

VIBRANT GANGA

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भारतीय वन्यजीव संस्थान
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Pahuj

GENERAL INFORMATION

- Pahuj River, a tributary of the Sind River, originates near Sujawani village in the Shivpuri district of Madhya Pradesh, and flows for 265 km through the districts of Shivpuri, Datia and Bhind in Madhya Pradesh, and Jhansi and Jalaun in Uttar Pradesh.
- It joins the Sind River at Deori village, Jalaun district.
- Pahuj River basin spans an area of about 3,648 km² (Figure 1).
- The basin falls under the Semi-arid (Gujarat Rajputana- 4B) biogeographic zone.
- The basin has a subtropical climate, characterized by hot summers, monsoon, and cool, dry winters.
- Pahuj River flows through granitic hills and alluvial plains and exhibits a structurally controlled mixed drainage pattern, including dendritic, rectilinear, and parallel forms.
- Samoha River is the key tributary of the Pahuj.
- Population density along the river is 285.85 persons/km².

- Decadal LULC transitions in the Pahuj basin (2008-09 to 2018-19) recorded an increase in area under double/triple crop (23.91%), scrub forest (11%), evergreen forest (2.28%), kharif crop (0.71%) and built-up (0.22%), and a decrease in wasteland (-15.81%), current fallow (-10.43%), rabi crop (-8.99%), waterbodies (-1.48%) and deciduous forest (-1.41%) (Figures 2a and 2b).

Figure 1: Map of Pahuj River basin



BIODIVERSITY VALUE

- Pahuj basin is dominated by non-forest areas (94%), followed by open forest (3.66%), scrubland (1.65%) and moderately dense forest (0.69%) (Figure 3).
- The basin supports Tropical Dry Deciduous Forest dominated by *Anogeissus latifolia*, *Boswellia serrata*, *Butea monosperma*, *Madhuca longifolia* and *Tectona grandis*, along with Tropical Thorn Forest represented by *Acacia nilotica*, *Ziziphus mauritiana*, *Capparis decidua* and *Terminalia arjuna*. Critically Endangered *Chlorophytum borivilianum*, and Near Threatened *Pterocarpus marsupium* are found in the river basin. The populations of *Boswellia serrata* and *Sterculia urens* have regionally declined due to overexploitation and habitat loss.
- 170 bird species have been recorded from Pahuj (Simardha) Reservoir, of which 74 were water and water associated birds, including the Endangered Egyptian vulture (*Neophron percnopterus*), and Vulnerable river tern (*Sterna aurantia*) and common pochard (*Aythya ferina*).
- 20 fish species belonging to 6 orders, 7 families, and 13 genera have been documented from the Pahuj River, including the Vulnerable *Wallago attu*, and Near Threatened *Ompok bimaculatus*.

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

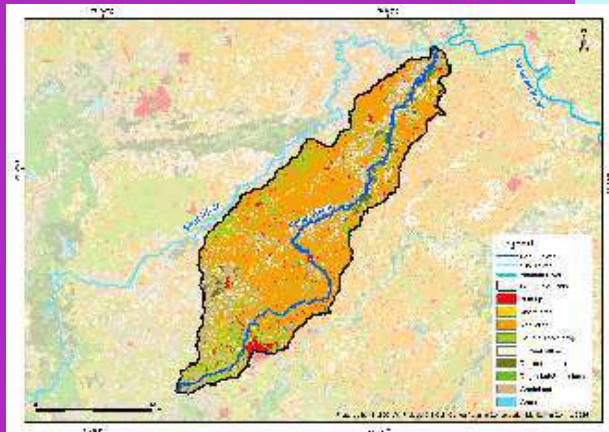


Figure 2b: LULC map of Pahuj River basin (2018-19)

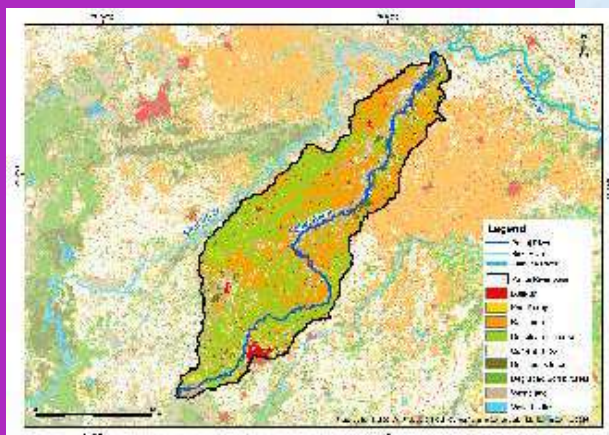


Figure 3: Forest cover of Pahuj River basin (2019)



CONSERVATION SIGNIFICANCE

ENDANGERED

Avifauna

Egyptian vulture *Neophron percnopterus* (Linnaeus, 1758)

VULNERABLE

Avifauna

River tern *Sterna aurantia* (Gray, 1831)

Common pochard *Aythya ferina* (Linnaeus, 1758)

Fish

Wallago attu (Bloch and Schneider, 1801)

River tern (*Sterna aurantia*) | ©Vishal Lokare



DRIVERS OF RIVERSCAPE CHANGE

- Pahuj Dam, the only functional dam on the Pahuj mainstem, has altered the river's natural flow and sediment regimes, causing downstream sediment starvation, channel narrowing, habitat degradation, and increased ecological stress.
- Urban runoff, and discharge of untreated sewage and industrial effluents, particularly in the river stretch along the Jhansi city, and agricultural runoff have degraded water quality, leading to eutrophication and the proliferation of water hyacinth, which physically chokes the channel.

INTERESTING FACTS

- Jhansi is historically renowned as the kingdom of Rani Lakshmbai, a central figure in the Indian Rebellion of 1857. Jhansi Fort, perched on Bangra Hill, and the Rani Mahal Museum stand as enduring symbols of this legacy and mark Jhansi as a cultural and historical gateway to the Bundelkhand region.
- The Unao Balaji Sun Temple located on the banks of Pahuj River in the Datia district of Madhya Pradesh, is famous for the discovery of a prehistoric Sun idol, which, according to local lore, was revealed to the King of Datia in a dream at a spot where a cow miraculously offered her milk daily.
- Pahuj is one of the five rivers that form the holy *Pachnada* confluence in Jalaun district, along with the Yamuna, Chambal, Kunwari, and Sind, which attracts large numbers of devotees, especially during *Kartik Purnima*.



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