

VIBRANT GANGA



भारतीय वन्यजीव संस्थान  
Wildlife Institute of India



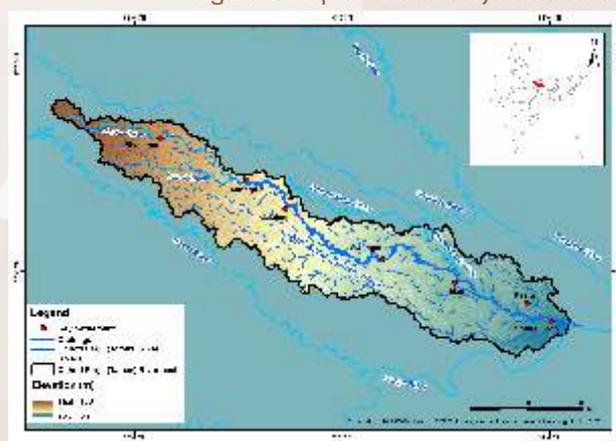
# Chhoti Saryu

## GENERAL INFORMATION

- Chhoti Sarju (Tamsa, Tamas or Tons) River, a tributary of the Ganga, is formed by the confluence of Marha and Biswi rivers near Petha Pur village in Ambedkar Nagar district, Uttar Pradesh. It flows for approximately 385 km in a south-easterly direction through the districts of Ambedkar Nagar, Azamgarh, Mau, Ghazipur and Ballia in Uttar Pradesh.
- It meets the Ganga River near Salahabad village, Ballia district.
- Chhoti Sarju River basin spans an area of about 9,077 km<sup>2</sup> (Figure 1).
- The basin lies within the Gangetic Plain (Upper Gangetic Plains – 7A) biogeographic zone.
- Chhoti Sarju basin experiences subtropical monsoon climate, characterized by a hot summer, an intense monsoon, and cool to mild winter seasons.
- Chhoti Sarju River exhibits a meandering channel pattern typical of rivers flowing through low-gradient alluvial plains marked by meander scars and oxbow lakes.
- Mangai (Magai), Majhui (Manjusha), Kanwar and Bhainsahi are the major tributaries of the Chhoti Sarju.
- The population density along the river is 1,110.73 persons/km<sup>2</sup>.

- Decadal LULC transitions in the Chhoti Sarju basin (2008-09 to 2018-19) recorded a significant increase in area under double/triple cropping (15%) and built-up areas (1.16%), and decrease in current fallow land (-5.32%), rabi crop (-3.86%), wasteland (-3.73%), kharif crop (-2.71%) and water bodies (-1%), indicating a shift towards agricultural intensification and urbanisation. Deciduous forest increased marginally (0.01%), while scrub forest and plantation remained the same (Figures 2a and 2b).

Figure 1: Map of Chhoti Sarju River basin



## BIODIVERSITY VALUE

- Chhoti Sarju basin is dominated by non-forest areas (98.23%), followed by moderately dense forest (1.72%) and very dense forest (0.05%) (Figure 3).
- Chhoti Sarju basin is predominantly characterised by Northern Moist Mixed Deciduous Forest, represented by *Dalbergia sissoo*, *Acacia nilotica*, *Syzygium cumini*, *Madhuca longifolia*, and *Ficus* spp., transitioning downstream to riparian fringing forests with *Terminalia arjuna*, *Dalbergia sissoo*, *Syzygium cumini*, and *Barringtonia acutangula*, and further to edaphic alluvial grassland-swamp vegetation in the lower floodplains dominated by *Saccharum spontaneum*, *Chrysopogon aciculatus*, *Echinochloa crus-galli*, and *Cyperus* spp., interspersed with riverine trees such as *Salix tetrasperma* and *Tamarix dioica*.
- 170 bird species have been documented from Ambedkar Nagar district, including the Endangered Egyptian vulture (*Neophron percnopterus*), and Vulnerable common pochard (*Aythya ferina*), river tern (*Sterna aurantia*) and sarus crane (*Grus antigone*).
- 59 fish species (10 orders and 24 families) have been recorded from Ambedkar Nagar and Azamgarh districts, including the Endangered wagar (*Clarias magur*), and Vulnerable *Bagarius bagarius* and *Wallago attu*.

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

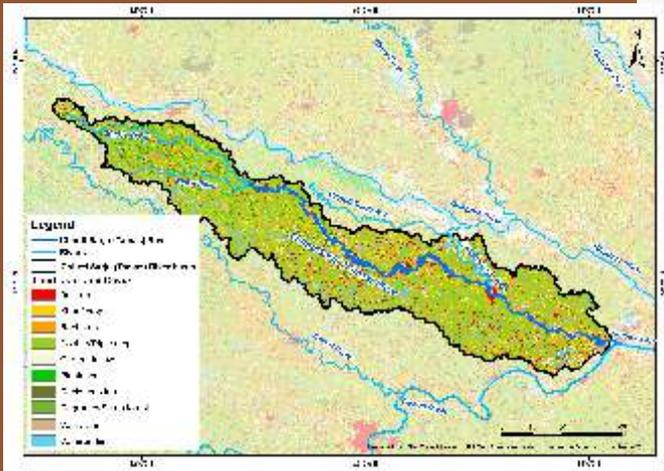


Figure 2b: LULC map of Chhoti Sarju River basin (2018-19)

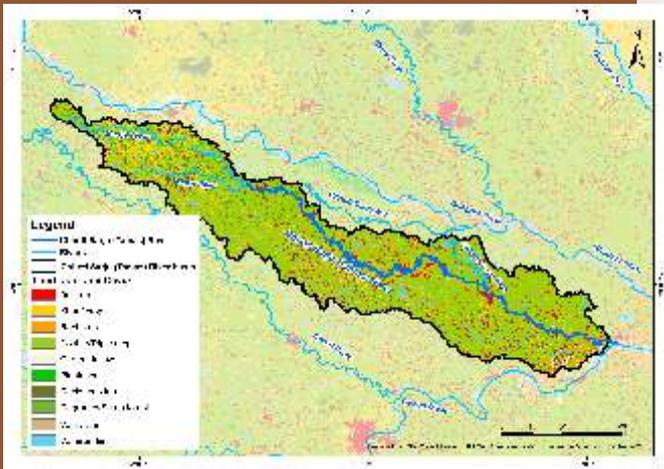
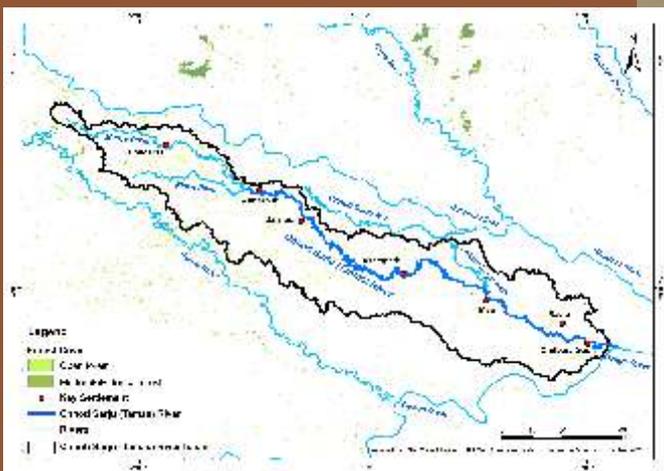


Figure 3: Forest cover of Chhoti Sarju River basin (2019)



## 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)

#### Fish

*Bagarius bagarius* (Hamilton, 1822)

*Wallago attu* (Bloch and Schneider, 1801)

Common pochard (*Aythya ferina*) | ©Atif Riaz Baba



## DRIVERS OF RIVERSCAPE CHANGE

- Discharge of untreated sewage and industrial effluent, and solid waste dumping from settlements along the River, such as Akbarpur, Azamgarh and Mau, and agricultural runoff from intensively cultivated areas contribute to declining water quality, eutrophication, and degradation of aquatic habitats.
- High seasonal discharge and recurrent monsoonal flooding, combined with the River's passage through erosion-prone newer alluvium, accelerate riverbank erosion and results in high sediment loads, channel siltation, reduced depth, and increased flood risk across the basin. Low forest cover further reduces soil stability and natural buffering capacity.
- Encroachment by agriculture and settlements along the riverbanks and across the floodplain has narrowed the active channel corridor, constrained natural flow paths, reduced floodplain connectivity, and further increased vulnerability to flooding and channel instability.

## INTERESTING FACTS

- Chhoti Sarju, also known as Tamas, Tamsa or Tons, shares its name with another Tamsa that joins the Ganga downstream of Prayagraj, Uttar Pradesh. The Tamas holds significant religious and cultural importance and is closely associated with the *Ramayana*, with these traditions linked to both rivers bearing the name Tamas. According to tradition, Sage Valmiki composed the first Sanskrit verse on the banks of Tamas after witnessing a hunter kill a sarus crane, which inspired the composition of the *Ramayana*. Lord Rama, Sita (wife), and Lakshmana (brother), the central figures in the *Ramayana*, spent the first night of their 14-year exile from Ayodhya on the banks of Tamas.
- According to the 1911 *Azamgarh Gazetteer*, the present-day Chhoti Sarju nala (a small tributary of the Chhoti Sarju that joins it just upstream of Mau) flows largely along the old, abandoned channel of the Ghaghra River, which once coursed southwards across the region to join the Ganga. It interacts with Ghaghra through the Badrauwan nala, which reconnects this channel with the Ghaghra mainstem. The former course of the Ghaghra has left a broad alluvial channel and distinctive geomorphology that continue to shape the present riverscape.
- In Azamgarh district, the Durvasa Rishi Ashram (at the Tamsa–Majhui confluence), the Dattatreya Rishi Dham (Tamsa–Kunwar confluence), and the Chandrama Rishi Ashram (Tamsa–Silni confluence) are associated with prominent ascetics in Hindu mythology believed to have been born to Sage Atri and his wife Anasuya, who is revered for her chastity and devotion.



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

### GACMC/NCCR

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