MIYAWAKI TECHNIQUE: ENVIRONMENT

NEWS: Around 56,000 sq. meters of Dense Forests created in Prayagraj in last two years using Miyawaki Technique

WHAT'S IN THE NEWS?

The Prayagraj Municipal Corporation has developed multiple dense forests using the Miyawaki technique, covering over 55,800 square meters, to enhance air quality and biodiversity for Mahakumbh 2025. These efforts have also transformed industrial and dumping sites into green zones, providing significant environmental and ecological benefits.

1. Mahakumbh 2025 and the Need for Green Spaces

- **Objective:**
    - To provide pure air and a healthy atmosphere for the millions of devotees expected to attend Mahakumbh 2025.
- **Approach:**
    - Dense forests were developed at over 10 locations across Prayagraj using the Miyawaki technique.

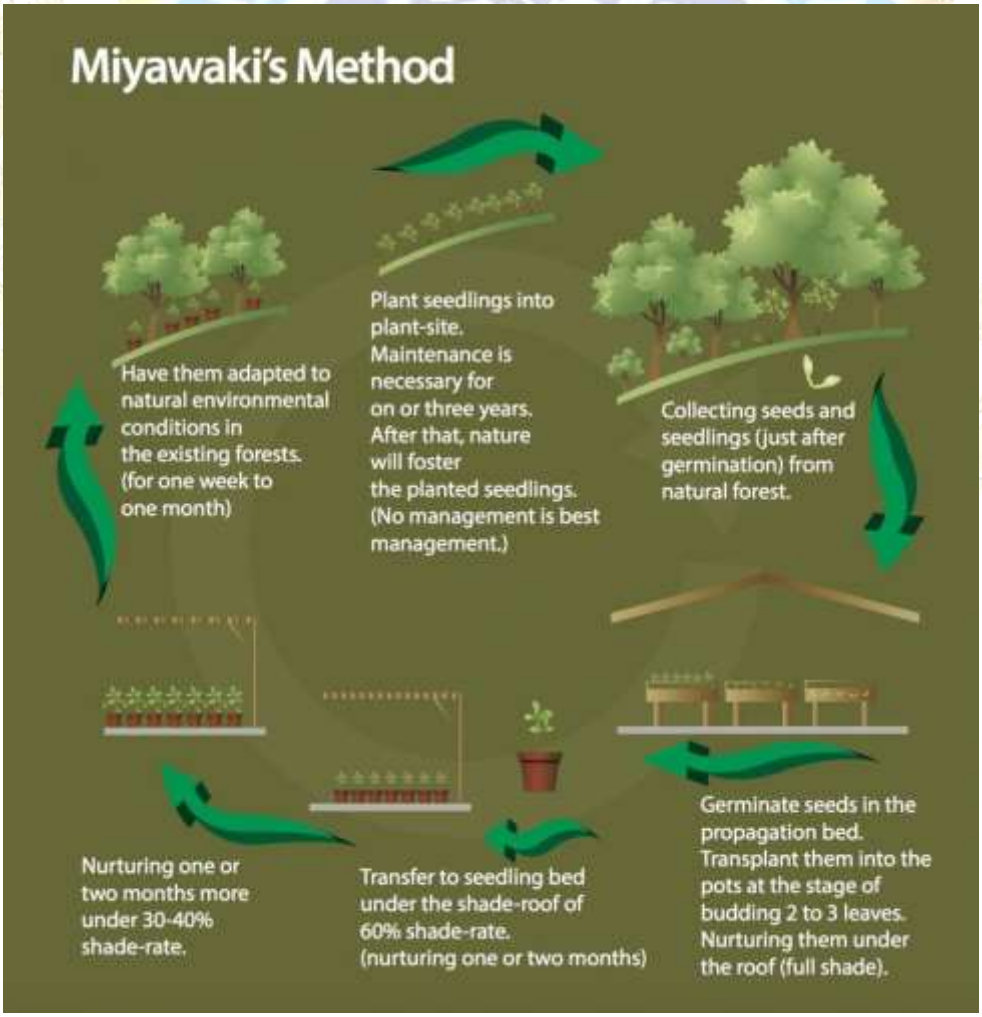
2. Key Features of the Plantation Drive

1. **Scale of the Project:**
    - Total area covered: 55,800 square meters.
    - Largest plantation in the Naini industrial area: 1.2 lakh trees of 63 species.
    - Baswar dumping yard cleaned and transformed: 27,000 trees from 27 species.
2. **Species Diversity:**
    - Includes fruit-bearing (e.g., mango, amla, lemon), medicinal (e.g., neem, tulsi, brahmi), ornamental (e.g., hibiscus, gulmohar), and native species (e.g., teak, mahogany, bamboo).
    - Over 20 species of trees and plants have been planted to enhance biodiversity and ecological balance.
3. **Environmental Impact:**
    - Improved air quality by reducing dust, dirt, and odours.
    - Managed industrial waste effectively.

- Reduced air and water pollution and prevented soil erosion.
- Lowered the temperature by 4–7°C in the vicinity.

3. What is the Miyawaki Technique?

- Developed by Japanese botanist **Akira Miyawaki** in the 1970s.
- A method for creating **dense forests in small areas**, mimicking natural ecosystems.
- Key features:
  - Involves **planting native species densely** to accelerate growth.
  - Trees grow **10 times faster** compared to conventional methods.
  - Promotes **rapid carbon absorption**, soil restoration, and biodiversity.
- Often called the **'pot plantation method,'** it is highly effective in urban areas with limited space.



4. Benefits of Miyawaki Technique in Urban Settings

1. **Rapid Forest Growth:**
    - Trees grow 10 times faster than traditional methods.
    - Dense forest development mimics natural ecosystems.
2. **Environmental Restoration:**
    - Transforms barren or polluted land into green ecosystems.
    - Improves soil fertility and absorbs higher amounts of carbon.
3. **Biodiversity Enhancement:**
    - Creates habitats for birds and animals.
    - Boosts the variety of plant species and supports rich ecosystems.
4. **Climate Mitigation:**
    - Helps reduce urban heat by lowering temperatures.
    - Mitigates the effects of pollution in industrial areas.

5. Expert Insights on the Miyawaki Technique

- **Dr. N.B. Singh (Botany Expert):**
    - Dense forests help regulate temperature variations during summers.
    - Improves biodiversity, soil fertility, and ecological balance.
    - Creates habitats for urban wildlife and fosters greenery in degraded areas.

Source: https://www.pib.gov.in/PressReleasePage.aspx?PRID=2091250