

Urban Forest Ecosystem and Tourism

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Abstract

Urbanisation is a logical and well anticipated consequence along the development of the cities. The role of urban forest in ameliorating urban habitats and improving quality of life is significant. Trees in urban system provide a variety of ecosystem services including biodiversity conservation, removal of atmospheric pollutants, oxygen generation, noise reduction, mitigation of urban heat island effect, microclimate regulation, stabilization of soil, groundwater recharge, prevention of soil erosion and carbon sequestration. With the participation of many different organization, local council, municipal and national planning bodies, department etc. for greening of cities is preferred. Government departments, educational institutions, municipal bodies, local residents are the key players in the greening of the urban cities. Systematic management entails regulated tree management, operations such as planting, pruning and felling needs to be conducted in an organized manner at the appropriate time. Law may be necessary for both to protect the tree from removal and to protect residents from hazardous trees. NCT of Delhi has been making continuous effort in this direction and taken many initiatives on this front which has shown positive results and it has been considered worth discussing here to have a framework for greening to be utilised while planning for the other cities. Census data for 2011 & data on Forest Cover of SFR 2011 has been used in the discussion. Key Words: City Forests, Ridge, Free Distribution, DPGS, Biodiversity Parks, Greening Agencies

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Introduction

Urban forestry is the care and management of single trees and tree populations in urban settings for the purpose of improving the urban environment. Urban forestry advocates the role of trees as a critical part of the urban infrastructure. Urban foresters plant and maintain trees, support appropriate tree and forest preservation, conduct research and promote the many benefits trees provide. Urban forestry is practiced by municipal and commercial arborists, municipal and utility

foresters, environmental policymakers, city planners, consultants, educators, researchers and community activists.

Urban forestry is a practical discipline, which includes tree planting, care, and protection, and the overall management of trees as a collective resource. The urban environment can present many arboricultural challenges such as limited root and canopy space, poor soil quality, deficiency or excess of water and light, heat, pollution, mechanical and chemical damage to trees, and mitigation of tree-related hazards. Urban forestry is the management of trees for their contribution to the physiological, sociological and economic well being of the urban society. Urban forestry deals with woodlands, group of trees and individual trees where people live. The need for urban forestry is to be planned & integrated and systematic approach to urban tree management should be stressed. Planning is important because trees are very often considered as an afterthought once development has taken place rather than being incorporated as original design phase. An integrated approach implies the participation of many different organization, local council, municipal and national planning bodies, department etc. Systematic management entails regulated tree management, operations such as planting, pruning and felling must be conducted in an organized manner at the appropriate time. Parks and green spaces are the backbone of the sustainable and high quality urban environment.

Per Capita Availability of Urban Forests:

In India from ancient times, flowers and plants have been admired and cultivated. There are many references to the Gardens in old Buddhist literature and the Sanskrit plays. But it was from the North, Central Asia and Persia that the splendid garden traditions were introduced in India, taking roots under various Muslim conquerors. A few surviving Mughal gardens, at present, are found in Srinagar, Pinjore, Delhi, Agra and Allahabad cities. Special care has been taken to include urban forestry in the city's master plans in respect of newly developed cities after Indian independence, e.g., Gandhinagar and Chandigarh. Gandhinagar, the capital city of Gujarat state, leads in per capita urban greenery (Figure 1) among Indian cities with Chandigarh taking second and Bangalore last position (based on 2001 population census). A casual drive through Gandhinagar city roads reveals that the variety of tree species planted on roadsides, parks/gardens/vans and as block plantation, is less in comparison to other important Indian cities. *Azadirachta indica* and *Peltophorum* species mainly dominate the Gandhinagar city area. Bangalore city has scored high in terms of 'species richness' with the recording of 164 species in parks, institutions, commercial and residential areas (Sudha and Ravindranath, 2000) while Chandigarh stood second with over 100 kinds of tree species along roads, parks, gardens and residential areas, excluding species in botanical gardens (Kohli et al., 2000). Vegetation in Delhi consists mainly of tropical thorn forest with *Prosopis juliflora* being dominant. This is a controversial species in the city forests/reserved forests from the wildlife, mainly birds and aesthetic view point (Khera et al., 2009). However, the city has some well maintained parks and gardens like Lodhi Garden, Mughal Garden, Deer Park, Budha Jayanti Samarak Park, Indraprastha Park and The Garden of Five Senses. Overall, there are about 15,000 big and small parks/gardens in Delhi, maintained by different agencies. The forest department of NCT, Delhi and other governmental agencies has

been responsible for increasing the green cover of the city from 30 sq kms to 300 sq kms during last ten years, despite of acute biotic pressure.

Potential for improvement

Urban forests and green spaces are in the public eye. All kinds of tree-related events, such as planting or felling, removing dangerous branches are often discussed in public and reported by the media. For these and other reasons, urban forestry should be based on scientifically sound principles and be transparent to the public. These objectives can be met if options are compared and evaluated, if management is demonstrated to the media, and if management activities are continuously monitored on a short and long-term basis (Gadow, 2002). Developed countries are doing excellently on this front but the same is not true in case of developing countries like India. There is a lack of a comprehensive research database on urban forestry in the country. Reasons for this deficiency are not difficult to find. There is inadequate financial support for urban forestry development and Urban forestry in India 89 research work. Researchers and practitioners in this field have not been able to convince bureaucracy-laden research funding agencies on the multiple contribution of urban forestry to human society in a populous and developing country like India. To compete with other kind of city expenditures/budgets, it is essential for urban forestry to raise its public profile and publicise its multiple contributions to city dwellers at large. Another reason is the paucity of trained and skilled researchers/scientists on different aspects of urban forestry

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