

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL****PRINCIPAL BENCH, NEW DELHI****Original Application No. 1044 OF 2024****In the matter of:**

News item appearing in News18 dated 25.06.2024 titled "आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पूछा-अभी मछलियां मर रही, आगे क्या होगा?"

**Index**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Page No.</b>
1.	<i>Reply on behalf of Central Pollution Control Board, (CPCB) i.e. Respondent no. 1 in compliance to Hon'ble NGT order dated 05.08.2024 in O.A No. 1044/2024.</i>	
2.	<i>Annexure- I A copy of Hon'ble NGT order dated 05.08.2024 in O.A No. 1044/2024.</i>	
3.	<i>Annexure- II A copy of detailed report of Joint Inspection Team.</i>	



**(Filed by Adv. Suman Arora)**  
**On behalf of Central Pollution Control Board**

**Place: Delhi**

**Dated: 04.11.2024**

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL****PRINCIPAL BENCH, NEW DELHI****Original Application No. 1044 OF 2024****In the matter of:**

News item appearing in News18 dated 25.06.2024 titled "आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पूछा-अभी मछलियां मर रही, आगे क्या होगा?"

**REPLY ON BEHALF OF CENTRAL POLLUTION CONTROL BOARD,  
RESPONDENT NO. 1**

1. That, the Hon'ble NGT vide order dated 05.08.2024 (annexed as **Annexure-I**) has issued notice to Central Pollution Control Board (herein after referred as CPCB) in the instant matter. Thereby, the reply is made in succeeding paragraphs.
2. That, CPCB is a statutory Board constituted under Section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (hereinafter referred to as "Water Act, 1974"). It performs functions under the Water Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 (hereinafter referred to as "Air Act, 1981") and the Environment (Protection) Act, 1986.
3. That the subject News item provides for allegations towards deteriorating condition of the Adi-Ganga River flowing through Jaunpur in Uttar Pradesh. It also alleges that, due to extreme heat, the river has dried up to a considerable extent whereby 50-60% of the river is alleged to be waterless. The news item also asserts of presence of several dead fish in the river emanating foul smell in the area. The said News item further



alleges that due to discharge of acid chemicals directly into the river from silver refining units, the lives of the fish are endangered, which is further increased due to the decrease in water level.

4. That, in response, post passing of aforesaid order of Hon'ble NGT dated 05.08.2024, a Joint Inspection Team of CPCB, UPPCB and District Administration, Jaunpur carried out visit for ascertainment and ground verification of the site in question. Therein, site inspection, monitoring of water quality of River Gomti and drains with gradient towards the river in the area namely Sonar Mandi and Hanuman Ghat of Jaunpur city was carried out on 19.09.2024. The detailed report of the said Joint Inspection Team is annexed as **Annexure II**.
5. That the key findings of the above said report of the Joint Inspection Team are discussed hereinafter:

**A. REGARDING LEAN FLOW OF THE RIVER**

With respect to the lean flow of the River Aadi Ganga Gomti, it is submitted that the Aadi Ganga Gomti is a non-perennial river. The photographs published in the News item dated 25.06.2024 have been taken in the summer season during which the river has lean flow. However, as per the report of the joint inspection team, high water level and free flow was observed on 19.09.2024.

**B. REGARDING COMPLAINT OF SEVERAL DEAD FISH IN THE RIVER EMANATING FOUL SMELL**

That, with respect to the complaint regarding presence of several dead fish in the river emanating foul smell in the area, it is



submitted that no fish mortality was observed by the Joint Inspection team on 19.09.2024.

Interaction with the local people revealed that the water level of the river reduces considerably during the summer season and the flow also reduces.

**C. REGARDING THE COMPLAINT OF DISCHARGE OF ACID CHEMICALS FROM THE SILVER REFINING UNITS DIRECTLY INTO THE RIVER**

That, with respect to discharge of acid chemicals from the Silver Refining Units into the River through drains, the Joint Inspection Team surveyed the entire Sonar Mandi Area, which is located on the left bank of the River Gomti (24.750477, 82.68557) in Jaunpur City and situated along both sides of Hanuman Ghat Road and between Belwai-Phulpur Road and Sadbhawana Road. During survey very small goldsmith shops were found operating in the area.

Moreover, the wastewater generated from households and commercial area is discharged into to the main drain of Sonar Mandi i.e. Hanuman Ghat Drain. The drain is tapped to Hanuman Ghat Sewage Pumping Station (SPS) and the wastewater is diverted to 30 MLD STP at Pachahatiya for treatment, preventing any kind of discharge of polluted water directly into River Gomti from Sonar Mandi.

**D. OBSERVATION REGARDING WATER QUALITY**

- a. That, with respect to river water quality, the water quality of river Gomti was assessed at two locations at Hanuman Ghat i.e. Shahipul and Sadbhavna Bridge. The Shahipul is the upstream (u/s) location to Sadbhavna Bridge at Hanuman Ghat. The river water quality is also assessed at u/s and



downstream (d/s) locations to Hanuman Ghat namely at Katghara Olandganj, approx. 950 m. u/s to Hanuman Ghat and at Shashtri Bridge which is approx.450 m. d/s to Sadbhavna Bridge. The samples were collected by the joint team.

- b. Total three drains discharge into river Gomti around the Hanuman Ghat area in the stretch from Katghara Olandganj to Shashtri Bridge. Two drains namely Bajrang Ghat drain 1 and Bajrang Ghat drain 2 discharges into river Gomti u/s to Shahipul (i.e. u/s to Hanuman Ghat) and found untapped. One drain namely Hanuman Ghat Drain which passes from Sonar Mandi, found tapped to Hanuman Ghat Sewage Pumping Station (SPS), meeting river Gomti d/s to Shahipul.
- c. The analysis results of river samples indicate that DO at all locations was found to be  $> 5$  mg/l and ranged between 5.8 – 6.5 mg/l. pH varies between 7.6 - 7.74. BOD was observed to be  $> 3$  mg/l at all locations and ranged 4.7 - 5.66 mg/l. Total Coliform were observed between  $2.2 \times 10^4$  –  $1.1 \times 10^6$  MPN/100 ml.
- d. Compared to the upstream location Katghara Olandganj (u/s of Hanuman Ghat), a slight deterioration in river water quality in terms of BOD has been observed at Shahipul, Sadbhavana Bridge and Shastri Bridge which may be attributed to the two Bajrang Ghat drains discharging directly at the upstream of Shahi Pul.
- e. The details of the sampling points are given in the table 1 and shown in figure 1 and the results of samples collected from the river locations are given in Table 2:



**Table 1: Details of sampling points on River Gomti**

S. No.	Sampling point	GPS Coordinates	Sampling point significance	Remarks
1.	Katghara Olandganj	25.75125000 82.67583333	U/s of Hanuman ghat	Approx. 950 m U/s of Sahipul
2.	Shahipul	25.749944 82.684613	Upper side of Hanuman Ghat	In front of Sonar Mandi and near to Hanuman Ghat sewage pumping station
3.	Sadbhavna Bridge	25.747789 82.686759	Lower end of Hanuman Ghat	Opposite of Navdurga Visarjan Ghat
4.	Shashtri Bridge	25.744063 82.690114	D/s of Hanuman Ghat	Near Shekhpur sewage pumping station and about 400 m D/s of Sadbhavna Bridge

**Fig 1: 03 drains and 04 river locations around Hanuman Ghat in Jaunpur**

**Table 2: Water quality at four locations of R. Gomti**

S. No.	Parameter	Sampling location				Class B* (DBU water quality criteria)
		Katghara Olandganj	Shahipul	Sadbhavna Bridge	Shastri Bridge	
1	pH	7.6	7.62	7.74	7.73	6.0-8.5
2	DO (mg/L)	6.5	5.8	6.2	6.3	<5
3	BOD (mg/L)	4.7	5.66	5.36	5.26	≥3
4	NH <sub>3</sub> -N (mg/L)	0.102	<0.1	<0.1	<0.1	-
5	Electrical Conductivity (μS/cm)	387	372	374	382	-
6	TC (MPN/100 ml)	1.7×10 <sup>5</sup>	1.7×10 <sup>5</sup>	2.2×10 <sup>4</sup>	1.1×10 <sup>6</sup>	≤500
7	Total Cr. (mg/l)	<0.05	<0.05	<0.05	<0.05	--
8	Copper (Cu) (mg/l)	<0.01	<0.01	<0.01	<0.01	--
9	Cadmium (Cd) (mg/l)	<0.01	<0.01	<0.01	<0.01	--
10	Lead (Pb) (mg/l)	<0.09	<0.09	<0.09	<0.09	--
11	Iron (Fe) (mg/l)	0.7137	0.8317	1.0151	0.7924	--
12	Nickel (Ni) (mg/l)	<0.04	<0.04	<0.04	<0.04	--
13	Zinc (Zn) (mg/l)	<0.01	<0.01	<0.01	<0.01	--

**\*Class B: DBU water quality criteria for Outdoor bathing (Organised).**

That, monitoring of two drains at u/s of Hanuman Ghat i.e. Bajrang ghat drain 1 & Bajrang Ghat drain 2 and one drain in Sonar Mandi i.e. Hanuman Ghat drain was also carried out. Bajrang ghat drain 1 & 2 were found contributing discharge of 10.6 m<sup>3</sup>/hr (extrapolated to 0.254 MLD) of wastewater into river in the u/s of Hanuman Ghat. No wastewater

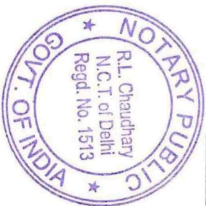


discharge into the river was observed from drain in Sonar Mandi i.e. Hanuman Ghat drain. However, the wastewater sample of this drain was collected before tapping point. Total chromium, copper, lead and nickel are not detected in the any of the drains. Cadmium and iron is not detected in Bajrang Ghat drain 1 and Bajrang Ghat drain 2 respectively while zinc is not detected in both these drains.

The analysis results of the samples collected from these drains are given Table 3.

**Table 3: Analysis results of drains located in the area around Hanuman Ghat**

S.No.	Parameter	Sampling location		
		Bajrang Ghat Drain 1	Bajrang Ghat Drain 2	Hanuman Ghat Drain
1	pH	7.42	6.91	7.30
2	Colour (Hazen)	75	50	60
3	SS (mg/L)	49.8	25.2	107
4	TDS (mg/L)	<b>2073</b>	<b>1349</b>	<b>2269</b>
5	Chloride (mg/L)	<b>387</b>	<b>249</b>	60.1
6	Sulphate (mg/L)	<b>373</b>	<b>256</b>	<b>340</b>
7	Total P (mg/L)	1.69	0.626	1.15
8	Nitrate as N (mg/L)	1.017	1.012	1.019
9	Amm. Nitrogen (mg/L)	46.2	27.2	38.4
10	COD (mg/L)	180	120	171
11	BOD (mg/L)	68.0	35.3	61.0
12	Flow (MLD)	0.096	0.158	-
13	BOD Load (kg/day)	6.53	5.58	-
14	Total Cr. (mg/l)	<0.05	<0.05	<0.05
15	Copper (Cu) (mg/l)	<0.01	<0.01	<0.01
16	Cadmium (Cd) (mg/l)	<0.01	0.0299	0.0378
17	Lead (Pb) (mg/l)	<0.09	<0.09	<0.09
18	Iron (Fe) (mg/l)	0.1241	<0.05	2.1288
19	Nickel (Ni) (mg/l)	<0.04	<0.04	<0.04
20	Zinc (Zn) (mg/l)	<0.01	<0.01	0.1055



**Note:** BOD and COD values in drains indicate the characteristics of sewage. heavy metals were found only in trace amounts or below detection levels, indicating domestic discharge sources

That, Monitoring of R. Gomti revealed high water levels and free flow, with no fish mortality observed. No silver refining activities or chemical usage found in the area. Three wastewater drains were identified: two non-priority drains discharging directly into the river's left bank, showing higher BOD and color levels than standard limits, thereby increasing pollution. Heavy metals were found only in trace amounts or below detection levels, indicating domestic discharge sources.

The river water was deemed unfit for organized outdoor bathing, with slight quality deterioration downstream from the drain discharge points. No heavy metals, other than iron, were detected, suggesting no industrial discharge.

Overall, no fish mortality was observed from Katghara Olandganj to Shastri Bridge at Jaunpur city, and the water quality reflects the absence of industrial pollution in the area around Sonar Mandi.

6. That the answering respondent CPCB craves the leave of this Hon'ble Tribunal to file additional reply, in future, if required.
7. That, in the light of the above submissions, it is respectfully submitted that the answering respondent CPCB shall abide by any order(s) and/or direction(s) passed by the Hon'ble Tribunal in the instant case.



*Ajit Kumar Vidyarthi*

(A.K. Vidyarthi)  
Scientist "F"

Central Pollution Control Board

(Filed by Adv. Suman Arora)

On behalf of Central Pollution Control Board

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI  
Original Application No. 1044 OF 2024**

**In the matter of:**

News item appearing in News18 dated 25.06.2024 titled "आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पूछा-अभी मछलियां मर रही, आगे क्या होगा?"

**AFFIDAVIT**

I, **A.K. Vidyarthi** working as Scientist 'F' in Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi, the Respondent No. 1 in the above matter, do hereby solemnly affirm, declare on oath and state as under:-

1. That I, the deponent herein is authorized representative to represent the Respondent CPCB in the present case, and as such, I am well conversant with the facts and circumstances of the present case on the basis of the information derived from the official records, and hence, I am competent and authorized to verify, sign and swear this affidavit on behalf of the Respondent CPCB.
2. That the accompanying reply may be read part and parcel of the present affidavit.
3. That the accompanying reply has been drafted and filed under my instructions and authority the contents thereof are true and correct on the basis of the record maintained during ordinary course of business of CPCB and available records and documents and the contents of the same are read over and explained to me and are not repeated herein for the sake of brevity.



*Ajit Kumar Vidyarthi*  
**DEPONENT**

**ए. के. विद्यार्थी / A. K. Vidyarthi**  
**वैज्ञानिक 'एफ' / Scientist 'F'**  
**केंद्रीय प्रदूषण नियंत्रण बोर्ड**  
**Central Pollution Control Board**  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार  
M/o Env. Forest & Climate Change, Govt. of India  
परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली-110032  
Parivesh Bhawan, East Arjun Nagar, Delhi-110032

**VERIFICATION**

Verified at New Delhi on this day of U 4 NOV 2024 that the contents of the above reply are correct and true on the basis of the records of the case as mentioned in the day-to-day affairs of the CPCB. Nothing has been concealed therefrom or mis-stated.

*Ajit Kumar Vidyarthi*

**DEPONENT**

ए. के. विद्यार्थी / A. K. Vidyarthi  
 वैज्ञानिक 'एफ' / Scientist 'F'  
 केंद्रीय प्रदूषण नियंत्रण बोर्ड  
 Central Pollution Control Board  
 पर्यावरण, वन एवं जलवायु परिवर्तन विभाग, भारत सरकार  
 M/o Env. Forest & Climate Change, Govt. of India  
 परिवेश भवन, पूर्वी अणु कक्ष, दिल्ली-110032  
 Parivesh Bhawan, East Atomic Complex, Delhi-110032

**ATTESTED**

*[Signature]*  
 NOTARY PUBLIC  
 GOVT. OF INDIA

U 4 NOV 2024

Item No. 05

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 1044/2024

News item appearing in News18 dated 25.06.2024 titled “आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पूछा-अभी मछलियां मर रही, आगे क्या होगा?”

Date of hearing: 05.08.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON  
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER  
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: None appeared

**ORDER**

1. This original application is registered *suo motu* on the basis of the news item titled “आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पूछा-अभी मछलियां मर रही, आगे क्या होगा?” appearing in News18 dated 25.06.2024.

2. The news item relates to the deteriorating condition of the Adi Ganga Gomti river flowing through Jaunpur in Uttar Pradesh. As per the article, the river has dried up due to extreme heat resulting in 50-60 percent of the river becoming waterless. The article also highlights the presence of several dead fish in the river emanating foul smell in the area.

3. The news item states that the river has been a source of employment and a protector of environment for the people in the region. It is also alleged that the death of the fish is caused due to chemical pollution in the river. Furthermore, in front of Hanuman Ghat is Sonar Mandi. Here silver is refined with acid chemicals, which comes directly into the river through the deadly chemical drain. Due to this, the danger to the lives of the fish increases. The danger has increased further due to

the decrease in the water level in the river. The article asserts that no action has been taken yet by the concerned authorities.

4. The news item raises substantial issue relating to compliance of the environmental norms, especially compliance of Water (Prevention and Control of Pollution) Act, 1974 and the Environment Protection Act, 1986.

5. Power of the Tribunal to take up the matter *suo-motu* has been recognized by the Hon'ble Supreme Court in the matter of "*Municipal Corporation of Greater Mumbai vs. Ankita Sinha & Ors.*" reported in 2021 SCC Online SC 897.

6. Hence, we implead the following as respondents in the matter:

- (1). Central Pollution Control Board, through its Member Secretary, Parivesh Bhawan, East Arjun Nagar, Delhi-110032
- (2). Uttar Pradesh Pollution Control Board, through its Member Secretary, Building No. TC-12V, Vibhuti Khand, Gomti Nagar, Lucknow 226010
- (3). Ministry of Environment, Forest and Climate Change, through its Regional Office, Integrated Regional Office, Kendriya Bhawan, 5<sup>th</sup> Floor, Sector "H", Aliganj, Lucknow – 226020
- (4). National Mission for Clean Ganga, Through its Director General, Ministry of Jal Shakti, (Department of Water Resources, River Development and Ganga Rejuvenation) Government of India First floor, Major Dhayan Chand national Stadium India Gate, New Delhi- 110002
- (5). District Magistrate, Jaunpur, Collector Compound, Jaunpur

7. Issue notice to the above respondents for filing their response at least one week before the next date of hearing.
8. List on 08.11.2024.

Prakash Shrivastava, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

August 05, 2024  
Original Application No. 1044/2024  
SNP

## Annexure- II

### 1.0 Background

Hon'ble National Green Tribunal (NGT), Principal Bench, New Delhi, *suo-moto* registered the original application (OA) number 1044/2024 on the basis of the news item titled "आदि गंगा गोमती खुद बूंद-बूंद पानी के लिए तड़प रही, लोगों ने पुछा – अभी मछलियाँ मर रहीं, आगे क्या होगा?" appearing in News18 dated 25.06.2024.

The news item in the referred Hon'ble NGT Order raises significant issue relating to compliance of the environmental norms, especially compliance of Water (Prevention and Control of Pollution) Act, 1974 and the Environment Protection Act, 1986 and the Hon'ble tribunal has impleaded the following as respondents in the matter:

Central Pollution Control Board (CPCB), Uttar Pradesh Pollution Control Board (UPPCB), Ministry of Environment, Forest and Climate Change (MoEF&CC), through its Regional Office, National Mission for Clean Ganga (NMCG) and District Magistrate, Jaunpur

In compliance of the referenced order of Hon'ble NGT, a joint team of CPCB, UPPCB and District Administration, Jaunpur carried out visit for monitoring of water quality of River Gomti and drains with gradient towards the river in the area namely Sonar Mandi and Hanuman Ghat of Jaunpur city on 19.09.2024. Team also visited the area around the river bank from U/s to D/s of Hanuman Ghat to gather factual status of wastewater sources.

### 2.0 Objectives

- I. Field survey of Hanuman Ghat and Sonar Mandi to identify wastewater sources and their status.
- II. Quantification and characterization of drains with gradient towards River Gomti
- III. Water Quality monitoring of River Gomti in the stretch under study.

### 3.0 Study of the area with special reference to above objectives:

**3.1 Methodology:** Methodology adopted for the study is as under:

- (i) **Field visit:** The area of concern along R. Gomti was surveyed and drains location identified with reference to water quality of the river.
- (ii) **Sampling:** Two untapped drains were identified and samples were collected from these two drains before confluence with R. Gomti. Sample from the tapped drain was also collected from the collection sump. Similarly, four river locations were identified for sample collection. Sampling was carried out by joint team of officials from CPCB and UPPCB. All the samples were analysed at CPCB Regional Directorate, Lucknow.
- (iii) **Laboratory work:** General parameters (Colour, pH, TSS, NH<sub>3</sub>-N, Nitrate, DO, BOD, COD, bacteriological parameters (Total coliforms (TC) and trace/heavy metals were analysed in the laboratory.

### 4.0 Survey of the area

Hanuman Ghat, Bajrang Ghat and Sonar Mandi area were visited. It was observed that along with general market/stores, very small goldsmith shops were also operating in the area. As per interaction with local people and site observation, no activities of refining silver by using chemicals observed in the area. Wastewater generated from households and shops in the area are connected to the main drain of Sonar Mandi. Sonar Mandi drain is tapped to Hanuman Ghat SPS and diverted to 30 MLD STP at Pachahatiya preventing discharge of wastewater into R. Gomti from Sonar Mandi area.

Due to monsoon season during survey, the water level of the river was high, with high flow and water current. According to local residents, the water level of river drops significantly post monsoon and remains low in the summer season, resulting in reduced flow. During the visit, the joint team did not observe any harmful impacts on the river, nor were there any signs of fish mortality.

### 5.0 Quantification and characterization of wastewater sources&drains

Three drains having gradient towards the river were found in the area around Hanuman Ghat. As presented in Pic. 1 & Table 1, two drains (Photo 1 & 2) in U/s of Hanuman Ghat at Bajrang ghat were found discharging in to the river while one drain in Sonar Mandi (Photo 3) was found tapped to Hanuman Ghat SPS (Photo 4) and diverted to 30 MLD STP at Pachahatiya.



**Pic. 1: Schematic presentation of three drains and four river locations around Hanuman Ghat, R. Gomti in Jaunpur (image is based on the captured coordinates of visited area)**

**Table 1: Drains with gradient towards River Gomti in area around Hanuman Ghat, Jaunpur**

S. No.	Drain	Sampling point coordinates	Flow (m <sup>3</sup> /hr)	Landmark	Remarks
1.	Bajrang Ghat Drain 1	25.750580 82.682451	4	U/s of Shahipul	Untapped & approx. 250 m U/s of Sahipul
2.	Bajrang Ghat Drain 2	25.750280 82.682619	6.6	U/s of Shahipul	Untapped & approx. 230 m U/s of Sahipul
3.	Hanuman Ghat Drain	25.749241 82.686024 (IPS Hanuman Ghat)	Tapped	Hanuman Ghat	Tapped & diverted to STP at Pachahatiya. Opposite of Gopi Ghat b/w Shahipul & Sadbhavna Bridge

**Photographs of drains (sampling/discharge & tapping/diversion points)**





Although, the drain at Hanuman Ghat in Sonar Mandi was found tapped, sample was collected to analyse the characteristics of wastewater which is diverted to STP for treatment. Samples from the two untapped drains were also collected during visit and flow was also determined. Drains were having lean flow and as per instantaneous discharge during visit, both drains were contributing 10.6 m<sup>3</sup>/hr (extrapolated to 0.254 MLD) of wastewater to the river. The results of samples collected from the drains are tabulated (Table-2) below-

**Table 2: Wastewater quality of one tapped drain & two untapped drains discharging in to R. Gomti**

S. No.	Parameter	Unit	Sampling location			
			BajrangGhat Drain 1	BajrangGhat Drain 2	Hanuman Ghat Drain	General discharge standards
1	pH	--	7.42	6.91	7.30	5.5-9.0
2	Colour	Hazen	75	50	60	50
3	SS	mg/L	49.8	25.2	107	100
4	TDS	mg/L	2073	1349	2269	--
5	Chloride	mg/L	387	249	60.1	--
6	Sulphate	mg/L	373	256	340	--
7	Total P	mg/L	1.69	0.626	1.15	--
8	Nitrate as N	mg/L	1.017	1.012	1.019	10
9	Ammonium Nitrogen	mg/L	46.2	27.2	38.4	50
10	COD	mg/L	180	120	171	250
11	BOD	mg/L	68.0	35.3	61.0	30
12	Total Cr.	mg/L	<0.05	<0.05	<0.05	--
13	Copper (Cu)	mg/L	<0.01	<0.01	<0.01	--

14	Cadmium (Cd)	mg/L	<0.01	0.0299	0.0378	--
15	Lead (Pb)	mg/L	<0.09	<0.09	<0.09	--
16	Iron (Fe)	mg/L	0.1241	<0.05	2.1288	--
17	Nickel (Ni)	mg/L	<0.04	<0.04	<0.04	--
18	Zinc (Zn)	mg/L	<0.01	<0.01	0.1055	--

The drains at Bajrang Ghat are not priority drains (combined flow of both drains is less than 1 MLD) nevertheless, samples were collected as the drains were untapped and found discharging in to the river. Analysis of samples indicates the characteristics of domestic drain. Colour and BOD of the Bajrang Ghat drain 1 is higher than the standards while Bajrang Ghat drain 2 is having higher BOD only. This exceedance w.r.t. the general discharge standards implies that the drains shall be tapped and diverted to prevent discharge of untreated wastewater to R. Gomti. Characteristic of drain at Hanuman Ghat (tapped and diverted) is similar to above mentioned drains, except SS (higher than Bajrang ghat drains) and chloride (lower than Bajrang ghat drains). Total chromium, copper, lead and nickel are not detected in any drain. Cadmium and iron is not detected in Bajrang Ghat drain 1 and Bajrang Ghat drain 2 respectively while zinc is not detected in both these drains.

## 6.0 Water quality of R. Gomti

Stretch of R. Gomti in the area of concern was surveyed and four sampling points were identified. As presented in Pic. 1 and Table 3, two of the four points are located at the opposite ends of Hanuman Ghat, while the other two points are situated U/s and D/s of Hanuman Ghat.

**Table 3: Four sampling points at R. Gomti**

S. No.	Sampling point	GPS Coordinates	Landmark	Remarks
1.	Katghara Olandganj	25.75125000 82.67583333	U/s of Hanuman ghat	Approx. 950 m U/s of Sahipul
2.	Shahipul	25.749944 82.684613	One end of Hanuman Ghat	In front of Sonar Mandi and near to Hanuman Ghat sewage pumping station
3.	Sadbhavna Bridge	25.747789 82.686759	Other end of Hanuman Ghat	Opposite of Navdurga Visarjan Ghat
4.	Shastri Bridge	25.744063 82.690114	D/s of Hanuman Ghat	Near sewage pumping station about 400 m D/s of Sadbhavna Bridge

**Photographs of river locations**

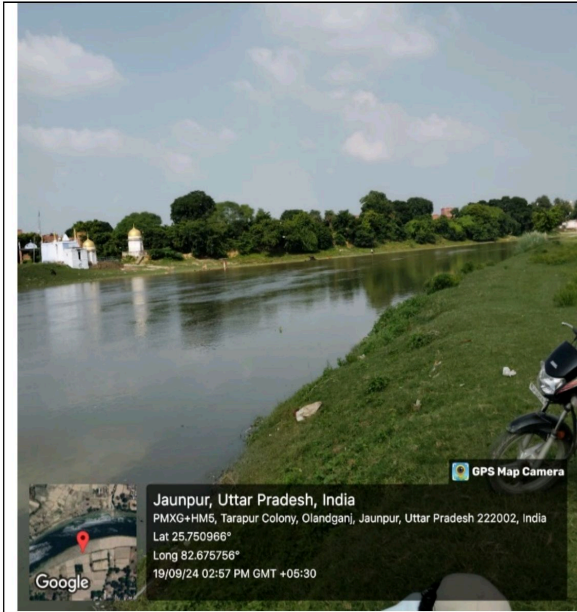


Photo 5: Sampling site at Katghara Olandganj



Photo 6: Sampling & onsite measurement at Shahipul



Photo 7: Sadbhawana bridge sampling



Photo 8: Shastri bridge sampling

The results of samples collected from the river locations are tabulated (Table-4) below-

**Table 4: Water quality at four locations of R. Gomti**

S. No.	Parameter	Unit	Sampling location				Class B (DBU water quality criteria)
			Katghara Olandganj	Shahipul	Sadbhavna Bridge	Shastri Bridge	
1	pH	--	7.6	7.62	7.74	7.73	6.5-8.5
2	DO	mg/L	6.5	5.8	6.2	6.3	≥5
3	BOD	mg/L	4.7	5.66	5.36	5.26	≤3
4	NH <sub>3</sub> -N	mg/L	0.102	<0.1	<0.1	<0.1	≤1.2
5	EC	μS/cm	387	372	374	382	≤2250
6	TC	MPN/100 ml	1.7×10 <sup>5</sup>	1.7×10 <sup>5</sup>	2.2×10 <sup>4</sup>	1.1×10 <sup>6</sup>	≤500
12	Total Cr.	mg/L	<0.05	<0.05	<0.05	<0.05	--
13	Copper (Cu)	mg/L	<0.01	<0.01	<0.01	<0.01	--
14	Cadmium (Cd)	mg/L	<0.01	<0.01	<0.01	<0.01	--
15	Lead (Pb)	mg/L	<0.09	<0.09	<0.09	<0.09	--
16	Iron (Fe)	mg/L	0.7137	0.8317	1.0151	0.7924	--
17	Nickel (Ni)	mg/L	<0.04	<0.04	<0.04	<0.04	--
18	Zinc (Zn)	mg/L	<0.01	<0.01	<0.01	<0.01	--

Water quality of the river at the upstream location at Katghara Olandganj is relatively better in terms of DO and BOD; however, the water is found not fit for organised outdoor bathing as BOD is more than 3 mg/L and TC is more than 500 MPN/100 ml (Table-4). Slight deterioration in water quality characterized by reduced DO and elevated BOD is observed at Shahipul, Sadbhavana Bridge and Shastri Bridge which is located downstream of Bajrang Ghat drains. This minor decline in water quality may be attributed to the two Bajrang Ghat drains discharging directly at the upstream of Shahipul. Analyzed heavy metals were not detected, except iron, with variation of 30 % within the four river locations.



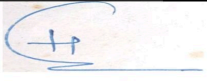
### 7.0 Conclusion:

High water level and free flow observed in R. Gomti and no fish mortality noticed. No work regarding silver refining and use of any chemical found in the area of concern. Only three wastewater drains were found in the area. Two of these drains, although not priority drains, found directly discharging in to the left bank of R. Gomti are having higher BOD and colour as compared to general discharge standards and increasing the pollution load of river. Presence of heavy metals in traces or below detection level indicates discharge from domestic sources only. As these drains are very small, they shall be tapped and diverted to the existing STP. Third drain in Sonar Mandi is found tapped and diverted to STP preventing discharge of untreated wastewater in R. Gomti and hence not significantly impacting river water quality.

River water quality in the study region was found unfit for organised outdoor bathing with slight quality deterioration downstream from the drain discharge points. No heavy metals, other than iron, were detected, suggesting no industrial discharge.

Overall, no fish mortality in between Katghara Olandganj to Shastri Bridge at Jaunpur city in River Gomti observed during visit and the drains in the area around Sonar Mandi are not showing any industrial characteristics and the same is reflected in the river water quality.

### 8.0 Monitoring Team

Name & Designation	Organization	Signature
1. Er.Ram Balak Singh, Sci. 'C'	CPCB RD Lucknow	
2. Dr.Sarvesh Rai, Sci. 'C'	CPCB RD Lucknow	
3. Sh.Harishchandra, SI	Nagar Palika,Jaunpur	
4. Sh. Rajnath Chaudhry, SA	UPPCB, RO Varanasi	