

VIBRANT GANGA



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

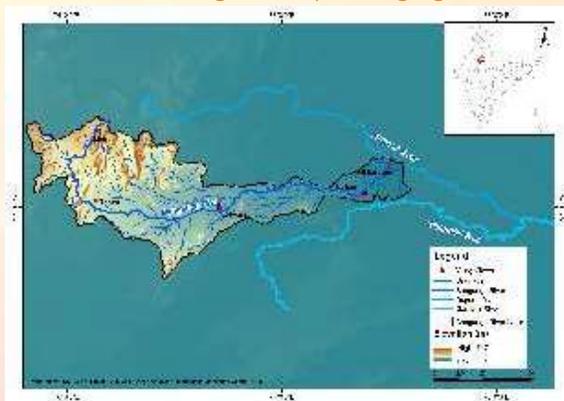


Banganga

GENERAL INFORMATION

- Banganga River, a tributary of the Ruparel River (a tributary of the Gambhir River), originates from Aravalli hills, near Med village (Jaipur district, Rajasthan), and flows for approx. 253 km through Jaipur, Dausa and Bharatpur districts in Rajasthan.
- It joins the Ruparel River, near Nagla Kesaria village, Bharatpur district.
- Banganga River basin spans an area of about 5,041 km² (Figure 1).
- The basin falls under the Semi-arid (Punjab Plains – 4A and Gujarat Rajputana – 4B) biogeographic zone.
- Banganga basin in Rajasthan has a sub-humid climate, with hot summers, cool winters, and monsoon-dominated rainfall.
- Banganga River flows through alluvial plains influenced by Aravalli geology, showing semi-arid river characteristics shaped by rock structure, climate, and groundwater interactions.
- Gumti Nalla, Palasan and Suri are the major tributaries of the Banganga.
- Population density along the river is 550.33 persons/km².
- Decadal LULC transitions in the Banganga basin (2008-09 to 2018-19) recorded an increase in area under kharif crop (3.36%), current fallow (2.48%), built-up (0.06%), deciduous forest (0.02%), waterbodies (0.04%) and scrub forest (0.02%), while a decline was observed in rabi crop (-2.8%), double/triple crop (-2.15%) and wasteland (-1.03%). Marginal changes were noted in plantation (0.01%) and grassland (0.01%) (Figures 2a and 2b).

Figure 1: Map of Banganga River basin



BIODIVERSITY VALUE

- Banganga basin is dominated by non-forest areas (82.42%), followed by open forest (9.46%), scrubland (4.17%), moderately dense forest (3.19%), and very dense forest (0.56%) (Figure 3).
- The basin supports Northern Tropical Thorn Forests and Dry Tropical Deciduous Forests, dominated by drought-tolerant species such as *Acacia nilotica*, *Acacia catechu*, *Prosopis cineraria*, *Prosopis juliflora*, *Capparis decidua*, *Balanites aegyptiaca*, *Ziziphus mauritiana*, and *Anogeissus pendula*, with scattered *Dalbergia sissoo*, *Tamarix dioica*, and *Salix tetrasperma* in sheltered reaches, and grasses like *Saccharum spontaneum*, *Cenchrus ciliaris*, and *Panicum antidotale* along monsoon pools and channel margins.
- Banganga River flows through the Jamwa Ramgarh Wildlife Sanctuary.
- 20 mammals have been recorded from the Sariska Tiger Reserve, including the Endangered tiger (*Panthera tigris*), and Vulnerable leopard (*Panthera pardus*).
- 350, 224 and 218 bird species have been documented from the Keoladeo National Park, Sariska Tiger Reserve and Jamwa Ramgarh Wildlife Sanctuary, respectively. Threatened species include the Endangered steppe eagle (*Aquila nipalensis*) and Egyptian vulture (*Neophron percnopterus*), and Vulnerable sarus crane (*Grus antigone*) and common pochard (*Aythya ferina*).
- 61 fish species (10 orders, 20 families) have been recorded from the Banganga River basin, including the Vulnerable *Wallago attu*, and Near Threatened *Ailia coila*, *Chitala chitala* and *Ompok bimaculatus*.

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

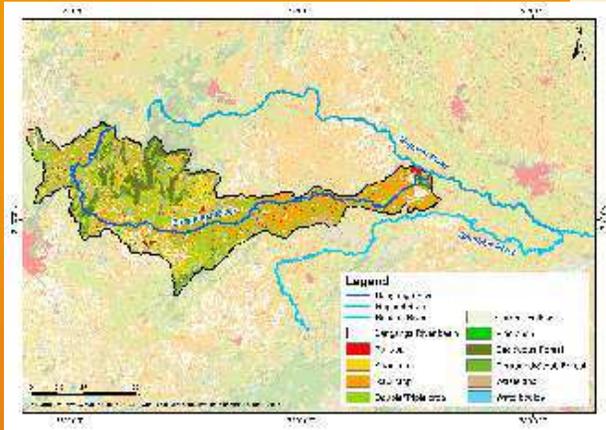


Figure 2b: LULC map of Banganga River basin (2018-19)

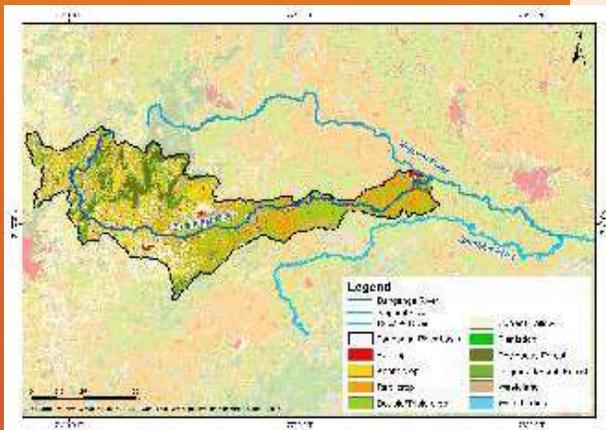
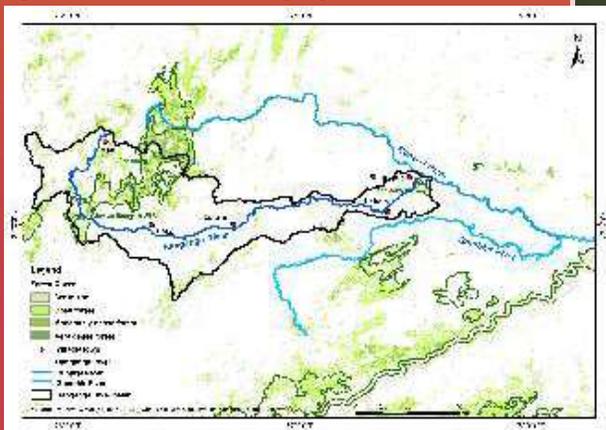


Figure 3: Forest cover of Banganga River basin (2019)



CONSERVATION SIGNIFICANCE

ENDANGERED

Avifauna

Egyptian vulture *Neophron percnopterus* (Linnaeus, 1758)

Steppe eagle *Aquila nipalensis* (Hodgson, 1833)

VULNERABLE

Avifauna

Common pochard *Aythya ferina* (Linnaeus, 1758)

River tern *Sterna aurantia* (Gray, 1831)

Sarus crane *Grus antigone* (Linnaeus, 1758)

Fish

Wallago attu (Bloch and Schneider, 1801)

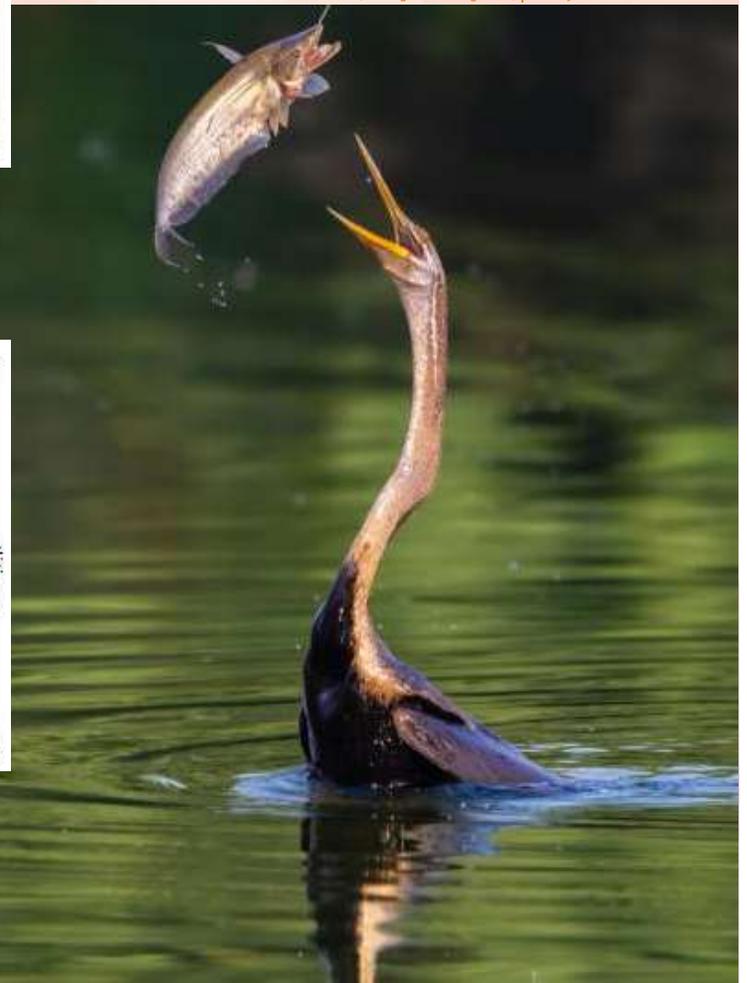
KEY PROTECTED AREAS

Jamwa Ramgarh Wildlife Sanctuary

Sariska National Park

Keoladeo National Park

Oriental Darter (*Anhinga melanogaster*) | ©Vikhy



DRIVERS OF RIVERSCAPE CHANGE

- Expansion of irrigated agriculture in the Bharatpur, Dausa and Alwar districts has increased surface-water diversion and groundwater extraction, reducing lean-season flows.
- Growing settlements such as Bharatpur, Bayana, and nearby rural clusters has led to riverbank encroachment, waste discharge, and channel modification.
- Sand extraction along river stretches in Dausa and Bharatpur districts has disrupted sediment balance and riverbed morphology.
- Water diversion for agriculture, including through structures like the Ajan Dam, has reduced river flow and altered natural flow regimes, especially during dry seasons.

INTERESTING FACTS

- According to local lore, the Banganga River is associated with the Ramayana, with legends describing it as an underground channel of the Ganga River that emerged from the ground pierced by an arrow shot by a Hindu deity, giving the river its name and spiritual significance.
- Buddhist monastery on Bijak-ki-Pahadi near the Banganga River is part of the ancient ruins at Viratnagar (Bairath) near Jaipur and includes India's earliest known freestanding Buddhist *chaityagriha* (prayer hall), reflecting the early spread of Buddhism in Rajasthan.
- Alwar, historically part of the ancient Matsya Kingdom (c. 1500 BCE) and linked to the Pandavas' exile, derives its name from the Salva tribe or Alaval Khan Mewati (also called Aravalpur), and was among the first Rajput princely states to join the British Empire. It is renowned for landmarks such as Bala Qila (Alwar Fort), Vijay Mandir (present day royal residence), the City Palace (Vinay Vilas Palace), and the haunted Bhangarh Fort.
- Sariska Tiger Reserve is the world's first tiger reserve to successfully reintroduce tigers after they went locally extinct in 2004, using translocated tigers from the Ranthambore Tiger Reserve.
- Keoladeo National Park, located near the Ruparel-Banganga confluence in Bharatpur, Rajasthan, is a UNESCO World Heritage and Ramsar wetland site (since 1981). Historically, a royal hunting ground, it was declared a protected bird sanctuary in 1971 and sustained by water from the Ajan Bandh reservoir via canal.



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