

Additional Considerations for the Proposed Gandak River Conservation Reserve

This submission complements the ‘*Conserving Gharial and Associated Fauna in the Gandak River - Assigning Legal Status to River Habitats*’ document prepared by Wildlife Trust of India (October 2018) proposing the creation of the Gandak River Conservation Reserve (GRCR) in the state of Bihar.

This will be the third riverine conservation reserve in India and the first of its kind in Bihar to be established under Section 36 of the Wildlife (Protection) Act, 1972 amended in 2002.

In addition to its biodiversity values, the Gandak River also contributes critical ecosystem services to local human settlements and communities, who depend on the river-floodplain system for agriculture, artisanal capture-fisheries, and livestock husbandry.

Extent of GRCR: The GRCR may extend from the location of its entry into Bihar, downriver of the Paniahwa bridge (N 27.181°, E 83.964°) near the Uttar Pradesh-Bihar border (Piprani Block of West Champaran district), to Fatehabad ghat (N 26.065°, E 84.965°) in the Paroo Block of West Muzaffarpur Taluk (Muzaffarpur district).

Due to the dynamic nature (channel avulsion, meandering and braiding) of the Gandak River, we propose that the river channel, braid bars, and entire floodplain within which these channels have moved in the last 100 years be considered as the GRCR boundary. The extent of the GRCR may need to be identified and mapped annually considering the dynamic nature of this river system.

Parts of the river often move between the states of Bihar and Uttar Pradesh, and sections of the river and floodplain that move into Uttar Pradesh will be exempted from the purview of the GRCR.

Management Actions

Ecological flows: Maintenance of ecological flows from the Triveni barrage on the Gandak is critical for the effectiveness of the GRCR, especially during the breeding season of gharials and dolphins in the dry-season (December to June). It is, therefore, necessary to:

- 1) Coordinate with barrage authorities to ensure adequate and gradual discharge (flow), especially to prevent disruption of connectivity and submergence of nesting sites,
- 2) Ensure rate and timing of discharge should avoid damage to downstream nesting sites,
- 3) Patrol and monitor gharial nesting sites, and other wildlife hotspots, and
- 4) Conduct hydrological and geomorphological studies for river-floodplain habitat conservation and management.

No new barrages, dams or other water diversions to be allowed on the Gandak River to protect this riverine ecosystem.

Activities prohibited within the GRCR should include

- 1) Hunting, as defined in the Wildlife Protection Act 1972;

- 2) Dumping of solid wastes, sewage release, and other pollution-causing activities as per applicable laws including (a) Water (Prevention and Control of Pollution) Act, 1974, and related Cess Act (1977), (b) Noise Pollution (Regulation and Control) Rules, 2000, (c) Air (Prevention and Control of Pollution) Act, 1981.;
- 3) Sand-mining, boulder-mining and any other form of substrate-mining, including river-bottom dredging or channel deepening;
- 4) Intensive cultivation on sand-bars and floodplain sand deposition areas adjoining the river at least for a distance of 1 km from the river;
- 5) Large shipping traffic or large-scale motorized vessel movements, and
- 6) Release of any exotic or invasive fish species (non-native fishes) into the river or nearby wetlands.

Fishing in the GRCR may be considered a special case, given the significance of fishing for local livelihoods as well as the potential threats to wildlife from fishing-related activities, and managed as follows:

- 1) Fishing rights need to be clearly settled through a system of identity cards and permits, by identifying all settlements with active, seasonal or part-time fishers along the GRCR, and in accordance with the Bihar Fisheries Jalkar Management Act, 2006 (amended 2017);
- 2) Permitting use of only sustainable fishing gear such as cast-nets, gill nets of mesh sizes between 24mm and 100mm, and basket-, scoop, or trap-nets placed along shorelines;
- 3) Issuing guidelines for fishing in the GRCR, for e.g. preventing the entanglement and trapping of gharials, dolphins and turtles; banning destructive fishing practices (using actively dragged large mosquito nets, poisoning, and use of dynamite/explosives etc.)
- 4) Involving designated persons from fishing settlements along the GRCR in monitoring activities, and providing incentives for the same;
- 5) Monitoring the collection of ornamental fish for the aquarium trade and regulating the number of permits, and the numbers and species of fish collected.

Collaborative Monitoring: Academic institutions and NGOs like Wildlife Trust of India, T.M. Bhagalpur University, Zoological Survey of India, and Ashoka Trust for Research in Ecology and the Environment (ATREE) have been involved for many years in monitoring gharials and river dolphins in the Gandak River, and may be made regular collaborators in research and monitoring activities towards the effective management of the GRCR.

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