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Types of the Urban Forests

There is no specific type of classification of the urban forests neither one could find the customized types of the urban forests. For the sake of the studies one can refer forests, in general, as the natural woodlands which are categorized at different levels and sub-levels at different geographic ranges from local to national, and to global. In a conventional format, the urban forests could be natural or artificial/ manmade within the urban or peri-urban limits. These two could be broadly referred as *Natural Urban Forest* and *Artificial Urban Forest.*

Based on the Origin

Natural Urban Forest (NUF): The fragmented patches or pockets of the natural forests or woodlands within the urban or peri-urban periphery which got the protection or being saved due to any reason such natural forest relicts can be grouped under this category of natural urban forest. The most important example is Aarey Forest (Mumbai), Yamuna Biodiversity Park or Aravalli Biodiversity Park (Delhi).

Artificial Urban Forest (AUF): The forests which have been raised or developed through planned action on the land where there was no sign of forests in the past or on the tree-less land abandoned long-time back within the urban or peri-urban periphery can be grouped under this category of artificial urban forest. There are numerous examples from almost all the urban and peri-urban areas throughout the nation. The trees raised in or around the governmental or public or private land with the institutional or residential setup are good examples. The public gardens in the residential societies or the green belts developed in the industrial zones are yet other examples of AUF.

Based on location and purpose

Landscape forest: trees near and around buildings of the residential areas, schoolyards, campuses, hospitals, commercial/ business entity, and industrial campus to beautify and improve working environment.

Road forest: trees along railways, highways, boulevards, roads, streets, intersections to protect from the alter effects of traffic.

Park forest: trees in all the public use spaces used for the recreation like public parks, forest parks, historic sites, religious sites for general aesthetic value of the assets.

Ecologic forest: trees (in pockets or line) in between the residential on the outskirts of the city planted to abate the catastrophes as wind breakers, sand stabilizers, pollution reducer, etc.

Commercial forest: trees in nurseries, orchards, plantation, woodlands for commercial purpose such as for providing seedlings, saplings, fruit and nonconventional forest products, etc. The above types could also be classified zone wise depending on their size and use:

Trees near houses: trees in close proximity of the human residential site

Neighborhood forests: patch of trees forming small forests within residential areas

District forests: relatively medium sized patch of trees or forest fragments which equalizes half or more than the size of city

Recreational forests: large sized forests mostly on the urban fringes for the recreation

Forests for production: patches of trees or forests where traditional forestry is in practice

Based on importance

FAO - Types of Urban Forests

FAO (2016) adopted five simplified reference types to classify urban forests. These five types are ranked in importance for addressing specific issues in urban and peri-urban environments.

1) **Peri-urban forests and woodlands:** Forests and woodlands surrounding towns and cities that can provide goods and services such as wood, fiber, fruit, other non-wood forest products, clean water, recreation and tourism.
2) **City parks and urban forests (>0.5 ha):** Large urban or district parks with a variety of land cover and at least partly equipped with facilities for leisure and recreation.
3) **Pocket parks and gardens with trees (<0.5 ha):** Small district parks equipped with facilities for recreation/ leisure, and private gardens and green spaces.
4) **Trees on streets or in public squares:** groups of trees, and individual trees in squares and parking lots and on streets, etc.
5) **Other green spaces with trees:** sports grounds, vacant lands, lawns, river banks, open fields, cemeteries and botanical gardens.

Environmental benefits (Fig 1)

The benefits obtain from the forest ecosystem functions or the direct and indirect contributions from the forest ecosystems to human well-being are the

Ecosystem Services (FES). The role of urban forests in the ES for the urban population is briefed in the subsequent paragraphs.

Climate Change – it has increased the incidence and severity of extreme weather events like drought, heat waves, heavy rains, wind storms. The urban and peri-urban forests and trees are instrumental in mitigating climate change in the urban environment by capturing and storing atmospheric carbon dioxide.

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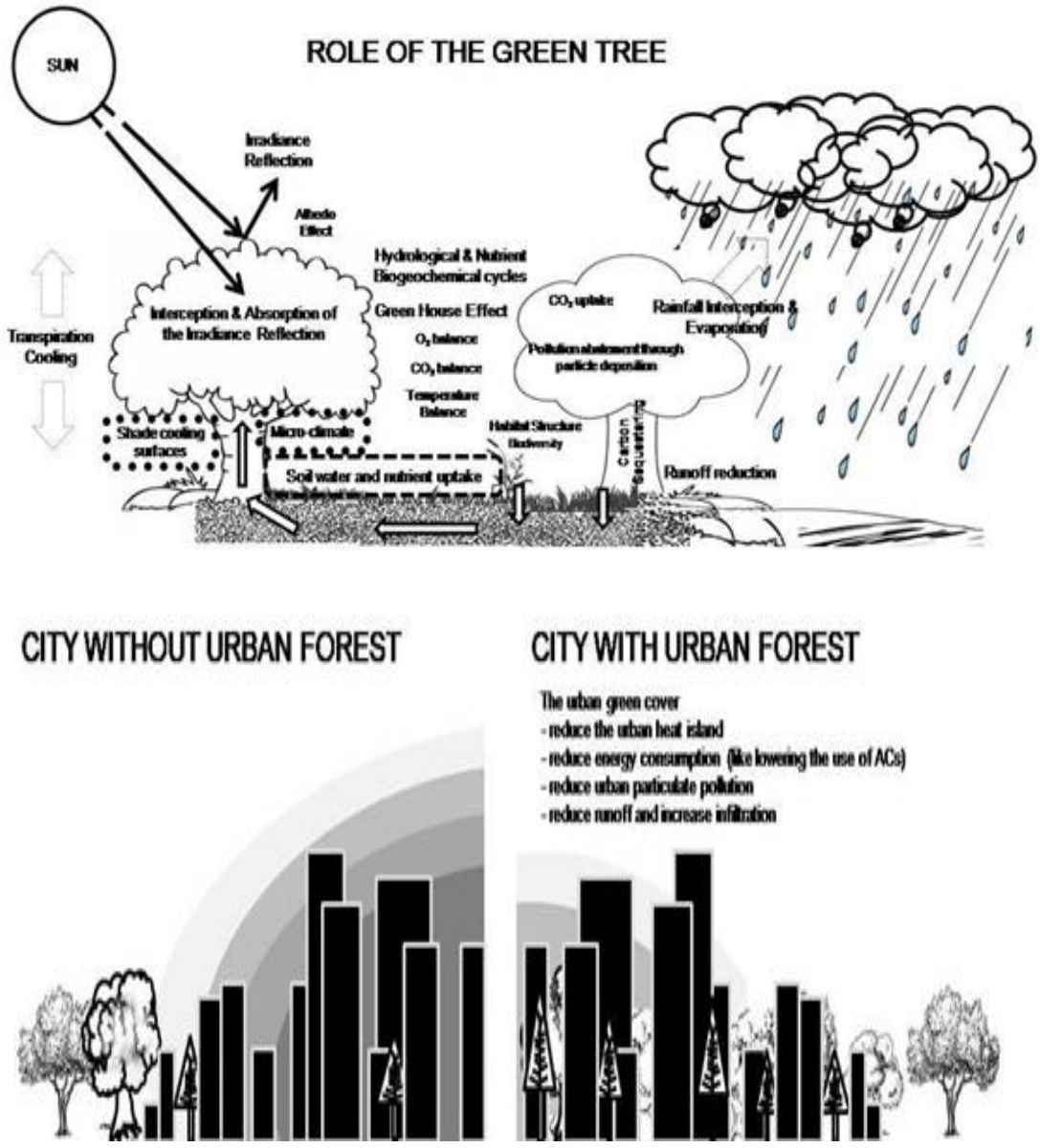

Figure 1: The ecosystem services and functions as a tree and forest in urban areas (Adapted from Livesley et al. 2016)