)	155	1392	44	1452
18	Ghodbunder Creek Crematorium	1	9	16	27
19	Retibunder Creek (Ghodbunder)	110	987	188	901
20	Chenna River	14	122	15	128
21	Lakshmi Bagh	-	-	-	2
22	Mahavishnu Temple Mahajanwadi	-	-	-	10
23	Subhash Chandra Bose Maidan, Bhayandar (W.) (Artificial Lake)	-	-	10	44
24	Late Anand Dighe Maidan Bhayandar (E) (Artificial Lake)	-	-	21	12
25	Shiwar Garden Mira Road (E) (Artificial Lake)	141	1426	259	1368
26	Joggers Park Mira Road (E) (Artificial Lake)	19	166	134	120
	Total	**2068**	**18424**	**3192**	**17476**



20 : Idol immersed during Ganpati Visarjan

46 (a) : Monitoring and measuring water levels in ponds before Ganpati Visarjan, during the five-day Ganpati Visarjan and during the Anant Chaturdashi Ganpati Visarjan

Place	Stan dard	Rao Lake			Mandli Lake Nagar Bhavan			Murdha Village Gaondevi			Rai Lake			Morwa Lake		
		Before Ganpati Visar jan	Five-day Ganpati Visar jan	Anant Chatur dashi Gan pati Visar jan	Before Ganpati Visarjan	Five-day Gan pati Visar jan	Anant Chatur dashi Gan pati Visar jan	Before Ganpati Visar jan	Five-day Ganpati Visar jan	Anant Chatur dashi Gan pati Visar jan	Before Ganpati Visar jan	Five-day Ganpati Visar jan	Anant Chatur dashi Gan pati Visar jan	Before Ganpati Visar jan	Five-day Ganpati Visar jan	Anant Chatur dashi Gan pati Visar jan
pH	6.5 -8.5	8.7	8.5	8.7	8.7	8.8	8.5	8.4	8.5	8.4	8.1	8.6	8.4	8.5	8.4	8.6
Temp(°C)	-	26.8	27.4	26.7	25.6	26.8	26.4	26.6	27.3	26.5	25.4	26.5	26.3	25.8	27.1	25.9
Turbidity (NTU)	-	7	15	18	9	13	22	8	18	21	6	12	18	7	16	21
TDS (mg/L)	-	314	410	1250	298	312	1042	252	302	986	412	426	480	503	625	1403
Total Suspended Solids (TSS) (mg/L)	-	32	40.2	160	37	42.5	58.1	19	25.8	40.1	15	22.2	35.1	27	52	56.3
Electrical Conductivity (µS/cm)	-	523	631	1838	414	422	1306	371	425	1517	580	546	738	811	1020	2057
Calcium, as Ca (mg/L)	-	71.3	83.5	84.6	82.1	150	161.76	78.3	74.5	82.1	76.3	97.1	106.5	65.3	112.3	113.4
Magnesium, asMg(mg/L)	-	27.8	46.3	48.1	32.9	71.5	85.1	43.1	42.4	46.7	32.3	49.6	56.7	31.1	45.5	60.9
Hardness (total) (mg/L)	-	292.5	399.2	409.3	340.5	669.0	754.4	373.0	360.6	397.3	323.5	446.7	499.4	291.1	467.8	533.9
Total Alkalinity (mg/L)	-	92.1	92.3	94.6	90.3	96.1	106.2	72.1	78.5	88.1	90.5	94.6	103.4	86.6	87.9	94.6
Dissolved Oxygen (DO) (mg/L)	Min 4 mg /L	5.1	4.8	4.9	5.3	4.93	4.6	5.1	4.63	4.4	5.1	4.84	4.7	5.5	5.41	5.1
BOD (mg/L)	-	38.3	50.2	52.6	23.5	27.4	35.2	46.8	59.9	62.7	43.6	58.1	62.6	48.1	69.4	72.5
COD (mg/L)	-	62.1	107.6	107.6	45.7	60.6	115.8	65.2	78.9	80.6	72.6	96.7	107.2	67.2	108.6	114.4
Total Nitrogen (mg/L)	-	0.3	0.31	0.33	0.41	0.45	0.45	0.26	0.32	0.38	0.19	0.25	0.28	0.6	0.62	0.66
Total Phosphates (mg/L)	-	0.02	0.03	0.02	0.025	0.021	0.028	0.026	0.023	0.023	0.021	0.023	0.03	0.031	0.032	0.021
Salinity (ppt)	-	0.35	0.55	0.56	0.54	0.81	0.84	0.29	0.44	0.47	0.33	0.54	0.56	0.25	0.75	0.78
Potassium, as K (mg/L)	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium, as Cr (mg/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

46 (b) : Monitoring and measuring water levels in ponds before Ganpati Visarjan, during the five-day Ganpati Visarjan and during the Anant Chaturdashi Ganpati Visarjan

Place	Stan dard	Jarimari Lake			Shivar Garden Lake			Goddev Lake			Navghar New Lake			Mahavishnu Temple Mahajanwadi			Penkar Pada		
		Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan	Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan	Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan	Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan	Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan	Before Ganpati Visarjan	Five-day Ganpati Visarjan	Anant Chaturdashi Ganpati Visarjan
pH	6.5-8.5	8.3	8.3	8.5	8.1	8.3	8	8.1	8.3	9	8.2	8.4	8.7	6.9	7.7	9	8.1	8.5	8.5
Temp (°C)	-	26.3	26.6	25.9	26.5	27.1	25.8	26.5	26.7	26.4	25.9	26.3	26.7	26.3	26.5	25.8	26.1	26.2	26.6
Turbidity (NTU)	-	6	14	20	8	15	24	9	20	25	7	18	21	8	15	22	7	14	23
TDS (mg/L)	-	390	588	720	520	672	712	480	560	1010	816	1052	1512	415	502	1035	522	665	982
Total Suspended Solids (TSS) (mg/L)	-	26.3	13	15	42	56	58	25	29	38	18	35	48	22	31	43	23	31	45
Electrical Conductivity (µS/cm)	-	549	803	952	839	1018	1167	706	879	1423	1133	1525	2224	638	761	1643	816	978	1488
Calcium, as Ca (mg/L)	-	78.6	81.1	87.87	83.2	120.2	121.76	75.2	91.3	104.6	96.1	124.5	132.6	100.2	108.4	115.79	78.6	90.2	99.81
Magnesium as Mg (mg/L)	-	28.1	38.9	48.7	38.2	88.5	67.6	26.3	42.5	56.8	62.3	49.8	69.3	52.1	62.3	61.1	28.3	50.1	53.4
Hardness (total) (mg/L)	-	312.0	362.7	420.0	365.1	664.6	582.4	296.1	403.0	495.1	496.5	516.0	616.5	464.7	527.2	540.7	312.8	431.5	469.1
Total Alkalinity (mg/L)	-	44.6	54.2	62.3	41.2	51.3	58.4	52.1	94.6	102.5	56.5	87.9	97.8	56.2	95.1	101.3	28.2	54.4	67.6
Dissolved Oxygen (DO) (mg/L)	Min 4 mg/L	5.2	4.63	4.4	5.8	4.94	4.8	5.2	4.8	4.6	5.6	5.23	5.1	5.6	4.74	4.4	5	4.91	4.6
BOD (mg/L)	-	35.6	51.2	59.4	38.6	71.9	74.6	50.1	58.6	78.1	46.1	76.2	134.6	52.1	110.2	151.6	65.3	81.8	90.3
COD (mg/L)	-	68.9	123.2	124.5	59.3	105.4	158.3	78.2	105.3	136.2	82.1	352.6	290.6	62.3	263.3	327.1	75.3	160.2	194.2
Total Nitrogen (mg/L)	-	0.5	0.52	0.56	0.18	0.23	0.36	0.23	0.29	0.29	0.28	0.36	0.45	0.12	0.21	0.25	0.16	0.29	0.35
Total Phosphates (mg/L)	-	0.021	0.028	0.029	0.021	0.031	0.033	0.028	0.029	0.028	0.026	0.027	0.03	0.021	0.022	0.028	0.026	0.03	0.03
Salinity (ppt)	-		0.52	0.54		0.63	0.62		0.5	0.53		0.38	0.41		0.92	0.94		0.69	0.73
Potassium as K (mg/L)	-		<1	<1		<1	<1		<1	<1		<1	<1		<1	<1		<1	<1
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium as Cr (mg/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Conclusion:

Laboratory analysis shows significant changes in the water quality of various lakes before Ganpati immersion, on the fifth day, and on Anant Chaturdashi. The pH at all locations ranged between 8.1 and 8.7. There was not much variation in temperature, but turbidity, TDS, TSS and electrical conductivity increased considerably after immersion, indicating a rise in suspended solids and dissolved minerals in the water. Notably, Rao Lake and Morva Lake showed a sharp increase in TDS and TSS levels. The concentrations of calcium, magnesium and hardness also increased after immersion, indicating a rise in overall water hardness. The DO (Dissolved Oxygen) levels remained above 4 mg/L, which is suitable for aquatic life; however, at some locations it dropped to around 4.4 mg/L. BOD and COD levels increased in all lakes after immersion, with Morva and Mandli Lakes showing particularly significant rises, indicating an increase in biodegradable organic matter. Levels of Total Nitrogen and Total Phosphates also increased, which may pose a risk of eutrophication.Heavy metals such as Pb, Hg, and Cr were found to be below the permissible limits as per standards. Overall, immersion activities have an impact on lake water quality and proper control measures are necessary. As per the directions of the Hon'ble High Court, the use of natural water bodies for immersion has been prohibited this year, which will help improve the water quality of the lakes. Considering all these factors, the use of eco-friendly idols, adoption of temporary/artificial ponds/tanks and public awareness are extremely essential.

Arrangement of artificial lakes during Ganpati :

Artificial ponds are arranged in the municipal area to ensure that natural resources are protected and water pollution is reduced. This year too, such ponds were made available for the citizens. The water of those lakes is also tested and the report is as follows .

47 : Monitoring and measuring the water of the artificial pond before Ganapati Visarjan, during the five-day Ganapati Visarjan and during the Anant Chaturdashi Gapati Visarjan

Place	Stan dard	Joggers Park		Subhash Chandra Maidan		Navghar Artificial Lake		Shivar Artificial Lake	
Date		Five-day Ganpati immersion	Anant Chaturdashi Ganpati Visarjan	Five-day Ganpati immersion	Anant Chaturdashi Ganpati Visarjan	Five-day Ganpati immersion	Anant Chaturdashi Ganpati Visarjan	Five-day Ganpati immersion	Anant Chaturdashi Ganpati Visarjan
pH	6.5- 8.5	8.3	8.4	8	8.2	8.1	9	8.6	8.5
Temp(°C)	-	26.2	25.9	26.4	26.5	26.6	26.6	27.6	26.9
Turbidity(NTU)	-	12	18	14	19	18	21	20	21
TDS(mg/L)	-	568	625	460	495	516	1056	309	896
Total Suspended Solids(TSS)(mg/L)	-	15	16.2	22.2	28.9	29.1	38.2	25.8	44.2
Electrical Conductivity(µS/cm)	-	811	827	590	762	810	1487	435	1378
Calcium, as Ca (mg/L)	-	81.5	88.2	99.1	106.5	90.2	90.8	78.2	80.2
Magnesium, as Mg (mg/L)	-	25.9	45.1	46.2	56.7	28.2	56.8	28.2	25.1
Hardness (total) (mg/L)	-	310.2	406.0	437.7	499.4	341.4	460.6	311.4	303.6
Total Alkalinity (mg/L)	-	28.9	56.2	88.1	98.1	96.3	98.6	25.5	78.2
Dissolved Oxygen (DO) (mg/L)	Min 4 mg/L	4.91	4.78	5.12	5.08	5.08	4.98	4.91	4.78
BOD (mg/L)	-	55.83	63.8	62.94	67.3	63.4	82.7	64.53	67.1
COD (mg/L)	-	128.11	129.28	101.82	112.28	110.38	141.18	83.81	85.38
Total Nitrogen (mg/L)	-	0.56	0.58	0.52	0.58	0.29	0.28	0.3	0.35
Total Phosphates (mg/L)	-	0.03	0.028	0.025	0.032	0.03	0.025	0.026	0.026
Salinity (ppt)	-	0.52	0.51	0.52	0.56	0.51	0.53	0.49	0.56
Potassium, as K (mg/L)	-	<1	<1	<1	<1	<1	<1	<1	<1
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium, as Cr (mg/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Conclusion:

According to the above water quality observations, during the Ganpati immersion period, the pH levels of water in various artificial ponds remained within the normal range (6.5–8.5) and were slightly alkaline. The temperature ranged between 25.9°C and 27.6°C. Turbidity and total solids were found to have increased after immersion, reducing the transparency of the water. Both BOD (Biochemical Oxygen Demand) and COD (Chemical Oxygen Demand) showed an increase, indicating a rise in biological and chemical pollution in the water.Hardness, total alkalinity, and magnesium levels also increased at several locations. However, since the Dissolved Oxygen (DO) level was above 4 mg/L, it will help stabilize the BOD and COD of the water. The concentrations of metals such as lead, mercury, and chromium were found to be below permissible limits. Overall, Ganpati immersion has led to a significant increase in biological pollution in water bodies. Yet, the municipal corporation has succeeded in preventing this pollution from affecting natural water sources by using artificial ponds.



21 : Collection of water samples from artificial lakes

Quality testing of rivers in Mira Bhayandar city (During Ganpati) :

Although the municipal corporation has provided artificial lakes, citizens are still seen immersing idols in the river. Therefore, the pollution levels in the riverbed are also examined. The municipal corporation conducted water quality testing of the river before Ganpati immersion, during the five days of immersion and on Anant Chaturdashi (the final day of immersion). The analysis is as follows.

48 : Observation and measurement of river water before Ganpati immersion, during the five-day Ganpati immersion period, and during Anant Chaturdashi Ganpati immersion

Place	Standard	Chena River			Ghodbunder Crematorium River		
Date		Before Ganapati Immersion	Five-day Ganpati immersion	Anant Chaturdashi Ganpati immersion	Before Ganapati Immersion	Five-day Ganpati immersion	Anant Chaturdashi Ganpati immersion
pH	6.5-8.5	8.5	8.8	8.8	8.7	8.8	8.5
Temp (°C)	-	25.9	26.8	26.5	27.1	27.2	26.9
Turbidity (NTU)	-	2.0	2.0	2.0	2.0	2.0	3.0
TDS (mg/L)	-	98.0	125.0	105.0	97.0	166.0	176.0
Total Suspended Solids (TSS) (mg/L)	-	10.0	11.0	12.0	9.0	10.0	15.0
Electrical Conductivity (µS/cm)	-	140.0	166.7	134.6	136.6	244.1	279.4
Calcium, as Ca (mg/L)	-	49.3	51.6	54.9	52.1	72.0	73.8
Magnesium, as Mg (mg/L)	-	28.9	30.3	30.6	28.6	29.6	40.5
Hardness (total) (mg/L)	-	242.1	253.6	263.0	247.9	301.7	351.0
Total Alkalinity (mg/L)	-	28.9	30.1	32.1	56.2	62.2	68.3
Dissolved Oxygen (DO) (mg/L)	Min 4 mg/L	5.9	5.9	5.7	5.1	5.6	5.4
BOD (mg/L)	-	25.0	28.0	34.0	68.6	94.0	102.0
COD (mg/L)	-	52.0	54.0	71.0	102.6	274.0	217.0
Total Nitrogen (mg/L)	-	0.4	0.5	0.5	0.3	0.4	0.4
Total Phosphates (mg/L)	-	0.0	0.0	0.0	0.0	0.0	0.0
Salinity (ppt)	-	3.0	3.6	4.2	4.1	4.5	4.3
Potassium, as K (mg/L)	-	<1	<1	<1	<1	<1	<1
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium, as Cr (mg/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Conclusion:

Based on the above data, the chemical quality of water in the Chena River and the river near Ghodbunder crematorium has changed to some extent during the Ganpati immersion period. The pH everywhere is between 8.5 and 8.8, indicating slightly alkaline water. Turbidity (NTU) is low, meaning the water is transparent; however, TDS, electrical conductivity and hardness have significantly increased after immersion, especially in the Ghodbunder area, showing a rise in dissolved and solid waste in the water.Both BOD (Biochemical Oxygen Demand) and COD (Chemical Oxygen Demand) levels have increased sharply after immersion, with Ghodbunder showing extremely high values (BOD 102 mg/L, COD 217 mg/L). This indicates an increased demand for oxygen for biological decomposition, posing a threat to the river's biodiversity. Dissolved Oxygen (DO), however, is above 5 mg/L, which means the oxygen content in the water is satisfactory. Phosphates were not detected and the levels of metals were found to be very low. Overall, it is evident that immersion has intensified organic pollution in the water and strong measures are necessary to control river pollution at such locations.

Quality testing of creeks in Mira Bhayandar city (During Ganpati) :

During Ganesh festival, large idols from community mandals are immersed in the creek waters. Therefore, the pollution levels of these creeks are also examined. The municipal corporation conducted water quality testing at Ghodbunder Retibandar Creek, Bhayandar East Chowpatty Creek and Bhayandar Jetty before Ganpati immersion, during the five days of immersion and on Anant Chaturdashi (the final day of immersion). The analysis is as follows.



22 : Mira- Bhayandar Ganpati Visrjan

49 : Monitoring and measuring of the creek water before Ganpati Visarjan, during the five-day Ganpati Visarjan and during the Anant Chaturdashi Ganpati Visarjan

Place	Standard	Ghodbunder Retibandar Creek			Bhayandar East Chowpatty Creek			Bhayandar Jetty		
		Before Ganapati Immersion	Five-day Ganpati immersion	Anant Chaturdashi Ganpati immersion	Before Ganapati Immersion	Five-day Ganpati immersion	Anant Chaturdashi Ganpati immersion	Before Ganapati Immersion	Five-day Ganpati immersion	Anant Chaturdashi Ganpati immersion
pH	6.5-8.5	7.6	8.1	8.4	7.8	7.9	7.8	8.3	8.0	8.0
Temp (°C)	-	25.9	26.7	27.2	26.1	26.5	26.3	25.9	27.2	26.5
Dissolved Oxygen (DO) (mg/L)	Min 4 mg/L	6.5	5.2	5.1	6.8	5.0	4.7	5.6	5.4	5.1
BOD (mg/L)	-	28.6	31.0	32.5	35.6	40.2	42.1	35.3	56.2	52.1
Total Phosphates (mg/L)	-	0.3	0.2	0.3	0.3	0.3	0.3	1.0	0.3	0.3
Metal-Lead (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Mercury, as Hg (mg/L)	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Chromium, as Cr (mg/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Conclusion:

At Ghodbunder Retibandar Creek, Bhayandar East Chowpatty Creek and Bhayandar Jetty, notable changes in water quality were observed during the Ganpati immersion period. The pH at all locations ranged between 7.6 and 8.4, indicating mildly alkaline water. A slight increase in temperature was recorded, which may be due to natural variations. Dissolved Oxygen (DO) levels were above 4 mg/L at all sites, providing favourable conditions for aquatic life.However, the Biochemical Oxygen Demand (BOD) levels rose significantly after immersion, reaching 42.1 mg/L at Chowpatty Creek and 56.2 mg/L at Bhayandar Jetty. These extremely high values indicate increased biological pollution and a greater demand for oxygen for decomposition. Total phosphates remained generally stable at <1 mg/L, except at Bhayandar Jetty before immersion, where it was 1.0 mg/L. All samples for metals such as Lead, Mercury and Chromium were within safe limits (not detectable). Overall, Ganpati immersion has led to an increase in organic pollution, which poses a potential negative impact on the marine environment. Therefore, from this year onward, immersion management should completely prohibit idol immersion in natural water bodies, with greater emphasis on artificial immersion sites and at-home immersions. Additionally, the decision of the Honorable High Court should be widely publicized to inform citizens and eco-friendly Ganpati immersions must be made mandatory for all.

9.1.4 Noise Pollution During Ganeshotsav



During the Ganeshotsav period, Mira Bhayandar Municipal Corporation carried out noise monitoring before and during Ganesh immersion at various ghats and near artificial ponds. The noise monitoring recorded during the Ganeshotsav period are given below.

50 : The analysis of noise pollution at various immersion ghats before Ganpati immersion is shown in the table below.

Sr. No.	Location	River/Creek / Lake/ Artificial lake	Sound level (dB)	Sound level (dB)	CPCB Standard	
			2023-24	2024-25	Day time dB(A)	Night time dB(A)
1	Bhayandar Jetty	Creek	64	68.3	55	45
2	Rao Lake	Lake	60	65.8		
3	Mandali Lake Nagar Bhavan	Lake	70.4	72.5		
4	Murdha Village Ram Mandir	Lake	60.5	65.3		
5	Murdha Village Gaondevi	Lake	70.2	73.3		
6	Rai Lake	Lake	52	57.4		
7	Morwa Lake	Lake	60	64.3		

Conclusion:

During the Ganpati immersion period, analysis of noise pollution at various immersion sites shows that at most locations, the noise levels exceeded the limits prescribed by the Central Pollution Control Board (CPCB). Particularly, at Bhayandar Jetty, Mandli Lake Municipal Hall and Murda Village Gavdevi, noise levels were recorded above 70 dB, which can be extremely harmful to health. At all sites, noise pollution in 2024–25 was found to be higher compared to 2023–24. It is essential to effectively control noise pollution during public festivals. To reduce noise pollution, measures such as regulating the sound of drums and traditional instruments, controlling Dolby sound systems, increasing public awareness and imposing strict restrictions during nighttime are necessary to prevent adverse effects on the environment and public health.

51 : Analysis of noise pollution at various immersion ghats during the five-day Ganpati Visarjan and the Ganpati Visarjan of Anant Chaturdashi

Sr. No.	Location	River/Creek /Lake/ Artificial lake	Noise level (dB) during the five-day Ganpati Visarjan	Sound level (dB) during Ganpati Visarjan on Anant Chaturdashi	Noise level (dB) during the five-day Ganpati Visarjan	Sound level (dB) during Ganpati Visarjan on Anant Chaturdashi	CPCB Standard	
			2023-24		2024-25		Day time dB(A)	Night time dB(A)
1	Chenna River	River	72.3	63.9	76.6	68.2	55	45
2	Ghodbunder Crematorium River	River	66	57	71.8	62.8		
3	Ghodbunder Retibandar Creek	Creek	89.7	93.2	91.8	95.3		
4	Jarimari Lake	Lake	60.4	79.4	65.2	82.2		
5	Shivar Garden Lake	Lake	72.2	80.8	75.3	83.9		
6	Shivar Artificial Lake	Artificial lake	89.1	64.6	94.5	70		
7	Goddev Lake	Lake	98.8	61.5	103.1	65.8		
8	Navghar New Lake	Lake	69.9	63.3	76.3	69.7		
9	Navghar Artificial Lake	Artificial lake	57.5	72	61.8	76.3		
10	Bhayandar East Chowpatty Creek	Creek	63.9	93.2	69.7	99		
11	Bhayandar Jetty (West)	Creek	65	88.6	67.1	90.7		
12	Mahavishnu Temple Mahajanwadi	Lake	73.5	88.6	78.3	93.4		
13	Penkar Pada	Lake	79.7	57.2	82.8	60.3		
14	Joggers Park	Artificial lake	74.9	80.6	81.3	87		
15	Municipal Office (Nagar Bhavan)	Lake	68.5	61	72.8	65.3		
16	Rao Lake	Lake	78.5	85	84.3	90.8		
17	Subhashchandra Ground	Artificial lake	71.8	75	73.9	77.1		
18	Murdha Lake	Lake	81.8	54	86.6	58.8		
19	Raigaon Lake	Lake	75.6	55	78.7	58.1		
20	Morva Village Lake	Lake	78.4	64.1	83.8	69.5		

Conclusion:

During the five days of Ganpati immersion and on Anant Chaturdashi, noise pollution at various immersion sites was analyzed. This study shows that at most locations, noise levels exceeded the limits prescribed by the Central Pollution Control Board (CPCB). In particular, on Anant Chaturdashi, noise levels were higher at many sites, which is clearly due to the large processions held on that day.At Ghodbunder Retibandar Creek, Goddev Lake, Bhayandar East Chowpatty Creek, Rao Lake and the Mahavishnu Temple area, noise levels were found to be above 90 dB. These observations make it evident that noise pollution reaches severe levels during public festivals.Therefore, to control noise, strict restrictions must be imposed during nighttime and public awareness must be increased so that citizens' health and the environment can be protected.

9.1.5 Ganeshotsav- 2024: Measures taken by Mira Bhayandar Municipal Corporation



The Mira-Bhayandar Municipal Corporation (MBMC) implemented the following eco-friendly measures for Ganesh idol immersion:

- **"Bappa Majha Shaducha" Initiative :** To celebrate an environmentally friendly Ganesh festival, MBMC organized workshops and seminars under the theme "Bappa Majha Shaducha" (My Ganesh is made of clay).
- **Creation of Artificial (Temporary) Immersion Ponds :** Temporary ponds were constructed at various public places or near water sources in the city. These ponds were equipped with arrangements for waste collection and storage, thereby promoting clean and eco-friendly immersion.
- **Waste Collection and Disposal :** Waste generated at immersion sites was collected promptly and safely disposed of within 24 hours after the immersion was completed.
- **Waste Segregation :** Separate color-coded bins were provided at immersion sites to collect biodegradable and non-biodegradable waste separately.
- **Disposal of Sludge :** The sludge from immersion ponds was scientifically disposed of by the municipal corporation. Alternatively, idol-maker associations were mandated to reuse this sludge for making new idols, contributing to sustainable resource use.
- **Awareness Campaign :** The municipal corporation carried out a wide-reaching awareness campaign. Citizens were encouraged to use natural, biodegradable and eco-friendly raw materials for idol-making. A complete ban was imposed on idols made from Plaster of Paris (POP) and people were urged and motivated to perform immersions in an environmentally friendly manner.

9.2 Navratri Festival

Navratri is celebrated every year in large grounds and residential complexes in Mira-Bhayandar. It includes various programs like traditional Garba, music and dance.

9.2.1 Pollution during Navratri festival

- **Water Pollution :** Immersion of POP (Plaster of Paris) idols in natural water bodies, as well as the disposal of Floral Waste (nirmalya), leads to an increase in water pollution.
- **Noise Pollution :** During the Navratri festival, loud music played for Garba dances and the use of large loudspeakers in processions cause noise pollution.

9.2.2 Guidelines issued by Mira Bhayandar Municipal Corporation for Navratri Festival- 2024

During the Navratri festival, the Mira-Bhayandar Municipal Corporation emphasized raising public awareness to reduce pollution. Citizens were urged to follow these guidelines:

- Noise levels should be kept within limits at both public and private places.
- Any type of loudspeaker, sound system, or amplifier should be used at restricted volume.
- Strict adherence to noise regulations must be observed during festivals, celebrations or other events.
- Use of loudspeakers should be avoided after 10 p.m.

Navratri Festival- 2024 Observations

Noise monitoring and measurement were conducted at four locations during the Navratri festival by Mira Bhayandar Municipal Corporation. The noise monitoring and measurement conducted during the Navratri festival period are given below.

52 : Sound monitoring conducted during Navratri

Sr. No.	Location	Zone Type	Noise level measurement before the event Night noise level (dB)	Noise level measurement during the event Night noise level (dB)	Noise level measurement before the event Night noise level (dB)	Noise level measurement during the event Night noise level (dB)	CPCB Standard [Night time dB(A)]
			2023-24		2024-25		
1.	J. P. Road	Residential Area	61.5	86.5	64.6	90.8	**45**
2.	Maxus Mall	Commercial Area	79.3	92.4	84.1	98.2	**55**
3.	Lotus Maidan	Residential Area	81.6	94.3	85.9	96.4	**45**
4.	Late.Balasaheb Thackeray Maidan	Residential Area	76.3	87.9	82.1	92.7	**45**

Conclusion:

During Navratri, noise levels at various locations were measured at night. The observations include noise levels recorded before and during events for both 2023–24 and 2024–25. The Central Pollution Control Board (CPCB) has prescribed nighttime noise limits of 45 dB for residential areas and 55 dB for commercial areas. However, at all the given locations, the noise levels were found to be higher than these limits.

9.3 Diwali

9.3.1 Pollution during Diwali

- **Air Pollution :** Bursting firecrackers increases air pollution by mixing toxic gases and smoke particles into the air, which increases respiratory diseases.
- **Noise Pollution :** Loud noise from firecrackers causes noise pollution.

9.3.2 Guidelines issued by Mira Bhayandar Municipal Corporation for Diwali-2024

- Under Maharashtra Government's Majhi Vasundhara Abhiyan 5.0 and Swachh Survekshan 2024, citizens were urged to celebrate a cracker-free, plastic-free, waste-free, pollution-free, and eco-friendly Diwali festival.
- As part of this campaign, citizens were appealed to avoid the use of firecrackers, refrain from using plastic, adopt paper bags instead, and celebrate a pollution-free Diwali under the Majha Vasundhara Abhiyan.
- All wholesale/retail traders and firecracker vendors in the Mira-Bhayandar Municipal Corporation area were instructed to ensure compliance with Government of India Notification No. G.S.R. 682(E). D8.5.10.1999, which prohibits noise levels exceeding 125 dB(A).
- Firecrackers causing air and noise pollution, producing smoke, or containing traces of metals such as lithium, arsenic, lead, or mercury must not be sold.
- As per Maharashtra Pollution Control Board PII. No. 2/2022, firecrackers may only be burst between 8:00 p.m. and 10:00 p.m.; bursting firecrackers outside this time frame is strictly prohibited.
- Citizens were encouraged to celebrate a cracker-free Diwali within their housing societies. Citizens should pledge to celebrate a clean and green Diwali .Diwali should be celebrated keeping in mind senior citizens as well as children.

9.3.3 Air pollution monitoring before and during Diwali

In the year 2024–25, air and noise monitoring was carried out in Mira-Bhayandar city before and during Diwali. Due to firecrackers, particulate matter such as PM2.5 and PM10 increases significantly in the air. Levels of sulfur dioxide (SO_2), nitrogen oxides (NOx) and other toxic gases also rise. Since the weather during Diwali is cold, the dispersion of pollutants is reduced. As a result, pollutants remain in the air for a longer time, increasing health risks.



Considering these climatic conditions, measuring Air Quality Index (AQI) before and during Diwali helps to understand the difference in pollution levels. This enables the administration to implement appropriate and effective measures, while also protecting public health. Such initiatives make it possible to enjoy the festival while maintaining a balance between the environment and health.

53 : Monitoring and measurement of air pollutants at various locations before Diwali 2023-24 and 2024-25

No.	Place	PM10 (µg/m3)	PM 2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI	PM10 (µg/m3)	PM 2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI
	Standard	**100**	**60**	**80**	**80**		**100**	**60**	**80**	**80**	
		2023-24					**2024-25**				
1	Kashimira Chowk Near Chhatrapati Shivaji Maharaj Statue.	160.55	53.99	15	35.25	140	146	43.7	20.3	35.8	131
2	Bhayandar Police Station (W) Chowk	178.03	59.87	11	47	152	112	57.8	16.3	40.1	108
3	Bhayandar (W) Railway Station	130.38	43.84	17.63	31.08	121.1	115	47.3	22.3	31.57	110
4	Near Mira Road Railway Station	168.55	56.68	12.3	21.66	146	130	55.1	22.1	30.4	127
5	Bhayandar(E) Cabin Road	125.47	42.19	13.9	16.9	117.7	121	42.7	16.4	19	114
6	Bhayandar (E) B.P. Road	113	38	18.57	28.14	109	106	34	21.3	27.8	104
7	Golden Nest Chowk	195.51	65.75	11.8	9.3	164	132	55.7	19.4	31.1	121
8	S. K. Stone Chowk	169.77	57.09	14	25.9	147	139	59.1	15.3	25.4	126
9	At Uttan Dhaavgi Solid Waste Treatment Project Site	92.38	31.07	12.66	27.44	92	132	37.8	15.1	27.3	121
10	Uttan Naka (Bus Stop Chowk)	126.75	42.62	15.55	28.33	118.9	114	42.3	17.2	30	109
11	Near Pali St. Andrew Church	155.81	52.4	13.5	28.16	137	102	50.8	21.5	31.4	101
12	Kanakia Police Station, Mira Road	159.11	53.5	13.5	28.5	139	140	51.8	17.1	27.2	117
13	Near Hotel Fountain Chowk	140.89	47.38	11.3	25.3	127	157	52.7	15.8	24.5	138
14	Subhash Chandra Bose Maidan	85.36	28.7	11.21	24.92	85	92	38.9	24.1	28.5	92

Conclusion:

Before Diwali : Air quality monitoring in the Mira-Bhayandar area shows that at most locations, PM10 and PM2.5 levels are above the prescribed standards. At Hotel Fountain, Kashimira Junction, Mira Road Railway Station and S.K. Stone Junction, the Air Quality Index (AQI) is high, ranging from "poor" to "moderate." This increases the risk of respiratory disorders. At B.P. Road, Uttan Dumping Ground and Subhash Chandra Bose Ground, all pollutants were found to be within standard limits and the air there is comparatively cleaner. Overall, it is observed that pollution levels are higher in areas with greater traffic and industrial density.

54 : Monitoring and measurement of air pollutants at various locations during Diwali 2023-24 and 2024-25

No.	Place	PM10 (µg/m3)	PM 2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI	PM10 (µg/m3)	PM 2.5 (µg/m3)	So2 (µg/m3)	Nox (µg/m3)	AQI
	Standard	**100**	**60**	**80**	**80**		**100**	**60**	**80**	**80**	
		2023-24					**2024-25**				
1	Kashimira Chowk Near Chhatrapati Shivaji Maharaj Statue.	236	69.62	32.5	57.5	191.2	222	72.9	34.2	59.6	181
2	Bhayandar Police Station (W) Chowk	203	87.51	44.3	56.3	192	208	90.7	49.5	57.31	172
3	Bhayandar (W) Railway Station	189.4	63.13	44.2	65.3	160	185	66.04	46.7	67.5	157
4	Near Mira Road Railway Station	220	73.63	38.3	55.2	180	205	78.1	38.6	56.6	170
5	Bhayandar (E) Cabin Road	175	57.43	50	66.31	175.6	218	60.7	66.2	51.5	179
6	Bhayandar (E) B.P. Road	165	50.98	46.909	42.09	143	190	62.8	46.3	42	160
7	Golden Nest Chowk	260	90.05	46.7	64.1	210	240	92.3	46	64.9	193
8	S. K. Stone Chowk	230	75.86	44	59.556	187	215	79.7	46	59.2	177
9	At Uttan Dhaagi Solid Waste Treatment Project Site	115	39.25	54.111	51	110.5	145	44.7	56.7	52.7	130
10	Uttan Naka (Bus Stop Chowk)	178	60	46	59.75	152.6	184	67.1	49.2	61.3	156
11	Near Pali St. Andrew Church	183.4	59.22	46.5	29	156.5	198	70.2	48.1	34.2	165
12	Kanakia Police Station, Mira Road	196	65	60	58.429	164	198	70.2	59.1	61.2	165
13	Near Hotel Fountain Chowk	215	64.53	41.78	68.33	177	214	70.7	43.5	69.2	176
14	Subhash Chandra Bose Maidan	105.84	36.6	50	67	104.2	112	45.9	59.1	66.1	108

Conclusion:

During Diwali : During Diwali, air quality in Mira-Bhayandar city showed a significant decline in 2025 compared to 2024. At all locations, pollutants such as PM2.5, PM10, SO_2 and NO_2 were recorded above the standard limits. In particular, at Hotel Fountain, Kashimira Junction, Mira Road Railway Station and S.K. Stone Junction, the AQI exceeded 170, creating a severe pollution situation.The highest level of PM2.5 was recorded at 92.3 µg/m^3, while PM10 reached 240 µg/m^3. Levels of NO_2 and SO_2 also increased at several sites. This rise appears to be due to the extensive use of firecrackers during Diwali and the cold weather conditions, which cause pollutants to remain trapped in the atmosphere. As a result, effective preventive measures are necessary to control air quality during the Diwali period.

55 : Monitoring and measurement of noise pollutants at various locations before and during Diwali

No.	Location	Type	Noise (dB) Before Diwali	Noise (dB) During Diwali	Noise (dB) Before Diwali	Noise(dB) During Diwali	CPCB Standard	
							Day time dB(A)	Night time dB(A)
			2023-24		2024-25			
1	Hotel Fountain Ghodbunder Road	Business sector	50.3	56.4	54.6	60.7	65	55
2	Kashimira Chowk	Business sector	56.2	68.9	62	74.7	65	55
3	Mira Road Railway Station	Business sector	53	63.9	55.1	66	65	55
4	S.K. Stone Chowk	Business sector	49	62.5	53.8	67.3	65	55
5	Kanakia Police Chowk	Business sector	57.6	71.2	60.7	74.3	65	55
6	Golden Nest Chowk	Business sector	50	68.9	55.4	74.3	65	55
7	Cabin Road	Residential area	66.7	71.3	71	75.6	55	45
8	Bhayandar Railway Station	Business sector	70.4	76.5	76.8	82.9	65	55
9	B. P. Road	Residential area	42	66.3	46.3	70.6	55	45
10	Bhayandar Police Station	Business sector	53	65.6	58.8	71.4	65	55
11	St. Andrews Church Chowk	Residential area	58	55	60.1	57.1	55	45
12	Uttan Dhaagi Solid Waste Dumping Ground	Industrial area	49	65.4	53.8	70.2	75	70
13	Uttan Naka	Business sector	58	69.9	61.1	73	65	55
14	Subhash Chandra Bose Maidan	Business sector	47.1	68.8	53.5	75.2	65	55

Conclusion:

Noise pollution measurements were carried out at various locations before and during Diwali. The analysis clearly shows that during Diwali, noise levels increased significantly at almost all sites. Noise pollution caused by firecrackers during the festival is extremly high. This rising noise pollution can have serious effects on human health, especially on the senior citizens, children and patients with heart diseases. Therefore, it is essential for the administration to regulate firecracker based on time and location, raise public awareness and strictly enforce the rules.

9.3.4 Measures taken by Mira Bhayandar Municipal Corporation before and during Diwali

- The Mira-Bhayandar Municipal Corporation issued guidelines for celebrating an eco-friendly Diwali in 2024.
- Pre-Diwali Cleanliness Drive: The corporation conducted a cleanliness campaign to keep public places, roads and other areas clean. The aim was to reduce pollution and create a hygienic environment for citizens.
- Control on Unauthorized Firecracker Shops: Before Diwali, the corporation took action against unauthorized firecracker shops. Some shops were shut down and stocks were seized.
- For citizens' safety, the corporation selected 12 grounds for the sale of firecrackers during Diwali.



9.4 Makar Sankranti

In the jurisdiction of the Mira-Bhayandar Municipal Corporation, citizens fly kites during the Makar Sankranti festival and for this, nylon thread (plastic or synthetic string) is widely used. This nylon thread has caused human accidents and serious injuries on birds, resulting in the loss of lives of many humans, birds and animals. Therefore, the government has issued directives banning the use of nylon thread. In addition, related instructions have been issued by the Animal Welfare Board of India.

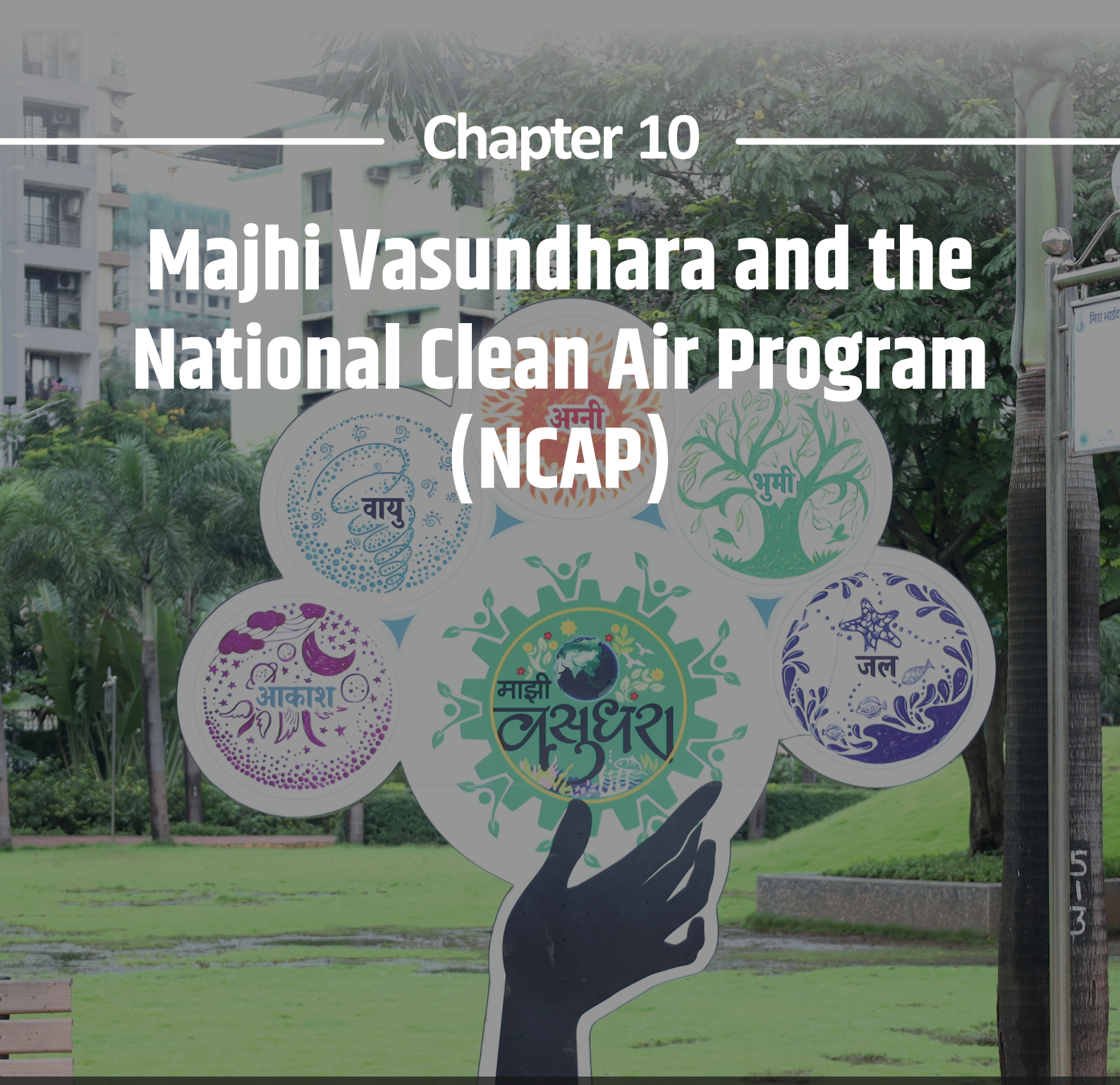
9.4.1 Guidelines issued by Mira Bhayandar Municipal Corporation for Makar Sankranti - 2024

- Eco-friendly alternatives should be adopted instead of nylon kite strings.
- The use of nylon strings made from plastic or other synthetic materials should be avoided.
- Wholesale traders, retailers and stockists must immediately stop the sale of nylon strings. Care should be taken to ensure that their storage, handling and sale do not occur throughout the year.
- Use of nylon strings while flying kites can cause friction with electric wires leading to fires, substation failures, damage to electrical equipment, accidents, injuries and loss of life, considering this factors nylon strings should not be used.
- Birds, animals and livestock injured due to nylon strings should be taken for treatment to the "Animal and Bird Care Center" located under the flyover of Bhayandar (West).



Chapter 10

Majhi Vasundhara and the National Clean Air Program (NCAP)



10.1 Majhi Vasundhara

Majhi Vasundhara is a comprehensive campaign implemented by the Department of Environment and Climate Change, Government of Maharashtra. This campaign focuses on the five elements of nature—that is, the "Panchamahabhuta": Bhoomi (Earth), Jal (Water), Vayu (Air), Agni (Energy), and Aakash (Growth/Development). The objective of this campaign is to raise awareness among citizens about climate change and environmental challenges and to encourage conscious actions for environmental improvement. Alongwith this, the campaign aims to ensure sustainable development in Maharashtra and to implement effective climate action at the state level.

Majhi Vasundhara campaign focuses on the revival of the five elements of nature. This initiative is implemented by the Department of Environment and Climate Change, Government of Maharashtra, with the aim of sensitizing stakeholders from various sectors and citizens of all age groups about sustainable development and climate change.

Under the Majhi Vasundhara campaign, emphasis is placed on identifying necessary action points for environmental conservation by local self-government bodies and implementing them accordingly. The campaign seeks to connect with government institutions (Majhi Vasundhara Summit), local and international corporate organizations (Majhi Vasundhara Corporates) and national and international non-profit organizations (Majhi Vasundhara Non-Profit).In addition, Majhi Vasundhara plans to create a special curriculum (Majhi Vasundhara Curriculum) for school students to build environmental awareness among future generations.

10.1.1 Various initiatives implemented by Mira Bhayandar Municipal Corporation under Majhi Vasundhara in 2024-25

- **Tree Plantation Drive:** More than 30,000 trees were planted across the city, leading to a significant increase in the green cover. Additionally, 7 new green zones were created, which promoted local biodiversity and provided accessible green spaces for citizens. This initiative was actively supported by local schools, NGO, and community groups, ensuring broad community participation and the long-term sustainability of these green areas.
- **Environmental Day Initiative under "Majhi Vasundhara Abhiyan 6.0":** The Mira-Bhayandar Municipal Corporation organized a tree plantation and tree procession activity. A tree procession was carried out from Late Arvind Pendse Garden, Mira Road (East) to Reservation No. 242. Following this, collective tree plantation was conducted along the route from Appasaheb Dharmadhikari Auditorium to Reservation No. 242.



23 : Tree plantation campaign

- **Vasundhara Mahotsav :** A three-day event was held to raise environmental awareness and encourage to adopt sustainable and eco-friendly practices.



24 : Vasundhara Mahotsav

- **Solar Energy :** Solar panels, solar street lights, and solar heaters have been installed at various locations. Awareness campaigns are being conducted to promote the use of solar energy in communities, offices, schools and educational institutions.

- **Advanced Waste Management System :** Concepts such as smart waste collection systems and enhanced recycling programs are being implemented.

- **Water Conservation :** Large-scale beach cleaning drives are organized every year, along with other regular cleanliness campaigns.



25 : Beach Cleaning Campaign

- **Awareness Campaigns :** Various awareness campaigns are conducted in public places, schools, colleges and gardens.
- **LED Street Lights :** All street lights in the city have been converted to energy-efficient LED lights, resulting in electricity savings and a reduction in carbon emissions.
- **Major Initiative on 'Ending Plastic Pollution Globally :** On behalf of the Mira-Bhayandar Municipal Corporation, a grand event was organized at Bharat Ratna Lata Mangeshkar Auditorium under this theme. As part of the program, a special capacity-building workshop was held for sanitation department staff. Sanitation inspectors and workers who performed excellently were honoured with certificates of appreciation by the Commissioner. The initiative promoted awareness about plastic bans and the elimination of plastic pollution. Artists presented attractive posters and cultural dances based on the concept of Global Beat Plastic Pollution. During the event, the Swachh Star Ranking competition was launched to encourage citizens to maintain cleanliness in their surroundings. In collaboration with Making the Difference (MTD) and General Insurance Corporation of India (GIC-Re), a waste segregation awareness campaign was initiated in Wards 10, 11 and 12. Under this initiative, 2,500 dual dustbins were distributed, 25 composting tumblers were installed, electric tempos were deployed and 30 steel twin bins were set up at different locations.



26 : Ending Plastic Pollution Globally

- On the occasion of World Environment Day, the Mira-Bhayandar Municipal Corporation organized a grand initiative under the theme "Ending Plastic Pollution Globally." As part of this program, two child artists, Ethan and Annie, conveyed the message of environmental conservation and a plastic-free Mira-Bhayandar using a "Rubik's Cube."



27 : Ending Plastic Pollution Globally

- On 9th May 2025, a pre-monsoon "Deep Clean Drive" was conducted in the Mira Road Railway Station area and Ward No. 05. As part of the campaign: monument cleaning, drain cleaning, statue washing, sticker removal, tree pruning and action against plastic usage were carried out. During this drive, a stretch of 5.5 km was cleaned and concrete steps were taken against unhygienic conditions.



28 : Pre-monsoon "Deep Clean Drive" cleanliness drive

- To spread the message of the Maharashtra Government's "Majhi Vasundhara" campaign across the city, the Mira-Bhayandar Municipal Corporation organized the "Killa Cyclothon 2025" competition, which received an enthusiastic response from citizens.The event, aimed at promoting environmental conservation, was inaugurated by the Hon. Commissioner and Administrator on 6th April 2025 at 7:00 a.m. at Netaji Subhash Chandra Bose Ground, Bhayandar (W).Following the competition, a tree plantation ceremony was held, where dignitaries present took a step forward towards a greener future and conveyed the message of environmental protection.On this occasion, the Additional Commissioner, Deputy Commissioner (Headquarters), City Engineer, along with municipal department heads, officers, staff and large number of environment-friendly cyclists were present.



29 : Killa Cyclothon 2025

- Awareness about cleanliness is being created among citizens through LED vans within the jurisdiction of Mira Bhayandar Municipal Corporation.

10.1.2 Activities being carried out by Mira Bhayandar Municipal Corporation under Majhi Vasundhara Abhiyan

The Mira-Bhayandar Municipal Corporation is actively conducting environmental awareness campaigns in schools, colleges, gardens and other public places. The purpose of these campaigns is to educate citizens about environmental issues, foster sensitivity towards nature and encourage the adoption of a sustainable lifestyle.

Important activities:

- Environmental Rallies and Awareness Processions
- Display of informative posters, banners and standees
- Tree plantation drives and plastic-free initiatives
- Cleanliness campaigns and e-waste collection drives
- Citizen interaction sessions and workshops on eco-friendly practices

The purpose of these initiatives is to ensure active participation of citizens, strengthen the environmental movement and bring about positive change in behavior.

10.1.3 Proposed initiatives and concepts under Majhi Vasundhara Mission

Expansion of Green initiatives :

In the coming years, the goal is to plant 50,000 trees of native species in selected parts of the city and suburbs to support local biodiversity.

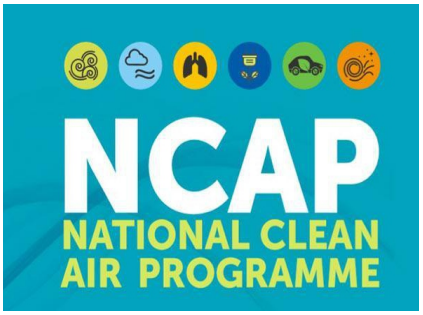
Community Participation Initiatives :

The "Eco Ambassador" program is to be implemented, encouraging local residents to take the lead in spreading environmental awareness in their neighborhoods, participate in cleanliness drives and promote sustainable lifestyles.

Organic Composting and Recycling Workshops :

Regular workshops on household composting and recycling have been organized. Residents were provided with guidance on composting practices.

10.2 National Clean Air Program: NCAP



To improve air quality at the national level, the Ministry of Environment, Forest and Climate Change, in partnership with various ministries and state governments, has launched the National Clean Air Programme (NCAP). The programme was implemented across the country in January 2019.

Goals and objectives : To meet the annual average ambient air quality standards at all locations across the country, through long-term mitigation measures. To reduce the concentration of PM10 and PM2.5 by 20% to 30% by 2024.

Tenure : NCAP is a five-year action plan that was launched in 2019. However, international and national experience has shown that significant improvements in air quality are only possible through long-term efforts. Therefore, it was considered to extend the program for another 20-25 years.

Mira Bhayandar city's performance in clean air survey:

Environment Department

- Mist Spraying Machines (Stationary, Trolley, Vehicle-mounted)
- IEC Awareness Vehicle
- Mission LiFE Initiative (Ongoing)
- Effective Measures for Dust and Air Pollution Control

Garden Department

- Horticulture Compost Machine
- Tree Pruning
- Development of Green Areas and Road Dividers
- Urban Greening and Beautification

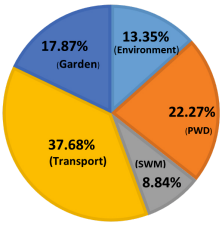
Solid Waste Management Department

- Road Sweeping Machines (3)
- Road Cleanliness and Dust Control

Transport Department

- 57 Electric Buses in Operation
- Reduction in Air Pollution

Mira Bhayandar city has received funds for various departments under NCAP. Out of the total funds, Environment Department has received 13.55%, Garden Department 17.87%, PWD Department 22.27%, Solid Waste Management Department 8.84% and Transport Department 37.68%. Works have been carried out by various departments in the city. The information about this is given in the table below.



Sr. No.	Types of work	Number	Committed amount of expenditure (crores)	Condition
Environment Department 5.67 crores				
1	Mist spray Machine (Stable)	2	0.8	Completed
2	Mist spray Machine (Trolley)	3	1.18	Completed
3	Mist spray Machine (Vehicle)	2	2.54	Completed
4	IEC Vehicle	1	0.98	Completed
5	Mission LiFE		0.15	On going
Garden Department 7.60 crores				
1	Horticulture Compost Machine	1	0.61	Completed
2	Fountain	2	1.72	Completed The works of Ghodbunder Road (34 lakhs) and Shivar Garden Fountain (44 lakhs) have been cancelled.
3	Green areas and dividers (at various places)	15	1.44	Reservation No. 314, Hatkesh and Phulpakhru Udyan Ghodbunder, Reservation 368 Mahajanwadi, Reservation 220, Tiwari College Road Divider, S.K. Stone to Mira Road Station Divider work completed. Ongoing works at the following locations: Jalkumbh area, Netaji Subhas Chandra Bose Ground, Navghar Marathi School No. 13 Ground, Murda Gavdevi Ground, and Savitribai Phule Garden.
4	Green areas and fountains (at JP Infra)	-	3.44	On going
PWD Department 9.45 crores				
1	EV Charging station	2	0.99	Completed
2	Scrubber	5	1.06	Completed
3	Solar power project	14	2.1	Complete (at the following 7 locations): Nagar Bhavan, Ghodbunder Depot, Kalpana Chawla Fire Station, Vilasrao Deshmukh Bhavan, Bhayandar Municipal Corporation School, Bhayandar (W.), Kashigaon School Mira Road (E).
4	Electric Crematorium	2	5.15	Completed – Bhayandar (W.) Crematorium On going Work proposed for Mira Road (East) Cemetery
Solid Waste Management Department 3.75 crores				
1	Road sweeping Machine	3	3.75	Completed
Transport Department 16 crores				
1	EV Buses	57	57	34 Buses have arrived

Chapter 11

Various initiatives implemented by Mira Bhayandar Municipal Corporation



The Mira-Bhayandar Municipal Corporation has been effectively implementing various initiatives with a focus on environmental protection and sustainable development. Continuous efforts are being made to improve environment quality by emphasizing air quality management, water management, solid waste management, sanitation, green belt development, and public awareness programs. This chapter presents a brief overview of the initiatives undertaken by the Municipal Corporation.

11.1 Reduce, Reuse, Recycle Initiatives

- The Mira Bhayandar Municipal Corporation (MBMC) has established a new RRR (Reduce, Reuse, Recycle) Centre with the objective of providing assistance to needy citizens in the city. The main purpose of this initiative is to give a new life to unused items and ensure that they reach people who need them. Under this programme, useful items such as clothes, utensils, school supplies, sports equipment, etc. were distributed free of cost to poor and needy citizens in the city.



30 : Aid to Needy Citizens through RRR (Reduce, Reuse, Recycle) Initiative

- Under Swachh Survekshan 2025, public awareness was conducted regarding proper waste segregation, RRR (Reduce, Reuse, Recycle), the ban on single-use plastic, and the promotion of home composting.

11.2 Works of the Animal Husbandry Department

- A Rabies Vaccination Campaign for stray dogs was successfully implemented in the Mira Bhayandar Municipal Corporation by the Animal Husbandry Department in collaboration with the WVS organisation. A total of 5 ward-wise teams were appointed for this drive, out of which 2 teams operated under the Municipal Animal Husbandry Department and 3 teams operated through the WVS organisation. Approximately 5,000 stray dogs in the Municipal area were vaccinated against rabies under this campaign.

11.3 Plastic-Free Mira Bhayandar

- The massive campaign titled "Plastic-Free Mira Bhayandar" was enthusiastically and successfully launched from Mira Road Railway Station. This initiative, based on the theme "Ending Plastic Pollution – Plastic-Free Mira Bhayandar," was executed by the MBMC. The core objective of this campaign is to reduce the usage of plastic, encourage recycling, and adopt eco-friendly alternatives to make the city cleaner and greener. Special efforts were undertaken at Kashigaon Vegetable Market, Mangalnagar

Vegetable Market, Ramdev Park Vegetable Market, and Vimal Dairy Road Vegetable Market to convey this message to the citizens. A particular emphasis was placed on using cloth bags instead of plastic, along with the proper segregation and recycling of waste.

- On the occasion of World Environment Day, a grand initiative was organised by the Mira Bhayandar Municipal Corporation based on the theme 'Ending Plastic Pollution Globally.' Under this initiative, the cleanliness champions-Sanitation Inspectors, Cleanliness Workers (Safai Karmacharis), and Coordinators-who played a vital daily role in keeping the city clean, were felicitated.

11.4 Tree Plantation Initiatives

- The Mira Bhayandar Municipal Corporation (MBMC) carried out the plantation of 11 different species of trees near the designated dumping ground site. The implementation of this initiative was undertaken in collaboration with the NGO, Making The Difference, while Traz Distribution India Pvt. Ltd. provided financial and resource support under Corporate Social Responsibility (CSR).This tree plantation initiative played a crucial role in environmental conservation under the Swachh Bharat Abhiyan and the National Clean Air Programme.



31 : Tree Plantation of Different Species Near the Dumping Site

11.5 Drainage Cleaning

- Detailed review of the drain cleaning work is regularly conducted by the Mira Bhayandar Municipal Corporation (MBMC). The Mira Bhayandar city currently has a total of 208 nallahs (unpaved and paved), and the Administration is committed to completing their cleaning on time and up to planned standards. For these works, equipment such as JCB machines, Poclain machines, Poclain with boats, Hydra cranes, dumpers, and Taurus trucks, as well as the required manpower, has been made available.

- On January 20, 2025, Mr. Radhabinod Sharma, Commissioner and Administrator of the Mira-Bhayandar Municipal Corporation, conducted an on-site inspection to review the progress of drain cleaning work across various parts of the city. During the visit, the status of cleaning work was assessed at locations including the MMRDA Road, Ghodbunder Creek, Mahajanwadi, Mira Gaothan, Penkarpada, the Srishti area, and the drain near Ayyappa Temple. He was accompanied by Additional Commissioner Dr. Sachin Bangar, Deputy Sanitation Officer Prakash Pawar, Sanitation Inspector Anil Rathod, and the concerned ward officers. Mira-Bhayandar currently has a total of 208 drains (comprising both open and concrete types), and the administration is committed to completing their cleaning in a timely and systematic manner.For this work, the necessary equipment such as JCB machines, poklain machines (including boat-mounted machines), hydra, dumpers, torus, and the required manpower has been made available.



32 : "Flash MOB" Program on the occasion of World Environment Day

On the occasion of World Environment Day, the Mira-Bhayandar Municipal Corporation organized a grand initiative centered on the theme 'Ending Plastic Pollution Globally'. As part of this initiative, a 'flash mob' was organized to raise public awareness about environmental conservation, cleanliness, and preventing the use of plastic.



33 : Disaster Management Action plan 2025

The Disaster Management Action Plan 2025 has been prepared to reduce the impact of potential natural and man-made disasters in Mira-Bhayandar city and to ensure an immediate, effective response during emergencies. Considering the risks of floods, heavy rainfall, cyclones, fires, building collapses, chemical accidents, and other disasters, this plan has been created for preventive measures, rescue operations, rehabilitation, and inter-departmental coordination. It helps minimize loss of life and property, ensures citizen safety, and enhances administrative efficiency during times of disaster.

Chapter 12

Mira Bhayandar Climate Action Plan (CAP)

12.1 Brief information about the Climate Action Plan

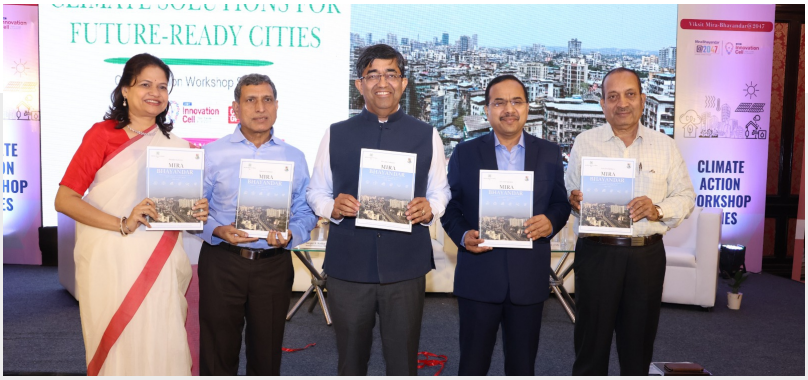
A Climate Action Plan is a comprehensive plan designed to address the impacts of climate change. It includes reducing greenhouse gas (GHG) emissions, adopting energy efficiency measures, using renewable energy (solar and wind energy), improving waste management, promoting sustainable transport and increasing green areas. The plan aims to make a city or state more environmentally friendly, climate-resilient and sustainable. A Climate Action Plan is prepared through a combination of citizen participation, administration, and scientific measures and is also reviewed periodically.

12.2 Concept of Climate Action Plan

Maharashtra has set a target of net-zero carbon emissions by 2070, Mira-Bhayandar city has set a target of achieving the same by 2047. The Climate Action Plan is a long-term plan of the city that outlines the measures required to combat climate change. The plan has been prepared to ensure environmental sustainability, citizen well-being and address climate change. The plan, prepared by Mira-Bhayandar Municipal Corporation (MBMC) in collaboration with the Aga Khan Agency for Habitat (AKAH), was submitted on 29 January 2025. It outlines clear strategies to combat climate change and achieve sustainable development.

12.3 Climate Action Plan Objectives

Mira Bhayandar Municipal Corporation (MBMC) and the Aga Khan Agency for Habitat (AKAH) have jointly developed a climate action plan to achieve net-zero carbon emissions by 2047. The plan aims to reduce emissions by 36%, including the use of renewable energy sources, measures for energy-efficient buildings, and improvements in waste management practices. This also includes 23% of the planned emission reductions of the Central Electricity Authority of India and 41% of absorption(carbon sinks) - by increasing green space. All this together points the way to a climate-resilient and sustainable future. According to the greenhouse gas (GHG) analysis, 62% of GHG emissions come from stationary energy sources, 22% from the transport sector, and 16% from the waste sector.



34 : Mira-Bhayandar Municipal Corporation has released a 'Climate Action Plan' to achieve 'net-zero emissions' by 2047.

12.4 Energy Consumption

In 2024, Mira-Bhayandar city recorded 1.34 million tonnes of CO_2e (CO_2 equivalent), which is 1.12 tonnes of CO_2e per capita. This represents a significant increase from 0.89 million tonnes of CO_2e in 2020. These GHG emissions have been recorded as per the Global Protocol for Communities (GPC) BASIC standards. The city's GHG inventory mainly includes three major gases – carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) and SF_6 (sulfur hexafluoride), NF_3 and F-Gases have also been taken into consideration. These emissions measurement were done for the entire city.

Mira–Bhayandar GHG Emissions	Per Capita Emissions	Share of Emissions from Energy
1.34 Million Tons Co_2e	**1.12 Ton Co_2e**	**Sector 62%**

The 62% of emissions from the stationary energy sector, 96% of the emissions are due to city-level electricity consumption. The remaining 4% of emissions come from other sources, such as PNG (piped natural gas), LPG (liquefied petroleum gas), coal and kerosene. The Residential Buildings sector accounts for 0.54 million tonnes of Co_2e. The Commercial and Institutional Buildings sector accounts for 0.17 million tonnes of CO_2e, which is 20%.

Stationary Energy 62%

City-level electricity consumption(96%),remaining 4% of emissions come from other energy sources.

12.5 Transportation

In Mira-Bhayandar city, the transport sector generates 0.27 million tonnes of CO_2e, which is 22% of the city's total emissions. The greenhouse gas (GHG) emission inventory includes only road transport emissions. The transport sector falls includes stationary fuel combustion and vehicular transport within the city limits. Emissions from this sector are mainly due to CNG, petrol and diesel fuels.

Road transport includes two-wheelers, rickshaws, cars/taxi, buses, trucks and other large vehicles. Of these, diesel-dependent vehicles - such as buses, trucks, etc. - contribute 46.67% of the total emissions from the transport sector. The number of electric vehicles in the city is currently very low, so there is a need to transition to eco-friendly vehicles with low carbon emissions. CNG fuel-powered vehicles, especially three-wheelers (rickshaws) and taxis, are called Intermediate Public Transport (IPT), and their contribution is 26.68% of the total emissions from the transport sector.

Transportation 22%

Contributes 22% to total emissions | Diesel vehicles: 46.67% of emissions | CNG-Taxi/Rickshaw (IPT): 26.68%
Low number of electric vehicles in the city Road transport is a major source of emissions.

12.6 Waste Management

The waste management sector in Mira-Bhayandar city emits 0.22 million tonnes of CO_2e, which is 16% of the city's total emissions. Emissions from this sector are measured from two main components.

Solid Waste Disposal : This results in 1.12 million tonnes of CO_2e emissions, which is 52% of total emissions from the waste sector.

Sewage Management (Wastewater) : This results in 1.06 million tonnes of CO_2e emissions, which is 48% of the total emissions from the waste sector. Waste Management. In Mira-Bhayandar city, the waste management sector produces 0.22 million tonnes of CO_2e emissions, which is 16% of the city's total emissions.

Waste Management 16%

Contributes 16% to total emissions | Solid waste: 52% (1.12 million tonnes of Co_2e) | Wastewater: 48% (1.06 million tonnes of Co_2e) Emissions from waste management.

12.7 Coastal Risk

The Mira-Bhayandar **coastline has lost around 0.5 km of land to the sea over the past 15 years (from 2008 to 2023)**, mainly because of soil erosion and natural activities near the mouth of the Vasai creek in the north. On the western side of the coast, some areas have seen land buildup (accretion), while others have seen land loss (decretion), due to both natural forces and human activities.

Mira-Bhayandar city is geographically situated in such a way that mangroves act as a natural protective shield in its northern and southern parts. These mangroves act as a barrier against storm surges. There has been a significant growth in mangroves on the northwestern and southwestern coasts of the city, **mangrove area of 2.82 sq. km increased in the southern part of the city between 2000 and 2022. In contrast, there has been a decrease of 1.66 sq. km in the northern part adjacent to Vasai Creek.** The density of mangroves has increased due to minimum impact of urbanisation in this area. In addition, the city administration has planted more than 15 species of trees on a large scale for the conservation of mangroves, which has led to a significant increase in the mangrove area.

12.8 Air Pollution Risk

Mira-Bhayandar city has a Clean Air Action Plan in place. Currently, there is **only one Ambient Air Quality Monitoring Station (AAM)** operating in the city under the National Air Quality Monitoring Programme (NAQMP). Air pollution data from the city has been collected by the Maharashtra Pollution Control Board (MPCB) from 2022 to 2024, covering major pollutants like PM2.5, PM10, SOx, NOx and ozone. **The data collected shows that the average PM2.5 concentration in Mira-Bhayandar is 70.12 µg/m^3 and the average PM10 concentration is 140.71 µg/m^3**, which is above the permissible limit. These figures clearly indicate the severity of air pollution in the city and need to be addressed immediately.

The major causes of air pollution in the city are dust pollution, which is mainly caused by poor road conditions, construction activities and vehicular smoke. Another key factor is National Highway No. 48 (NH-48), which passes through the central part of the city and 37% of the commuters travel on this route daily.

12.9 Electricity consumption

Approximately 1075 GWh of electricity is consumed in Mira-Bhayander city. This usage has increased significantly due to rapid urbanization, population growth, and the expansion of economic activities. The demand for electricity in the residential, commercial, industrial, and public sectors is increasing year by year. Demand for electricity is rising annually across residential, commercial, industrial, and public sectors. The city's electricity supply is mainly provided by Tata, Adani, followed by Maharashtra State Electricity Distribution Company Limited (MSEDCL). **The commercial sector consumes 20% of the city's total electricity consumption, while the residential sector consumes 62%. There are currently 0.34 million (3.4 lakh) residential metered connections** and the number of customers is increasing by 4% annually, while the per capita electricity consumption is increasing by 2% annually. **The annual electricity consumption per household is 1967 kWh**, with a monthly consumption of 164 kWh. The residential sector emits a total of 0.51 million tonnes of CO_2, which is 41% of the total emissions. The demand for electricity is expected to increase further in the future.

12.10 Clean energy, eco-friendly buildings, water and transport management improvements

Roof Top Solar (RTS) Contribution : 2%

43% of energy demand can be met from renewable energy.

Pradhan Mantri Surya Ghar Yojana : 40% subsidy

LED Streetlights : 7036 (90W), 301 (135W).

The adoption of rooftop solar (RTS) systems in Mira-Bhayandar city is very low. Only 2% of the city's total electricity consumption is being supplied by solar panels. The average monthly solar energy generation is only 76 to 168 kWh. However, given the favorable geographical and climatic conditions of the city, there is a huge opportunity for renewable energy generation. About 43% of the city's total electricity demand can be met by renewable energy sources such as solar power. These measures can help in reducing greenhouse gas (GHG) emissions and reducing the contribution of the energy sector to the city's total emissions from the current 62% to 32.86%.

Residents of Mira-Bhayandar can avail benefits under the central government's Pradhan Mantri Surya Ghar Yojana. Under this scheme, a subsidy of up to 40% of the cost of installing solar panels on the rooftop of houses is provided, which helps in getting free electricity and encourages the adoption of renewable energy in the city.Also, the Mira Bhayandar Municipal Corporation (MBMC) offers a 5% property tax rebate to housing societies that use solar panels, solar water heaters and other renewable energy solutions, which is a great incentive. The distribution of greenhouse gas (GHG) emissions from various fossil fuels in Mira Bhayandar in the year 2022-23 is as follows: Diesel, CNG and Petrol.

Diesel fuel accounts for the highest share of total GHG emissions at 41%, followed by petrol at 22%, and compressed natural gas (CNG) at 26% of CO2. Piped natural gas (PNG) also accounts for 11% of CO2. These figures indicate that the use of diesel and other fossil fuels is a significant contributor to GHG emissions in the city.

Mira Bhayandar city has taken significant steps to make its street lighting more modern and energy efficient. As of 2022-23, the city has installed 7036 LED (90 W) and 301 LED (135W) energy efficient streetlights. However, the city still uses conventional lighting systems on its streets, including High-Pressure Sodium Vapor (HPSV) lamps (4320 units), as well as older technologies like Metal Halide (MH) and High-Pressure Mercury Vapor (HPMV). Mira Bhayandar Municipal Corporation (MBMC) has taken a commendable step by installing solar streetlights in 27 residential areas. Out of the planned 630 solar streetlights, about 600 units have already been installed. The municipal corporation aims to convert 100% of the streetlights in the city to LED, and this plan will be implemented in the coming days.

Municipalities can increase their renewable energy capacity by installing solar trees in public parks, roadsides or open spaces. This is a modern and self-sufficient technology, capable of generating clean energy in a small space. It also has benefits such as reduction in greenhouse gas emissions, efficient use of space, public awareness and educational benefits, and financial savings.

12.11 Measures



Mira Bhayandar Municipal Corporation's meditation center in Ramdev Park area has been awarded the green building certificate by the Indian Green Building Council (IGBC). The building has adopted various principles of sustainability such as use of energy efficient appliances, incorporation of renewable energy sources like solar energy, rainwater harvesting, waste reduction measures and use of sustainable construction materials.



The Mira Bhayandar Municipal Corporation (MBMC) has established a small processing unit in Bhayandar to recycle leftover coconut shells. This centre follows sustainable waste management practices by converting about 40 tonnes of coconut shells into useful by-products like organic fertilizer and coir ropes. Considering the positive impact of this initiative,the Municipal Corporation has provided the necessary space and infrastructure facilities to enhance recycling efficiency. This initiative marks an important move toward environmentally friendly and sustainable growth by putting the Reduce, Reuse, Recycle (RRR) principles into action.



The Mira Bhayandar Municipal Corporation (MBMC) has introduced the Reduce, Reuse, Recycle (RRR) initiative as part of the Swachh Bharat Mission-Urban 2.0. As part of this program, 24 RRR centers have been set up throughout the city to encourage sustainable waste management. These centers collect used items such as clothes, books, toys, and electronic waste from residents. These items are repaired or recycled and then distributed to those in need.To complement this effort, a mobile van has also been launched, which visits various areas to encourage citizen participation, public awareness, and environmental conservation.This initiative plays a significant role in promoting a sustainable lifestyle and reducing waste generation.

12.12 Conclusion

The Mira-Bhayandar Climate Action Plan is an important move toward creating a stronger and more sustainable city that can cope with the various challenges of climate change. The plan outlines practical steps to reduce and manage the effects of climate change, based on a detailed study of greenhouse gas (GHG) emissions, climate-related threats, risks, vulnerabilities and the specific conditions of different sectors.

Chapter 13

Environmental Performance Index of Mira Bhayandar City

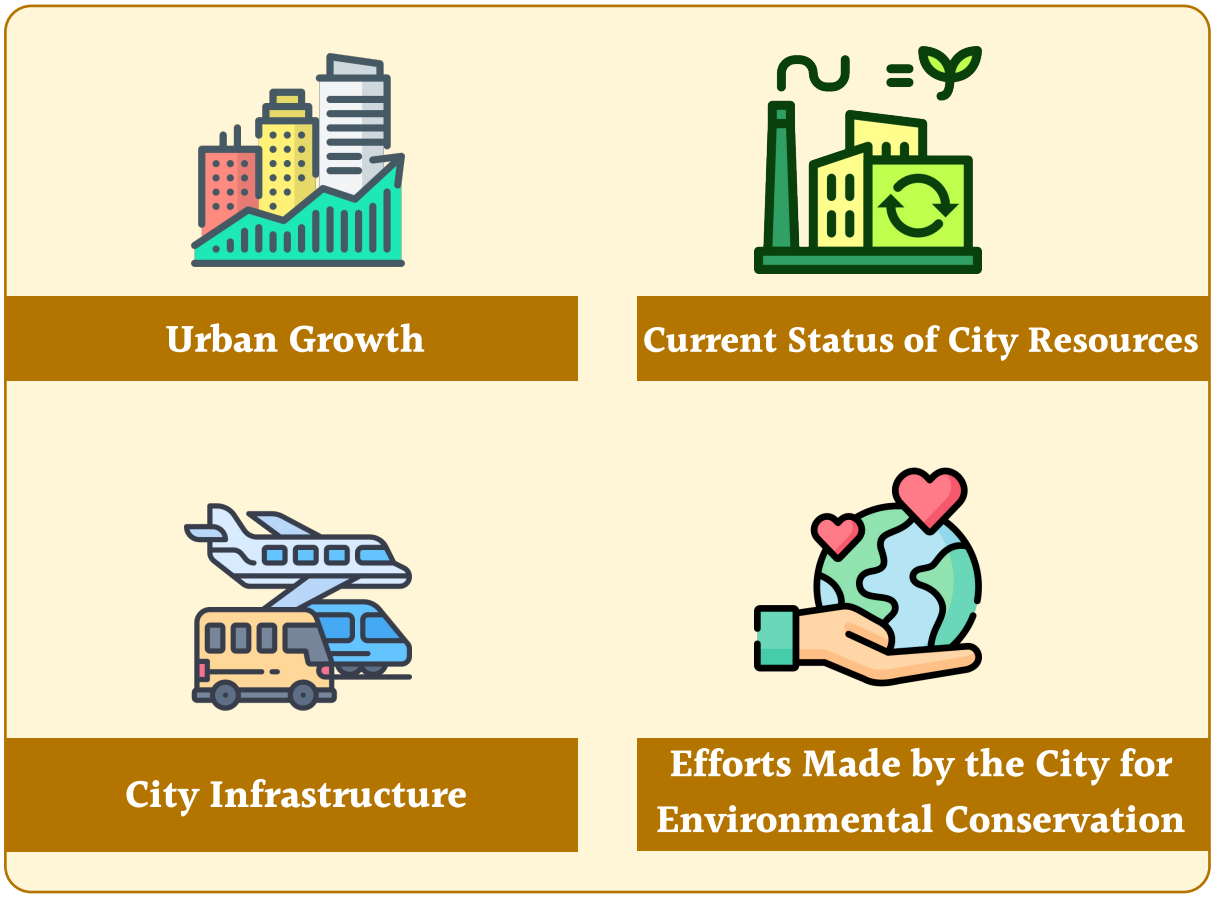


13.1 Environmental Performance Index : EPI

For many years, cities in Maharashtra have been publishing Environmental Status Reports (ESR). These reports discuss the condition of various natural resources, urban services and the environmental challenges faced by the respective cities. To make ESRs more comprehensive documents and to ensure that developmental policies are better aligned with environmental concerns, the Maharashtra Pollution Control Board (MPCB) proposed a framework in June 2009. This framework is based on international guidelines.

The Environmental Performance Index (EPI) reflects the overall environmental performance of a city.

The four fundamental components of the Environmental Performance Index are as follows :



Environmental Performance Index

All the preliminary indicators under theme add up to 100

Thematic Indicators

Growth of cities (16.92)	State of resources (21.54)	Urban services (30.77)	Initiatives for improving city environment (30.77)

(Weights of the thematic indicators is mentioned next to them.)

Primary indicators for diagnostic and action planning

Demographic growth	Land	Water supply	Environmental education
Economic growth	Air	Sewerage sanitation	Waste Management
Industrial growth	Water	Solid waste management	Slum Improvement
Spatial growth	Energy	Transport	Traffic
	Humans		

35 : Weightages of thematic indicator

A statistical review has been carried out based on various indicators related to urban development, the status of natural resources, urban services and environmental improvement initiatives. Information has been provided on population growth, economic growth, industrial development and environmental factors of the cities. Additionally, Mira-Bhayandar city has been evaluated in terms of urban services such as water supply, sewage management, waste management, and transportation. The review also takes into account initiatives undertaken by the city for environmental awareness, improvements in waste management, and slum rehabilitation.

Environmental quality assessment

Calculation of environmental points								
Concept	**Score**	**Data Variables**	**Factor**	**Factor Attributes**	**Evaluation**	**Score**	**Qualitative Value**	**Best Quality**
Growth of cities	**25**	Population Growth (% 2011)	Population growth rate	15	3.75	10.00	37.50	15
			Slum population as a percentage of total population (%)	15	3.75	10.00	37.50	15
		Economic Growth	Work participation ratio	14	3.5	6.00	21.00	14
			People below poverty line (%)	14	3.5	10.00	35.00	14
			Municipal revenue and expenditure ratio	8	2	6.00	12.00	8
		Industrial Growth	Number of polluting industries	8	2	8.00	16.00	8
		Geographic Growth	Population density	13	3.25	2.00	6.50	13
			Slum area as a percentage of city area (%)	13	3.25	6.00	19.50	13
			Total	100	25		185	
Current Status of Natural Resources	**30**	Landuse	Percentage of green area in total area of the city	12	3.6	10.00	36.00	12
			Per capita green area	5	1.5	2.00	3.00	5
		Air	Ambient air quality	13	3.9	8.00	31.20	13
		Noise	Sound quality	13	3.9	8.00	31.20	13
		Water	Water quality	13	3.9	8.00	31.20	13
		Energy	Per capita energy consumption	8	2.4	2.00	4.80	8
			Consumption of non-conventional energy	9	2.7	8.00	21.60	9
			Annual fuel consumption	7	2.1	8.00	16.80	7
		Human Resources	Mortality rate	8	2.4	8.00	19.20	8
			Infant mortality rate	12	3.6	10.00	36.00	12
			Total	**100**	**30**		**231.00**	

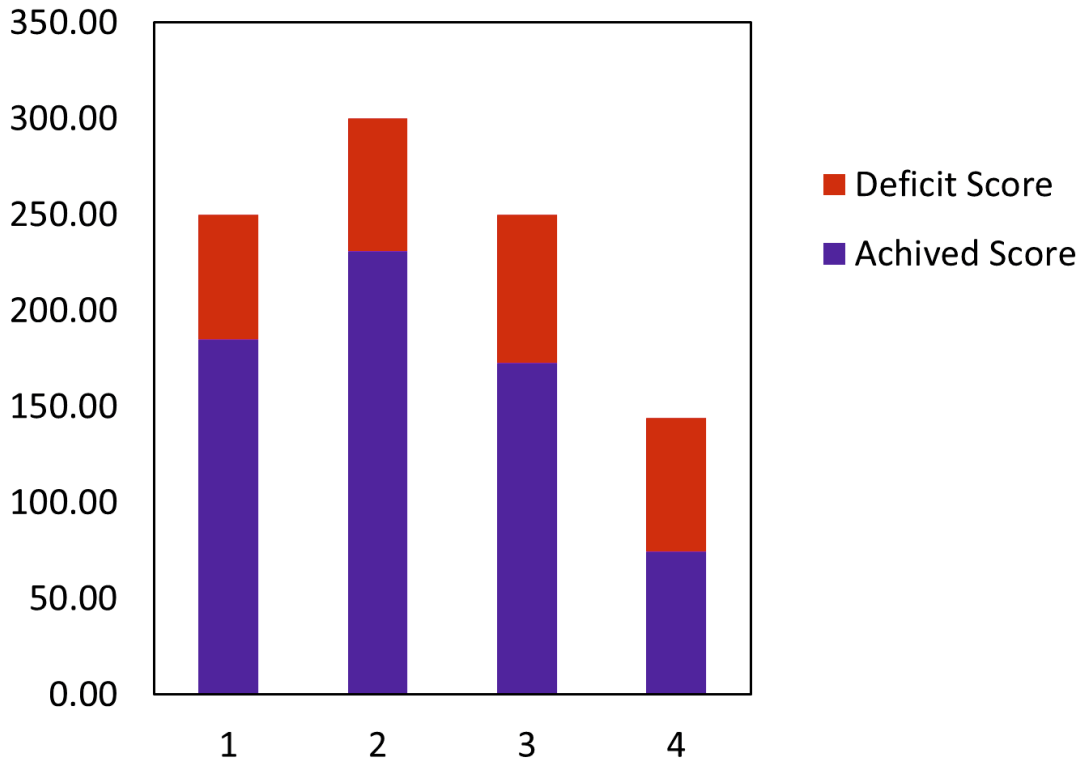
Concept	Score	Data Variables	Factor	Factor Attributes	Evaluation	Score	Qualitative Value	Best Quality
Urban Facilities	25	Water Supply	Water supply per person	9	2.25	10.00	22.50	9
			Tap connection per household (%)	9	2.25	10.00	22.50	9
			Water leakage	5	1.25	6.00	7.50	5
			Average duration of water supply	5	1.25	6.00	7.50	5
			Manpower behind per 1000 tap connections	4	1	10.00	10.00	4
		Sewage Management	Total sewage generation	8	2	10.00	20.00	8
			Landscaping network (%) Population	9	2.25	10.00	22.50	9
			Manpower behind per 1000 sewage connections	5	1.25	10.00	12.50	5
		Solid Waste Management	Total solid waste generation	5	1.25	6.00	7.50	5
			Lifespan of Landfill Site	5	1.25	0.00	0.00	5
			Total solid waste going to landfill out of total waste generation (%)	6	1.5	0.00	0.00	6
			Total waste collected out of total waste generation (%)	5	1.25	10.00	12.50	5
			Processing centers available for biomedical waste	5	1.25	10.00	12.50	5
		Transportation	Total road length out of total departmental area (%)	9	2.25	2.00	4.50	9
			Total population using public transport facilities (%)	11	2.75	4.00	11.00	11
			Total	**100**	**25**		**173**	

Concept	Score	Data Variables	Factor	Factor Attributes	Evaluation	Score	Qualitative Value	Best Quality
Urban Environment Improvement Scheme	20	Environmental awareness and education	Are there adequate training programs available for school teachers on environmental education?	4	0.8	0.00	0.00	4
			How many times are programs on environment organized other than annual festivals?	5	1	6.00	6.00	5
			How many exhibitions/ street plays etc. are organized to spread environmental awareness?	4	0.8	8.00	6.40	4
			On which local television channels are ULB-sponsored environmental advertisements aired	4	0.8	8.00	6.40	4
			To what extent do local newspapers publish information about programs sponsored by the ULB as part of environmental awareness?	4	0.8	4.00	3.20	4
		Waste Management	To what extent has the disposal of dry and wet waste reduced the amount of waste dumped on land?	5	1	6.00	6.00	5
			To what extent has NGO or decentralization been given priority in waste management?	5	1	4.00	4.00	5
			To what extent are waste recycling activities carried out by ULB-designated ragpickers operational?	4	0.8	6.00	4.80	4
			To what extent has the policy and rules of ULB given priority to the management of cnstruction and demolition waste?	4	0.8	2.00	1.60	4
			To what extent is PPP efforts being responded to in the management of hazardous waste, plastics, electronic waste and other waste?	4	0.8	4.00	3.20	4

Concept	Score	Data Variables	Factor	Factor Attributes	Evaluation	Score	Qualitative Value	Best Quality
		Slum Improvement	What is the status of public toilet and sanitation facilities in slums?	5	1	6.00	6.00	5
			To what extent are public health centers and regular health checkup facilities available for slum residents?	5	1	2.00	2.00	5
			To what extent are adult education programmes run by ULBs in the slums?	5	1	6.00	6.00	5
			What is the condition of solid waste management in slums maintained by the ULB?	5	1	2.00	2.00	5
			To what extent firewoodl use restricted in slum areas, and to what extent has the ULB set rules to provide alternative fuel supply?	5	1	4.00	4.00	5
		Transport	Availability and use of cycle or pedestrian paths	4	0.8	2.00	1.60	4
			Efforts by the ULB to prevent fuel adulteration	5	1	4.00	4.00	5
			Use of clean fuel like CNG	4	0.8			4
		Water	To what extent do the ULBs have rules/plans for rainwater harvesting schemes?	5	1	4.00	4.00	5
			Does the building code have rules for the use of water storage fittings and low pressure taps?	4	0.8	4.00	3.20	4
			Identification of water wastage/leakage and measures to reduce water consumption	5	1	6.00	6.00	5
			To what extent does the ULB check whether the quality of water supplied to the consumers is satisfactory?	5	1	0.00	0.00	5
			Total	**100**	**20**		**74.40**	
			Environmental City Index				**663.40**	

56 : Gap Analysis

Thematic Indicators	Total Marks	Obtained Marks
Growth of Cities	250	185.00
State of Natural Resources	300	231.00
Urban Services	250	173.00
Initiatives for Improving City Environment	144	74.40



Gap Analysis in Environmental Status – Mira-Bhayandar City

The total environmental score recorded for Mira-Bhayandar city is 663.40. Taking an overall assessment of the city's environmental status based on this score, good progress is seen in some areas, while some areas need improvement. The analysis based on thematic indicators is as follows:

1. Growth of Cities :

This component received 185 out of 250 points. It indicates that the city's growth is controlled and planned. However, for sustainable urban development, greater attention needs to be given to future planning, traffic management, and the conservation of green spaces.

2. State of Natural Resources :

This component received 231 out of 300 points. It shows that the city's natural resources—such as water sources, green areas and biodiversity—are relatively in good condition. Nevertheless, continuous emphasis is required on protecting water sources, managing wastewater and conserving trees.

3. Urban Services :

This component received 173 out of 250 points. It suggests that essential services for citizens, such as waste management, sanitation, water supply and transportation, require improvement. More effective measures need to be implemented to enhance the quality of these services.

4. Initiatives for Improving City Environment :

This component received 74.40 out of 144 points. It highlights that while some initiatives for environmental improvement are being implemented, their scale and effectiveness need to be increased. Efforts should be made to strengthen citizen participation in cleanliness drives, green initiatives and the use of renewable energy.

Conclusion:

Based on the overall scoring, it appears that the environmental status of Mira-Bhayandar city is moderate to satisfactory. While the city has made good progress in the conservation of natural resources and planned urban development, further attention is required in urban services and environmental improvement initiatives. In the future, by focusing on public participation, green infrastructure and the use of clean energy, the city can move towards becoming more sustainable and environmentally friendly.

Chapter 14

Mira Bhayandar Municipal Corporation - Department-wise Sustainable Environmental Action Plan



Various departments are functioning within the Mira Bhaindar Municipal Corporation, and they are committed to the overall development of the city. Maintaining an environmental balance during development is essential for a secure future. According to the climate change report,though certain measures have already been implemented in the respective areas, detailed information and analysis from various departments were conducted while preparing the environmental report. Based on this, a clear roadmap of the activities to be carried out by each department has been determined and the following measures are being proposed to ensure planned and eco-friendly city development.

14.1 Water Supply Department

- Conduct regular water leakage inspection and repair programs.
- Install IoT-based smart water meters to monitor water usage and leakage in real time.
- Make rainwater harvesting mandatory in all new buildings.
- Launch a "Save Water" awareness campaign for citizens.
- Encourage the recycling/reuse of wastewater for gardening, cleaning, and construction purposes.
- Develop a mobile app/dashboard to provide citizens with facilities for tracking water usage, bills and lodging leakage complaints.

14.2 Solid Waste Management Department

- Ensuring separate collection of wet and dry household waste.
- Smart waste collection vehicle system with GPS tracking – ensuring vehicle routes and timely collection.
- Promoting establishment of composting units at community level and in schools.
- Restriction on single-use plastics and promotion of alternatives.
- Regular collection drive of e-waste and hazardous waste.
- Increasing citizen participation by organizing Zero-Waste Society Competition.

14.2.1 Construction and Demolition Waste (C&D Waste) Management and Recycling Measures

1. Establish a C&D Waste Processing Plan : Set up a dedicated facility to collect, segregate, process and recycle construction and demolition waste generated in the city.

2. GPS-Tracked Waste Transportation System : Ensure control and transparency in transporting waste from construction sites to the plant.

3. Online Permission and Registration System : Record the quantity and disposal of C&D waste from all construction projects through an online platform.

4. Reuse of Processed Waste :

- As sub-base material for road construction
- For pathways, footpaths, and block manufacturing
- For landscaping, backfilling and site leveling.

5. Promote Use of Recycled C&D Material : Mandate 10–20% use of recycled material in all new development projects under the Town Planning Department

6. Mobile C&D Crushing Unit : Use of portable units for small-scale projects to enable immediate recycling and reuse of waste on-site.

7. Digital Data Portal : Provide real-time information on the generation, processing and utilization of C&D waste in the city.

8. Public Awareness Campaign : Educate builders, contractors and citizens about the benefits of recycling C&D waste.

9. Green Rating System : Award "Green Ratings" or incentives to projects that recycle C&D waste.

10. Alignment with State-Level Policy : Maintain waste processing and reporting systems in accordance with guidelines of the Maharashtra Pollution Control Board (MPCB) and CPHEEO.

These actions will reduce the volume of construction waste in the city, ease pressure on new natural resources, lower carbon emissions, and help build a sustainable circular economy.



14.3 Sewerage Department

- Treat all wastewater in STPs (Sewage Treatment Plants) and reuse it afterward.
- Install online wastewater quality monitoring sensors (pH, BOD, COD, DO) in STPs.
- Use a SCADA system for remote control and data recording of sewage treatment facilities.
- Inspect household sewage connections to ensure wastewater does not mix directly into drains.
- Promote biological wastewater treatment methods (DEWATS / Bio-STP) in small-scale projects.
- Conduct awareness campaigns on wastewater usage.



14.4 Town Planning / Building Department

- Implement Green Building standards in all new constructions.
- Prepare GIS-based zoning maps and identify environmentally sensitive areas.
- Develop a Green Building Score Calculator Portal for automatic verification of green building criteria during building plan approvals.
- Spread awareness for Urban Heat Island analysis and develop green concept solutions.
- Make the use of solar energy mandatory in buildings.
- Encouraging for green roofs and vertical gardens.
- Include provisions in planning to increase open spaces and green belts.
- Integrate sustainable transport options such as cycle tracks and walkways into urban planning.



14.5 Education Department

- Develop interactive modules on environmental modules on e-learning platforms.
- Emphasize experiential learning.
- Continuously organize "Green School Competitions" in schools.
- Implement a series of student-led initiatives such as tree plantation, plastic ban and water conservation.
- Develop projects near school premises such as composting, solar energy, and rainwater harvesting as demonstration models.
- Assign environmental education project work that connects with local issues.

14.6 Health Department

- Ensure proper segregation and disposal of biomedical waste in hospitals.
- Install air quality monitoring sensors around health centers and link the data to the city's public health system.
- Use natural mosquito control methods (such as guppy fish) instead of fogging.
- Install solar energy and water recycling projects at health centers.
- Conduct awareness campaigns on health impacts related to climate change.

14.7 Garden Department

- Plant and maintain native tree species.
- Install drip irrigation systems using recycled water.
- Set up wet waste composting units in every garden.
- Promote tree conservation initiatives through citizen participation.

14.8 Transport Department / Public Works Department

- Promote public transportation and expand cycle tracks and footpaths.
- AI-based traffic monitoring cameras to monitor vehicle emissions and control them.
- Provide infrastructure for electric vehicles and charging stations.
- Develop rows of trees and green belts to control traffic and reduce air pollution.
- Regularly organize vehicle inspection camps.

14.9 Environment Department

- Regularly clean drains and water bodies.
- Maintain a 10-meter environmental buffer zone around reservoirs.
- Continuously monitor pollution in nullahs and lakes using IoT-based water quality monitoring systems.
- Citizen Reporting App – provide a facility for citizens to directly report incidents of water pollution or waste dumping.
- Encourage environmentally friendly idols for Ganeshotsav and set up artificial ponds for immersion (visarjan).
- Our Lake – Our Responsibility" campaign for citizens.

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This report is a significant step towards the city's environmental improvement, conservation, and sustainable development. We are deeply grateful to all colleagues, officers, experts, and staff who participated in this initiative. It is only because of their invaluable cooperation that this report could be completed.

We are grateful for the support received in these efforts and express our sincere hope to receive the similar cooperation and guidance in the future as well.





Mangrove cover in Mira Bhayandar



Salt pans in Mira-Bhayandar

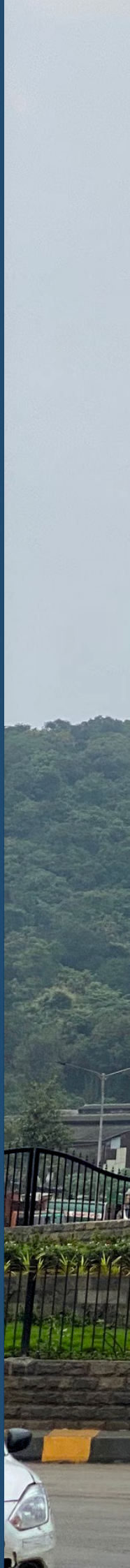
Tree Plantation and Tree Procession (Vruksha Dindi) initiative under the **'Majhi Vasundhara Abhiyan 5.0' campaign**





Vruksha Dindi on the Occasion of World Environment Day

MIRA BHAYANDAR
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