

Towards Greener Delhi



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26 sq. km. in 1997



88 sq. km. in 1999



151 sq. km. in 2001



268 sq. km. in 2003

Green cover of Delhi

Delhi, a city variously famed as the "City of Forts" or, the "City of Djinns", and more recently as the "City of Flyovers" can now also be referred to as the "City of Greens". This is an exceptional milestone for Delhi in the arena of urban environment improvement and a remarkable turnaround for a city that was known for its appalling air quality just about 10 years ago and was routinely referred to as one of the most polluted cities of the world with a paltry tree cover. The turnaround is even more spectacular given the fact that with a population of 15 Million and a population density of 10,000 people to a Sq. KM, Delhi is an environmental manager's challenge in the best of circumstances.

The last decade of the last millennium was marked by an unprecedented growth in human population. The associated increase in industrial activity and vehicular traffic led the city to an environmental and ecological crisis that peaked in 1996 when Delhi was ranked as 4th among the 41 most polluted cities in the world.

A people's movement to green Delhi that started in 1997 was Delhi's response to this wake-up call. Delhi's forest and tree cover that was as low as 26 sq. km (or 1.75% of the total geographical area) in 1997 has expanded to an all time high of 268 sq km (or 18.07% of the total geographical area) in 2003 (State of the Forest Report, FSI, 2003). A ten fold increase in a mere span of 6 years! Delhi deserves the distinction of being one of the few, if not the only, city of the world that has managed this spectacular increase in its green cover in the face of odds that can only be called enormous.

Delhi : A Brief Profile

Located in Northern India between the latitude of 28°-24' and 28°-54' North and longitudes of 76° -50' and 77° -20' East, the city of Delhi has a majestic and regal past that has seen the rise and fall of many a great empire. Each empire added to the glory and expanse of Delhi. The history of Delhi talks of the royal citadels of Indraprastha, Lal Kot, Quila Rai Pithora, Siri, Jahanpanah, Tughlakabad, Ferozabad, Dinpanah, and Shahjahanabad which were distinct yet close to each other. The process started in 900 BC with the establishment of Indraprastha and ended in 1930 when the British completed the construction of New Delhi as the capital of imperial India. Delhi, as it stands today, is an expanded amalgamation of these eight cities that were established by successive rulers at various points in time.

Delhi has a semi-arid climate, with hot summers, average rainfall and moderate winters. Mean monthly temperatures range from 14.3 °C in January to 34.5 °C in June. The annual precipitation in Delhi is about 711 mm falling largely during the monsoon months (July-September). Dust storms are frequent during summer months leading to an immense build-up of particulate matter in the atmosphere.

The river Yamuna and the Delhi Ridge are the two main natural features of Delhi. The Yamuna, which passes through the city for a length of about 50 KM, is one of the most important sources of its water supply. The Delhi Ridge is a part of the Aravalli mountain range, the oldest mountain range on Indian soil.

Delhi is also one of the most historic capitals in the world and two of its monuments- the Qutub Minar and Humayun's Tomb, have been declared as World Heritage Sites. The Archaeological Survey of India has listed more than 1300 monuments in Delhi, which through their eclectic architectural styles symbolize the peaceful co-existence of the various cultures that have evolved and flourished here in the course of history.

Delhi has grown far beyond its historical dimensions, engulfing in its growing expanse the historic city sites mentioned earlier. Though several factors have contributed to this rapid growth, the main reason is the migration of population from different parts of the country to take advantage of the economic/livelihood opportunities offered by Delhi. Being the seat of power for both central as well as state legislatures, the manpower requirements of the government, staggering in themselves, have expanded even more to accommodate the requirements of the industry and business making the city an important commercial hub.

Thus, what was essentially an administrative centre with a population of 1.45 million in 1951 has now become a bustling metropolis with a population of 13.9 million in 2001, and estimated to touch 16.06 million in March, 2006 (see Figure 2). A 46.31 % decennial growth (compared to the national average 21.43%) in the population of Delhi during 1991-2001 is an all time high. During the same period, the population density also rose from 6352 persons per sq. km in 1991 to 9294 persons per sq. km (the highest in the country) in the year 2001.

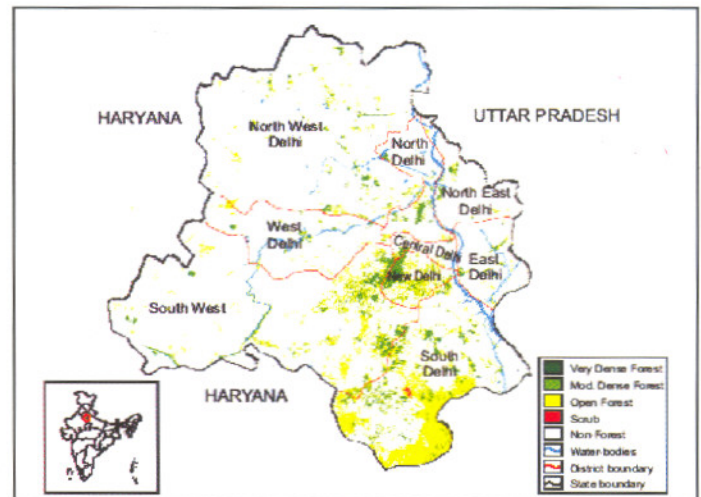
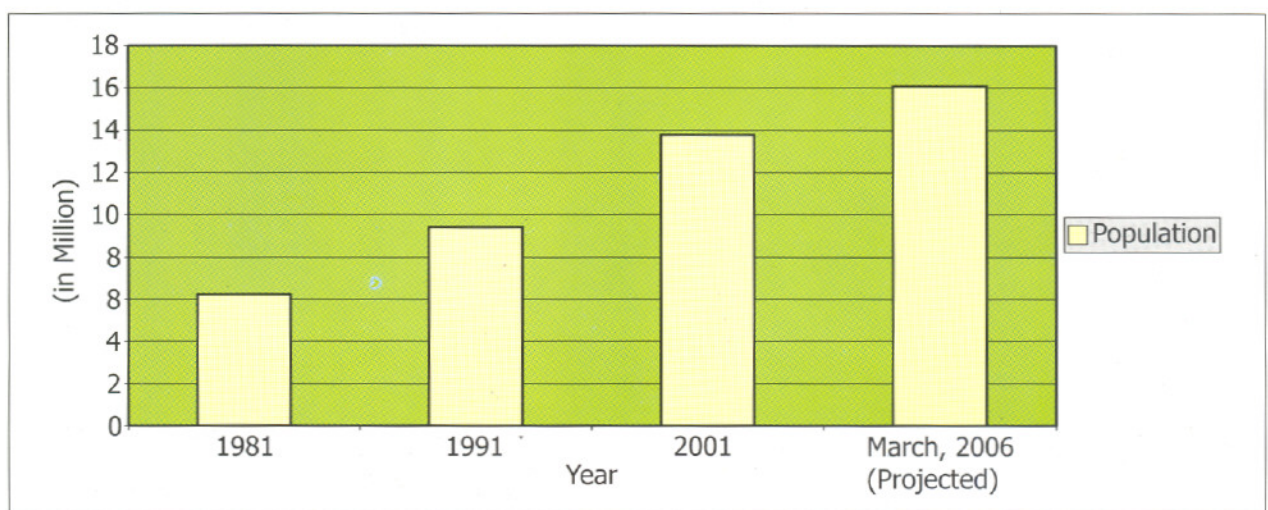


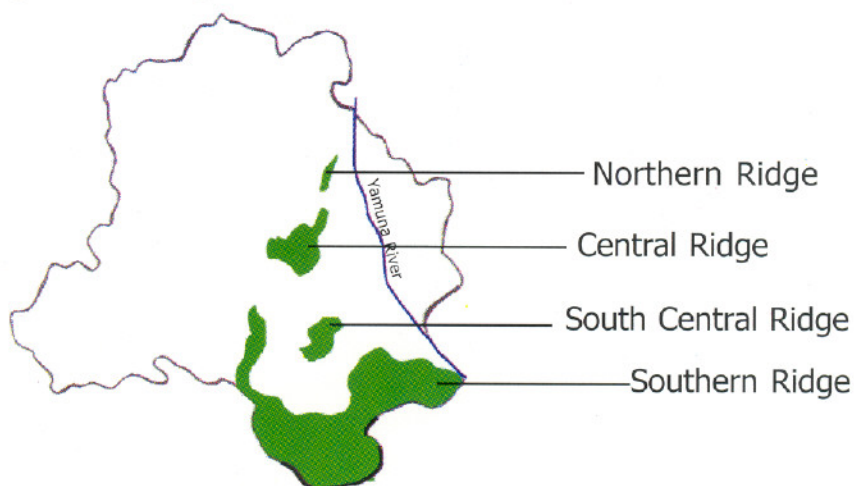
Figure 1 - Map of Delhi with the Classification of Delhi Forests

Figure 2 : Population Growth of Delhi



(Source: Census Survey of India)

Figure 3 : Ridges Vis-a-Vis Delhi



Managing Delhi's Natural Heritage

Aravallis, the oldest mountain ranges of India, act as a natural barrier separating Delhi from the sandy expanse of Rajasthan (the adjoining desert state of India,). Portions of the Aravali range that fall in Delhi constitute the Delhi Ridge, the only natural forest area of the city (Figure 3)

The Gazetteer of Delhi 1883-84 recorded a rich faunal diversity of foxes, hare, blackbuck, Indian gazelle, jackals, blue bull, hog deer and even leopards as the inhabitants of the Delhi Ridge. That

AMONG THE COMMON SPECIES FOUND AND PLANTED IN THE DELHI RIDGE ARE:

Prosopis juliflora; *Acacia nilotica*; *Acacia catechu*; *Acacia leucophloea* Willd; *Acacia senegal* Willd, *Azadirachta indica* Juss;
Balanites roxburghii Planch; *Butea monosperma* Taub; *Holoptelea integrifolia* Plach.; *Flacourtia indica* Merr.; *Maytenus senegalensis* Exell; *Ziziphus species*;
Prosopis cineraria Linn; *Albizia lebbek*;
Anogeissus pendula; *Cassia fistula*; *Erythrina indica*; *Salvadora persica*; *Dalbergia sissoo*;
Ficus species

the conservation of the Ridge was considered important in the planning of New Delhi even in early 20th century is evident in the 1913 notification by the then Chief Commissioner of Delhi declaring an area of 796.25 hectares as a Reserve Forest under the Indian Forest Act, 1878. In fact, till a few decades ago the animal species present in the ridge forests included the Indian pangolin, porcupines, grey musk shrew, long eared hedge-hog, five striped palm squirrel, striped hyena, Indian wolf, vampire bat, spiny tailed lizards and more than 300 species of birds.

Rapid population growth has had an impact on Delhi's forests and wildlife resources. The

Ridge once a continuous whole has been destroyed over long years to retain only 60% of its original expanse. Still, the Ridge is the only relatively undisturbed natural part of Delhi that sustains a sizeable breeding and non-breeding population of a large variety of mammals, birds and butterflies. This has prompted DFW in cooperation with other government/non government agencies to focus on the restoration and conservation of the Delhi Ridge.

Regarded as the only Green Lung of Delhi, the Delhi Ridge today has an area of 7784 hectares (5.2% of Delhi's geographical area) was notified as a "Reserve Forest" under the Indian Forest Act (1927). Tree density in the ridge area has been recorded in the range of 1050 –1300 trees per hectare, with a plant diversity of over 120 species. While, the average canopy density is around 0.6 (Forest Research Institute of India, 2003).

Protecting the Delhi Ridge

Recognising the importance of the Ridge for sustaining Delhi's environmental quality, a Ridge Management Board headed by the Chief Secretary of Government of Delhi was constituted in year 1995 for effective and scientific management of Delhi Ridge as a natural landscape.

For the purpose of management, the Ridge has been divided into four zones. Lying to the West of River Yamuna, the **Northern Ridge**, or the Old Delhi Ridge is the smallest yet the most well preserved of all four zones with an area of about 87 hectares. **The Central Ridge** however has an area of 864 hectares. This includes the Buddha Jayanti Park where trees and shrubs, associated with the life of Lord Buddha have been planted in large numbers. Another large park in the Central Ridge, the Bhagwan Mahavir Vanasthali, has been conceived as a spiritual theme park that creates an interface between forests, spiritual fervour, recreation and relaxation.

The South Central Ridge is spread in an area of about 626 hectares, surrounding the World Heritage Monument, Qutab Minar. The largest of the four management zones of the Delhi Ridge is the **Southern Ridge** with an area of about 6200 hectares. Because of its size and the fact that parts of it were considerably degraded, a significant

At the time Asola Bhatti Wildlife Sanctuary was established there was barely any wildlife worth viewing. The Bhatti mines area was a heavily mined area devoid of trees and desolate with 200 quarrying pits honey combining the entire area. The turnaround took place when restoration work began in mid 1990s with afforestation of indigenous species of trees, shrubs and grasses, soil and water conservation measures for improvement of wildlife habitat. Now much of its erstwhile wildlife including birds can be seen.



Photo 1-An aerial view of the central ridge



Photo 2-A panoramic view of the central ridge in the heart of the city

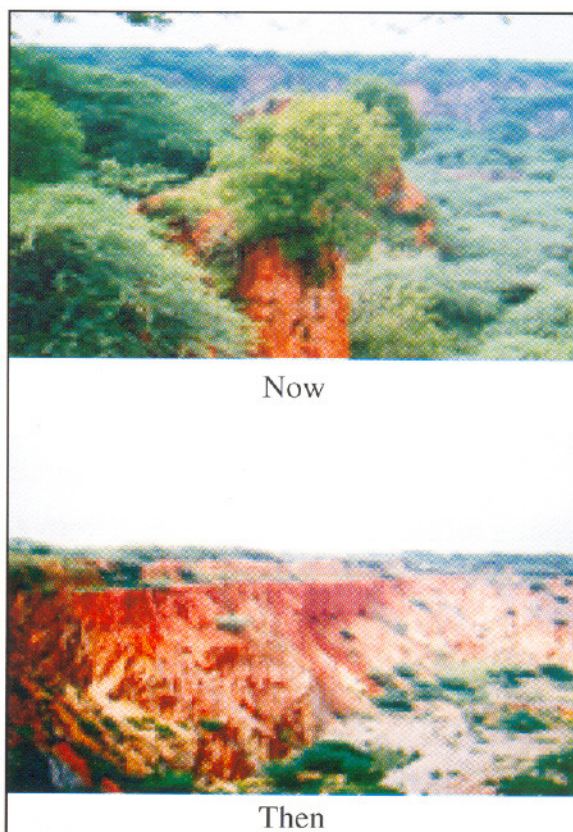


Photo 3-A top view of the Asola wildlife sanctuary

fauna of the Aravallis. Asola Bhatti Wild Life Sanctuary acquired its current dimensions in two stages. Asola Wildlife Sanctuary having an area of 1072 hectares was notified in 1986. An adjoining area of 866.5 hectares known as Bhatti mines, which was an open pit sand stone mine was merged into the sanctuary in 1991 for planned rehabilitation and afforestation, in the process giving the sanctuary its current name.

To bolster Delhi's existing forest cover in the Asola Bhatti Wildlife Sanctuary, Department of Environment and Forests (DOEF), Delhi Government has made a widely hailed effort to reclaim the degraded Bhatti mines landscape with the help of the Eco-Task Force of the Territorial Army. Comprising of ex-servicemen but commanded by regular officers the eco-task force is a dedicated workforce engaged in ecological restoration of critical ecosystems. While the primary goal of the Eco-Task force is to enhance the tree cover of Asola Bhatti Wildlife Sanctuary, enlisting the support and cooperation of communities living on the fringes of the sanctuary in protecting the integrity of the Asola Bhatti landscape is also given due importance.

A total of 0.5 million saplings have been planted in the project area in a period of 5 years at a cost of approximately USD 1.87 million. This initiative has been recognized as an innovative use of armed forces personnel to assist in nation building as a committed force in the greening movement. While Eco task force has had successful programs in non-urban landscapes like Mussoorie Dehradun in the Himalayas or Indira Gandhi Canal Command Area in Rajasthan, it is for the first time that Eco-Task Force is working in an urban backdrop.



Photos 4 & 5 - A view of Bhatti mines



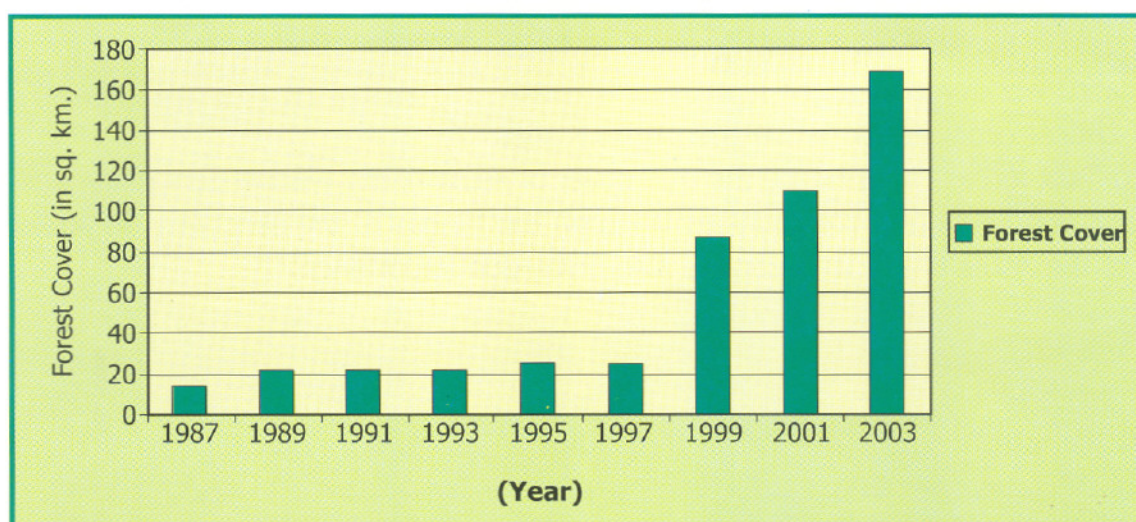
Photos 6 & 7 - Plantation by Eco-Task Force

Enhancement of the Landscape

Green areas of Delhi form an integral part of the unfolding landscape of Delhi. Government of Delhi is committed to bring about further increase in the green cover to address the larger environmental goals like creating sinks to absorb the air and noise pollution; augmenting ground water recharge by reducing surface water run offs and enhancing the general ambience of the city that on one hand provides ample recreational opportunities and on the other hand fosters a sense of pride amongst citizens of Delhi.

Delhi's forest cover has increased from 111 sq. Kms in 2001 to 170 sq. Kms in 2003, leaping from 7.5 per cent to 11.46 per cent in the space of just two years (Figure 4). Besides this, the tree cover¹, including avenue plantations falling outside the forest area of Delhi, now constitutes another 98 sq. km. (State of Forest Report, 2003)²

Figure 4: Increase in Forest Cover in Delhi 1987-2003



(Source: State of Forest Report, 2003)

¹ Tree cover comprises tree growth of less than one hectare area.

²The State of Forests Report, 2003 was released by the Forest Survey of India in July, 2005. (www.fsiorg.net)

At 268 square km, forest and tree cover stands at 18.07 % of the total geographical area of Delhi, which is the highest amongst all metropolitan cities in India (Figure 5).

Figure 5: Comparative Forest Cover of Indian Metropolitan Cities

City	Geographical Area (Km ²)	Forest Cover (Km ²)	Tree Cover (Km ²)	% age of Geographical Area
Delhi	1483	170	98	18.07
Mumbai City Suburban	603	87	NA	14.43
Chennai	144	6	NA	4.17
Kolkata & Howra	1652	80	NA	4.84
Bangalore City	2190	168	NA	7.67
Hyderabad & Rangareddy	7710	392	NA	5.08

(Source: State of Forest Report, 2003)

Developing City Forests

DOEF and Delhi's main urban development agency, the Delhi Development Authority are working in tandem to develop city forests to not only create the much needed lung spaces for the growing metropolis but also to provide the citizens healthy and pleasing surroundings. City forests are large woodlots with a variety of indigenous trees. These are more than just recreational spaces as they also serve as air purifiers and climate moderators. As many as 25 protected forests (see Figure 6 (a) & 6 (b) have already been set up in different parts of the city with areas ranging from 8.0 Ha (Shahpur Garhi City Forest) to 300 Ha (Garhi Mandu City Forest). The total area covered by city forests is 1658 hectares.

Figure 6 (a) : Protected Forests under Forest Department

S. No.	Name	Area
1	Mitraon Protected Forest	105 acres
2	Sultanpur Protected Forest	120 acres
3	Mukhmelpur Protected Forest	133 acres
4	Razokri Protected Forest	600 acres

Figure 6 (b) : Protected Forest in Delhi under DDA & L&DO

S. No.	Name	Area in Acres
1	Distt. Park. I/c Hauz khas	400
2	Jahanapanah City Forest	800
3	Basant Nagar Moradabad Pahari area	200
4	Vasant Vihar Distt. Park	20
5	Dhaura Kuan Complex	200
6	Nehru University afforestation	200
7	Distt. Park Gokul Puri	7.5
8	Distt. Park Jhilmil Taharpur	20
9	Zonal Green area Kalyan Puri, Trilokpur, Khichripur, Ghazipur etc.	373
10	Sadhula Kalan, Namri, Gulabi Bagh & Darbar Khan Nursery and other areas.	100

S. No.	Name	Area in Acres
11	Area Between Hill Road & Ludocastle Road	17
12	Wazirpur Near Bharat Nagar and Nemri Colony	120
13	Mayapuri Green Land	5
14	Hastal afforestation	40
15	Inderpuri Narayana	32
16	M.P.Green area Najafgarh Drain (Tagore Garden)	55.26
17	Nangloi sayed	257.56
18	Distt. Park Rohatak Road.	35
19	M.P Green G-8	65
20	M.P area Najafgarh Drain	54.58
21	Distt. Park Pitam Pura-CGH Society	185

Figure 7 : City Forests under Forest Department

S. No.	Name of City Forests	Area in ha.	District
1	Nasirpur City Forest	28	South-West
2.	Alipur City Forest	16.80	North-West
3.	Hauzrani City Forest	28.80	South
4.	Mitraon City Forest	40.00	South-West
5.	Sultanpur City Forest	48	North-West
6.	Ghumenhera City Forests	32	South-West
7.	Ghoga City Forest	10.40	North-West
8.	Shahapur Garhi City Forest	8.00	North-West
9.	Mamurpur City Forest	56	North-West
10.	Jindpur City Forest	47.60	North-West
11.	Mukhmelpur City Forest	53	North-West
12.	Bawana City Forest	32	North-West
13.	Garhi Mandu City Forest	300	North-East
14.	Anand Vihar City Forest	32	East

Avenue Plantations

In addition to enrichment of forest areas, considerable emphasis has been given to tree plantations along roads, railway tracks, bunds, canals, and river banks. The current running length of avenue plantations as mentioned is more than 550 KM.

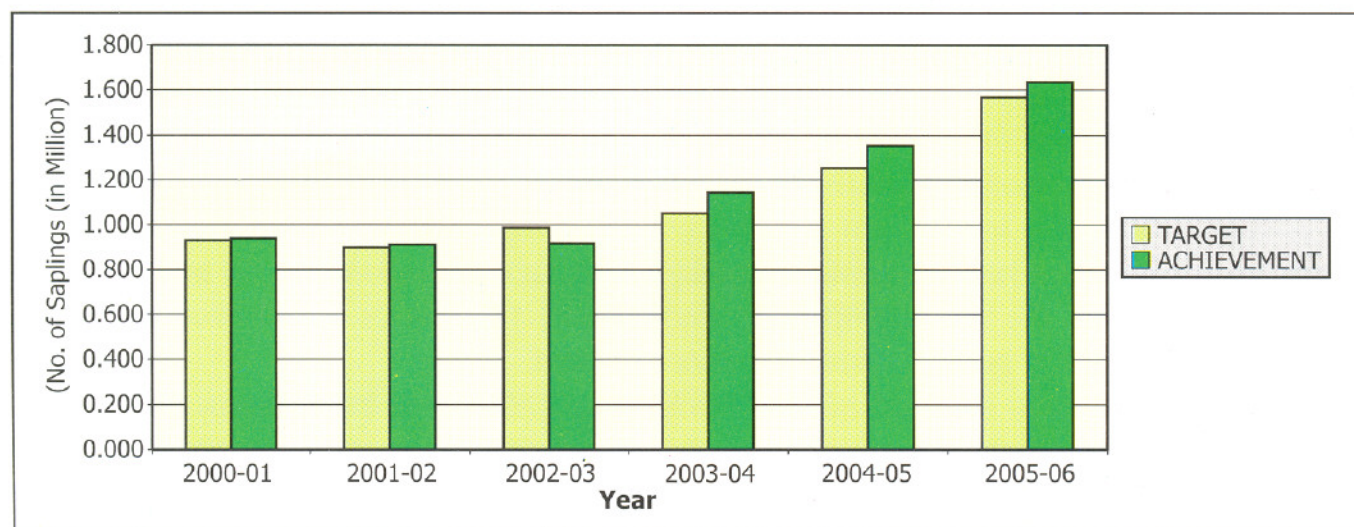
Protection of Existing Green Cover and Compensatory Plantation Scheme

Delhi has seen rapid urbanization and modernisation of its infrastructure in the last decade such as Mass Transit System (Metro Rail), Highway Development etc. Though, felling of trees is prohibited in Delhi by the Delhi Preservation of Tree Act, 1994, cutting of trees is often unavoidable for developmental works. Therefore, in order to compensate the loss of trees felled for various reasons a mandatory provision for compensatory plantation has been provided in the Act itself. As per the act, a compensatory plantation of 10 trees is mandatory against each tree felled. Till date more than 150 hectares have been brought under tree cover through the compensatory afforestation route.

Greening Delhi Action Plan

Since 1997, an Annual Greening Action Plan is prepared by the Forest Department to undertake afforestation programs in cooperation with various Government agencies and civil society groups. From 1.35 million tree saplings planted in the year 2004-2005, the corresponding figure rose to 1.634 million in 2005-06 (Figure 8). The target for 2006-07 stands at 1.617 million saplings.

Figure 8 : Target and Achievement of Plantation during Last Six Years



The Greening Delhi Action Plan provides for a variety of measures, such as:

1. densification of and enrichment planting in and around the Delhi Ridge idg, the green lung zone of Delhi;
2. involving citizens of Delhi in make greening a mass movement;
3. ensuring free distribution of saplings at various locations in Delhi;

4. identification of highly polluted traffic intersections, central verges, roads etc. for priority planting of indigenous plant species suitable for pollution abatement;
5. monitoring of post-plantation care such as regular watering, etc. for better survival;
6. setting up a dedicated TREE HELPLINE for lodging of complaints regarding illegal felling of trees.

Parks and Gardens

As per the Delhi Development Master Plan 2001, 8422 hectares of land has been earmarked for park greens. The greening project is categorized into: Regional Parks³ ; District Parks; Neighbourhood Parks; City Forests; Historical Landscapes; Sports Complexes; Landmark Greens; Green Belts and Tot Lots. Delhi has about 14500 big and small parks, which are managed by various local Government and semi Government agencies. Some of the landmarks in green development have been mentioned below.



Photo 8 - Garden of Five Senses

1. *Lodhi Garden:* A sprawling 100 acres park with a wide variety of beautiful trees, flowering shrubs and lawns interspersed with the graceful geometry of the 15th century tombs of the Lodi Sultans. The park is mapped with fountains, lakes, a traditional well, rose garden, bonsai garden, glass house and walking tracks.
2. *The Garden of Five Senses:* The Garden of Five Senses was conceptualized to answer to the city's need for leisure space, for people to socialize, unwind and relax. The twenty-acre site, close to the Mehrauli Heritage area in New Delhi, has about twenty-five different sculptures and murals comprising one of the largest commissions of public art in the country.
3. A Herbal Garden has been established by Municipal Corporation of Delhi in North-West Delhi, which is the first attempt of its kind. Already 125 species of medicinal & aromatic trees, shrubs and herbs, grasses have been planted.
4. *Indraprastha Park:* Another milestone in Landmark Greens is Indraprastha Park created over an area of 34 hectares stretching 2.7 km along the Ring Road. It is a sterling example of transforming a sanitary landfill site into living, breathing and verdant landscapes.
5. *The Yamuna Bio-diversity Park :* The Yamuna Biodiversity Park, Delhi is slated to act as a heritage site and repository of approximately 50 communities of endangered species of flora & fauna of Yamuna river basin. DDA has proposed to develop over an area of 456 acres, which will be constructed in phasewise i.e. 156 acres in first phase, another 300 acres in the second phase. The total cost of the first phase of the project is envisaged to

³Regional parks are areas which form a part of the Delhi Ridge.

be 18.68 crores. This park comprises of poly house, net house, interpretation center, main nature trail, meandering water body and wetlands, with ancillary facilities in visitor's area. So far, 107500 no. of saplings of different species found in the Yamuna river basin have been planted as well as 1500 no. of saplings of different varieties of fruit trees have been planted in the orchard area .

6. Aravali Bio-diversity Park : DDA is developing Aravali Bio-diversity park in an area of 227 ha. near Vasant Vihar, which will be completed in 10 years in phase manner. Total estimated cost for phase –I development is 15.90 crores, which comprises of development of herbal/ medicinal gardens, butterfly park, Orchidarium, fernarium, tropical rainforest, etc.

Environmentally Sensitive Practices

The GNCTD has initiated a number of environmentally sustainable practices from introduction of a CNG based public transport system, improvements in quality of auto-fuels, rain-water harvesting, recycling and management of solid waste, et al. While the achievements in increasing the overall green cover of Delhi have been described amply in the previous sections, the following section is devoted to the strides made in enhancing the air quality of Delhi.

Towards Cleaner Air

Apart from Delhi's meteorological conditions which often play an important role in the build up of pollution levels, rapid population growth, along with the high rate of industrialization and the overwhelming increase in motorized transport has been at the heart of increase in the levels of various air pollutants.

Recognising that polluted air is just a symptom and not the cause, a variety of mitigation measures were initiated from 1996 onwards, the details of which have been provided below:

- Introduction of cleaner fuel, CNG based public transport system in 2001
- Phasing out of old commercial vehicles
- Establishment of emission norms of vehicles i.e. Bharat Stage – II and III (equivalent to Euro II and III). Only vehicles complying with BS III emission norms are being registered from April 2005
- Introduction of Rapid Mass Transport System i.e. Delhi Metro Rail
- Construction of Flyovers for free flow of traffic and to make congestion free crossings.

An integral part of the Garden of Five Senses is the Solar Energy Park set up with the assistance of the Ministry of Non-conventional Renewable Energy Sources, which aims to promote awareness on renewable sources of energy. A 20 KW solar power plant is installed to meet the requirements of the park.

The exhibits include: Two solar-powered buses; Weighing machine; Solar-powered bicycles; Solar-powered cars for children; Quiz computer; Solar drum and slide; A prototype of a solar-powered home; Exhibits on renewable energy sources. In addition, solar water- heating has been installed in the nine food outlets. **The Solar Energy Park featured in the Limca Book of records, 2004 for its unique concept.**

- Installation of electrostatic coal precipitators in all the three coal thermal power plants.
- Sustained plantation of saplings and their protection, to enhance the green cover

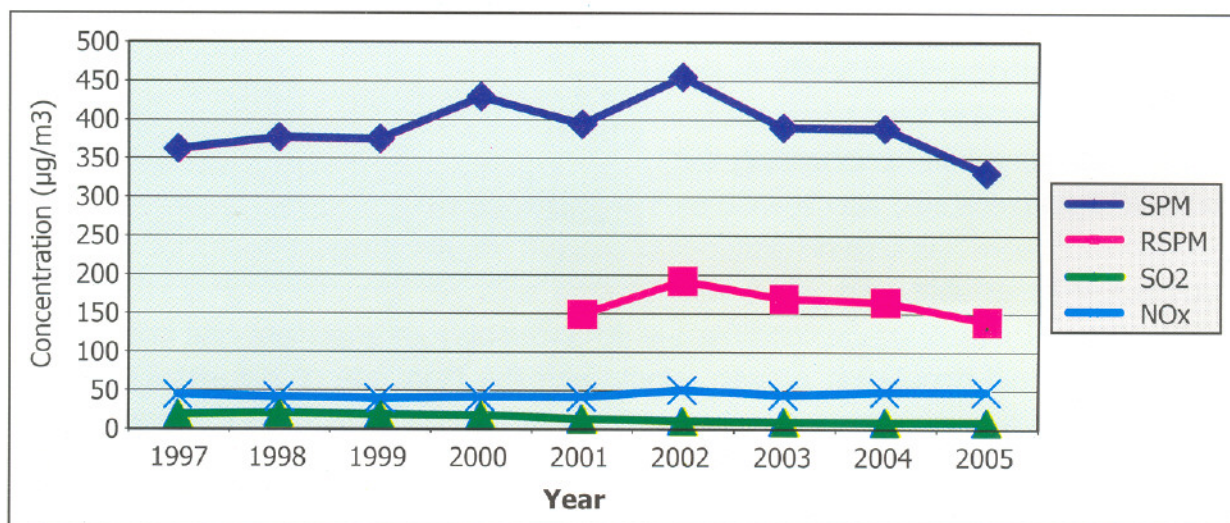
Present Air Quality Status

The capital's fight against air pollution which began in 1997 has now begun yielding results (Figure 9). Between the years 2000 and 2005 Sulphur Dioxide (SO₂) levels have fallen by 51 % with a consistent declining trend observed since 2000. The reduction in Carbon Monoxide (CO) concentration is directly attributed to the introduction of CNG as automotive fuel, implementation of stringent emission norms and improvement in the fuel quality. The concentrations of other pollutants like Lead and Benzene have also registered a marked decline. Moreover the levels of

Delhi bagged the United States Department of Energy's first clean cities International Partner of the year award in 2003 for its bold efforts to curb air pollution and support alternative fuel initiatives i.e. introduction of CNG based public transport.

The Chief Minister while accepting the Award said, "I without any hesitation share this recognition with all the stakeholders, in particular with the judiciary, civil society-NGOs and expert groups and the transport entrepreneurs of Delhi who invested large financial resources to make the change. The search for a cleaner and greener way forward for Delhi does not end with this milestone."

Figure 9 : Ambient Air Quality Status of Delhi



Suspended Particulate Matter (SPM), Respirable Suspended Particulate Matter (RSPM) and Nitrogen Dioxide (NO_x) have remained more or less constant despite the remarkable growth in private automobiles.

Community Participation

Governmental efforts alone can never achieve success without the active participation of the civil society, especially where these efforts are concerned with the conservation and management of public goods such as air, water and land. Recognising this, the Government of Delhi initiated the concept of *Bhagidari* or "Partnership in Governance" to involve the civil society in governance.

***Bhagidari* or a Citizen-Government Partnership**

- is a means for facilitating citywide changes in Delhi
- utilizes process and principles of multi-stakeholder (Citizen groups, NGOs and Government) collaboration.
- applies the method of large group interactive events.
- aims to develop 'joint ownership' by the citizens and government of the change process.
- facilitates people's participation in the range of governmental processes

The *Bhagidari* movement has strived to develop and implement common solutions for broader civic issues. Tree plantation was then included in the *Bhagidari* movement for not only greater public awareness but also involvement in actual plantation work.

Free Distribution of Tree Saplings

The Delhi Government initiated a proactive policy on free distribution of tree saplings in 1997. It was in recognition of the fact that the financial cost of free distribution of tree saplings would undeniably be offset by the long-term tangible and intangible benefits that would accrue from the incremental tree cover. Notably, free distribution is the first instance of such a decisive step on tree plantations being taken by any State Government in India.

Free tree saplings have been distributed extensively by the Forest Department from its nurseries, located in different parts of Delhi. The department has also been making free saplings available at Bhagidari fairs, school

Free tree saplings are also distributed at select petrol pumps of Delhi. The idea being that vehicles are a major source of pollution in the city and the polluters should feel responsible and contribute towards the preservation of Environment. This initiative has worked well as it has been found that while visiting petrol stations people are often more conscious of the destructive ecological impact on their consumption patterns have and more keen to find constructive ways to mitigate it.

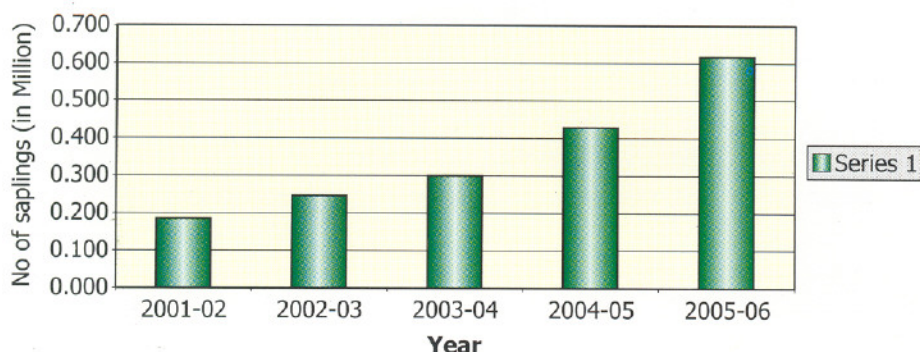


Photo 9 - Free distribution of tree saplings



Photo 10 - Free distribution of tree saplings at "all women petrol pump"

Figure 10 : Free Distributions of Saplings during last Six Years



(Source: Forest Department, GNCTD, 2006)

schools, and along traffic intersections, road dividers, national highways, drains, rural roads, village community lands, et al. Public awareness campaigns, through audio-visual, print and electronic media, have been undertaken by the Forest Department of Delhi Government in an attempt to arouse the citizens to share the responsibility of greening Delhi.

Bhagidari in Tree Planting

On their part the citizens have responded enthusiastically to the green call for planting at least a tree per family in their surroundings. Several NGOs have been involved not only in tree plantation



Photo 11 - Tree Plantation Drive

eco-club⁴ meetings, health fairs, resident welfare /industrial association meetings, women empowerment fairs and at other public functions. Alongside a massive afforestation programme has been launched by various Government agencies for planting in the Ridge, city forests, parks,

Figure 11 : Nurseries of the Department of Forests, Govt. of NCT of Delhi

S.No.	Name of the Nursery	Phone No.
1.	Kamla Nehru Bridge	23853561
2.	Anand Vihar (Behind ISBT)	22166232
3.	Bhairon Marg (Ring Road)	23379669
4.	Old Yamuna Bridge	—
5.	Hauzarni City Forest (M.B. Road)	29555439
6.	Alipur City Forest (Old Seed Farm)	27204688
7.	Brar Square (Near Rly. Cross Ring Rd. Cantt.)	25696875
8.	Poonth Kalan (Near Sultanpuri Bus terminal)	25483026
9.	Nazafgarh Forest Nursery (Old BDO Office)	—
10.	Kharkhari Nursery (Near Kharkhari Jatmal Agriculture Seed Farm)	—
11.	Deoli Pahari Nursery (Behind Sainik farms)	—
12.	Tughlakabad Nursery (Near shooting range)	26044711
13.	Birla Mandir Nursery	23361879

⁴Eco Clubs in Schools have been set up to involve young children into issues related environmental management in the city.

The *Bhagidari* initiative of the Delhi Government has been widely acclaimed at the national and international levels. Internationally it has received appreciation from the Commonwealth Association for Public Administration and Management, UN Habitat Dubai International Award Programme, International Fair and Congress Sub-Cities – 2003 Sao Paulo, Brazil and United Nations International Innovation Exhibition held in South Korea, 2005. However the supreme moment of glory came when *Bhagidari* was awarded the prestigious **United Nations Public Service Award- 2005** for "Improving Transparency, Accountability and Responsiveness in Public Service".

but also preparing progress reports on targets, achievements, lagging area, root cause analysis, et al. Overall it has been observed that free saplings distribution scheme has evinced considerable enthusiasm and inculcated sensitivity among the citizens particularly among children and senior citizens towards planting, nurturing and the protection of the existing tree cover of Delhi.

Building Environmental Awareness

Driven by the motto of "Catch Them Young", environmental awareness has been initiated among the school children through forming of "Eco-Clubs" in

In the coming years, environmental awareness will gain further impetus with the 2004 order passed by the Supreme Court making it mandatory to introduce subjects on environment in primary and high school education for all schools (public or private).



the schools and colleges of Delhi. So far, a network of about 1601 Eco-Clubs have been set-up in various schools and colleges of Delhi. These schools have adopted Best Environment Management Practices at their Schools which include recycling of paper, water conservation, energy conversation, vermi-composting, rain water harvesting and zero waste campaigns. Recycling paper machines have been provided in the lead Eco-Club schools. An Annual Eco-Club meet cum exhibition on eco-friendly products is organized every year. The children act

as "Paryavaran Vahinis" i.e. carriers of eco-principles through dissemination of eco-concepts to the society. Campaigns on varied environmental themes have been launched in schools, namely:

मैं अपना पर्यावरण स्वच्छ एवं हरा-भरा बनाने में योगदान दूँगा/दूँगी।



मैं दिल्ली को हरा-भरा बनाने के लिए ज्यादा से ज्यादा पौधे लगाऊँगा/लगाऊँगी तथा उनका संरक्षण करूँगा/करूँगी।



मैं सड़कों एवं सार्वजनिक स्थानों पर गंदगी नहीं फैलाऊँगा/फैलाऊँगी।



मैं अपने घर का जैविक कूड़ा (रसोईघर का कूड़ा) एवं पुनर्चक्रवत कूड़ा (शीशा एवं प्लास्टिक) अलग-अलग कर के हरे एवं नीले कूड़ेदान में डालूँगा/डालूँगी।



मैं कपड़े, जूट या पुनःचक्रित कागज (Recycled Paper) से बने थैले का ही प्रयोग करूँगा/करूँगी।



मैं अपने वाहन की नियमित प्रदूषण जाँच करवाऊँगा/करवाऊँगी।



मैं पानी बरबाद नहीं करूँगा/करूँगी।



मैं बिजली की बचत करूँगा/करूँगी।

पर्यावरण विभाग

राष्ट्रीय राजधानी क्षेत्र दिल्ली सरकार



दिल्ली को हरा-भरा एवं स्वच्छ बनाने की यही हमारी और आपकी भागीदारी है।

