

# Impact Assessment Report of the Pratiti: Public Park Maintenance Project, Surat (Gujarat)



Submitted by NuSocia | April 2026



# Executive Summary

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The assessment evaluates the impact of the UNM Foundation's (UNM) Pratiti: Public Park Maintenance Project across the three parks in Surat. The Pratiti programme aims to address the deteriorating quality and accessibility of urban public spaces in India by developing and maintaining high-quality, inclusive, and ecologically sound parks in partnership with the Surat Municipal Corporation (SMC). The assessment, conducted by NuSocia, evaluates the programme's effectiveness from April 2022 to March 2025, utilising a qualitative research approach based on the UN-HABITAT framework for public space assessment.

**Scope and Scale of Intervention:** The assessment covers three parks in Surat, Jyotindra Dave Garden in Adajan, Lakeview Garden and Ravi Shankar Maharaj Garden in Athwa. These interventions encompass a combined area of over 63,300 square meters, representing 2.38% of Surat's total park count 3 out of 126 parks; these interventions account for approximately 6.48% of the city's total municipal park area of 977,373 square meters.

Two parks were fully developed and maintained by the UNM Foundation, while one was taken under maintenance only. Together, the three parks record a combined annual footfall exceeding 2.2 million visitors, reflecting sustained and significant community engagement.

## Key Impact Metrics

- **Area Impacted:** 64,291 sq.mt of urban park space developed and maintained across three Surat locations.
- **Green Cover Area:** A total of 84,836 plants were introduced across the three parks between 2021 and 2025, with green cover recorded at 54% at Jyotindra Dave Garden and 47% at Ravi Shankar Maharaj Garden.
- **Biodiversity:** A total of 83 trees (33 in Jyotindra Dave, 27 in Ravishankar, and 23 in Lakeview) and 176 unique plant species (62 in Jyotindra Dave, 91 in Ravishankar, and 23 in Lakeview) have been introduced across the three parks, featuring a balanced mix of native, acclimatized, and exotic species suited to Surat's coastal and semi-arid conditions.
- **Environmental Contribution:** Estimated cumulative carbon sequestration of approximately 2,524 metric tons from plants introduced between 2021 and 2025. All three parks are equipped with recharge wells and borewells supporting sustainable groundwater management. Dedicated composting for leaf litter is in place at Jyotindra Dave Garden and Lakeview Garden.

- **Employment Generation:** A total of 30 security personnel and 36 gardeners are directly employed across the three parks, providing stable local employment in security and maintenance sectors.
- **Community Usage:** High utilisation across all three parks, with respondents visiting six to seven days a week.

### Key Findings

The Pratiti programme's Surat interventions demonstrate high standards across several dimensions:

- **Accessibility and Connectivity:** All three parks are well-connected to surrounding neighbourhoods and public transport. Jyotindra Dave Garden and Ravi Shankar Maharaj Garden have entry ramps, though Lakeview Garden remains without ramps. This will be incorporated into redevelopment plan of Lakeview Garden
- **Maintenance and Management:** High standards of cleanliness, vegetation upkeep, and facility keep up are maintained through a robust multi-layered management system involving UNM Foundation, SMC and maintenance vendors. Regular and surprise inspections ensure consistent accountability across all the three parks.
- **Design and Aesthetics:** Parks feature thoughtful spatial organisation, diverse amenities catering to different age groups, and enhanced aesthetic appeal through extensive and ecologically appropriate plantation. Respondents expressed high satisfaction with the design and layout of all three parks.
- **Inclusion and Safety:** Parks cater to diverse age groups and are perceived as safe by all respondents including women, children and elderly. No criminal incidents have been reported across any of the three parks. Accessibility for users with disability will be incorporated into the redevelopment plan of Lakeview Garden.
- **Environmental Contribution:** The introduction of 83 trees and 176 plant species, sustainable water management infrastructure, and composting practices contribute positively to the urban ecosystem and reflect standards that exceed typical municipal park benchmarks.
- **Socio-Economic Value:** All activities across the three parks are free of charge. At Jyotindra Dave Garden, positive spillover effects on surrounding businesses have been noted. The parks provide valuable free recreational spaces, reducing residents' travel costs and time. Direct employment of 66 staff across the three parks represents a tangible economic contribution to the local community.

The UNM Foundation's Pratiti programme in Surat has demonstrably succeeded in transforming public green spaces into high-quality, ecologically significant, and socially valuable community

assets. The interventions have meaningfully enhanced urban green cover, biodiversity, and environmental quality across three Surat neighbourhoods. By maintaining high standards in design, maintenance, safety, and community engagement, the Pratiti parks serve as vital civic assets and replicable models for sustainable urban public space development. Key areas for future focus include ensuring universal accessibility at Lakeview Garden, providing basic amenities at Ravi Shankar Maharaj Garden, introducing a formal feedback mechanism across all three parks, and implementing systematic monitoring and evaluation for long-term adaptive management.

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## List of Acronyms

CSR	Corporate Social Responsibility
GIM	India's National Mission for Green India.
KIIs	Key Informant Interviews.
LEAF	Landscape Environment and Advancement Foundation.
SMC	Surat Municipal Corporation.
UNMF	UN Mehta Foundation
UN-HABITAT	The United Nations Human Settlements Programme.
SDGs:	Sustainable Development Goals

# 1. Introduction

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India's tier-one and tier-two cities are undergoing an unprecedented pace of urban expansion. Population growth, in-migration, and economic development have collectively transformed the spatial character of cities like Surat compressing residential densities, intensifying land use, and placing mounting pressure on civic infrastructure. Within this landscape of rapid change, urban green spaces occupy a particularly vulnerable position. Parks and public gardens, though essential to the ecological and social health of cities, have historically received insufficient investment, inadequate professional stewardship, and limited integration into urban planning frameworks. The National Mission for a Green India (GIM), launched in February 2014 as one of the eight missions under India's National Action Plan on Climate Change, explicitly recognises this gap calling for the expansion of urban and peri-urban forest and tree cover as a national priority, and acknowledging the steady deterioration of green ecosystems in rapidly urbanising areas as both a climate and public health concern.<sup>1</sup>

The consequences of this neglect are visible and measurable. India's National Clean Air Programme (NCAP), launched in 2019, designated hundreds of cities as non-attainment cities — urban areas persistently failing to meet national ambient air quality standards for particulate matter reflecting the scale of environmental degradation linked in part to the loss of vegetative cover and permeable surfaces in dense urban neighbourhoods.<sup>2</sup> The Smart Cities Mission, launched by the Government of India in June 2015, similarly identified the creation and improvement of open public spaces as a core area-based development priority, recognising that access to quality green infrastructure remains deeply unequal across city zones and income groups.<sup>3</sup> Degraded park infrastructure, poor maintenance standards, inadequate lighting, and the absence of inclusive design have collectively rendered many public green spaces inaccessible or unattractive to large segments of the urban population particularly women, elderly residents, and persons with disabilities. The social cost is significant, the erosion of shared public space diminishes community cohesion, restricts opportunities for physical activity, and deepens inequalities in access to urban amenities

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<sup>1</sup> Ministry of Environment, Forest and Climate Change, Government of India. *National Mission for a Green India: Mission Document*. New Delhi: MoEFCC, 2014. [https://moef.gov.in/uploads/2017/08/GIM\\_Mission-Document-1.pdf](https://moef.gov.in/uploads/2017/08/GIM_Mission-Document-1.pdf)

<sup>2</sup> Ministry of Environment, Forest and Climate Change, Government of India. *National Clean Air Programme*. New Delhi: MoEFCC, 2019.

<sup>3</sup> Ministry of Housing and Urban Affairs, Government of India. *Smart Cities Mission: Statement and Guidelines*. New Delhi: MoHUA, 2015.

## **The Pratiti Public Park and Lake Development Programme: Concept and Vision**

The Pratiti programme represents one of UNM Foundation's most significant ecological initiatives, conceptualized in 2016 to develop urban public spaces. Recognising the growing challenges faced by rapidly urbanizing Indian cities, Pratiti emerged as a response to the deteriorating quality and accessibility of public parks and green spaces in urban environments.

The Pratiti initiative was born from the recognition that while cities across India continue to expand to accommodate increasing populations, the quality and significance of public parks have been significantly neglected. This challenge is compounded by the fact that the effort to develop public parks and spaces has traditionally not been governed by trained professionals, with no consolidated model for such endeavors. The Pratiti programme was conceived to address this critical gap in urban planning and development. The UNM Foundation, recognizing the need for specialized expertise in this domain, formed a collaborative partnership with LEAF (Landscape Environment and Advancement Foundation), the research arm of Landscape India, to create a group called 'The Park's People.' This collective included many designers and landscape architects who shared a common vision for reimagining public spaces. Working in association with the Surat Municipal Corporation, the Pratiti initiative was launched to transform Surat's urban landscape through thoughtfully designed public parks.

The programme was initiated in Surat in April 2021, it has transformed underutilized or degraded areas in Surat into vibrant green spaces that serve as community hubs, ecological assets, and models for replicable urban development.

### **Key Objectives of the Pratiti Programme**

- Develop and maintain common public spaces that enhance the quality of life for urban residents.
- Ensure parks are clean, green, secure, and universally accessible to all social groups, including children, women, and persons with disabilities.
- Transform parks into effective green spaces that help reduce heat and improve air quality.
- Implement environmentally responsible designs and maintenance practices for long-term viability.

### **Geographical Scope and Implementation**

The Pratiti programme's interventions in Surat encompass three parks , Jyotindra Dave Garden in Adajan, and Lakeview Garden and Ravi Shankar Maharaj Garden in Athwa spanning a combined

area of over 63,300 square meters. While representing 2.38% of Surat's total park count, 3 out of 126 parks these interventions account for approximately 6.48% of the city's total municipal park area of 977,373 square meters, with a combined daily footfall exceeding 10,000 visitors. Implementation was carried out in close collaboration with the Surat Municipal Corporation, anchored in participatory planning, eco-conscious landscaping, and technology-integrated maintenance systems.

Parks covered	<ul style="list-style-type: none"> <li>• 3</li> </ul>
Developed and maintained	<ul style="list-style-type: none"> <li>• Jyotindra Dave Garden</li> <li>• Ravi Shankar Maharaj Garden</li> </ul>
Maintenance only	<ul style="list-style-type: none"> <li>• Lakeview Garden</li> </ul>
Total area	<ul style="list-style-type: none"> <li>• 63,300+ sq.m</li> </ul>
Share of Surat's park count	<ul style="list-style-type: none"> <li>• 2.38%</li> </ul>
Share of Surat's total park area	<ul style="list-style-type: none"> <li>• 6.48%</li> </ul>
Combined daily footfall	<ul style="list-style-type: none"> <li>• 10,000+ visitors</li> </ul>

*Table 1: Key Programme Statistics: Pratiti Interventions in Surat*

### **Background to the Assessment Report**

The present assessment was commissioned by the UNM Foundation to examine the outcomes of the Pratiti programme's three park interventions in Surat over the period April 2022 to March 2025. This evaluation focuses on analyzing changes over time in Surat's parks by evaluating their current condition and effectiveness for visitors.

NuSocia, an independent research and advisory organisation specialising in social impact measurement, was engaged to conduct this evaluation. Data was gathered through a combination of structured beneficiary interviews, the UNM Foundation team, and direct field observation across all three parks. Findings were assessed against the UN-HABITAT Public Space Assessment framework, providing an internationally grounded basis for evaluating park quality and community value.

The report is intended to be of practical use, documenting what has worked, where gaps remain, and what the evidence suggests for the continued development of these parks as long-term civic assets for Surat's residents.

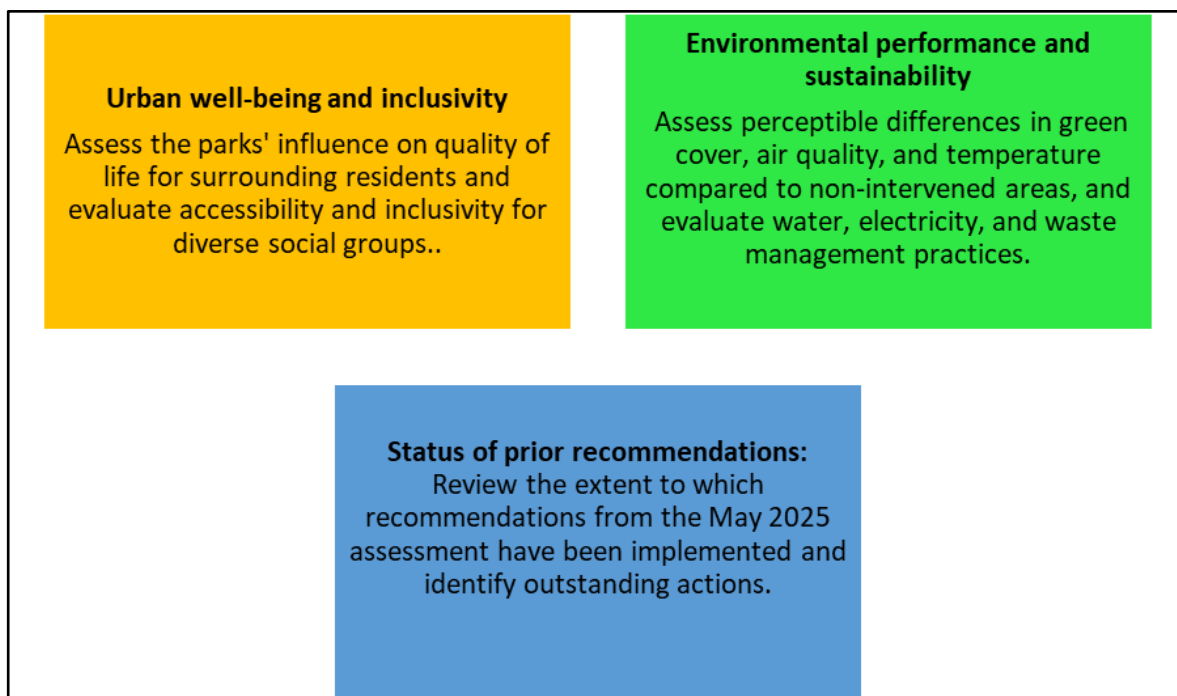
## 2. The Impact Assessment Study

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### 2.1 Assessment Objectives

The impact assessment of the Pratiti programme in Surat was designed to provide a comprehensive evaluation of the effectiveness and outcomes of the UNM Foundation's interventions in developing and maintaining three public parks in the city. As the second formal evaluation of these parks, this assessment serves as a critical tool for understanding progress achieved since the April 2025 assessment, identifying areas requiring further attention, and informing future decisions related to the continued management and development of these public spaces.

The assessment was undertaken with three primary objectives:



*Picture 1: Programme Objectives*

### 2.2 Assessment Framework and Research Design

For the impact assessment of the Pratiti program, a comprehensive evaluation framework based on UN-HABITAT's Public Space Site-specific Assessment methodology was adopted (UN-

HABITAT, 2021)<sup>4</sup>. This internationally recognised framework provides a structured approach to evaluating public spaces across multiple dimensions, ensuring the assessment captures qualitative aspects of public space performance.<sup>5</sup> It enabled the evaluation of the Pratiti programme's interventions against global standards of public space quality while remaining sensitive to local context and user needs.

### Key Assessment Criteria

The framework employed eight criteria to evaluate the quality and performance of the three Surat parks. Each criterion was assessed through a combination of field observations, beneficiary interviews, key informant discussions, and design document reviews, ensuring findings were grounded in both technical evidence and lived user experience.

Criterion	Description
<b>Accessibility and connectivity</b>	Examines how easily users can physically access and use the parks, considering ramps, pathways, proximity (public transport), and integration with surrounding urban fabric including pedestrian routes and transit connections.
<b>Maintenance &amp; Management</b>	Assesses ongoing care and upkeep including cleanliness, waste management, vegetation maintenance, repair of facilities, and the effectiveness of the public-private partnership model in ensuring long-term sustainability.
<b>Design &amp; Layout</b>	Assesses spatial organisation, aesthetic quality, and functionality, including whether design accommodates diverse activities, provides appropriate amenities, and whether the proportion of hardscape relative to soft landscape is appropriate given usage patterns.
<b>Inclusion</b>	Evaluates how well parks accommodate diverse user groups including persons with disabilities, women and girls, children, the elderly, and residents across socioeconomic groups, as well as cultural inclusivity reflecting the diversity of local communities.

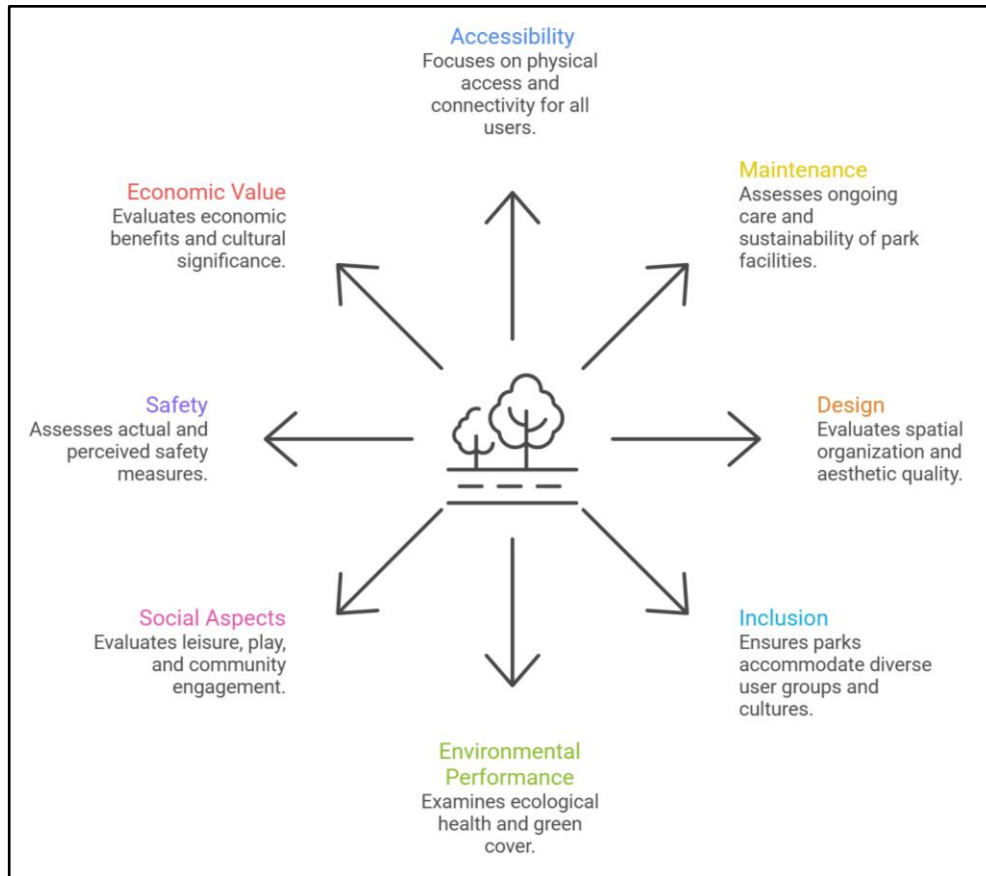
<sup>4</sup> UN-Habitat, Public Space Site-Specific Assessment Guidelines (Nairobi: UN-Habitat, 2021), <https://unhabitat.org/public-space-site-specific-assessment-guidelines-to-achieve-quality-public-spaces-at-neighbourhood>

<sup>5</sup> This methodology defines public spaces as "places that are publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive," aligning perfectly with the Pratiti program's vision for inclusive urban green spaces.

<b>Environmental &amp; Ecological Performance</b>	Examines vegetation diversity and health, permeable surfaces, water management, and each park's role as a carbon sink. Also considers perceptible differences in green cover, air quality, and temperature compared to non-intervened areas in comparable proximity.
<b>Social &amp; Recreational Aspects</b>	Evaluates opportunities for leisure, play, and physical activity; the diversity and condition of recreational facilities; suitability for different age groups; and the extent to which parks foster a sense of community ownership among users.
<b>Safety and security</b>	Examines actual and perceived safety including lighting, visibility, presence of security personnel and surveillance systems, and design elements contributing to a sense of safety across different times of day.
<b>Economic &amp; Cultural Value</b>	Evaluates economic benefits including property value impacts, local business activity, and cost-effectiveness of maintenance, alongside cultural aspects such as opportunities for cultural expression, heritage preservation, and contribution to local identity.

*Table 2: Key Assessment Criteria*

A comparative framework was additionally developed to systematically evaluate the three Surat parks against each other across the eight criteria, facilitating the identification of best practices, site-specific challenges, and variations in performance across the programme's Surat interventions.



Picture 2: Assessment framework adopted for Pratiti Program Assessment

## 2.3 Data collection methods

The assessment employed a qualitative research approach, incorporating multiple data collection techniques to ensure a comprehensive evaluation of the Pratiti programme's impact across the three Surat parks. This approach allowed for triangulation of findings and a nuanced understanding of outcomes across different dimensions. The data collection process included project document reviews, a site visit across all three parks, and structured beneficiary interviews with 15 park users. During the site visit, direct observations of park infrastructure, amenities, accessibility features, and maintenance conditions were recorded alongside interactions with respondents.

### 2.3.1 Project document reviews

A review of project documents was conducted to identify and synthesise information on park intervention elements, plantation data, and expected outcomes. Unlike the previous assessment, AutoCAD designs and layout drawings were shared for during the April 2025 assessment and findings from that review have been referenced where relevant. Documents reviewed for the

current assessment included year-wise plantation reports, plant inventory data, a consolidated MIS sheet containing park-wise plantation and garden details, and the April 2025 assessment report together with its recommendations. This review provided the foundation for measuring current outcomes against originally stated objectives and for tracking the implementation status of prior recommendations..

### 2.3.3 Beneficiary (user) interviews

Primary data from park users was collected through structured qualitative interviews across all three parks. A total of 15 interviews were conducted (five per park) using a convenience sampling approach, with a focus on capturing beneficiary perspectives. All interviews were conducted by researchers proficient in Gujarati, Hindi and English.

*(The parks are classified into two main categories: Community Parks, these larger parks serve broader areas and typically include more extensive facilities and amenities. Neighbourhood Parks, these smaller, more localised parks serve immediate residential areas and provide essential green space for nearby communities.)*

Sr. no	Park name	Type	Interviews
1	Jyotindra Dave Garden, Adajan	Community	5
2	Lakeview Garden, Athwa	Community	5
3	Ravi Shankar Maharaj Garden, Athwa	Neighbourhood	5
	Total		15

*Table 3: Details of Data Collection in Surat Parks*

## 2.4 Data collection challenges

- The primary challenge encountered across all three parks was limited willingness among visitors to pause for structured interviews, particularly during peak morning hours when most users were engaged in walking or exercise routines.

## 3. Pratiti Program: Progress and Achievements

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### 3.1 Project Implementation process<sup>6</sup>

The Pratiti programme's vision extends beyond the beautification of urban spaces. It aims to create a roadmap and replicable pathways that can inspire similar projects throughout the country. In Surat, this vision has been operationalised through interventions across three parks, undertaken in close partnership with the Surat Municipal Corporation. The programme's approach in Surat combines full landscape development at two parks Jyotindra Dave Garden and Ravi Shankar Maharaj Garden with professional maintenance at Lakeview Garden, where UNM Foundation took over the upkeep of an existing public space. This dual model reflects the programme's adaptability to different site conditions and intervention needs.

**Park selection process:** The selection of parks in Surat was guided by considerations designed to ensure meaningful impact and equitable distribution across the city's urban fabric:

- **Geographic Distribution:** Parks were selected across different zones of Surat to provide equitable access to quality green spaces for residents from diverse neighbourhoods — from the densely populated residential areas of Adajan to the civic and institutional precinct of Athwa.
- **Scale Variation:** Parks of varying sizes were selected to allow for diverse design approaches and programming options. The three parks vary in scale, ranging from a neighbourhood garden of approximately 4,794 sq. m. (Ravi Shankar Garden) to larger community parks such as Lake View Garden (28,521 sq. m.) and Jyotindra Dave Garden (nearly 31,000 sq. m.), enabling the programme to cater to both local and city-wide users.
- **Community Need:** Parks were prioritised based on the gap between existing green space quality and community demand, ensuring that the programme's investments translated into tangible improvements in neighbourhoods where public green space was underserved or poorly maintained.

**Location Context of the Three Surat Parks:** The three parks are distributed across Surat's urban fabric, serving neighbourhoods with distinct socioeconomic and spatial characteristics.

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<sup>6</sup> UNMF, 2017, Udyan Pravaha - a public space initiative Report

- Jyotindra Dave Garden is situated in a high-density residential area in Adajan. It serves a mixed catchment of residents, students, and working professionals, functioning as a major community hub in one of Surat's most populated zones. Its scale and location make it one of the city's most heavily used public green spaces, drawing approximately 6,000 visitors on weekdays and up to 10,000 on weekends.
- Lakeview Garden in Athwa is located near the main road, in proximity to SVNIT College, with easy access to public transport. It serves a broad urban catchment and draws approximately 3,500 daily visitors, reflecting its established role in the city's green infrastructure. As a maintenance-only intervention, the programme's contribution here has focused on improving the quality, cleanliness, and ecological richness of an existing public space rather than undertaking new development.
- Ravi Shankar Maharaj Garden, also in Athwa, is located near the Circuit House and police officer, Gymkhana. It serves as a neighbourhood park for the immediate residential community. With a daily footfall of 400–500 visitors, it functions as a quieter, locally oriented green space, consistent with its smaller footprint and neighbourhood park typology.

## 3.2 Project Coverage and Impact

### Spatial Impact of UNM Interventions in Surat's Park System

The Pratiti programme's Surat interventions cover three parks spanning a combined area of over 63,300 square meters. While representing 2.38% of Surat's total park count 3 out of 126 parks these interventions account for approximately 6.48% of the city's total municipal park area of 977,373 square meters. This disproportionate share reflects the scale of the parks selected and underscores the programme's meaningful contribution to Surat's quality public green infrastructure.

Park	Type	Area (sq.m)	Annual Footfall
Jyotindra Dave Garden, Adajan	Community	30,974.95	15,39,475
Lakeview Garden, Athwa	Community	28,521.83	6,12,258
Ravi Shankar Maharaj Garden, Athwa	Neighbourhood	4,794.26	69,393
<b>Total</b>		<b>64,291.04</b>	<b>22,21,126</b>

Table 4: Details of Parks under the Pratiti Programme in Surat

### Green Cover and Plantation

The programme's ecological contribution across the three parks is substantial, encompassing both tree and shrub plantation across a combined area of approximately 23,950 square meters. A total of 612 new trees have been planted, 160 at Jyotindra Dave Garden, 385 at Lakeview Garden, and 67 at Ravi Shankar Maharaj Garden.

Park	Existing trees	New trees	Total Trees	Plantation Area (sq.m)
Jyotindra Dave Garden	568	160	728	4898
Lakeview Garden	174	385	559	16808
Ravi Shankar Maharaj Garden	60	67	127	2,243.35
<b>Total</b>	<b>802</b>	<b>612</b>	<b>1414</b>	<b>23950</b>

Table 5: Tree Plantation Data Across Surat Parks

Tree species have been carefully selected for ecological appropriateness and climatic suitability. Prominent species across the three parks include *Delonix regia*, *Terminalia arjuna*, *Michelia champaca*, *Mimusops elengi*, *Ficus benghalensis*, *Bauhinia variegata*, and *Tabebuia rosea* — species known for their shade provision, carbon sequestration capacity, biodiversity value, and visual appeal. Growth rates average 2–5 feet per year, contributing to progressive canopy development across all three sites. Beyond tree plantation, the programme has introduced an extensive layer of shrub and ground cover planting, with a total of 84,836 new shrubs across the three parks:

### Infrastructure and Staffing

All three parks are equipped with borewells, underground tanks, and recharge wells, supporting sustainable groundwater replenishment and reducing dependency on external water supply. Dustbins and utility spaces are present across all three sites, supporting cleanliness and waste management. Security is ensured through structured deployment of guards across three shifts— 17 guards at Jyotindra Dave Garden, 6 guards at Lake View Garden, and 3 guards at Ravi Shankar Maharaj Garden—providing round-the-clock coverage.

Horticultural staffing totals 32 gardeners across the three parks 17 at Jyotindra Dave Garden, 10 at Lakeview Garden, and 5 at Ravi Shankar Maharaj Garden reflecting the scale of ongoing maintenance required to sustain the programme's greening investment

### 3.3 Alignment with Global and National Priorities

The Pratiti programme's interventions in Surat align strategically with both global sustainability frameworks and India's national urban greening priorities. The programme contributes directly to Sustainable Development Goal 11 (Sustainable Cities and Communities), specifically target 11.7, which calls for universal access to safe, inclusive, and accessible green and public spaces by 2030<sup>7</sup>. By developing and maintaining three parks that together record a combined annual footfall exceeding 2.2 million visitors, the programme advances equitable access to quality urban green space in one of India's fastest-growing cities.

At the national level, the interventions support India's National Mission for a Green India (GIM)<sup>8</sup> and urban greening initiatives such as the Nagar Van Yojana, which targets the development of 600 urban forests and 400 urban gardens by 2026–27<sup>9</sup>. The programme's emphasis on ecologically appropriate species selection including native tree species such as *Ficus benghalensis*, *Azadirachta indica*, and *Ficus religiosa* (*All tree species are known for their large size, longevity, and significant roles in the ecosystem such as Banyan, Neem, Peepal etc*) alongside recharge well installation and on-site water management, reflects the ecological responsibility that these national frameworks call for. Through its focus on professional park management, community engagement, and long-term sustainability, the Pratiti programme in Surat exemplifies how targeted local interventions can advance broader national goals of increasing urban green cover while contributing to global sustainable development commitments.



<sup>7</sup> UN-Habitat. SDG 11 Monitoring Framework: A Guide to Assist National and Local Governments. Nairobi: United Nations Human Settlements Programme, 2018. <https://data.unhabitat.org/pages/sdgs>

<sup>8</sup> <https://www.moef.gov.in/green-india-mission-gim>

<sup>9</sup> <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1846954>

## 4. Findings

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This chapter presents the findings of the impact assessment study of the Pratiti program's park development interventions. The findings are organized according to the eight assessment criteria established in Chapter 2, integrating data from beneficiary interviews and site observations conducted across all three parks. Each section examines the pre-intervention challenges, post-intervention improvements, and user experiences to provide a comprehensive understanding of the program's impact.

### 4.1 Accessibility and Connectivity

#### 4.1.1: Pre-Intervention Challenges

Prior to UNM Foundation's interventions, the three Surat parks shared common challenges. Respondents who had been visiting for ten years or more described a stark contrast between the parks' earlier state and their current condition. The key issues observed before redevelopment included:

- **Poor maintenance:** Parks were inadequately managed, with insufficient cleaning, limited plantation, and deteriorating surfaces.
- **Lack of design and layout:** Parks functioned as basic open grounds without intentional zoning, functional layout, or designed infrastructure.
- **Facilities in Gardens (Pre-development):** Certain amenities that existed earlier, such as the boating facility at Lake View Garden, have been removed by the Surat Municipal Corporation as part of broader redevelopment decisions. At Ravi Shankar Maharaj Garden, earlier dome structures have been replaced with updated designs. In Jyotindra Dave Garden, a new dome structure has been introduced as part of the redevelopment, reflecting efforts to upgrade facilities, although some respondents noted a preference for the earlier structure.
- **Limited green cover:** Plantation was sparse, with fewer trees and shrubs than what the spaces required to function as quality green spaces.

At Jyotindra Dave Garden, long-standing visitors described the pre-renovation state as a poorly managed space where basic upkeep was visibly absent. The garden had far fewer trees, blocked walking surfaces, and minimal flowering plants. As one respondent shared, *"two years ago when the garden was not renovated, many changes have been seen , the blocks were removed, the*

*surface was improved, and flower plants have increased. Earlier, when the garden was managed by the Surat Municipal Corporation, maintenance was not carried out properly."*

At Ravi Shankar Maharaj Garden, the pre-development space was described as a basic, unremarkable open garden, present in the neighbourhood but offering little by way of purposeful design or maintained infrastructure. The covered dome structure, previously used as a shelter, had been removed; however, in response to feedback from regular visitors, Ravi Shankar Maharaj Garden is planning to install a new dome in the seating area to enhance user comfort, particularly during the rainy season.

#### 4.1.2: Post-Intervention Improvements

UNM Foundation's interventions have significantly improved the accessibility and overall condition of the three Surat parks. Jyotindra Dave Garden now features four well-marked entry gates with good road connectivity, ramps for differently-abled visitors, and wide pathways throughout. Ravi Shankar Maharaj Garden has a ramp at entry and well-maintained walking paths, though internal accessibility for differently-abled users remains limited. At Lakeview Garden, while entry and exit points are adequate and the park is well-connected to public transport, the absence of entry ramps remains an unresolved gap that limits accessibility for persons with disabilities.

Feature	Jyotindra Dave Garden	Lakeview Garden	Ravi Shankar Maharaj Garden
Entry Gates	4	2 (second gate closed)	2
Entry Ramp	Yes	No	Yes
Service Gate	Yes	No	Yes
Public Transport	Easily available	Easily available	Easily available
Daily Footfall	~6,000	~3,500	400–500
Accessibility for Differently-Abled	ramp at entry,	Limited, no entry ramp	ramp at entry,

Table 6: : Post-Intervention Accessibility and Connectivity Status Across Surat Parks

Respondents across all three parks reported that the parks are now easy to reach and well-integrated with their surrounding neighbourhoods. As one respondent from Jyotindra Dave Garden shared, *"I come here from 500 meters away, when coming to this garden, there was a*

*normal garden here, currently there is a designed garden and cleaning has also improved a lot."*  
Another visitor noted, *"I have been coming to this garden for the last ten years, I come six to seven days a week, only in the morning. In the last two years it has improved a lot."*

*"I come to this park almost every day as it's just a few minutes from my home. Earlier it was quite simple, but now it feels much more organized and well-designed. The cleanliness has improved a lot, and the pathways are easier to use. Over the past couple of years, I've really noticed positive changes. It's become a much more pleasant and welcoming space to spend time in."*

-44 years old visitor from Ravi Shankar Maharaj Garden

#### 4.1.3 Connectivity to Surrounding Areas

All three parks are well-integrated with their surrounding residential neighbourhoods and public transportation networks, with public transport easily available near all three locations.

Jyotindra Dave Garden's location in a high-density residential area in Adajan, means it serves a broad and diverse catchment of residents, students, and working professionals. Respondents travel from distances ranging from 500 metres to 2 kilometres, arriving by walk, bike, and private vehicle. As one respondent shared, *"I have been coming inside this garden for the past 10 to 15 years. I live nearby and come by bike from my home."*

At Ravi Shankar Maharaj Garden, the majority of respondents live within 0.3 to 1.4 kilometres and walk to the park daily, consistent with its neighbourhood park typology and localised catchment.

At Lakeview Garden, respondents travel from farther distances up to 5 kilometres arriving primarily by bike. The park's location near the main road and Circuit House contributes to its broader city-level reach. As one respondent noted, *"as there is a residential area in the vicinity, many people come, and as it is on the road, many people also come from far away for recreation."*

#### 4.1.4 Inclusion

In terms of gender inclusivity in park usage, all three Surat parks are perceived as safe and welcoming spaces for women across different times of day. Respondents at Jyotindra Dave Garden specifically confirmed that the garden is safe for women at all hours, with one noting that *"single women can come and go at any time and there has been no untoward incident since our*

arrival." Another respondent affirmed that *"the garden has adequate security facilities guards and camera (Lake view garden) are also seen and this garden is very safe for women too."*

Security guards are deployed across all three parks. However, CCTV cameras are present only at Lakeview Garden, which remains under the Surat Municipal Corporation's ownership with UNM Foundation responsible for its maintenance. At Jyotindra Dave Garden and Ravi Shankar Maharaj Garden, which are fully developed and managed by UNM Foundation under the Torrent group, CCTV cameras are not installed as a matter of policy. Despite the absence of cameras at these two parks, respondents reported feeling safe, with security guards cited as the primary enabler of safety across all three sites.

**Age-Friendly Design:** The three Surat parks demonstrate strong age-friendly design elements that cater to diverse age groups. Respondents across the interviews ranged from 21 to 88 years, reflecting a broad age spectrum of active park users. At Jyotindra Dave Garden, the park's combination of walking tracks, open gym equipment, children's play areas, gaming zones, and ample seating effectively serves users across all life stages from young professionals and students to retired senior citizens. One respondent aged 73 who has been visiting for over 12 years noted, *"I come here six to seven days a week. Many people prefer to come here because of the good facilities."*

At Ravi Shankar Maharaj Garden, the park serves primarily elderly morning walkers and parents with young children. Respondents noted the garden's suitability for both groups, with seating arrangements described as adequate. One visitor noted, *"in this garden we do sadhana, prayer, yoga, exercise, walking all these activities,"* reflecting the variety of age-appropriate uses the space accommodates. At Lakeview Garden, open gym facilities and shaded seating were noted as key attractions for younger adults and older residents respectively, with the park drawing a mix of daily runners, families, and elderly visitors.

**Accessibility for Differently-Abled:** The three Surat parks vary in their provision for differently-abled users, with Jyotindra Dave Garden performing strongest and Lakeview Garden presenting the most significant gap. At Jyotindra Dave Garden, entry ramps and low seating arrangements are in place for persons with disabilities. Respondents confirmed their presence and adequacy one noting that *"a ramp has also been made for the disabled and that arrangements have been made for the disabled, overall the seating arrangement is also very good."* The park additionally has a service gate and four entry points, making physical access manageable for users with mobility challenges.

At Ravi Shankar Maharaj Garden, while an entry ramp is present, internal accessibility for differently-abled users remains limited. All five respondents from this park noted that there is no ramp system inside the garden and no toilet facility. One respondent specifically recommended that "*provision should be made for the disabled and the elderly.*" The site data confirms the absence of visitor restrooms entirely at this park, compounding the accessibility deficit.

At Lakeview Garden, where infrastructure development has been carried out by the Surat Municipal Corporation, accessibility for differently-abled users remains a key concern compared to the other parks. The park lacks entry ramps at its gates, and the second gate remains closed, limiting access for individuals with mobility challenges. Water taps are installed at a height that is not wheelchair-friendly, and although restrooms are available, they are not designed to accommodate differently-abled visitors. As one respondent noted, "*the entry gate and exit gate are adequate but not suitable for disabled people.*" While the park benefits from otherwise strong infrastructure, it is not yet fully accessible to all segments of the community.

#### **Status of April 2025 Recommendation: Accessibility at Lakeview Garden**

The April 2025 assessment highlighted the absence of entry ramps at Lakeview Garden as an important area for improvement. It is encouraging to note that the UNM Foundation has now taken up the redevelopment agreement for the garden, and plans have been prepared to incorporate key accessibility features, including ramps and accessible toilets for differently-abled users. These upcoming interventions are expected to significantly enhance inclusive access and further improve the overall user experience.

## **4.3 Design and Layout**

### **4.3.1 Spatial Organisation and Functionality**

The three Surat parks demonstrate effective spatial organisation that enhances functionality and user experience. Respondents across all three parks expressed satisfaction with the layout and organisation of the spaces, noting that the redesign had transformed previously unremarkable grounds into purposefully designed public spaces with distinct activity zones.

During site visits, observations across the three parks documented a considered approach to spatial organisation and zoning. Jyotindra Dave Garden features distinct areas including walking tracks, an amphitheatre, children's play areas, open gym equipment, a gaming zone, and a multipurpose lawn serving multiple age groups simultaneously. Ravi Shankar Maharaj Garden is

organised consistently with its neighbourhood park scale, offering a walking track, children's play area, and sports ground for its immediate residential catchment. At Lakeview Garden, the open gym, shaded seating, and children's play area are well-distributed across the space, catering effectively to families and young adults. The absence of a covered shelter at Ravi Shankar Maharaj Garden and Jyotindra Dave Garden presents an opportunity to expand the parks' utility during Surat's monsoon season, and the addition of roofed structures has been consistently requested by respondents at both sites.

Respondents expressed satisfaction with the improved organisation of spaces. As one visitor at Jyotindra Dave Garden shared, *"this garden has enough gaming zone, benches for sitting, all facilities are available."*

#### **4.3.2 Aesthetic Appeal and Design Elements**

The aesthetic quality of the three parks has improved significantly following UNM Foundation's interventions, with the introduction of diverse plant species, structured landscaping, and thoughtfully placed seating transforming each park's visual character.

During the site visit, the NuSocia team observed that Jyotindra Dave Garden incorporates artistic elements and murals that reflect local culture, alongside well-placed seating with views to landscape features and vibrant planting including Heliconia, Bougainvillea, and Strelitzia reginae that contribute to year-round colour and visual interest. Lakeview Garden's large plantation area home to ornamental species including Wedelia, Pseudo-eranthemum reticulatum, and various palms contributes significantly to its green density and visual appeal. At Ravi Shankar Maharaj Garden, respondents appreciated the improved planting and maintenance, though some noted that additional greenery would further enhance the park's aesthetic quality. Respondents across all three parks expressed appreciation for the visible improvement in aesthetic quality since the intervention. As one visitor at Lakeview Garden noted, *"there is a complete arrangement of trees and plants here and it is also well maintained; many new plants have been planted now."* This reflects one of the most notable contributions of the UNM Foundation in strengthening the garden's upkeep and greenery.

#### **4.3.3 Amenities and Facilities**

The three parks now offer a range of amenities that support diverse activities across different user groups. Site visit confirms a consistent baseline of provision across all three parks, with walking tracks, seating areas, benches, lawns, children's play areas, open gym equipment, lights, and dustbins present at all three locations.

Site visit observations noted that Jyotindra Dave Garden has the amenities like including a sports court, gaming zone, gender-separated and well-maintained restrooms, and drinking water facilities, consistent with its community park classification and high daily footfall. Lakeview Garden offers a strong amenity profile with open gym and shaded seating catering well to families and young adults, though its restrooms are not accessible to differently-abled users and it does not have a sports court. Ravi Shankar Maharaj Garden has a designated sports court area used for badminton and volleyball. However, the facility is currently not in use, as volleyball activities had led to damage of the surrounding netting and, at times, nearby plants. To prevent further deterioration and maintain the garden's upkeep, the management has temporarily suspended the use of the court for the games. The gaps most consistently raised at this park remain the absence of visitor restrooms and drinking water. As one visitor shared, *"there should be toilet facilities and there is also a need for drinking water."*

#### **Recommendation: Toilet Facility at Ravi Shankar Maharaj Garden**

The absence of a toilet facility within the park premises has been noted as a concern by visitors, particularly elderly users, children, and on-duty staff, with some inconvenience experienced due to reliance on the nearby pay-and-use facility, especially during peak hours.

While a nearby facility ensures basic access to sanitation, introducing an in-park toilet would require careful consideration of space constraints and potential impacts on plantation areas.

Community parks are typically equipped with washrooms and drinking water facilities as they cater to larger and more diverse user groups. In contrast, neighbourhood parks often lack these amenities as they primarily serve nearby residents. This distinction reflects the differing scales and intended usage of the park types. Respondents expressed high satisfaction with the overall amenity provision. As one visitor at Jyotindra Dave Garden noted, *"this garden has enough gaming zones, benches for sitting, all facilities are available and the cleaning work is also done very nicely."*

#### **4.3.4 Lack of Directional and Educational Signage**

Site visit observations indicate that while all three parks have clearly defined entry points, there is scope to enhance internal navigation through improved signage to support better visitor movement.

This gap is particularly significant at Jyotindra Dave Garden and Lakeview Garden, where the scale and diversity of activity zones make wayfinding important for first-time and infrequent visitors.

Signage is especially important for community parks given their size and the diversity of users they serve (UN-HABITAT, 2017).

## 4.4 Environmental & Ecological Performance

The three Surat parks demonstrate significant environmental and ecological benefits, contributing to urban biodiversity, climate regulation, and ecological sustainability. This section examines vegetation diversity, water management features, green cover, and the parks' role as carbon sinks.

### 4.4.1 Efforts to improve Biodiversity: Selection of plants

Analysis of the plant inventory across the three Surat parks shared by UNM Foundation suggests that careful selection of tree, shrub, and ground cover species was undertaken. With an aim to establish a healthy and ecologically functional green system, the selection criteria for plant material involved preparation of an exhaustive list of species tabulated under various attributes including medicinal value, fruit bearing, nesting and foraging support, fragrant flowers, scented leaves, and ornamental characteristics (UNM Plant Inventory, u.d.).

The diverse selection of plants across the three Surat parks serves multiple ecological, aesthetic, and functional purposes, tailored to Surat's semi-arid coastal climate and urban conditions. Vetiver grass and *Cymbopogon citratus* combat soil erosion, a key concern in monsoon-prone Surat while providing ground stabilisation across large planted areas. Fragrant species such as *Jasminum sambac* and *Cestrum nocturnum* enhance the sensory experience of park visitors. Ornamental species including *Heliconia* varieties, *Bougainvillea*, and *Strelitzia reginae* add vibrant colour and attract pollinators, contributing to year-round visual interest. Medicinal plants including *Adhatoda vasica* and *Ocimum sanctum* align with India's traditional wellness ethos. Drought-tolerant varieties such as *Leucophyllum frutescens* and *Zephyranthes* reduce water dependency, supporting long-term sustainability. Fruit-bearing trees like *Muntingia calabura* planted at Jyotindra Dave Garden attract biodiversity, while species such as *Sansevieria* and *Areca* palm contribute to localised air quality improvement. The inclusion of *Couroupita guianensis* at Ravi Shankar Maharaj Garden reflects the programme's conservation ambitions beyond purely ornamental planting. Collectively, this curated mix addresses microclimate moderation, cultural relevance, and low-maintenance landscaping, making these parks resilient community assets.

In terms of scale, a total of 84,836 new shrubs have been introduced across the three parks between 2022 and 2025, 63,590 at Jyotindra Dave Garden across 91 species, 9,717 at Ravi Shankar Maharaj Garden across 62 species, and 11,529 at Lakeview Garden across 23 species. Combined with 612 new trees planted across the three sites, the total new plantation amounts

to 85,448 plants, establishing a rich and ecologically layered green infrastructure across Surat's Pratiti parks.

### Abundance and species richness

In terms of scale, a total of 84,836 new shrubs were introduced across the three parks between 2022 and 2025. Of these, 63,590 were planted at Jyotindra Dave Garden across 91 species, 9,717 at Ravi Shankar Maharaj Garden across 62 species, and 11,529 at Lakeview Garden across 23 species. Combined with 612 new trees planted across the three sites during this period, the total new plantation between 2022 and 2025 amounts to 85,448 plants.

### Native, Acclimated, and Exotic Species Distribution

Analysis of the plant inventory across the intervention parks (shared by UNM) reveals a thoughtfully curated mix of species:

Category	Key species	Ecological Function
Native Species (32%)	Neem ( <i>Azadirachta indica</i> ), Banyan ( <i>Ficus benghalensis</i> ), Peepal ( <i>Ficus religiosa</i> ), Jamun ( <i>Syzygium cumini</i> ), Terminalia arjuna	Habitat for native fauna, soil health, shade provision
Acclimated Species (28%)	Gulmohar ( <i>Delonix regia</i> ), Terminalia catappa, <i>Peltophorum pterocarpum</i> , <i>Mimusops elengi</i> , <i>Tabebuia rosea</i>	Aesthetic diversity, shade, microclimate regulation
Exotic Species (40%)	Heliconia varieties, <i>Strelitzia reginae</i> , <i>Couroupita guianensis</i> , <i>Bougainvillea</i> , <i>Michelia champaca</i>	Pollinator attraction, visual interest, year-round flowering

Table 7: Plant Species Distribution Across Surat Parks (Source: UNM Foundation Plant Inventory)

### Year-wise Plantation Data

A strategic multi-year greening programme has resulted in a cumulative total of 84,836 plants planted across the three Surat parks between 2021 and 2025. Peak execution occurred in 2024–25 with 77,490 plants reflecting the programme's intensified greening push in its final year.

S no	Year	Surat Gardens

1	2021-22	2435
2	2022-23	3931
3	2023-24	980
4	2024-25	77490
<b>Total</b>		<b>84836</b>

Table 8: Year-wise Plantation Details for Surat Parks

#### 4.4.2 Carbon Sequestration Contribution of Planted Species

Trees play a vital role in sequestering atmospheric carbon dioxide. Based on international averages (EcoTree<sup>10</sup> and For Tomorrow<sup>11</sup>), A single mature tree is estimated to absorb approximately 25 kg of CO<sub>2</sub> per year on average. This is a generalized estimate, as actual sequestration depends on tree species (fast-growing vs. slow-growing), age (young trees absorb less than mature ones), and local conditions (climate, soil quality, maintenance). Assuming all planted vegetation species survive and reach maturity, and applying the 25 kg/year estimate uniformly (though sequestration increases as vegetation grows), the total cumulative CO<sub>2</sub> sequestered by the 84,836 plant species planted between 2021-22 and 2024-25 is estimated to be approximately 25,24,575 Kg (2524.575 Metric Tons)<sup>12</sup>. This is equivalent to approximately ~**12,600** round-trip flights between Delhi and Mumbai for one passenger<sup>13</sup>

Year Planted	Trees Planted	Growth Years (2021–2025)	CO <sub>2</sub> Absorbed per Tree (kg)	Total Cumulative CO <sub>2</sub> (kg)
2021-22	2435	4	25X4 =100	2435 X 100 = 243,500
2022-23	3931	3	25X3 =75	3931 X 75 = 294,825
2023-24	980	2	25X2 =50	980 X 50= 49,000
2024-25	77490	1	25X1 =25	77490 X 25 =1,937,250

<sup>10</sup> <https://ecotree.green/en/how-much-co2-does-a-tree-absorb>

<sup>11</sup> <https://www.fortomorrow.eu/en/blog/co2-tree>

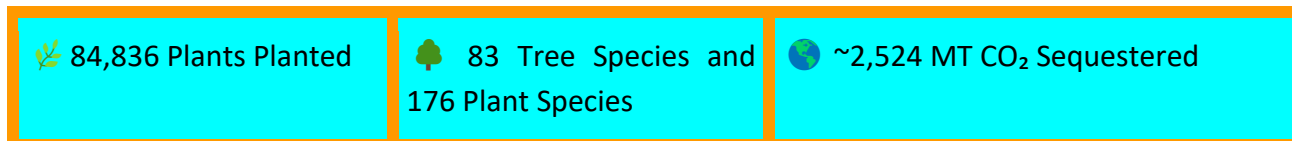
<sup>12</sup> Note that these are approximations based on averages

<sup>13</sup> Average CO<sub>2</sub> emissions per passenger per round trip ≈ 0.2 metric tons (200 kg) (This includes both legs of the flight and accounts for Indian carrier fuel efficiency and average load factors.)

Total	84836			25,24,575 Kg (2524.575 Metric Tons)
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Table 9: Approximate cumulative carbon sequestration achieved for Surat Parks

### Key Metrics:



#### 4.4.3 Green cover

Based on analysis of AutoCAD drawings shared during the April 2025 assessment, the green cover within the two Surat parks for which data is available reflects a meaningful commitment to vegetation. Jyotindra Dave Garden records a green cover area of 16,808 square meters, representing 54% of its assessed area. Ravi Shankar Maharaj Garden records a green cover area of 2,243 square meters, representing 47% of its assessed area. While specific international standards for within-park green cover vary depending on park type and function, these figures reflect a strong balance between planted zones and active recreation areas. Lakeview Garden, with a plantation area of over 16,800 square meters, has the largest absolute green cover area among the three Surat parks.

#### 4.4.4 Water and Leaf Litter-waste Management

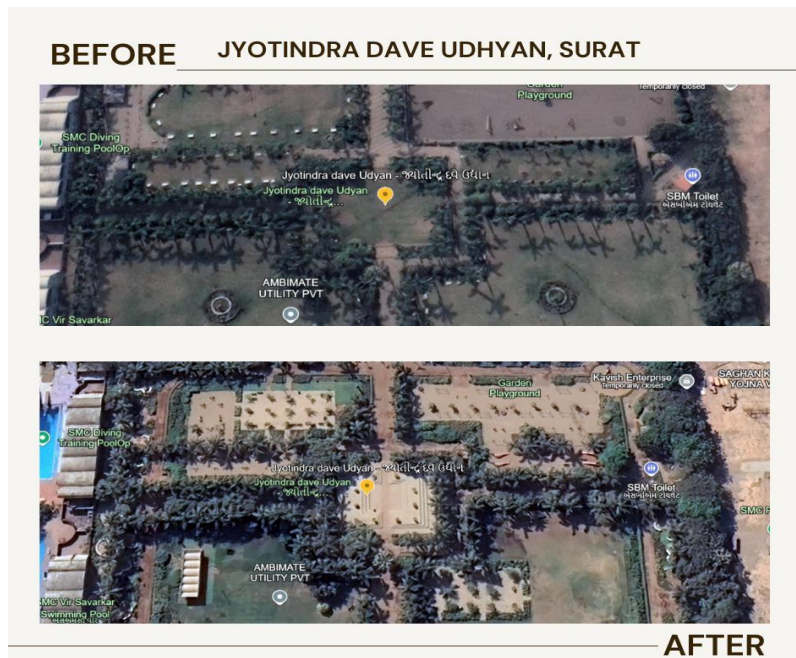
- All three Surat parks are equipped with borewells, underground tanks, and recharge wells, supporting sustainable groundwater replenishment and reducing dependency on external water supply. Jyotindra Dave Garden and Ravi Shankar Maharaj Garden additionally receive municipal corporation water supply, while Lakeview Garden relies on its borewell and recharge well infrastructure.



- On-site management of organic waste is in place across the parks. Jyotindra Dave Garden has a dedicated compost site for

Picture 3 : Leaf litter collection in Lake View Garden

managing leaf litter, avoiding the environmentally harmful practice of burning dry leaves. At Lakeview Garden and Ravi Shankar Maharaj Garden, dustbins are present across the sites and regular cleaning and grass cutting are carried out by dedicated gardening staff 10 gardeners at Lakeview Garden and 5 at Ravi Shankar Maharaj Garden ensuring that organic waste is managed as part of routine maintenance operations.



## 4.5 Social and Recreational Aspects

The preferred social and recreational usage by users across the three Surat parks reflects a consistent pattern of daily, purposeful engagement. Based on beneficiary interviews, the primary activities reported include:

**Walking and Jogging:** The most frequently mentioned activity across all three parks, with respondents visiting daily predominantly in the morning hours for walks, runs, and exercise routines.

**Yoga and Spiritual Activities:** At Ravi Shankar Maharaj Garden, respondents specifically noted engaging in sadhana, prayer, yoga, and walking reflecting the park's role as a space for personal wellbeing and quiet reflection. As one visitor shared, *"I come regularly for sadhana, yoga, and quiet prayer. The peaceful atmosphere makes it easy to focus and feel mentally relaxed. It's not just a place for walking, but somewhere I can take time for myself and start the day with clarity."*

**Children's Play and Family Recreation:** Parents across all three parks highlighted the importance of free, accessible play zones. At Ravi Shankar Maharaj Garden, one respondent noted bringing children to play, with open gym and play facilities available at no charge. At Lakeview Garden, families with young children visit regularly, with one visitor noting, *"I bring my children here every evening since it's close to our home, and they really enjoy the open play areas and equipment."*

**Social Gatherings and Community Events:** At Jyotindra Dave Garden, respondents described a vibrant social calendar senior citizen groups, women's groups, yoga groups, and birthday celebrations all taking place within the park. As one visitor noted, *"different programs are organized in this garden senior citizen groups do yoga, there are many young people's groups, there are women's groups doing aerobics they do all these activities."* Festival-related activities and community parties are also regularly organised.

**Seating and Passive Recreation:** Elderly users across all three parks highlighted the value of shaded seating for socialising and resting. At Ravi Shankar Maharaj Garden, respondents noted the availability of umbrella seating, though the absence of a covered dome structure limits use during the monsoon season.

### **Usage Patterns**

Respondents across all three parks are regular, habitual users visiting primarily in the morning, six to seven days a week. At Jyotindra Dave Garden, several respondents have been visiting continuously for 10 to 15 years, reflecting deep community integration. As one long-standing

visitor shared, *"I've been coming here almost every morning for around ten years, usually six to seven days a week. Recently, I've noticed clear improvements, and more people are becoming conscious about fitness and making good use of the park."*

At Ravi Shankar Maharaj Garden, the daily pattern is similarly consistent, with respondents walking to the park every morning given its proximity to their homes. At Lakeview Garden, visitors travel from farther distances but maintain regular morning routines, primarily for running and walking. Across all three parks, all activities and facilities are free of charge. As respondents consistently confirmed, *"One of the best things about this park is that everything is free to use. I come here regularly with my family, and we can enjoy walking, exercise, and the play areas without worrying about any cost. It makes it easier to visit often and spend more time here. Because of this, people from all backgrounds come together and use the space comfortably."*

Respondents at Jyotindra Dave Garden also noted the park's value in reducing the need to travel to more distant recreational spaces. As one visitor observed, *"many people prefer to come here because of the good facilities"* reflecting how the park's improved offering has made it a self-sufficient recreational destination for the surrounding neighbourhood.

### **Events and Cultural Activities**

At Jyotindra Dave Garden, structured and informal events are regularly organised. Respondents described festival-themed activities, birthday celebrations, senior citizen gatherings, and yoga sessions as recurring features of the park's social life. As one visitor shared, *"often there are many activities in the garden there are activities related to the festival, and beyond the festival, people also celebrate. We senior citizens also do our programs such as yoga and meditation."*

It was also observed during the site visit that some visitor groups, including aerobics and singing groups, use music speakers within the park premises. While the volume was noted as relatively low, this has caused irritation among some visitors. Garden management has communicated a no-music and no-speaker policy, however compliance remains inconsistent. This is an area that may benefit from clearer



*Picture 4: Aerobics Group in Jyotindra Dave Garden*

communication and enforcement of existing park guidelines.

At Ravi Shankar Maharaj Garden and Lakeview Garden, structured programming is limited given the parks' smaller scale or maintenance-only status. Events at these parks are informal and community-driven, small gatherings, festival celebrations, and friend group meetups. At Lakeview Garden, festival lighting and themed decorations are organised from time to time. As one respondent noted, *“small and large programs are organised here from time to time. During festivals, the park is decorated with lights and themed arrangements, creating an atmosphere that truly reflects the spirit of the occasion.”*

## 4.6 Safety and Security

Safety was a concern in the three Surat parks prior to UNM Foundation's interventions, with poor lighting and low footfall limiting visitor confidence, particularly during evening hours. Post-intervention, there has been a marked improvement in safety conditions across all three parks, with better lighting, dedicated security personnel deployed across three shifts, and a consistent absence of reported criminal incidents.

All three parks maintain round-the-clock security through a three-shift guard system. Jyotindra Dave Garden deploys 17 guards across three shifts, the most comprehensive security arrangement among the three parks, Lake View Garden and Ravi Shankar Maharaj Garden deploy 6 and 3 guards respectively, distributed across three shifts. Respondents across all three parks confirmed that this visible security presence contributes significantly to their sense of safety.

Park	Security guards	Shifts	CCTV	Incidents reported
Jyotindra Dave Garden	17	3	No	None
Lakeview Garden	6	3	Yes	None
Ravi Shankar Maharaj Garden	3	3	No	None

*Table 10: Security Infrastructure Across Surat Parks (Source: Site Visit and Beneficiary Interviews April 2026)*

At Lakeview Garden, CCTV cameras are installed in key areas alongside the guard system, and respondents reported high confidence in the park's security. As one visitor shared, *“in terms of security, this garden is very good , there are guard facilities, cameras are also installed in some*

areas, and since we have been here, there has been no criminal incident. This is a very safe garden." Another noted that "the garden is very safe for women too, single women can come and go at any time and there has been no untoward incident."

At Ravi Shankar Maharaj Garden, the security arrangement relies on guards without CCTV coverage. Respondents noted that while the system is not high-tech given the park's smaller scale, it is adequate and effective. As one visitor observed, "since the garden is small, the security system is not that hi-tech but what is there is good, there is no lack of security in this garden."

At Lakeview Garden, security is maintained through guards and adequate lighting, with CCTV present at some locations. Respondents reported feeling safe at all times. As one visitor noted, "cameras are not noticeable but there are security guards and lighting is also good, due to which there is no safety issue." Another respondent confirmed, "guards are available in the garden throughout the day and it is safe in this garden, even the police station is near the garden."

Across all three parks, no criminal incidents have been reported by any respondent, reflecting the effectiveness of the current security arrangements. The consistent deployment of security personnel has created an environment where residents including women and elderly visitors feel comfortable visiting at different times of day. The assessment found substantial improvements in safety and security across all three Surat parks, with residents expressing significantly greater confidence in visiting the parks compared to the pre-intervention period.

## 4.7 Maintenance and Management

**4.7.1 Cleanliness and Waste Management** Cleanliness and waste management were identified as significant concerns across the three Surat parks prior to UNM Foundation's interventions. Post-intervention, the current status shows significant improvement, with dedicated cleaning staff visible and maintenance carried out on a daily basis across all three parks.

At Jyotindra Dave Garden, respondents consistently noted high standards of cleanliness. As one visitor shared, "the cleaning of



Picture 5: Cleaning and gardening staff in Ravi Shankar Garden

*the roads and the seating arrangement inside the garden is done very systematically and regularly.*" At Lakeview Garden, respondents reported regular maintenance, with one noting *"the garden is regularly maintained and cleaned and we see the cleaning workers working, walking tracks are cleaned daily and all the cuttings of grass and plants are also done from time to time."* At Ravi Shankar Maharaj Garden, respondents confirmed that cleaning is carried out regularly, with walking tracks cleaned daily.

#### **4.7.2 Vegetation Maintenance**

The current status of vegetation maintenance is positive across all three parks. Respondents expressed satisfaction with the upkeep of plants, lawns, and garden infrastructure, noting regular mowing, pruning, and replanting activities. At Jyotindra Dave Garden, one visitor noted *"plants in the garden and lawns are cut well and there is a complete arrangement of trees and plants here and it is also well maintained, many new plants have been planted now."* At Ravi Shankar Maharaj Garden, respondents confirmed regular upkeep with one noting *"the garden is well maintained with regular mowing and cleaning."* At Lakeview Garden, vegetation maintenance was similarly described as consistent.

#### **4.7.3 Repair of Facilities**

Facility maintenance across the three parks is generally positive. At Jyotindra Dave Garden, respondents noted that facilities, including seating, pathways, and restrooms, are well-maintained. At Lakeview Garden, the visitor restrooms are reported as well-maintained, with one respondent noting *"there are two toilets in the garden, one is for pay and use and the other is for staff use; its maintenance is also very good."* At Ravi Shankar Maharaj Garden, general maintenance is well managed, and visitors have access to a nearby pay-and-use toilet facility; further enhancements such as in-park restrooms and drinking water could improve overall visitor convenience.

One of the key maintenance challenges observed at Jyotindra Dave Garden relates to pathways and lawn upkeep. Daily footfall at the park has increased significantly over the past year, from approximately 6,000 to 8,000 visitors on regular days and up to 10,000 at peak times. Pathway repairs require temporary closure of specific areas, which is difficult to enforce given the consistently high visitor volume. A similar challenge exists with lawn maintenance; newly grown grass requires time and protection before it can withstand regular use, necessitating the temporary closure of certain sections. However, visitors are often reluctant to accommodate these restrictions and continue to demand access for sitting, walking, and exercise. Balancing the

needs of a growing visitor base with the operational requirements of maintenance remains an ongoing challenge for the garden management team at Jyotindra Dave Garden.

#### 4.7.4 Management Systems

The management structure across the three Surat parks is well-organised with clear oversight from all parties. The Surat Municipal Corporation, UNM Foundation, and the Torrent group all conduct surprise inspections, creating a multi-layered system of accountability. Security guards are present throughout the day across three shifts at all three parks.

#### 4.7.5 Feedback Mechanisms

Across all three Surat parks, the primary feedback channel used by visitors is informal and guard-centred. Respondents consistently indicated that they raise issues directly with security guards on duty. As one visitor at Jyotindra Dave Garden shared, *"if we have any complaint or representation, we have told the guards who stand here and they usually dispose of it."* At Lakeview Garden, one respondent noted, *"there is no complaint box facility which really should be there, but if you let the guard know, they will solve any problem."*

#### **Status of April 2025 Recommendation: Feedback Mechanisms**

The April 2025 assessment highlighted the need for a formal feedback mechanism across the Surat parks. It is encouraging to note that quarterly feedback is now being actively considered, reflecting a growing emphasis on systematically capturing user inputs. While visitors currently continue to share concerns through informal channels such as security personnel, plans are underway to further strengthen this process by exploring app based feedback system. These steps indicate a positive move towards more structured, responsive, and efficient park governance by the UNM Foundation and the Surat Municipal Corporation.

## 4.8 Economic and Cultural Value

### 4.8.1 Property Values

Respondents across all three Surat parks reported no significant change in property values as a result of the park development. This was consistent across Jyotindra Dave Garden, Lakeview Garden, and Ravi Shankar Maharaj Garden, with respondents noting that property values in their areas had remained unchanged.

#### 4.8.2 Small-scale Business Opportunities

Commercial activities within the parks are restricted by policy, consistent with UNM Foundation's norms regarding commercial activity on garden property. At Ravi Shankar Maharaj Garden and Lakeview Garden, all respondents reported no observable impact on local business activity. At Jyotindra Dave Garden, however, 4 out of 5 respondents noted a positive spillover effect on surrounding businesses, with one sharing *"because of the garden there is a positive effect on the business around the garden, there are many small stores outside and those people get employment."*

#### 4.8.3 Employment Generation

The three Surat parks together employ 30 security personnel and 36 gardeners, providing stable direct employment in security and maintenance sectors and representing a tangible economic benefit to the local community.

#### 4.8.4 Community Economic Impact

All activities and facilities across the three parks are free of charge. Respondents across all three parks live within walking or short cycling distance, visiting daily without incurring transportation costs reflecting the parks' role as accessible, cost-free recreational assets for their surrounding communities. One respondent highlighted this accessibility, sharing, *"I live nearby, so I just walk to the park every day without spending anything on travel. Since all the facilities here are free, it's easy for me to come regularly and make use of the space without any financial concern."*

#### 4.8.5 Cultural Value

At Jyotindra Dave Garden, the park serves as an active community cultural asset, hosting yoga groups, women's aerobics, senior citizen gatherings, birthday celebrations, and festival events. As one visitor shared, *"often there are many activities in the garden there are activities related to the festival and people also celebrate, we senior citizens also do our programs and have parties."* At Lakeview Garden, festival lighting and themed decorations are organised periodically. At Ravi Shankar Maharaj Garden, events are informal and small-scale, centred around seasonal festivals and friend group gatherings.

## 5. Assessment of Park interventions and areas for improvements

### 5.1: Assessment of Park Interventions and Performance Rating

This section provides a qualitative assessment of the performance of UNM Foundation's park interventions across the key evaluation criteria used for this assessment. The assessment rates the performance of each criterion as Strong, Medium, or Weak based on the findings presented in Chapter 4.

Criteria	Sub-Indicator	Performance Rating	Supporting Remarks
Accessibility & Connectivity	Proximity to Users	<b>Strong</b>	All three parks are well-connected to surrounding neighbourhoods. Respondents across all three parks live within walking or short cycling distance and visit daily.
	Physical Accessibility (Ramps)	<b>Medium</b>	Jyotindra Dave Garden has entry ramps and accessible seating. Ravi Shankar Maharaj Garden has a ramp at entry but limited internal accessibility. Lakeview Garden currently does not have an entry ramp; however, this gap will be addressed as part of the upcoming redevelopment plan by UNM, which will enhance accessibility for all users.
Design & Aesthetics	Overall Aesthetics & Layout	<b>Strong</b>	All three parks demonstrate effective zoning with distinct activity areas. Jyotindra Dave Garden is particularly well-organised with an amphitheatre, gaming zone, and multipurpose lawn.
	Functionality & Amenities	<b>Strong</b>	Jyotindra Dave Garden provides comprehensive amenities. Lakeview Garden's restrooms are not accessible to differently-abled users. Ravi Shankar Maharaj Garden

			lacks visitor restrooms and drinking water facilities entirely.
	Signage	<b>Weak</b>	Internal directional signage across the parks can be further strengthened, particularly in the larger community parks where their scale and diversity of activity zones present an opportunity to enhance visitor navigation.
Community Engagement	Usage Rates & Frequency	<b>Strong</b>	High daily usage across all three parks with respondents visiting six to seven days a week. Jyotindra Dave Garden draws approximately 6,000 daily visitors rising to 10,000 on weekends.
	User Satisfaction	<b>Strong</b>	Overwhelmingly positive feedback from users across FGDs and surveys regarding improved conditions, safety, and amenities.
	Feedback Mechanisms	<b>Medium</b>	Quarterly reviews are being taken into consideration across the parks. At present, visitors continue to rely primarily on informal, guard-centred channels to share their concerns. App-based feedback collection will also be introduced soon.
	Community Events & Activities	<b>Strong</b>	Jyotindra Dave Garden hosts active events including yoga, women's aerobics, senior citizen gatherings, and festival activities. Lakeview Garden and Ravi Shankar Maharaj Garden are open to informal small-scale gatherings with potential for more structured programming.
Environmental & Ecological	Biodiversity & Species Richness	<b>Strong</b>	83 trees and 176 plant species introduced across the three parks, with a balanced mix of native, acclimated, and exotic species tailored to Surat's coastal and semi-arid conditions.
	Green Cover	<b>Strong</b>	Jyotindra Dave Garden records 54% green cover and Ravi Shankar Maharaj Garden 47%.

			Total new plantation of 85,448 plants across the three parks.
	Water Management	<b>Strong</b>	Borewells, underground tanks, and recharge wells present across all three parks, supporting sustainable groundwater replenishment.
	Waste Management	<b>Strong</b>	Dedicated compost site at Jyotindra Dave Garden for leaf litter management. Regular grass cutting and waste disposal across all three parks.
	Climate Regulation & Air Quality	<b>Strong</b>	Estimated cumulative carbon sequestration of approximately 2,524 metric tons from 84,836 plants planted between 2021 and 2025.
Social & Recreational Aspects	Variety of Activities & Zones	<b>Strong</b>	Caters well to diverse age groups and interests (walking, play, seating, yoga, events). High usage of walking paths and seating areas.
	Inclusivity	<b>Medium</b>	Parks cater effectively to diverse age groups from young adults to senior citizens. Facilities including walking tracks, open gym, play areas, and seating serve multiple age groups simultaneously. Accessibility can be further strengthened across the three parks. At Lake View Garden, the addition of an entry ramp is being considered as part of the redevelopment plan, while at Ravi Shankar Maharaj Garden, visitors currently have access to a nearby pay-and-use toilet facility, supporting basic accessibility needs.
	Cultural Expression & Identity	<b>Strong</b>	Jyotindra Dave Garden hosts active cultural and community events. Lakeview Garden and Ravi Shankar Maharaj Garden are open to informal, small-scale gatherings.

Safety & Security	Lighting	<b>Strong</b>	Adequate lighting across all three parks. Respondents reported feeling safe visiting at different times of day.
	Surveillance & Security Personnel	<b>Strong</b>	Lake View Garden is equipped with CCTV surveillance and 6 guards deployed across three shifts, whereas Jyotindra Dave Garden and Ravi Shankar Maharaj Garden have 17 and 3 guards respectively, ensuring structured security coverage.
	User Perception of Safety	<b>Strong</b>	No criminal incidents reported across any of the three parks. Respondents including women feel safe visiting at all hours.
Maintenance & Management	Cleanliness & Waste Disposal	<b>Strong</b>	Regular daily cleaning across all three parks. Respondents consistently noted visible cleaning staff and well-maintained pathways and seating areas.
	Vegetation Maintenance	<b>Strong</b>	Regular mowing, pruning, and replanting observed across all three parks. Respondents expressed satisfaction with plant and lawn upkeep.
	Repair of Facilities	<b>Medium</b>	Facilities are generally well maintained and promptly repaired. However, in Jyotindra Dave Garden and Ravi Shankar Maharaj Garden, there is a need for the garden management to develop a more structured strategy for timely repair and maintenance of pathways.
	Management Systems	<b>Strong</b>	Well-organised management structure with clear oversight from UNM Foundation, SMC, and maintenance vendors. Regular and surprise inspections ensure accountability.
	Property Value Impact	<b>Mixed</b>	No significant property value impact reported across all three parks.

Economic & Cultural Value	Local Business Benefits	<b>Mixed</b>	Positive spillover effect observed near Jyotindra Dave Garden. No impact reported near Ravi Shankar Maharaj Garden and Lakeview Garden.
	Employment Generation	<b>Strong</b>	30 security personnel and 36 gardeners directly employed across the three parks.

Table 11: Assessment of park interventions and performance rating

## 5.2 Overall Assessment

The UNM Foundation's park interventions in Surat have demonstrably transformed public spaces across three distinct neighbourhoods into valued community assets. The assessment across multiple criteria reveals a largely successful initiative with significant positive impacts, particularly in enhancing the social, recreational, and environmental quality of the areas served.

### 5.2.1 Key Strengths:

**Strong Community Engagement and Usage:** Across all three parks, respondents visit six to seven days a week, reflecting deep community integration. Jyotindra Dave Garden draws approximately 6,000 daily visitors rising to 10,000 on weekends, while user satisfaction ratings improved meaningfully across all three parks post-intervention. The parks effectively meet community needs for accessible, safe, and engaging recreational spaces.

**Improved Safety and Security:** The deployment of dedicated security personnel across three shifts, supported by lighting improvements at Jyotindra Dave Garden, has addressed pre-intervention safety concerns effectively. No criminal incidents have been reported across any of the three parks, and respondents including women feel confident visiting at all hours.

**Strong Maintenance and Management:** The implementation of robust management systems involving UNM Foundation, the Surat Municipal Corporation, and maintenance vendors has resulted in consistently high standards of cleanliness, vegetation upkeep, and facility maintenance. Regular and surprise inspections ensure accountability across all three parks.

**Significant Environmental Impact:** The interventions have made substantial contributions to urban biodiversity, green cover, and ecological sustainability in Surat. A total of 84,836 plants have been introduced across the three parks, spanning 83 trees and 176 plant species tailored to local coastal and semi-arid conditions. Recharge wells, composting practices, and sustainable water management reflect the programme's commitment to environmentally responsible park management. Estimated cumulative carbon sequestration from the Surat parks amounts to approximately 2,524 metric tons.

**Positive Social and Recreational Impact:** The parks cater successfully to diverse user groups and activities, fostering community interaction, promoting physical activity, and providing spaces for social and recreational activities at Jyotindra Dave Garden, Ravishankar and Lakeview Garden which functions as a vibrant community hub.

## 5.2.2 Detailed Architectural Design Assessment

Further analysis based on architectural design principles, drawing on the expert site assessment conducted during the April 2025 evaluation and observations from the NuSocia team's site visit in April 2026, reveals deeper insights into the design quality of the three Surat parks.

**Spatial Choreography:** Thoughtful planning of movement and experience is evident across all three parks. Jyotindra Dave Garden features a layout with clearly defined zones for play, rest, gathering, and movement, using built edges, view corridors, and intermediate nodes to enhance legibility and structure. Lakeview Garden demonstrates well-considered circulation across its large footprint, with seating and activity areas distributed to serve diverse user groups simultaneously.

**Scale of Spaces:** The design appropriately adjusts scale for comfort and function. Jyotindra Dave Garden and Lakeview Garden as community parks accommodate larger groups with expansive paths and lawns, while Ravi Shankar Maharaj Garden as a neighbourhood park offers a more intimate feel consistent with its localised catchment. Vertical elements including trees and lighting add perceived volume even within its smaller footprint.

**Circulation Logic and Variability:** Path networks across the three parks organise circulation through varied widths and articulated edges. Lakeview Garden and Jyotindra Dave Garden showcase well-designed curves and nodes that reflect pedestrian behaviour. Both parks would benefit from enhanced wayfinding infrastructure given their scale and diversity of activity zones.

**Active and Passive Spaces:** The parks successfully create a spatial gradient, offering zones from quiet seating corners for individuals to open lawns for larger gatherings. Jyotindra Dave Garden effectively uses layered planting, screens, and level changes to buffer between active and passive zones, creating a comfortable experience for diverse user groups visiting simultaneously.

**Materiality:** Material selection across the three Surat parks emphasises locally sourced, climate-appropriate options suited to Surat's coastal conditions, including stone, granite kerbs, and ferrocement seating. Durable choices including rust-resistant fittings and washable surfaces prioritise longevity and ease of maintenance across all three sites.

**Plant Material and Diversity:** The extensive plant diversity across the three Surat parks — 83 trees and 176 plant species — serves functional architectural roles beyond aesthetics, contributing strategically to microclimate control, shade hierarchy, and view framing while reinforcing regional identity and balancing ecological purpose with compositional beauty.

**Surface Distribution:** A balanced mix of surface types articulates spatial purpose across the parks. Soft zones of grass and soil allow for rest and water absorption, while hard surfaces cater to intensive use areas including playgrounds and walking tracks. This balance supports both recreational use and sustainable stormwater management.

**Maintainability:** Design across the three parks prioritises longevity and ease of upkeep through durable material choices and robust plant palettes suited to Surat's climate. The programme's dedicated gardening staff 32 across the three parks reflects the operational investment required to sustain the design's ambition over time.

**Sustainability:** Architectural sustainability is integrated through passive design, local material sourcing, and natural systems. Key contributions include estimated carbon sequestration of approximately 2,524 metric tons from the Surat parks, water conservation through recharge wells across all three sites, on-site composting at Jyotindra Dave Garden, and high species richness adapted to the local climate.

**Social Function and Acceptability:** Designs successfully accommodate diverse socio-cultural practices including yoga, festival celebrations, community gatherings, and children's play. The parks have become integral parts of daily life for surrounding residents — particularly Jyotindra Dave Garden, which naturally hosts spontaneous cultural events and organised community activities. User perception across all three parks is positive, with respondents associating the spaces with wellbeing, safety, and familiarity. Further enhancements in wayfinding and cultural programming could deepen this connection over time.

### 5.2.3 Areas for Improvement

**Universal Accessibility:** While entry ramps are in place at Jyotindra Dave Garden and Ravi Shankar Maharaj Garden, Lakeview Garden remains without ramps, a gap flagged in the April 2025 assessment that remains unaddressed. Internal accessibility for differently-abled users also requires attention at Ravi Shankar Maharaj Garden, where no accessible restroom or internal inclusive pathways exist.

**Pathway and Lawn Maintenance at Jyotindra Dave Garden:** Daily footfall at Jyotindra Dave Garden has increased significantly over the past year. Without a proactive maintenance strategy, continued high visitor volume risks accelerating wear and damage to pathways and planted areas. The garden management team is encouraged to develop a structured maintenance schedule that includes designated repair windows during off-peak hours and rotational closure of specific sections to allow for recovery.

**Basic Amenity Provision:** The absence of visitor restrooms and drinking water at Ravi Shankar Maharaj Garden represents the most consistently cited unmet need among users and warrants priority attention. At Lakeview Garden, existing restrooms are not accessible to differently-abled users and would benefit from appropriate modification.

**Feedback Mechanisms:** No formal feedback mechanism exists across any of the three Surat parks. The introduction of a structured complaint and feedback system would strengthen park governance and ensure user concerns are systematically recorded and addressed.

Overall, the UNM Foundation's park interventions in Surat represent a successful model for urban green space development and management. They have created well-managed, safe, ecologically valuable, and highly utilised community spaces that meaningfully enhance the quality of life for residents across three Surat neighbourhoods. Addressing the identified areas for improvement, particularly around universal accessibility, basic amenity provision, and feedback mechanisms, will further strengthen the long-term success and inclusivity of these valuable civic assets.

### 5.3. Comparative Analysis: Developed Parks vs. Maintenance-Only Park

The three Surat parks operate under two distinct intervention models, two parks were fully developed and maintained by UNM Foundation, while one was taken under maintenance only. A comparative analysis across key parameters reveals differences in outcomes between the two models.

Feature	Developed and Maintained — Jyotindra Dave Garden (JDG) and Ravi Shankar Maharaj Garden (RMG)	Maintenance Only — Lakeview Garden (LVG)
<b>Accessibility</b>	Entry ramps present at both parks	No entry ramp
<b>Amenities</b>	Sports court, restrooms at JDG; gaps at RMG	No sports court; restrooms not accessible to the differently-abled
<b>New plantation</b>	JDG: 63,750 RMG: 9,784	11,914

Table 12: *Comparative Analysis of Developed and Maintained Parks vs. Maintenance-Only Parks in Surat*

## 6. Conclusions

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The assessment of UNM Foundation's park interventions across three sites in Surat reveals a largely successful initiative that has transformed public green spaces into valued community assets. Across multiple evaluation criteria including accessibility, design, community engagement, environmental performance, social impact, safety, maintenance, and economic value, the interventions have yielded significant positive outcomes, enhancing the quality of life in the neighbourhoods served.

A primary success is the high level of community engagement across all three parks. Respondents visit six to seven days a week, with user satisfaction ratings improving meaningfully post-intervention across all three sites. Jyotindra Dave Garden in particular has emerged as a vibrant community hub, drawing approximately 6,000 daily visitors and hosting a diverse range of recreational, social, and cultural activities. The implementation of dedicated security personnel across three shifts and improved lighting has successfully addressed pre-intervention safety concerns, with no criminal incidents reported across any of the three parks and residents including women feeling confident visiting at all hours.

Environmentally, the three Surat parks represent significant ecological enhancements. A total of 85,836 plants spanning 83 trees and 176 plant species have been introduced, tailored to Surat's coastal and semi-arid conditions. Green cover at Jyotindra Dave Garden stands at 54% and at Ravi Shankar Maharaj Garden at 47%. Sustainable water management through recharge wells, borewells, and underground tanks across all three parks, combined with on-site composting at Jyotindra Dave Garden, reflects the programme's commitment to environmentally responsible park management. Estimated cumulative carbon sequestration from the Surat parks amounts to approximately 2,524 metric tons.

From a design perspective, the parks exhibit thoughtful architectural and landscape planning suited to their respective typologies and catchments. Jyotindra Dave Garden demonstrates strong spatial choreography, effective zoning, and a diverse plant palette that contributes to microclimate control and regional identity. Lakeview Garden and Ravi Shankar Maharaj Garden reflect appropriate scaling for their community and neighbourhood functions respectively. The use of durable, locally sourced materials and climate-appropriate plant species across all three sites contributes to long-term maintainability and sustainability.

Economically, the parks generate direct local employment 30 security personnel and 36 gardeners across the three sites and provide accessible, free recreational spaces that reduce

residents' transportation costs. At Jyotindra Dave Garden, positive spillover effects on surrounding businesses have also been noted.

The assessment highlights areas for improvement that will be addressed by UNM Foundation through planned initiatives. The installation of entry ramps at Lakeview Garden, previously flagged in the April 2025 assessment, has been identified as a priority and is part of the redevelopment plans. Similarly, Efforts are also underway to introduce app-based feedback mechanisms across all three parks, which will help strengthen user engagement and responsive management.

In conclusion, the UNM Foundation's park interventions in Surat serve as a meaningful model for urban green space development and management in a rapidly growing Indian city. Through thoughtful design, strong community focus, robust management, and a commitment to ecological sustainability, the programme has created safe, engaging, and valued public spaces across three Surat neighbourhoods. Addressing the identified areas for improvement will further strengthen the long-term success and inclusivity of these civic assets, ensuring they continue to serve the communities of Surat for years to come.

## **Project Documents reviewed**

- UNMF, u.d. Development details of Parks
- UNMF, u.d Inventory of Plantation
- UNMF u.d. MIS sheet- Year Wise details of plantation
- UNMF, u.d selection criteria for plant species
- UNMF, UNMF, 2017, Udyan Pravaha - a public space initiative Report
- UNMF, u.d Biodiversity highlight at Surat Parks
- UNMF, Plant descriptions for Surat Parks

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# ANNEXURE

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## Annexure A: About NuSocia

NuSocia is an impact advisory firm, headquartered at Pune and having its consultants working across Delhi, Mumbai, Bangalore, Kolkata and Pune and at locations outside India at Dubai, Toronto and Muscat.

Established in 2017 and incubated at IIM Bangalore NSCRCEL, NuSocia is working with the mission to enable the Social ecosystem with impact that is evident. The team comprise of consultants, researchers, social sector professionals and data scientists with a common passion to generate ideas that matter for the people and the planet. It work with Corporates, Governments, Foundations, and Non-profits to help them maximize, manage, measure, and communicate their social impact.

Clients select us for our expertise to bring the best of the global framework and marry it with the ability to connect at the grassroots level and thus creating and delivering practical solutions to the unique client requirements. As a knowledge driven organization, NuSocia focus on research and collaboration to design innovative solutions and work across the entire social impact lifecycle offering services in CSR strategy, needs assessment, program design, implementation, monitoring & evaluation, impact assessments, communication, and more.

With a global consulting team, localized partnerships and 60% female workforce, NuSocia is known as a social impact advisory built on the core pillars of design thinking, collaboration, and knowledge-sharing.

## Annexure B: Sample of interview schedule

SI No	Questions
1	Name, age, gender, occupation
2	Where do you live? near by park/garden, neighbourhood?  How was it before the re-development? Key issues observed ? Do you remember when the park was re-developed?  Are you aware of the organization responsible for developing and maintaining the park?
3	How often you visit this garden?  How easy is it for you to reach this garden?  What mode of transport do you use to come here? (Walking, cycling, public transport, private vehicle, etc.)  Do you feel the garden is well connected to surrounding areas?
4	Are the entry and exit points sufficient and convenient?  Is the garden accessible for senior citizens, children, and people with disabilities?  Are there enough ramps, smooth pathways, and accessible seating for all age groups?
5	What activities do you usually engage in when you visit the garden? (e.g., jogging, yoga, social gatherings, reading, playing, cultural events)  Are there any specific spaces or activity areas in the park that require a payment or entry fee, such as the indoor gymnasium or open theater?
6	Do you think there are enough amenities like benches, shaded areas, open gyms, and play areas?  What is the condition of these amenities, and are they maintained regularly?

7	<p>Have you noticed security measures such as guards, cameras, or emergency services?</p> <p>Do you feel safe while visiting the garden at different times of the day?</p> <p>Have there been any crime incidents in the park/garden?</p>
8	How are the pathways, seating areas, and water bodies maintained? Have you observed regular cleaning and upkeep?
9	Are restrooms available in the garden? If yes, are they accessible to all groups, including differently-abled individuals, and are they well-maintained?
10	Do you notice regular upkeep of plants, lawns, and garden infrastructure?
11	Are any events or activities organized in this park/garden? If yes, are they held regularly? Have you ever participated in any of these events?
12	Are you aware of any feedback or complaint mechanism for the park? If you need to report an issue with facilities or park staff, where would you go to file a complaint?
13	Do you think this garden has had a positive impact on the local community and nearby businesses?
14	Do you believe the development of the park has influenced property values in the surrounding areas?
15	How can community participation be improved in maintaining and enhancing the garden?
16	What improvements would you suggest to enhance your experience? (e.g., better lighting, extended hours, more activities, better security)

## Annexure C: Assessment Team

Sindhu Nambiath	Overall guidance
Namrata Shinde	Project Manager
Nisha Poojari	Project Coordinator
Gunjan Khorgade	Data analysis and compilation of the assessment report