

537

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI**

Rejoinder

In

ORIGINAL APPLICATION NO. 511 OF 2023

IN THE MATTER OF

Priyank Bharati

APPLICANT IN PERSON

Versus

State of Uttar Pradesh through its Chief Secretary and ors.

RESPONDENTS

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Priyank Bharati

Applicant in Person

Date : 28.02.2025

Place : Meerut

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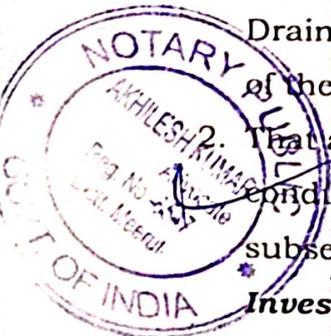
Affidavit cum Rejoinder by Applicant

MOST RESPECTFULLY SHOWETH;

I, Priyank Bharati aged about 36 years R/O 148/4 Jagriti Vihar Meerut-250004, UP hereby solemnly affirm and declare as under:

1. That the District Magistrate, Meerut, vide letter no. 4402/OSD-Camp/2024 dated 07/11/2024, appointed the Executive Engineer, Drainage, Irrigation Department, Meerut, as the Nodal Agency. A copy of the said letter is annexed herewith and marked as **Annexure 1**.

That a team from the **National Institute of Hydrology (NIH)**, Roorkee, conducted a site visit to Budhi Ganga on 08/11/2024 and subsequently submitted a proposal titled "**Hydrological Investigation, Revival, and Restoration Plan for Budhi Ganga River**" on 10/01/2025 via email to the Irrigation Department and the District Magistrate, Meerut. A copy of the said email and proposal is annexed herewith and marked as **Annexure 2**.



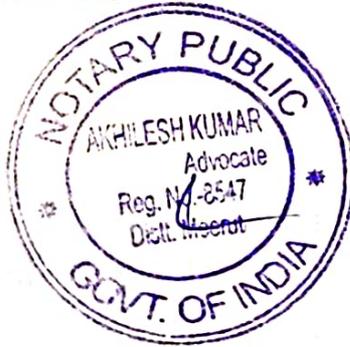
3. That the applicant, vide email dated 28/02/2025, submitted an urgent request to the District Magistrate, Meerut (also cc to EE, Drainage, Irrigation Department, Meerut), titled "Urgent Request for Intervention Regarding Inaction by the Irrigation Department on Budhi Ganga Rejuvenation." The matter often lingers, causing unnecessary delays. The copy of email is attached herewith and marked as Annexure 3.

For all the reasons stated above the Hon'ble Tribunal may kindly be pleased to take cognizance of all these facts and to pass appropriate orders to meet the ends of Justice and equity.

AND FOR THIS ACT OF KINDNESS THE APPLICANTS, AS IN DUTY BOUND, SHALL EVER PRAY.

Verification

Verified on this 28 day of Feb 2025 that the contents of the present Application are true and correct to my knowledge and belief and nothing material is concealed therefrom.



Date: 28/2/25
Place: Meerut

Priyank Bharati

Priyank Bharati
Applicant in Person

ATTESTED
AKHILESH KUMAR
NOTARY MEERUT
4/3/25

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI**

ORIGINAL APPLICATION NO. OF

IN THE MATTER OF

Priyank Bharati

APPLICANT IN PERSON

Versus

State of Uttar Pradesh through its Chief Secretary and ors.

RESPONDENTS



Affidavit

I, Priyank Bharati, S/o, Shri. Brahampal Singh Singh aged about 36 years, R/o, 148/4 Jagriti Vihar, District Meerut, Uttar Pradesh do hereby solemnly affirm and declare as under:

1. That I am the Applicant/Applicant In Person in above mentioned application and I am fully conversant with the facts and circumstances of the case and therefore competent to swear this affidavit.
2. That, the statements made in paragraphs 1 to 3 of this affidavit is true to my knowledge

(Signature)
Applicant In Person



VERIFICATION

Verified on this **28** day of **Feb** 2025 that the contents of the present Application are true and correct to my knowledge and belief and nothing material is concealed therefrom.

ATTESTED
4/2/25
AKHILESH KUMA
NOTARY MEERUT

(Signature)
Applicant In Person
/Deponent

Annexure 1

04

कार्यालय जिलाधिकारी, मेरठ।

संख्या: 4402/ओ0एस0डी0-कैम्प/2024

दिनांक: 07-10-2024

कार्यालय आदेश

माननीय एन0जी0टी0 न्यायालय के निर्देशानुसार तहसील मवाना, जनपद मेरठ में बूढ़ी गंगा को पुनर्जीवित किए जाने विषयक कार्यवाही विगत कई माह से प्रचलित है।

उक्त के सम्बन्ध में मा0 एन0जी0टी0 न्यायालय के निर्देशों के अनुपालन हेतु आवश्यक कार्यवाही सुनिश्चित कराने के लिए अधिशासी अभियन्ता, ड्रेनेज, सिंचाई विभाग, मेरठ को गौडन अधिकारी नामित किया जाता है।

(दीपक मीणा)

जिलाधिकारी, मेरठ।

प्रतिलिपि-

- 1- प्रभागीय निदेशक, सामाजिक वानिकी प्रभाग, मेरठ।
- 2- अपर जिलाधिकारी (प्रशासन), मेरठ को सूचनार्थ प्रेषित।
- 3- उप जिलाधिकारी, मवाना को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।
- 4- अधिशासी अभियन्ता, ड्रेनेज, सिंचाई विभाग, मेरठ को अनुपालनार्थ प्रेषित।
- 5- श्री प्रियांक भारती, संस्थापक/चेयरमैन, नेचुरल साईस ट्रस्ट, 148/4, जागृति विहार, मेरठ को उक्त सन्दर्भ में सूचनार्थ प्रेषित।

(दीपक मीणा)

जिलाधिकारी, मेरठ।



Annexure 2

Priyankbharati, priyank.bharati@shobhituniversity.ac.in>

Submission of project proposal on Budhi Ganga

2 messages

Dr P. C. Nayak <nayak.nihr@gov.in>

Fri, Jan 10, 2025 at 11:58 AM

To: eedrainagemeerut <eedrainagemeerut@gmail.com>

Cc: dmmeee <dmmeee@nic.in>, priyankbharati <priyank.bharati@shobhituniversity.ac.in>

Dear Sir,

As suggested by you I am herewith attaching a project proposal on "Revival and restoration plan of Budhi Ganga river".

Kindly feel free to contact with me if you need any clarification/modification.

Best regards

Dr. P. C. Nayak, Scientist 'F'National Institute of Hydrology | Surface Water Hydrology Division |
Jalangan Bhawan | Roorkee-247 667 (UK) | INDIA

T: +91 1332 249208 (O) | +91 949277 6420 (M) | F: +91 1332 272123

W: <https://online.nihrorkee.gov.in/profile/scientist/nayak>

E: nayakpc@yahoo.co.in | nayakpc@gmail.com | nayak.nihr@gov.in

Scopus, Researchgate, Google Scholar, Reseracherid
Associate Editor, Journal of Hydrology, Elsevier SciencesBudhi Ganga river resotorationStudy-NIH Roorkee.pdf
293K

Hydrological Investigation, Revival and Restoration Plan for Budhi Ganga River

1. Background

The Budhi Ganga river, a palaeo-channel of the sacred Ganga River, holds significant geological and cultural importance in the Meerut District of Uttar Pradesh, India. Palaeochannels of ancient river courses, provide valuable information about the region's hydrological history, tectonic evolution, and climatic changes. Identifying and studying these relict channels can shed light on the dynamics of fluvial systems, floodplain development, and the impact of human activities on the environment. The Boodhi Ganga River, in particular, has witnessed significant alterations, with its course shifting over time. For revival of Buddhi Ganga river, The District Magistrate of Uttar Pradesh nominated the Executive Engineer, Drainage and Irrigation Department, Meerut as a Nodal Officer based on Hon'ble NGT direction.

The District Magistrate, Meerut (Ref: 4373/OSD/2024, dated 21-10-2024) had invited NIH team for field visit and discussions for action to be taken in connection with revival of Budhi Ganga river. A field visit by NIH Team with Prof. Priyank Bharti and team from Irrigation Department and Revenue, Govt of UP was carried out on 08/11/2024. It was discussed that a project proposal for carrying out a detailed study on revival and restoration of Budhi Ganga river may be submitted by NIH, Roorkee.

2. Objective of the study

1. Identification and mapping of paleo channels using isotope analysis and geophysical survey of the river basin
2. Hydrological and environmental modelling for assessing carrying capacity of river under different Scenarios.
3. Preparation of land and water management plan for water restoration in Budhi Ganga river basin.

3. Study Area

The study area is Budhi Ganga river catchment



4. Methodology

4.1 Identification and Mapping of Paleo Channels

Remote Sensing (RS) and Geographical Information System (GIS) softwares will be used for preparation of different thematic maps. The Digital Elevation Models (DEM) map provides elevation data that enable the identification of subtle landforms, such as depressions or terraces, often associated with paleo channels. Hydrological tools, including flow direction and accumulation analysis, will be applied to DEM to delineate drainage patterns. Contour maps generated from DEMs will also aid in understanding the geomorphic features related to paleo channels and to distinguish them from other landforms. Historical maps and archival records are essential for validating potential paleo channel locations identified through remote sensing. These maps often capture past river systems and geomorphic features that may no longer be visible in the present landscape. Comparing modern satellite imagery with historical maps such as old toposheets allows to detect shifts/presence of rivers/stream courses over time, offering insights into the evolution of paleo channels. This step bridges the gap between past and present hydrological conditions, ensuring identification of paleo channel.

Field surveys including infiltration test and soil sampling will be conducted. Soil samples will be collected and analyzed for grain size, sediment composition, and moisture retention characteristics, which are indicative of fluvial deposits associated with paleo channels. If it is required, geophysical investigations will be carried out at selected locations to confirm the presence of the paleo channel.

The isotope techniques may also be used for identification of paleo-channel. The stable isotopes of oxygen ($\delta^{18}\text{O}$) and hydrogen (δD) will be used to characterize the different water bodies and help to understand the recharge source of groundwater. The palaeo channels are good aquifers that recharged by the river water flowing in past while the groundwater adjacent to that aquifers recharged by the rain. The isotopes can be used to identify the recharge source of these palaeo aquifers and will help in finding out the origin of river. Along with the water, the identification of sediment present in the palaeo aquifer will help in to understand the sedimentation rate and their source.

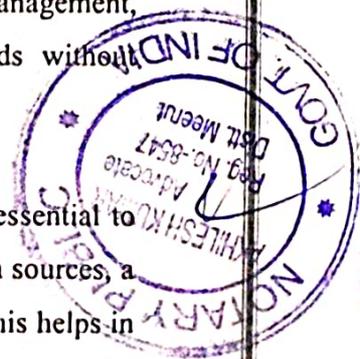


4.2 Hydrological and environmental modelling

The Soil and Water Assessment Tool (SWAT) is a robust model used to assess the carrying capacity of streams and rivers by simulating hydrological and pollutant transport processes at the watershed scale, with a focus on water quantity. In the present study, SWAT model will be used to achieve the objective. The required data, including meteorological inputs (e.g., precipitation, temperature, and solar radiation), land use/land cover data, soil properties, and topographic information such as Digital Elevation Models (DEMs) will be collected from different sources. These datasets will be integrated into the SWAT model to define hydrological response units (HRUs), representing unique combinations of land use, soil, and slope. The model simulates key hydrological components such as precipitation, interception, surface runoff, infiltration, evapotranspiration, baseflow, and groundwater recharge to estimate streamflow at various spatial and temporal scales. Calibration and validation will be conducted using observed streamflow data to ensure the model accurately reflects the watershed's hydrology.

For accurate calibration and validation of the hydrological modeling, a comprehensive field data collection program will be implemented. At least three permanent Gauge and Discharge (G&D) stations will be established along strategic locations of the Budhi Ganga River, representing the upper, middle, and lower reaches of the river system. These stations will be equipped with the state of art instruments to monitor water discharge continuously throughout one complete monsoon period or more. This monitoring network will provide crucial data on flow dynamics, stage-discharge relationships, and seasonal variations in river flow patterns. By quantifying the streamflow under varying climatic and land-use scenarios, the SWAT model helps assess the carrying capacity of the stream in terms of water availability. This includes understanding the natural variability in flow regimes, peak flow events, and low flow conditions that influence the capacity of streams to support ecological health and economic activities. The model outputs provide insights into sustainable water resource management, ensuring the streams and rivers can meet current and future water demands without compromising their ecological integrity.

In order to estimate the river health status and pollution load contributors, it is essential to analyze the water quality of river and drains. To identify and assess contamination sources, a systematic water quality monitoring program will be conducted along the river. This helps in preparing the mitigation measures for the revival of the river. Water samples will be collected



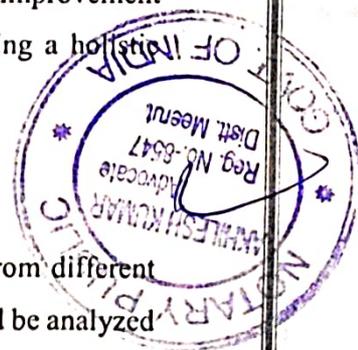
from several strategic locations, including upstream reference points, tributary confluences, urban discharge points, etc. The parameters for estimating the physical, chemical and bacteriological status includes pH, temperature, turbidity, total dissolved solids (TDS), electrical conductivity (EC), dissolved oxygen (DO), biochemical oxygen demand (BOD), chemical oxygen demand (COD), major ions, trace metals, and coliforms (EC and TC). The samples will be preserved at the site and will be brought to NIH, Roorkee Laboratory. The samples will be analyzed as per Standard Methods for the Examination of Water and Wastewater (APHA, 2019).

4.4 Preparation of land and water management plan for water restoration

The restoration planning phase will begin by integrating findings from previous studies, and results of the present study. The flood plain zoning results, paleochannel mapping data, hydrogeological analysis and other data would help in identifying the critical intervention zones and restoration opportunities. Various land and water management interventions which may decrease the portion of rainfall going as runoff and increase the ground water recharge. This augmentation of ground water will supplement the flow in Buddhi Ganga river as base flow in the post monsoon period of the catchment. Land and water management interventions are predominantly applied for improving the groundwater recharge through reducing the velocities of runoff water and thus providing more time for rainfall to infiltrate into the soil. Land and water management interventions such as Vegetative measures (plantation of trees, grass barriers and bushes etc. across the slopes); Semi-structural measures (contour bunds, terracing, trenching, gully plugging, gabion structure, etc.); Groundwater recharge structures (ponds, pits, percolation tanks, bunds, etc.); Engineering/structural measures (masonry check dams / stop dams, in-stream storages structures etc.) for water retention and ground water recharge may be recommended for suitable sites in the catchment. Water quality improvement measures will also be integrated throughout the restoration framework, ensuring a holistic approach to river health.

5. Time Schedule

The NIH shall collect all data required for the water availability study from different agencies. For, the water quality, samples will be collected by NIH team and would be analyzed at our Laboratory. The river cross-sectional survey and other data should be provided by the sponsoring agencies. **The NIH shall complete the study in 18 months from the date of**



signing the agreement. After submission of draft report by NIH, the comments from the sponsoring agencies should be provided within 2 weeks. The final report shall be submitted within 2 weeks of receipt of comments followed by the complete payment by sponsoring agencies.

6. Deliverables

A comprehensive report containing preparation of river restoration plan on River Budhi Ganga, NIH will submit report (5 hard copies)

7. Cost

The estimated cost of the consultancy work is Rs. 75.00 lakh + GST as applicable (Rs. Seventy-five Lakh only + GST) which include charges for manpower services, Field instrumentation and investigations, travel and accommodation, procurement of data and analytical charges, consumables, contingencies, overhead and preparation and submission of reports etc.

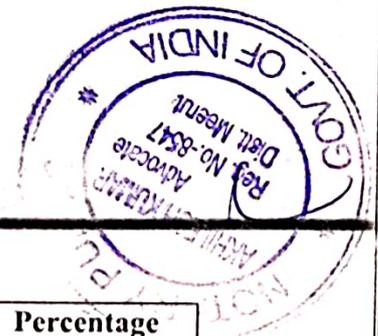
For online transfer, the bank account details are as below:

Account name : NIH Consultancy Project
 A/C No. : 31125916862
 Bank name : State Bank of India
 Branch : IIT Roorkee Branch
 IFSC Code : SBIN0001069
 MICR Code : 247002094
 GST No. : 05AAATN1385M1ZD

8. Payment Schedule

The payment schedule will be as follows:

S. No.	Schedule	Percentage
1	First installment at the time of signing agreement	50%
2	Within one week on submission of Inception report	30%
3	Within one week after submission of final report	20%



8. Executing Organization

Surface Water Hydrology Division
National Institute of Hydrology, Jal Vigyan Bhawan, Roorkee – 247 667 (Uttarakhand)

Contact Person

Dr. P.C. Nayak,
Scientist 'F'
Surface Water Hydrology Division
National Institute of Hydrology (NIH)
Jal Vigyan Bhawan, Roorkee-247667 (Uttarakhand)
Phone: 01332 – 249 208
Mobile: +91-7989907737
Email: nayakpc@gmail.com; nayak.nihr@gov.in



Urgent Request for Intervention Regarding Inaction by the Irrigation Department on Budhi Ganga Rejuvenation (Hon'ble NGT, Principle Bench, New Delhi OA-511/2023)

1 message

Priyank Bharati <naturalsciencetrustmrt@gmail.com>
To: Pramod Kumar <eedrainagemeerut@gmail.com>, dmmee@nic.in

Fri, Feb 28, 2025 at 4:39 PM

To
The District Magistrate,
Meerut

Subject: Urgent Request for Intervention Regarding Inaction by the Irrigation Department on Budhi Ganga Rejuvenation (Hon'ble NGT, Principle Bench, New Delhi OA-511/2023)

Respected Sir,

I, Priyank Bharati, write to bring to your attention the continued inaction regarding the rejuvenation of Budhi Ganga in Meerut, Uttar Pradesh.

On **November 7, 2024**, the District Magistrate of Meerut designated the Irrigation Department as the nodal agency to address issues concerning Budhi Ganga (Letter No. 4402/OSD-Camp/2024, dated 07/11/2024). Following this directive, the National Institute of Hydrology (NIH), Roorkee, submitted a comprehensive proposal entitled "**Hydrological Investigation, Revival, and Restoration Plan for Budhi Ganga River**" on 10/01/2025 via email to both the **District Magistrate and the Irrigation Department, with a copy provided to me for reference.**

Despite these clear directives and the submission of a well-researched proposal, **the Irrigation Department has failed to take meaningful action.** This negligence not only contravenes the mandates of the River Ganga Authority Order, 2016, but also accelerates the environmental degradation of Budhi Ganga, severely impacting the local ecosystem and the communities dependent on it.

I urge your immediate intervention to ensure the implementation of the NIH Roorkee proposal and to uphold the commitments outlined in the River Ganga Authority Order, 2016. Prompt action is crucial to restoring and protecting this vital water body.

Sincerely,

Priyank Bharati,
148/4 Jagriti Vihar, Meerut

Enclosures:

1. Copy of the NIH Roorkee proposal

Copy to :

1. EE, Drainage, Irrigation Department, Meerut



📎 Budhi Ganga river resotationStudy-NIH Roorkee (1).pdf
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