

VIBRANT GANGA



भारतीय वन्यजीव संस्थान
Wildlife Institute of India



Dhasan

GENERAL INFORMATION

- Dhasan River, a tributary of the Betwa River, originates from Jasrath Hills in the Raisen district of Madhya Pradesh.
- The river flows for 365 km and passes through the districts of Raisen, Sagar, Tikamgarh and Chhatarpur in Madhya Pradesh, and Lalitpur, Jhansi and Hamirpur in Uttar Pradesh, and meets the Betwa River near Deori village (Hamirpur district).
- Dhasan River basin spans an area of around 10,663.57 km² (Figure 1).
- The basin falls in the Deccan Peninsula (Central Highlands - 6A) biogeographic zone.
- Dhasan basin experiences subtropical monsoon climate with hot summers, mild winters, peak rainfall in August, frequent droughts, and variable moisture from upper (dry) to lower (semi-arid) areas, challenging water management.
- Dhasan River drains the hard Archean rocks of the Bundelkhand Craton, with exposures of the Bijawar Group and Vindhyan Supergroup, partially overlain by Deccan Basalt.
- Major tributaries of the Dhasan include the Kathan, Mangrar, Bachneri, Sukhanai, and Rohni.

- The population density along the river is 271 persons/km².
- Decadal LULC transitions in the Dhasan basin (2008–09 to 2018–19) recorded increases in double/triple crop by 17.83%, built-up areas by 0.10%, kharif crop by 0.01%, and deciduous forest by 0.01%, while plantations and evergreen forest remained unchanged (0%). In contrast, rabi crop decreased by 9.90%, wasteland by 5%, current fallow by 2.97%, scrub forest by 0.02%, and waterbodies by 0.06% (Figures 2a and 2b).

Figure 1: Map of Dhasan River basin



BIODIVERSITY VALUE

- Dhasan basin is dominated by non-forest areas (78.38%), followed by open forest (10.97%), moderately dense forest (6.45%), scrubland (2.59%), and very dense forest (0.60%) (Figure 3).
- The basin supports Tropical Dry Deciduous Forests, represented by *Tectona grandis*, *Dendrocalamus strictus*, *Anogeissus latifolia*, *Butea monosperma*, and *Terminalia* spp., and Tropical Thorn Forests, characterized by *Acacia nilotica* and *Euphorbia* spp., with shrubs such as *Ziziphus nummularia*, *Calotropis procera*, and *Flueggea leucopyrus*.
- 168 bird species have been reported from the basin, comprising 74 species of waterbirds and 94 species of terrestrial birds, including the Endangered Egyptian vulture (*Neophron percnopterus*), and Vulnerable common pochard (*Aythya ferina*).
- Vulnerable Indian flapshell turtle (*Lissemys punctata*) has been reported from the Chhatarpur district.
- 45 fish species (9 orders, 16 families, and 31 genera) have been documented from the river, including the Endangered wagur (*Clarias magur*), and Vulnerable *Wallago attu*.

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

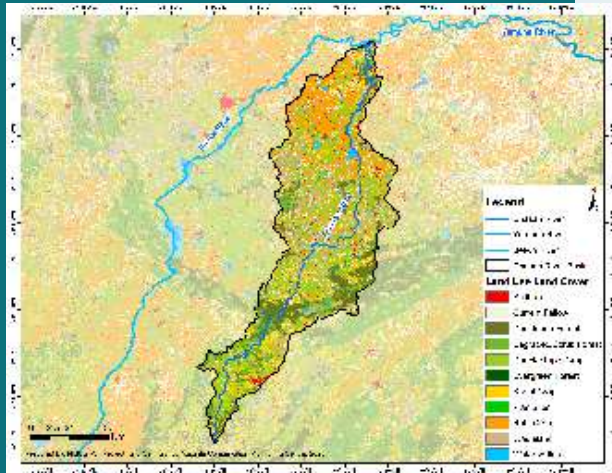


Figure 2b: LULC map of Dhasan River basin (2018-19)

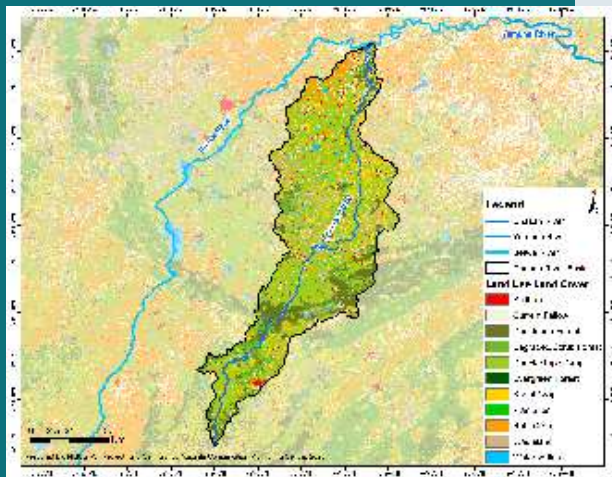
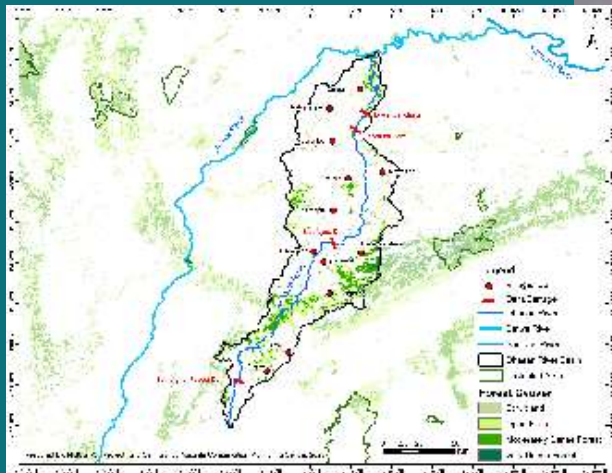


Figure 3: Forest cover of Dhasan River basin (2019)



CONSERVATION SIGNIFICANCE

ENDANGERED

Avifauna

Egyptian vulture *Neophron percnopterus* (Linnaeus, 1758)

Fish

Wagur *Clarias magur* (Hamilton, 1822)

VULNERABLE

Avifauna

Common pochard *Aythya ferina* (Linnaeus, 1758)

Reptile

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

Fish

Wallago attu (Bloch and Schneider, 1801)

Common pochard (*Aythya ferina*) | ©Rahul Chengal



DRIVERS OF RIVERSCAPE CHANGE

- Hydrological modification due to existing dams (Lahchura and Pahari Ban Sujara) and the proposed Semra Ghat Feeder Dam on the Dhasan River, have altered the river's natural flow, disrupted fish migration, impacted water quality (temperature, turbidity, oxygen), and sediment trapping.
- Agricultural expansion and intensification in this drought-affected basin has increased irrigation demand, resulting in reduced water availability and increased pressure on the river's flow.
- Dhasan River basin, located along the south-eastern margin of the Malwa Plateau, is strongly influenced by ravine erosion processes operating within the Marginal Ganga Plain, which is a major source of sediment to the river system.
- Unregulated and illegal sand mining along the river channel has significantly altered riverbed morphology.

INTERESTING FACTS

- Dhasan River flows through Jhansi, popularly known as "City of Warriors." 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.
- Chhatarpur district is named after the legendary Bundela Rajput ruler Maharaja Chhatrasal, who established an independent Bundelkhand; his cenotaph is located within the district.
- Khajuraho Group of Temples (Chhatarpur district), a UNESCO World Heritage Site, is renowned for its exceptional medieval Hindu and Jain architecture, intricate stone carvings, and symbolic representation of the spiritual, cultural, and artistic traditions of the Chandela dynasty.
- Historically, the Dhasan River served as a boundary between the Malwa and Bundelkhand regions.



National Mission for Clean Ganga,
Ministry of Jal Shakti,
Department of Water Resources,
River Development and Ganga Rejuvenation,
Major Dhyani Chand Stadium, New Delhi - 110001

GACMC/NCRR

Ganga Aqualife Conservation
Monitoring Centre/
National Centre for River Research
Wildlife Institute of India, Dehradun
nmcg@wii.gov.in



भारतीय वन्यजीव संस्थान
Wildlife Institute of India
P.O. Box #18, Chandrabani
Dehradun - 248002, Uttarakhand
wii@wii.gov.in