



## GREENING CHANDIGARH ACTION PLAN 2012-2013 CHANDIGARH ADMINISTRATION

### INTRODUCTION

#### A) Chandigarh And Its Environment

Chandigarh is a modern city with prehistoric past. The 'city beautiful' is designed by famous French Architect Le Corbusier and is known for its unique architecture and well planned landscaping. It derives its name from a temple 'Chandi Mandir' located in the vicinity of the site selected for the city. It is a modern city, housing the Capital of two States Punjab and Haryana and the seat of 'Union Territory' Administration. Bounded on two sides by two seasonal rivulets, the northern edge of the city is the Capital Complex against the panoramic backdrop of the Shivalik hills. A harmonious blend of buildings, trees and other landscape elements, with the beautiful backdrop of the Shivalik hills, enhances its aesthetic value. The most fascinating feature of the City's landscaping is perhaps the "Tree plantation" along avenues, open spaces and around building complexes. A number of beautiful avenues with conspicuous tree species, well wooded forests along the periphery, 'Sukhna Lake' against the backdrop of Lake Reserve Forests, green belts running across the length and breadth of the city and the beautiful 'Sukhna Wildlife Sanctuary' on its periphery, further enhance the ecological, environmental and aesthetic richness of the city. Geographical area of U.T. Chandigarh is 139.98 sq. kms which includes 25.98 sq. km. of hilly area (which has been declared as 'Sukhna Wildlife Sanctuary') acquired for soil conservation works.

The galloping increase in population and rapid increase in the number of vehicles have led to a rising trend in pollution levels in Chandigarh. The population of the city is about 13.0 lakhs and the number of vehicles including the floating vehicles is more than 9.00 Lakhs. The sharp increase in number of vehicles is alarming. As per monitoring data of Chandigarh Pollution Control Committee, SO<sub>2</sub> and NO<sub>x</sub> levels in Chandigarh are very low, however, RSPM levels are matter of concern which always remains on higher side. However, it is significant to mention that despite of remarkable increase in no. of vehicles,

***"There is sufficient in the world for man's need but not for man's greed."***



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which are the main source of air pollution in Chandigarh, in previous years there is no major change in RSPM levels and definitely one of the main reason in combating air pollution is increase in green cover of the city during the last decade.

**Chandigarh bestowed with Indira Priyadarshini  
Vriksha Mitra Award**

Union Territory of Chandigarh was presented the prestigious Indira Priyadarshini Vriksha Mitra (IPVM) Award for States and Union Territories (Category: Union Territories) for the year 2010 for outstanding work in increasing forest & tree cover in the city. The forest cover in U.T. Chandigarh is 43 sq km and another 10 sq km area in under tree cover.

The MoEF, GoI has been giving IPVM Award since 1986 under various categories for outstanding achievement in the field of afforestation. During the year 2008, GoI decided to institute IPVM Award biennially to the State and Union Territories for outstanding works in increasing forest and tree cover within their boundaries based on the last two State of Forest Reports of Forest Survey of India.

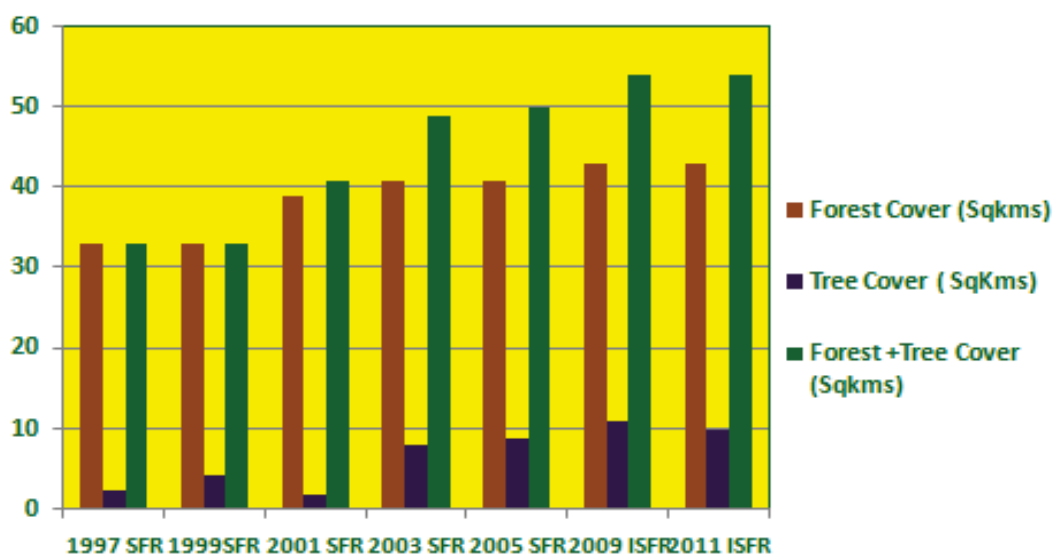


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**Indira Priyadarshini Vriksha Mitra Award - Trophy**

### Trend of Increase in Forest & Tree Cover of UT Chandigarh



*"We won't have a society if we destroy the environment."*



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City Forest near I.T. Park, Chandigarh



Shivalik Arboretum near Transport Chowk on Madhya Marg, Chandigarh

***"Confidence is a thing that cannot be produced by compulsion"***





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## **B) Role of Forests in Amelioration of Environment**

Rising pollution level and degrading environment of the city particularly by vehicular pollution highlights the need for remedial steps to combat pollution. Though the best way to reduce pollution at source is by adoption of clean technology and clean fuel, proper maintenance of roads & vehicles, maximum use of bicycles, strict enforcement of Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974 and the Environment (Protection) Act, 1986 etc., yet another effective way to reduce air and noise pollution is through a well planned and realistic afforestation strategy. Apart from giving shade, aesthetic beauty, recreational spots and playing host to a wide variety of birds and insects, the forests and trees play an important role in amelioration of environment due to their tremendous potential to act as:

1. Organic sponges to absorb gaseous pollutants via their leaf stomata (the tiny pores on the leaves) and breaks them down into less harmful molecules during the photosynthesis.
2. Storehouse of Carbon dioxide by assimilating the carbon dioxide in form of sugar.
3. Supplier of much needed vital oxygen.
4. Nature's air conditioners as well as purifier of air.
5. Vegetative measures for Soil and water conservation.

Forests and Trees in the city enhance its visual character by adding variety and richness to urban landscape with their different foliage and blossoms. They provide habitat for the wildlife. They have significant effect in improving the microclimate of the area. Green Cover significantly affects the building heating budget. Vegetation helps in reducing the noise pollution to the acceptable level.

Plants play an important role in both, reducing the environmental pollution load as well as serve as pollution indicator. Vegetal cover is, therefore, a pollution scavenger as it absorbs

***"In our every deliberation, we must consider impact of our decisions on next generations."***



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gases and gathers particulate matter through leaves having large surface areas. The green portion of the trees and plants has the capacity to filter dust, smoke and other pollutants in the air. Some species like Ficus, Mango, Neem etc. also act as good dust collectors. Well laid out gardens and parks with selected ornamental and shady trees provide good recreational spots and enhance the beauty of the city. Well-designed green belts prove to be very effective wind break and help in soothing the microclimate of the surroundings.

### **C) Strategy To Improve The Forest And Green Cover**

A need based appropriate model dovetailing environmental considerations will have to be adopted by all Greening Agencies in their plantation drives. The selection and quality of species play most important role in the success of greening and improving the survival percentage of the plantations. Therefore, the selection of species has to be judicious for which a number of indicators have been short-listed as indicated below:-

- Location of plantation site,
- Site conditions like, soil, ground water table,
- Climatic conditions like rainfall, temperature,
- Ornamental and aesthetic requirement,
- Environmental considerations like pollution abatement.
- Distance of the plantation site from the residential building, public utility services

*"Tell me, I forget. Show me, I remember. Involve me, I understand."*



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To ensure greater survival percentage of saplings planted, salient requirements have been identified which are as follows:-

- Proper identification of area requiring afforestation,
- Selection/choice of species,
- Raising of healthy seedlings,
- Planting of healthy and tall saplings,
- Area treatment according to its edaphic and climatic condition,
- Protection from grazing by providing tree guards or proper fencing, Post plantation care particularly the maintenance and watering upto three years,
- Monitoring and concurrent evaluation, Soil and water conservation including water harvesting measures.

It has to be recognized clearly by all greening agencies that every effort should be made for horizontal expansion of the forest cover/ green cover in & around Chandigarh. Simultaneously, all efforts have to be made as well for vertical expansion of existing green areas by way of developing them into multi-strata forest to increase efficiency and effectiveness of forest areas as carbon sink and green lungs of the city.

## **D) Potential areas available for greening during 2012-13**

### **I) Enrichment Plantation in the Catchment area of Sukhna Lake:**

1. Plantation of indigenous & palatable variety of trees & shrubs on gentle slopes & plain area of Wildlife sanctuary.
2. Hill tops & slopes of Sukhna Wildlife Sanctuary will be enriched with green cover by seed sowing in patches by contour trenching and trench-cum-ridge method.
3. Plantation of stem cuttings of soil conserving species like Arundo-donax along choe-banks to reduce erosion of choe banks by rain water run off.

*"We still do not know one thousandth of one percent of what nature has revealed to us."*



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#### **II) Enrichment plantation in the city forest area**

Reserved and Unclassed Forests in & around the city are:-

- 1) Lake Reserved Forest,
- 2) Sukhna Choe Reserved Forest
- 3) Patiala-ki-Rao Reserved Forest
- 4) Unclassed forests in Sukhna Choe, Lake & Patiala- ki- Rao

As per the India State of Forests Report-2011, density of these forests ranges from dense to moderately dense and at places open forests patches are also present. Enrichment plantation will be carried out in the open forests area to improve the quality and the biodiversity of the forests area. Fruit bearing & palatable species of trees and shrubs will be planted here as wildlife is in abundance in these forests.

#### **III) Plantation within the city**

1. Plantation of trees and shrubs in Parks and greenbelts under the jurisdiction of Municipal Corporation and Engineering Department.
2. Vacancy filling by planting along the roads, green belts etc. by Municipal Corporation and Engineering Department.
3. Enrichment plantation in southern sectors.
4. Development of Parks & green belts in southern sectors.

#### **IV) Plantation in Schools, Colleges, Offices and Residential Areas & Other Vacant Spaces**

A massive campaign for plantations on private lands, complexes of Schools, Colleges, University, Hospitals, Police Lines and Residential Complexes and offices will be undertaken in collaboration with students, Resident Welfare Associations, Market Associations, Environmental N.G.O.'s etc. Every unutilized & abandoned patch of land will thus be brought under tree plantations.

***“Only One Future for Our Children – Development Without Destruction”***