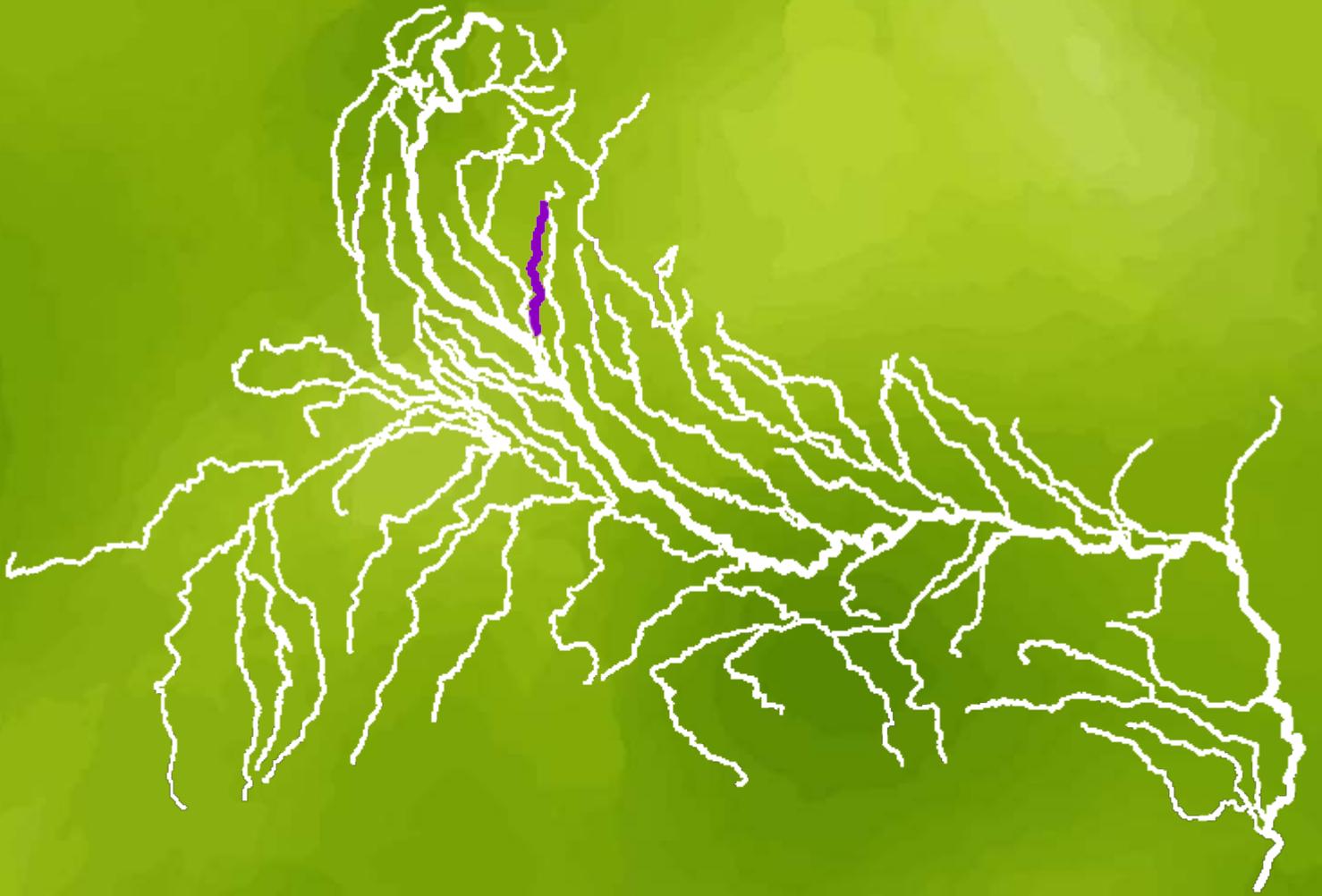


VIBRANT GANGA



भारतीय वन्यजीव संस्थान
Wildlife Institute of India



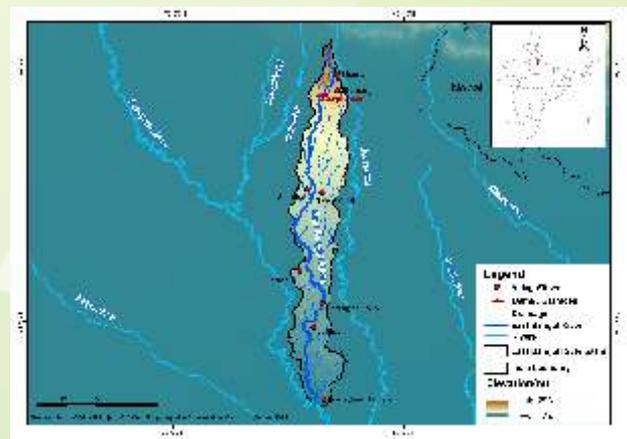
East Bahgul

GENERAL INFORMATION

- East Bahgul (East Baigul) River, a stream-fed tributary of the Ramganga River, originates in the Shivalik foothills of the Kumaon Himalaya in Uttarakhand, near Raikhil Range village in Udham Singh Nagar district. It flows for approx. 295 km through the districts of Udham Singh Nagar in Uttarakhand, and Bareilly and Shahjahanpur in Uttar Pradesh.
- It joins the Ramganga River at Alhadadpur Baihari village, Shahjahanpur district.
- East Bahgul River basin spans an area of approx. 2268.13 km² (Figure 1).
- The basin falls in the Gangetic Plain (Upper Gangetic Plains – 7A) biogeographic zone.
- East Bahgul basin experiences subtropical monsoon climate, marked by hot summer, an intense monsoon, and cool to mild winter seasons.
- East Bahgul drainage system exhibits a dendritic to sub-dendritic drainage pattern.
- Major tributaries of the East Bahgul River include the Afsarha Nadi, Nakatia Nadi, and Gundhia Nadi.
- The population density along the river is 823.87 persons/km².

- Decadal LULC transitions in the East Bahgul basin (2008-09 to 2018-19) recorded an increase in area under kharif crop (5.48%), built-up (1.08%) and rabi crop (0.43%), and decrease in current fallow (-3.24%), wasteland (-2.24%), double/triple crop (-1.36%) and waterbodies (-0.16%), indicating a shift towards agricultural intensification. Marginal to no changes were noted in area under evergreen forest (0.01%), deciduous forest (0.01%), scrub forest (-0.01%), plantation (nil) and littoral zone (nil) (Figures 2a and 2b).

Figure 1: Map of East Bahgul River basin



BIODIVERSITY VALUE

- East Bahgul basin is dominated by non-forest areas (96.55%), followed by open forest (2.16%), very dense forest (0.66%), moderately dense forest (0.61%), and scrubland (0.02%) (Figure 3).
- East Bahgul River, in the upper reaches, is characterised by highly fragmented moist deciduous and agro-riparian vegetation dominated by *Dalbergia sissoo*, *Syzygium cumini*, *Azadirachta indica*, *Madhuca longifolia*, and *Ficus* spp., the middle stretch exhibits strong riverine influence and supports *Terminalia arjuna*, *Dalbergia sissoo*, *Syzygium cumini*, and *Barringtonia acutangula*, and the lower reach is characterised by open, seasonally flooded alluvial tracts dominated by *Saccharum spontaneum*, *Chrysopogon aciculatus*, *Echinochloa crus-galli*, and *Cyperus* spp., with scattered riparian trees of *Acacia nilotica*, *Dalbergia sissoo*, *Salix tetrasperma*, and *Tamarix dioica*. The riparian margins in both the upper and middle stretches support *Saccharum spontaneum* and *Phragmites karka*.
- 104 and 32 bird species have been documented from the Bareilly and Shahjahanpur districts, respectively. Threatened species include the Critically Endangered Indian vulture (*Gyps indicus*); Endangered Egyptian vulture (*Neophron percnopterus*); Vulnerable common pochard (*Aythya ferina*), river tern (*Sterna aurantia*) and sarus crane (*Grus antigone*); and Near Threatened lesser adjutant (*Leptoptilos javanicus*) and Indian roller (*Coracias benghalensis*).
- The Vulnerable Indian flapshell turtle (*Lissemys punctata*) and Mugger (*Crocodylus palustris*) have been reported from the Udham Singh Nagar district.
- 46 fish species (9 orders and 15 families) have been documented from the East Bahgul River, including the Endangered *Clarias magur*, Vulnerable *Wallago attu*, and Near Threatened *Chitala chitala* and *Ompok pabda*.

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

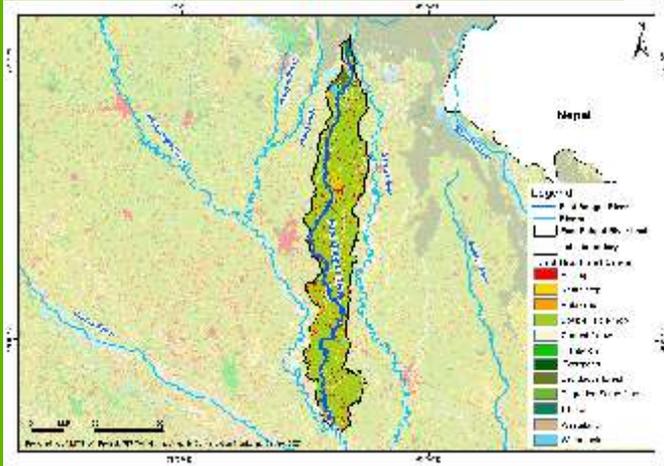


Figure 2b: LULC map of East Bahgul River basin (2018-19)

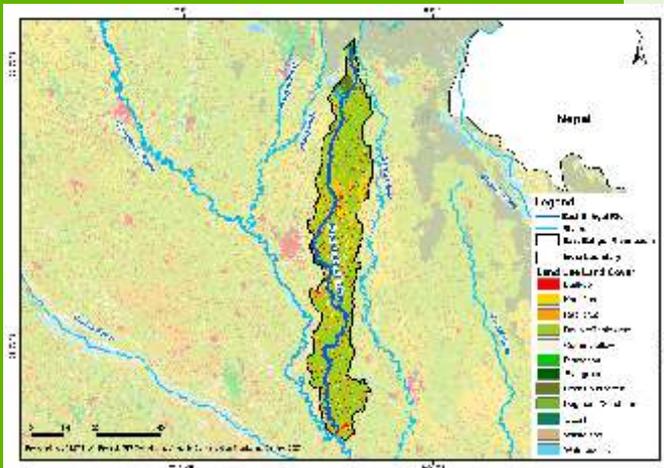
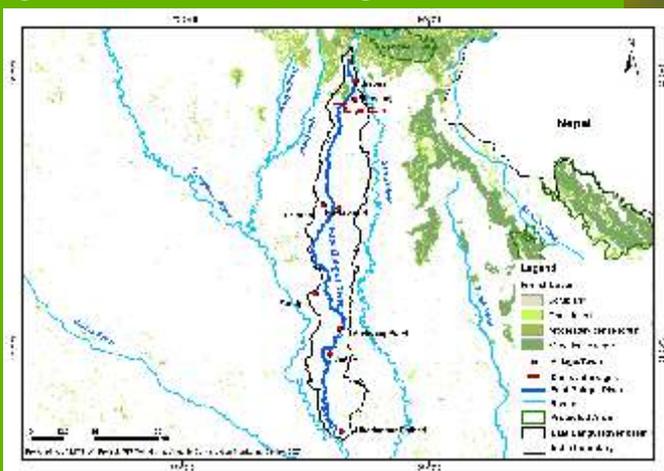


Figure 3: Forest cover of East Bahgul River basin (2019)



CONSERVATION SIGNIFICANCE

ENDANGERED

Avifauna

Egyptian vulture *Neophron percnopterus* (Linnaeus, 1758)

Fish

Wagur *Clarias magur* (Hamilton, 1822)

VULNERABLE

Avifauna

Common pochard *Aythya ferina* (Linnaeus, 1758)

River tern *Sterna aurantia* (Gray, 1831)

Sarus crane *Grus antigone* (Linnaeus, 1758)

Reptile

Indian flapshell turtle *Lissemys punctata* (Lacépède, 1788)

Mugger *Crocodylus palustris* (Lesson, 1831)

Fish

Wallago attu (Bloch and Schneider, 1801)

Egyptian Vulture (*Neophron percnopterus*) | ©Anindya Mazumdar



DRIVERS OF RIVERSCAPE CHANGE

- Baigul Dam (Udham Singh Nagar district), the only dam on the East Bahgul River, has obstructed the natural flow of the river, impacting downstream riverine ecology, hydrology and groundwater recharge.
- Riverbed and river bank encroachment is a key issue in the East Bahgul riverscape, contributing to habitat degradation and reduced habitat availability.
- Agricultural runoff and the discharge of untreated sewage from settlements along the river are the primary sources of water pollution, adversely impacting water quality.
- There are no major urban centres along the East Bahgul River; however, industrial effluents from Sitarganj (Udham Singh Nagar district), a growing industrial hub in the basin, may be entering the river directly or indirectly.
- Exotic invasive fish species, namely common carp (*Cyprinus carpio*), African catfish (*Clarias gariepinus*), grass carp (*Ctenopharyngodon idella*), silver carp (*Hypophthalmichthys molitrix*), and bighead carp (*Hypophthalmichthys nobilis*), pose a significant threat to native fish populations.
- Illegal trade in chelonians, as indicated by frequent seizures of Indian flapshell turtles by the State Forest Department, poses a major threat to freshwater turtle populations in the basin.

INTERESTING FACTS

- East Bahgul River shares its name with Bahgul (West Bahgul) River, which flows through the Rudrapur city in Udham Singh Nagar district.
- Udham Singh Nagar district, known as the 'food bowl of Uttarakhand', was carved out of the Nainital district in 1995 and is named in honour of Indian freedom fighter, Shaheed Udham Singh (1899-1940), who assassinated Sir Michael Francis O'Dwyer, former Lieutenant Governor of the Punjab Province of British India (1913-1919), in retribution for the Jallianwala Bagh massacre (13th April, 1919) in Amritsar, Punjab, a major turning point in India's Independence movement.
- The northern part of the Udham Singh Nagar district falls within the Terai Arc Landscape (TAL), a transboundary and globally recognised priority region for tiger conservation and one of the 200 globally important eco-regions due to its fairly intact large mammal assemblages.
- Indian freedom fighters Ram Prasad Bismil and Ashfaqulla Khan, who carried out the Kakori Train Robbery in 1925 near Lucknow to seize British treasury funds in support of the revolutionary movement, were born in Shahjahanpur district.
- Bareilly district, particularly the city of Bareilly—popularly known as the “Zari Nagri” (City of Zari)—is a major centre of Zari-Zardozi (zar: gold; dozi: embroidery) handicraft, involving gold or silver thread work on textiles such as velvet and silk. Introduced by Persian artisans and patronised during the Mughal period, the craft has deeper historical roots, with references to gold and silver embroidery found in ancient Indian texts, including the Mahabharata and Ramayana, and documented in historical sources from the Gupta to the Sultanate periods.



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