

Namami Gange – Program Management Consultants

Trip Report- Chandauli, UP for Karmanasha & Garai River

Proposal for rejuvenation of Karmanasha & Garai River, Chandauli,
UP

Date – 21.01.2025 to 24.01.2025

Site Visit/ Trip Title:	Conservation of Karmanasha & Garai River, in Chandauli, UP	Location:	Chandauli, UP
Date/Time:	21.01.2025 to 24.01.2025		
#	Agenda items for the site visit/trip		
	1. To explore the possibility to reserve the Ground Water, flowing through the Garai River located in the Chandauli district of Uttar Pradesh 2. To construct the check dams to increase groundwater by using the water of the Varuna river passing through Varanasi and Karmanasha River in Chandauli district		

Site Visit / Trip Attendees		
#	Organization	Name
1	NMCG	Mrs. Kriti Varma, Project Officer (Technical)
2	PMC	Mr. Harish Kumar Mahavar (Small River Rejuvenation Expert)
3	PMC	Mr. Alok Srivastava (Ground Water Management Expert)
4	Central Ground Water Board	Umareddy Dereddy, Scientist- B, 7330835810 umareddy-cgwb@gov.in
5	District Ganga Samiti, Chandauli	दर्शन निषाद, जिला परियोजना अधिकारी DPO (जिला गंगा समिति), जनपद चंदौली, Email id darshannishad96@gmail.com
6	Irrigation Department, Chandauli	Maniraj Yadav, JE
7	Irrigation Department, Chandauli	Rishab, AE
8	Irrigation Department	Rakesh Tiwari, AE

1 Introduction

1.1 Background and purpose of the visit

As per letter received with reference to the VIP references dated 02.01.2025 from Shri Virendra Singh, Hon'ble Member of Parliament (Lok Sabha), Chandauli to the Director General (NMCG) for requesting the following:

- a. To explore possibility to reserve the Ground Water, flowing through the Garai River located in the Chandauli district of Uttar Pradesh
- b. To construct the check dams to increase groundwater by using the water of Varuna river passing through Varanasi and Karmanasha River in Chandauli district.

NMCG has decided to constitute a Team of Small River Rejuvenation (SSR) to proceed for the site visit and will associate with Local Administration to discuss the emerging issues and suggest the Action Plan in the above-mentioned matters.

1.2 Key officials met during the site visit

1. Umareddy Dereddy, Scientist- B, Central Ground Water Board
2. दर्शन निषाद, जिला परियोजना अधिकारी DPO (जिला गंगा समिति), जनपद चंदौली
3. Maniraj Yadav, JE, Irrigation Department, UP
4. Rishab, AE, Irrigation Department, UP
5. Rakesh Tiwari, AE, Irrigation Department, UP

2 Overview of the site visit/trip -

2.1 Technical details of the projects visited

Karmanasha River, Chandauli, UP

Karamnasa or Karmanasa River is a tributary of the Ganges. It originates in the Kaimur district of Bihar and flows through the Indian states of Uttar Pradesh and Bihar. Along the boundary between Uttar Pradesh and Bihar it has the districts of Sonbhadra, Chandauli, Varanasi, and Ghazipur on its left (UP side); and the districts of Kaimur and Buxar on its right (Bihar side).

The Karmanasa originates at a height of 350 metres (1,150 ft) on the northern face of Kaimur Range near Sarodag in Kaimur district of Bihar. It flows in a north-westerly direction through the plains of Mirzapur, then forms the boundary between Uttar Pradesh and Bihar, and finally joins the Ganges near Village Bara (East Side) Ghazipur Uttar Pradesh and Chausa (Bihar). The length of the river is 192 kilometres (119 mi), out of which 116 kilometres (72 mi) lies in Uttar Pradesh and the rest 76 kilometres (47 mi) forms the boundary between Uttar Pradesh (Bara-Ghazipur) and Bihar (Chausa). Total drainage area of the Karmnasa along with its tributaries is 11,709 square kilometres (4,521 sq mi)

Garai River, Chandauli, UP

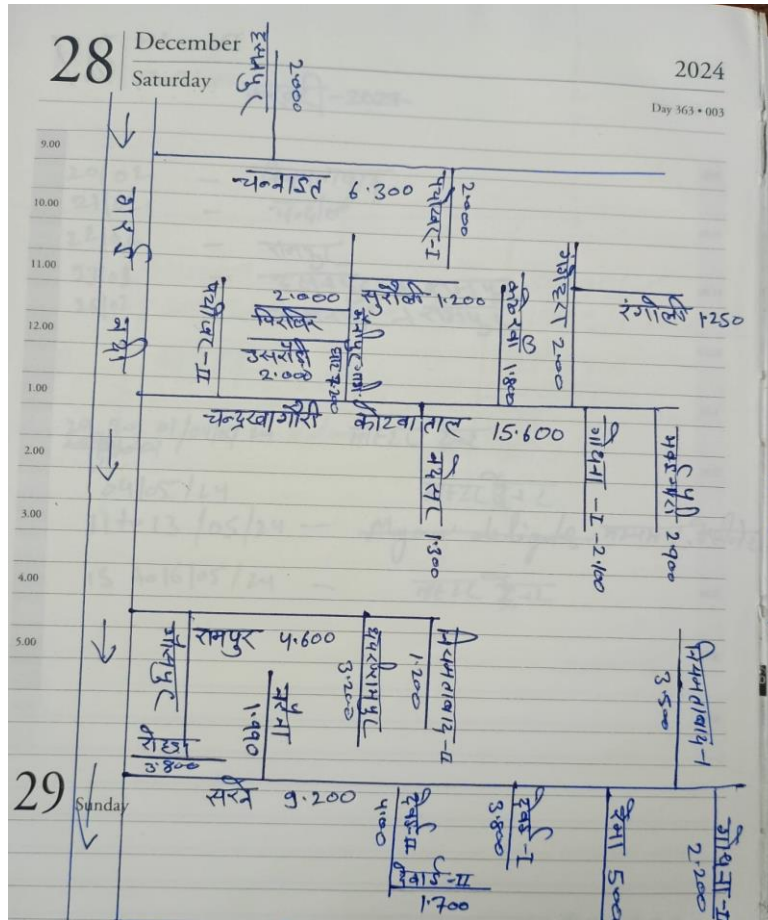
Total Length of Garai River is 58.50 kms, 32.50 kms in Mirjapur District & remaining 26 kms in Chandauli district. It originates in Vindhaya Mountains region and merging in Chandraprabha River. Its catchment area is 430 square kms and it max. discharge capacity is 6000 cusec. It is a seasonal river & flowing only in monsoon period but it also used for irrigation purpose. It also discharges water 70 to 200 cumec from Ahrora Dam.

2.2 Details of visit- Agenda

DG, NMCG directed the small river rejuvenation team to visit the proposed sites to view the current situation of rivers, feasibility of the project and understand the need of the project.

2.2.1 Project background

As per letter received with reference to the VIP references dated 02.01.2025 from Shri Virendra Singh, Hon'ble Member of Parliament (Lok Sabha), Chandauli to the Director General (NMCG) for requesting to visit both the rivers to view the current situation of rivers, feasibility of the project and understand the need of the project.



Line Diagram of Garai River with inlet drains & their length with chainages

2.2.2 Key Observations during the visit & report

1. In the Karmnasha River, there is a problem of pollution at the lower stretch.
2. During site visit the solid waste has been found to be a major issue, some of the river stretches are heavily silted and also encroached by the local farmers for farming at the bank of the river causing the non-point source pollution.
3. We have visited Latif Shah Barrage & Musakhand Dam located at the upstream of the river stretch and feeding the canals for irrigation purpose.
4. There are small bunds called laghu bunds, which are 70 nos. are constructed & operational in the catchment of the Karamnasha River, which is used for Irrigation purpose and also recharging the ground water.
5. Water is discharged & regulated by the series of three dams throughout the year, however the flow is very lean in the non monsoon period.

6. In the Garai River, there are several polluted drains coming from Rampur Industrial Town & domestic waste from the nearby villages.
7. The Garai river has witnessed the flood during the monsoon period every year due to heavy siltation & no construction of any regulating structures like Dam, barrages etc.
8. The Garai is a seasonal river & can be used for groundwater recharge if a series of check dams, regulators & laghu bunds in the plain area are proposed.
9. For the pollution abatement nature-based solutions can be considered in both the rivers.

2.2.3 Key Issues identified

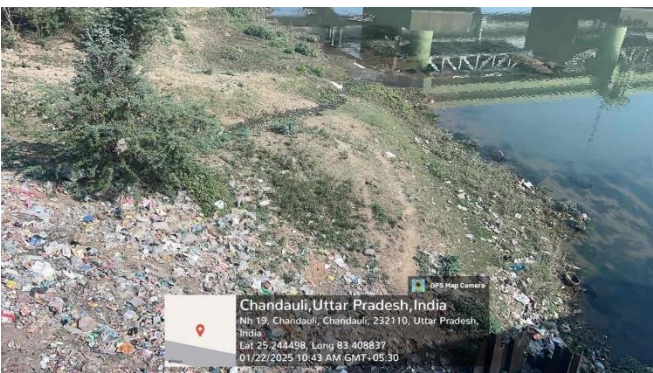
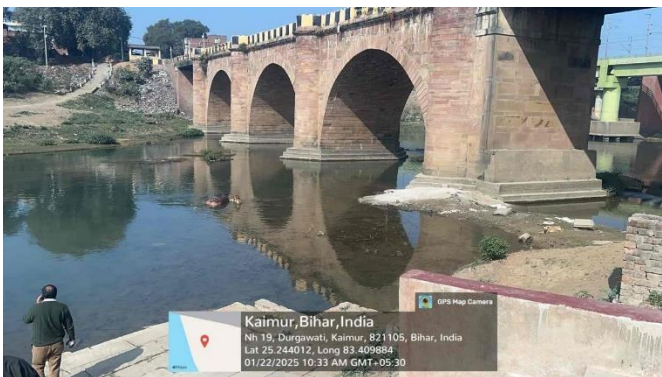
1. There is a point and non-point pollution in both rivers.
2. The upper reach is undulating in both the rivers where check dams, and regulators can be constructed for Ground water recharge while the plain area can be considered for the ground water recharge through laghu bunds.
3. There is the presence of solid waste and adds to the pollution.

2.2.4 Way forward

- a) Since both the rivers are small in nature & are primarily seasonal. The lack of data availability requires the detailed scientific study & DPR preparation for the interventions proposed.
- b) For the pollution abatement nature based solutions like Soil based treatment, constructed wetlands etc on the industrial & domestic waste treatment.
- c) The proven interventions like laghu bunds can be constructed as an immediate measure for ground water recharge.
- d) People's participation in the river conservation has to be designed for long term effectiveness.

Day 1: Karmanasha River, Chandauli, UP

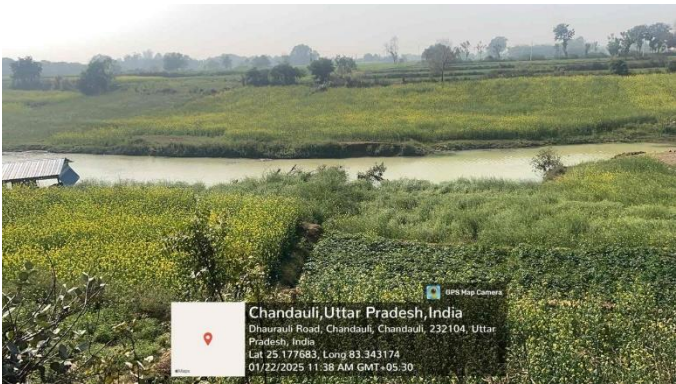
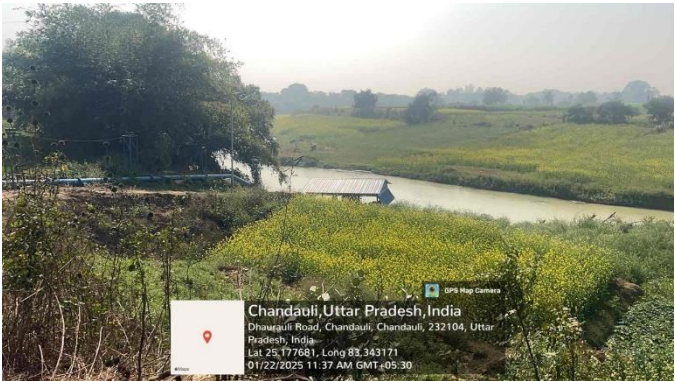
Bank of Karmanasha River, Hanuman Mandir, Khajura, Naubatpur, Durgawati



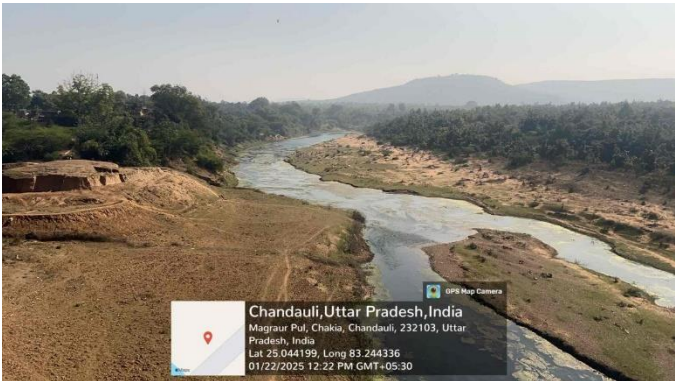
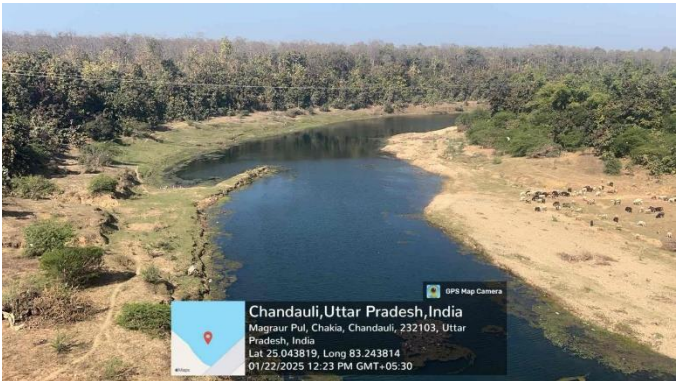
Bridge on Karmanasha River, Dhaurauli Road, Chandauli



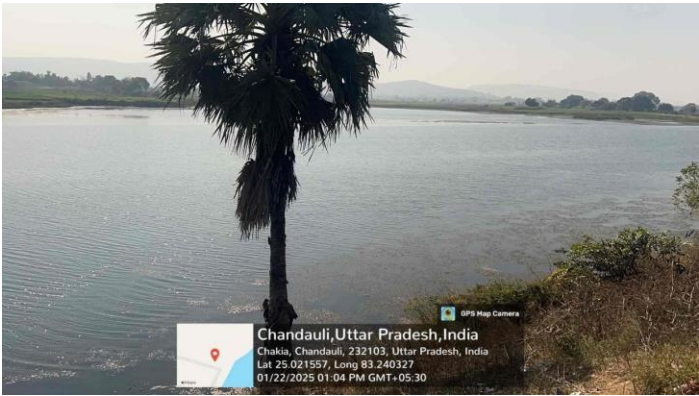
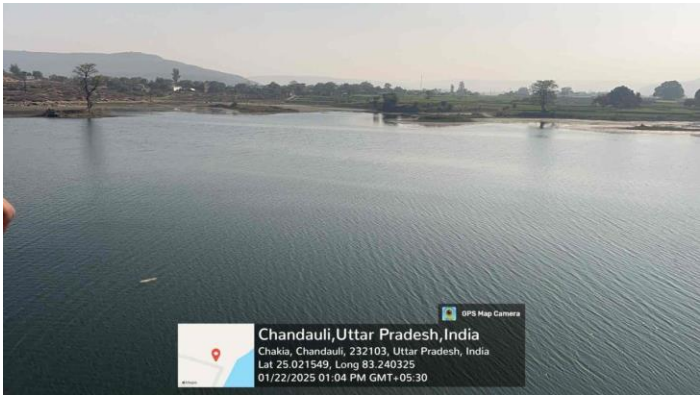
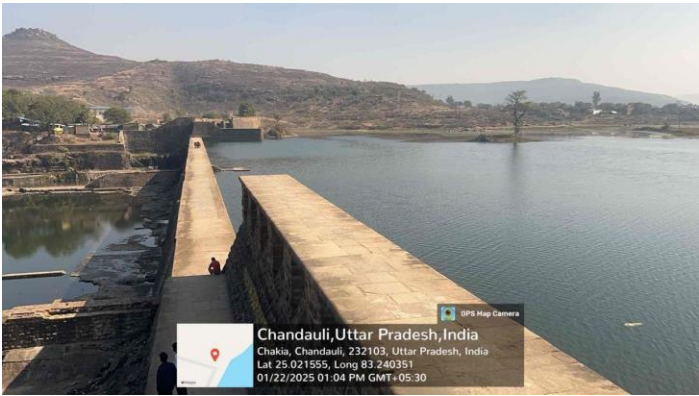
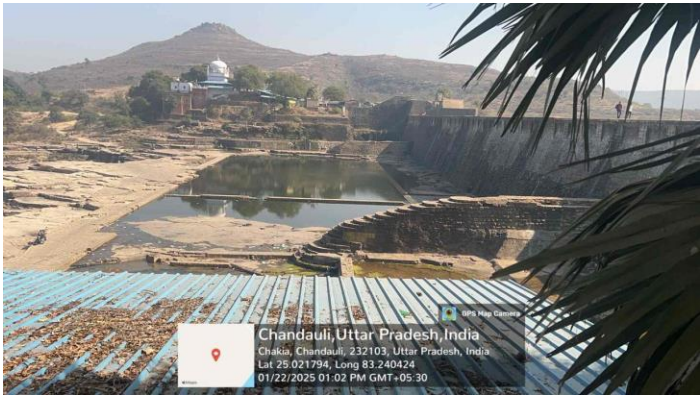
Pump Canal on Karmanasha River, Halua, Capacity= 10 Cusec, Dhaurauli Road, Chandauli



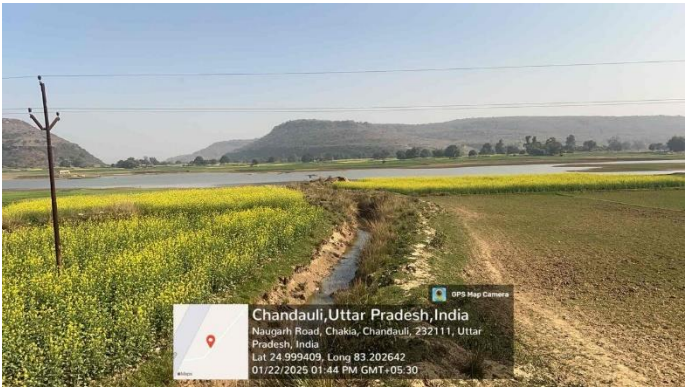
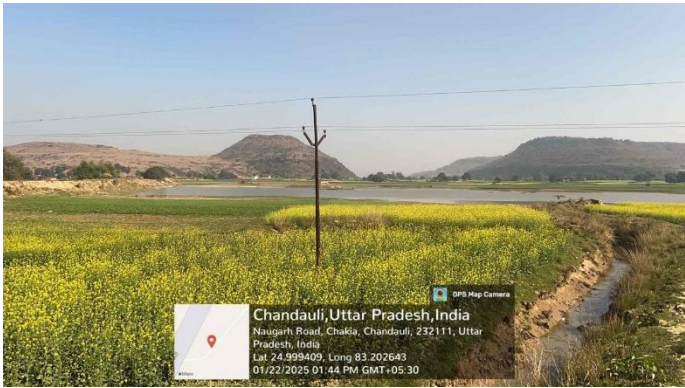
Magraur Pul, Bashrahi, Road, Chakia, Chandauli



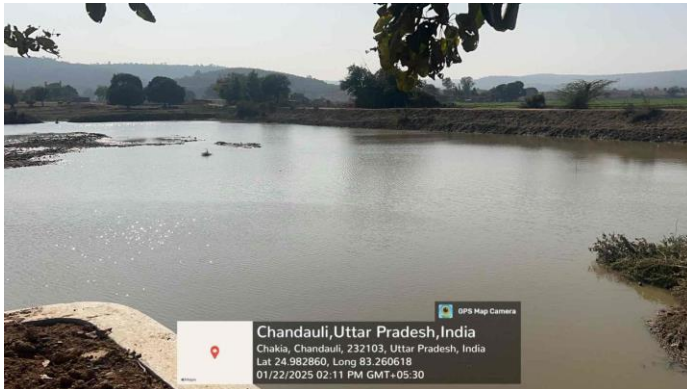
Latif Shah Dam, Chakia, Chandauli



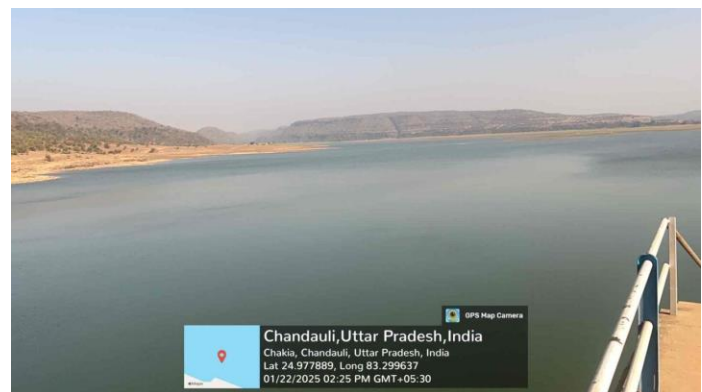
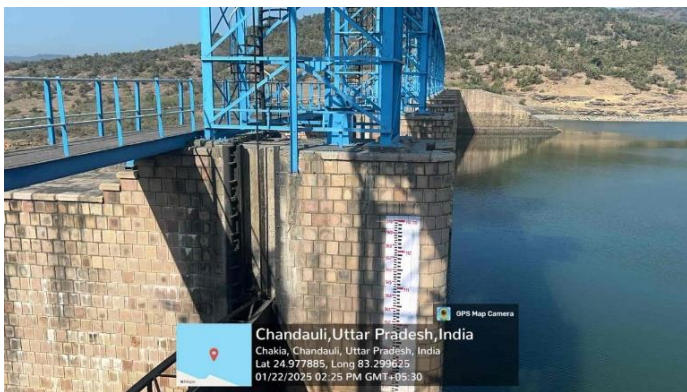
Bund (Bandi- Pond covered by sand or Mud Bund to store rain water), Naugarh Road, Chakia, Chandauli



Gram Panchayat Pond, Malher, Shahabgunj, Chakia, Chandauli

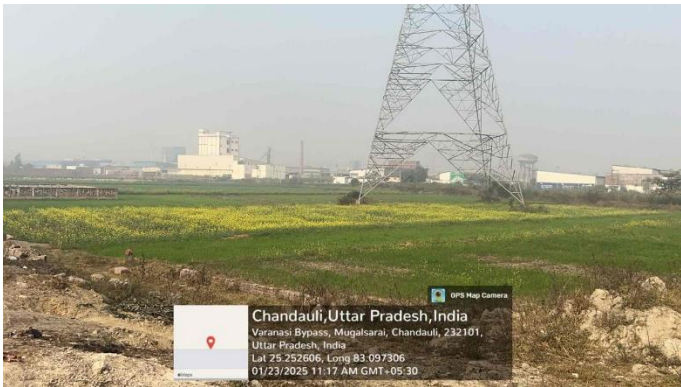
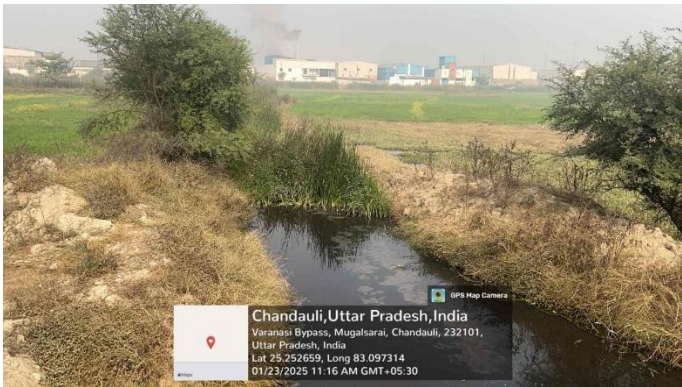


Musakhand Dam, Chandraprabha, Chakia, Chandauli

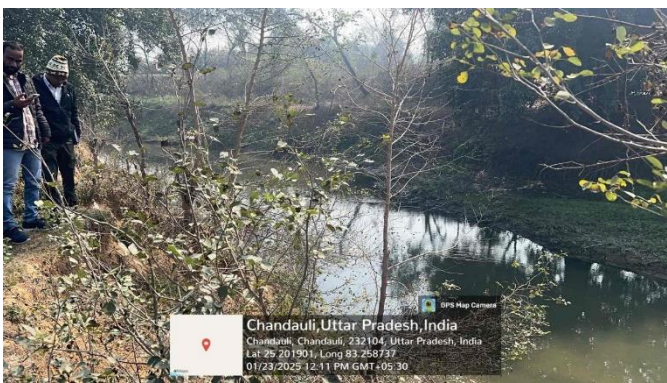


Day 2: Garai River, Chandauli, UP

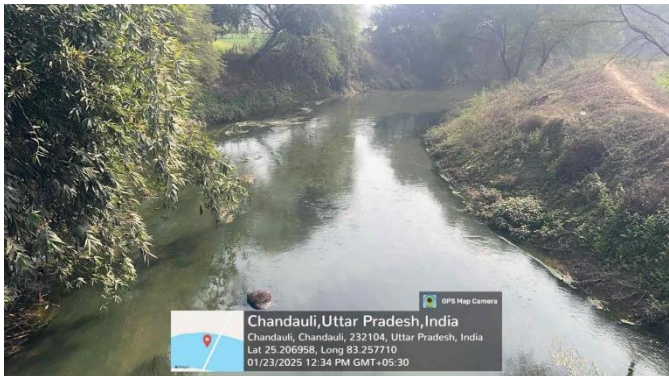
Chandrakhagauri Kotwataal Drain, Ramnagar Phase-II, Varanasi Bypass, Mugalsarai, Chandauli



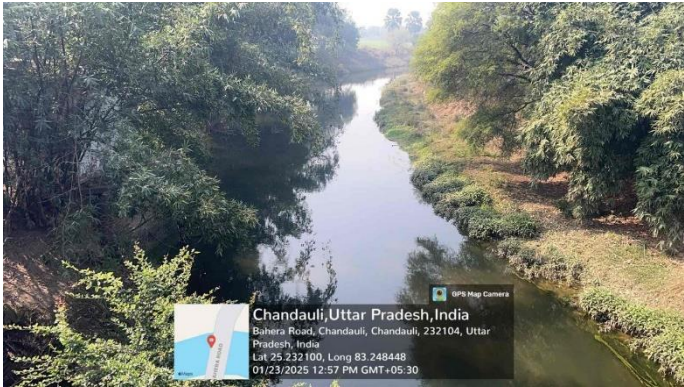
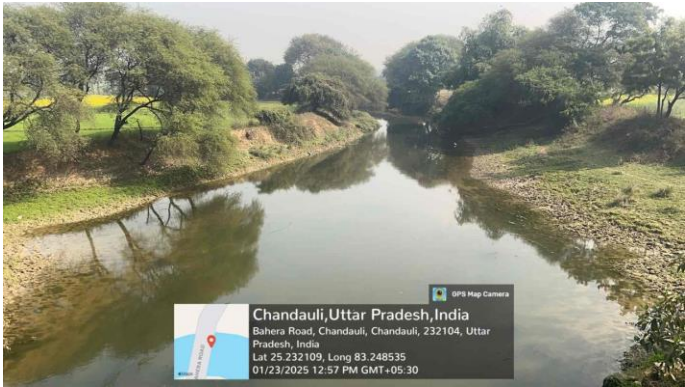
Garai & Karmanasha River Meeting Point, Chandauli



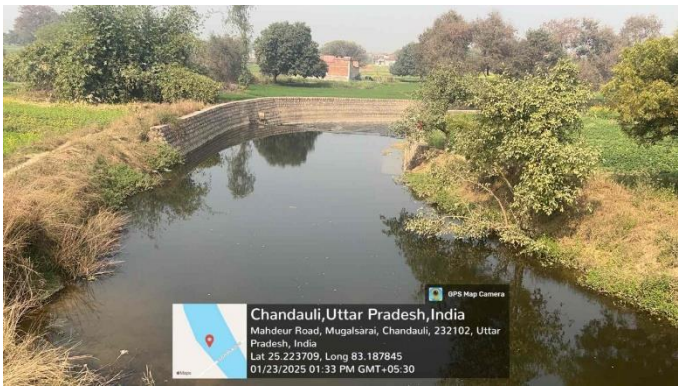
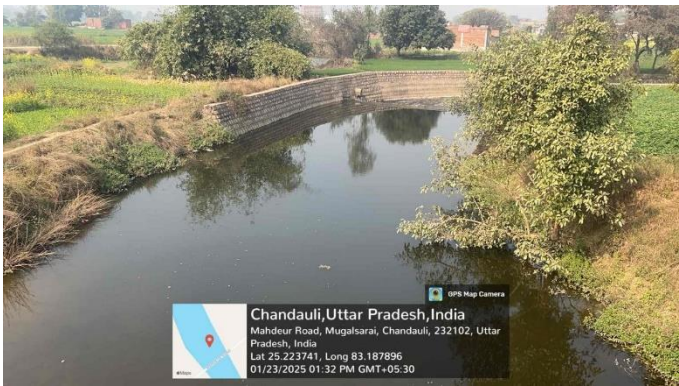
Bridge on Garai River, Chandauli



Pump Canal on Garai River, Bahera Road, Chandauli



Check Dam (1.5 m Height) on Garai River, Mahdeur Road, Mugalsarai, Chandauli



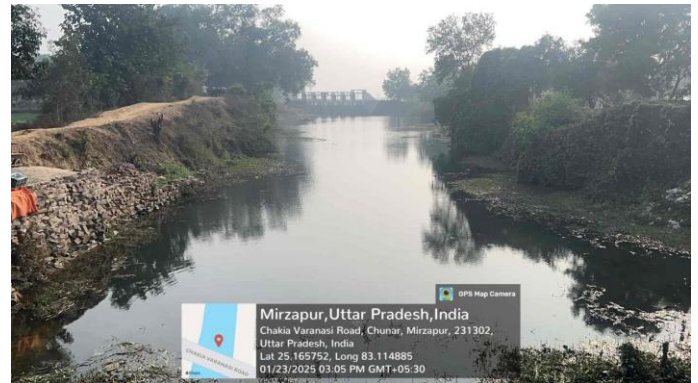
Drain Carrying Industrial Waste, Roharha Road, Mugalsarai, Chandauli



Drain Carrying Industrial Waste, Ddu Nagar, Chakia Road, Mugalsarai, Chandauli



Check Dam, Chakia Varanasi Road, Chunar, Mirzapur



Day 3: Meeting with Irrigation Department Officials at Saarnath