

## General Studies-3; Topic – Conservation and Environmental degradation

### Is planting saplings a solution to the felling of trees?

#### 1) Introduction

- In recent months, the idea of Compensatory Afforestation (CA) or plantations has sparked a huge debate.
- The debate is around, can we continue to lose the large number of trees being cut for the Goa airport, housing complexes in Delhi, highways, and the bullet train, and expect the damage to be offset through plantations.

#### 2) Present Urban Status

- City clusters are economic growth engines.
- In India the urban population (nearly 32%) contributes over 60% to the GDP and is projected to contribute around 75% in the next few years.
- Indian cities are estimated to add 300 million new urban residents by 2050.
- Nine of the 10 most polluted cities in the world are in India.
- Delhi is projected to become the most populous city in the world by 2028, according to the United Nations.
- With the inevitability of migration to urban areas, the share of agriculture and allied services in GDP has shrunk to around 15% even as the sector continues to engage around 70% of our working age population.
- This has led to subsistence living and distress in rural India.
- On the contrary, the GDP contribution of megacities and metropolitan regions is disproportionately high.
- The environment has been the casualty.
- In Indian cities, there is lack of basic infrastructure and a deteriorating quality of life.
- Environmental pollution caused by daily hour-long traffic jams on a 10-km stretch causes more harm to the environment.

#### 3) Shortcoming in the policy of CA

- Growing trees is not a substitute for altering shared habitats.
- Urban green spaces support a variety of life including birds and animals.
- These green spaces perform critical ecological functions including water recharge.
- The value of such ecologies cannot be substituted by plantations.
- The Afforestation overdrive by government departments is done in floodplains, grasslands and other ecosystems that are often not suitable for tree cover.
- Lack of impact assessments of sites where CA is to take place.
- In some areas, CA is seen as dumping saplings in sites that are empty and where trees are not appropriate.
- A mature, decades-old tree has an incredible capacity for pollution control, biodiversity support and cooling.
- Large trees can absorb and sequester as much carbon as 90 small trees.
- Saplings will take decades to provide the same scale of environmental services.
- Planners seek to compensate for the loss of these trees by selecting fast-growing species.

- Many popular fast-growing species used for urban Afforestation, such as Eucalyptus and Acacia auriculiformis, deplete groundwater and affect soil quality.
- They cannot replace the environmental services provided by a giant native peepal, mango or tamarind.

#### 4) **Benefits**

- Urban trees reduce air pollution, cool cities, and increase ground water infiltration.
- Research shows that in Bengaluru the street trees reduce PM10 levels by 75%, reduce atmospheric temperature by 3-5°C and road asphalt temperatures by 23-25°C.

#### 5) **Concerns / Challenges**

- Delay in fund disbursements and poor utilisation of funds by the forest department that is tasked with ensuring plantations.
- Further diversion of the CA lands for other uses is a challenge.
- Using the route of compensatory Afforestation, there is loss of an average of 35,000 hectares of forests annually to development projects.
- Forest and tree conservation laws have fuelled more ecological loss and destruction by relying on compensatory Afforestation.
- The location of compensatory plantation poses another challenge.
- Trees that were public resources are compensated by saplings that are inaccessible to the citizenry.
- Designs for redevelopment, road widening, or metro construction are developed by engineers with little or no background in ecology.

#### 6) **Invest in urban infrastructure**

- Not creating essential urban infrastructure will lead to a deteriorating quality of life.
- With large-scale migration to the cities, we must focus on making our cities economically viable and environmentally sustainable so that they remain economic growth engines that provide employment.
- Investing in our urban infrastructure will lead to enhanced economic activity.
- It will result in large-scale employment generation and an improved quality of life.
- This is a much-desired socioeconomic outcome in a young nation where the majority of urban migrants are youth.

#### 7) **Way Forward**

- We have to work hard to ensure that our urban infrastructure causes least harm to the environment and has a net positive impact on our quality of life.
- Whether it is metros or elevated corridors, a net environment impact assessment must be conducted to justify the felling of trees and harm to water bodies.
- There is a need to inform the stakeholders about the long-term positive impact of urban infrastructure projects to justify cutting trees.
- Large-scale compensatory Afforestation should be provided in the immediate vicinity where the trees are cut, to the extent possible.
- With coordination between municipal engineering and forest departments, and genuine public consultation, designs can be innovatively modified to save a number of trees.
- CA, when needed, must be done locally, using the right species.
- These species should be watered and protected to ensure long-term survival.