



# Tree Plan Manchar Nagar Panchayat Dist. Pune (Maharashtra) Report 2024- 25



Prepared by  
Prakrutiparv Green Private Limited  
Pune - 411038





Tree Plan of Manchar Nagar Panchayat 2024-25

# **TREE PLAN REPORT OF MANCHAR NAGAR PANCHAYAT 2024-25**

Report prepared by:



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## PROJECT TEAM

<b>Project Co-ordinator</b>	<b>Mr. Dnyanesh Rathod</b>
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<b>Field Co-ordinator</b>	<b>Ms. Sayali Dhole</b>
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## 1. SUMMARY

Tree Census of Manchhar Nagar Panchayat was carried out during the month of February- March 2023 in 16 Wards of city, spread over an area of 12 sq. km. Geo-coordinates of each tree were recorded using GPS instruments. The extensive field work resulted into count of 20,537 Trees. Total Native trees and Non-Native trees are 14,050 and 6,517 respectively. Along with the tree count, tree cover was also recorded via Google earth pro software. To achieve national goal of having 33% green cover, some empty pockets with minimum green cover were marked.

Sr. No	Component	Result and Description
1	Total number of Trees	20,537
2	Number of Tree species	115
3	Total Green Cover required	33 %
4	Total Green area exist	43.5 %
6	Total Road side area to be covered	6.50 Kms
7.	Total Hill Top area to be covered	12 Potential Site
8.	Replantation pockets	4 Potential sites



## 2. INTRODUCTION

Various forces brought about a decrease in forest area of the world. It has been estimated that rate of deforestation of the world forest resources was 0.3 percent per annum during 1981-85. The national goal should be to have a minimum of one-third of the total land area of the country under forest or tree cover.

In the hills and in mountainous regions, the aim should be to maintain two-third of the area under such cover in order to prevent erosion and land degradation and to ensure the stability of the fragile eco-system. Around 33% or one-third of the land should be under the forest cover because forests help in the conservation of the natural environment. An inadequate forest cover will have the following implications:

- Tribals, animals and birds will lose their habitat. Destruction of forests would also affect the food chain. It will also lead to the destruction of bio-diversity.
- Inadequate forest cover would result in soil erosion
- Forest cover also determines the climate of a region. Depleting forest cover would result into rise in global temperatures and increasing droughts which will affect every living form of life.
- Forest also helps in minimising the effects of pollution. It is because of all the above advantages of the forest cover; it is always suggested that the one-third of the total land area should be covered with forests.

India has committed to reducing greenhouse gas emission intensity under its nationally determined contributions (NDC), made at the United Nations Climate Change Conference in 2015 (COP21). To achieve this goal, India plans to create carbon sinks of 2.5 to 3 billion tonnes of carbon dioxide equivalents by increasing its forest and tree cover to 33% of its land area.





### **Majhi Vasundhara Abhiyan**

To achieve National Goals, Maharashtra Government has come up with innovative initiative called “Majhi Vasundhara Abhiyan” The Environment and Climate Change Department, Govt. of Maharashtra has taken up a holistic initiative, Majhi Vasundhara (My Earth), to make citizen aware of the impacts of climate change and environmental issues and to encourage them to make a conscious effort towards the improvement of the environment.

This initiative will also support the state in the implementation of climate change mitigation and adaptation measures. It is a unique integrated first-ever exercise in India by the department, focusing on all five elements of nature i.e. “Panchamahabhuta” comprises Bhumi (Earth), Jala (Water), Vayu (Air), Agni (Energy), Akash (Enhancement) to ensure sustainable development for the state.

The “Maharashtra Preservation of Trees Act”, No. XLIV of 1975 states that it is duty on the Tree Authority of the Municipal Corporation to carry out a census of trees in all lands within the jurisdiction once in every five years.

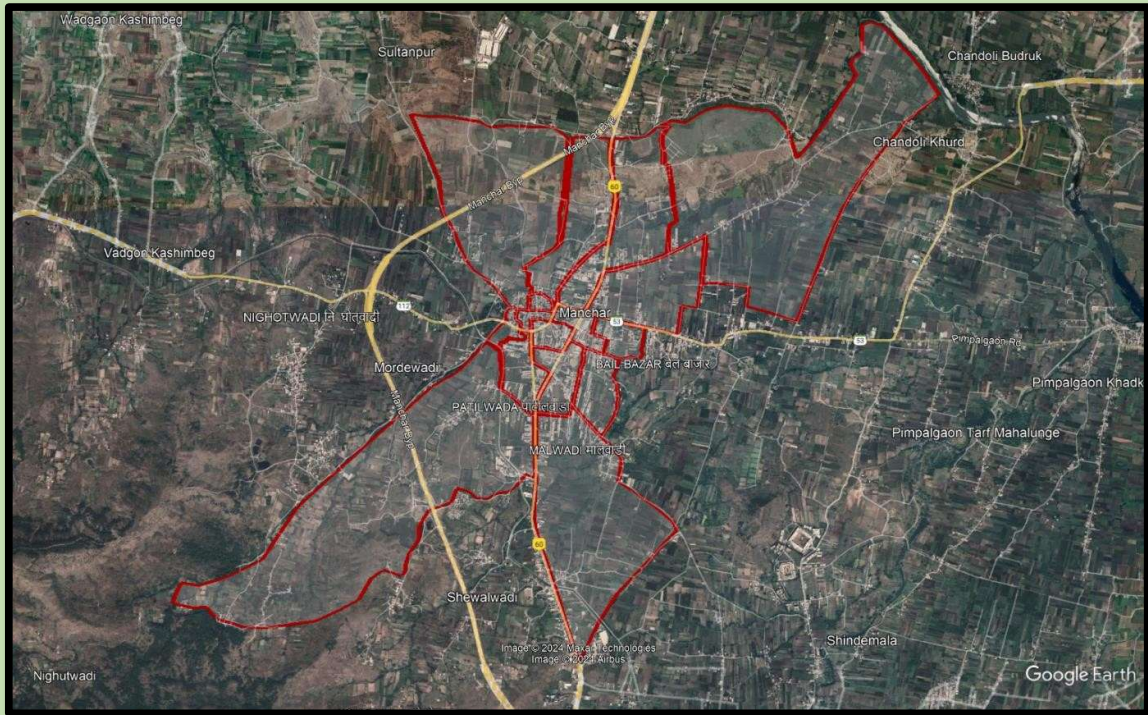
Percentage of forest cover recommended by National Forest Policy (1988) is 33% in plains, 67% in hills. The Indian National Forest Policy focuses on the importance of forests in maintaining ecological balance and environmental stability.

### **What is the importance of Tree plan?**

After on field evaluation, tree plan helps us to identify potential sites where plantation can be done to achieve further goals. This would include all the empty pockets in and near by area of town. This includes road side space, river side space and other Government owned land. This can also be achieved by involving local people and other related institutes in this initiative.



## Tree Plan of Manchar Nagar Panchayat 2024-25



### LOCATION OF TREE CENSUS PROJECT:

Manchar is a census town and Nagar panchayat in Ambegaon taluka of Pune district in the Indian state of Maharashtra. City is located at 19.0°N 73.93°E. It has an average elevation of 682 metres (2237 feet) with 12 sq.km of area.

### ABOUT AREA SURVEYED:

Manchar city comes in a slight dry arid region and acts as a forest corridor for many wild animals connecting Junnar and nearby areas. Area has good amount of floral diversity with majority of Native species. This city plays a crucial role in harbouring and supporting many diverse wildlife and plays key role in environmental balance.

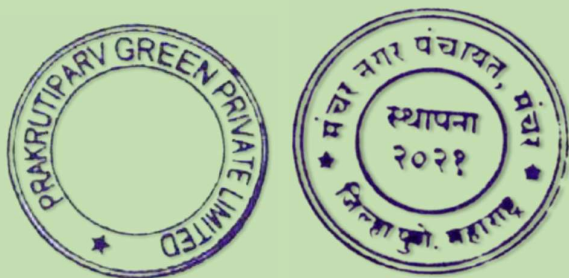




### 3. METHODOLOGY

The purpose of the project was to create a detailed inventory of Tree individuals and species known as the “Tree Census”. In total, 12 sq. kms of the project area was surveyed and each tree was counted and was get tagged on a GPS device. The data collection was done from all the 16 wards separately in the Manchhar City. Trees having woody stem and having minimum girth of 10 cm in diameter at the chest level of an average height person and height of about 3 m high were counted. Trees which fit in these criteria were counted. Data was collected from all wards using GPS etrex 30 instruments. Information like Scientific Name, Common name, Diameter, Height, Health condition, GPS location, ownership was recorded in field itself.

This data was fed into Microsoft Excel software. During the field work, the team noted down location, ownership, counted each individual tree, measured the diameter, noted down the approximate height and age of the same. The condition of the tree whether in healthy condition, infected condition, dead or mechanically cut – were mentioned. Trees growing on the roadside, in the government plots, agricultural boundaries and in the private plots were included in the census. Most of the tree identification was done in field. In case of unidentified trees, specimens were collected and identified with help of literature and with the help of plant taxonomist. Data from all the instruments was collected and analysed using MS excel. Technology used GPS device along with the Google earth pro software was used to mark GPS positioning of each tree individuals.



## 4. OBSERVATION

Table 4.4: Count of total trees and its green canopy cover in each ward wise.

Sr. No	Ward No.	Ward Area (Sq.mt)	Total Tree	Total Tree Canopy (Sq.mt)	Green Cover Percentage (%)
1	Ward 1	1225082	1969	539406	44.43
2	Ward 2	437663	1807	182579	41.72
3	Ward 3	581585	2585	396388	68.16
4	Ward 4	2477419	97651	2170361	87.61
5	Ward 5	431369	724	73000	16.92
6	Ward 6	95165	1075	69748	73.27
7	Ward 7	78630	162	5722	7.28
8	Ward 8	21965	124	4008	18.25
9	Ward 9	28644	116	17928	17.20
10	Ward 10	43606	352	20910	47.97
11	Ward 11	2469261	6311	97463	40.40
12	Ward 12	150300	732	18249	21.84
13	Ward 13	65859	190	9916	15.06
14	Ward 14	161846	599	73204	45.23
15	Ward 15	1249172	2533	458685	36.72
16	Ward 16	178874	994	76618	42.83
	<b>Total</b>	<b>9623597</b>	<b>238958</b>	<b>3666592</b>	<b>43.5</b>

## RESULT:

- The total green cover percentage across all wards is **43.5%**
- Ward 4 has the highest green cover percentage (87.61 %) while Ward 7 has the lowest (7.28 %)
- The total tree canopy cover depends upon the ward area and growth of vegetation.
- Ward 11 has the most total tree canopy cover (997463 sq.mt), which indicates the large number of mature trees.
- Despite the better green cover percentage, some of the ward's area may appear open. This is because the dominant tree species are deciduous, meaning they lose their leaves during the summer season.



## Tree Plan of Manchar Nagar Panchayat 2024-25



Fig 5.2 – Tree planning mapping.

- White line passing through Ward no. 1, 4 and 11 indicates empty space along road where plantation could be done.
- Blue polygon indicates empty space and Hill Top and other open spaces where more plantation could be done.
- Area marked in yellow colour are where wild shrub exists and could be uprooted and made available for planting native trees.



## 5. RECOMMENDATION

### Scope 1

- Initially target open spaces inside the town like road side space, playground and gardens.
- Various institutes like government school campus, grounds and other places can be planted with native trees.

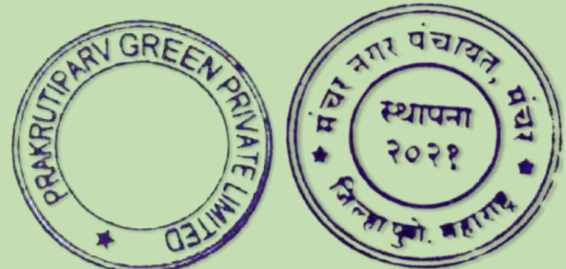
### Scope 2

- Manchar City has many small Hills, its top areas are still open. Planting Trees here will not help to increase green cover but also reduce soil erosion and develop natural habitat for many birds and other animals.

### Scope 3

- Few areas like Ward 3 and 4 have good amount of green cover, however it also consists equal number of Non-Native species. This area could be targeted in Scope 3.

All these can be achieved with proper initial study of river, soil and other related factors for high success plantation programs.



## Tree Plan of Manchhar Nagar Panchayat 2024-25

### Yearly Plan

Tree plan is a step wise procedure for identifying and mapping of potential areas, establishing plant nursery, site preparation, plantation and Monitoring. The process can be effectively implemented through setting timelines in accordance to ground conditions and seasons. Tree planning can be conducted through carrying out stepwise plantation in identified Scope areas 1, 2 and 3 namely. Nursery establishment and sapling preparation of selected tree species will be continuous process.

Following is the yearly schedule for Scope 1 areas.

Duration	Work	Details
2 Months	Identifying and Mapping potential Scope 1 area	Step by step area coverage and mapping of potential sites for plantation
June – July, 2025	Nursery establishment (For specific species to be planted in Scope 1, 2 and 3 areas)	Seed collection (June-July) Sapling preparation
Aug-Sept 2025	Removal of weeds, invasive and non- indigenous species in Scope 3 area	Identified Site Preparation by removal of weeds and invasive, non-indigenous
June – July, 2025	Site preparation for Plantation Scope 1, 2 and 3 area	Digging pits, mulching, compost addition, sapling plantation
August - December, 2025	Plantation Monitoring	Plant tagging, Sapling protection from grazing, fire, De-weeding, watering, fencing, Sapling monitoring for survival

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