

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 680 OF 2025

IN THE MATTER OF:

PRAHLAD GOENKA & ORS.

...APPLICANTS

VERSUS

UNION OF INDIA & ORS.

...RESPONDENTS

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Respondent No. 8
(State of Bihar through its Water Resource Department)

Through its Counsel



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Date: 07.07.2026

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
ORIGINAL APPLICATION NO. 680 OF 2025**

IN THE MATTER OF:

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**REPLY ON BEHALF OF RESPONDENT NO. 8, STATE OF
BIHAR**

MOST RESPECTFULLY SHOWETH:

1. The instant Reply is being filed on behalf of Respondent No. 8, i.e., State of Bihar, through its Deputy Director, Water Resource Department, Bihar (“**answering Respondent**”) in compliance of Order dated 10.03.2026 passed by this Hon’ble Tribunal in the subject OA.
2. Notably, the subject OA has been preferred by the Applicant, *inter alia*, raising the issue of alleged rampant, unregulated and illegal construction activities in the river floodplains mainly concerning 13 rivers, of which, only one river flows through the State of Bihar i.e., Ganga.

Preliminary Submission/Objection

3. It is pertinent to note that the exact issue of illegal encroachment on the flood plains of the river Ganga is presently *sub judice* before the Hon'ble Supreme Court in Civil Appeal No. 3367 of 2020 titled "***Ashok Kumar Sinha vs. Union of India & Ors.***" ("**Appeal**") with respect to all the States through which the river Ganga passes. It is notable that this Civil Appeal was originally filed against an Order of this Hon'ble Tribunal in a petition pertaining to illegal construction and encroachment of the floodplains of the river Ganga passing through the city of Patna, Bihar. During the course of the hearing of this Civil Appeal, the Hon'ble Apex Court has enlarged the scope of the issue involved, has impleaded all other States through which the river Ganga / its tributaries pass and has sought a report regarding the issue of encroachments on the floodplains from the Union of India.
4. The aforesaid position is made abundantly crystal on perusal of Orders dated 02.04.2025 and 12.03.2026 passed in the *sub judice* Appeal. The Order dated 12.03.2026 reads thus:

*"12. However, we are **concerned as on date with the issue of large scale illegal encroachments over the banks of river Ganga.***

...

18. Out of 213 encroachments, 58 have been demolished so far whereas the State authorities have not been able to remove the balance 145 encroachments, as according to the learned counsel appearing for the State, there are some interim orders passed by the High Court and various other Courts of the district judiciary. The second stretch which the learned counsel talks about is from Nauzar Ghat to Nurpur Ghat. According to the learned counsel, there are hundreds of encroachments insofar as the stretch from Nauzar Ghat to Nurpur Ghat is concerned.

19. Our attention was also drawn to the affidavit filed on behalf of the National Mission for Clean Ganga Authority duly affirmed by Shri Binod Kumar, Director, National Mission for Clean Ganga Authority (NMCG), Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti New Delhi. The affidavit highlights the status insofar as the State of Uttar Pradesh, State of Uttarakhand, State of West Bengal, State of Bihar, Government of National Capital Territory of Delhi, State of Haryana, State of Jharkhand, State of Rajasthan and State of Chhattisgarh respectively are concerned.

24. The report should also indicate the status of the flood plain demarcation in each of the States referred to above.

25. *The State of Bihar is very much before us. However, let notice be issued to all other States, referred to above.*”

(Emphasis Supplied)

True web copies of the Orders dated 02.04.2025 and 12.03.2026 passed by the Hon’ble Supreme Court in Civil Appeal No. 3367 of 2020 are annexed herewith and marked as **Annexure R-8/1** and **Annexure R-8/2**, respectively.

5. It is most respectfully reiterated that prior to the passing of the Order dated 12.03.2026, the *sub judice* civil appeal was only being heard by the Hon’ble Supreme Court with respect to alleged encroachments and illegal construction on the banks and floodplains of the river Ganga, restricted to District Patna in Bihar (on the basis of the prayer sought in the civil appeal). However, noting the nature of issue involved, the Hon’ble Supreme Court *vide* its Order dated 12.03.2026 expanded the scope of the *sub judice* civil appeal to deal with all the States from which River Ganga passes, however, limited to the issue of encroachments on the river bank, floodplains as also the issue of flood plain demarcation.
6. Notably, since the issue of floodplain demarcation is intrinsically linked with the issue of illegal encroachment and

illegal construction, in the *sub judice* civil appeal, the issue of floodplain demarcation is also being taken up by the Hon'ble Supreme Court, and the same finds mention in paragraph No. 24 of the Order dated 12.03.2026.

7. Notably, the Union of India is also very much represented in the said civil appeal in the following manner:
 - i. Union of India through Ministry of Jal Shakti (Respondent No. 1 therein),
 - ii. National Mission for Clean Ganga (“NMCG”) (Respondent No. 2 therein),
 - iii. Central Water Commission (Respondent No. 3 therein),
 - iv. Ministry of Environment, Forests and Climate Change (Respondent No. 4 therein).
8. Vide its Order dated 12.03.2026 in the said civil appeal, the Hon'ble Supreme Court has called for an updated Report to be filed by the NMCG covering the following points:
 - i. What is the current status insofar as encroachments are concerned in all the States, referred to above, from where River Ganga is flowing or passing through?
 - ii. What steps have been taken so far for the meaningful implementation and execution of all the clauses of the Notification dtd. 7th October 2016 referred to above?

- iii. What are the impediments or hurdles coming in the way of the Authority in giving effect to the better and effective implementation of the Notification, referred to above?
 - iv. What steps the Authority intends to take to protect the river Ganga passing through all the States, referred to above, and ensure that the river plains and banks are free of all encroachments?
 - v. And in the last, we would also like to know from Ms Bhati what type of directions the Authority would like to seek from this Court to give meaningful effect to the Notification, referred to above, more particularly, to give effect to the very mission which the Government of India has undertaken to make the river plains and the banks of river Ganga absolutely free of all encroachments?
 - vi. The report should also indicate the status of the flood plain demarcation in each of the States referred to in the Order.
9. Additionally, vide the last Order dated 23.04.2026 passed in the said *sub judice* civil appeal, the Union of India sought further time to place its Comprehensive Report on record. Accordingly, the matter has been posted to be listed on 21.07.2026 as a part-heard matter. A true web copy of the

Order dated 23.04.2026 passed by the Hon'ble Supreme Court in Civil Appeal No. 3367 of 2020 is annexed herewith and marked as **Annexure R-8/3**.

10. It is therefore most respectfully submitted that the Hon'ble Supreme Court is presently seized of the issue of illegal encroachment pertaining to River Ganga (with respect to all States from which it passes), as also the issue of flood plain demarcation of River Ganga (with respect to all States from which it passes). As such, it would be prudent that the issue raised in the present original application, in so far as it pertains to the river Ganga is excluded from the purview of consideration and adjudication by this Hon'ble Tribunal.
11. In view of the aforesaid, Prayer Nos. 1, and 4 to 6 in the subject OA, may have to exclude the river Ganga from its scope. In such a case, the answering Respondent may also be deleted from the array of parties since only the river Ganga and its tributaries flow within the State of Bihar.

Status of Floodplain Zoning in Bihar

12. Without prejudice to the above, it is submitted that the answering Respondent has substantially progressed the process of Flood Plain Zoning (FPZ) through departmental

policies, scientific studies, institutional arrangements, technical collaborations and district-level monitoring mechanisms. It is therefore submitted, without prejudice, that the issues raised in the subject OA are already under active consideration and implementation by the answering Respondent. The Government of Bihar recognizes Flood Plain Zoning as an important non-structural flood management measure for reduction of flood losses, protection of human life and property, environmental conservation and sustainable land use planning.

13. It is submitted that the answering Respondent through its Flood Management Information System Cell (“**FMISC**”) has already undertaken scientific studies relating to flood inundation analysis, floodplain mapping and flood-risk assessment for various return periods.
14. It may be noted that vide letter dated 27.01.2023 issued by the Engineer in Chief (HQ), Water Resources Dept., Govt. of Bihar, the Joint Director, FMISC was directed to arrange the required relevant records related to Flood Plain Zoning and to remain continuously updated on the latest status of Departmental views on Flood Plain Zoning for the maintenance of records related to Flood Plain Zoning. Vide

this communication, it was also recorded that scientific study reports and flood inundation analyses for various periods had already been completed through FMISC and submitted to the competent authorities. This letter further recorded that the NMCG, with the assistance of the Survey of India, was undertaking the preparation of High resolution Digital Elevation Models (“DEM”), Orthophotos and Flood Plain / riverbed datasets for scientific floodplain management and zoning. It was also recorded therein that after the receipt of said data, further action/study was expected to be carried out at the Departmental level after reviewing the data, the results of which had to be informed to the Joint Committee formed by this Hon’ble Tribunal. A true copy of the Letter dated 27.01.2023 issued by the answering Respondent to the FMISC along with its true translated and typed copy is annexed herewith and marked as **Annexure R-8/4**.

15. It is submitted that the State of Bihar has consistently approached the issue of Flood Plain Zoning as a scientific and evidence-based exercise requiring hydrological, hydraulic and geomorphological assessment rather than basing the same on arbitrary demarcation.

16. Additionally, the Water Resources Department, Govt. of Bihar, issued departmental letter dated 06.03.2025 introducing and operationalizing Flood Plain Zoning measures for identified rivers in Bihar and prescribing institutional mechanisms for implementation, monitoring and regulation of activities within floodplain areas. The said framework provides for monitoring and regulation of activities within floodplain areas through District Administrations and other competent authorities. A copy of the letter dated 06.03.2025 along with its true translated copy is annexed herewith and marked as **Annexure R-8/5**.
17. Further, *vide* letter dated 12.06.2026, the Engineer-in-Chief (HQ) of the answering Respondent communicated to the Joint Director, FMISC, that the Department had already directed the District Administration for required action against persons who have encroached the area of floodplains. A true copy of Letter dated 12.06.2026 issued by the Engineer-in-Chief of the answering Respondent to the Joint Director, FMISC along with its true translated copy is annexed herewith and marked as **Annexure R-8/6**.
18. It is also pertinent to note that the FMISC is studying the area from Chausa to Manihari on the Ganga riverbank related to

Flood Plain Zoning through the National Institute of Hydrology (NIH), Roorkee. In order to ensure scientific delineation of floodplain boundaries, the Government of Bihar has approved engagement of the National Institute of Hydrology (NIH), Roorkee for undertaking Flood Plain Zone Delineation Study of River Ganga from the stretch of Chausa to Manihari. The said study is being undertaken on the basis of:

- i. 1 in 5 years return flood period,
- ii. 1 in 25 years return flood period, and
- iii. 1 in 100 years return flood period.

19. In this regard, the answering Respondent has executed a Memorandum of Understanding dated 03.10.2025 with the NIH, Roorkee and has designated FMISC as the nodal agency for coordination and implementation of the study. It may be noted that the main purpose of the MOU is to conduct a study for Flood Plain Zone delineation of the Ganga River in the State of Bihar in the stretch of Chausa to Manihari Ghat. The specific scope of work has also been defined in the said MOU. A true copy of the MOU dated 03.10.2025 executed between the answering Respondent and the National Institute of Hydrology (NIH), Roorkee is annexed herewith and marked as **Annexure R-8/7**.

20. The Flood Plain Delineation Study comprises of:
 - i. Collection and validation of hydrological and hydraulic datasets;
 - ii. Preparation of Digital Elevation Models (DEM);
 - iii. Flood modelling and inundation simulation;
 - iv. Preparation of flood hazard maps;
 - v. Delineation of floodplain boundaries under different return period floods; and
 - vi. Formulation of floodplain management recommendations.
21. It may also be noted that the State Government is providing all required hydrological, hydraulic, topographical, satellite-based and river morphology data to the NIH, Roorkee and is extending all institutional support necessary for completion of the study. Further, the FMISC is also continuously coordinating with NIH, Roorkee for supply of river cross-sections, embankment details, hydrological records, satellite imagery and other technical inputs required for completion of the study.
22. It is submitted that once the study is completed, the recommendations of NIH and the maps prepared by it shall

be examined by the State Government and appropriate administrative, regulatory and developmental measures shall be implemented in accordance with the Flood Plain Zoning framework. It is envisaged that after finalization of floodplain maps, the State Government shall integrate floodplain zones with district planning, disaster management plans, land-use regulation mechanisms and flood-risk mitigation measures through coordinated action of the answering Respondent, the Revenue and Land Reforms Department, the Urban Development and Housing Department, the Rural Development Department and the District Administration.

23. It is most respectfully submitted that the State Government shall continue to identify, monitor and regulate encroachments, unauthorized constructions and activities adversely affecting floodplain areas through District Magistrates and other competent authorities.
24. The above-quoted information has been provided by the answering Respondent *bonafide*.

25. Without prejudice to the aforesaid, the answering Respondent most humbly reserves its right to file an additional reply/affidavit/Report, as and when directed by this Hon'ble Tribunal.

G. Singh
(INDRAJEET SINGH)
Respondent No. 8

(State of Bihar through its Water Resources Department)

Through its Counsel

Azmat H. Amanullah

(Azmat H. Amanullah)

Additional Standing Counsel for the State of Bihar
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Email: azmat.amanullah@gmail.com

Place: New Delhi

Date: 07.07.2026

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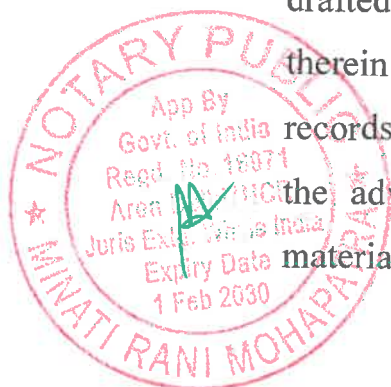
UNION OF INDIA & ORS.

...RESPONDENTS

AFFIDAVIT

I, Indrajeet Singh, aged about 43 years, working as Deputy Director with Respondent No. 8- Water Resource Department, Government of Bihar, having its office at Sinchai Bhawan, Patna, Bihar, presently at New Delhi, do hereby solemnly affirm and declare as under:

1. That I am the Officer-in-Charge for the above noted matter and have been duly authorized by Respondent No. 8 in this regard. I am well conversant with the facts of the case on the basis of official records, and, hence, competent to affirm this affidavit.
2. That the contents of the accompanying Reply have been drafted by our counsel under our instructions. Facts stated therein are true to my knowledge on the basis of official records and the legal submissions made therein are based on the advice received and believed to be correct. Nothing material has been concealed therefrom.



3. The documents accompanying the Reply, if any, are true copies/true translated copies, true typed copies of their respective originals.

J. Singh
(INDRAJEET SINGH)
DEPONENT

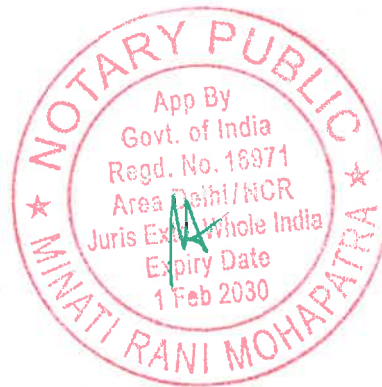
VERIFICATION:

I, the abovenamed deponent, do hereby verify that the contents of the above affidavit are true and correct to my knowledge and belief as per the official records available. I say that no part of it is false and nothing material has been concealed therefrom.

06 JUL 2026

Verified at New Delhi on this 6th day of July, 2026.

Rebecca
D/11356/2023
IDENTIFIED



J. Singh
(INDRAJEET SINGH)
DEPONENT

MINATI RANI MOHAPATRA
ADVOCATE (NOTARY)
Mob. No.: 8130128457

ATTESTED

MINATI RANI MOHAPATRA
NOTARY DELHI-R-16971
GOVERNMENT OF INDIA
SUPREME COURT OF INDIA
COMPOUND NEW DELHI
REGISTER Pg./Sl. No.

06 JUL 2026

ITEM NO.6**COURT NO.13****SECTION XVII****S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS****Civil Appeal No.3367/2020****ASHOK KUMAR SINHA****Appellant(s)****VERSUS****UNION OF INDIA & ORS.****Respondent(s)**

IA No. 54518/2024 - CLARIFICATION/DIRECTION, IA No. 247125/2023 - EXEMPTION FROM FILING O.T., IA No. 184904/2023 - EXEMPTION FROM FILING O.T., IA No. 73609/2023 - EXEMPTION FROM FILING O.T., IA No. 28766/2024 - EXEMPTION FROM FILING O.T., IA No. 100859/2020 - STAY APPLICATION

Date : 02-04-2025 This matter was called on for hearing today.

CORAM :

**HON'BLE MR. JUSTICE J.B. PARDIWALA
HON'BLE MR. JUSTICE K.V. VISWANATHAN**

**For Appellant(s) : Mr. Neeraj Kumar Sharma, AOR
Mr. Akash Vashishitha, Adv.
Ms. Nidhi Agarwal, Adv.**

**For Respondent(s) : Mrs. Aishwarya Bhati, A.S.G.(NP)
Ms. Manisha Chava
Swarupama Chaturvedi, Adv.
Ruchi Kohli, Adv.
Navanjay Mahapatra, Adv.
Santosh Kumar, Adv.
Annirudh Sharma-(ii), Adv.
Dr. N. Visakamurthy, AOR**

**Ms. Aishwarya Bhati, A.S.G.
Mr. Gurmeet Singh Makker, AOR
Ms. Swarupama Chaturvedi, Adv.
Ms. Ruchi Kohli, Adv.
Mr. Navanjay Mahapatra, Adv.
Mr. Santosh Kumar, Adv.**

Mr. Annirudh Sharma-ii, Adv.

Mr. Azmat Hayat Amanullah, AOR
Ms. Rebecca Mishra, Adv.
Mr. Sagar Chauhan, Adv.

Mr. Manish Kumar, AOR
Mr. Suyash Vyas, Adv.

Mr. Chandrika Prasad Mishra, AOR

UPON hearing the counsel the Court made the following
O R D E R

1. We heard Mr. Akash Vashishitha, the learned counsel appearing for the appellant, Mr. Azmat Hayat Amanullah, the learned counsel appearing for the State of Bihar and Ms. Manisha Chava, the learned counsel appearing for the Union of India.

2. We take notice of the order passed by a Coordinate Bench of this Court on 16.12.2022, the same reads thus:-

"Ms. Aishwarya Bhati, learned Additional Solicitor General apprises this Court that steps have been taken by the concerned Ministry for identifying unauthorised constructions, if any, on the flood of the river plain Ganga in and around the location over which complaints have been made by the appellant by using Geo Mapping technology and it will take sometime to complete this process. List the matter after six weeks alongwith the report from the concerned Ministry."

3. We also take notice of the order dated 17th February, 2023, the same reads thus:-

"Ms. Aishwarya Bhati, learned additional solicitor general appearing for the Union of India, Ministry of Jal Shakti, submits that a survey map has already been made available to the State of Bihar.

Let an assessment on the survey map giving the ground level situation as regards particulars of existing constructions on the floodplains of the river Ganga in Patna. A report shall be filed disclosing therein how the floodplains have been described in the revenue records and if there is any construction within the zone of floodplains of the Ganga. List after four weeks."

4. In pursuance of the two orders passed by this Court, referred to above, an affidavit has been filed on behalf of respondent no.4 duly affirmed by one Sh. Ved Prakash Mishra, Joint Secretary in the Ministry of Environment, Forest and Climate Change (MoEF&CC), New Delhi.

5. We have looked into the affidavit, referred to above, the same appears to be one relating to dumping of plastic.

6. The affidavit reads thus:-

"ADDITIONAL AFFIDAVIT ON BEHALF OF THE MINISTRY OF
ENVIRONMENT, FOREST AND CLIMATE CHANGE, RESPONDENT NO. 4.

I, Ved Prakash Mishra, S/o Shri Ram Sidh Mishra, aged about 50 years currently working as Joint Secretary in the Ministry of Environment, Forest and Climate Change (MoEF&CC) having office at Aliganj, Jor Bagh, New Delhi-110003, do hereby solemnly affirm and state as under:

1. That I, in the capacity of Joint Secretary at Ministry of Environment, Forest and Climate Change, am fully conversant with the facts of the case and competent to swear this affidavit on behalf of Respondent No 4.

2. That the contents of the petition under reply, unless

specifically admitted, are denied to the extent that they are inconsistent with the submissions made hereinafter. The annexure accompanying this affidavit is true copy of its original.

3. That, without prejudice to the above and as an alternative submission, the deponent craves liberty to raise further required contentions during the course of the proceedings.

4. That vide order dated 02.08.2024, Hon'ble Court directed Respondent no. 4 -MoEF&CC file an affidavit with respect to the para 8: In course of deliberation in this matter, it came to light that there is wide spread use of plastic in the areas which are to be kept free from such pollution potential products. The dumping of plastic is causing serious environment degradation and also impacting aquatic life in the river banks and the water bodies in the country. Unless concerted effort is made by the responsible authorities with people's cooperation, irrespective of the efforts to target illegal/unauthorized constructions, the desired improvement of the quality of the water in river Ganga/all other rivers and water bodies in the country will remain illusory. A copy order dated 02.08.2024 is marked and annexed as Annexure- I.

5. The Ministry vide G.S.R. 320 (E) dated 18th March 2016 had notified the Plastic Waste Management (PWM) Rules, 2016 that provides satisfactory framework for management of plastic waste in the country. A copy of the Plastic Waste Management Rules, 2016 is marked and annexed as Annexure-II.

6. The Ministry had notified the Plastic Waste Management (Amendment) Rules, 2021 vide G.S.R. 571 (E) dated 12th August, 2021 thereby prohibiting the manufacture, import, stocking, distribution and sale and use of identified single use plastic items, which have low utility and high littering potential, with effect from 1st July, 2022, in order to reduce pollution of environment caused by littered single use plastic items leading to protecting and improving the quality of the environment. A copy of the Plastic Waste Management (Amendment) Rules, 2021 is marked and annexed as Annexure-III.

7. That considering the unmanaged and littered plastic waste has adverse impacts on terrestrial and aquatic ecosystems, inter alia the following identified single use plastic items, which have low utility and high littering potential, have already been prohibited, with effect from 1st July, 2022,

(i) ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration;

(ii) plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation, cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.

8. That Ministry of Environment, Forest and Climate Change has also notified the Guidelines on Extended Producer Responsibility (EPR) for plastic packaging vide Plastic Waste Management (Amendment) Rules, 2022, on 16th February 2022. The guidelines mandate targets for recycling of plastic packaging waste, reuse of rigid plastic packaging and use of recycled plastic content. The ban on identified single use plastic items, which have littering potential and low utility, coupled with implementation of extended producer responsibility on plastic packaging is expected to reduce pollution caused by littered and unmanaged plastic waste. A copy of Guidelines on Extended Producer Responsibility is marked and annexed as Annexure- IV.

9. That Guidelines for Extended Producer Responsibility (EPR) on plastic packaging notified in February 2022, has provided clear framework for market based EPR mechanism made operational through a centralized online portal. As on date, under this framework for EPR implementation on plastic packaging, around 41446 PIBOs are registered on the online EPR portal as opposed to 300 in 2021. The EPR liability of PIBOs for 2022-23 is around 3 million tonnes, which is significant proportion of plastic waste generated in the country. Around 2503 plastic waste processors have also registered on the centralized online portal.

10. It is submitted that as on date, EPR certificates of around 75 lakh tonnes equivalent of plastic waste processed have been generated by registered plastic waste processors, of which, around 57 lakh tonnes EPR certificates have been procured by producers, importers and brand owners to fulfil their EPR obligations. The progress achieved can be seen on the Dashboard of the EPR portal.

11. Further, a National Task Force has been constituted which reviews measures on implementation of ban on identified single use plastic items and effective plastic waste management in the country. All States and UTs have constituted a Special Task Force under Chief Secretary inter alia for effective plastic waste management. The States/UTs have been asked to take measures for stopping of ingress of plastic waste into water bodies including rivers.

12. That in view of the aforementioned facts and circumstances, it is most respectfully prayed that this Hon'ble Court may graciously be pleased to pass such other order and further order(s) as this Hon'ble Court may deem fit and necessary in the interest of justice.

13. That no new facts and no documents have been taken in the Counter Affidavit, which was not, parts of the Court below."

7. However, we are concerned as on date with the issue of encroachment over the banks of river Ganga.

8. The learned counsel appearing for the appellant(s) submitted that there are large scale encroachments all over the banks which requires immediate attention. He pointed out that some parts of this river banks are very rich in fresh water Dolphins.

9. As pointed out by the learned counsel appearing for the State

of Bihar we looked into the second supplementary counter affidavit filed on behalf of the State duly affirmed by one Shri Pramod Kumar Rajak in his capacity as Project Officer cum Deputy Director, Urban Development & Housing Department, Government of Bihar.

10. The affidavit reads thus:-

"2nd SUPPLEMENTARY COUNTER AFFIDAVIT ON BEHALF OF THE RESPONDENT NOS. 5 TO 9.

I, Pramod Kumar Rajak, aged about 30 years, son of Shri Bhim Rajak, resident of Vill. + P.O. Belawon, Police Station Kaler, District Arwal, Bihar do hereby solemnly affirm and state as follows:-

1. I am presently posted as the Project Officer cum Deputy Director, Urban Development and Housing Department, Government of Bihar. I have been authorized to file the present 2nd supplementary counter affidavit on behalf of the State of Bihar (Respondent No. 5) as well as Respondent Nos. 6 to 9. I am aware of the facts of the present case on the basis of official records maintained by the State of Bihar that I believe to be true. As such, I am competent to depose the present counter affidavit.

2. The present civil appeal has been preferred by the Appellant assailing the impugned Order dated 30.06.2020 passed by a Bench of the National Green Tribunal (NGT) in OA No. 42/2020/EZ vide which the Appellant's original application before the Ld. NGT was summarily dismissed for being 'bereft of particulars of the violations and of the violators'. It is pertinent to note that the Appellant's application before the Ld. NGT (and the present civil appeal) pertain to the alleged encroachments on the floodplains of the Ganga River in Patna.

3. The present 2nd supplementary counter affidavit is being filed on behalf of the Respondent Nos. 5 to 9 in terms of the directions contained in Order dated 17.02.2023 passed by this Hon'ble Court to prepare and file a report regarding encroachments on the floodplains of the river Ganga in Patna. It may be noted that the answering Respondents had earlier filed a brief counter affidavit in response to the subject civil appeal and, thereafter, a supplementary counter

affidavit was also filed by the answering Respondents. The contents of the same may kindly be read in conjunction with the present 2nd supplementary counter affidavit.

4. As mentioned in the supplementary counter affidavit already filed, in terms of the mandate of this Hon'ble Court vide Order dated 17.02.2023, the Urban Development and Housing Department, Government of Bihar vide departmental letters bearing letter no. 1996 dated 04.05.2023, letter no. 2118 dated 16.05.2023, letter no. 2572 dated 15.06.2023, letter no. 3598 dated 01.08.2023 requested the District Magistrate, Patna to make available a detailed report on the encroachments made on the floodplains of the river Ganga in Patna after proper verification on the ground and on the basis of revenue records.

5. Thereafter, the District Magistrate, Patna vide letter no. 5609 dated 25.08.2023 made available a detailed survey report that was prepared and submitted by a measurement team constituted by the District Magistrate, Patna for carrying out a survey and measurement, on the ground level, from Digha Ghat to Nauzar Ghat situated on the banks of river Ganga in Patna.

6. It is notable that till that time (25.08.2023), survey had been completed along the banks of the Ganga river from Digha Ghat to Mahatma Gandhi Setu that is approximately an 8 km stretch that is divided into Survey Map (1908-1909), Khas Mahal Digha-Diara map and Municipal Survey Map (1932-1933).

7. It may be of note, for context, that in each survey map, private or raiyati land is marked by plots or *khesra* numbers and the areas along the banks of river Ganga were left unsurveyed, presumably because they were subject to seasonal floods. Any private construction on these parts which is unauthorized has been identified as an encroachment.

8. In pursuance of the directions of the District Magistrate, the measurement team conducted measurement work on the basis of Survey Map (1908-1909), Khas Mahal Digha-Diara map and Municipal Survey Map (1932-1933) and the said measurement team submitted a detailed 1st survey report (from Digha Ghat to Mahatma Gandhi Setu) to the Circle Officer, Patna Sadar enclosing therewith (i) report, (ii) visual map, (iii) joint map of Siwan Patna District, and (iv) list of

encroachers that were forwarded vide letter no. 7558 dated 24.08.2023 to the District Magistrate, Patna.

9. As per the measurement report qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu, the status of illegal constructions/encroachments, Mauza/village-wise was as follows:

- (i) Mauza Digha Diara Khas Mahal ½: Total number of illegal constructions, permanent/temporary encroachments are 35.
- (ii) Mauza-Digha Diara, Thana no. 141:- Total number of illegal constructions, permanent/temporary encroachments are 21.
- (iii) Mauza-Mainpura, Thana No. 140: Total number of illegal constructions, permanent/temporary encroachments are 06.
- (iv) Mauza-Mainpura Diara, Thana No. 140: Total number of displaced families that were rehabilitated to these areas, decades ago by the Government in Bindī Toli are 205.
- (v) Mauza-Dujra Diara, Thana No. 13: Total number of displaced families that were rehabilitated to these areas, decades ago by the Government are 08.

10. As per the report (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu), at present the river Ganga is flowing only through certain parts of Diara area that is marked in the map and there is no specific map of the river Ganga in the survey maps. Temporary farming is done by local villagers due to increase and decrease in the water level during the rainy season. A true translated and typed copy of the report of the measurement team has already been placed on record by the answering Respondents with their supplementary counter affidavit where the same is marked as Annexure R-5/10.

11. This report of the measurement team (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu) was shared by the Circle Officer, Patna City with the Office of the District Magistrate, Patna vide letter dated

24.08.2023 that clarified, inter alia, that in order to vacate the permanent/temporary encroachments that had been identified, and in terms of the Bihar Public Land Encroachment Act, 1956, action has duly been initiated vide Encroachment Case No. 14/2023-24, Encroachment Case No. 15/2023 and Encroachment Case No. 16/2023-24. A true translated and typed copy of letter dated 24.08.2023 has already been placed on record along with the supplementary counter affidavit filed by the answering Respondents where it has been marked as Annexure R-5/11.

12. The 1st supplementary counter affidavit filed by the answering Respondents also specified that as regards the Displaced Persons in these un-surveyed areas, a scheme for rehabilitation would need to be prepared in case a decision was taken to relocate these persons.

13. This 1st report (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu) also clarified that the process for measurement and identification of the encroachers was still underway for the remaining area i.e., from Mahatma Gandhi Setu to Nauzer Ghat.

14. It is notable that this balance survey exercise has also now been concluded and vide letter dated 27.09.2023, the Measurement Survey Report for the remaining area (hereinafter referred to as "the balance Measurement Survey Report") was supplied by the District Magistrate, Patna to the Department enclosing therewith a copy of the report, list of encroachers and other documents. A true translated and typed copy of the letter dated 27.09.2023 is enclosed herewith and is marked as Annexure R-5/13.

15. As was the case in the earlier part of this exercise, in each survey map, private or raiyati land is marked by plots or *khesra* numbers and the areas along the banks of river Ganga were left un-surveyed, presumably because they were subject to seasonal floods. Any private construction on these parts which is unauthorized has been identified as an encroachment.

16. The salient observations of this the balance Measurement Survey Report is as follows:

i. The measurement work and identification of encroached

areas was done by the team (constituted under the orders of the District Magistrate) based on a comparative examination of the Survey Map (1908-09) and the Municipal Survey Map (1932-33).

- ii. A total number of 151 illegal constructions comprising of temporary and permanent structures were identified and listed for the balance from between Mahatma Gandhi Setu to Nauzer Ghat, comprising of un-surveyed areas of Sambalpur Diara, Police Station Nos. 169 and 170.
- iii. In order to vacate the permanent/temporary encroachments that have been identified, and in terms of the Bihar Public Land Encroachment Act, 1956, action has duly been initiated vide Encroachment Case Nos. 24/2023-24, 25/2023-24, 26/2023-24, 27/2023-24, 28/2023-24, 29/2023-24, 30/2023-24, 31/2023-24, 32/2023-24, 33/2023-24, 34/2023-24, 35/2023-24, 36/2023-24, 37/2023-24, and 38/2023-24.
- iv. Apart from the list of encroachments/illegal construction appended with the report, the report also specified that there is a concrete road from Mahavir Ghat to Nauzer Ghat which is presently being used for general traffic and is also functioning as an embankment.
- v. The balance Measurement Survey Report also reiterated that at present the river Ganga is flowing only through certain parts of Diara. Temporary farming is done by local villagers due to increase and decrease in the water level during the rainy season.

A true translated and typed copy of the Measurement Survey Report for the remaining area dated 18.09.2023 along with the list of encroachments enclosed therewith is enclosed herewith and is marked as Annexure R-5/14.

17. The facts stated in the present affidavit are true to my knowledge as derived from the official records. No part of the same is false and nothing material has been concealed therefrom. The annexures filed with the present affidavit are true translated copies of their respective originals."

11. We would like to have more than a fair idea as regards the current status of the matter.

12. We would like to know what steps have been taken by the authorities to remove all such encroachments over the banks of river Ganga.

13. We would also like to know how many such encroachments are still there as on date on the banks of the river and in what manner authorities propose to remove all such encroachments & within what period of time.

14. Before we proceed to issue final directions in this matter, we would like to have a report in this regard by the next date of hearing.

15. We direct both the State of Bihar as well as the Union of India to file an appropriate report so that we can proceed further in the matter.

16. It shall be open for the appellant also to furnish us with the necessary information as regard the position as on date.

17. Post it after four weeks.

(CHANDRESH)
ASTT. REGISTRAR-cum-PS

(POOJA SHARMA)
COURT MASTER (NSH)

ITEM NO.45

COURT NO.7

SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGSCivil Appeal No.3367/2020

ASHOK KUMAR SINHA

Appellant(s)

VERSUS

UNION OF INDIA & ORS.

Respondent(s)

[TO BE TAKEN UP AT THE TOP OF THE BOARD]

(IA No. 54518/2024 - CLARIFICATION/DIRECTION, IA No. 28766/2024 - EXEMPTION FROM FILING O.T., IA No. 247125/2023 - EXEMPTION FROM FILING O.T., IA No. 184904/2023 - EXEMPTION FROM FILING O.T., IA No. 73609/2023 - EXEMPTION FROM FILING O.T. AND IA No. 100859/2020 - STAY APPLICATION

Date : 12-03-2026 This matter was called on for hearing today.

CORAM :

HON'BLE MR. JUSTICE J.B. PARDIWALA
HON'BLE MR. JUSTICE K.V. VISWANATHAN

For Appellant(s) :

Mr. Akash Vashishtha, Adv.
Ms. Nidhi Agarwal, Adv.
Mr. Neeraj Kumar Sharma, AOR

For Respondent(s) :

Mrs. Aishwarya Bhati, A.S.G.
Ms. Ruchi Kohli, Adv..
Mr. Navanjay Mahapatra, Adv.
Mr. Santosh Kumar, Adv.
Mr. Annirudh Sharma-(II), Adv.
Dr. N. Visakamurthy, AOR

Ms. Aishwarya Bhati, A.S.G.
Mr. Gurmeet Singh Makker, AOR
Ms. Ruchi Kohli, Adv.
Mr. Navanjay Mahapatra, Adv.
Mr. B K Satija, Adv.
Mr. Raman Yadav, Adv.
Mr. Rohan Gupta, Adv.

Mr. Azmat Hayat Amanullah, AOR
Ms. Rebecca Mishra, Adv.
Ms. Ekta Kundu, Adv.

Mr. Manish Kumar, AOR
Mr. Divyansh Mishra, Adv.

Mr. Kumar Saurav, Adv.

Mr. Chandrika Prasad Mishra, AOR

UPON hearing the counsel the Court made the following
O R D E R

1. This petition arises from the order dated 30th June, 2020 passed by the National Green Tribunal, Principal Bench, New Delhi in Original Application No. 42/2020/EZ by which the original application preferred by the petitioner before us stood dismissed.

2. The impugned order passed by the NGT, referred to above, reads thus:

"1. Case taken up by video conference on Vidyo App.

2. This case has been filed pursuant to order dated 21.01.2020 in O.A. No. 78/2019/EZ, whereby leave had been granted to the Applicant to withdraw the O.A. with liberty to file afresh.

3. Earlier vide order dated 11.12.2019 direction had been issued upon the Applicants to furnish particulars application of the alleged violators in the application.

4. We do not find the position having altered in any manner as the pleadings are still bereft of particulars of the violations and the violators. In view of this, the O.A. stands dismissed."

3. It appears on plain reading of the impugned order that earlier OA number 78 of 2019 was permitted to be withdrawn with liberty to file afresh with necessary and material particulars as regards encroachments over the periphery of the banks of River Ganga etc. Since the fresh OA was also bereft of material particulars, the NGT thought fit to dismiss the same.

4. We should first take notice of the order passed by this court dated 2nd August, 2024.

5. The Order reads thus:-

IA No. 54518/2024:-

Heard Mr. Azmat Hayat Amanullah, learned counsel appearing for the State of Bihar. Ms. Aishwarya Bhati, learned Additional Solicitor General appears for the Union of India and National Mission for Clean Ganga (NMCG). Mr. Akash Vashishtha, learned counsel appears for the appellant.

2. This court's attention is drawn to the order passed by this Court on 01.12.2023. The order reads as under:-

"When the matter is called on for hearing, learned counsel for the State of Bihar submits that the State has identified unauthorized constructions adjacent to the river Ganga in and around Patna and steps have been taken to remove these encroachments/constructions. List on 05.02.2024.

On that date the State shall report to this Court the progress in getting these unauthorized structures removed by filing an affidavit. Such affidavit shall be filed by the Chief Secretary of the State of Bihar. The State shall also ensure no further construction takes place adjacent to the river Ganga particularly in and around the city of Patna"

3. It is submitted by the applicant(s) that the last sentence in the said order is capable of being misconstrued and therefore the Court should clarify that the order has reference to only illegal construction and unauthorized encroachment in and around the areas adjacent to the river Ganga in Patna City.

4. On reading of the order and the nature of the appeal that is under consideration, it is quite apparent that appellant is concerned about the illegal construction and unauthorized encroachment on the bank of river Ganga.

5. This is also the submission of the counsel for the State of Bihar and also the learned ASG, appearing for the Union of India.

6. Considering the above, we deem it appropriate to clarify that the last sentence in this Court's order dated 01.12.2023 in the Civil Appeal No.3367/2020 should be read as "the State shall also ensure no further illegal construction or unauthorized encroachment takes place adjacent to the river Ganga particularly in and around the City of Patna."

7. The IA is ordered accordingly.

8. In course of deliberation in this matter, it came to light that there is wide spread use of plastic in the areas which are to be kept free from such pollution potential products. The dumping of plastic is causing serious environment degradation and also impacting aquatic life in the river banks and the water bodies in the country. Unless concerted effort is made by the responsible authorities with people's cooperation, irrespective of the efforts to target illegal/unauthorized constructions, the desired improvement of the quality of the water in river Ganga/all other rivers and water bodies in the country will remain illusory.

9. In the above circumstances, while permitting the learned ASG to file an affidavit in four weeks on the issues raised in the appeal, the response should also take into account the environment concerns raised in the present order. Affidavit in response be also filed by the State of Bihar within the same time line."

6. We must also take notice of the order passed by this court dated 2-4-2025.

7. The same reads thus.

1. We heard Mr. Akash Vashishitha, the learned counsel appearing for the appellant, Mr. Azmat Hayat Amanullah, the learned counsel appearing for the State of Bihar and Ms. Manisha Chava, the learned counsel appearing for the Union of India.

2. We take notice of the order passed by a Coordinate Bench of this Court on 16.12.2022, the same reads thus:-

"Ms. Aishwarya Bhati, learned Additional Solicitor General apprises this Court that steps have been taken by the concerned Ministry for identifying unauthorised constructions, if any, on the flood of the river plain Ganga in and around the location over which complaints have been made by the appellant by using Geo Mapping technology and it will take sometime to complete this process.

List the matter after six weeks alongwith the report from the concerned Ministry."

8. We also take notice of the order dated 17th February, 2023, the same reads thus:-

"Ms. Aishwarya Bhati, learned additional solicitor general appearing for the Union of India, Ministry of Jal Shakti, submits that a survey map has already been made available to the State of Bihar.

Let an assessment on the survey map giving the ground level situation as regards particulars of existing constructions on the floodplains of the river Ganga in Patna. A report shall be filed disclosing therein how the floodplains have been described in the revenue records and if there is any construction within the zone of floodplains of the Ganga. List after four weeks."

9. In pursuance of the two orders passed by this Court, referred to above, an affidavit has been filed on behalf of respondent no.4 duly affirmed by one Sh. Ved Prakash Mishra, Joint Secretary in the Ministry of Environment, Forest and Climate Change (MoEF&CC), New Delhi.

10. We have looked into the affidavit, referred to above, the same appears to be one relating to dumping of plastic.

11. The affidavit reads thus:-

"ADDITIONAL AFFIDAVIT ON BEHALF OF THE MINISTRY OF ENVIRONMENT,
FOREST AND CLIMATE CHANGE, RESPONDENT NO. 4.

I, Ved Prakash Mishra, S/o Shri Ram Sidh Mishra, aged about 50 years currently working as Joint Secretary in the Ministry of Environment, Forest and Climate Change (MoEF&CC) having office at Aliganj, Jor Bagh, New Delhi-110003, do hereby solemnly affirm and state as under:

1. That I, in the capacity of Joint Secretary at Ministry of Environment, Forest and Climate Change, am fully conversant with the facts of the case and competent to swear this affidavit on behalf of Respondent No 4.

2. That the contents of the petition under reply, unless specifically admitted, are denied to the extent that they are inconsistent with the submissions made hereinafter. The annexure accompanying this affidavit is true copy of its original.

3. That, without prejudice to the above and as an alternative submission, the deponent craves liberty to raise further required contentions during the course of the proceedings.

4. That vide order dated 02.08.2024, Hon'ble Court directed Respondent no. 4 -MoEF&CC file an affidavit with respect to the para 8: In course of deliberation in this matter, it came to light that there is wide spread use of plastic in the areas which are to be kept free from such pollution potential products. The dumping of plastic is causing serious environment degradation and also impacting aquatic life in the river banks and the water bodies in the country. Unless concerted effort is made by the responsible authorities with people's cooperation, irrespective of the efforts to target illegal/unauthorized constructions, the desired improvement of the quality of the water in river Ganga/all other rivers and water bodies in the country will remain illusory. A copy order dated 02.08.2024 is marked and annexed as Annexure- I.

5. The Ministry vide G.S.R. 320 (E) dated 18th March 2016 had notified the Plastic Waste Management (PWM) Rules, 2016 that provides satisfactory framework for management of plastic waste in the country. A copy of the Plastic Waste Management Rules, 2016 is marked and annexed as Annexure-II.

6. The Ministry had notified the Plastic Waste Management (Amendment) Rules, 2021 vide G.S.R. 571 (E) dated 12th August, 2021 thereby prohibiting the manufacture, import, stocking, distribution and sale and use of identified single use plastic items, which have low utility and high littering potential, with effect from 1st July, 2022, in

order to reduce pollution of environment caused by littered single use plastic items leading to protecting and improving the quality of the environment. A copy of the Plastic Waste Management (Amendment) Rules, 2021 is marked and annexed as Annexure-III.

7. That considering the unmanaged and littered plastic waste has adverse impacts on terrestrial and aquatic ecosystems, inter alia the following identified single use plastic items, which have low utility and high littering potential, have already been prohibited, with effect from 1st July, 2022,

(i) ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration;

(ii) plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation, cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers.

8. That Ministry of Environment, Forest and Climate Change has also notified the Guidelines on Extended Producer Responsibility (EPR) for plastic packaging vide Plastic Waste Management (Amendment) Rules, 2022, on 16th February 2022. The guidelines mandate targets for recycling of plastic packaging waste, reuse of rigid plastic packaging and use of recycled plastic content. The ban on identified single use plastic items, which have littering potential and low utility, coupled with implementation of extended producer responsibility on plastic packaging is expected to reduce pollution caused by littered and unmanaged plastic waste. A copy of Guidelines on Extended Producer Responsibility is marked and annexed as Annexure- IV.

9. That Guidelines for Extended Producer Responsibility (EPR) on plastic packaging notified in February 2022, has provided clear framework for market based EPR mechanism made operational through a centralized online portal. As on date, under this framework for EPR implementation on plastic packaging, around 41446 PIBOs are registered on the online EPR portal as opposed to 300 in 2021. The EPR liability of PIBOs for 2022-23 is around 3 million tonnes, which is significant proportion of plastic waste generated in the country. Around 2503 plastic waste processors have also registered on the centralized online portal.

10. It is submitted that as on date, EPR certificates of around 75 lakh tonnes equivalent of plastic waste processed have been generated by registered plastic waste processors, of which, around 57 lakh tonnes EPR certificates have been procured by producers, importers and brand owners to fulfil their EPR obligations. The progress achieved can be seen on the Dashboard of the EPR portal.

11. Further, a National Task Force has been constituted which reviews measures on implementation of ban on identified single use plastic items and effective plastic waste management in the country. All States and UTs have constituted a Special Task Force under Chief Secretary inter alia for effective plastic waste management. The States/UTs have been asked to take measures for stopping of ingress of plastic waste into water bodies including rivers.

12. That in view of the aforementioned facts and circumstances, it is most respectfully prayed that this Hon'ble Court may graciously be pleased to pass such other order and further order(s) as this Hon'ble Court may deem fit and necessary in the interest of justice.

13. That no new facts and no documents have been taken in the Counter Affidavit, which was not, parts of the Court below."

12. However, we are concerned as on date with the issue of large scale illegal encroachments over the banks of river Ganga.

13. The learned counsel appearing for the appellant(s) submitted that there are large scale encroachments all over the banks which require immediate attention. He pointed out that some parts of these riverbanks are very rich in fresh water Dolphins.

14. As pointed out by the learned counsel appearing for the State of Bihar we looked into the second supplementary counter affidavit filed on behalf of the State duly affirmed by one Shri Pramod Kumar Rajak in his capacity as the Project Officer cum Deputy Director, Urban Development & Housing Department, Government of Bihar.

15. The affidavit reads thus:-

"2nd SUPPLEMENTARY COUNTER AFFIDAVIT ON BEHALF OF THE RESPONDENT NOS. 5 TO 9.

I, Pramod Kumar Rajak, aged about 30 years, son of Shri Bhim Rajak, resident of Vill. + P.O. Belawon, Police Station Kaler, District Arwal, Bihar do hereby solemnly affirm and state as follows:-

1. I am presently posted as the Project Officer cum Deputy Director, Urban Development and Housing Department, Government of Bihar. I have been authorized to file the present 2nd supplementary counter affidavit on behalf of the State of Bihar (Respondent No. 5) as well as Respondent Nos. 6 to 9. I am aware of the facts of the present case on the basis of official records maintained by the State of Bihar that I believe to be true. As such, I am competent to depose the present counter affidavit.

2. The present civil appeal has been preferred by the Appellant assailing the impugned Order dated 30.06.2020 passed by a Bench of the National Green Tribunal (NGT) in OA No. 42/2020/EZ vide which the Appellant's original application before the Ld. NGT was summarily dismissed for being 'bereft of particulars of the violations and of the violators'. It is pertinent to note that the Appellant's application before the Ld. NGT (and the present civil appeal) pertain to the alleged encroachments on the floodplains of the Ganga River in Patna.

3. The present 2nd supplementary counter affidavit is being filed on behalf of the Respondent Nos. 5 to 9 in terms of the directions contained in Order dated 17.02.2023 passed by this Hon'ble Court to prepare and file a report regarding encroachments on the floodplains of the river Ganga in Patna. It may be noted that the answering Respondents had earlier filed a brief counter affidavit in response to the subject civil appeal and, thereafter, a supplementary counter affidavit was also filed by the answering Respondents. The contents of the same may kindly be read in conjunction with the present 2nd supplementary counter affidavit.

4. As mentioned in the supplementary counter affidavit already filed, in terms of the mandate of this Hon'ble Court vide Order dated 17.02.2023, the Urban Development and Housing Department, Government of Bihar vide departmental letters bearing letter no. 1996 dated 04.05.2023, letter no. 2118 dated 16.05.2023, letter no. 2572 dated 15.06.2023, letter no. 3598 dated 01.08.2023 requested the District Magistrate, Patna to make available a detailed report on the encroachments made on the floodplains of the river Ganga in Patna after proper verification on the ground and on the basis of revenue records.

5. Thereafter, the District Magistrate, Patna vide letter no. 5609 dated 25.08.2023 made available a detailed survey report that was prepared and submitted by a measurement team constituted by the District Magistrate, Patna for carrying out a survey and measurement, on the ground level, from Digha Ghat to Nauzar Ghat situated on the banks of river Ganga in Patna.

6. It is notable that till that time (25.08.2023), survey had been completed along the banks of the Ganga river from Digha Ghat to Mahatma Gandhi Setu that is approximately an 8 km stretch that is divided into Survey Map (1908-1909), Khas Mahal Digha-Diara map and Municipal Survey Map (1932-1933).

7. It may be of note, for context, that in each survey map, private or raiyati land is marked by plots or khesra numbers and the areas along the banks of river Ganga were left un-surveyed, presumably because they were subject to seasonal floods. Any private construction on these parts which is unauthorized has been identified as an encroachment.

8. In pursuance of the directions of the District Magistrate, the measurement team conducted measurement work on the basis of Survey Map (1908-1909), Khas Mahal Digha-Diara map and Municipal Survey Map (1932-1933) and the said measurement team submitted a detailed 1st survey report (from Digha Ghat to Mahatma Gandhi Setu) to the Circle Officer, Patna Sadar enclosing therewith (i) report, (ii) visual

map, (iii) joint map of Siwan Patna District, and (iv) list of encroachers that were forwarded vide letter no. 7558 dated 24.08.2023 to the District Magistrate, Patna.

9. As per the measurement report qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu, the status of illegal constructions/encroachments, Mauza/village-wise was as follows:

- (i) Mauza Digha Diara Khas Mahal ½: Total number of illegal constructions, permanent/temporary encroachments are 35.
- (ii) Mauza-Digha Diara, Thana no. 141:- Total number of illegal constructions, permanent/temporary encroachments are 21.
- (iii) Mauza-Mainpura, Thana No. 140: Total number of illegal constructions, permanent/temporary encroachments are 06.
- (iv) Mauza-Mainpura Diara, Thana No. 140: Total number of displaced families that were rehabilitated to these areas, decades ago by the Government in Bindi Toli are 205.
- (v) Mauza-Dujra Diara, Thana No. 13: Total number of displaced families that were rehabilitated to these areas, decades ago by the Government are 08.

10. As per the report (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu), at present the river Ganga is flowing only through certain parts of Diara area that is marked in the map and there is no specific map of the river Ganga in the survey maps. Temporary farming is done by local villagers due to increase and decrease in the water level during the rainy season. A true translated and typed copy of the report of the measurement team has already been placed on record by the answering Respondents with their supplementary counter affidavit where the same is marked as Annexure R-5/10.

11. This report of the measurement team (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu) was shared by the Circle Officer, Patna City with the Office of the District Magistrate, Patna vide letter dated 24.08.2023 that clarified, inter alia, that in order to vacate the permanent/temporary encroachments that had been identified, and in terms of the Bihar Public Land Encroachment Act, 1956, action has duly been initiated vide Encroachment Case No. 14/2023-24, Encroachment Case No. 15/2023 and Encroachment Case No. 16/2023-24. A true translated and typed copy of letter dated 24.08.2023 has already been placed on record along with the supplementary counter affidavit filed by the answering Respondents where it has been marked as Annexure R-5/11.

12. The 1st supplementary counter affidavit filed by the answering Respondents also specified that as regards the Displaced Persons in these un-surveyed areas, a scheme for rehabilitation would need to be prepared in case a decision was taken to relocate these persons.

13. This 1st report (qua the survey completed till August 2023 from Digha Ghat to Mahatma Gandhi Setu) also clarified that the process for measurement and identification of the encroachers was still underway for the remaining area i.e., from Mahatma Gandhi Setu to Nauzer Ghat.

14. It is notable that this balance survey exercise has also now been concluded and vide letter dated 27.09.2023, the Measurement Survey Report for the remaining area (hereinafter referred to as "the balance Measurement Survey Report") was supplied by the District Magistrate, Patna to the Department enclosing therewith a copy of the report, list of encroachers and other documents. A true translated and typed copy of the letter dated 27.09.2023 is enclosed herewith and is marked as Annexure R-5/13.

15. As was the case in the earlier part of this exercise, in each survey map, private or raiyati land is marked by plots or khesra numbers and the areas along the banks of river Ganga were left un-surveyed, presumably because they were subject to seasonal floods. Any private construction on these parts which is unauthorized has been identified as an encroachment.

16. The salient observations of this the balance Measurement Survey Report are as follows:

- i. The measurement work and identification of encroached areas was done by the team (constituted under the orders of the District Magistrate) based on a comparative examination of the Survey Map (1908-09) and the Municipal Survey Map (1932-33).
- ii. A total number of 151 illegal constructions comprising of temporary and permanent structures were identified and listed for the balance from between Mahatma Gandhi Setu to Nauzer Ghat, comprising of un-surveyed areas of Sambalpur Diara, Police Station Nos. 169 and 170.
- iii. In order to vacate the permanent/temporary encroachments that have been identified, and in terms of the Bihar Public Land Encroachment Act, 1956, action has duly been initiated vide Encroachment Case Nos. 24/2023-24, 25/2023-24, 26/2023-24, 27/2023-24, 28/2023-24, 29/2023-24, 30/2023-24, 31/2023-24, 32/2023-24, 33/2023-24, 34/2023-24, 35/2023-24, 36/2023-24, 37/2023-24, and 38/2023-24.
- iv. Apart from the list of encroachments/illegal construction appended with the report, the report also specified that there is a concrete road from Mahavir Ghat to Nauzer Ghat which is presently being used for general traffic and is also functioning as an embankment.
- v. The balance Measurement Survey Report also reiterated that at present the river Ganga is flowing only through certain parts of Diara. Temporary farming is done by local villagers due to increase and decrease in the water level during the rainy season.

A true translated and typed copy of the Measurement Survey Report for the remaining area dated 18.09.2023 along with the list of encroachments enclosed therewith is enclosed herewith and is marked as Annexure R-5/14.

17. The facts stated in the present affidavit are true to my knowledge as derived from the official records. No part of the same is false and nothing material has been concealed therefrom. The annexures filed with the present affidavit are true translated copies of their respective originals."

18. We would like to have more than a fair idea as regards the current status of the matter.

19. We would like to know what steps have been taken by the authorities to remove all such encroachments over the banks of river Ganga.

20. We would also like to know how many such encroachments are still there as on date on the banks of the river and in what manner authorities propose to remove all such encroachments & within what period of time.

21. Before we proceed to issue final directions in this matter, we would like to have a report in this regard by the next date of hearing.

22. We direct both the State of Bihar as well as the Union of India to file an appropriate report so that we can proceed further in the matter.

23. It shall be open for the appellant also to furnish us with the necessary information as regard the position as on date.

24. Post it after four weeks."

16. In the course of today's hearing, we heard the learned counsel appearing for the petitioner, Ms. Aishwarya Bhati, the learned ASG appearing for the Respondent Nos.1 & 2 (Union of India and National Mission for Ganga Authority) respectively, Mr. Azmat Hayat Amanullah, the learned counsel appearing for the Respondent No.5 - State of Bihar and also the other Respondent Nos.6 to 9 respectively

17. In today's hearing, the learned counsel appearing for the petitioner mainly flagged the issue with regard to removal of encroachments on two particular stretches insofar as the State of Bihar is concerned. He highlighted that in 2023, 213 encroachments were identified on the stretch between Digha Ghat and Nauzar Ghat.

18. Out of 213 encroachments, 58 have been demolished so far whereas the State authorities have not been able to remove the balance 145 encroachments, as according to the learned counsel appearing for the State, there are some interim orders passed by the High Court and various other Courts of the district judiciary. The second stretch which the learned counsel talks about is from Nauzar Ghat to Nurpur Ghat. According to the learned counsel, there are hundreds of encroachments insofar as the stretch from Nauzar Ghat to Nurpur Ghat is concerned.

19. Our attention was also drawn to the affidavit filed on behalf of the National Mission for Clean Ganga Authority duly affirmed by Shri Binod Kumar, Director, National Mission for Clean Ganga Authority (NMCG), Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti New Delhi. The affidavit highlights the status insofar as the State of Uttar Pradesh, State of Uttarakhand, State of West Bengal, State of Bihar, Government of National Capital Territory of Delhi, State of Haryana, State of Jharkhand, State of Rajasthan and State of Chhattisgarh respectively are concerned.

20. In all the States, referred to above, the Authority has highlighted encroachments all over the banks and periphery of River Ganga.

21. Our attention was also drawn to the Notification dated 7th October 2016 issued by the Ministry of Water Resources, River Development and Ganga Rejuvenation, in exercise of the powers conferred by sub-Section 1 read with other relevant provisions of the Environment (Protection) Act, 1986.

22. Insofar as the Notification, referred to above, is concerned, Ms. Bhati highlighted clause 4 of the Notification which talks about the principles to be followed for rejuvenation, protection and management of River Ganga. Thereafter, our attention was drawn to clause 5 of the notification which talks about ecological flow of water in River Ganga to be maintained. Clause 6 of the Notification talks about prevention, control and abatement of environmental pollution in River Ganga and its tributaries.

23. The affidavit filed by the Authority is of the year 2024. Almost 2 years have elapsed. We do not have the current status report. The first thing that we would like to impress upon Ms. Bhati, the learned ASG is to take appropriate instructions and place before us a comprehensive detailed report highlighting the following:-

1. What is the current status insofar as encroachments are concerned in all the States, referred to above, from where River Ganga is flowing or passing through?
2. What steps have been taken so far for the meaningful implementation and execution of all the clauses of the Notification dtd. 7th October 2016 referred to above?
3. What are the impediments or hurdles coming in the way of the Authority in giving effect to the better and effective implementation of the Notification, referred to above?
4. What steps the Authority intends to take to protect the river Ganga passing through all the States, referred to above, and ensure that the river plains and banks are free of all encroachments?
5. And in the last, we would also like to know from Ms Bhati what type of directions the Authority would like to seek from this Court to give meaningful effect to the Notification, referred to above, more particularly, to give effect to the very mission which the Government of India has undertaken to make the river plains and the banks of river Ganga absolutely free of all encroachments?.

24. The report should also indicate the status of the flood plain demarcation in each of the States referred to above.

25. The State of Bihar is very much before us. However, let notice be issued to all other States, referred to above.

26. We grant liberty to the petitioner to serve one set of his entire paper book to all the learned Standing counsel appearing for the respective States.

27. Post this matter for further hearing on 23-4-2026.
28. This matter shall be treated as part heard.
29. Ms. Bhati shall see to it that one copy of the entire report is furnished to the learned counsel appearing for the petitioner, who in turn, may study and file his response to the same.

(VISHAL ANAND)
ASTT. REGISTRAR-cum-PS

(POOJA SHARMA)
COURT MASTER (NSH)

ITEM NO.301

COURT NO.7

SECTION XVII

S U P R E M E C O U R T O F I N D I A
RECORD OF PROCEEDINGS

Civil Appeal No(s).3367/2020

ASHOK KUMAR SINHA

Appellant(s)

VERSUS

UNION OF INDIA & ORS.

Respondent(s)

[PART HEARD BY: HON'BLE MR. JUSTICE J.B. PARDIWALA AND HON'BLE MR. JUSTICE K.V. VISWANATHAN]

IA No. 54518/2024 - CLARIFICATION/DIRECTION

IA No. 184904/2023 - EXEMPTION FROM FILING O.T.

IA No. 73609/2023 - EXEMPTION FROM FILING O.T.

IA No. 28766/2024 - EXEMPTION FROM FILING O.T.

IA No. 247125/2023 - EXEMPTION FROM FILING O.T.

IA No. 100859/2020 - STAY APPLICATION

Date : 23-04-2026 This matter was called on for hearing today.

CORAM :

HON'BLE MR. JUSTICE J.B. PARDIWALA

HON'BLE MR. JUSTICE K.V. VISWANATHAN

For Appellant(s) :

Mr. Akash Vashishtha, Adv.

Ms. Nidhi Agarwal, Adv.

Mr. Harsh Rana, Adv.

Mr. Raja Kumar, Adv.

Mr. Neeraj Kumar Sharma, AOR

For Respondent(s) :

Mrs. Aishwarya Bhati, A.S.G.

Ruchi Kohli, Adv.

Navanjay Mahapatra, Adv.

Santosh Kumar, Adv.

Annirudh Sharma-(ii), Adv.

Dr. N. Visakamurthy, AOR

Ms. Aishwarya Bhati, A.S.G.

Mr. Gurmeet Singh Makker, AOR

Ms. Ruchi Kohli, Adv.

Mr. Navanjay Mahapatra, Adv.

Mr. B K Satija, Adv.

Mr. Raman Yadav, Adv.

Mr. Rohan Gupta, Adv.

Mr. Azmat Hayat Amanullah, AOR
Ms. Rebecca Mishra, Adv.
Ms. Vanshita Gupta, Adv.
Mr. Sagar Chauhan, Adv.

Mr. Manish Kumar, AOR
Mr. Divyansh Mishra, Adv.
Mr. Kumar Saurav, Adv.

Mr. Chandrika Prasad Mishra, AOR

Ms. Swati Ghildiyal, AOR
Ms. Neha Singh, Adv.

Mr. Shubham Upadhyay, AOR
Ms. Anukriti Bajpai, Adv.

Mr. Ruchira Gupta, Adv.
Mr. Shantanu Sagar, AOR
Mr. Mohtisham Ali, Adv.
Mr. Nitender Yadav, Adv.
Mr. Prakash Kumar Mangalam, Adv.
Mr. Manoneet Dwivedi, Adv.
Mr. Abhishek Kumar Gupta, Adv.
Ms. Anshala Verma, Adv.

Mr. Shekhar Raj Sharma, A.A.G.
Mr. Samar Vijay Singh, AOR
Ms. Nidhi Narwal, Adv.
Ms. Bhavya Singla, Adv.
Mr. Rahul Khurana, AOR
Ms. Srishti Jain, Adv.
Ms. Sabarni Som, Adv.
Mr. Aman Dev Sharma, Adv.
Mr. Sudhanshu Rai, Adv.
Mr. Shubham Malik, Adv.
Mr. Rajat Sinha Roy, Adv.
Mr. Gaj Singh, Adv.

Mr. Prashant Singh, AOR

Ms. Richa Kapoor, AOR
Ms. Udipti Chopra, Adv.

Mr. Abhishek Saket, Adv.
Mr. Sudeep Kumar, AOR
Ms. Manisha, Adv.

Ms. Rupali, Adv.
Ms. Nidhi Singh, Adv.
Ms. Harshita Chawla, Adv.

Mr. Kaushal Gautam, AAG
Ms. Snehpreet Kaur, AOR

Mr. Shiv Mangal Sharma, AAG
Mr. Saurabh Rajpal, AOR
Ms. Arushi Rathore, Adv.

UPON hearing the counsel the Court made the following
O R D E R

1. By our order dated 12.03.2026, we had requested Ms. Aishwarya Bhati, the learned Additional Solicitor General to take appropriate instructions and file a comprehensive detailed report as regards the questions formulated in para 23 of the order referred to above.
2. Ms. Bhati would submit that some more time may be granted to enable her to answer all the five questions formulated by this Court comprehensively with full and correct information.
3. Post this matter on 21.07.2026 as part-heard.

(HARPREET KAUR)
COURT MASTER (SH)

(POOJA SHARMA)
COURT MASTER (NSH)

बिहार सरकार
जल संसाधन विभाग

ईश्वर चन्द्र ठाकुर
अभिषेक प्रमुख, मुख्यालय
जल संसाधन विभाग, पटना।

श्री आर. कृष्ण
सहायक निदेशक
जल संसाधन विभाग, पटना।

ई-मेल - fmiscbihar@gmail.com

पटना, दिनांक 27-01-2023

विषय:- Flood Plain Zoning (FPZ) के संबंध में।

प्रारंभ:- आपके कार्यालय का पत्रांक-74 दिनांक-20.01.2023

संदर्भ:-

उपरोक्त विषयक प्रासंगिक पत्र के संबंध में कहना है कि Flood Plain Zoning पर विभागीय मंजूरी उपलब्ध कराने के क्रम में माननीय NGT द्वारा गठित संयुक्त समिति के अनुरोध के आलोक में Scientific Study Report एवं विभिन्न Return Periods के अनुमानित जल स्तर का आँकड़ा पूर्व में समर्पित किया गया है, जो FMISC के स्तर से तैयार किया गया है।

इस संबंध में NMCG द्वारा भारतीय सर्वेक्षण विभाग के सहयोग से किये जा रहे अध्ययन के पूर्ण होने के पश्चात High resolution DEM, orthophotos तथा Flood Plain -river bed data, गंगा नदी का मानचित्र बिहार राज्य को उपलब्ध कराने हेतु सचिव, जल संसाधन, नदी विकास और गंगा संरक्षण विभाग, जल शक्ति मंत्रालय, भारत सरकार द्वारा दिनांक-19.09.2022 को संपन्न बैठक में निदेशित किया गया है। उक्त आँकड़े विभाग को प्राप्त होने के उपरान्त, आँकड़ों के समीक्षोपरान्त अपेक्षित कार्रवाई/अध्ययन विभागीय स्तर से किया जाना अपेक्षित है जिसके फलाफल से NGT द्वारा गठित समिति को अवगत कराया जाएगा। उक्त के आलोक में भविष्य में भी FMISC के स्तर से Flood Plain Zoning के संबंध में कार्रवाई अपेक्षित हो सकता है।

अतएव, निदेश है कि दिनांक-19.01.2023 के माध्यम से उपलब्ध कराए गए Flood Plain Zoning में संशोधित अभिलेखों को संशोधित करने हेतु Flood Plain Zoning पर विभागीय मंजूरी की अद्यतन स्थिति से सतत अवगत रहा जाए।

सूचना एवं आवश्यक कार्रवाई हेतु प्रेषित।

विराटभाजन

ईश्वर

27-1-23

ईश्वर चन्द्र ठाकुर

अभिषेक प्रमुख, मुख्यालय

BIHAR GOVERNMENT
WATER RESOURCES DEPARTMENT

Ishwar Chandra Thakur
Chief Engineer, Headquarters
Water Resources Department, Patna.

To,
Mr. Anand Kumar
Joint Director,
Flood Management Improvement Support Center,
Water Resources Department, Patna.
E-mail - fmiscbihar@gmail.com

Patna, Date: 27-01-2023

Subject:- Regarding Flood Plain Zoning (FPZ).
Reference:- Your office letter no. - 74 dated - 20.01.2023

Sir,

In connection with the relevant letter on the above subject, it is to be stated that in the process of providing departmental evidence on Flood Plain Zoning, in light of the request of the joint committee constituted by the Hon'ble NGT, the Scientific Study Report and the data of estimated water levels for various Return Periods have been submitted previously, which was prepared at the level of FMISC.

In this regard, it was directed in the meeting held on 19.09.2022 by the Secretary, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India, to provide High resolution DEM, orthophotos and Flood Plain -river bed data, maps of the Ganga River to the state of Bihar after the completion of the study being conducted by NMCG in collaboration with the Survey of India. After the department receives the said data and following a review of the data, further action/study is expected to be conducted at the departmental level, the results of which will be informed to the committee constituted by the NGT. In light of the above, action regarding Flood Plain Zoning may be required from the level of FMISC in the future as well.

Therefore, it is directed that to maintain the records related to Flood Plain Zoning provided through 19.01.2023, one should remain constantly informed about the updated status of Flood Plain Zoning at the departmental level.

Forwarded for information and necessary action.

Yours faithfully,

-Sd.-

27/01/2023

(Ishwar Chandra Thakur)
Chief Engineer, Headquarters

बिहार सरकार
जल संसाधन विभाग

संचिका संख्या- यो०मो०-4 (विविध)07-372/2020 पार्ट-II- 143 /पटना, दिनांक- 06/3/2025

—: आदेश :—

विषय:— बिहार राज्य अंतर्गत तटबंधित नदियों के लिए Flood Plain Zoning लागू किए जाने के संबंध में।

- माननीय राष्ट्रीय हरित अधिकरण (National Green Tribunal), नई दिल्ली में विचाराधीन OA No-200/2014, OA No-673/2018 एवं अन्य मामले में पारित आदेशों के आलोक में नदियों के प्राकृतिक, आर्थिक एवं पर्यावरणीय लाभकारी मूल्यों का संरक्षण, प्रदूषण की रोकथाम तथा नदी पारिस्थितिकी तंत्र (River Ecosystem) का संरक्षण एवं जीर्णोद्धार के उद्देश्य से Flood Plain Zoning राज्यों द्वारा लागू किया जाना है।
- जल शक्ति मंत्रालय, भारत सरकार द्वारा बाढ़ प्रबंधन कार्यक्रम (Flood Management Program) के तहत वित्त पोषण प्राप्त करने हेतु राज्यों को Flood Plain Zoning कानून अथवा किसी उपयुक्त कार्यकारी आदेश के माध्यम से लागू किये जाने की भी पात्रता निर्धारित की गयी है।
- बिहार बाढ़ के दृष्टिकोण से अत्यधिक संवेदनशील राज्य है, जहाँ बाढ़ प्रवण क्षेत्र देश के बाढ़ प्रवण क्षेत्र का लगभग 17.2 प्रतिशत है। राज्य के कुल 94.16 लाख हेक्टेयर भौगोलिक क्षेत्र का 68.80 लाख हेक्टेयर क्षेत्र बाढ़ प्रवण है, जो कुल भौगोलिक क्षेत्र का लगभग 73 प्रतिशत है। बिहार के कुल 68.80 लाख हेक्टेयर बाढ़ प्रवण क्षेत्र में से 50.45 लाख हेक्टेयर बाढ़ प्रवण क्षेत्र उत्तरी बिहार तथा 18.35 लाख हेक्टेयर बाढ़ प्रवण क्षेत्र दक्षिणी बिहार में पड़ता है। यहाँ की भौगोलिक स्थिति तथा गंगा, कोसी, गंडक, बागमती जैसी प्रमुख नदियों के कारण राज्य को बार-बार बाढ़ की विभीषिका का सामना करना पड़ता है। बाढ़ के संरचनात्मक प्रबंधन हेतु जल संसाधन विभाग द्वारा नदियों पर तटबंधों का निर्माण एवं मरम्मत/रखरखाव तथा आवश्यक बाढ़ सुरक्षात्मक कार्य कराया जाता है। बिहार राज्य में विभिन्न नदियों पर लगभग 3800.41 किलोमीटर तटबंध का निर्माण किया जा चुका है, जिसमें 3606.02 किलोमीटर उत्तर बिहार एवं 194.40 किलोमीटर दक्षिण बिहार में तटबंध का निर्माण किया गया है।

डायरी सं०...1256.....

दिनांक...10.03.25.....

मु० अभि० यो० एवं मोनिटरिंग
जल संसाधन विभाग, पटना

बाढ़ प्रबंधन सुधार सहायक केन्द्र

जल संसाधन विभाग, पटना

डायरी सं०...1190...दिनांक...11/3/25

Y

"TRUE COPY"

तटबंधों के निर्माण से कुल 39.96 लाख हेक्टेयर क्षेत्र को बाढ़ से सुरक्षित किया गया है।

5. राज्य अंतर्गत प्रथम चरण में Flood Plain Zoning तटबंधित नदियों के लिए लागू करने का निर्णय लिया गया है। गैर तटबंधित नदियों के लिए Flood Plain Zone के निर्धारण हेतु आवश्यक अध्ययनोपरान्त अग्रेत्तर कार्रवाई की जायेगी।

6. उपर्युक्त वर्णित परिपेक्ष्य के दृष्टिगत राज्याधीन तटबंधित नदियों के लिए Flood Plain Zone का निर्धारण निम्नवत् किया जाता है:—

(क) जिन नदियों के दोनों किनारों पर तटबंध निर्मित है, उन नदियों के लिए दोनों किनारे पर निर्मित तटबंध के मध्य के क्षेत्र को Flood Plain Zone निर्धारित किया जाता है।

(ख) जिन नदियों के एक ही किनारे पर तटबंध निर्मित है, उन नदियों के लिए तटबंध से लेकर नदी की चौड़ाई होते हुए नदी के दूसरे किनारे से 500 मीटर तक की चौड़ाई के क्षेत्र को Flood Plain Zone निर्धारित किया जाता है।

(ग) उपरोक्त कंडिका— क एवं ख में निर्धारित Flood Plain Zone को Prohibited Zone अंतर्गत रखा गया है।

7. (क) Prohibited Zone में निम्नांकित गतिविधियां अनुमान्य होगी :—

- i. पारंपरिक जैविक और प्राकृतिक खेती, जिसमें किसी भी प्रकार के कृषि रसायन या भारी मशीनरी का उपयोग न हो।
- ii. पार्क, खेल के मैदान, बगीचे, मनोरंजक गतिविधियाँ आदि, जिनमें किसी स्थायी संरचना का निर्माण/अधिष्ठापन न हो।
- iii. पारंपरिक मछली पालन, जिसमें रसायनों, विषाक्त पदार्थों, विस्फोटकों या बिजली के कनेक्शन का उपयोग न हो।
- iv. पशुओं को चराने हेतु चारागाह।
- v. घरेलू तथा अन्य गैर-व्यावसायिक उपयोग के लिए हैंडपंपों से भूजल की निकासी।
- vi. संबंधित सक्षम प्राधिकार से अनुमति लेकर डिफेन्स संबंधित अस्थाई/चलंत संरचनाओं का निर्माण।
- vii. बाढ़ सुरक्षा संबंधित संरचनाओं का निर्माण।
- viii. आवश्यक सेवाओं के लिए निर्माण जैसे गैस/पेट्रोलियम पाइपलाइन, बिजली लाइन ट्रांसमिशन टावर, जल आपूर्ति पाइपलाइन, पुल और बैराज।

- ix. प्राकृतिक आपदाओं और आपदा प्रबंधन जैसी विशेष परिस्थितियों के लिए अस्थाई/चलंत संरचनाओं एवं आवासन का निर्माण।
- x. शहरों या कस्बों से घरेलू अपशिष्ट जल का उपचारित होकर निर्धारित मानकों के अनुसार निस्सरण।
- xi. धार्मिक और सामाजिक-सांस्कृतिक गतिविधियाँ (जैसे कुंभ मेला, पूजा अनुष्ठान आदि) और उनसे संबंधित पूर्ण रूप से अस्थाई/चलंत संरचनाएँ, लेकिन केवल गैर-मानसून मौसम में।
- xii. अस्थाई/चलंत घाट एवं रिवरफ्रन्ट के निर्माण।
- xiii. पर्यावरण-अनुकूल पर्यटन गतिविधियाँ, जिनमें स्थायी संरचनाओं का निर्माण न हो और प्रकृति अनुकूल प्रैक्टिस जैसे गैर-डीजल मोटरबोट का उपयोग शामिल हो।
- xiv. पर्याप्त सुरक्षा के साथ रेलवे के आधारभूत निर्माण जैसे नए तटबंध/पुलों का निर्माण।
- xv. स्थानीय वृक्ष/झाड़ का व्यावसायिक उपयोग के लिए वृक्षारोपण।
- xvi. पर्यावरण, वन एवं जलवायु परिवर्तन, भारत सरकार के दिशा-निर्देशों तथा राज्य सरकार के समय समय पर निर्धारित नियमों के अनुसार Regulated Sand/ Stone/ sediment/ river borne material mining की अनुमति।
- xvii. पूर्व से निर्मित भवनों का अतिआवश्यक मरम्मत का कार्य, परंतु इसमें कोई विस्तारीकरण/नवनिर्माण निषिद्ध होगा।
- xviii. STP, Conservation तथा NMCG से संबंधित कार्य।
- xix. नदी के वर्तमान किनारे को दृष्टिगत रखते हुए नदी-तट से 250 मीटर के दूरी को छोड़ कर बाकी चौड़ाई में ऐसे पूर्ण रूप से अस्थाई/चलंत भवन, आवास एवं संरचना का निर्माण जो अनफोल्ड कर अथवा यथास्वरूप स्थानांतरित किया जा सके।

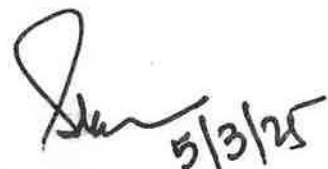
(ख) Prohibited Zone में निम्नांकित गतिविधियाँ प्रतिबंधित होगी:-

- i. सभी प्रकार के स्थायी निर्माण।
- ii. किसी भी प्रकार की किसी भी मौजूदा संरचना के फर्श क्षेत्र या ऊंचाई में कोई वृद्धि।
- iii. ठोस अपशिष्ट का डंपिंग/लैंड फिल का निर्माण।
- iv. अत्यधिक अस्थिर, ज्वलनशील, विस्फोटक, विषाक्त पदार्थों का भंडारण।
- v. बड़े पैमाने पर वाणिज्यिक या औद्योगिक सुविधाओं की स्थापना।
- vi. कंडिका 'क' में उल्लेखित अनुमत गतिविधियों को छोड़कर नदी चैनल के प्राकृतिक मार्ग को बाधित करने वाले निर्माण कार्य।

8. Prohibited Zone में मूलभूत सुविधाएँ यथा स्कूल, अस्पताल, सड़कें तथा आंगनवाड़ी केंद्र इत्यादि को स्थापित करने हेतु अस्थाई/चलंत संरचना, जो

अनफोल्ड/यथास्वरूप स्थानान्तरित किए जा सके को उपयोग में लाया जा सकता है।

9. Flood Plain Zoning के कार्यान्वयन/विनियमन से संबंधित गतिविधियों की निगरानी एवं रागन्वय संबंधित जिला प्रशासन द्वारा किया जायेगा। साथ ही Flood Plain Zoning की स्वीकार्यता के उद्देश्य से ग्रामवासियों को तटबंध से बाहर बसने के लिए जिला प्रशासन द्वारा प्रोत्साहित/प्रशिक्षित किया जायेगा। राज्याधीन सभी संबंधित विभागों के जिला स्तरीय पदाधिकारियों द्वारा जिला प्रशासन को Flood Plain Zoning के कार्यान्वयन/विनियमन हेतु सहयोग किया जायेगा।
10. Flood Plain Zoning के कार्यान्वयन की नियमित समीक्षा की जायेगी तथा बदलते पर्यावरणीय एवं सामाजिक-आर्थिक परिदृश्यों के अनुसार इसे सशक्त बनाने हेतु आवश्यक कार्रवाई की जायेगी।
11. उक्त पर माननीय मंत्री का अनुमोदन प्राप्त है।



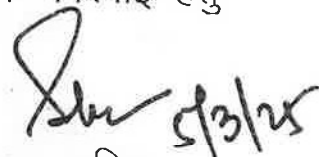
(संतोष कुमार मल्ल)

प्रधान सचिव

जल संसाधन विभाग

ज्ञापांक-यो०मो०-4 (विविध)07-372/2020 पार्ट-II-143 पटना, दिनांक- 06/3/2025

प्रतिलिपि:-सभी जिला पदाधिकारी को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

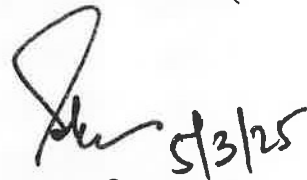


प्रधान सचिव

जल संसाधन विभाग

ज्ञापांक-यो०मो०-4 (विविध)07-372/2020 पार्ट-II-143 पटना, दिनांक- 06/3/2025

प्रतिलिपि:-अभियंता प्रमुख, मुख्यालय/सिंचाई सृजन/बाढ़ नियंत्रण एवं जल निस्सरण, जल संसाधन विभाग, बिहार सरकार को सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।



प्रधान सचिव

जल संसाधन विभाग

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"TRUE COPY"

ज्ञापांक-यो०मो०-4 (विविध)07-372/2020 पार्ट-II-143 पटना, दिनांक- 06/3/2025

प्रतिलिपि:-अपर मुख्य सचिव, राजस्व एवं भूमि सुधार विभाग/पथ निर्माण विभाग/ ग्रामीण कार्य विभाग/ आपदा प्रबंधन विभाग/ सामान्य प्रशासन विभाग/प्रधान सचिव, योजना एवं विकास विभाग/ लोक स्वास्थ्य अभियंत्रण विभाग/ खान एवं भू-तत्व विभाग/सचिव, पंचायती राज विभाग/ नगर विकास एवं आवास विभाग/ ग्रामीण विकास विभाग/ लघु जल संसाधन विभाग/ भवन निर्माण विभाग/ पर्यटन विभाग/ उद्योग विभाग/ पर्यावरण, वन एवं जलवायु परिवर्तन विभाग/ विधि विभाग/अध्यक्ष, बिहार प्रदूषण नियंत्रण पर्वद का सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।


5/3/25
प्रधान सचिव
जल संसाधन विभाग

ज्ञापांक-यो०मो०-4 (विविध)07-372/2020 पार्ट-II-143 पटना, दिनांक- 06/3/2025

प्रतिलिपि:-मुख्य सचिव, बिहार को सूचनार्थ समर्पित।


5/3/25
प्रधान सचिव
जल संसाधन विभाग

Government of Bihar
Water Resources Department

File Number- Pl.Mo.-4 (Misc.)07-372/2020 Part-II- 143 / Patna, Date- 06/3/2023

-: ORDER :-

Subject:- Regarding the implementation of Flood Plain Zoning for embanked rivers within Bihar state.

1. In light of orders passed in OA No-200/2014, OA No-673/2018 and other cases pending in the Honorable National Green Tribunal (National Green Tribunal), New Delhi, Flood Plain Zoning is to be implemented by the states for the purpose of conservation of natural, economic and environmental beneficial values of rivers, prevention of pollution and conservation and restoration of river ecology (River Ecosystem).
2. Eligibility for receiving financing under the Flood Management Program by the Ministry of Jal Shakti, Government of India, has also been determined for the states through the implementation of Flood Plain Zoning law or any suitable executive order.
3. Bihar is a highly sensitive state from the point of view of floods, where the flood-prone area is approximately 17.2 percent of the country's flood-prone area. Out of the state's total 94.16 lakh hectares of geographical area, 68.80 lakh hectares of area is flood-prone, which is approximately 73 percent of the total geographical area. Out of Bihar's total 68.80 lakh hectares of flood-prone area, 50.45 lakh hectares of flood-prone area falls in North Bihar and 18.35 lakh hectares of flood-prone area falls in South Bihar. Due to the geographical situation here and major rivers like Ganga, Kosi, Gandak, Bagmati, the state has to repeatedly face the menace of floods.
4. For structural management of floods, construction and repair/maintenance of embankments on rivers and necessary flood protection works are carried out by the Water Resources Department. Approximately 3800.41 kilometers of embankments have been constructed on various rivers in Bihar state, in which 3606.02 kilometers of embankments in North Bihar and 194.40 kilometers of embankments in South Bihar have been constructed. A total of 39.96 lakh hectares of area has been protected from floods by construction of embankments.
5. In the first phase within the state, it has been decided to implement Flood Plain Zoning for embanked rivers. Further action will be taken after necessary studies for determination of Flood Plain Zone for non-embanked rivers.
6. In view of the above described perspective, the Flood Plain Zone for embanked rivers under the state is determined as follows:—
 - a. For those rivers where embankments are constructed on both sides, the area between the embankments constructed on both sides for those rivers is determined as Flood Plain Zone.
 - b. For those rivers where an embankment is constructed on only one side, for those

rivers, the area from the embankment covering the width of the river up to 500 meters from the other side of the river is determined as Flood Plain Zone.

- c. The Flood Plain Zone determined in the above paragraphs— (a) and (b) has been kept under Prohibited Zone.

7. (a) The following activities will be permissible in the Prohibited Zone :—

- i. Traditional organic and natural farming, in which no type of agro-chemicals or heavy machinery is used.
- ii. Parks, playgrounds, gardens, recreational activities etc., in which no construction/installation of any permanent structure is done.
- iii. Traditional fish farming, in which chemicals, toxic substances, explosives or electricity connections are not used.
- iv. Pasture for grazing animals.
- v. Extraction of groundwater from hand pumps for domestic and other non-commercial use.
- vi. Construction of temporary/mobile structures related to defense after taking permission from the concerned competent authority.
- vii. Construction of flood protection related structures.
- viii. Construction for essential services such as gas/petroleum pipelines, power line transmission towers, water supply pipelines, bridges and barrages.
- ix. Construction of temporary / mobile structures and housing for special circumstances such as natural disasters and disaster management.
- x. Discharge of treated domestic waste water from cities or towns according to prescribed standards.
- xi. Religious and socio-cultural activities (such as Kumbh Mela, prayer rituals etc.) and completely temporary / mobile structures related to them, but only during the non-monsoon season.
- xii. Construction of temporary / mobile Ghats and Riverfronts.
- xiii. Environment-friendly tourism activities, which do not involve the construction of permanent structures and include the use of nature-friendly practices such as non-diesel motorboats.
- xiv. Construction of basic infrastructure of railways such as new embankments / bridges with adequate security.
- xv. Plantation for commercial use of local trees / shrubs.
- xvi. Permission for Regulated Sand/ Stone/ sediment/ river borne material mining as per the guidelines of Ministry of Environment, Forest and Climate Change, Government of India and rules prescribed by the State Government from time to time.
- xvii. Extremely essential repair work of pre-constructed buildings, but any expansion / new construction therein shall be prohibited.
- xviii. Works related to STP, Conservation and NMCG.
- xix. Keeping in view the current banks of the river, construction of such completely temporary / mobile buildings, housing and structures in the remaining width, leaving a distance of 250 meters from the river-bank, which can be unfolded or relocated as such.

(b) The following activities will be prohibited in the Prohibited Zone:-

- i. All types of permanent construction.
- ii. Any increase in the floor area or height of any existing structure of any kind.
- iii. Dumping of solid waste / construction of landfill.
- iv. Storage of highly unstable, flammable, explosive, toxic substances.
- v. Establishment of commercial or industrial facilities on a large scale.
- vi. Construction works obstructing the natural path of the river channel, except for the permitted activities mentioned in clause 'a'.

8. Temporary / mobile structure for establishing basic facilities such as schools, hospitals, roads and Anganwadi centers etc. in the Prohibited Zone, which unfold/can be used such that it can be transferred as is.
9. The monitoring and coordination of activities related to the implementation / regulation of Flood Plain Zoning will be carried out by the concerned district administration. Also, for the purpose of acceptance of Flood Plain Zoning, the villagers will be encouraged / trained by the district administration to settle outside the embankment. Cooperation will be provided to the district administration for the implementation / regulation of Flood Plain Zoning by the district level officers of all concerned departments under the State.
10. Regular review of the implementation of Flood Plain Zoning will be done and necessary action will be taken to strengthen it according to the changing environmental and socio-economic scenarios.
11. Approval of the Honorable Minister has been obtained on the above.

-Sd.-

5/3/25

(Santosh Kumar Mall)

Principal Secretary

Water Resources Department

Memo No.—Plan. Mon.—4 (Misc.) 07—372 / 2020 Part—II—143

Patna, Dated— 06/3/2025

Copy to:—Forwarded to all District Officers for information and necessary action.

-Sd.-

5/3/25

Principal Secretary

Water Resources Department

Memo No.—Plan. Mon.—4 (Misc.) 07—372 / 2020 Part—II—143

Patna, Dated— 06/3/2025

Copy to:—Forwarded to Engineer-in-Chief, Headquarters / Irrigation Creation / Flood Control and Drainage, Water Resources Department, Government of Bihar for information and necessary action.

-Sd.-

5/3/25

Principal Secretary
Water Resources Department

Memo No.- Yo.Mo.-4 (Misc) 07-372 / 2020 Part-II-143

Patna, Date- 06/3/2025

Copy to:- Additional Chief Secretary, Revenue and Land Reforms Department / Road Construction Department / Rural Works Department / Disaster Management Department / General Administration Department / Principal Secretary, Planning and Development Department / Public Health Engineering Department / Mines and Geology Department / Secretary, Panchayati Raj Department / Urban Development and Housing Department / Rural Development Department / Minor Water Resources Department / Building Construction Department / Tourism Department / Industry Department / Environment, Forest and Climate Change Department / Law Department / Chairman, Bihar Pollution Control Board forwarded for information and necessary action.

-Sd.-

5/3/25

Principal Secretary
Water Resources Department

Memo No.- Yo.Mo.-4 (Misc) 07-372 / 2020 Part-II-143

Patna, Date- 06/03/2025

Copy to:- Chief Secretary, Bihar submitted for information.

-Sd.-

5/3/25

Principal Secretary
Water Resources Department

"TRUE TRANSLATED COPY"

पत्रांक-यो०मो०-4 (विविध) 7-523/2026- 387

(678)

बिहार सरकार

जल संसाधन विभाग, पटना

प्रेषक

ब्रजेश मोहन,

अभियंता प्रमुख, मुख्यालय

संबंध में,

संयुक्त निदेशक,

बाढ़ प्रबंधन सुधार सहायक केन्द्र,

अनिसाबाद, पटना।

पटना, दिनांक- 12.6.2026

विषय -

माननीय NGT, नई दिल्ली में दायर याचिका OA No- 680/2025 अंतर्गत IA No.- 164/2026 मामले में पारित आदेश दिनांक-10.03.2026 के संबंध में।

महोदय,

उपर्युक्त विषय के संदर्भ में सूचित करना है कि माननीय राष्ट्रीय हरित अधिकरण (NGT) के समक्ष नई दिल्ली में दायर याचिका OA No- 680/2025 अंतर्गत IA No.-164/2026 मामले में अनेक नदी क्षेत्रों के बाढ़ क्षेत्र (Flood Plains) स्पष्ट रूप से परिभाषित एवं सुरक्षित नहीं होने के कारण बाढ़ क्षेत्र (Flood Plains) एवं नदी तटों पर बड़े पैमाने पर हाई रइ अनियंत्रित, अनियमित एवं अवैध निर्माण गतिविधियों का मुद्दा उठाया है। मामले की अगली सुनवाई दिनांक-09.07.2026 को निर्धारित है। उक्त मामले में गंगा, घाघरा, गंडक, सोन एवं कोसी नदी बिहार से संबंधित हैं।

उक्त मामले में गंगा, घाघरा, गंडक, सोन एवं कोसी नदी के बाढ़ क्षेत्रों (Flood Plains) एवं नदी तटों पर अतिक्रमण तथा अनियंत्रित, अनियमित एवं अवैध निर्माण गतिविधियों पर कार्रवाई करते हुए संबंधित प्रतिवेदन उपलब्ध कराने निमित्त अनुरोध संबंधित जिला पदाधिकारियों से किया गया है। पत्र की छायाप्रति संलग्न है।

उल्लेखनीय है कि विभागीय आदेश दिनांक-06.03.2025 द्वारा बिहार राज्य अन्तर्गत तटबंधित नदियों के लिए Flood Plain Zoning (FPZ) लागू किया गया है। गैर तटबंधित नदियों के संबंध में गंगा नदी के चौसा से मनिहारी तक FPZ निमित्त अध्ययन बाढ़ प्रबंधन सुधार सहायक केन्द्र (FMISC), अनिसाबाद, पटना द्वारा NIH के माध्यम से कराया जा रहा है।

अतएव मामले से संबंधित तथ्य कथन विवरणी एवं माननीय NGT नई दिल्ली के समक्ष शपथ पत्र दायर करने हेतु संबंधित पदाधिकारी के नाम का प्रस्ताव एक सप्ताह के अंदर उपलब्ध कराना चाहेंगे।

अनु०:- यथोक्त।

विराजमान/जन



(ब्रजेश मोहन)

अभियंता प्रमुख, मुख्यालय

पत्रांक- यो०मो०-4 (विविध) 7-523/2026- 387 के-

पटना, दिनांक- 12.6.2026

नियंत्रित, अनियमित एवं अवैध निर्माण गतिविधियों का मुद्दा उठाया है। मामले की अगली सुनवाई दिनांक-09.07.2026 को निर्धारित है। उक्त मामले में गंगा, घाघरा, गंडक, सोन एवं कोसी नदी बिहार से संबंधित हैं।

Letter No - Y.M.-4 (Misc) 7-523 / 2026 - 387
Government of Bihar
Water Resources Department, Patna

From,
Brajesh Mohan,
Engineer-in-Chief, Headquarters

To,
Joint Director,
Flood Management Improvement Support Centre,
Anisabad, Patna.

Patna, Date— 12.6.2026

Subject -- Regarding the order passed on 10.03.2026 in the case of IA No.- 164/2026 under petition OA No- 680/2025 filed in Hon'ble NGT, New Delhi.

Sir,

With reference to the above subject, it is to inform that in the matter of IA No.- 164/2026 under petition OA No.- 680/2025 filed before the Hon'ble National Green Tribunal (NGT) New Delhi, the applicant has raised the issue of large scale unauthorized, unregulated and illegal construction activities on Flood Plains and river banks due to the 13 major river systems of the country not being clearly defined and demarcated. The next hearing of the case is scheduled on 09.07.2026. The Ganga, Ghaghara, Gandak, Sone and Kosi rivers are related to Bihar in the said case.

In the said case, a request has been made to the concerned District Magistrates to provide the related report while taking action on encroachment and uncontrolled, unregulated and illegal construction activities in the flood plains (Flood Plains) and river banks of Ganga, Ghaghara, Gandak, Sone and Kosi rivers. A photocopy of the letter is attached.

It is noteworthy that Flood Plain Zoning (FPZ) has been implemented for embanked rivers under Bihar State by departmental order dated 06.03.2025. In respect of non-embanked rivers, the study for the determination of FPZ from Chausa to Manihari of Ganga river is being conducted through NIH by the Flood Management Improvement Support Centre (FMISC), Anisabad, Patna.

Therefore, you are requested to provide the statement of facts related to the case and the proposal of the name of the concerned officer for filing an affidavit before the Hon'ble NGT New Delhi within one week.

Encl:— As above.

Yours faithfully,

-Sd.-

(Brajesh Mohan)

Engineer-in-Chief, Headquarters

Memo No- Y.M.-4 (Misc) 7-523 / 2026 – 387 Patna, Dated— 12.6.2026

Copy to: Joint Director, Regional [...] for information and necessary action. [...] Flood Management Improvement Support Center [...]

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Memorandum of Understanding (MoU)
Between



National Institute of Hydrology (NIH)
(Roorkee)

And



Water Resources Department
Bihar

October 03, 2025

MoU for Flood Plain Zone (FPZ) between National Institute of Hydrology (NIH), Roorkee and Water Resources Department (WRD), Bihar

1. INTRODUCTION

Flood Plain Zoning is a very comprehensive work uses modern technology like statistical hydrology model, satellite imagery, LIDAR DEM, GIS, high end comping etc. The river reaches of Ganga between Chausa and Manihari (about 575 Km) has a relatively flat flood plain and requires lot of precision and Secondary verification in delineation of Flood Plain Zone (FPZ). The FPZ will be delineated following the Ganga Rejuvenation order 2016.

2. BACKGROUND

The Chief Engineer, Water Resources Department, Govt. of Bihar (Dated 24-12-2024) has approached Director, National Institute of Hydrology Roorkee to carry out the study for "Flood Plain Zone delineation of The Ganga River in the state of Bihar from Chausa to Maniharighat" as per the direction given by Honble NGT. Accordingly, the study proposal is submitted for the Flood Plain Zone delineation and demarcation from Chausa to Maniharighat of River Ganga.

The engineer in chief (Headquarter) Bihar has intimated the acceptance of the study proposal vide letter no. यो०मो०-4(विविध)07-372/2020 पार्त- III-127/dated- 28.02.2025. Further WRD, Bihar instructed FMISC Bihar to prepare MOU for the study. In this background, this MOU is prepared. After discussion and meetings on several occasions (the latest on 28-07-2025), the MOU has been finalized.

3. PURPOSE

The main purpose of the MoU between National Institute of Hydrology (NIH) and Water Resources Department (WRD), Bihar is the study for "Flood Plain Zone delineation of The Ganga River in the state of Bihar from Chausa to ManihariGhat" by carrying out demarcation and delineation.



4. SCOPE OF THE WORK

The scope of the proposed work includes:

a) Identify and demarcate the flood plains of Ganga River in the state of Bihar from Chausa to Maniharighaton one in hundred year's cycle or appropriately. In addition, flood plain zone for 1 in 5 years and 1 in 25 years will also be identified.

b) Identify prohibited zone, Regulatory Zone and Waring Zone as per requirement.

c) Digital Elevation Model (DEM)

In the previous study by NIH, in the river Ganga from Unao to Balia 1m grid size DEM from Survey of India (SOI) is used with available measured river cross-sections. Same approach will be used. In addition, the FABDEM (Forest and Buildings removed Copernicus DEM) will also be compared/used where the SOI data is not available. It is a global elevation map that removes building and tree height biases from the Copernicus GLO 30 Digital Elevation Model (DEM).

d) Four training sessions each of a one week duration will be provided to 10-11 WRD officers on model development (MIKE & HECRAS) during the study period. The training may be organised at WRD with NIH & WRD logistic support.

d) Hydraulic Modelling

Using the corrected DEM and the outputs of flood frequency analysis, the hydrodynamic Model Coupled 1-D & 2D or full 2D will be setup using HEC-RAS. Steady state analysis will be performed to model the extent of floodplain for various return period floods. The HEC-RAS model will be setup using:

- Upstream boundary to provide constant flood magnitude equal to the given return period at upstream boundary and additional intermediate catchment flow as internal boundary condition.
- Downstream boundary as water level at River Ganga corresponding to 100-year return period flood.
- Flood plain bathymetry for routing the flows for Chausa to Manihari.



e) Hybrid Approach

The results of satellite analysis and hydraulic modelling have their own limitation. Satellite may not cover the full flood event while the hydraulic model results are subjected to DEM quality. Therefore, hybrid approach will combine both the results by taking union of the areas obtained from both the results.

5. STUDY AREA

The main ganga river in the study stretch is about 575 km. The study reach would be from Buxar (upstream, GD site) to Sahibganj (Downstream, GD site). The hydrological data of CWC gauging sites located at Buxar (GD) and Sahibganj (G) would be used as boundary condition for the flow model. The major tributaries joining the Ganga River in this stretch are Ghaghara, Gandak and Kosi on the left bank and Sone, Punpun and Kiul on the right bank.

6. Hydrological Data Requirement:

The gauge discharge (GD) sites for which data would be required is given in Table 1. The daily discharge and water level data would be used for development of flow model. The long term annual maximum discharge data would be used for estimation of floods of various return periods using flood frequency analysis. The water level in the main river at intermediate locations would be used for calibration and validation of the model. Further, the long term historical annual maximum discharge & water level at these locations and other locations in Ganga River stretch & its major tributary will be considered for intermediate flow. Hourly/Daily water level and discharge data for available sites during monsoon seasons for six to ten years are required for model calibration.



Table 1: Hydrological data requirement

GD Site	River	Particulars	GD Site	River	Particulars
Buxar	Ganga	Daily discharge & water level (2018-2023)	Trutipar	Ghaghara	Long term annual maximum discharge & water level as per availability
Gandhighat			Lalganj	Gandak	
Hathidah			Baltara	Kosi	
Sahibganj			Koelwar	Sone	
Koelwar	Sone	Daily discharge & water level (2018-2023)	Sripalpur	Punpun	Long term annual maximum discharge & water level as per availability
Sripalpur	Punpun		Lakhisarai	Kiul	
Lakhisarai	Kiul		Buxar	Ganga	
Trutipar	Ghaghara		Gandhighat		
Lalganj	Gandak		Hathidah		
Baltara	Kosi		Azimabad		
			Farraka		
Any other site of Ganga WRD Bihar/WB d/s of Azimabad	Ganga	Daily discharge, water level & annual maximum discharge	Sahibganj	Ganga	Long term annual maximum discharge & water level as per availability

7. Brief Methodology:

The study will be carried out with similar methodology as used by NIH and Central Water Commission (CWC) in the previous studies of flood plain zoning of river Ganga and Yamuna. A brief methodology is proposed along with flow chart (Figure 2) described below:



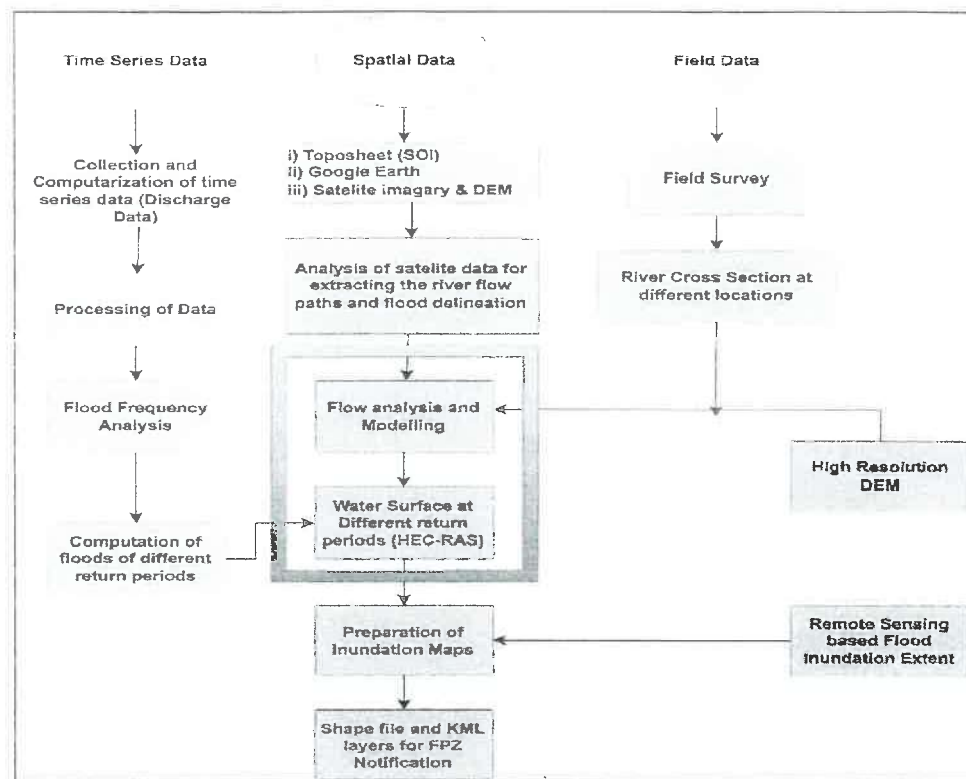



Figure2: Flow Chart showing steps for flood plain delineation

Flood Frequency Analysis

Flood frequency analysis will be carried out for the available gauging sites to estimate flood (design discharge) of 100-year return period. Twelve frequency distributions viz. extreme value (EV1), general extreme value (GEV), logistic (LOS), generalized logistic (GLO), normal (NOR), generalized pareto (GPA), generalized normal (GNO), uniform (UNF), exponential (EXP), Pearson Type-III (PT3), kappa (KAP) and wakeby (WAK) will be used to identify robust distribution based on the L-moment ratio diagrams and the Z_i^{dist} -statistic criteria.

Hydraulic Modelling

The river flow model will be developed for the main Ganga River from Buxar to Sahibganj in HECRAS. The major tributaries as discussed above would also be the part of flow model. The river terrain would be represented through cross-section and bathymetry i.e. Digital Elevation Model. The river cross-section (as per availability) and Digital Elevation Model is to be provided to NIH by the Water Resources

[Signature]

[Signature]

Department, Govt. of Bihar. The daily hydrological data of discharge at the upstream end of main river and tributaries would be used as upstream boundary while the water level at Sahibganj would be the downstream boundary condition. The water level in the main river at intermediate locations would be used for calibration and validation of the model.

Once the model is developed 100-year flood in the main Ganga River would be used to simulate the flow pattern on the existing topography for estimating flood inundation extent. The hydraulic model results will be compared with satellite-based flood inundation extent. The Joint Research Centre-European Commission has analysed Landsat multispectral satellite images of the past 37 years (1984-2021) for deriving the frequency with which water returns from year to year i.e. recurrence interval and maximum flood extent. Further the flood inundation Extent of recent years [2009-2024] from NRSC, FMISC, Bihar will also be compared and analysed for finalizing flood plain zone.

Flood Plain Zone Demarcation

The hydraulic model will provide the flood inundation extent for 100-year, 25 year and 5-year return period floods. NIH will process the output and the line corresponding to outer extent of flood plain will be provided as a KML file and Shape file to the Water Resources Department, Govt. of Bihar. The coordinates (Lat, Log) at suitable interval (200 m or bend to bend) will also be provided for further use. The Water Resources Department, Govt. of Bihar after verification/validation of the line may take up the work for physical demarcation and notification as per necessity and directive of Hon'ble NGT.

8. DATA REQUIRMENT:

Sl. No.	Data	Source	Responsibility
1.	Historical Observed Discharge and Water level data (hourly/daily & annual maximum)	CWC	WRD, Bihar
2.	River Cross-section	Survey/ CWC/ Govt. of Bihar	WRD, Bihar




Sl. No.	Data	Source	Responsibility
3.	High Resolution DEM	SOI, Drone Survey	WRD, Bihar
4.	CartoSat DEM/ FABDEM	NRSC	NIH
5.	Structures details (Bridge, Barrage, Embankment etc.)	Govt. of Bihar	WRD, Bihar
6.	Previous Flood inundation extent from Satellite Data	NRSC, FMISC-BIHAR	WRD, Bihar

9. DURATION AND TIME SCHEDULE

The study will be completed in Twelve months from the date of supply of all data and advance payment. The proposed timeline is given below:

Sl. No.	Activity	Month											
		1	2	3	4	5	6	7	8	9	10	11	12
1.	Data collection and Processing												
2.	Flood frequency analysis: Estimation of flood for 100-year return period												
3.	Hydraulic model setup using HEC RAS												
4.	Finalization of hydraulic model results with structures, embankments etc. with sponsoring agency												
5.	Submission of interim findings for discussion, result verification with sponsoring agency.												
6.	Finalization of delineation of flood plain												
7.	Submission of Progress/ Draft Report												
8.	Submission of final Report	(one month after receiving comments)											

Note: Timely availability of data is very important for maintaining the proposed activity schedule. Scientist of NIH and officers of WRD, Bihar will interact regularly for monitoring progress of the study.




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10. COST AND PAYMENT SCHEDULE

The Total cost of the study will be Rs 1,10,00,000 plus GST charges (18% or as applicable).

- 30% payment is to be made along with the award of work.
- 30% on submission of draft report.
- 40% payment is to be made on submission of the final report of the study.

SN	Expenditure head	Amount
a)	On Man-days	Rs.10,62,000
b)	Consumables / Components	Rs. 50,000
c)	Services/utilities	Rs.1,10,000
	Overheads (25% of b & c)	Rs. 40,000
d)	Equipment /computer usages	Rs. 55,000
e)	Project staff, Laptop/workstation, computer peripherals, stationary etc.	Rs.40,00,000
f)	TA/DA	Rs.3,00,000
g)	Contingencies	Rs.2,00,000
h)	Intellectual Fees	Rs.51,83,000
	Total Project Charges	Rs. 1,10,00,000
	GST (@ 18% as per norms)	Rs.19,80,000
	Total Consultancy charges	Rs. 1,29,80,000

11. ARBITRATION

Differences/ disputes if any in the interpretation on the execution of Memorandum of Understanding shall be mutually settled through discussion, failing which they will be referred to Secretary, Ministry of Water Resources RD & GR, Government of India/ Secretary, Water Resources Department, Government of Bihar whose joint decision shall be final and binding on both the parties.

Note:

All the payments are to be made by A/C payee bank draft or by e-transfer in the name of "NATIONAL INSTITUTE OF HYDROLOGY" payable at Roorkee. For online transfer, the account details are as below:

A/C Name: **NIH Consultancy Project**; Bank A/CSBI- IIT, ROORKEE;

A/C No. **31125916862**; IFSC CODE: **SBIN0001069**; MICR CODE: 247002094; SWIFT NO. **SBININBB559**.




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GST No. of NIH: 05AAATN1385M1ZD

The National Institute of Hydrology, Roorkee (PAN: AAATN1385M) is exempted from income tax vide Govt. of India Notification No. 38/2017 (F. No. 203/24/2016 ITA-II) dated May 15, 2017 (copy attached). Hence, Tax Deduction at Source (TDS) is not applicable on any payment to NIH.

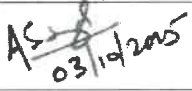
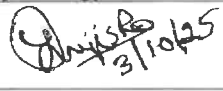
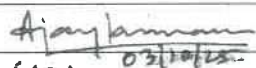
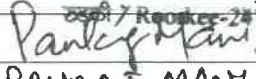
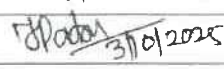
Contact Details:

Dr. Pankaj Mani, Scientist-G & Head CFMS, Patna
National Institute of Hydrology
E-mail: pmani.nihri@gov.in
Mob: 9471006278

Seal of Parties:

In witness where of the parties here to have signed this agreement on Day, Month and Year mentioned here in before

PARTIES

For and on behalf of Water Resources Department, Bihar	For and on behalf of National Institute of Hydrology, Roorkee
Signature: 	Signature: 
Name: AMITA SINGH	Name: DR. Y.R.S. RAO
Designation: JOINT DIRECTOR	Designation: DIRECTOR
Seal JOINT DIRECTOR Flood Management Improvement Support Centre, WRD, Anisabad, Patna	Seal डॉ. वाई. आर. एस. राव / Dr. Y.R.S. Rao निदेशक / Director राष्ट्रीय जलविज्ञान संस्थान
Witness: (Name and Address)	Witness: (Name and Address)
1.  (AJAY KUMAR) DIRECTOR, MMC	1.  (PANKAJ MANI) Sc. G, NIH, Patna
2.  DEPUTY DIRECTOR, EID, MMC	2.  J.P. Patra, Sc-E NIH Roorkee

Signed on the Day of October, 2025

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ADVANCE SERVICE: PRAHLAD ROY GOENKA & ORS. vs. UNION OF INDIA & ORS. | OA NO. 680 OF 2025 PENDING BEFORE NGT, PRINCIPAL BENCH

Rebecca Mishra <rebeccamishra10@gmail.com>

Tue, Jul 7, 2026 at 5:52 PM

To: missionganga.1@gmail.com, sanjeevaniganga777@gmail.com, piyushkryadav1987@gmail.com
Cc: gigicgeorge.adv42@yahoo.in, secy-mowr@nic.in, chairman-cwc@nic.in, secy-moef@nic.in, ccb.cpcb@nic.in, adidas625@gmail.com, cewrdplan@gmail.com, cewrd.assam@yahoo.co.in, watermin.cg@nic.in, secretaryifcdgnctd@gmail.com, ce-wrd.goa@nic.in, sec-wncw@gujarat.gov.in, irrigation@hry.nic.in, iphsecy-hp@nic.in, pscsphe@gmail.com, sec-wrd-jhr@nic.in, prs-wr@karnataka.gov.in, min.irr@kerala.gov.in, pswrd@mp.gov.in, sec.wrd@maharashtra.gov.in, meghalayawrd@gmail.com, nagalandwrd@gmail.com, wrsec.or@nic.in, psi@punjab.gov.in, ce.wr@rajasthan.gov.in, wrdsec@tn.gov.in, secy-irg@telangana.gov.in, hodcamp.id@gmail.com, psecup.irrig@nic.in, seciwd-wb@nic.in, secypwd.pon@nic.in, gad.utladakh@ladakh.gov.in, Azmat Amanullah <azmatamanullah@gmail.com>, Azmat Amanullah <azmat.amanullah@gmail.com>, Vanshita Gupta <guptavanshita46@gmail.com>, EKTA KUNDU <adv.ekta1217@gmail.com>, Suraj Kundu <suraj.kundu1@gmail.com>, Ajay Prajapati <ajayprajapatioffice@gmail.com>

Dear All,

The undersigned is engaged in the office of Mr. Azmat H. Amanullah, Additional Standing Counsel for the State of Bihar who is the counsel for Respondent No. 8: State of Bihar through its Water Resource Department in the captioned matter.

Please find attached the Reply being filed on behalf of the Respondent No. 8 State of Bihar in the captioned matter.

This shall be deemed as effective service.

Thanks and Regards,

Rebecca Mishra
Advocate
Mobile: +91-8586840600
Office of Mr. Azmat H. Amanullah,
AOR, Additional Standing Counsel for the State of Bihar
Office address: A-320, First Floor, Defence Colony, New Delhi - 110024

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 **Service_Reply on behalf of R-8 Bihar.pdf**
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