



Mains Practice Question

Q. Identify and discuss the factors responsible for diversity of natural vegetation in India. Assess the significance of wildlife sanctuaries in rain forest regions of India. (Answer in 250 words, UPSC Mains 2023)

25 Dec, 2023 GS Paper 1 Geography

Approach

- Briefly introduce the topic by providing context for the factors contributing to the diversity of natural vegetation in India.
- Discuss the factors responsible for diversity of natural vegetation in India and significance of wildlife sanctuaries in rainforest regions.
- Conclude by underlining the interconnectedness of factors influencing natural vegetation diversity and the role of sanctuaries in sustaining ecosystems.

Introduction

India's natural vegetation exhibits remarkable diversity owing to a myriad of geographical, climatic, and ecological factors.

Body

- **Factors Responsible for Diversity of Natural Vegetation in India:**
 - **Geographic Variation:** India's extensive and varied geography, spanning from the northern Himalayas to the southern coast, results in diverse ecosystems and vegetation due to a wide range of climatic conditions.
 - **Climatic Variation:** India's diverse climates, from tropical in the south to temperate in the north, directly impact regional vegetation patterns.
 - **Monsoon Winds:** The monsoon winds deliver substantial rainfall, leading to the growth of tropical rainforests in certain areas and supporting xerophytic vegetation in arid regions.
 - **Altitude:** India's diverse altitudes, from the Himalayas to lower regions, contribute to varied vegetation, with alpine flora at higher altitudes and temperate forests at lower ones.
 - **Soil Types:** India's diverse soil types, including alluvial, red, laterite, and desert soils, impact plant species and its distribution through varied vegetation support.
- **Significance of Wildlife Sanctuaries in Rainforest Regions of India:**
 - **Biodiversity Conservation:** It provides protected habitats for a wide variety of plant and animal species, some of which may be endangered or endemic.
 - **Research and Education:** These sanctuaries serve as living laboratories for researchers and conservationists to study and understand complex ecosystems.
 - **Tourism and Economic Benefits:** Well-managed wildlife sanctuaries can attract ecotourism, providing economic benefits to local communities.
 - **Carbon Sequestration:** Rainforests are vital in sequestering carbon dioxide from the atmosphere.
 - **Ecological Balance:** Rainforests play a vital role in ecological balance, providing essential ecosystem services like water purification, soil fertility, and pollination.

Conclusion

India's diverse natural vegetation results from geography, climate, altitude, soil, and biodiversity, while rainforest wildlife sanctuaries are crucial for conservation, research, tourism, carbon sequestration, and ecological health.

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