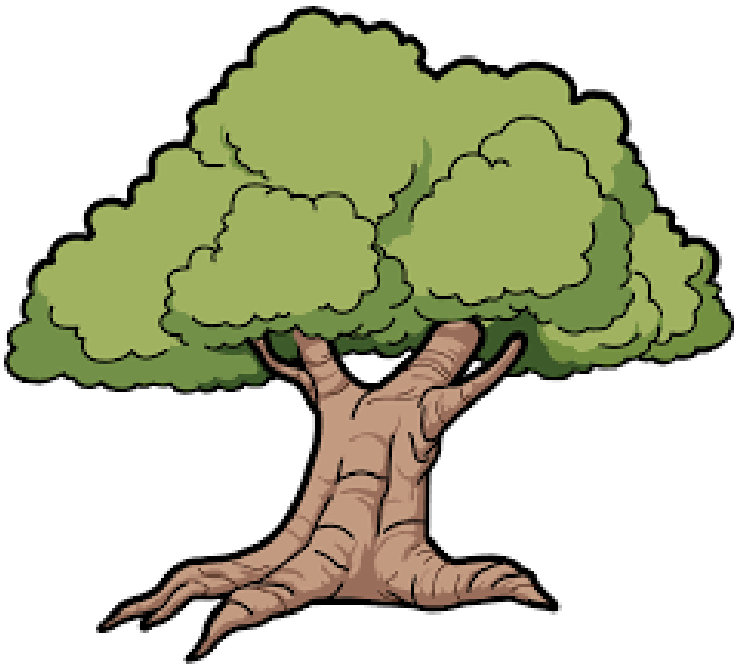
# TREE CENSUS



*Tree Census – GK Enclave 2*

*Conducted on behalf of Compassionate Living*

*By*

**SARVAG RIAN SAHU & ARYAMAN ARORA**

# ACKNOWLEDGEMENT

*It is my pleasure to have the opportunity to extend my heartiest thanks to everyone who helped me through the successful completion of my project, which is a great source of learning and experience for me.*

*My sincere thanks to* ***Ms Padmavati Dwivedi (Founder, Compassionate Living) , residents of the colony Madhumita N Sahu, Aarti Arora, Sangeet Tuli and Devender Singh*** *under whose able guidance and kind cooperation I was able to complete the detailed Tree Census.*

*A man doesn't plant a tree for himself. He plants it for posterity.*

*Alexander Smith*



# INTRODUCTION


For the present study, the tree census was carried out to create a more efficient, portable and comfortable database of trees in Greater Kailash Enclave II.

The tree census is an important scientific, technical, and educational effort. The results enable us to characterize the tree population in terms of its structure, function, and value. This information is used in a variety of ways, including:

Management: Enables daily and strategic decision-making based on the composition, condition and distribution of trees.

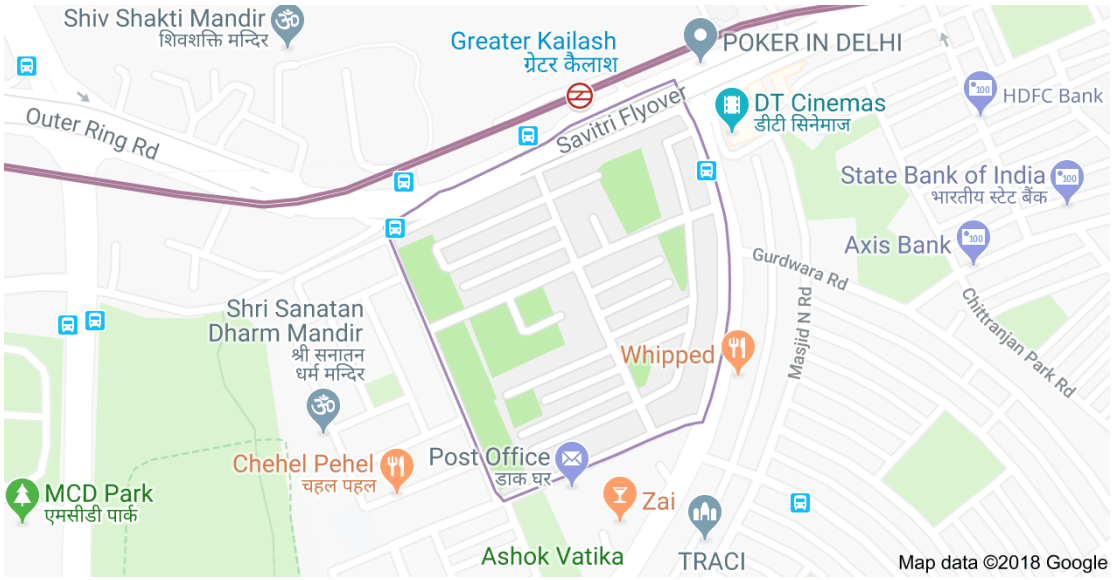
Planning: Tracking the changes that have occurred in the landscape and predicting or analysing the changes / impacts that the proposed project will have on the landscape.

Mitigation: Understanding of number, diversity and density of trees helps in developing appropriate mitigation measures.

# ABOUT GK ENCLAVE 2

A small quaint colony of 750 row houses, Greater Kailash Enclave 2 is nestled between GK 3 Masjid Moth on its western side, the Outer Ring Road on the north, the erstwhile Savitri Cinema complex on the east, GK 2 post office and the local market complex on the south. The old Jahanpanah City Forest which is a splintered part of the ridge forest, is just a few hundred meters away from the colony.

The colony is dotted with 8 small and big parks which serves as a recreational and meeting place for the 3000 odd residents of the colony. The colony boasts of a thick cover of trees both in the various parks and on both sides of the colony roads. The trees are home to not only numerous bird and animal species but it's shade protects more than 1500 cars that are parked outside on the roads.



# PURPOSE

The rampant construction activity undertaken by the builders in building high rises in place of single storey houses has put a tremendous amount of pressure on the trees standing inside as well as outside the plot on which construction is happening. Rampant lopping and pruning of trees has led to a massive loss of green cover inside the colony.

This tree census is a continuation of a project started by Ms Padmavati Dwivedi from the beautiful South Delhi neighbourhood of Sarvodaya Enclave. The purpose of the census is

* to create awareness and interest in trees and nature amongst the people, especially the youngsters in the colony.

*keep a record and monitor the health of the trees

*regulate pruning and felling

*plan out plantation of saplings in the colony

# IDEA BEHIND TREE CENSUS

The modern world runs on data. From Silicon Valley to Wall Street, the 21st century is obsessed with data. It's the backbone of every major policy decision, and the basis of every choice the market makes. Data quantifies the chaos that rages around us. It demystifies the world around us. This is the principle behind this Tree Census.

Climate change is real and it is happening now. The good news is that there is a significant change in people's behaviour and perceptions around the world. The bad news: there's a serious dearth of data. While a host of organisations, and environmentalists are taking up causes across of the globe and fighting global warming in their own way, most of them are highly unaware of the reality of the circumstances. An intricate and detailed database on the plethora of trees a local residential colony has to offer helps in three ways:

1) It helps local governments and environmentalists in the area take a more responsible and informed decision before initiating a scheme or program.
2) It's an invaluable tool for maintaining these trees and parks especially for local gardeners.
3) Trees in urban settings are often choked up as they're cemented up with barely any free soil around them. This census records the number and location of such trees so they can be decongested.

# OVERVIEW AND METHODOLOGY

*The Tree Census and Labelling Project was initiated by providing basic tree identification training to the volunteers: Sarvag and Aryaman. The students were then made to identify the trees located in the colony under the purview of Padma Dwivedi. She verified the trees identified by the students and also provided inputs for the next phases of the project. This tree census accounted for roughly 300 trees across Greater Kailash Enclave – 2.*

*Each tree was identified and given a unique number. Some of the trees were already labelled as per the previous census conducted by the MCD. The trees that weren't numbered were given the same number as the one before them with the addition of a letter. Say, the volunteers discovered 2 new trees that hadn't been numbered between 15 and 16, they were given the number '15a' and '15b.' The volunteers were following the numbers already marked out as per the previous census. Since, some of those trees have now been cut down or couldn't be located they have been left blank in the census to be filled in when they have been located. The project was carried out in 3 primary phases:*

| ***PHASES*** | ***AREA*** |
|---|---|
| *I* | *Main Colony Road* |
| *II* | *A/B Block* |
| *III* | *C/D/E Block* |

# MOST COMMON TREES

## ALSTONIA

*alstonia scholaris*

Saptaparni

The Alstonia is an evergreen tree which rises up to a height of 60 metres and is around 2 metres wide. The vibrant hues of flowers that adorn the tree are a site for sore eyes in a bleak Delhi landscape. The tree traces its roots back to Ancient India and has immense medicinal value for Ayurvedic medicines. The bark is used to cure malaria, rheumatism, toothache and snake bites. The latex is used in treating cough, sore throat and fever. Its wide canopy provides ample shade to stop for a cool drink in the hot summer!

## YELLOW OLEANDER

*cascabela thevetia*

Kaner

The Yellow Oleander is a tropical evergreen shrub. It's a drought resistant plant native to a large part of India. Yellow oleander trees' fruit changes colours as it matures. The fruit starts out green, then turns a lipstick red, but finally matures into a dull black. The stone inside is brown and smooth and makes nice necklaces. It's flower looks like a narrow tube that flares out at the tip into five petals, twisted into a spiral shape. Is the yellow oleander extremely poisonous? Yes, it is. Every part of the plant is poisonous to insects and animals.

# ASHOKA

*polyalthia longifolia*

## Mast Tree

The Ashoka is a small evergreen tree with oblong, paripinnate, and rigidly sub-coriaceous trees. The tree has aromatic orange coloured flowers. The Ashoka is an integral part of Indian history and is commonly known to decrease your sorrows.  Its bark has natural detoxifying properties, which make it very useful to keep the body free of toxins. The beautiful contrast of new golden and coppery brown leaves against old dark-green leaves make a spectacular show. The Ashoka's varied medical and spiritual use make it a popular tree among the residents and a tremendous number of them can be seen lining the roads.

# AMALTAS

*cassia fistula*

## Purging Cassia

A native to the Indian suncontinent, the Amaltas is known by many names like Laburnum and the Golden Rain tree. It grows to a height of 10-20 metres and is known for its arresting beautiful hanging bunch of bright yellow flowers. It blooms well when there is a marked temperature difference between summer and winter around late spring. The fruits are dark brown and around 2 feet ling containing 40-100 seeds each. All parts if the tree are an important component of traditional Ayurvedic medicine.

# MOST COMMON BIRDS

## PARAKEET

*melopsittacus undulatus*

*Tota*

They are native to India and have successfully adapted to the chaotic urban spaces. They are sexually dimorphic, the males having a distinct red and black ring around their neck and the female and the young ones have no or very faint rings around their neck. They are often seen in flocks all around the city.

## COMMON MYNAH

*acridotheres tristis*

*Maina*

it is also called the Indian Mynah is native to India and Southeast Asia. An omnivorous open wooded bird with a strong territorial instinct, the mynah has adapted extremely well to urban environments. Mynahs are accomplished scavengers feeding on almost anything from insects, fruits and vegetables to scapes, pet foods to even fledging sparrows

## RED-WHISKERED BULBUL

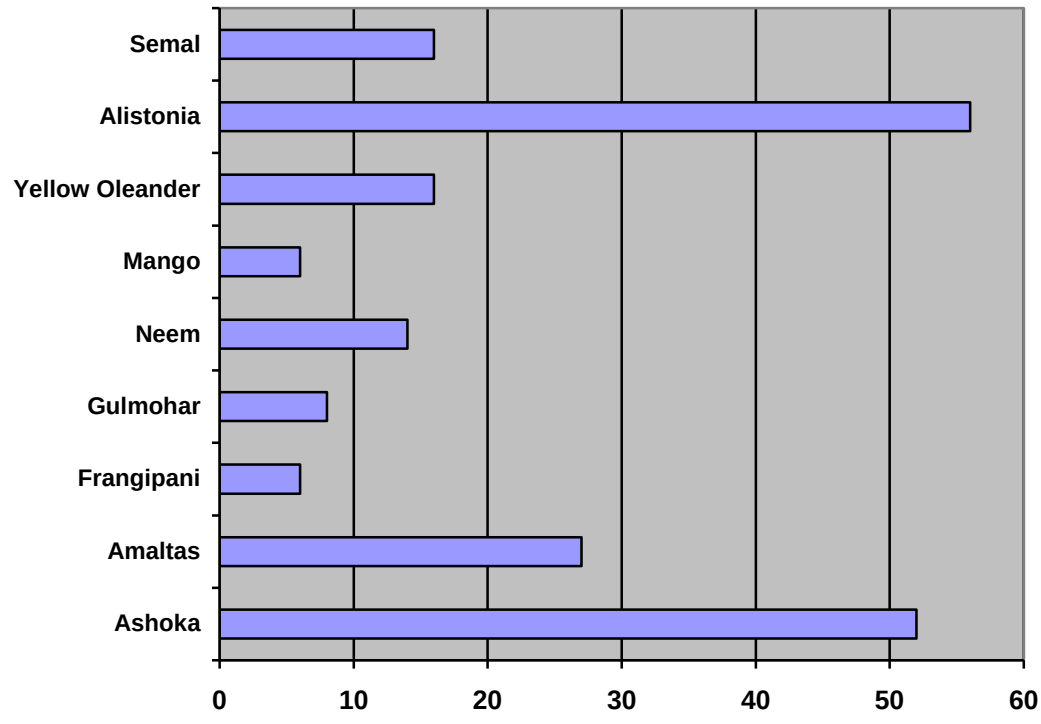
*pycnonotus jocosus*

*Common bulbul*

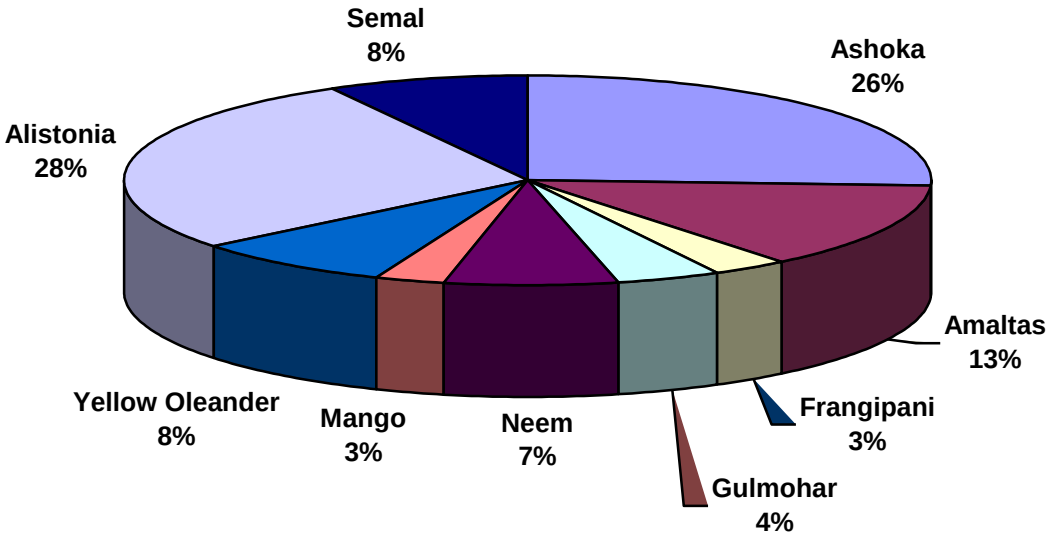
The red whiskered bulbul or the crested bulbul is a passerine bird found in Asia. The red whiskered mark from which it gets its name, is located below the eye. It has a loud three or four note call. They are very common in hill forests and urban gardens.

# TREE STATISTICS

| *Name of Trees* | *No. of Trees* | *Percentage* |
|---|---|---|
| *Ashoka* | *52* | *26* |
| *Amaltas* | *27* | *13* |
| *Frangipani* | *6* | *3* |
| *Gulmohar* | *8* | *4* |
| *Neem* | *14* | *7* |
| *Mango* | *6* | *3* |
| *Yellow Oleander* | *16* | *8* |
| *Alistonia* | *56* | *28* |
| *Semal* | *16* | *8* |



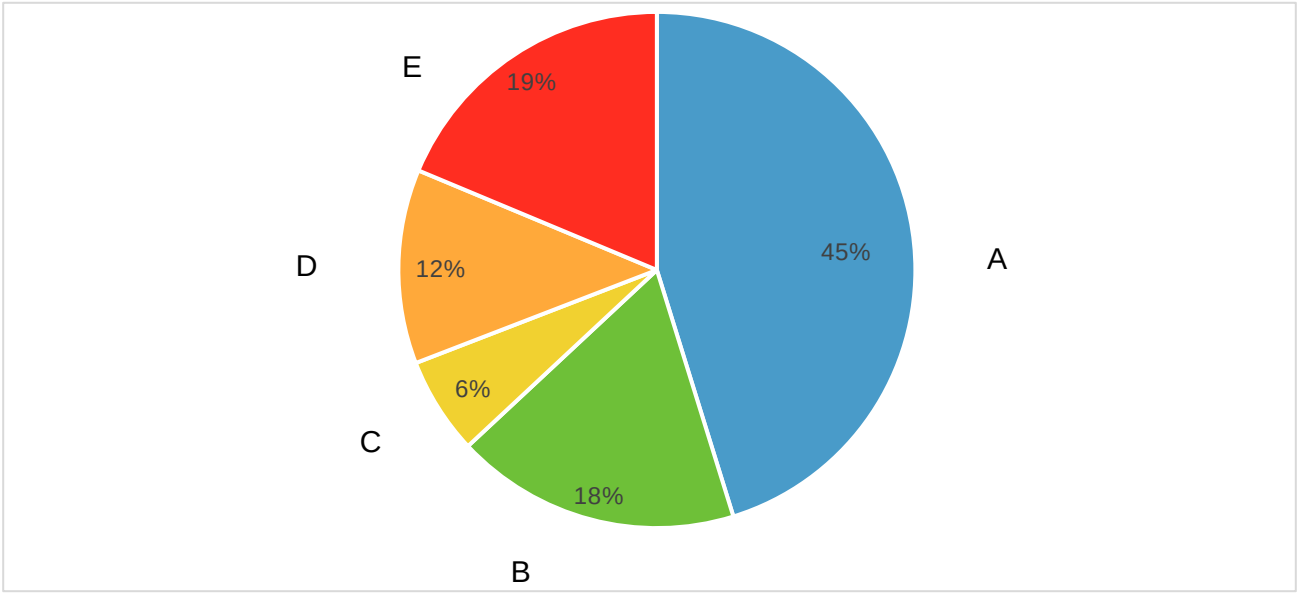
***Name of Tress in Percentage***




In Greater Kailash  Enclave II there are 9 different varieties of trees of which Ashoka and Alistonia are the dominant types. These two trees constitute  54% of the total population.

# *SOIL COVER AROUND TREES*

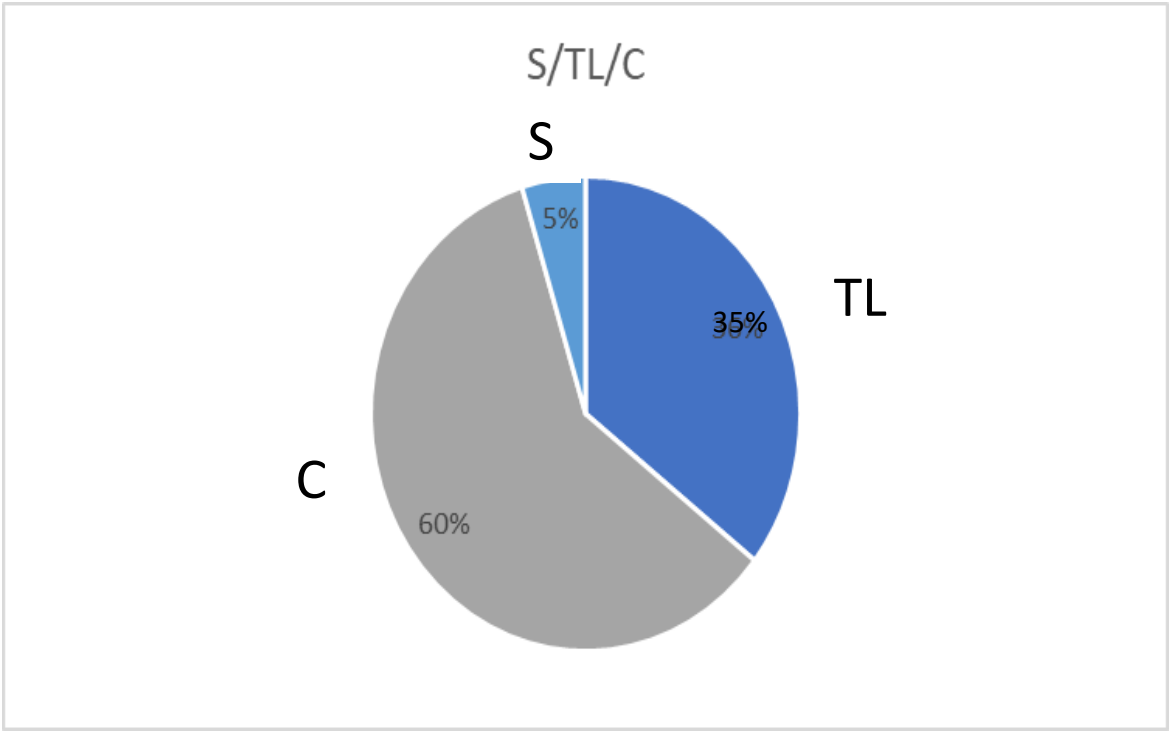
| CATEGORY | NUMBER OF TREES | % OF TREES WITH SOIL COVER |
|---|---|---|
| A (upto 1ft) | 104 | 45% |
| B (1-2ft) | 41 | 18% |
| C (2-4ft) | 14 | 6% |
| D (4-6ft) | 28 | 12% |
| E (>6ft) | 43 | 19% |




This shows that about 37% of the trees surveyed has a reasonable to very good cover of soil around the trunk. This needs to be preserved for the healthy growth and survival of the trees.

## *NATURE OF SURROUNDING AREA*

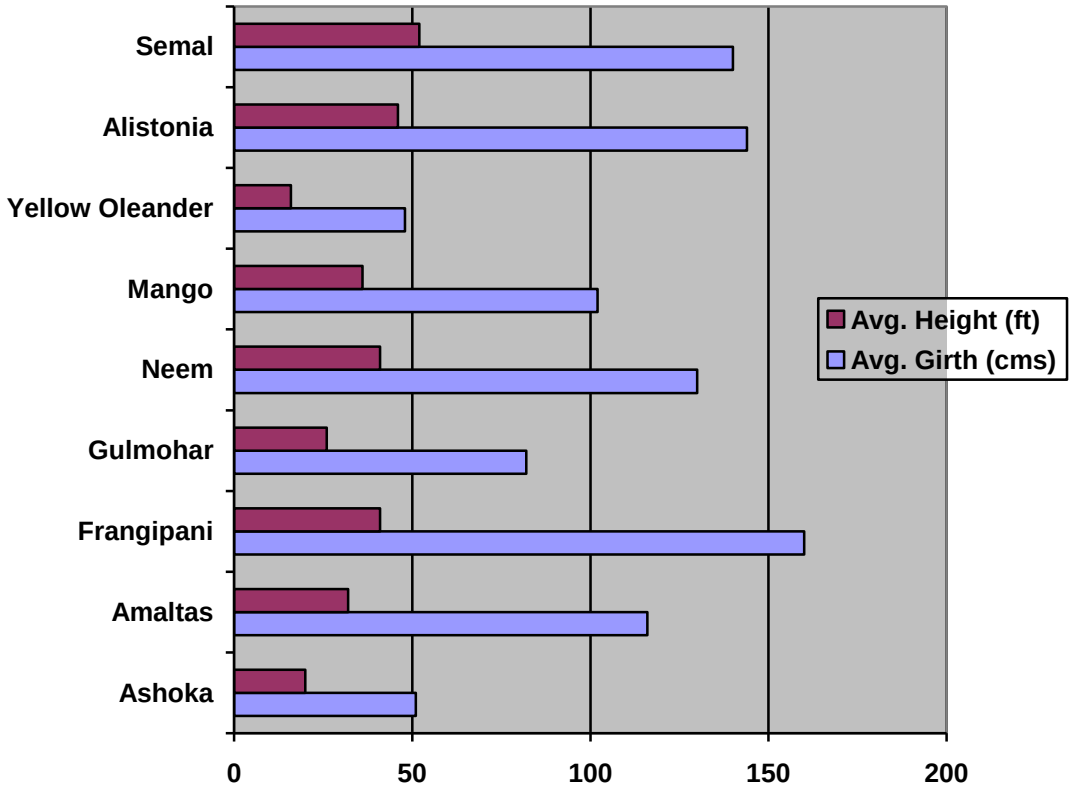
| CATEGORY | NUMBER OF TREES | % OF TREES |
|---|---|---|
| TL (Tiled) | 89 | 35% |
| C (Cemented | 149 | 60% |
| S (Loose soil) | 12 | 5% |




A majority of the trees are surrounded by a cemented area (60%) or tiles (35%). Only 5% of the trees have open soil area.

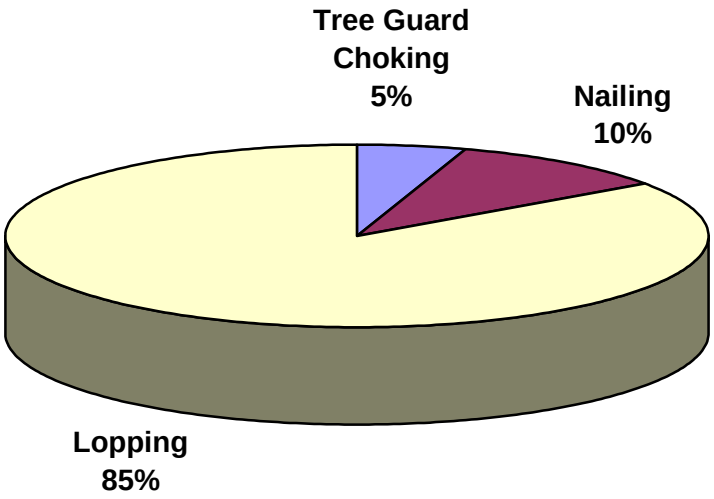
# TREE DATA

| *Name of Trees* | *No of trees* | *Avg. Girth (cms)* | *Avg. Height (ft)* |
|---|---|---|---|
| *Ashoka* | *52* | *51* | *20* |
| *Amaltas* | *27* | *116* | *32* |
| *Frangipani* | *6* | *160* | *41* |
| *Gulmohar* | *8* | *82* | *26* |
| *Neem* | *14* | *130* | *41* |
| *Mango* | *6* | *102* | *36* |
| *Yellow Oleander* | *16* | *48* | *16* |
| *Alistonia* | *56* | *144* | *46* |
| *Semal* | *16* | *140* | *52* |



# TREE BODY DAMAGES

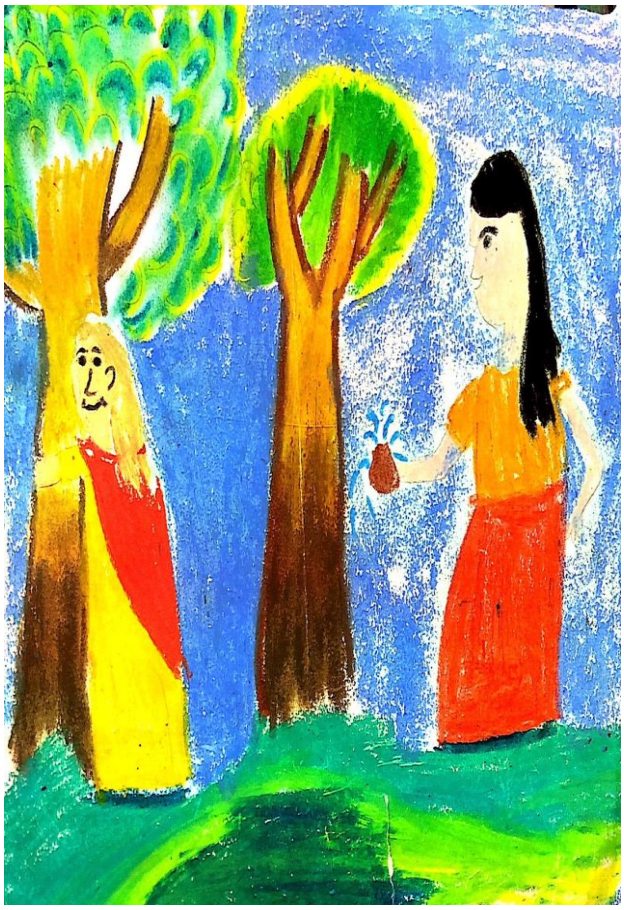
| *Name of Trees* | *Tree Guard Choking* | *Nailing* | *Lopping* |
|---|---|---|---|
| *No of trees affect* | *12* | *24* | *198* |



# *THOUGHTS*

***Whenever you feel dispirited, weary, or down, simply look up to the tree and you will feel better. Love a tree today because trees are keeping us and this planet alive.***

**Anonymous**



***"Consider a tree for a moment. As beautiful as trees are to look at, we don't see what goes on underground - as they grow roots. Trees must develop deep roots in order to grow strong and produce their beauty. But we don't see the roots. We just see and enjoy the beauty. In much the same way, what goes on inside of us is like the roots of a tree."***

***MIS Student***