

Ganga River Basin Management Plan

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Source: PIB, Ministry of Jal Shakti

A comprehensive River Basin Management Plan for Ganga was **prepared by the consortium of seven Indian Institutes of Technology (IITs) (Kanpur, Delhi, Madras, Bombay, Kharagpur, Guwahati, and Roorkee)**. The plan is being implemented by National Mission for Clean Ganga (NMCG) under Namami Gange Programme.

Objective

The objective of Mission **“Ecological Restoration”** is to **restore the ecological balance of National River Ganga** and provide an enabling environment for endemic flora, fauna and microorganisms to thrive in the Ganga river network.

Threats to Biodiversity of National River Ganga and their Remediation

Threats

Many factors affecting the ecological integrity of the National River Ganga have been identified through GRBMP studies. They are;

1. **Habitat Fragmentation** by dams and barrages
2. Habitat Shrinkage due to increased water diversions and withdrawals
3. Habitat Alterations by constructing embankments, levees, guide walls, etc.
4. Habitat Pollution by the influx of municipal, industrial and agricultural wastes
5. Habitat Invasion by alien river species
6. Habitat Encroachment by constructions in floodplains and

- river bed farming
7. Habitat Disturbances by plying of noisy vessels, dredging, etc.; and
 8. Habitat Malnutrition by the trapping of nutrient-rich sediments behind dams

Recommended Actions/measures

Based on the above threat assessment, the following essential actions are envisaged to restore the ecological balance of National River Ganga:

- **Restoration of longitudinal connectivity** along with **maintenance of environmental flows** and sediments throughout the Ganga river network.
- Maintenance of lateral and vertical connectivity across rivers and floodplains is also needed to provide breeding sites of fish and other aquatic/ amphibious animals as well as the periodic exchange of river biota with floodplain wetlands.
- Restoration of unpolluted flow in the river by appropriate measures to **control anthropogenic pollution** as envisaged under Mission Nirmal Dhara.
- **Restrictions on anthropogenic alterations of river morphology by gravel and sand mining** as well as by river bed and river bank modifications by structural measures.
- **Elimination of alien invasive species from the Ganga river network** and establishing norms to prevent future introductions of exotic species.
- Control of habitat encroachment by humans for riverbed farming, riparian activities and permanent constructions in floodplains.
- Restrictions on anthropogenic disturbances of river habitat by frequent plying of vessels, dredging of the river bed, etc.
- **Control of overfishing and fishing during spawning seasons**, ban on commercial fishing, and protection of

the spawning and breeding grounds of fish.

- **Assessment of essential nutrient elements available in different river stretches** and in sediments trapped behind dams, and devising suitable means to release the trapped sediments into downstream river reaches.
- **Continuous bio-monitoring of the entire Ganga river** and her important tributaries, and dissemination of information in the public domain.
- **Synergizing the eco-restoration measures proposed above with the Dolphin Conservation Action Plan initiated by MOEF in 2010.**