

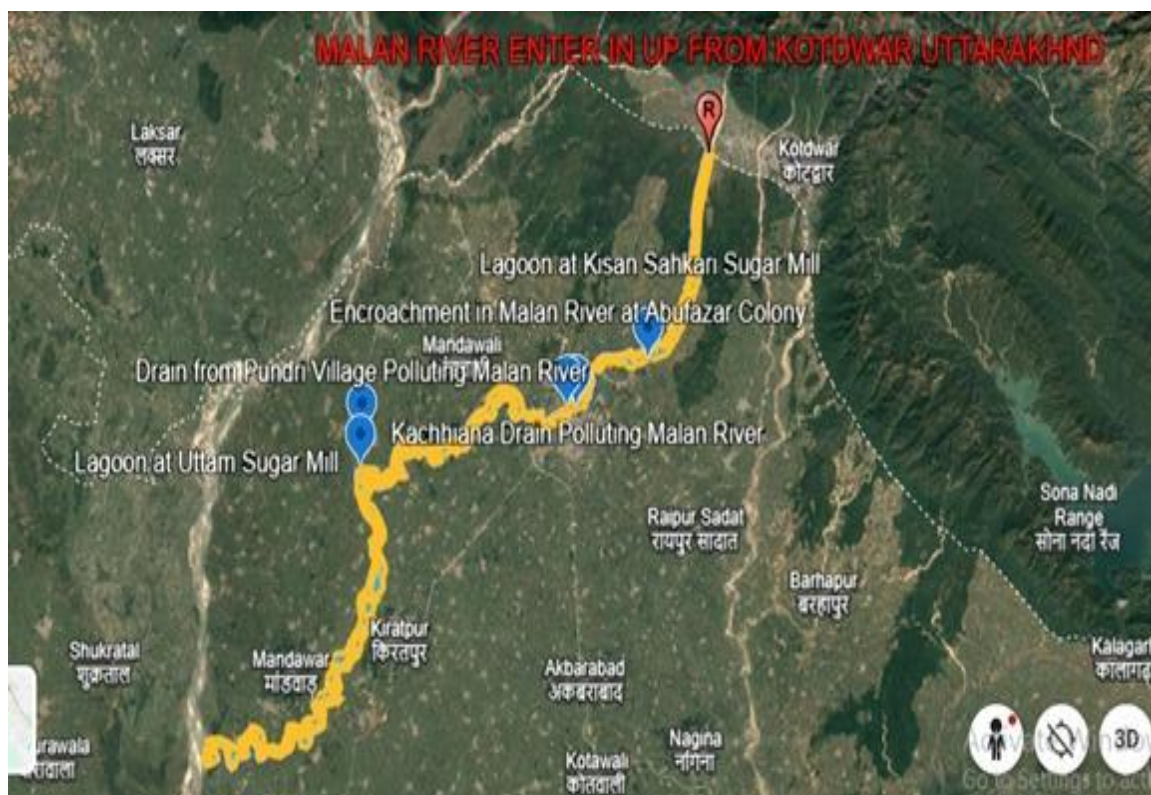


Site Visit Report
for
Malan River in Najibabad, Bijnor, Uttar
Pradesh

Date of visit– 05.01.2026 to 08.01.2026

Executive Summary

This report documents the on-ground assessment of Malan River in Najibabad, District Bijnor, Uttar Pradesh, conducted from 05.01.2026 to 08.01.2026. The river, with significant mythological importance (legendary love place of King Dushyant and Shakuntala), has been subject to severe environmental degradation including encroachments, pollution from untreated sewage, and loss of aquatic ecosystems. The total length of the river is 111 km (~6 km in Kotdwar, Uttarkhand and ~105 km in Bijnor, Uttar Pradesh). This report verifies the current status and provides technical observations to support restoration and management actions to rejuvenate the Malan River.



1. Site Visit Report Details

Visiting Team

#	Organization/ Department	Designation	Name
1	NMCG	Project Officer	Dr. Kriti Varma
2	NMCG	SRR Expert	Mr. Harish Kumar Mahavar
3	UPPCB	Regional Officer	Mr. Umesh Shukla
4	MoEF&CC	Scientist-D	Dr. Priti Tripathi
5	Irrigation Department	Chief Engineer	Mr. Sharad Kumar Singh

2. Introduction

Background and Purpose of the Visit

The Malan River, a tributary of the Ganga system, is located in Najibabad, District Bijnor, Uttar Pradesh. The river holds significant mythological and cultural importance in Hindu tradition, being traditionally considered the love place ("pranya sthalee") of King Dushyant and Shakuntala in the narrative of Kalidasa's classic play "Abhijnanashakuntalam." Despite its historical and cultural significance, the Malan River has undergone severe environmental degradation over recent decades. A letter petition (dated 17.05.2025) filed by Mr. Sandeep Kumar Verma, a concerned resident of Najibabad, was received by the National Green Tribunal, documenting persistent issues including:

1. **Encroachment on river land** – Unauthorized occupation and construction within protected river zones

2. **Water pollution** – Discharge of untreated domestic sewage from urban and peri-urban settlements
3. **Loss of aquatic life** – Complete depletion of fish and other aquatic organisms due to high pollution loads
4. **River course diversion** – Illegal modification of river path to accommodate construction and agriculture

3. Objectives of the Site Visit:

The site visit was undertaken to:

- i. Conduct on-ground verification of the current status of Malan River regarding pollution sources, encroachments, and environmental degradation.
- ii. Document physical evidence of sewage discharge, solid waste accumulation, and encroachment.
- iii. Identify critical intervention points for drain tapping, sewage treatment facility construction, and floodplain demarcation.
- iv. Engage with local stakeholders and administrative officials to understand challenges and resource requirements.

4. Overview of the Site Visit

Malan River is an important tributary in the upper Ganga basin, with its catchment spanning parts of Saharanpur and Bijnor districts in Uttar Pradesh and adjoining areas. The river has a significantly depleted baseflow, aggravated by:

- i. Unregulated groundwater extraction from the catchment
- ii. Encroachment on flood plains and riparian zones
- iii. Blockage of natural flow channels by structures and cultivation
- iv. Loss of vegetation cover in the catchment area

5. Key Observations During the Visit

A. Widespread Sewage Pollution

Finding: Multiple locations exhibited dark grey to blackish discoloration of river water, indicating high organic pollution and anaerobic conditions.

Evidence:

- Visible fecal matter and sanitary waste at drain outfalls
- Persistent foul odor (hydrogen sulfide) characteristic of septic conditions
- Foaming and surface scums from detergents and organic matter decomposition
- Water samples would likely show high BOD, COD, and fecal coliform concentrations

Root Cause:

The Najibabad municipality lacks sufficient sewage collection and treatment infrastructure. Most domestic sewage is either discharged directly into the river via drains.

B. Solid Waste Accumulation

Finding: Large quantities of plastic waste, municipal solid waste, packaging materials, and organic debris were observed along riverbanks and within the water channel.

Evidence:

- i. Plastic bags and bottles contaminating water surface and banks
- ii. Construction debris and demolition waste mixed with organic matter
- iii. Household waste scattered in dumping zones lacking proper containment
- iv. Floating refuse in stagnant sections of the river

Root Cause:

Inadequate municipal solid waste management (MSWM) system and designated

waste bins along the riverbank. Establishment of riparian buffer zones and waste collection points required along the river.

C. Encroachment and Land Use Violation

Finding: Illegal occupation of river land for residential and agricultural purposes, with structures located within the mandated 100-meter buffer zone from river channel.

Evidence:

- i. Semi-permanent and permanent structures (houses, shops etc.) constructed on river land
- ii. Agricultural cultivation extending right up to riverbank
- iii. Absence of visible floodplain demarcation or boundary markers at most locations

D. Inadequate Drain Infrastructure and Untapped Drains

Finding: Multiple drains carrying domestic sewage remain untapped and discharge directly into Malan River.

Evidence:

- i. Open drainage channels carrying raw sewage
- ii. No treatment prior to river discharge

Infrastructure Gap:

No formal sewage treatment facility currently serves the Najibabad area's wastewater discharge into Malan River.

E. Reduction in Riparian Vegetation and River Corridor Degradation

Finding: Natural riparian vegetation has been significantly reduced from most riverbank sections, replaced by invasive weeds, bare soil, or built-up structures.

Evidence:

- i. Absence of native tree species (Sal, Neem, Babul, Jamun) traditionally occurring in riparian zones
- ii. Invasive species (Lantana, water hyacinth, Eichhornia) colonizing banks and shallow water
- iii. Bare, eroded banks lacking soil stabilization
- iv. No buffer vegetation to filter runoff or shade water channel
- v. Loss of aquatic vegetation (submerged and emergent macrophytes) in polluted sections

Environmental Consequence:

The removal of riparian vegetation has eliminated:

- i. Natural water filtration and phytoremediation
- ii. Stream temperature regulation and habitat provision
- iii. Terrestrial-aquatic ecosystem connectivity
- iv. Bank stabilization and flood mitigation
- v. Aesthetic and cultural value of the river

F. Reduction in Aquatic Life

Finding: No visible fish, aquatic invertebrates, or amphibian activity observed during the visit.

Evidence:

- i. Water clarity and color indicating extreme pollution
- ii. Absence of fish or other aquatic fauna reported by local stakeholders
- iii. No bird activity (kingfishers, herons, eagles) that depend on aquatic food chains
- iv. Macrophyte growth limited to invasive species tolerant of pollution

Ecological Consequence:

The Malan River is impacted by pollution reducing the biodiversity and ecosystem services.

6. Action Plan for rejuvenation of Malan River at Bijnor, UP

S.No	Directive	Current Status	Gap/Recommendation	Concerned Department
1	Identification and GIS mapping of river and floodplain	Incomplete; no formal demarcation	Conduct hydrological studies; delineate floodplain for 5, 25, 50, 100-yr return periods; prepare GIS map with notification	Irrigation/ Minor Irrigation
2	Catchment rehabilitation	Ongoing degradation ; no formal plan	Prepare integrated catchment management plan addressing forestry, agriculture, groundwater, and erosion control	Irrigation/ Minor Irrigation & Forest Department
3	Encroachment identification and removal	Identified through site visit	Conduct formal survey; issue notices under applicable land acts	District Administration
4	Drain tapping and STP construction	No tapping; no treatment facility	Identify all drains; design interceptor/diversion lines; construct STP with adequate capacity	SMCG/ NMCG
5	Review of treatment facilities	No existing facility for Malan	Conduct capacity assessment of any available MSWM or treatment infrastructure; plan augmentation	SBM
6	Riparian Buffer	Non-existent, only weeds found	Demarcate riparian buffer zone and plantation of native species	Forest Department
7	Treated water reuse	Not applicable at present	After STP construction, design reuse pipeline to irrigation canal and/or industrial users	SMCG/ NMCG

7. Timeline for Action Plan

Time frame	Thematic area	Actions
Short-term (0–6 months)	Floodplain demarcation and notification	Conduct hydrological studies to delineate river and floodplain zones; issue draft notification for public hearing; complete final notification by District Administration.
	Drain survey and characterization	Identify and map all drains discharging into Malan River (residential, commercial, industrial); conduct water quality sampling at each outfall; estimate discharge volume and pollutant load.
	Encroachment documentation	Conduct aerial survey and ground verification of all encroachments; prepare list of structures violating floodplain and buffer-zone regulations; issue notices to encroachers.
	Community engagement and awareness	Conduct public consultations on river restoration plans; establish River Management Committee with representatives from municipality, water supply, agriculture, and community; launch awareness campaign on illegal dumping, sewage discharge prevention, and riparian vegetation restoration.
Medium-term (6–24 months)	Sewage infrastructure development	Design interceptor and diversion lines for all identified drains (estimated 3–5 km total); design and construct STP (estimated capacity 5–10 MLD, cost ₹5–8 crore); install pumping station for sewage lifting; achieve operational STPs for partial drain tapping.
	Encroachment removal	Implement removal of unauthorized structures in floodplain zone; facilitate alternative accommodation or relocation with appropriate compensation as per applicable policies; restore original river channel where diverted.
	Riparian afforestation	Prepare site for tree plantation along 5–10 km river length; plant native riparian

Time frame	Thematic area	Actions
		species (estimated 10,000–15,000 trees, cost ₹30–40 lakh); establish maintenance and monitoring protocol.
	Solid waste management	Establish municipal waste collection system with regular sweeping of river corridor; install waste bins and collection points at intervals; develop protocol for waste management in catchment area.
Long-term (24+ months)	Complete drain tapping and sewage treatment	Achieve 100% drain interception and treatment; upgrade STP capacity as needed based on monitoring data; decommission direct discharge points.
	Water reuse projects	Establish pipeline connection to irrigation canal for treated water reuse; develop industrial reuse opportunities where applicable.
	Catchment restoration	Implement soil and moisture conservation works in upper catchment; promote sustainable agriculture practices; establish wetlands and water-harvesting structures.
	Ecological monitoring and certification	Establish regular monitoring protocol (monthly water quality, quarterly ecological surveys); achieve compliance with environmental discharge standards; document recovery of aquatic life and ecosystem indicators; obtain Tribunal certification of river restoration.

Site Visit Photographs:



Figure 1: Encroachment in Malan River at Abufazar Colony



Figure 2:Google Image Showing Encroachment in Malan River at Abufazar Colony



Figure 3: Santomalan to Shamli Drain Polluting Malan River

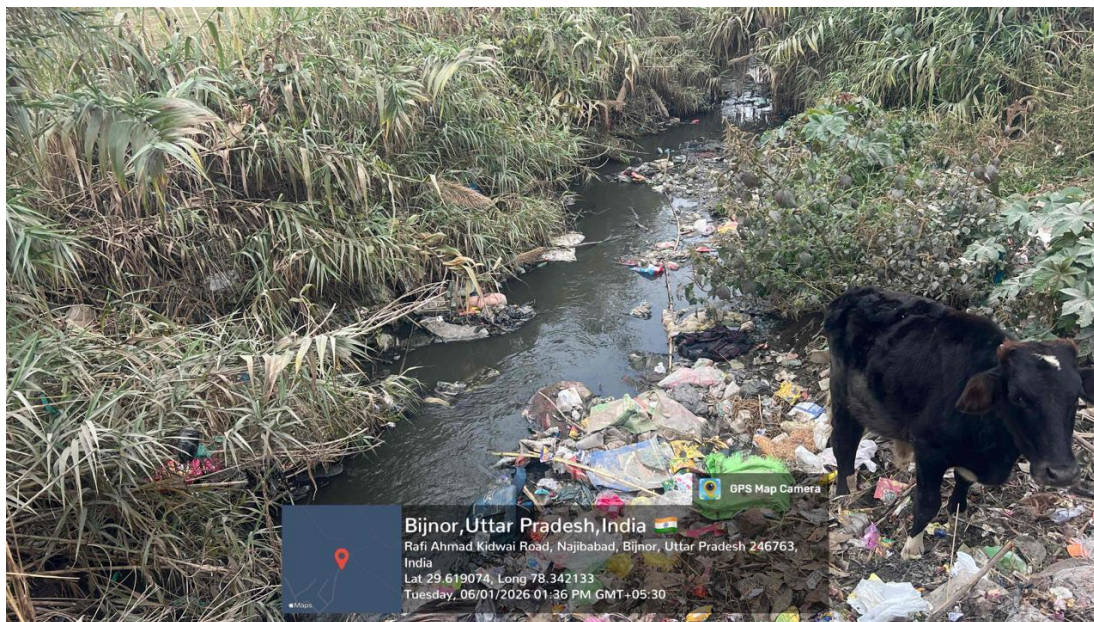


Figure 4: Kachhiana Drain Polluting Malan River

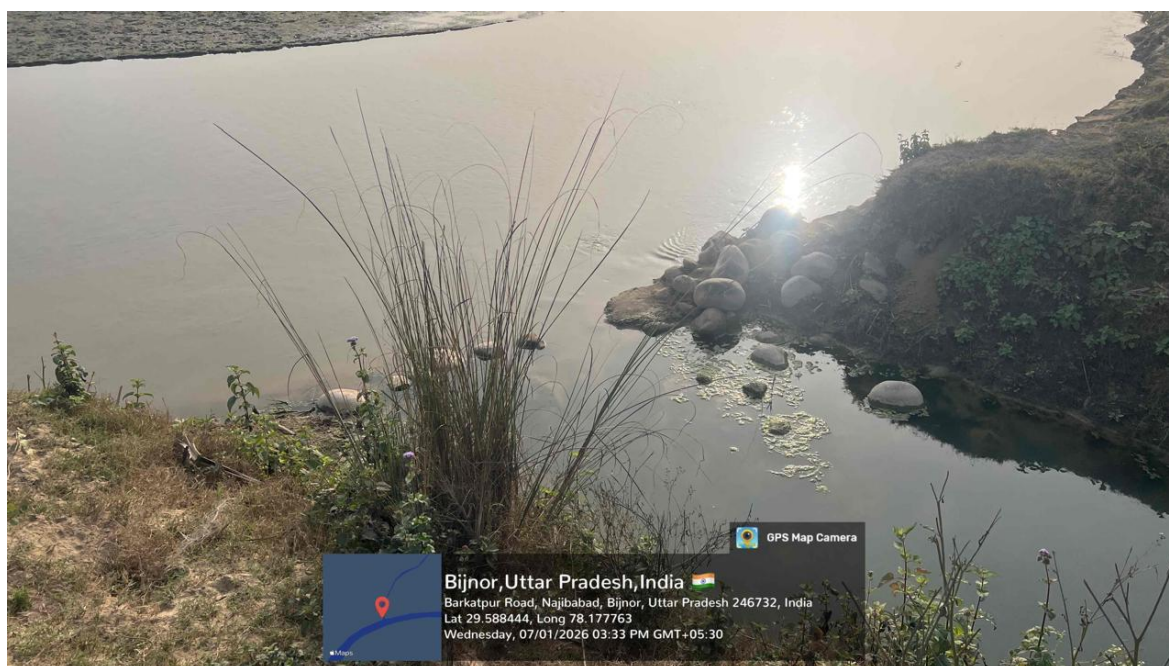


Figure 5: Drain from Pundri Village Polluting Malan River



Figure 6: Lagoon at Kisan Sahkari Sugar Mill

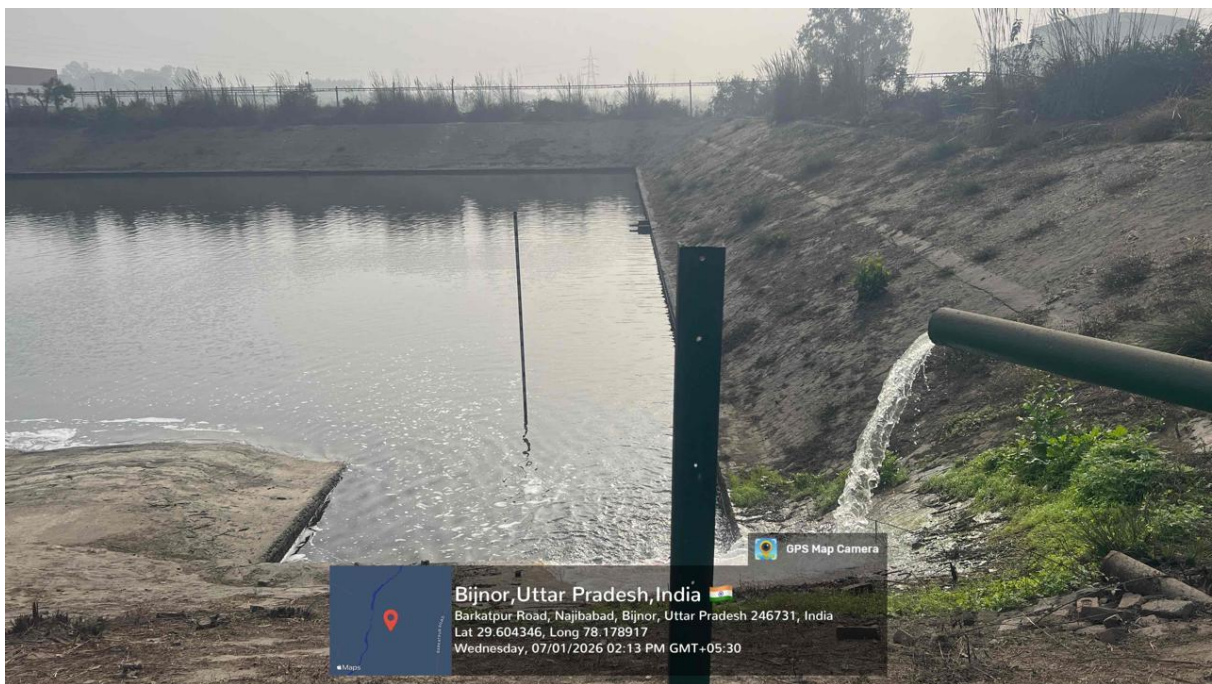


Figure 7: Lagoon at Uttam Sugar Mill