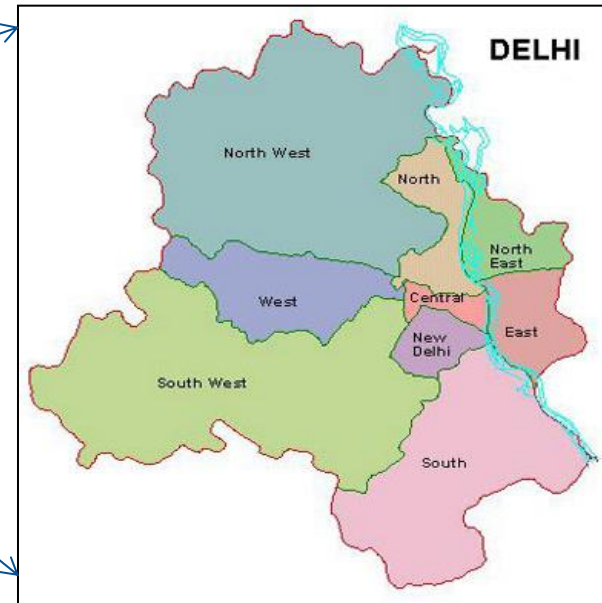


DYING TREES OF DELHI

**DEPARTMENT OF FORESTS & WILDLIFE
GOVT. OF NCT OF DELHI**



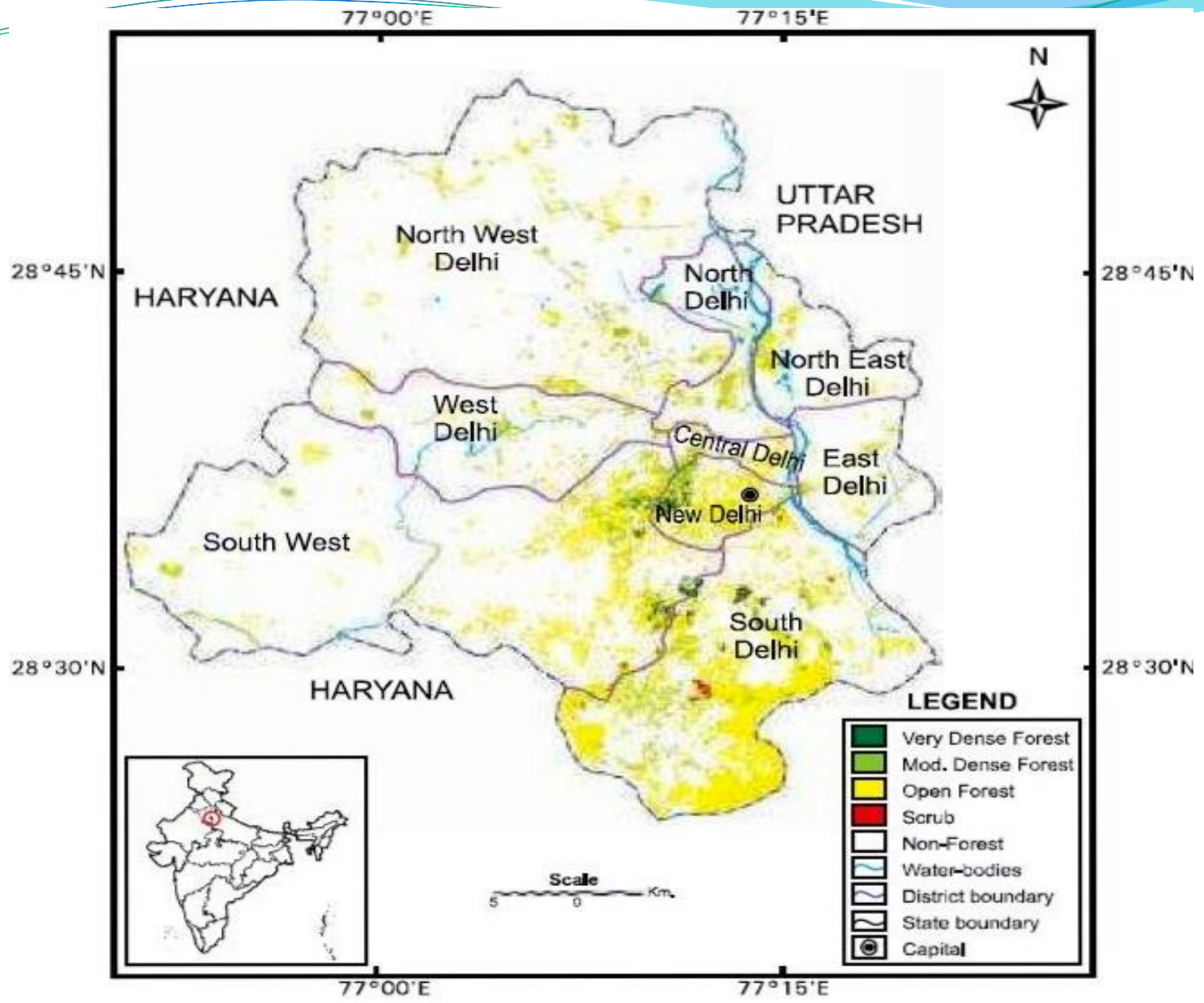
DELHI At A Glance



- **GEOGRAPHICAL AREA** : 1483 sq.km.
- **CAPITAL** : New Delhi
- **RECORDED FOREST AREA** : 85 Sq.Km
5.73 % of Geographical Area
- **FOREST COVER** : 176.20 Sq. Km
11.88% of Geographical Area
- **FOREST & TREE COVER** : 19.97% of Geographical Area
- **DISTRICTS** : 9
- **CURRENT POPULATION** : 16.75 million
- **RIVER** : Yamuna

Delhi Green Facts

- **Delhi is one of the Greenest Capital Cities in the World.**
- **Green cover of Delhi increased from 22 sq.km in 1993 to 296.20 sq. km in 2011.**
- **Green cover is 19.97% of the Delhi's geographical area, 11.88% being forest cover while 8.09% being tree cover outside forests.**
- **1 Wildlife Sanctuary (4845.58 acres), 5 Proposed Reserved Forests and 25 Protected Forests.**
- **A total of 42 city forests.**

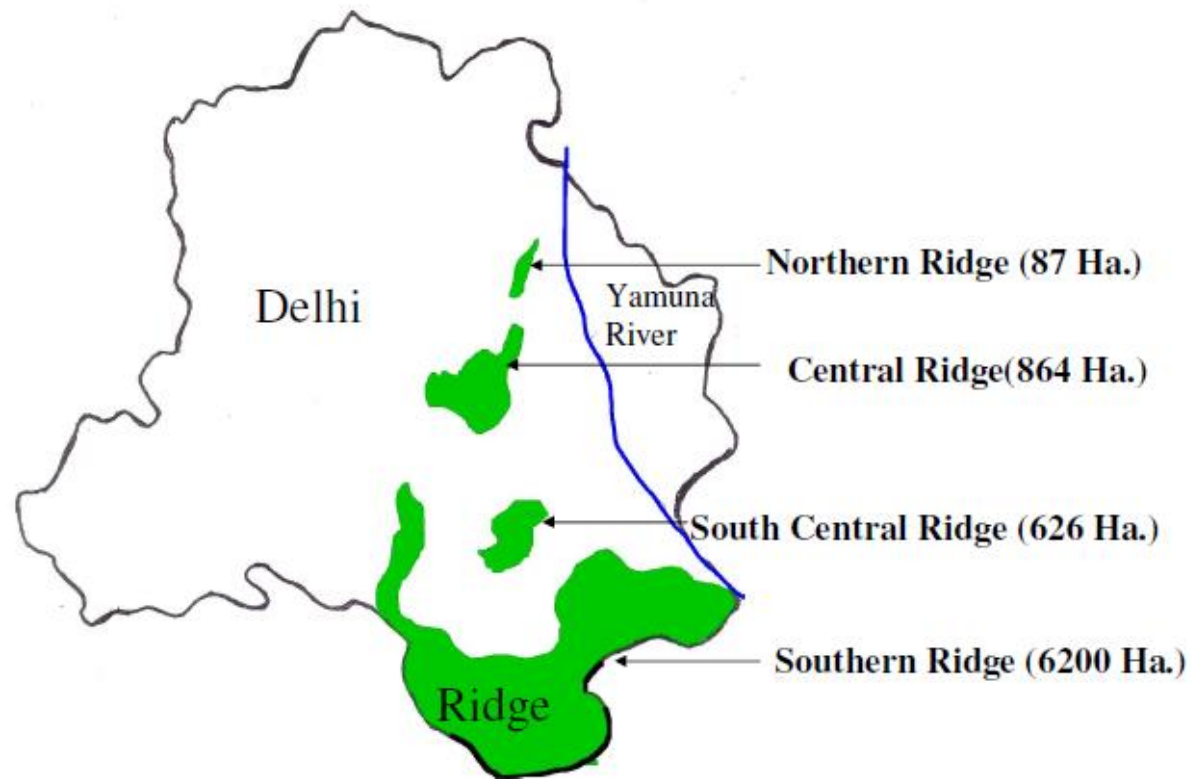


Green Cover Map of Delhi

Landscape highlights:

- **River Yamuna and the Delhi Ridge are two main natural features of Delhi.**

Delhi's Natural Heritage "The Delhi Ridge"



RIDGE LAND IN DELHI

- The Delhi Ridge land, extension of the Aravalli is represented by an area of 7784 ha.
- Typical open canopied thorny scrub forest.
- The ridge forest in Delhi is contiguous with the forests in Faridabad, Haryana forming a contiguous corridor for wildlife extending from the Arvallis in Haryana to the entire Southern boundary of Delhi along the villages of Tughlakabad, Asola Bhatti, Sahurpur, Dera Mandi, Jonapur, Ayanagar and Ghitorni.

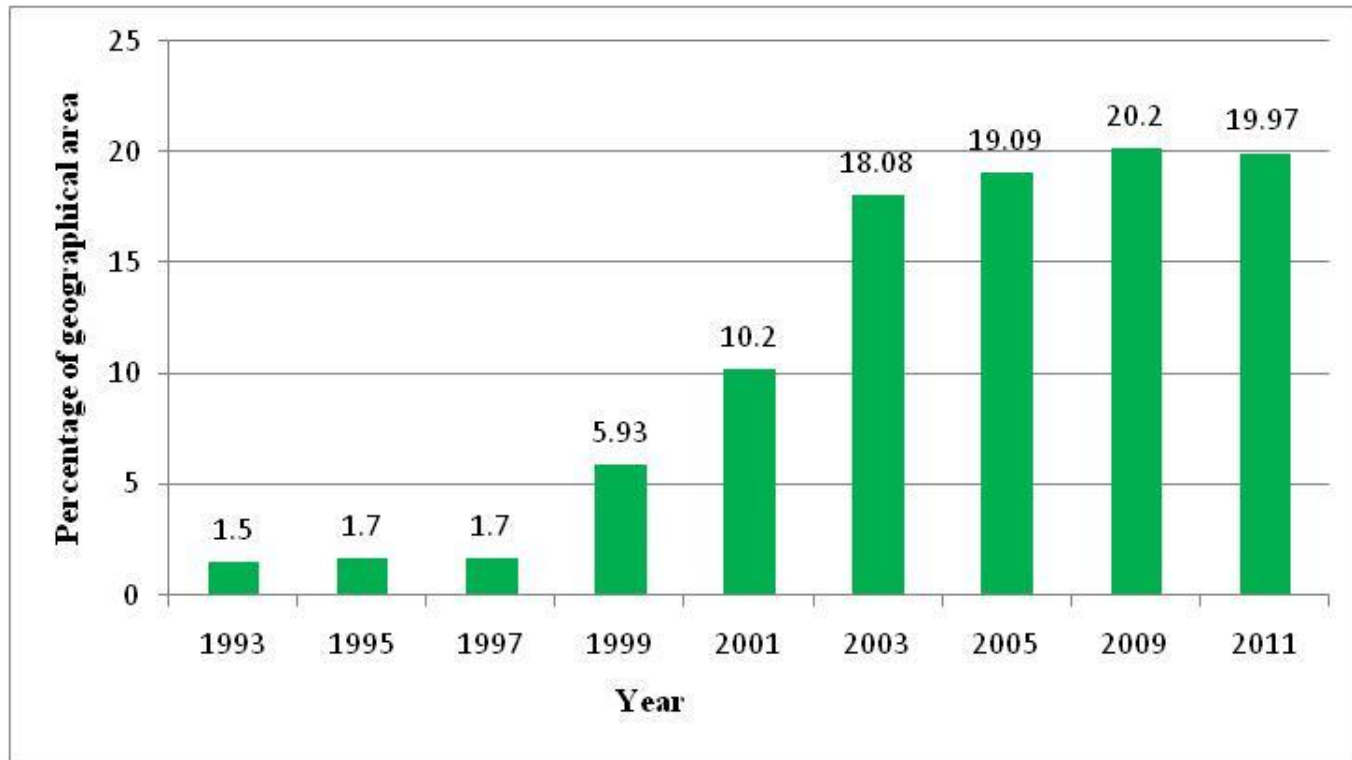
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- Ridge forests are important catchment areas from where Delhi's ground water gets recharged with good quality water.
- Density of vehicles in Delhi is the highest in the country and the ridge forests act as a sink for the carbon released into the atmosphere.

ASOLA BHATTI WILDLIFE SANCTUARY

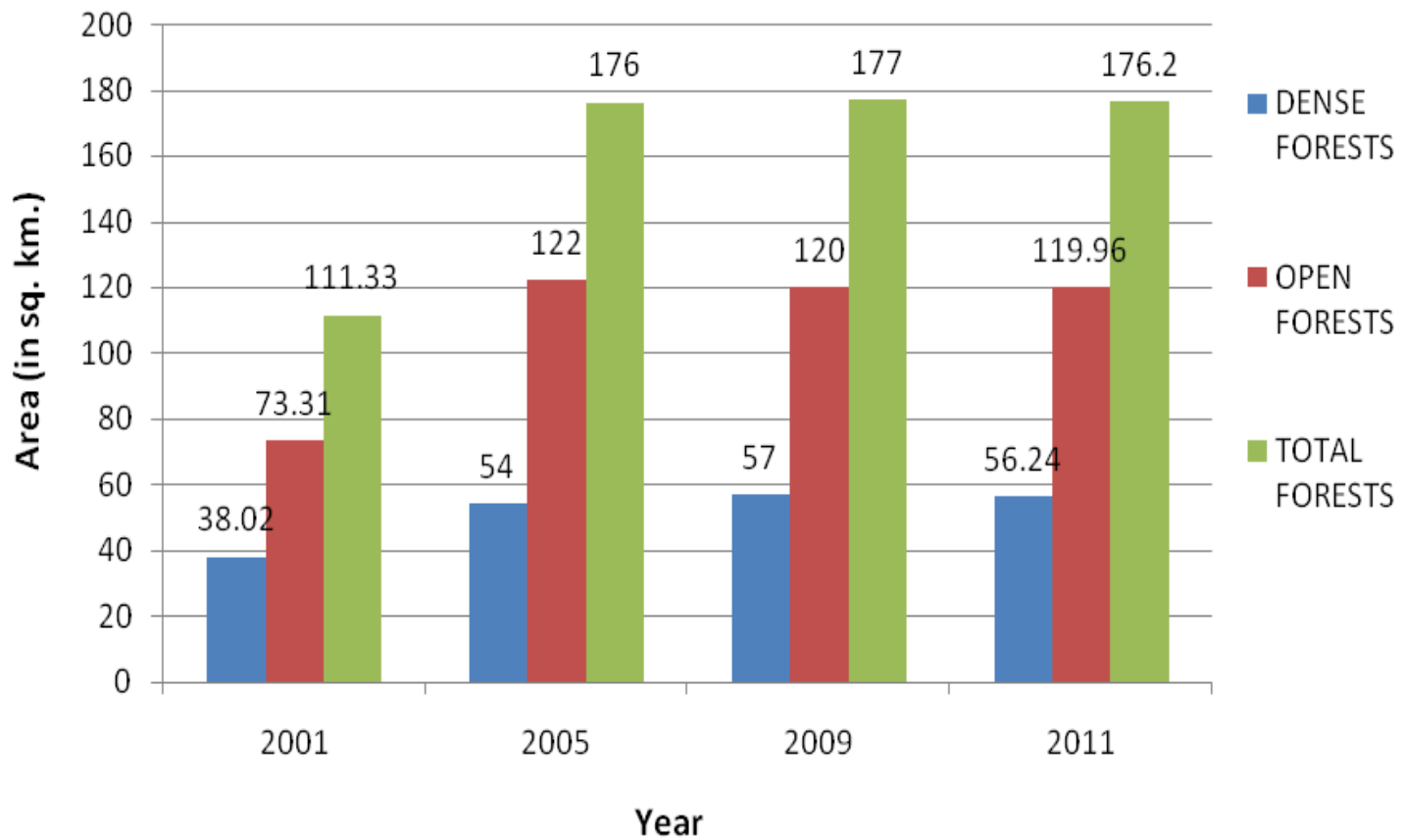
- “Green Lungs” of Delhi.
- >250 Species of plants.
 - Some of the original floral composition of the ridge still exists
- > 200 Species of Birds
 - *Some like Marshal's Iora (Aegithina nigrolutea) are reported after 25 years from Delhi*
- 150 species of butterflies & other insects
- 10 species of mammals
- 10 species of reptiles
- 8 species of Frogs
- The Department is implementing the project on rehabilitation of 2100 acres of Bhatti Mines area since October 2000, which is a part of Asola Bhatti Wildlife Sanctuary. The project has been accorded extension upto 2017.

CHANGE IN FOREST COVER IN DELHI

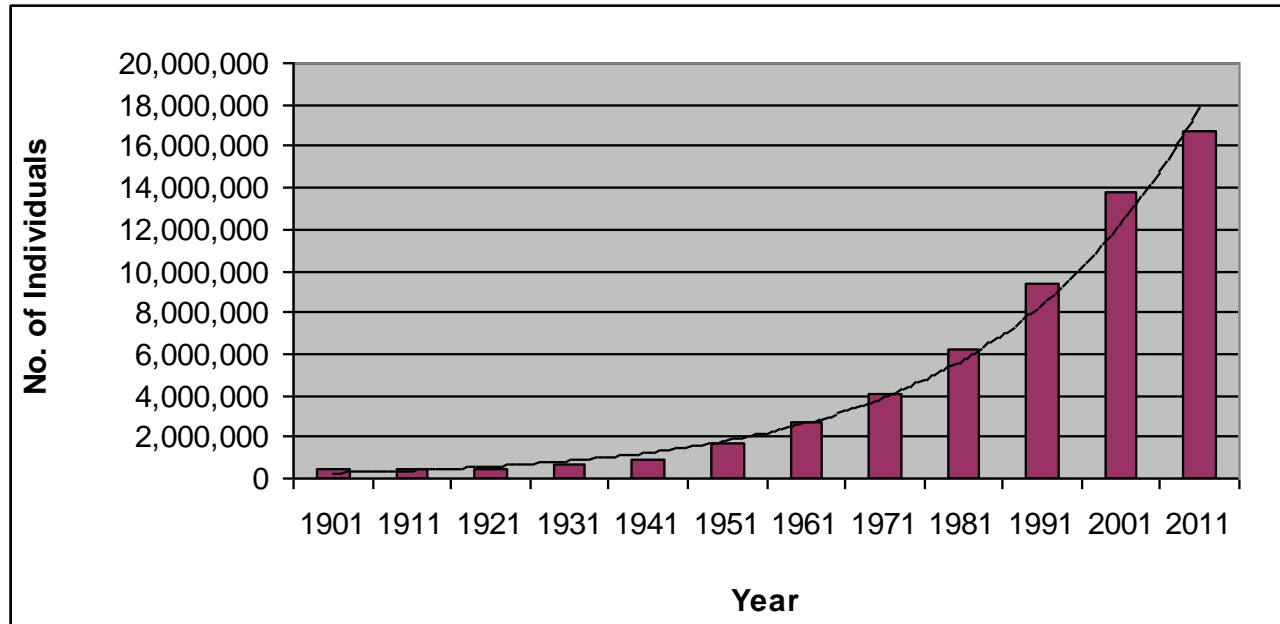


- **5000 Acres of denuded mine land, developed with plantation of seven lakh trees with the help of Eco- Task Force, a unit of the Territorial Army.**
- **14 existing City Forests densified and 28 New City Forests developed by the year 2011-2012**

Forest Cover Expansion in Delhi



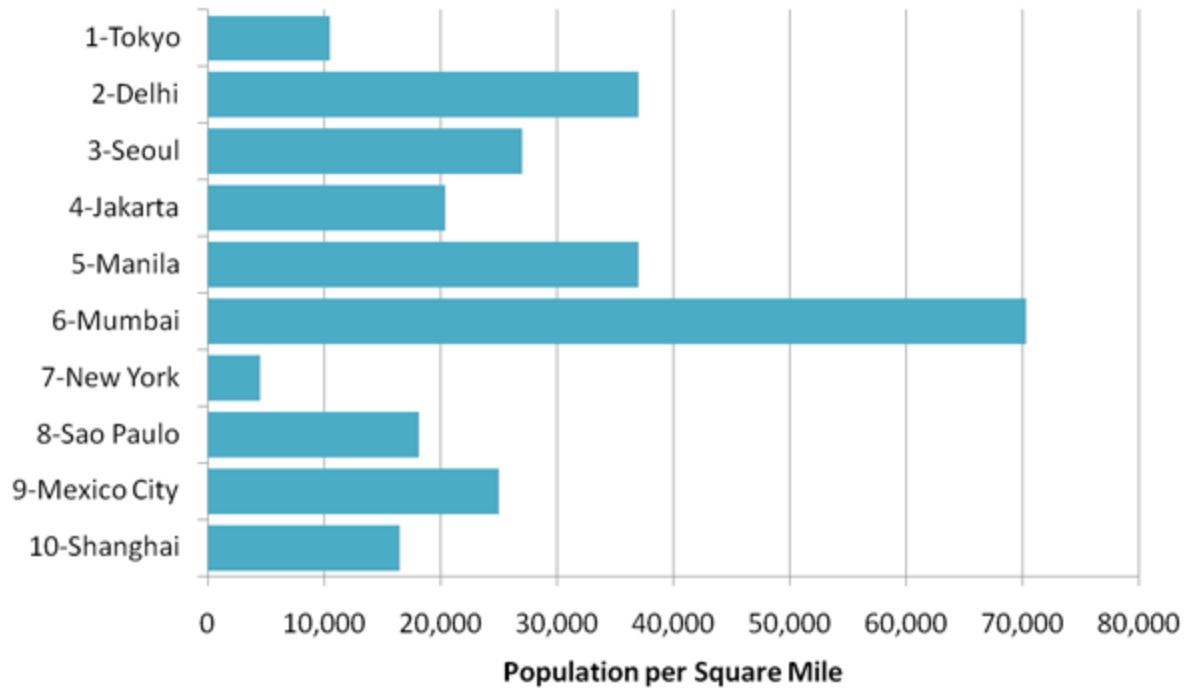
Delhi's ever rising Population



- **Delhi is one of the fastest growing cities in the world in terms of population.**
- **Population Density :11,297 persons per sq. km.**
- **Migration as a major factor for Delhi's population growth.**
- **By 2015, Delhi expected to become the 3rd largest conurbation in the world after Tokyo and Mumbai. Projected population by 2021 is 230 lakh.**
- **The increasing population demands development & urbanization posing pressure on the green cover.**

Density: 10 Largest World Urban Areas

POPULATION DENSITY: 2011: ENGLISH MEASURE



According to the Planning Commission report 2021:

- At present 702 sq km. of built up area.
- Urban area by 2021: 920 sq. km.

Measures suggested by Planning Commission:

- Urbanization have to be in areas already having development pressure/potential, like areas along transport corridors and fringes of already urbanized areas unlike rural/agricultural areas.
- Land upto the depth of one peripheral revenue village boundary along the border of NCTD, wherever available, would be maintained as green belt.
- New farmhouses & motels not to be permitted.
- 15 – 20% land in urban extension to be distributed for green/recreational purposes.
- Comprehensive scheme for the development of villages to be prepared by the concerned local bodies to plan development along the village peripheries carefully for the provision of green areas wherever necessary.

Young Trees Over Old Trees

- Young trees grow quicker than old trees which have already reached their maximum size and stopped growing taller.
- Thus young trees have a greater photosynthetic rate to make both wood and leaves while old trees have to make leaves only.
- Thus young trees remove more '**carbon dioxide**' from the atmosphere and thereby add more '**oxygen**' than old trees.

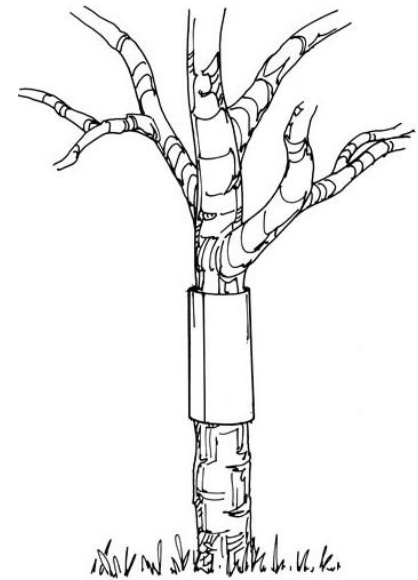
Reasons for Trees Dying in Delhi

1. **Ageing:** Natural cause.
2. **Concretization and tiling around trees to make pavements –**
Limiting surface soil for trees to grow & weakening root system.



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- 3. Strangulation by Metal tree guards – Limiting growth of the trees after a certain point, at times choking it.**



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- 4. Nailing on trees for advertisements – Causing damage to trees aggravating their disease susceptibility.**



- 5. Developmental activities – Demanding felling of trees at times.**

ACTIONS TAKEN

- **Guidelines laid and implemented by the Tree Authority (chaired by the Secretary, Environment & Forests, GNCTD) regarding deconcretization, removal of tree guards and nailed advertisements.**
- **Development Authorities instructed to leave 6 × 6 feet kachha space around trees.**
- **Launching of Tree Helpline for lodging complaints regarding threats to trees in Delhi. Immediate action is undertaken.**
- **The ‘Tree Ambulance’ under NDMC acts like a ‘doctor visiting a patient’ to treat damaged and diseased plants.**

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- **A pilot tree census to be carried out involving NGOs, RWAs and school students which is also aimed at recording health status of the trees surveyed.**
- **Guidelines for pruning of trees have been issued by the Forest Department and requires prior permission from the Department.**
- **Under Delhi Preservation of Trees Act, 1994, for every tree felled for a developmental project the Forest Department ensures planting and maintenance of 10 saplings. Five by the Department and other five by the User Agency.**

Contd...

- **Under ‘Greening Delhi Action Plan’ every year lakhs of saplings are planted and distributed by the Forest Department and other Greening agencies. For the year 2012-13 a total of 17.17 lakh saplings have been planted and distributed.**
- **Ceremonial plantation drives are often carried out involving students, NGOs, RWAs and common citizens wherein they are also made aware of the importance of trees and ways and means to protect them. Thereby saving the dying trees of Delhi and increase its green cover.**

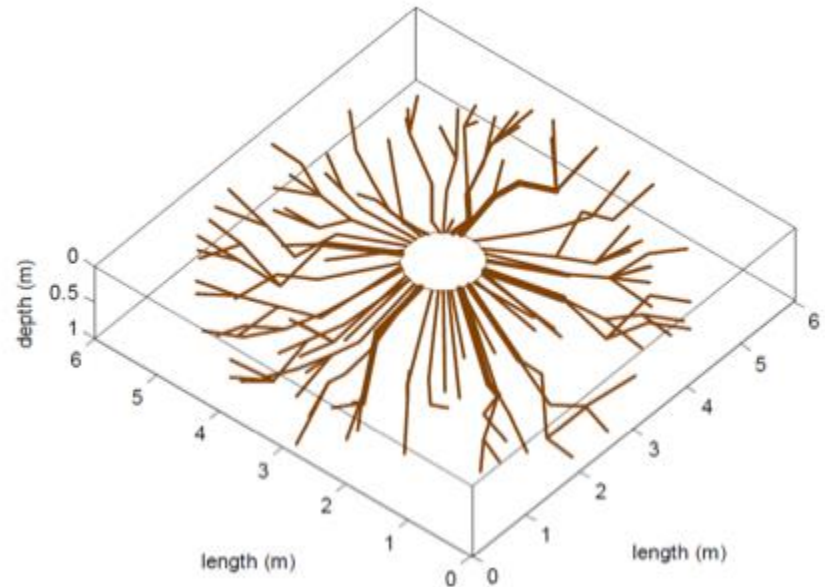
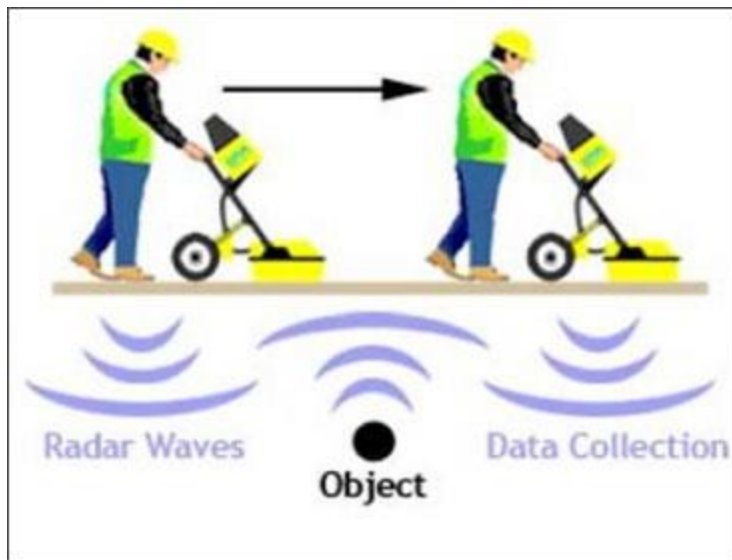
Other Considerations

- **‘Heritage Trees’ to be preserved as done in Cambodia by Forest Research Institute, Dehradun** – Heritage tag to be given to 1 tree per species for trees aged 100 years and above. These trees to be preserved until their natural death by filling up their cavities using natural materials like bamboo.
- **Registration of ‘old and valuable’ trees as done in Hong Kong** – Felling of registered trees prohibited unless under exceptional circumstances and with prior agreement.

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- **DAVEY Group Land Development Solutions preserving trees along Chicago Shore:**

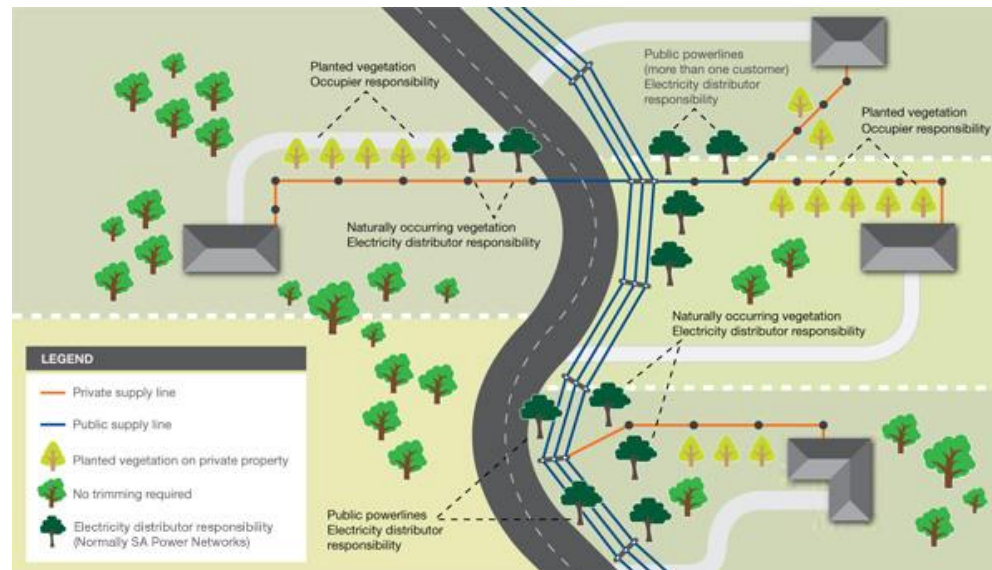
- Using new technologies such as ground penetrating radar to detect key roots.
- Using air tool evacuation for uncovering tree roots for examination, tunnelling under roots of large mature trees to install sewer and electrical utilities.



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- **In Sydney, Australia,**

- Clearance zones are maintained around trees where overhead or underground powerlines come in vicinity.
- Identification of important trees based on historic, visual, cultural, social and ecological criteria.
- Emphasis is shifted from tree planting and preservation to an overall approach of urban tree management.



A dense thicket of green and brown shrubs and trees under a clear sky. The foreground is dominated by various types of bushes, some with small red flowers. The background shows taller trees and a clear blue sky.

“Indigenous and exotic tree species, each have a practical & aesthetic role in improvement of the city’s amenity”.

THANK YOU!!!