



## EVERGREEN REVOLUTION - GS III MAINS

**Q.** The transition to an Evergreen Revolution is necessary to feed the world in a sustainable manner. Discuss. (10 marks, 150 words)

**News:** *The evergreen revolution: Making hunger history*

### What's in the news?

- Dr M.S. Swaminathan, the Father of the Green Revolution in India, described the Evergreen Revolution as “improvement of productivity in perpetuity without ecological harm”. This revolution aims for increased productivity in a way that's safe for the environment, economically beneficial, and socially sustainable.

### Key Pillars of the “Evergreen Revolution”:

- Long-Term Detriments Acknowledgment
- Balancing Productivity and Ecology.
- Efficient irrigation methods
- Watershed management
- Drought-tolerant crop development,
- Sustainable Agricultural Practices.
- Mitigating Ecological Perils.
- Preserving Indigenous Crop Varieties.
- Productivity in Perpetuity.
- Shift Towards Sustainable Agriculture.

### Need for Evergreen Revolution:

#### 1. Failure of the Green Revolution:

- Despite being initiated over five decades ago, the Green Revolution fell short in its goal to eradicate hunger and malnutrition in India.
- As per NFHS-5 (2019-21), stunting is still above 35% while wasting hovers around 20% for children under 5 years.

#### 2. Soil Degradation:

- Improper use of fertilizers has resulted in a loss of soil fertility, posing a threat to sustainable agriculture.
- **The current NPK ratio of fertilizer usage is approximately 7:2.5:1 instead of the ideal 4:2:1.**

#### 3. Shift Towards Less Nutritious Crops:

- Nutrient-rich foods like pulses and millets have been replaced by more dominant crops such as wheat and rice, leading to a decline in dietary diversity.



#### 4. Over-Dependence on Imports:

- India still depends on imports for certain key crops like pulses and oilseeds. Imports of Oil Seeds in India averaged 176.44 USD Million from 1996 until 2022.

#### 5. Increasing Resilience against Climate Vagaries and Ensures Food Security:

- The Evergreen Revolution promotes crop diversification and introduction of climate-resilient crop varieties which can help in reducing the vulnerability of agriculture to climate change.
- For instance, ICAR developed flood tolerant rice varieties like Swarna Sub1 for coastal districts of India.

#### 6. Tackling Water Scarcity:

- Evergreen Revolution emphasizes efficient water use through drip irrigation, rainwater harvesting, and watershed management.
- This is crucial against changing precipitation patterns and increasing water scarcity due to climate change.

#### 7. Reducing GHG Emissions:

- Proper handling of crop residues can prevent open burning, which is a source of greenhouse gas emissions (PM10, PM2.5, CO, CO<sub>2</sub> etc).
- Implementing techniques like mulching, composting, or using crop residues for bioenergy production can be more climate-friendly.

#### 8. Carbon Sequestration:

- Incorporating trees and woody perennials into agricultural landscapes, a component of evergreen revolution, through agroforestry can sequester carbon dioxide.
- It also helps in reducing soil erosion and providing shade to crops.

#### 9. Addressing Soil Degradation:

- Implementing Integrated Pest Management practices reduces the reliance on chemical pesticides.
- It encourages the use of biological controls and natural predators, which is more sustainable and helps maintain ecological balance.

The evergreen revolution aims to bring agriculture, health, and nutrition together and work on them as one unit. The transition to an Evergreen Revolution is necessary to feed the world in a sustainable manner while causing no further harm to the already depleted but valuable natural resources.

Further Reference - [Green Revolution](#)