

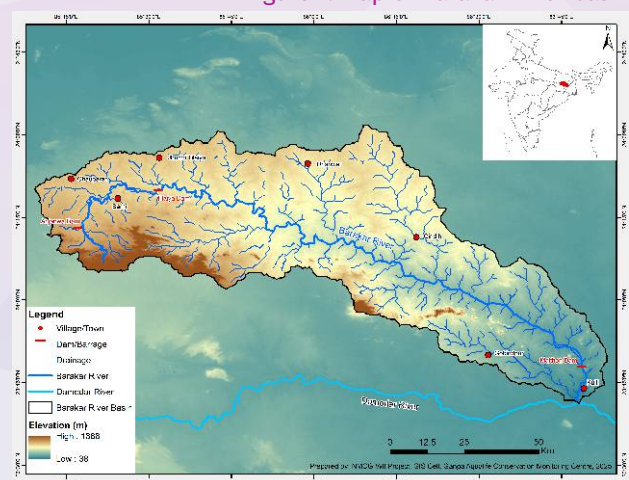
Barakar

GENERAL INFORMATION

- Barakar River, a tributary of the Damodar River, originates from the Hazaribagh Plateau (near Padma village, Hazaribagh district, Jharkhand), flows for 225 km, through the districts of Hazaribagh, Koderma, Giridih, Dhanbad and Jamtara in Jharkhand, and Paschim Bardhaman in West Bengal.
- It merges into the Damodar River near the industrial city of Asansol (Paschim Bardhaman district) in West Bengal.
- Barakar River is mainly characterised by a wide, shallow channel over the flat plateau, and is marked by steep-sided, narrow valleys.
- Barakar River basin covers an area of about 6,776.72 km² (Figure 1).
- The basin lies in the Deccan Peninsula (Chhota Nagpur – 6B) biogeographic zone.
- The climate of the basin is tropical monsoon, characterized by dry winter stretching from November to February, dry summer stretching from March to May, and wet summer between July and October.
- Major tributaries of Barakar include the Usri and Barsoti.
- The population density along the river is 733.60 persons/km².

- Decadal LULC transitions in the Barakar basin (2008-09 to 2018-19) witnessed a significant increase in area under kharif crop (21.11%), and decrease in current fallow (-14.32%) and wasteland (-4.63%). Area under waterbodies (0.44%), built-up (0.16%), deciduous forest (0.06%), plantation (0%), degraded/scrub forest (-0.03%), rabi crop (-1.22%) and double/triple crop (-1.57%) have remained largely stable with marginal to no changes (Figures 2a and 2b).

Figure 1: Map of Barakar River basin



BIODIVERSITY VALUE

- Barakar basin is dominated by non-forest (83.66%) areas, followed by open forest (9.07%), moderately dense forest (3.19%), waterbodies (2.10%), very dense forest (1.42%), and scrubland (0.56%) (Figure 3).
- Forest types in the basin include Tropical Dry Deciduous Forest, Dry Mixed Deciduous Forest and Dry Peninsular Sal Forest, represented by sal (*Shorea robusta*), teak (*Tectona grandis*) tendu (*Diospyros melanoxylon*), sirish (*Albizia procera*), mahua (*Madhuca longifolia*), Indian ash tree (*Lannea coromandelica*), palash (*Butea monosperma*), amaltas (*Cassia fistula*), khair (*Senegalia catechu*), bel (*Aegle marmelos*), and *Terminalia* spp.
- Key mammal species in Hazaribagh Wildlife Sanctuary include Vulnerable leopard (*Panthera pardus*), sloth bear (*Melursus ursinus*) and sambar (*Rusa unicolor*), and Near Threatened striped hyaena (*Hyaena hyaena*).
- 192 bird species have been recorded from Hazaribagh Wildlife Sanctuary, including Critically Endangered white-rumped vulture (*Gyps bengalensis*) and Indian vulture (*Gyps indicus*), Endangered Egyptian vulture (*Neophron percnopterus*), and Vulnerable common pochard (*Aythya ferina*).
- 45 fish species belonging to 8 orders, 17 families, and 30 genera have been documented from the Barakar River, including Vulnerable *Wallago attu* and Near Threatened *Chitala chitala*.
- 38 species of water beetles belonging to 22 genera, six subfamilies, and three families have been recorded from Hazaribagh Wildlife Sanctuary.

Figure 2a: LULC map of Barakar River basin (2008-09)

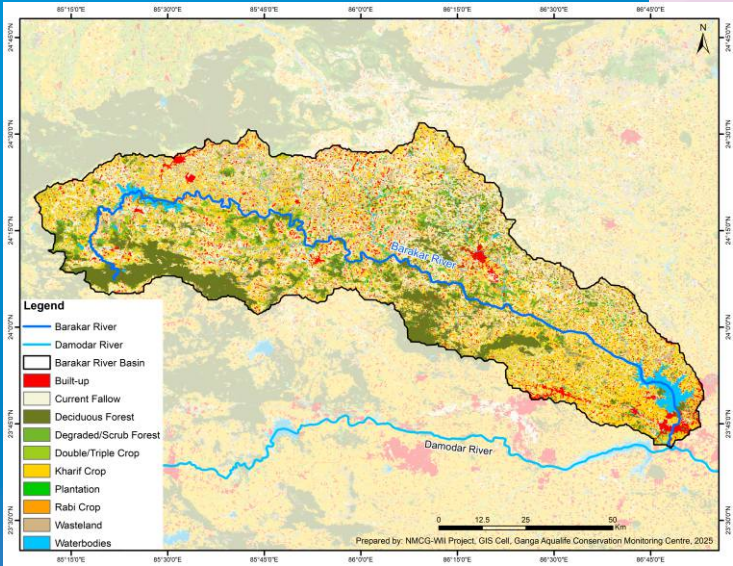


Figure 2b: LULC map of Barakar River basin (2018-19)

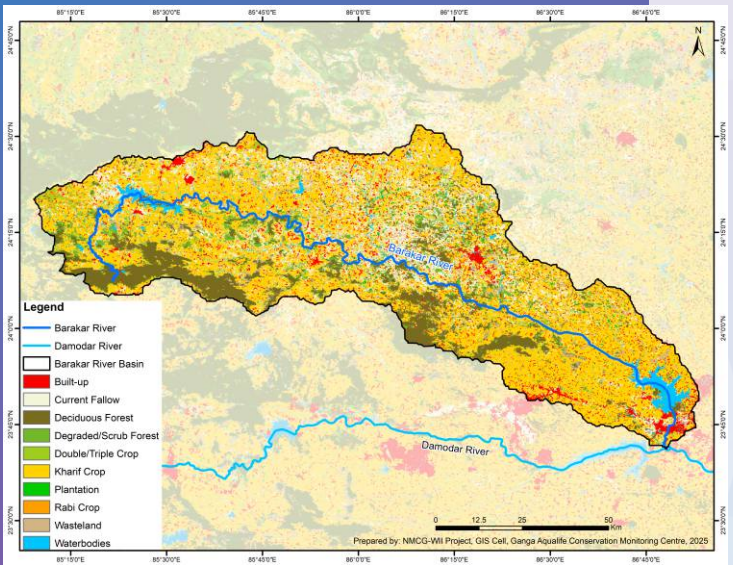
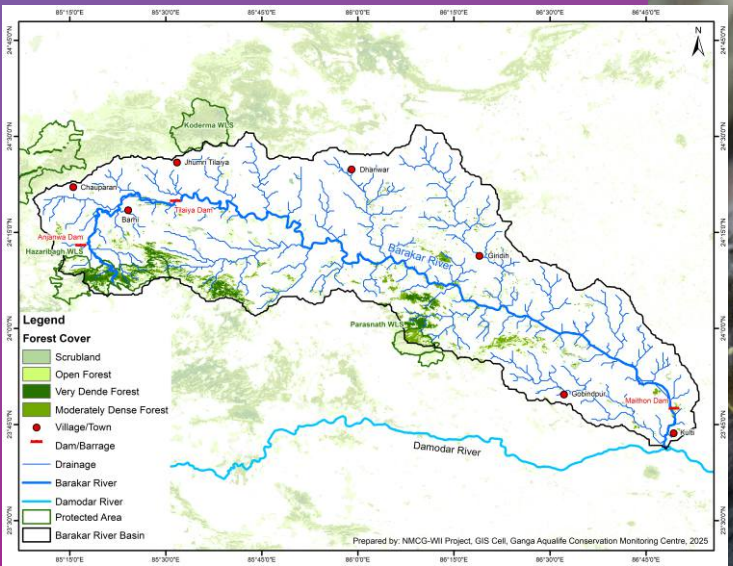


Figure 3: Forest cover of Barakar River basin (2019)



CONSERVATION SIGNIFICANCE

ENDANGERED

Avifauna

Egyptian vulture *Neophron percnopterus* (Linnaeus, 1758)

VULNERABLE

Avifauna

Common pochard *Aythya ferina* (Linnaeus, 1758)

Fish

Wallago attu (Bloch and Schneider, 1801)

KEY PROTECTED AREAS

Hazaribagh Wildlife Sanctuary

Parasnath Wildlife Sanctuary

Topchanchi Wildlife Sanctuary

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DRIVERS OF RIVERSCAPE CHANGE

- Barakar River is impounded by two dams, namely Tilaiya Dam (Koderma district, Jharkhand; 4 MW) in the upper reaches and Maithon Dam (Dhanbad district, Jharkhand; 63.2 MW) in the lower reaches. Although both projects were designed for flood control, hydroelectric power generation, and irrigation, they have resulted in habitat fragmentation and altered the river's ecological character.
- Barakar has high levels of chloride and iron, likely due to urban waste, especially near Barakar town.
- The lower Barakar River is significantly affected by sand mining, highlighting both its economic significance and the environmental challenges it faces.

INTERESTING FACTS

- Barakar River holds deep religious significance in Jainism, as it is believed that Lord Mahavir, the 24th and last Tirthankara (a spiritual leader who has attained moksha), attained *Keval Gyan* (omniscience or the highest level of spiritual enlightenment in Jainism) under a Sal tree in the farm of a peasant named Shyamaka, on the bank of the Rujubaluka River (also spelled Rujuvalika or Rijubalika), the ancient name of the present-day Barakar River.
- Shri Rujuvalika Tirth in Giridih district, Jharkhand, on the banks of Barakar, is an important Jain pilgrimage site associated with Lord Mahavir's attainment of Keval Gyan.
- Parasnath Hill, also known as Marang Buru to the Santhal tribe, is the highest peak in Jharkhand and is sacred to both Jains and Santhals. For the Jains, it is the site where 20 of the 24 Tirthankaras attained moksha, including the 23rd Tirthankara, Lord Parshvanatha, after whom the hill range is named. The Shikharji Temple, also known as Sammed Shikharji, is a highly sacred Jain pilgrimage site situated atop Parasnath Hill. For the Santhals, the hill is considered the abode of their supreme animist deity, and the Jug Jaher Than (sacred grove) located on the hill is regarded as their most sacred dhorom garh (religious site).
- Maithon Dam has an underground power station, which was the first of its kind in South Asia.
- The reservoirs of Tilaiya Dam and Maithon Dam are popular local tourist spots, offering activities such as boating and fishing.



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