



Mains Practice Question

Q. Enumerate the major threats to wetlands in India? How can “wise use approach” help in mitigating these threats? (150 words)

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Approach

- Define wetland
- Enumerate the major threats to wetlands in India
- Analyse the efficacy of wise use approach in mitigating these threats
- Conclude by suggesting a way forward

Introduction

The Ramsar Convention, which is an international intergovernmental treaty for the conservation of wetlands, to which India is a party, defines wetlands as “areas of marsh, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which, at low tides, does not exceed six meters”.

India currently has 49 sites designated as Wetlands of International Importance (Ramsar Sites). The wetlands support rich biodiversity and help stabilise water supplies, cleanse polluted waters, protect shorelines, and recharge groundwater aquifers. However, there are various factors which threaten their existence.

Body

Major threats to wetlands in India

- Wetlands near urban centres are under increasing developmental pressure for residential, industrial and commercial facilities, for example, Udaisagar Lake in Udaipur. Urban wetlands are essential for preserving public water supplies.
- Increased air temperature; shifts in precipitation; increased frequency of storms, droughts, and floods; increased atmospheric carbon dioxide concentration; and sea-level rise could also affect wetlands.
- With not more than one-fifth of the municipal solid waste treated in the country, wetlands have become the ultimate waste dumps.
- Indian wetlands are threatened by exotic introduced plant species such as water hyacinth and Salvinia. They clog waterways and compete with native vegetation.
- Vast stretches of wetlands have been converted to paddy fields. Construction of a large number of reservoirs, canals and dams to provide for irrigation significantly altered the hydrology of the associated wetlands.

Wise use approach

The Ministry of Environment, Forest and Climate Change has come out with guidelines to support state governments in the implementation of the Wetlands (Conservation and Management) Rules, 2017, the

guidelines said the management of notified wetlands is recommended to “be based on wise-use approach”.

- Ramsar Convention defines the ‘wise use’ of wetlands as “the maintenance of their ecological character, achieved through the implementation of ecosystem approaches, within the context of sustainable development.”
- A wetland use is “not wise use” if the human “intervention leads to adverse changes in ecosystem components and processes, such as the reduction in water flowing into the wetlands, in the area under inundation, water holding capacity, etc.”
- For instance, in an urban lake type of wetland, intervention like concretisation of shoreline for beautification will increase the aesthetic value and tourism benefits but will lead to decrease in the “ability to accommodate monsoon flows” and thus may not be a “wise-use”.
- Wise use approach is based on the conservation and restoration of the natural state of the wetlands. This involves the participation of the government, communities, individuals and NGOs for mitigating negative impacts on the wetland ecosystems.

Way forward

- To counter unplanned urbanization and a growing population, management of wetlands has to be an integrated approach in terms of planning, execution and monitoring.
- Effective collaborations among academicians and professionals, including ecologists, watershed management specialists, planners and decision-makers for the overall management of wetlands.
- The dynamic nature of wetlands necessitates the widespread and consistent use of satellite-based remote sensors and low-cost, affordable GIS tools for effective management and monitoring.

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