



SITE VISIT REPORT: GUNIYA RIVER, GUNA, MADHYA PRADESH



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INTRODUCTION

The Small River Rejuvenation (SRR) Wing of the National Mission for Clean Ganga was established to extend the principles and learnings of river rejuvenation beyond the Ganga and its major tributaries to India's numerous small rivers, which are vital for local water security, biodiversity, livelihoods, ecological resilience, and ultimately play a vital role in determining the health of larger rivers. The wing supports States and Union Territories in planning and implementing integrated river rejuvenation initiatives through a basin-based approach that combines pollution abatement, ecological restoration, catchment conservation, environmental flow improvement, and community participation. It also promotes capacity building, knowledge dissemination, preparation of river rejuvenation plans, demonstration projects based on Nature-based Solutions (NbS), and convergence with various Central and State Government schemes to ensure sustainable management and restoration of small rivers across the country.

In this regard, a letter dated 23.05.2026 was received from the District Magistrate, Guna, forwarding a Detailed Project Report (DPR) amounting to ₹80.22 crore for the conservation, rejuvenation, and maintenance of the environmental flow (e-flow) of the river. Subsequently, a site visit to Guna district, Madhya Pradesh, was conducted from 11.06.2026 to 12.06.2026 to assess the proposed rejuvenation of the Guniya River.



कार्यालय कलेक्टर एवं जिला दण्डाधिकारी जिला गुना (म.प्र.)

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गुना, दिनांक 23/05/2026

क्रमांक/एस.सी.-2/विधि/2026/ 2.2.1

प्रति,

**महानिदेशक
राष्ट्रीय नदी संरक्षण निदेशालय
जल शक्ति मंत्रालय
(जल संसाधन, नदी विकास एवं गंगा संरक्षण विभाग) भारत सरकार
पंडित दीनदयाल अंत्योदय भवन, सीजीओ कॉम्प्लेक्स,
लोदी रोड, नई दिल्ली - 110003**

O/o ED (Projects), (NMCG)
Dy. No. 5238
Date 25/05/2026

विषय:- गुनिया नदी जीर्णोद्धार परियोजना हेतु विस्तृत परियोजना प्रतिवेदन (DPR) प्रेषित करने बाबत।

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उपरोक्त विषयांतर्गत निवेदन है कि, जिला गुना में स्थित गुनिया नदी के जीर्णोद्धार हेतु एक परियोजना तैयार की गई है। माननीय मुख्यमंत्री महोदय द्वारा जिला गुना प्रवास दिनांक 10.05.2026 के दौरान "गुनिया नदी के जीर्णोद्धार" की घोषणा की गई थी, जिसके परिपालन में परियोजना का प्रारंभिक सर्वेक्षण एवं डीपीआर तैयार कराया गया है।

प्रस्तावित परियोजना अंतर्गत नदी के संरक्षण, पुनर्जीवन एवं जल संवर्धन हेतु विभिन्न संरचनात्मक एवं पर्यावरणीय कार्य प्रस्तावित किए गए हैं, जिनमें प्रमुख रूप से नदी चैनल सुधार, जलधारण क्षमता वृद्धि, तट संरक्षण, वर्षा जल संचयन संरचनाएं, गेबियन संरचनाएं, स्टॉप डैम/वेक डैम निर्माण, जल स्रोत पुनर्भरण एवं हरित विकास कार्य सम्मिलित हैं।

उक्त परियोजना का प्रथम स्तरीय प्राक्कलन राशि लगभग ₹80.22 करोड़ है। परियोजना के क्रियान्वयन से भू-जल स्तर में सुधार, सिंचाई क्षमता वृद्धि, जल संरक्षण, पर्यावरण संरक्षण एवं स्थानीय नागरिकों को दीर्घकालिक लाभ प्राप्त होना संभावित है।

अतः अनुरोध है कि संलग्न विस्तृत परियोजना प्रतिवेदन (DPR) का परीक्षण कर राष्ट्रीय नदी संरक्षण योजना/नाममि गो परियोजना अंतर्गत आवश्यक तकनीकी एवं वित्तीय स्वीकृति प्रदान करने की कार्यवाही करने का कष्ट करें।

संलग्न:- उपरोक्तानुसार डीपीआर

(किशोर कुमार कन्याल)
कलेक्टर एवं जिला मजिस्ट्रेट
गुना (म.प्र.)

25/5
Small River Team

Figure 1: Letter dated 23.05.2026 from DM, Guna

ABOUT THE RIVER

Guniya, a seasonal river, originates near Singhwasa Talab in Guna district, Madhya Pradesh, and flows for approximately 13 km within the district. It subsequently merges with the Parbati River, which is a tributary of the Chambal River. The Chambal River further joins the Yamuna River, which ultimately drains into the Ganga River, making the Guniya River part of the Ganga River basin. The district has a population of ~3 lakh.

S.No.	Parameter	Details
1	Total length	13 km
2	No. of districts	1 (Guna)
3	Total population	~3 lakh
4	STP status	2 operational STPs (14.65 MLD & 3.5 MLD)
5	Course of river	Guniya → Parbati → Chambal → Yamuna → Ganga

Table 1: General details of Guniya River

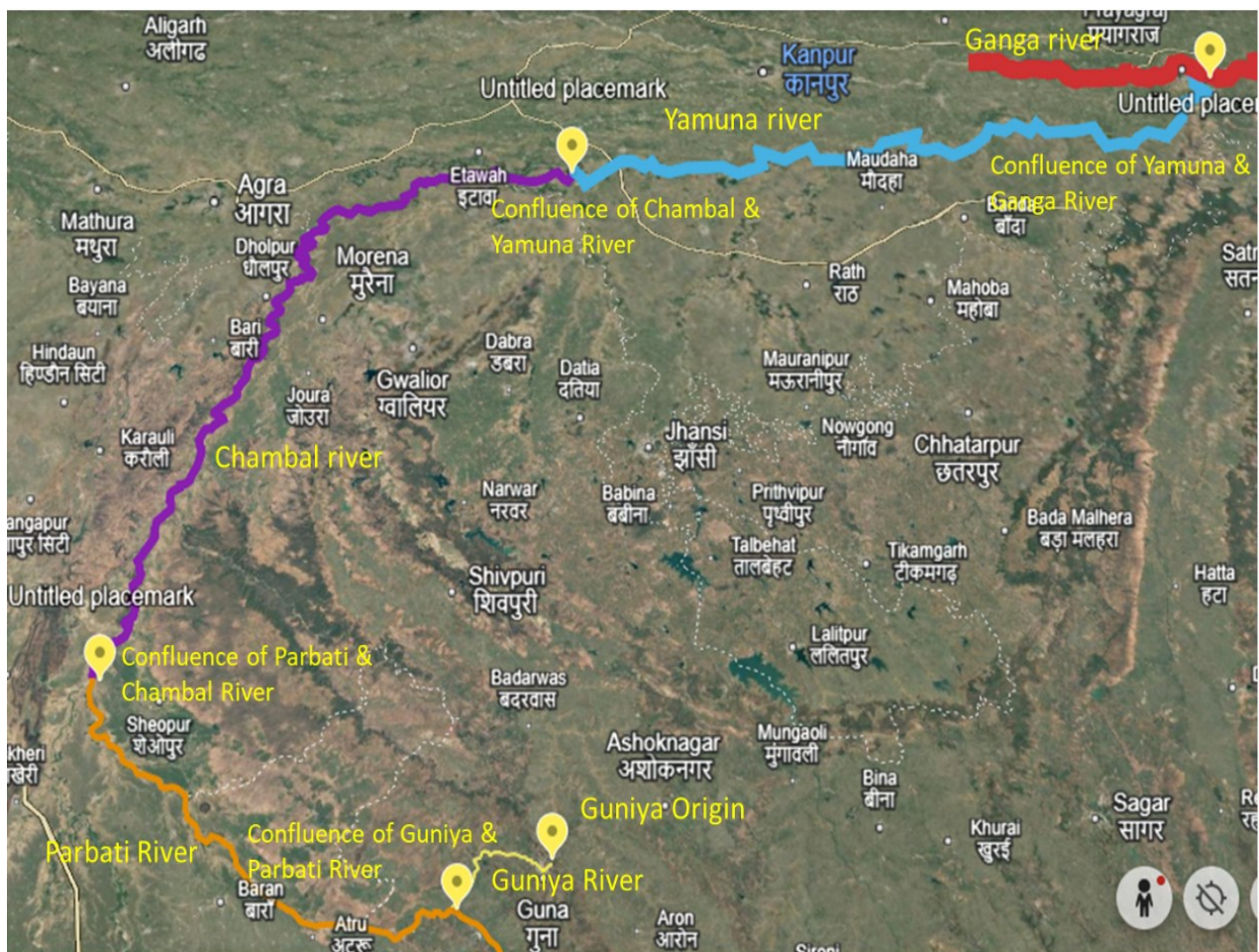


Figure 2: Course of Guniya → Parbati → Chambal → Yamuna → Ganga



Figure 3: Course of Guniya River

SCOPE OF ASSESSMENT

The scope of the present site visit broadly included:

1. Assessment of the feasibility of the components mentioned in the DPR.
2. Assessment of the indicative water quality, ecological characteristics, and hydrogeological characteristics of the river.
3. Baseline observation of existing wastewater, drainage, and solid waste management systems, along with ongoing sewage infrastructure interventions influencing the river environment.
4. Identification of key ecological, and river-edge management concerns.

METHODOLOGY & APPROACH

The site visit was undertaken by the Project Officer, NMCG, over approximately one and a half days of field engagement in Guna, Madhya Pradesh. The assessment methodology comprised field reconnaissance and on-site observations along key stretches of the Guniya River; review and indicative assessment of available water quality data at selected upstream, urban, and downstream locations; examination of available secondary data, maps, reports, and planning-related documents shared by the district administration; and a preliminary assessment of drainage interactions, wastewater conveyance pathways, riverfront conditions, and hydrological characteristics based on field observations and stakeholder consultations.

The following officers/officials participated in the site visit and technical discussions:

S.No.	Name	Designation
NMCG		
1	Dr. Kriti Varma	Project Officer, NMCG
District Administration, Guna		
2	Shri Kishore Kanyal	DM, Guna
3	Shri Akhilesh Kumar Jain	ADM, Guna
4	Ms. Shivani	SDM, Guna
5	Shri Shailendra Awasya	Nagar Nigam, Guna
6	Members	Civil Society, Guna

Table 2: List of key officers/officials during visit and meeting

DATA AVAILABILITY & ASSESSMENT LIMITATIONS

The observations and recommendations presented in this report are based on field visits, stakeholder consultations, and the limited data and information made available during the assessment period. Owing to the rapid nature of the site visit and the limited duration of field investigations, the findings should be considered indicative rather than exhaustive. The assessment did not include detailed hydrological modelling, seasonal flow analysis,

continuous water quality monitoring, comprehensive sewer network mapping, or in-depth ecological and socio-economic assessments.

Water quality observations reflect conditions prevailing during the period of assessment and may vary seasonally depending on rainfall, river flows, reservoir operations, and wastewater discharges. Accordingly, the identified intervention areas and strategic recommendations are intended to serve as preliminary guidance for informing subsequent detailed investigations, project prioritization, and coordinated planning by the concerned departments and stakeholders. The recommendations may be refined further based on detailed technical studies, stakeholder consultations, and statutory approvals, wherever applicable.

KEY OBSERVATIONS

A. Site 1- Singhwasa Talab:

i. Overview:

The site is considered the origin of the Guniya River, where the river emerges from Singhwasa Talab. The pond has already undergone Riverfront Development (RfD) works undertaken and maintained by the Nagar Palika, Guna. The existing infrastructure is generally in satisfactory condition; however, with periodic maintenance, improved landscaping, enhanced visitor amenities, and better upkeep of public spaces, the site has significant potential to be developed as an attractive recreational and eco-tourism destination. During the monsoon season, excess water from the pond overflows into the Guniya River, contributing to its flow.

ii. Water Quality Status:

Visual observations indicate that the pond exhibits signs of slight eutrophication, primarily due to the organic matter from the surrounding areas. While the water body retains its ecological significance as the river's source, localized nutrient enrichment may adversely affect its water quality and ecological health if left unmanaged.

iii. Key Issues:

- a) Localized pollution resulting from indiscriminate disposal of domestic waste and litter around the pond.
- b) Need for periodic maintenance and upkeep of the existing Riverfront Development (RfD) infrastructure, including pathways, landscaping, lighting, and public amenities.

iv. Recommendations:

- a) Undertake regular maintenance of the existing Riverfront Development (RfD) works, including repair of damaged infrastructure, landscaping, cleaning, and improvement of visitor facilities including boating etc.
- b) Strengthen solid waste management through installation of adequate waste bins, regular collection, and enforcement against littering.
- c) Ensure that no untreated wastewater, greywater, or solid waste is discharged into the pond or the originating stretch of the river.

- d) Aerators may be installed to check the organic pollution.
- e) Develop awareness and information signage to educate visitors and local residents on the ecological importance of the river's source and promote responsible behavior.
- f) Implement periodic water quality monitoring to preserve the ecological health and aesthetic value of the water body.



Figure 4: Existing riverfront work at Singhwasa Talab

B. Site 2- Near Bandha:

i. Overview:

The site was observed to be under significant environmental stress due to the continuous discharge of untreated domestic wastewater into the river, resulting in severe eutrophication. The accumulation of nutrient-rich wastewater has led to excessive growth of aquatic vegetation and algal blooms, adversely affecting the ecological health and aesthetic value of the river stretch. In addition, widespread encroachments were observed along the riverbanks, reducing the effective river

corridor, obstructing natural drainage, and increasing the risk of further pollution and degradation of the river ecosystem.

ii. Water Quality Status:

The river stretch exhibits heavy eutrophication, characterized by dense aquatic vegetation, algal growth, and poor water quality resulting from sustained inflow of untreated domestic wastewater. The deteriorated water quality is indicative of a high organic and nutrient load, with potential adverse impacts on dissolved oxygen levels and aquatic biodiversity.

iii. Key Issues:

- a) Continuous discharge of untreated domestic wastewater leading to severe eutrophication and degradation of water quality.
- b) Extensive encroachment within the river corridor, restricting the natural channel and impacting the river's ecological and hydraulic functions.
- c) Degradation of the riverfront environment due to unplanned anthropogenic activities and inadequate management of the river buffer zone.

iv. Recommendations:

- a) Eliminate Wastewater Discharge: Identify and intercept all untreated domestic wastewater outfalls entering the river and divert them to an appropriate sewage treatment facility or decentralized treatment system. Ensure that no untreated wastewater is discharged directly into the river and establish regular monitoring to prevent future illegal discharges.
- b) Remove Encroachments: Undertake demarcation of the river boundary and remove encroachments within the river corridor in accordance with applicable regulations. Restore the reclaimed riverbanks with native vegetation and a green buffer to prevent re-encroachment and improve the river's ecological and hydraulic functions.



Figure 5: Eutrophication in Guniya River stretch at Bandha

C. Site 3- Kalapatha Road:

i. Overview:

The river stretch was observed to be severely degraded due to indiscriminate dumping of municipal solid waste, and continuous discharge of untreated domestic wastewater. Additionally, the presence of a sewer line was observed running through the riverbed. These activities have significantly impaired the river's ecological health, resulting in excessive aquatic weed and algal growth. The accumulation of waste and encroachment of utility infrastructure within the river channel have also reduced its hydraulic efficiency and adversely affected its aesthetic value.

ii. Water Quality Status:

The river exhibits heavy eutrophication, characterized by dense growth of aquatic vegetation, stagnant water, and high organic loading caused by untreated wastewater inflows. The water quality is poor and indicates substantial nutrient enrichment, making the stretch environmentally stressed.

iii. Key Issues:

- a) Continuous discharge of untreated domestic wastewater leading to severe eutrophication and deterioration of water quality.
- b) Indiscriminate dumping of municipal solid waste within and along the river channel.
- c) Sewer line passing through the riverbed, posing risks of leakage, obstruction to natural flow, and limiting future river restoration efforts.

iv. Recommendations:

- a) Treat all wastewater outfalls to eliminate direct discharge into the river.
- b) Remove accumulated solid waste from the river channel and establish an efficient solid waste management system, including waste collection infrastructure and regular cleaning.
- c) Assess the structural condition of the sewer line and, wherever feasible, relocate it outside the river corridor or provide adequate protection to prevent leakage and minimize its impact on the river ecosystem.
- d) Restore the affected river stretch through cleaning, removal of aquatic weeds, development of a green riparian buffer, and regular water quality monitoring to improve ecological health and prevent future degradation.



Figure 6: Eutrophication and solid waste disposal at Kalapatha Road stretch

D. Site 4- Banskhedi:

i. Overview:

The river stretch was observed to be affected by indiscriminate dumping of municipal solid waste along the riverbanks and within the channel, resulting in deterioration of the river environment and obstruction of natural flow. A sewer line was found passing through the riverbed, posing a potential risk of leakage, structural damage, and interference with future river restoration activities. In addition, the excavated silt and mud from recent desilting operations had been deposited along the riverbanks instead of being scientifically disposed of, creating the risk of re-entry into the river during rainfall and increasing bank instability.

ii. Water Quality Status:

The water quality was observed to be degraded due to the accumulation of solid waste and localized organic pollution. The continued waste dumping and the presence of sewer infrastructure within the river corridor pose a significant risk to future water quality deterioration.

iii. Key Issues:

- a) Indiscriminate dumping of municipal solid waste along the riverbanks and within the river channel.
- b) Sewer line running through the riverbed, posing risks of leakage, maintenance challenges, and obstruction to river restoration.
- c) Excavated mud and silt deposited on the riverbanks after desilting, with the potential to be washed back into the river during monsoon, causing secondary siltation.

iv. Recommendations:

- a) Remove all accumulated solid waste from the river corridor and strengthen solid waste management through regular collection, installation of waste bins, and enforcement against illegal dumping.
- b) Assess the condition of the sewer line and, wherever feasible, relocate it outside the river corridor or provide adequate structural protection to eliminate the risk of leakage and facilitate future river restoration works.
- c) Dispose of desilted material at designated disposal sites or utilize it for suitable beneficial purposes after quality assessment, ensuring that excavated mud is not stored along the riverbanks where it can be washed back into the river during rainfall.



Figure 7: Discharge of wastewater at Banskhedi stretch

E. Site 5- Bada Pul:

i. Overview:

The river stretch was observed to be impacted by indiscriminate dumping of municipal solid waste and localized eutrophication resulting from nutrient enrichment. A 3.5 MLD Sewage Treatment Plant (STP) is operational in the area, of which approximately 1 MLD of treated wastewater is being reused, while the remaining treated effluent is discharged into the river.

ii. Water Quality Status:

The river exhibits signs of eutrophication, characterized by localized growth of aquatic weeds and algal proliferation. The treated effluent from the STP appears to reduce the direct impact of untreated sewage; however, persistent solid waste accumulation continue to impair water quality and ecological health.

iii. Key Issues:

- a) Indiscriminate dumping of municipal solid waste along the riverbanks and within the river channel.
- b) Localized eutrophication caused by nutrient enrichment from wastewater and surface runoff.

iv. Recommendations:

- a) Strengthen solid waste management through regular collection, installation of waste bins, and strict enforcement to eliminate dumping within the river corridor.
- b) Implement measures to reduce nutrient loading by preventing untreated wastewater inflows, controlling non-point source pollution, and periodically removing excessive aquatic weeds where necessary.
- c) Maximize the reuse of treated wastewater for applications such as irrigation, industrial use, landscaping, urban forestry, and lake rejuvenation, thereby minimizing treated effluent discharge into the river. Continuous monitoring of STP performance and treated effluent quality should be undertaken to ensure compliance with prescribed discharge standards.



Figure 8: Solid waste and eutrophication at Bada Pul stretch

F. Site 6- Haat Road:

i. Overview:

The river stretch was observed to be in a highly degraded condition due to indiscriminate dumping of municipal solid waste, extremely poor water quality, and the presence of a slaughterhouse in close proximity to the river. A strong foul odor was evident throughout the stretch, indicating a high organic pollution load and possible discharge of untreated wastewater and slaughterhouse waste into the river. The combined impact of these activities has severely degraded the river's ecological condition, visual appeal, and public health environment.

ii. Water Quality Status:

The water quality was observed to be very poor, with dark-colored, stagnant water accompanied by a persistent foul odor. Visual evidence suggests a high organic and nutrient load, low dissolved oxygen levels, and significant pollution, rendering the stretch environmentally stressed and unsuitable for sustaining a healthy aquatic ecosystem.

iii. Key Issues:

- a) Indiscriminate dumping of municipal solid waste along the riverbanks and within the river channel.
- b) Very poor water quality characterized by high organic pollution, stagnant conditions, and persistent foul odor.
- c) Presence of slaughterhouses in the vicinity, posing a risk of untreated or inadequately treated effluent, blood, and organic waste entering the river.
- d) Unsanitary riverfront conditions, adversely affecting public health, aesthetics, and the ecological integrity of the river.

iv. Recommendations:

- a) Immediate removal of accumulated solid waste from the river corridor and strengthen solid waste management through regular collection, surveillance, and strict enforcement against illegal dumping.
- b) Conduct a detailed inspection of the slaughterhouse to ensure that no untreated effluent or solid waste is discharged into the river. Adequate effluent treatment facilities should be installed or upgraded, and compliance should be monitored regularly.
- c) Identify and eliminate all sources of untreated wastewater entering the river, followed by restoration of the affected stretch through cleaning, wherever required, and removal of accumulated organic matter.
- d) Implement regular water quality monitoring, odor control measures, and development of a vegetated riparian buffer to improve the ecological health, environmental quality, and public amenity value of the river corridor.



Figure 9: Pollution at Haat Road stretch

G. Site 7- Shitala Ghat:

i. Overview:

The river stretch was observed to be severely degraded due to dumping of both solid and liquid waste, resulting in significant deterioration of its ecological and aesthetic condition. The water appeared highly polluted, with visible waste accumulation, discoloration, and poor flow conditions. During stakeholder interactions, local residents reported that the river once had clear water and served as an important community resource, highlighting the extent of degradation that has occurred over time due to unplanned urbanization, inadequate waste management, and continuous pollution.

ii. Water Quality Status:

The water quality was observed to be very poor, characterized by high turbidity, dark-colored water, visible floating waste, and indications of substantial organic pollution. The continuous inflow of liquid waste has adversely affected the river's self-purification capacity, resulting in an environmentally stressed river stretch with limited ecological value.

iii. Key Issues:

- a) Dumping of solid waste along the riverbanks and within the river channel.
- b) Continuous discharge of liquid waste, leading to severe deterioration of water quality and degradation of the river ecosystem.
- c) Loss of the river's natural ecological character and decline in its aesthetic and recreational value, as reflected by local accounts of the river previously having clear and clean water.
- d) Inadequate waste management practices and lack of effective pollution control measures within the river corridor.

iv. Recommendations:

- a) Eliminate all sources of solid and liquid waste entering the river through interception of wastewater drains, strengthening of sewerage infrastructure, and implementation of an effective solid waste management system.
- b) Undertake intensive cleaning of the river channel and riverbanks, followed by ecological restoration measures such as riparian plantation, bioengineering, and habitat improvement to restore the river's natural character.
- c) Establish a regular water quality monitoring program and enforce strict measures against illegal waste disposal to prevent further degradation.
- d) Promote community participation through awareness campaigns, citizen-led monitoring, and river stewardship initiatives to revive the river and restore its historical ecological and cultural significance.



Figure 10: Solid and liquid waste pollution at Shitala Ghat stretch

H. Site 8- Sakatpur:

i. Overview:

The river stretch passes through a predominantly rural (gramin) landscape with relatively limited urban and industrial influence. The river exhibited better flow conditions compared to upstream urban stretches, contributing to improved dilution and self-purification capacity. The surrounding area is characterized by agricultural land and scattered rural settlements, and the river retains much of its natural channel morphology and ecological character.

ii. Water Quality Status:

The water quality was observed to be comparatively good, with better flow conditions, lower levels of visible pollution, and minimal accumulation of solid waste. The improved hydraulic conditions enhance the river's natural assimilative capacity, resulting in better overall ecological health than the urban stretches.

iii. Key Issues:

- a) Potential risk of future pollution from expanding rural settlements and agricultural runoff.
- b) Localized disposal of domestic waste and agricultural residues at a few locations.
- c) Need to preserve the existing natural river corridor and prevent encroachment or unplanned development.

iv. Recommendations:

- a) Protect the river stretch by preventing discharge of untreated wastewater and restricting solid waste dumping to maintain the existing water quality.
- b) Establish regular water quality monitoring and promote sustainable agricultural practices to minimize nutrient and pesticide runoff into the river.
- c) Conserve the natural riparian vegetation through plantation and riverbank protection measures, while engaging local communities in river conservation and awareness programs to ensure the long-term ecological health of the river.



Figure 11: Water quality at Sakatpur stretch

I. Site 9- Govind Garden:

i. Overview:

The river stretch was observed to be affected by indiscriminate dumping of municipal solid waste and encroachments along the riverbanks. The accumulation of waste has degraded the aesthetic and ecological condition of the river, while encroachments have narrowed the natural river corridor, obstructed flow in certain locations, and reduced the available riparian buffer. These activities have increased the vulnerability of the river to pollution, flooding, and further environmental degradation.

ii. Water Quality Status:

The water quality was observed to be degraded due to the presence of solid waste and associated localized organic pollution. The continued waste accumulation poses a risk of leachate generation, deterioration of water quality, and adverse impacts on aquatic habitats.

iii. Key Issues:

- a) Indiscriminate dumping of solid waste within and along the river corridor.

- b) Encroachment on the riverbanks, reducing the natural river width and riparian buffer.
- c) Degradation of the river environment due to poor maintenance and unregulated human activities.

iv. Recommendations:

- a) Remove all accumulated solid waste from the river channel and banks, strengthen the solid waste management system, and enforce strict measures to prevent future dumping.
- b) Conduct a detailed survey to demarcate the river boundary and remove encroachments in a phased manner in accordance with applicable legal provisions. Restore the reclaimed riverbanks with native vegetation and a green buffer to improve ecological stability and prevent re-encroachment.
- c) Implement regular monitoring, community awareness programs, and periodic maintenance of the river corridor to preserve its ecological integrity and prevent further degradation.

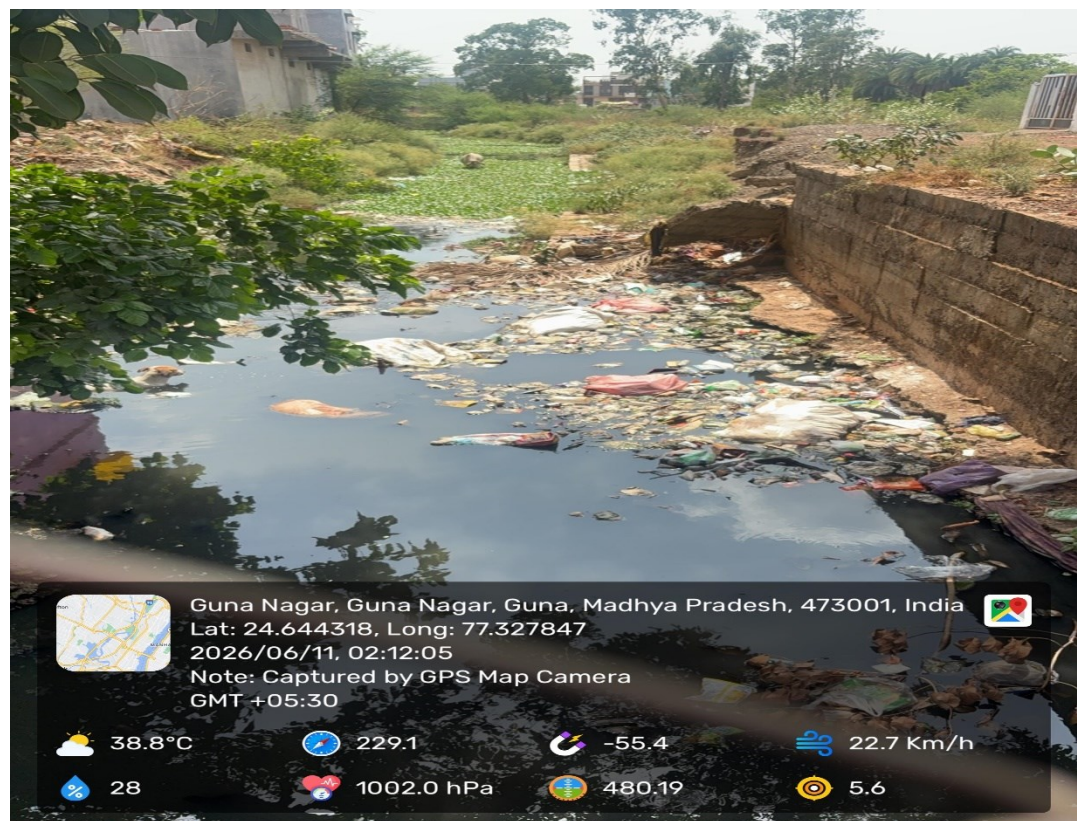


Figure 11: Encroachment and pollution at Govind Ghat stretch

WAY FORWARD

S.N.	Issue	Recommendation	Concerned Agency	Timeline
1	Solid Waste	Remove solid waste from the river corridor, establish an efficient solid waste collection system, install waste bins at vulnerable locations, and strictly prohibit dumping along the river.	Nagar Palika, Guna	Immediate (0–6 months)
2	Wastewater discharge	Identify all drains and prevent discharge of untreated sewage into the river. Install Nature-based solutions (NbS), wherever feasible.	Nagar Palika/Urban Local Body, Guna	Short-term (6–12 months)
3	Encroachment	Demarcate the river boundary, remove encroachments in accordance with legal provisions.	District Administration/ Revenue Department, Guna	Medium-term (1–2 years)
4	Siltation	Establish riparian buffers for controlling siltation and bank stabilization	Forest Department/ Nagar Palika, Guna,	Short to Medium-term (6–18 months)
5	River Front Development	Aerators may be installed at Singhwasa Talab. Ecologically sustainable riverfront development practices, including native landscaping, riparian plantation, pedestrian pathways, and interpretation signage, may be adopted while preserving the river's natural character.	Nagar Palika, Guna	Medium-term (1–3 years)
6	Community Participation & IEC Education Department, NGOs, Local Communities	Conduct Information, Education and Communication (IEC) activities, awareness campaigns, school and community engagement programs, river cleanliness drives, and initiatives to strengthen the public–river connect and promote community stewardship.	District Administration/ Nagar Palika, Guna	Continuous

