BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN BENCH, KOLKATA

MEMORANDUM OF APPLICATION

(Under Section 14 read with Section 15 of the National Green Tribunal Act, 2010)

ORIGINAL APPLICATION NO. 123 OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI ...APPLICANT

VERSUS

STATE OF BIHAR & ORS ...RESPONDENTS

INDEX

S. NO.	PARTICULARS	PAGE NOS.
1.	Index	1-4
2.	Memo of Parties	5-6
3.	Letter of Urgency	7
4.	Synopsis & List of Dates	8-22
5.	Memorandum of Application (under Section 14 read with section 15 of the National Green Tribunal Act, 2010) along with Affidavit.	23-50
6.	**ANNEXURE A-1** A Copy of the Relevant Extracts of the EIA Notification dated 14.09.2006 issued by the MOEF.	51-74
7.	**ANNEXURE A-2** A Copy of the Notification dated 15.01.2016 issued by the MOEF.	75-86
8.	**ANNEXURE A-3** A Copy of the Relevant Extracts of the Sustainable Sand Mining Management Guidelines ***[SSMG, 2016]*** issued by the MOEF.	87-137
9.	**ANNEXURE A-4** A Copy of the Enforcement & Monitoring Guidelines for Sand Mining, 2020 **[EMGSM, 2020]** issued by the MOEF.	138-220

10.	**ANNEXURE A-5** A Copy of the Joint Committee Report dated 10.06.2021 in OA No. 194 of 2020 (SZ) titled as '*Sarvabhoum Bagali v. State of Karnataka'*.	221-234
11.	**ANNEXURE A-6** A Copy of the Judgment dated 10.11.2021 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661/2020, *State of Bihar v. Pawan Kumar.*	235-241
12.	**ANNEXURE A-7** A Copy of the Relevant Extracts of the SEAC, Bihar MOM dated 25.03.2022.	242-246
13.	**ANNEXURE A-8** A Copy of the Judgment dated 06.05.2022 passed by this Hon'ble Tribunal, Principal Bench in the case titled *'Raj Kumar v. State of U.P.', OA No. 140/2021.*	247-255
14.	**ANNEXURE A-9** A Copy of the SEIAA, Bihar MOM dated 20.05.2022 approving the Impugned DSR for District Jamui, Bihar.	256-259
15.	**ANNEXURE A-10** A Copy of the Impugned DSR for District Jamui, Bihar.	260-402
16.	**ANNEXURE A-11** A Copy of the Order dated 30.05.2022 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'.*	403-406
17.	**ANNEXURE A-12** A Copy of the Order dated 19.09.2022 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'.*	407-408
18.	**ANNEXURE A-13**	409-440

	A Copy of the Judgment dated 26.04.2023 passed by the Hon'ble Supreme Court in *'In re: T.N. Godavarman Thirumulpad'*, *2023 SCC Online SC* 504.	
19.	**ANNEXURE A-14** A Copy of the Relevant Extracts of the SEAC, Bihar MOM dated 09.08.2023.	441-444
20.	**ANNEXURE A-15** A copy of the Relevant Extracts of the SEIAA, Bihar MOM dated 22.08.2023.	445-447
21.	**ANNEXURE A-16** A Copy of the EC dated 28.08.2023 issued by SEIAA Bihar.	448-457
22.	**ANNEXURE A-17** A Copy of the EC dated 28.08.2023 issued by SEIAA Bihar.	458-467
23.	**ANNEXURE A-18** A translated copy of the letter dated 7.12.2023 sent by Respondent No. 2, Director, Mines & Geology Department to Respondent SEIAA, Bihar.	468
24.	**ANNEXURE A-19** A Copy of the Judgment dated 22.08.2025 passed by the Hon'ble Supreme Court in *State (UT of J&K) v. Raja Muzaffar Bhat, 2025 SCC OnLine SC 1789*.	469-490
25.	**ANNEXURE A-20** A Copy of the Impugned E-Auction Notice dated 02.04.2026 issued by the Respondent No. 2, Mines and Geology Department.	491-508
26.	**ANNEXURE A-21** A Copy of the IA No. 85385 of 2026 filed by the Applicant herein in Civil Appeal No. 3661-3662 of 2020 filed before the Hon'ble Supreme Court.	509-521

27.	**ANNEXURE A-22** A Copy of the Order dated 8.04.2026 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'*.	522-527
28.	**VAKALATNAMA**	528

Filed By:

[VANSHDEEP DALMIA]
ADVOCATE FOR THE APPLICANT
206, Jor Bagh, New Delhi-110003
Email id: vanshdeepdalmia@gmail.com
M. No. 9810077085

Filed on: 01.05.2026
Place: Kolkata

BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN BENCH, KOLKATA

MEMORANDUM OF APPLICATION
(Under Section 14 read with Section 15 of the National Green Tribunal Act, 2010)

ORIGINAL APPLICATION NO. OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI ...APPLICANT

VERSUS

STATE OF BIHAR & ORS ...RESPONDENTS

MEMO OF PARTIES

SANJEEV KUMAR BHARTI
S/o Brahamdev Ydaav
R/o Tola Banjama,
Sahiya, Jamui, Jhajha
Bihar - 811308 …**APPLICANT**

Versus

1. **STATE OF BIHAR**
   Through its Chief Secretary,
   Government of Bihar,
   Main Secretariat,
   Patna – 800015
   cs-bihar@nic.in

2. **DEPARTMENT OF MINING & GEOLOGY,**
   Through its Principal Secretary,
   Vikas Bhawan (New Secretariat, Bailey Rd),
   Patna, Bihar -800015
   secymine-bih@nic.in

3. **THE DISTRICT MAGISTRATE**
   Office of the District Magistrate,
   Jamui, Bihar-811307
   dm-jamui.bih@nic.in

4. **STATE EXPERT APPRISAL AUTHORITY**
[SEAC, BIHAR]
Through its Member Secretary,
2nd Floor, Beltron, Baldev Bhawan Rd,
Shastri Nagar,
Patna, Bihar - 800023
seac.ms.br@gmail.com

5. **THE STATE LEVEL ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY**
[SEIAA, BIHAR]
Through its Member Secretary,
2nd Floor, Beltron, Baldev Bhawan Rd,
Shastri Nagar,
Patna, Bihar – 800023
seiaa.ms.br@gmail.com

6. **BIHAR STATE POLLUTION CONTROL BOARD**
Through its Member Secretary
Parivesh Bhawan, NS - B/2,
Patliputra Industrial Area
P.O. - Sadaqat Asharam,
Patna, Bihar - 800 023
mscellbspcb@gmail.com
msbspcb-bih@gov.in

...**RESPONDENTS**

FILED BY:



[VANSHDEEP DALMIA]
ADVOCATE FOR THE APPLICANT
206, Jor Bagh, New Delhi-110003
Email id: vanshdeepdalmia@gmail.com
M. No. 9810077085

Filed on: 01.05.2026
Place: Kolkata

BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN BENCH, KOLKATA

MEMORANDUM OF APPLICATION
(Under Section 14 read with Section 15 of the National Green Tribunal Act, 2010)

ORIGINAL APPLICATION NO. OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI ...APPLICANT

VERSUS

STATE OF BIHAR & ORS ...RESPONDENTS

LETTER OF URGENCY

To
THE REGISTRAR,
National Green Tribunal,
New Delhi

RESPECTED SIR,

You are requested to kindly treat the accompanying application as an urgent one in accordance with the NGT Rules and Orders.

The grounds of urgency are as set in the Original Application may be treated as part and parcel of the present Application.

FILED BY:

[VANSHDEEP DALMIA]
ADVOCATE FOR THE APPLICANT
206, Jor Bagh, New Delhi-110003
Email id: vanshdeepdalmia@gmail.com
M. No. 9810077085

Filed on: 01.05.2026
Place: Kolkata

SYNOPSIS

The instant OA is being filed under Section 14 and 15 of the National Green Tribunal Act, 2010 raising serious *substantial question relating to the environment,* by raising a challenge to the District Survey Report **[DSR]** for District Jamui, Bihar, *interalia* on the grounds that the same has been approved by the SEIAA, Bihar without it been appraised or recommended by SEAC, Bihar. Further, the Impugned DSR has admittedly been prepared in absence of a Replenishment Study, and without adherence to the other mandatory provisions of the Enforcement & Monitoring Guidelines for Sand Mining, 2020 **[EMGSM, 2020]** issued by the MOEF, thereby being in blatant contravention of various Judgments and Orders passed by the Hon'ble Supreme Court and this Hon'ble Tribunal.

The Applicant herein further challenges the Impugned E-Auction Notice dated 02.04.2026 issued by the Respondent No. 2, Mines and Geology Department for 9 Sand Ghats in District Jamui *(admeasuring 121 ha)* in the absence of a fresh Replenishment study including Auctioning of a particular Sand Ghat i.e. Block-9, Mauz Manjhagaya, Block Khaira *(admeasuring 42 ha)* which is as per the DSR itself is located at a distance of 0.3 km of a notified Wildlife Sanctuary/ Eco Sensitive Zone, and thus *per se* impermissible as per the Judgment passed by the Hon'ble Supreme Court in *'In re: T.N. Godavarman Thirumulpad'* being mining within 1 km thereof.

A. CHALLENGE TO DSR OF DISTRICT JAMUI, BIHAR

I. DSR NOT APPRAISED OR RECOMMENDED BY SEAC, BIHAR

It is submitted that the Impugned DSR has been approved by SEIAA, Bihar vide its MOM dated 20.05.2022 without any application of mind, in a perfunctory manner without it having been finally appraised or recommended by SEAC, Bihar, in blatant disregard to the directions passed by the Hon'ble Supreme Court in *Pawan Kumar*.

The SEAC, Bihar vide its MOM dated 25.03.2022 had examined the draft DSR and made 18 suggestive corrections to be made in the Draft DSR which *interalia* included the condition that the DSR has to be placed in the public domain for receiving the comments of the general public and after which it has to be submitted to the SEAC, Bihar again with all the necessary corrections.

In furtherance of the above directions, though the Draft DSR was uploaded on the public portal on 3.03.2022 and advertised in the newspapers on 3.04.2022, however was never placed before the SEAC for approval with the necessary corrections, as is evident from the SEIAA, Bihar MOM dated 20.05.2022. Ergo, the Impugned DSR was never recommended and/or approved by the Expert body, SEAC Bihar, in absence of which the DSR Jamui could not have been approved by the SEIAA, Bihar.

II. DSR PREPARED WITHOUT A REPLENISHMENT STUDY

The Impugned DSR has admittedly been prepared without conducting a Replenishment study as per the DSR itself which states as under:

> *"Once replenishment study conducted table of estimation of sand resources in pre- monsoon and post-monsoon period for the sand deposit with respect to the reduce level will be submitted minable depth is being taken only 1-meter bgl as **replenishment study not carried during last three years**"*

The Hon'ble Supreme Court vide its Judgment dated 22.08.2025 in ***State of J&K v. Raja Muzaffar Bhat*** has held that a Replenishment Study is the foundational basis, and forms an integral part of the DSR, in the absence of which a DSR is untenable and fundamentally defective.

It is submitted that the MOEF Notification dated 15.01.2016 [Appendix X] along with the SSMG, 2016 and EMGSM, 2020 emphasis the importance of conducting a Replenishment study Annually for Riverbed mining which is mandatorily required to nullify the adverse impacts arising due to excessive sand

extraction. A Replenishment study is a core requirement and a *conditional precedent,* a *sine qua non* before preparation of a DSR.

It is submitted that the Impugned DSR having been prepared in the absence of a Replenishment Study is *per se* illegal and ought to be quashed on this ground alone, in as much as, mining activities undertaken under the Impugned DSR would invariably lead to excessive and unsustainable mining adversely affecting the riverine Environment.

III. DSR PREPARED WITHOUT COMPLYING WITH CLAUSE 4.1.1 OF THE EMGSM, 2020

The Hon'ble Supreme Court in *State of Bihar v. Pawan Kumar, 2022 (2) SCC 348* (Para 16.2) directed the DSRs to be prepared after ensuring '*strict adherence'* to the *EMGSM, 2020.* However, the Impugned DSR is not prepared in terms of the EMGSM, 2020, including Clauses 4.1.1, 4.3, 5.0 thereof, which is illustrated below:

Sr No.	**EMGSM, 2020** *[Relevant Clauses]*	**VIOLATION**
1.	**4.1.1(b)** requires a detailed River survey/ audit to identify the source of River bed material.	No such River survey/ Audit has been done.
2.	**4.1.1 (c) & (g)** mandates identification of No Mining Zones considering Environmental and Social factors.	No such *'No Mining Zones'* have been identified anywhere in the Impugned DSR.
4.	**4.1.1 (f) & 4.3 (o)** requires erection of permanent boundary pillars after identification of an area of aggradation and deposition.	No such boundary pillars have been placed, rather the Impugned DSR mentions that permanent boundary pillars shall be erected after auction by the department and preparation of the Mining Plan.

5.	**4.1.1 (k)** Distance between any two clusters should not be less than 2.5Km and further the total area of the mining leases in a cluster should not be more than 10 Ha.	Out of the 48 Mining Leases in the District (total area of 1024.47 Ha), 25 leases are a part of 7 Clusters having a total Area of 589.37 Ha. As per Annexure-III to the DSR, <u>all</u> 7 Clusters are far in excess of the 10 ha limit. **Note:** 2 Clusters are above 100 ha & 5 Clusters are above 40 ha
6.	**4.3 (h)** prohibits extraction of Sand & gravel within 1 km from a major bridges and highways on both sides.	The Impugned DSR is completely silent on any such study having been conducted.
7.	**4.3 (r)** requires that the area for removal of minerals shall not exceed 60% of the mine lease area.	The Impugned DSR recommends the entire quantity present in a sand ghat upto permissible depths to be the total extractable quantity. This is evident from a comparison of Table No. 11 and Annexure V of the DSR whereby the total quantity and the 60% of the total mineable quantity is the same.

IV. <u>DSR PROPOSES MINING IN SAND GHATS WITHIN 1 KM OF A WILDLIFE SANCTUARY (WLS) AND/OR PROTECTED FOREST AREAS (PFA)</u>

(Violation of directions passed by the Hon'ble Supreme Court in 'In re: T.N. Godavarman Thirumulpad')

That 7 out of 48 Sand Ghats that have been proposed in the Impugned DSR are within 1 Km of Wild Life Sanctuary (Bhimbandh Wild life Sanctuary) and Eco-Sensitive Area/Protected Forest Area (Nagi & Nakti Bird Sanctuary) as evident from Table 14 of the DSR, which is demonstrated below:

S. NO.	RIVER	SAND GHAT	DISTANCE FROM WILDLIFE SANCTUARY/ PROTECTED FOREST AREA (IN KM)
1.	Kuil River	Block-1	0.1
2.		Block-3	0.7
3.		Block-15	0.5
4.	Barnar River	Block-8	0.5
5.		Block-9	0.9
6.	Sukhnar River	Block-1	0.4
7.	Gajhi River	Block-3	0.6

It is submitted that the Hon'ble Supreme Court vide its Judgment dated 26.04.2023 passed in *'In re: T.N. Godavarman Thirumulpad'*, *2023 SCC Online SC* 504 has re-iterated that Mining within an area of 1 Km from the boundary of a National Park, Wildlife Sanctuary & PFA shall be impermissible.

B. CHALLENGE TO E-AUCTION NOTICE DATED 02.04.2026

I. NO REPLENISHMENT STUDY

The Impugned E-Auction Notice dated 02.04.2026 has been issued without conducting any Replenishment Study in the year 2025 as required under the MOEF Sand Mining Guidelines, 2016 & 2020 and directions passed by this Hon'ble Tribunal.

In the case of ***Raj Kumar v. State of UP***, OA No. 140 of 2021 vide Judgment dated 6.05.2022 this Hon'ble Tribunal held as follows:

> *"11. Accordingly, the ACS, Mining, UP has fairly stated that replenishment study will be conducted prior to auctions in future and with regard to the current leases, ongoing replenishment study will be expedited. In the light thereof, the leases will be renewed, if necessary…*

12. In view of above, let the Replenishment studies be completed by credible institutions, following due procedure, in accordance with para 5 of EMSG, 2020. Further, no mining be permitted till replenishment studies are completed beyond the schedule laid down above…"

The Hon'ble High Court Patna in the recent Judgment dated 30.01.2026 in the case of **'*Manjeet Chawla v. State of Bihar'*,** CWP No. 17523 of 2023 has emphasized that a Replenishment study must be undertaken before auctioning of Sand Ghats.

Apropos, the issuance of the Impugned Auction Notice in the absence of a prior replenishment study is manifestly illegal, unsustainable and *void ab initio*. It is submitted that in absence thereof, the Mining Department has no basis to calculate the quantity of sand available in the Mining lease area which gets replenished yearly after every monsoon. Ergo, the Replenishment study further determines the Replenished rate of the River/ Mining lease area, equal to which minerals can be legally excavated. Furthermore, without knowing the actual mineable reserves, it would be impossible to check illegal, excessive mining, if any.

II. SAND GHAT AUCTIONED (BLOCK- 9) IS WITHIN 1KM OF A WILDLIFE SANCTUARY

The Hon'ble Supreme Court vide its Judgment dated 26.04.2023 in *'In re: T.N. Godavarman Thirumulpad,' 2023 SCC Online SC* 504 has held that Mining within an area of 1 km from the boundary of a National Park and Wildlife Sanctuary shall not be permissible.

The Impugned NIT dated 02.04.2026 seeking to Auction 9 blocks including a large Mining lease area of 42.2 hectare i.e. the Block- 9, Mauz Manjhagaya, Block Khaira (as per the DSR itself) which is within 0.3 km of a notified Wildlife Sanctuary/ Protected Forest Area as indicated in Table 14 of the Impugned DSR, and thus auction of the said Sand Ghat ought to be quashed by exercising the doctrine of Severability.

C. MINING UPTO 1M DEPTH PERMISSIBLE ONLY BY MANUAL EXCAVATION

That without prejudice to the aforesaid submissions, if this Hon'ble Tribunal upholds the Impugned NIT, the Applicant prays that it be directed that mining operations *(upto max depth of 1m as per DSR)* are conducted by manual methods only, without use of any heavy/ semi-mechanized machinery.

A Joint Committee Report *(Comprising of MOEF, SEIAA Karnataka, CPCB)* dated 10.06.2021 in OA No. 194 of 2020 (SZ) titled as '*Sarvabhoum Bagali v. State of Karnataka'* recommended that "*Mining up to one- meter should be by manual only."* This Hon'ble Tribunal vide its Judgment dated 15.09.2022 in OA No. 194 of 2020 (SZ) accepted this recommendation of the said Joint Committee.

The SEAC, Bihar while appraising Sand Ghats situated on the river Kiul in the neighboring District of Lakhisirai vide its MOM dated 9.08.2023 imposed the following additional condition:

> *"Project Proponent should undertake sand mining limited to 1 meter (one meter) depth by manual excavation to check over-exploitation beyond one meter depth"*

Further, the specific condition No. 5 mentioned in the EC's issued for the sand ghats and applicable to all Sand Ghats in the Lakhisirai District state that *"Only manual method shall be used for the River Bed Mining",* which substantiates the submission of the Applicant that manual method of mining has to strictly be observed in cases where the permitted mining depth is upto 1m.

That the SSMG, 2016 states that "*Depending upon the location, thickness of sand, deposition, agricultural land/Riverbed, the method of mining may be manual, semi-mechanized or mechanized; however, manual method of mining shall be preferred over any other method.*" Thus, the condition to permit mining

by Manual method was obviously imposed in the neighboring district of Lakhisirai (River Kiul) considering that the Mining pertains to River bed and the permissible depth is 1m (as approved in the DSR) instead of the maximum 3m depth in other Districts of Bihar.

That the Director, Mines & Geology Department vide letter dated 7.12.2023 has itself clarified to SEIAA, Bihar that SEIAA should consider giving EC with the permission of manual operation in other cases of Sand Mining upto 01 meter depth, giving impetus to the Applicant's submission that mining upto 1 meter depth ought to be done by manual excavation.

It is submitted that the rationale behind permitting Mining upto the depth of 1m by Manual methods only is that the bucket size of the smallest JCB would excavate the mineral below the 1m depth, which would invariably attract the risk of excessive mining beyond permissible limits causing detriment and severe damage to the riverine environment.

That the sole reason for seeking a direction restricting mining upto 1m by manual methods only is due to earlier instances of Mining being conducted in District Jamui by using Heavy/semi mechanized machinery despite the abovementioned conditions prescribed in the EC and penalties imposed by the Mining Department time and again. However, despite such express conditions and penalties, lease holders have not stopped from using Machinery, due to which the Applicant herein anticipates that mining under the Impugned NIT would also be conducted by using heavy/ semi-mechanized machinery.

Needless to submit that the powers exercised by this Hon'ble Tribunal under Section 14 and 15 of the NGT Act is not only remedial and restitutionary but also preventive and ameliorative based on the precautionary principle as enumerated in Section 20 of the NGT Act.

The Applicant is a farmer by profession and a resident of District Jamui, Bihar whose Right to life along with that of the other residents/ villagers of the District is directly and immediately affected due to the illegal and unplanned mining proposed to be carried on in the District, Jamui, Bihar under the illegally finalized DSR and the Impugned NIT. Such proposed mining would lead to contamination of water supply and foreseeable draught created thereby which would deprive the Applicant and the other Villagers of vital water resources, which they are dependent on for source of drinking, livelihood and farming activities.

Hence the present Application under Section 14 and 15 before this Hon'ble Tribunal.

LIST OF RELEVANT DATES AND EVENTS

DATE	PARTICULARS
14.09.2006	The MOEF issued the parent EIA Notification dated 14.09.2006 *("hereinafter referred to as EIA, 2006")* under Section 3 of the Environmental Protection Act, 1986.
27.02.2012	The Hon'ble Supreme Court in the case of *Deepak Kumar v. State of Haryana*, *2012 (4) SCC 629* highlighted the dangers to the Riverine Environment due to unregulated and illegal Sand Mining.
15.01.2016	The MOEF issued Notification dated 15.01.2016 by *inter-alia* mandating the Preparation of a District Survey Report for Sand Mining *(hereinafter referred to as 'DSR')* by a newly formed DEAC/DEIAA, and an Annual Replenishment Study.

2016	That the MOEF issued the Sustainable Sand Mining Management Guidelines, 2016 *(hereinafter referred to as 'SSMG, 2016')* which mandated for an Annual Replenishment Study, and highlighted the dangers of excessive River Sand mining that ought to be restricted to/ equal to the rate of replenishment, so as to ensure that the natural equilibrium of the stream is not disturbed.
13.09.2018	This Hon'ble Tribunal, Principal Bench vide its Judgment dated 13.09.2018 in the case titled *Satender Pandey v. UOI*, partly quashed the Notifications dated 15.01.2016 and 20.01.2016, including quashing of the newly formed DEIAA and DEAC.
2020	The MOEF in supplement and addition to the SSMG, 2016 issued the Enforcement & Monitoring Guidelines for Sand Mining, 2020 *(hereinafter referred to as 'the EMGSM, 2020")* enumerating the parameters of preparing a DSR, benefits of preparation of a DSR and the importance of a Replenishment study for Riverbed mining which is mandatorily required to nullify the adverse impacts arising due to excessive sand extraction, in Clauses 4.0, 4.1.1, 4.2, 4.3, 5.0 5.1 etc.
14.10.2020	This Hon'ble Tribunal, EZ, vide its detailed Judgment dated 14.10.2020 in the case titled *'Pawan Kumar v. State of Bihar'* held that a DSR is a crucial document as it contains an Environmental Management Plan, including the Replenishment study and other safeguard, and is the basis to consider the environment impact of mining based on which decision to grant the Environmental Clearance is taken.

	This Hon'ble Tribunal further directed that the DSR be prepared by an Expert accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India (NABT/QCCI) in terms of the MOEF OM dated 16.03.2010, and thereafter the same be verified by the District Magistrate, and lastly evaluation by the Expert bodies i.e. the SEAC/ SEIAA.
10.06.2021	A Joint Committee Report *(comprising of the MOEF/ CPCB &SEIAA)* dated 10.06.2021 in OA No. 194 of 2020 (SZ) titled as '*Sarvabhoum Bagali v. State of Karnataka'* while discussing the impact on the Environment by use of heavy/semi-mechanized machinery for the purpose of sand mining recommended that "*Mining up to one- meter should be by manual only."* The said Report of the Joint Committee Report was accepted by this Hon'ble Tribunal vide its Judgment dated 15.09.2022 in OA No. 194 of 2020 (SZ).
10.11.2021	The Hon'ble Supreme Court vide its Judgment dated 10.11.2021 in *State of Bihar v Pawan Kumar*, modified the procedure for preparation of a DSR and directed that the same be prepared by a Sub-Divisional Committee comprising of **(i)** Sub-Divisional Magistrate, **(ii)** Officers from Irrigation Department **(iii)** SPCB **(iv)** Forest Department and **(v)** Geology or Mining Officer and directed strict compliance of the EMGSM, 2020 Guidelines while preparing a DSR. Such

	DSR was then to be evaluated, appraised and verified by the Expert bodies i.e. SEAC & SEIAA.
03.03.2022	The Impugned DSR for District Jamui was uploaded on the website of the District Administration on 3.03.2022 for public comments.
25.03.2022	The SEAC, Bihar vide MOM dated 25.03.2022 evaluated the Impugned DSR for District Jamui and suggested 18 observations/corrections to be made in the Impugned DSR. The SEAC *interalia* observed that "*The DSRs should be places in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the concerned sub-divisional committee for active consideration for necessary corrections, if any. Only after such consultation of the DSR should be submitted before the SEAC. "*
03.04.2022	The Impugned DSR for District Jamui was advertised in the daily newspapers on 03.04.2022.
6.05.2022	This Hon'ble Tribunal, Principal Bench in the case of *Raj Kumar v. State of U.P., OA No. 140/2021*, vide its Judgment dated 6.05.2022 accepted that a Replenishment Study is mandatorily to be conducted prior to e-Auctions in future and also for all current leases.
20.05.2022	That SEIAA, Bihar vide its MOM dated 20.05.2022 erroneously approved the Impugned DSR for District Jamui, Bihar, without it being recommended by SEAC, Bihar.

30.05.2022	The Hon'ble Supreme Court vide Order dated 30.05.2022 in *Pawan Kumar* recorded the objections raised against the merits and correctness of several DSR's that were prepared in State of Bihar and permitted the parties to take recourse as available in law.
19.09.2022	The Hon'ble Supreme Court vide its Order dated 19.09.2022 in *Pawan Kumar* stayed the proceedings before the Hon'ble Tribunal, EZ in OAs No. 130,131 & 136 of 2022 challenging the DSRs for various Districts in the State of Bihar. It is humbly submitted that under the aegis of the aforesaid Order, the DSRs prepared in respect of any of the districts in the State of Bihar could not have been challenged before any forum including this Hon'ble Tribunal, as the veracity and correctness of the same were a subject matter before the Hon'ble Supreme Court.
26.04.2023	That the Hon'ble Supreme Court vide its Judgment dated 26.04.2023 passed in *'In re: T.N. Godavarman Thirumulpad'*, WP (C) No. 202 of 1995 re-iterated that Mining within an area of 1 Km from the boundary of a notified Wildlife Sanctuary/ Eco-Senstive Zone shall not be permissible.
09.08.2023	That SEAC, Bihar vide MOM dated 9.08.2023 recommended grant of EC to Sand Ghats situated on River Kiul in the neighbouring district of Lakhisarai i.e. Cluster II (Block No. 11 and 12) and at Block No. 5 with a condition that mining upto 1m should be done by manual excavation "*to check over-exploitation beyond one meter depth*"

22.08.2023	That SEIAA, Bihar vide MOM dated 22.08.2023 accepted the recommendation of SEAC, Bihar and granted ECs to sand ghats situated on River Kiul with the additional specific condition that mining upto 1m should be undertaken by manual excavation only.
7.12.2023	The Director, Mines & Geology Department vide letter dated 7.12.2023 clarified to SEIAA, Bihar that in case of objections in giving permission to semi-mechanized operation, SEIAA should consider giving EC with the permission of manual operation in other cases of Sand Mining upto 01meter depth.
08.05.2025	The Hon'ble Supreme Court vide its Judgment dated 08.05.2025 in *'State of Uttar Pradesh v Gaurav Kumar', 2025 SCC OnLine SC 1069* has re-iterated that DSR is a document of seminal importance and the procedure prescribed under the EIA, 2006 (Appendix X) is to be meticulously followed.
22.08.2025	The Hon'ble Supreme Court vide its Judgment dated 22.08.2025 in *State of J&K. v. Raja Muzaffar Bhat* held that a Replenishment Study is the foundational basis and forms an integral part of the DSR, in the absence of which a DSR is untenable and fundamentally defective.
02.04.2026	That Mines and Geology Department, Govt. of Bihar in pursuance to the Impugned DSR issued the Impugned NIT dated 02.04.2026 without conducting a prior Replenishment study, seeking to Auction 9 blocks situated in District Jamui, Bihar, which includes a large Mining lease area of 42.2 hectare i.e. Block- 9, Mauz Manjhagaya, Block Khaira which

	as per the DSR itself is situated within 0.3 km of a notified Wildlife Sanctuary, and thus in violation of 1 km ban imposed by the Hon'ble Supreme Court in *'In re: T.N. Godavarman Thirumulpad'*.
16.03.2026	The Applicant herein filed IA No. 85385 of 2026 before the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020, *State of Bihar v. Pawan Kumar interalia* seeking to quash the Impugned DSR of District Jamui.
08.04.2026	The Hon'ble Supreme Court vide Order dated 8.04.2026 disposed of the said Civil Appeal No. 3661 of 2020 and directed that the decision of this Hon'ble Tribunal dated 14.10.2020 in OA No. 40 of 2020 (EZ) and OA No. 57 of 2020 shall stand modified as per the directions passed by the Hon'ble Supreme Court on 10.11.2021. The Hon'ble Supreme Court further granted liberty to the Applicant to withdraw IA No. 85385 of 2026 to avail remedies to address his grievances.
01.05.2026	Hence the present Original Application.

BEFORE THE NATIONAL GREEN TRIBUNAL,
EASTERN BENCH, KOLKATA

MEMORANDUM OF APPLICATION
(Under Section 14 read with Section 15 of the National Green Tribunal Act, 2010)

ORIGINAL APPLICATION NO. OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI
S/o Brahamdev Ydaav
R/o Tola Banjama,
Sahiya, Jamui, Jhajha
Bihar - 811308 …**APPLICANT**

VERSUS

1. **STATE OF BIHAR**
   Through its Chief Secretary,
   Government of Bihar,
   Main Secretariat,
   Patna – 800015
   cs-bihar@nic.in

2. **DEPARTMENT OF MINING & GEOLOGY,**
   Through its Principal Secretary,
   Vikas Bhawan (New Secretariat, Bailey Rd),
   Patna, Bihar -800015
   secymine-bih@nic.in

3. **THE DISTRICT MAGISTRATE**
   Office of the District Magistrate,
   Jamui, Bihar-811307
   dm-jamui.bih@nic.in

4. **STATE EXPERT APPRISAL AUTHORITY [SEAC, BIHAR]**
   Through it's Member Secretary,
   2nd Floor, Beltron, Baldev Bhawan Rd,
   Shastri Nagar, Patna, Bihar - 800023
   seac.ms.br@gmail.com

5. **THE STATE LEVEL ENVIRONMENTAL IMPACT ASSESSMENT AUTHORITY [SEIAA, BIHAR]**
Through it's Member Secretary,
2nd Floor, Beltron, Baldev Bhawan Rd,
Shastri Nagar, Patna, Bihar – 800023
seiaa.ms.br@gmail.com

6. **BIHAR STATE POLLUTION CONTROL BOARD**
Through its Member Secretary
Parivesh Bhawan, NS - B/2, Patliputra Industrial Area
P.O. - Sadaqat Asharam, Patna, Bihar - 800 023
mscellbspcb@gmail.com
msbspcb-bih@gov.in

...**RESPONDENTS**

TO,

THE HON'BLE CHAIRPERSON
AND HIS COMPANION MEMBERS
OF THE NATIONAL GREEN TRIBUNAL

THE HUMBLE ORIGINAL APPLICATION OF THE APPLICANT HEREIN:

MOST RESPECTFULLY SHOWETH:

1. The address of the Applicant's counsel is given below for the service of notices of this application.

2. The addresses of the Respondents No. 1 - 6 are given above for service of notices of the present Application.

3. The instant OA is being filed under Section 14 and 15 of the National Green Tribunal Act, 2010 raising serious *substantial question relating to the environment,* by raising a challenge to the District Survey Report **[DSR]** for District Jamui, Bihar, *interalia* on the grounds that the same has been approved by the SEIAA, Bihar without it been appraised or recommended by the Expert body, SEAC, Bihar. Further, the Impugned DSR has admittedly been prepared in absence of a Replenishment Study, and also

without adherence to the mandatory provisions of the Enforcement & Monitoring Guidelines for Sand Mining, 2020 **[EMGSM, 2020]** issued by the MOEF, thereby being in blatant contravention of various Judgments and Orders passed by the Hon'ble Supreme Court and this Hon'ble Tribunal.

The present OA further challenges the Impugned E-Auction Notice dated 02.04.2026 issued by the Respondent No. 2, Mines and Geology Department for 9 Sand Ghats in District Jamui *(admeasuring 121 ha)* in the absence of a fresh Replenishment study including Auctioning of a particular Sand Ghat i.e. Block- 9, Mauz Manjhagaya, Block Khaira *(admeasuring 42 ha)* which is as per the DSR itself, at a distance of 0.3 km of a notified Wildlife Sanctuary/ Eco Sensitive Zone, and thus *per se* impermissible as per the Judgment passed by the Hon'ble Supreme Court in *'In re: T.N. Godavarman Thirumulpad'* being mining within 1 km thereof.

4. The Applicant is a farmer by occupation and has no personal interest in the present matter. The Applicant is a resident of Jamui, Bihar whose Right to Life and Health along with that of other citizens are directly and immediately affected due to preparation of a faulty DSR without scientific assessment, Replenishment studies and by non-compliance of the MOEF Sand Mining Guidelines, 2016 & 2020, despite the various Judgments passed by this Hon'ble Tribunal.

The subsequent Mining activities on the basis of such a faulty DSR is bound to invariably have a potential impact on causing Water pollution in the already Polluted Water bodies. The Environment being a party in *absentia* cannot pursue its own interests and the hence the instant application is filed to ensure that such rampant flouting of environmental norms are prevented

and checked with a direction to comply with the existing environmental regulations and directions issued by this Hon'ble Tribunal forthwith.

BRIEF FACTS

5. The Applicant herein seeks to place the following relevant facts chronologically for the kind perusal of this Hon'ble Tribunal, which have a material bearing on the issue at hand and are imperative for the purposes of the adjudication of the present Application:

i. That in September 2006, the MOEF issued the parent EIA Notification dated 14.09.2006 *("hereinafter referred to as EIA, 2006")* under Section 3 of the Environment (Protection) Act, 1986.

A Copy of the Relevant Extracts of the EIA Notification dated 14.09.2006 issued by the MOEF is enclosed herewith as **Annexure A-1 [at page 51 to 74].**

ii. The Hon'ble Supreme Court in the case of *Deepak Kumar v. State of Haryana*, 2012 (4) SCC 629 stated that unregulated mining and the extraction of alluvial material from and within, and near a streambed has a direct impact on the stream's physical habitat characteristics and affects its biodiversity and ought to be conducted in an environmentally sustainable manner. Lack of proper planning and sand management causes disturbance of marine ecosystem and also upset the ability of natural marine processes to replenish the sand.

iii. The MOEF issued Notification dated 15.01.2016 and the Sustainable Sand Mining Management Guidelines, 2016 *(hereinafter referred to as 'SMMG, 2016')* by *inter-alia* mandating the '*Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minerals',* and an *Annual Replenishment Study.*

This District Survey Report (DSR) was to be prepared by a newly constituted District Environmental Impact Assessment Authority *(hereinafter referred to as "DEIAA")* and District Expert Appraisal Committee *(hereinafter referred to as "DEAC")* at the District level in each State.

The SSMG, 2016 *interalia* highlighted the dangers of excessive River Sand mining and that the same ought to be restricted to/ equal to the rate of replenishment, so as to ensure that the natural equilibrium of the stream is not disturbed.

A Copy of the Notification dated 15.01.2016 issued by the MOEF is enclosed herewith as **Annexure A-2 [at page 75 to 86].**

A Copy of the Relevant Extracts of the Sustainable Sand Mining Management Guidelines ***[SSMG, 2016]*** issued by the MOEF is enclosed herewith as **Annexure A-3 [at page 87 to 137].**

iv. This Hon'ble Tribunal, Principal Bench vide its Judgment dated 13.09.2018 in the case titled *Satender Pandey v. UOI*, partly quashed the Notifications dated 15.01.2016 and 20.01.2016, including quashing of the newly formed DEAC & DEIAA.

v. The MOEF in supplement and in addition to the Sustainable Sand Mining Management Guidelines, 2016 issued the Enforcement & Monitoring Guidelines for Sand Mining, 2020 *[hereinafter referred to as 'EMGSM, 2020']*.

The EMGSM, 2020 along with highlighting the requisite judicial decisions passed by this Hon'ble Tribunal wherein the importance of DSR has been reflected, enumerated the parameters of preparing a DSR, benefits of preparation of a DSR and the importance of a Replenishment study for Riverbed mining which is mandatorily required to nullify the

adverse impacts arising due to excessive sand extraction, in Clauses 4.0, 4.1.1, 4.2, 4.3, 5.0, 5.1 etc.

A Copy of the Enforcement & Monitoring Guidelines for Sand Mining, 2020 ***[EMGSM, 2020]*** issued by the MOEF is enclosed herewith as **Annexure-A-4 [at page 138 to 220].**

vi. This Hon'ble Tribunal, EZ, vide its detailed Judgment dated 14.10.2020 in the case titled *'Pawan Kumar v. State of Bihar'* directed that DSRs be prepared by an Expert accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India (NABT/QCCI) in terms of the MOEF OM dated 16.03.2010, and thereafter the same be verified by the District Magistrate, and lastly evaluated and appraised by the Expert bodies i.e. the SEAC/ SEIAA.

vii. A Joint Committee Report *(comprising of the MOEF/ CPCB & SEIAA, Karnataka)* dated 10.06.2021 in OA No. 194 of 2020 (SZ) titled as '*Sarvabhoum Bagali v. State of Karnataka'* while discussing the impact on environment on account of use of semi-mechanized machinery for the purpose of sand mining noted that it causes dust pollution, noise pollution and water pollution and hence, recommended as follows:

"The usage of semi mechanized, or mechanized mining may be permitted as per the Sustainable Sand Mining Guidelines, 2016, only in case of the blocks where the depth of sand deposition is more than three meters and depth of mining can be permitted more than one meter. Mining up to one-meter should be by manual only."

The said Report of the Joint Committee Report was accepted by this Hon'ble Tribunal vide its Judgment dated 15.09.2022 in OA No. 194 of 2020 (SZ).

A Copy of the Joint Committee Report dated 10.06.2021 in OA No. 194 of 2020 (SZ) titled as '*Sarvabhoum Bagali v. State of Karnataka'* is enclosed herewith as **Annexure-A-5 [at page 221 to 234].**

viii. The Hon'ble Supreme Court vide its Judgment dated 10.11.2021 in *Pawan Kumar v. State of Bihar*, modified the procedure for preparation of a DSR, and directed that the same be prepared by a Sub-Divisional Committee comprising of **(i)** Sub-Divisional Magistrate, **(ii)** Officers from Irrigation Department **(iii)** SPCB **(iv)** Forest Department **(v)** Geology or Mining Officer and directed that the EMGSM, 2020 issued by the MOEF be strictly adhered to while preparing District Survey Reports. Such DSR was to be then evaluated and appraised by Expert bodies i.e. SEAC/SEIAA.

A Copy of the Judgment dated 10.11.2021 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661/2020, *State of Bihar v. Pawan Kumar* is enclosed herein and marked as **Annexure A-6 [at page 235 to 241].**

ix. That pursuant to the aforesaid directions passed by the Hon'ble Supreme Court in *Pawan Kumar,* DSR's were prepared in the State of Bihar including the Impugned DSR of District Jamui. The Impugned DSR for District Jamui was uploaded on the District Administration website on 3.03.2022.

x. The SEAC, Bihar vide MOM 25.03.2022 evaluated the Impugned DSR for District Jamui and suggested 18 observations/corrections. The SEAC, Bihar *interalia* observed as under:

> *"(f) The DSRs should be places in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. <u>The comments so received shall be placed before the concerned sub-divisional committee for active</u>*

consideration for necessary corrections, if any. Only after such consultation of the DSR should be submitted before the SEAC.

A Copy of the Relevant extracts SEAC, Bihar MOM dated 25.03.2022 is enclosed herein and marked as **Annexure A-7 [at page 242 to 246].**

xi. The Impugned DSR for District Jamui was advertised in Newspapers by the District Authorities on 3.04.2022.

xii. This Hon'ble Tribunal, Principal Bench in the case of *Raj Kumar v. State of U.P., OA No. 140/2021*, vide its Judgment dated 6.05.2022 held that a Replenishment Study is mandatorily to be conducted prior to e-Auctions in future and also for all current leases.

The Hon'ble Supreme Court vide its Order dated 29.11.2022 dismissed the said Civil Appeal No. 8035-8036 of 2022 filed by the State of UP being aggrieved by the abovementioned Judgment dated 6.05.2022, and clarified that the State authorities shall undertake Replenishment studies for both years i.e. year ending 31.12.2021 as well as the current year ending 31.12.2022.

A Copy of the Judgment dated 06.05.2022 passed by this Hon'ble Tribunal, Principal Bench in the case titled *'Raj Kumar v. State of U.P.', OA No. 140/2021* is enclosed herein and marked as **Annexure A-8 [at page 247 to 255].**

xiii. That SEIAA, Bihar vide MOM dated 20.05.2022 erroneously approved the Impugned DSR for District Jamui, Bihar, without without it being recommended by SEAC, Bihar and in the absence of a Replenishment Study.

A Copy of the SEIAA, Bihar MOM dated 20.05.2022 of SEIAA, Bihar approving the Impugned DSR for District Jamui, Bihar is enclosed herein and marked as **Annexure A-9 [at page 256 to 259].**

A Copy of the Impugned DSR for District Jamui, Bihar is enclosed herein and marked as **Annexure A-10 [at page 260 to 402].**

xiv. The Hon'ble Supreme Court vide Order dated 30.05.2022 in *State of Bihar v Pawan Kumar*, Civil Appeal No. 3661 of 2020 recorded the objections raised against the merits and correctness of DSR's that were prepared in State of Bihar and permitted the parties to take recourse as available in law. Further the Hon'ble Supreme Court held that there should be no impediment for the State of Bihar to proceed further for inviting tenders or auction of sand blocks in accordance with the DSRs which have already been approved.

The Relevant portion of the Order dated 30.05.2022 reads as under:

"Though it is contended by Shri Dalmia and Shri Mishra that the said DSRs are not free from flaws, we do not find necessary to go into the said issues at this stage. The parties are always at liberty to take recourse to such remedies as are available in law…"

A Copy of the Order dated 30.05.2022 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'* is enclosed herein and marked as **Annexure A-11 [at page 403 to 406].**

That subsequently, certain individuals filed various proceedings before this Hon'ble Tribunal (EZ Bench) being OAs No. 130,131 & 136 of 2022, challenging the DSRs for various Districts on certain grounds including that the said DSRs have been prepared without conducting a Replenishment Study and are in non-compliance of the Sustainable Sand

Mining Guidelines, 2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020. That during the pendency of the OAs before the Hon'ble NGT, EZ, the State of Bihar filed IA No. 137877 & 137884/2022 before the Hon'ble Supreme Court in CA No. 3661 of 2020, and the Hon'ble Court vide its Order dated 19.09.2022 stayed the proceedings before the Hon'ble Tribunal, EZ in OAs No. 130,131 & 136 of 2022.

It is humbly submitted that under the aegis of the aforesaid order, the DSRs prepared in respect of any of the districts in the State of Bihar could not have been challenged before any forum including this Hon'ble Tribunal, as the veracity and correctness of the same were a subject matter before the Hon'ble Supreme Court. Additionally, no Court or authority would have entertained a challenge to any DSR since the same were prepared on the orders passed by the Hon'ble Supreme Court and further, that the Order dated 19.09.2022 had stayed the proceedings before this Hon'ble Tribunal involving a challenge to DSRs prepared in various three districts in the State of Bihar.

A Copy of the Order dated 19.09.2022 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'* is enclosed herein and marked as **Annexure A-12 [at page 407 to 408].**

xv. That the Hon'ble Supreme Court vide its Order dated 26.04.2023 passed in *'In re: T.N. Godavarman Thirumulpad'*, *2023 SCC Online SC* 504 has held that Mining within an area of 1 km from the boundary of a National Park and Wildlife Sanctuary shall not be permissible.

A Copy of the Judgment dated 26.04.2023 passed by the Hon'ble Supreme Court in *'In re: T.N. Godavarman Thirumulpad'*, *2023 SCC Online SC* 504 is enclosed herein and marked as **Annexure A-13 [at page 409 to 440].**

xvi. That the Hon'ble Supreme Court vide its Judgment dated 08.05.2025 in *'State of Uttar Pradesh v Gaurav Kumar,' 2025 SCC OnLine SC 1069* re-iterated that DSR is a document of seminal importance and the procedure prescribed under the EIA, 2006 (Appendix X) is to be meticulously followed.

xvii. That SEAC, Bihar vide MOM dated 9.08.2023 recommended grant of EC to Sand Ghats situated on Kiul River at Lakhisarai Cluster II (Block No. 11 and 12) and at Block No. 5, District Lakhisarai. That SEAC in both cases imposed the following additional condition:

"Project Proponent should undertake sand mining limited to 1 meter (one meter) depth by manual excavation to check over-exploitation beyond one meter depth"

Further, the specific condition No. 5 applicable to all Sand Ghats in the Lakhisarai District stated that *"Only manual method shall be used for the River Bed Mining",* which substantiates the submission of the Applicant that manual method of mining has to strictly be observed in cases where the permitted mining depth is upto 1m.

A copy of the Relevant Extracts of the SEAC, Bihar MOM dated 09.08.2023 is enclosed herewith as **Annexure-A-14 [at page 441 to 444].**

xviii. That SEIAA, Bihar vide MOM dated 22.08.2023 accepted the recommendation of SEAC, Bihar and granted ECs to the abovementioned sand ghats with the additional specific condition that mining should be undertaken by manual excavation only.

It is pertinent to mention that in the EC dated 28.8.2023 which were issued in respect of the abovementioned sand ghats, the Condition that *"Only*

manual method of mining shall be used for River Bed Mining" has been highlighted in bold giving impetus to the recommendation of SEAC as well as the submission of the Applicant herein that only manual method of mining is permissible for mining upto 1m depth so as to prevent over exploitation beyond the depth of 1m.

A Copy of the Relevant Extracts of the SEIAA, Bihar MOM dated 22.08.2023 is enclosed herewith as **Annexure-A-15 [at page 445 to 447].**

A Copy of the EC dated 28.08.2023 issued by SEIAA, Bihar is enclosed herewith as **Annexure-A-16 [at page 448 to 457].**

A Copy of the EC dated 28.08.2023 issued by SEIAA, Bihar is enclosed herewith as **Annexure-A-17 [at page 458 to 467].**

xix. The Director, Mines & Geology Department vide letter dated 7.12.2023 clarified to SEIAA, Bihar that in case of objections in giving permission to semi-mechanized operation, SEIAA should consider giving EC with the permission of manual operation in other cases of Sand Mining upto 01meter depth.

A translated copy of the letter dated 7.12.2023 sent by Respondent No. 2, Director, Mines & Geology Department to Respondent SEIAA, Bihar is enclosed herein and marked as **Annexure A-18 [at page 468].**

xx. The Hon'ble Supreme Court vide its Judgment dated 08.05.2025 in *'State of Uttar Pradesh v Gaurav Kumar,' 2025 SCC OnLine SC 1069* has re-iterated that DSR is a document of seminal importance and the procedure prescribed under the EIA, 2006 (Appendix X) is to be meticulously followed.

xxi. The Hon'ble Supreme Court vide its Judgment dated 22.08.2025 in '*UT of J&K Versus Raja Muzaffar Bhat'* while highlighting the need and importance of a Replenishment study has held that the absence of a Replenishment Study renders a DSR fundamentally defective.

The Relevant paras of the Judgment dated 22.08.2025 are as under:

"29. From the foregoing analysis, it is apparent that in light of Guidelines, 2016 and the Guidelines, 2020, the absence of a replenishment study renders a DSR fundamentally defective. These guidelines categorically require that any assessment of mineable mineral quantity must be premised on scientific estimation of replenishment rates, failing which the DSR lacks the foundational data necessary to determine sustainable extraction limits.

32. Without a proper study of the existing position of the riverbed and its sustainability for further sand mining, grant of environmental clearances would be detrimental for the ecology. It has therefore been held that a detailed study leading to a preparation of the replenishment report is an integral part of the DSR. If the DSR becomes the foundation for consideration of an application for environmental clearance, then it is compelling to ensure replenishment studies are undertaken in advance and the report forms an integral part of the DSR.

33. In view of the existing legal regime that mandates preparation of replenishment report in a scientific manner and such a report forming an integral part of the District Survey Report, we hold that a District Survey Report without a proper replenishment study is equally untenable"

A Copy of the Judgment dated 22.08.2025 passed by the Hon'ble Supreme Court in *State (UT of J&K) v. Raja Muzaffar Bhat, 2025 SCC OnLine SC 1789* is enclosed herein and marked as **Annexure A-19 [at page 469 to 490].**

xxii. That Mines and Geology Department, Government of Bihar in pursuance to DSR prepared for District Jamui issued the Impugned NIT dated 02.04.2026 seeking to Auction 9 blocks situated in District Jamui, Bihar which includes a large Mining lease area of 42.2 hectare namely, Block-

9, Mauz Manjhagaya, Block Khaira (as per the DSR itself) is within 0.3 km of a notified Wildlife Sanctuary. It is submitted that proximity to WLS is in violation of 1 km ban imposed by the Hon'ble Supreme Court by Judgment dated 26.04.2023 passed in *'In re: T.N. Godavarman Thirumulpad'*.

A Copy of the Impugned E-Auction Notice dated 2.04.2026 issued by the Respondent No. 2, Mines and Geology Department is enclosed herein and marked as **Annexure A-20 [at page 491 to 508].**

xxiii. The Applicant herein filed IA No. 85385 of 2026 filed before the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 seeking the following directions:

"a) Pass an Order quashing the DSR for District Jamui, Bihar and the NIT dated 15.01.2026 for being in contravention of the Sustainable Sand Mining Guidelines, 2016 and the Enforcement& Monitoring Guidelines for Sand Mining, 2020 and having being prepared without conducting a Replenishment study;

b) Alternatively, permit the Applicant herein to challenge the DSR for District Jamui, Bihar along with the NIT dated 15.01.2026 before the Hon'ble NGT, EZ;"

A Copy of the IA No. 85385 of 2026 filed by the Applicant herein in Civil Appeal No. 3661-3662 of 2020 before the Hon'ble Supreme Court is enclosed herein and marked as **Annexure A-21 [at page 509 to 521].**

xxiv. The Hon'ble Supreme Court vide Order dated 8.04.2026 disposed of the Civil Appeal No. 3661 of 2020 and directed that the decision of this Hon'ble Tribunal dated 14.10.2020 in OA No. 40 of 2020 (EZ) and OA No. 57 of 2020 shall stand modified as per the directions passed by the Hon'ble Supreme Court on 10.11.2021. The Hon'ble Supreme Court

further granted liberty to the Applicant to withdraw IA No. 85385 of 2026 to avail remedies to address his grievances.

A Copy of the Order dated 8.04.2026 passed by the Hon'ble Supreme Court in Civil Appeal No. 3661-3662 of 2020 being *'State of Bihar v Pawan Kumar'* is enclosed herein and marked as **Annexure A-22 [at page 522 to 527].**

xxv. Hence the present OA.

GROUNDS

The present Application is filed on the following among other grounds:

A. Because the Impugned DSR is *non-est* and void in law being approved by SEIAA, Bihar vide its MOM dated 20.05.2022 without any application of mind, in a perfunctory manner without it having been finally appraised or recommended by SEAC, Bihar.

The SEAC, Bihar vide its MOM dated 25.03.2022 had examined the draft DSR and made 18 suggestive corrections to be made in the Draft DSR which *interalia* included the condition that the DSR has to be placed in the public domain for receiving the comments of the general public and after which it has to be submitted to the SEAC, Bihar again with all the necessary corrections.

In furtherance of the above directions, though the Draft DSR was uploaded on the public portal on 3.03.2022 and advertised in the newspapers on 3.04.2022, the same was however never placed before the SEAC for approval with the necessary corrections, as is evident from the SEIAA, Bihar MOM dated 20.05.2022. Ergo, the Impugned DSR was never recommended and/or approved by the Expert body, SEAC Bihar, in absence of which the DSR Jamui could not have been approved by the SEIAA, Bihar. Thus, the Impugned DSR ought to be quashed on this

ground alone having been in operation without following the due procedure for approval of a DSR as per the directions of the Hon'ble Supreme Court and this Hon'ble Tribunal in *Pawan Kumar.*

B. Because the Impugned DSR has been admittedly prepared without conducting a Replenishment study. It is submitted that a Replenishment Study is a pre-condition, conditional precedent and a *sine qua non* before preparation of a DSR.

It is pertinent to mention that the Impugned DSR itself states as under:

> *"Once replenishment study conducted table of estimation of sand resources in pre- monsoon and post-monsoon period for the sand deposit with respect to the reduce level will be submitted minable depth is being taken only 1-meter bgl as replenishment study not carried during last three years"*
>
> *"There are 48 sand Ghats recognised in this district…Also need to conduct replenishment study as per norm of Enforcement & Monitoring Guidelines for Sand Mining 2020"*

That the Hon'ble Supreme Court vide Judgment dated 22.08.2025 in *'UT of J&K Versus Raja Muzaffar Bhat'* has held that a Replenishment Study forms the foundational basis, and an integral part of a DSR, and that a DSR without a proper Replenishment Study is untenable. It was further held that the absence of a Replenishment Study renders a DSR fundamentally defective.

C. Because without prejudice to the submission that the SEAC, Bihar has not recommended or approved the Impugned DSR and that no Replenishment Study was conducted in the District for a period of last three years, the SEIAA without any rationale, explanation or application of mind approved the Impugned DSR.

D. Because SSMG, 2016 envisaged for an Annual Replenishment Study whereas the EMGSM, 2020 stipulated for 3-4 Surveys (pre & post

monsoon) every year to ascertain the correct quantities of the sand replenished.

It is submitted that no Replenishment studies, pre or post monsoon had been done by the State of Bihar /Sub-division Committee/ SEAC/ SEIAA, Bihar before preparation of the Impugned DSR.

E. Because the MOEF Notification dated 15.01.2016 [Appendix X] along with the SSMG, 2016 and EMGSM, 2020 emphasis the importance of conducting a Replenishment study Annually for Riverbed mining which is mandatorily required to nullify the adverse impacts arising due to excessive sand extraction. A Replenishment study is a core requirement for preparation of a DSR.

MOEF Notification dated 15.01.2016 [Appendix X]

The Main objective of the preparation of District Survey Report (as per the Sustainable Sand Mining Guideline) is to ensure the following

Identification of areas of aggradation or deposition where mining can be allowed; and identification of area of erosion and proximity to infrastructures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.

Enforcement & Monitoring Guidelines for Sand Mining, 2020

[EMGSM, 2020]

5.0 Replenishment Study

The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessing sand extraction… It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river

stretch, it is imperative to have a study of replenishment of material during the defined period.

It is submitted that it is incomprehensible as to how the Mineable quantities have been calculated and mentioned in the Impugned DSR without conducting a Replenishment Study.

F. Because this Hon'ble Tribunal vide its Judgment dated 19.07.2023 in *Anuj Singh v. State of UP,* OA No. 284 of 2023 after appreciating the above provisions in the SSMG, 2016 & EMGSM, 2020, directed the State of UP (Mining department) to *'ensure that quantity of minerals directed to be mined will not exceed the quantity under replenishment study'.*

G. Because permitting the lease holders to mine without a Replenishment study results in illegal mining, in as much as, the Mining Department has no basis to calculate the amount of Sand excavated by the Lease holder, not having the replenishment rate of quantity. Furthermore, as per the MOEF Sand Mining Guidelines of 2016 and 2020 only the replenished quantity of sand is permitted to be mined as the excess quantity i.e. over and above the replenished rate amounts to excessive, disproportionate and unsustainable mining which would invariably have a serious and direct adverse impact on the River's physical habitat characteristics, including bed elevation, substrate composition, stability, velocity, depth, turbidity, sediment transport, apart from causing irreparable harm to the biodiversity and result in flood risk and loss of habitat.

H. Because this Hon'ble Tribunal vide its recent Judgment dated 22.04.2025 passed in OA No. 532 of 2023 being *'Balbir Sandhu v Union of India'* directed that *"Quantity of minerals directed to be mined should not exceed the quantity under replenishment study and should be limited to auctioned as well as sustainably permissible quantity."*

I. Because the Impugned DSR of District Jamui has been prepared without adherence to the EMGSM, 2020 Guidelines issued by the MOEF. The Impugned DSR of District Jamui is not prepared in terms of Clause 4.1.1, 4.3, 5.0 etc of the EMGSM, 2020 which is demonstrated in the Table mentioned in the Synopsis to this OA, and not repeated herein for the sake of brevity.

The Hon'ble Supreme Court in the case of *Pawan Kumar* held that the EMGSM, 2020 Guidelines should be strictly adhered to while preparing DSRs. Further, in the recent Judgment of '*State of UP v Gaurav Kumar'*, *2025 SCC OnLine SC 1069* the Hon'ble Apex Court reiterated that DSR is a document of seminal importance and the procedure prescribed under the EIA, 2006 (Appendix X) is to be meticulously followed.

J. Because the Impugned DSR merely provides for a general description of the rivers and sand availability without demonstrating any actual calculation of mineral potential or River audit for sustainable Sand Mining. No field investigations, Geomorphological assessment, Catchment area geology, Sediment transport analysis is shown to be carried out before preparation of the Impugned DSR.

K. Because the SEAC/SEIAA, Bihar being expert bodies ought to have appraised the Impugned DSR after ensuring that it complies with the SSMG, 2016 and EMGSM, 2020. The Hon'ble Supreme Court in ***'Bengaluru Development Authority v Sudhakar Hegde & Ors'***, (2020) 15 SCC 63 has discussed the duties of the expert bodies and held as under:

"88. The reasons furnished by the SEAC must be assessed with reference to the norm that it is required to submit reasons for its recommendation. The analysis by the SEAC is, to say the least, both perfunctory and fails to disclose the reasons upon which it recommended to the SEIAA the grant of EC for the PRR project. The SEAC proceeds merely on the reply furnished by the appellant to the queries raised by the SEAC at its 115th

meeting dated 11-08-2014 to 12-08-2014. In this view, the procedure followed by the SEAC suffers from a non- application of mind.

"182. ... a duty is cast upon the EAC or SEAC as the case may be to apply the cardinal principle of Sustainable Development and Principle of Precaution while screening, scoping, and appraisal of the projects or activities. While so, it is evident in the instant case that the EAC has miserably failed in the performance of its duty not only as mandated by the EIA Notification, 2006, but has also disappointed the legal expectations from the same. For a huge project as the one in the instant case, the consideration for approval has been done in such a cursory and arbitrary manner without taking note of the implication and importance of environmental issues. ...Thus, the EAC has not conducted itself as mandated by the EIA Notification, 2006 since it has not made proper appraisal by considering the available materials and objections in order to make proper evaluation of the project before making a recommendation for grant of EC."

The Court held that the EAC had not conducted a proper appraisal given its failure to consider the available material and objections before it. The EAC had thus failed to conduct a proper evaluation of the project prior to forwarding to the regulatory authority its recommendation.

"92. The SEAC, as an expert body, must speak in the manner of an expert. Its remit is to apply itself to every relevant aspect of the project bearing upon the environment and scrutinise the document submitted to it. The SEAC is duty bound to analyse the EIA report. Apart from its failure to repudiate a process conducted beyond the prescribed time period stipulated by the MoEF-CC, the SEAC failed to apply its mind to the abject failure of the appellant in conducting the EIA process leading upto the submission of the EIA report for the grant of EC. The SEAC is not required to accept either the EIA report or any clarification sent to it by the project proponent. In the absence of cogent reasons by the SEAC for the recommendation of the grant of EC, the process by its very nature, together with the outcome, stands vitiated.

97. The SEAC, as an expert body abdicated its role and function by relying solely on the responses submitted to it by the appellant and failing to comply with its obligations under the OMs issued by the MoEF-

CC from time to time. In failing to provide adequate reasons for its recommendation to the SEIAA for the grant of an EC, it failed in its fundamental duty of ensuring both the application of mind to the materials presented to it as well as the furnishing of reasons which it is mandated to do under the 2006 Notification."

L. Because 7 out of 48 sand ghats that have been proposed in the Impugned DSR are within 1 Km of Wild Life Sanctuary and Protected Forest Area as demonstrated in the Table below:

S. NO.	**RIVER**	**SAND GHAT**	**DISTANCE FROM WILDLIFE SANCTUARY/PROTECTED FOREST AREA (IN KM)**
1.	Kuil River	Block-1	0.1
2.		Block-3	0.7
3.		Block-15	0.5
4.	Barnar River	Block-8	0.5
5.		Block-9	0.9
6.	Sukhnar River	Block-1	0.4
7.	Gajhi River	Block-3	0.6

M. Because as per Clause 4.3(r) of the EMGSM, 2020, only 60% of the minerals in the Mining lease area is permitted to be extracted, whereas in the Impugned DSR the entire mineral quantity present in the sand ghats upto a depth of 1m is recommended as the total quantity to be auctioned. It is submitted that such permission to mine the entire available Quantity is violative of the Doctrine of Sustainable Development, various Judgments passed by the Hon'ble Supreme Court and the Sand Mining Guidelines issued by the MOEF *[SSMG, 2016 & EMGSM, 2020]*.

N. Because the Impugned e-Auction Notice dated 2.04.2026 is issued without conducting a prior Replenishment Study in the year 2025, in violation of the directions passed by this Hon'ble Tribunal in *Raj Kumar.*

O. Because the Impugned e-Auction Notice dated 02.04.2026 is to be quashed on the sole ground that one of the sand ghats being auctioned i.e. Block-9, Mauz Manjhagaya, Block Khaira, District Jamui admeasuring 42.2 ha is merely 0.3 Km away from a Wildlife Sanctuary, where mining is per se prohibited in terms of Judgment dated 26.04.2023 passed by the Hon'ble Apex Court in *'In re: T.N. Godavarman Thirumulpad'*.

P. Because the Impugned Auction Notice has been issued for a period of 5 years, whereas it ought to be co-terminus with the validity of the Impugned DSR. It is submitted that new leases may or may not be identified/recommended in the new DSR which will lead to confusion and invariably result in overlapping with the existing mining leases. That the identification of new mining leases is more relevant in the context of the District Jamui, in as much as, all the 6 rivers where the leases are identified, are non-perennial in nature.

Q. Because the Impugned DSR itself stipulates that the maximum depth of permissible Mining shall be upto 1m only. It is submitted that since the maximum permissible mining is restricted to a depth 1m, the same must necessarily be done manually, as 1m depth mining cannot accommodate the use of mechanized methods of mining.

R. Because the rationale behind permitting Mining upto the depth of 1m by Manual methods only is that the bucket size of the smallest JCB would excavate the mineral below the 1m depth, which would invariably attract the risk of excessive mining beyond permissible limits causing detriment and severe damage to the riverine environment.

S. Because mining upto a depth of 1m by semi-mechanized mode would invariably attract the risk of excessive mining beyond permissible limits causing detriment to the environment and a loss to the state exchequer. It is submitted that the method of mining upto a depth of 1m has to be manual in order to prevent excessive and illegal mining, and protect the riverine environment.

T. Because the SEAC, Bihar and SEIAA, Bihar itself vide its MOM dated 9.08.2023 and 22.08.2023 respectively granted EC's dated 28.08.2023 to Sand Ghats situated on the river Kiul in the neighboring District of Lakhisirai imposed the following additional condition:

"Project Proponent should undertake sand mining limited to 1 meter (one meter) depth by manual excavation to check over-exploitation beyond one meter depth"

"Only manual method shall be used for the River Bed Mining"

It is submitted that the above substantiates the submission of the Applicant that manual method of mining has to strictly be observed in cases where the permitted mining depth is upto 1m.

U. Because the SSMG, 2016 states that "*Depending upon the location, thickness of sand, deposition, agricultural land/Riverbed, the method of mining may be manual, semi-mechanized or mechanized; however, manual method of mining shall be preferred over any other method*." Thus, the condition to permit mining by Manual method was obviously imposed in the neighboring district of Lakhisirai (River Kiul) considering that the Mining pertains to River bed and the permissible depth is 1m (as approved in the DSR) instead of the maximum 3m depth in other Districts of Bihar.

V. Because the Director, Mines & Geology Department vide letter dated 7.12.2023 has itself clarified to SEIAA, Bihar that SEIAA should

consider giving EC with the permission of manual operation in other cases of Sand Mining upto 01 meter depth, giving impetus to the Applicant's submission that mining upto 1 meter depth ought to be done by manual excavation.

W. Because the Hon'ble Supreme Court in *NHAI v. Aam Aadmi Lokmanch, (2021) 11 SCC 566* has held that *"The power and jurisdiction of the NGT under Sections 15(1)(b) and (c) are not restitutionary, in the sense of restoring the environment to the position it was before the practise impugned, or before the incident occurred. The NGT's jurisdiction in one sense is a remedial one, based on a reflexive exercise of its powers. In another sense, based on the nature of the abusive practice, its powers can also be preventive."*

X. Because the consequence of not quashing and setting aside the Impugned faulty and defective DSR and the subsequent Auction Notice would invariably result in excessive, disproportionate and unsustainable mining which would have a serious and direct adverse impact on the River's physical habitat characteristics, including bed elevation, substrate composition, stability, velocity, depth, turbidity, sediment transport, apart from causing irreparable harm to the biodiversity and result in flood risk and loss of habitat.

LIMITATION

That the instant Application is being filed within the period of limitation as prescribed under the provisions of Section 14 and 15 of the National Green Tribunal Act, 2010 in as much as the Hon'ble Supreme Court vide its Order dated 19.09.2022 stayed the proceedings filed before this Hon'ble Tribunal, EZ in OAs No. 130,131 & 136 of 2022 wherein DSRs for various Districts in the State of Bihar had been challenged.

It is humbly submitted that under the aegis of the aforesaid Order, the DSRs prepared in respect of any of the districts in the State of Bihar could not have been challenged before any forum including this Hon'ble Tribunal, as the veracity and correctness of the same were a subject matter before the Hon'ble Supreme Court. Additionally, no Court, Tribunal or authority would have entertained a challenge to any DSR since the same were prepared on the orders passed by the Hon'ble Supreme Court and further, that the Order dated 19.09.2022 had stayed the proceedings before this Hon'ble Tribunal involving a challenge to DSRs prepared in in the State of Bihar. The Hon'ble Supreme Court vide Order dated 8.04.2026 disposed of the Civil Appeal No. 3661 of 2020 and granted liberty to the Applicant herein to avail remedies i.e. including approaching this Hon'ble Tribunal.

The Applicant submits that the period when the issue of Challenge to DSRs in the State of Bihar was pending before the Hon'ble Supreme Court ought to be excluded for the purposes of limitation.

Be that as it may, the Impugned DSR is still in operation and thus the cause of action is continuing and subsisting. Further, the challenge to the Impugned e-Auction Notice dated 2.04.2026 is within the period of six months as prescribed by the Section 14 of the NGT Act, 2010 and without prejudice to the above submission, the principle severability can be exercised in case thereof.

PRAYER

In light of the above stated facts and circumstances, it is most respectfully prayed that this Hon'ble Tribunal may be pleased to pass the following orders:

i. Pass an Order quashing and setting aside the Final DSR for District Jamui, Bihar being in flagrant violation of the SSMG, 2016 and EMGSM, 2020 and Judgments passed by the Hon;ble Supreme Court and this Hon'ble Tribunal; and

ii. Pass an Order directing the Respondents to prepare a fresh DSR for District Jamui, Bihar after conducting a Replenishment study and in strict compliance of the SSMG, 2016 & EMGSM, 2020 and other applicable laws; and

iii. Pass an Order restraining the Respondents to take any subsequent action (including Auctioning of Mining leases) pursuant to the Impugned DSR; and

iv. Pass an Order quashing the Impugned NIT dated 02.04.2026 issued by the Respondent No. 2, Mines and Geology Department for being in contravention of the Sustainable Sand Mining Guidelines, 2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020 and having being issued without conducting a Replenishment study and including auctioning of areas within 1km of a notified Wildlife Sanctuary/ Eco-Sensitive Zone; and

v. Pass an Order directing the Respondents to take strict action against Mining lease holders conducting mining operations by using heavy/ semi-mechanized machinery in District Jamui where the permissible depth for mining is 1m;

vi. Pass any other orders as the Hon'ble Tribunal may deem fit and proper in the facts and circumstances of the instant case.

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

FILED BY:



[VANSHDEEP DALMIA]
ADVOCATE FOR THE APPLICANT
206, Jor Bagh, New Delhi-110003
Email id: vanshdeepdalmia@gmail.com
M. No. 9810077085

Filed on:01.05.2026
Place: Kolkata

WELFARE STAMP ₹25 बिहार BIHAR पच्चीस रुपये Rs. Twenty Five

WELFARE STAMP ₹25 बिहार BIHAR पच्चीस रुपये Rs. Twenty Five

BIHAR COURT FEE ₹10 BRECR042C260400007462 04 Apr 2026

DIST BAR ASSOCIATION JAMUI B.M.R.E. ESTD. 1884 RS-25/-

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,
EASTERN BENCH, KOLKATA

ORIGINAL APPLICATION NO. OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI ...APPLICANT

VERSUS

STATE OF BIHAR & ORS ...RESPONDENTS

AFFIDAVIT

I, Sanjeev Kumar Bharti S/o Brahamdev Ydaav, R/o Tola Banjama, Sahiya, Jamui, Jhajha, Bihar - 811308, do hereby solemnly affirm and declare as under:

1. That I am the Applicant in the above Original Application and I am well conversant with the facts and circumstances of the case and competent to depose the present Affidavit.
2. That the contents of the accompanying OA (including the Synopsis, List of dates at page ___ to ___ and OA from para 1 to ___ at page ____to ___) and the accompanying applications have been drafted by my counsel under my instructions and after going through and carefully understanding the same, I state that same to be true and correct to the best of my knowledge and belief, based on records of the case, and the legal submissions made therein are based on legal advise which I believe to be true. No part thereof is false and nothing material has been concealed therefrom.
3. That annexures marked as Annexure A-1 to A-___ enclosed are true and/or typed and/or true and typed copies of their respective originals.
4. That the averments of facts stated herein above are true to my knowledge, no part of it is false and nothing material has been concealed therefrom.

3305 28/04/26

Aadhar No-3222 0526 6284

संजीव कुमार भारती

DEPONENT

VERIFICATION:-

Verified at JAMUI on this 28 day April 2026, that the contents of the present affidavit are true and correct to my knowledge, no part of it is false and nothing material has been concealed therefrom.

संजीव कुमार भारती

DEPONENT

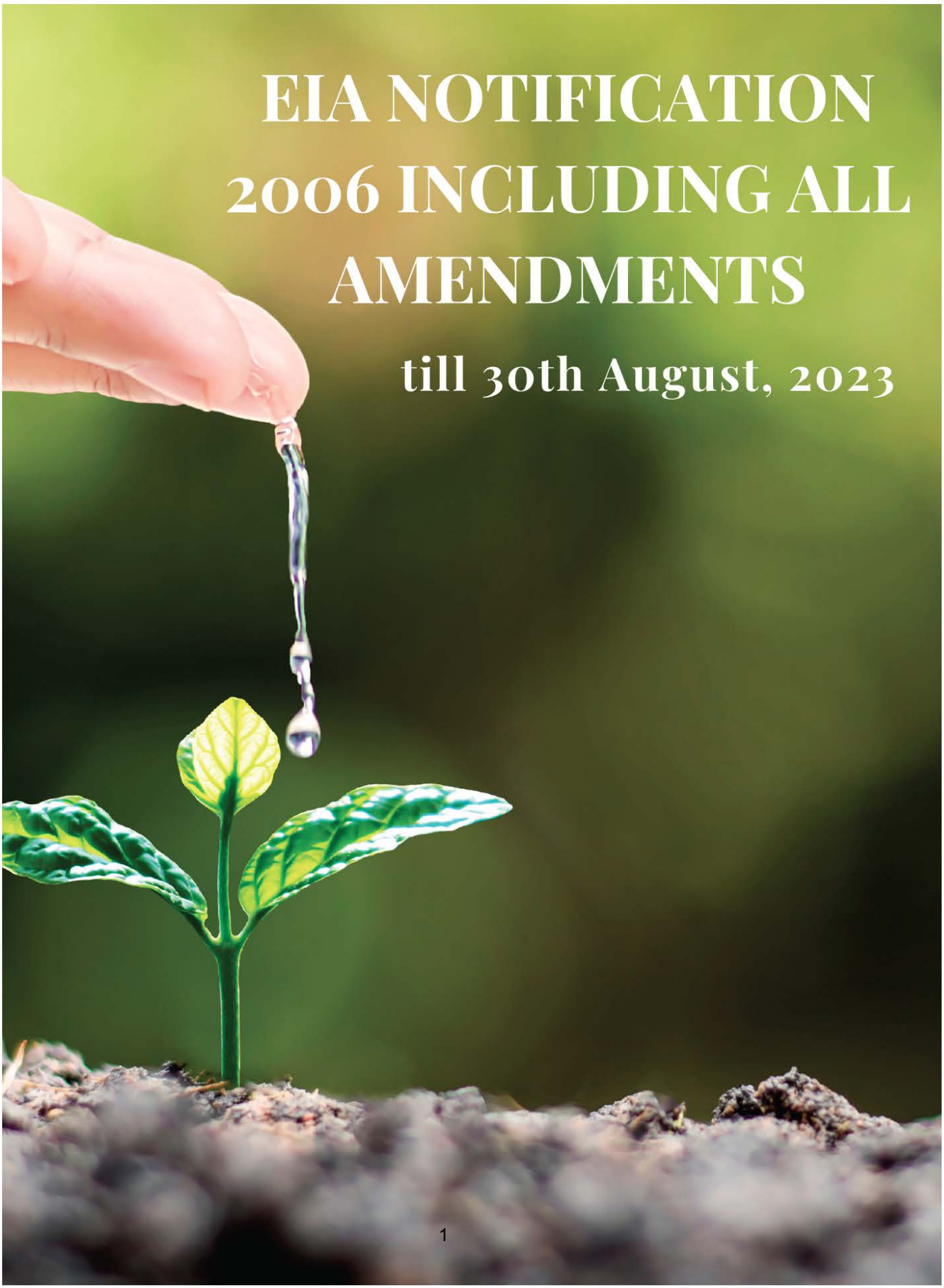
Subhash Chandra Singh
NOTARY (A.D.V.)
Civil Court, Jamui

Sri/Smt. Sanjeev Kumar Bharti
Who is identified by Sri..... Advocate Solemnly affirmed and declared before me.

Subhashchandra Singh Adv
28/4/26

CamScanner

ANNEXURE A-1


EIA NOTIFICATION
2006 INCLUDING ALL
AMENDMENTS
till 30th August, 2023

(Disclaimer: This document has incorporated subsequent amendments of the principal notification issued up to August 2023 and status before Courts / Tribunal. However, various Office Memoranda have also been issued, the provisions of which have not been incorporated in this document. In case there is a discrepancy, then the principal notification read along with the amendment issued in the gazette of India shall prevail)

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

ENVIRONMENT IMPACT ASSESSMENT NOTIFICATION 2006 AND SUBSEQUENT AMENDMENTS

New Delhi, the 14th September, 2006

S.O. 1533(E).-Whereas, a draft notification under sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986 for imposing certain restrictions and prohibitions on new projects or activities, or on the expansion or modernization of existing projects or activities based on their potential environmental impacts as indicated in the Schedule to the notification, being undertaken in any part of India[1], unless prior environmental clearance has been accorded in accordance with the objectives of National Environment Policy as approved by the Union Cabinet on 18th May, 2006 and the procedure specified in the notification, by the Central Government or the State or Union Territory Level Environment Impact Assessment Authority (SEIAA), to be constituted by the Central Government in consultation with the State Government or the Union Territory Administration concerned under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 for the purpose of this notification, was published in the Gazette of India, Extraordinary, Part II, section 3, sub-section (ii) *vide* number S.O. 1324 (E) dated the 15th September, 2005 inviting objections and suggestions from all persons likely to be affected thereby within a period of sixty days from the date on which copies of Gazette containing the said notification were made available to the public;

And whereas, copies of the said notification were made available to the public on 15th September, 2005;

And whereas, all objections and suggestions received in response to the above-mentioned draft notification have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986, read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 and in supersession of the notification number S.O. 60 (E) dated the 27th January, 1994, except in respect of things done or omitted to be done before such supersession, the Central Government hereby directs that on and from the date of its publication the required construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule to this notification entailing capacity addition with change in process and or technology shall be undertaken in any part of India only after the prior environmental clearance from the Central Government or as the case may be, by

[1] includes territorial waters

the State Level Environment Impact Assessment Authority, duly constituted by the Central Government under sub-section (3) of section 3 of the said Act, in accordance with the procedure specified hereinafter in this notification.

2. Requirements of prior Environmental Clearance (EC):- The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule and at District level, the District Environment Impact Assessment Authority (DEIAA) for matters falling under Category 'B2' for mining of minor minerals in the said Schedule,[2] before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

(i) All new projects or activities listed in the Schedule to this notification;

(ii) Expansion, modernisation or any change in the product mix or raw material mix in existing projects or activities, listed in the Schedule to this notification, resulting in capacity beyond the threshold limits specified for the concerned sector in the said Schedule, subject to conditions and procedure provided in the sub-paragraph (ii) of paragraph 7[3].

3. State Level Environment Impact Assessment Authority: -

(1) A State Level Environment Impact Assessment Authority hereinafter referred to as the SEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of three Members including a Chairman and a Member – Secretary to be nominated by the State Government or the Union Territory Administration concerned.

(2) The Member-Secretary shall be a serving officer of the concerned State Government or Union Territory administration familiar with environmental laws.

(3) The Chairman shall be an expert in terms of eligibility criteria given in APPENDIX VI in one of the specified fields, with sufficient experience in environmental policy or management.[4]

(4) The other member shall be an expert fulfilling the eligibility criteria given in APPENDIX VI in one of the specified fields.[4]

(5) The State Government or Union Territory Administration shall forward the names of the Members and the Chairman referred in sub- paragraph 3 to 4 above to the Central Government and the Central Government shall constitute the SEIAA as an authority for the purposes of this notification within thirty days of the date of receipt of the names.

---

[2] Words inserted *vide* S.O. 141(E), dated the 15th January, 2016 (This notification has been suspended by NGT in EA No. 55/2018 in OA No. 520/2016 in the matter of Vikrant Tongad vs. UoI vide order dated 11th December, 2018 and same has been appealed before Hon'ble Supreme Court and matter is sub-judice)

[3] Para substituted *vide* notification number S.O.980 (E), dated the 2nd March, 2021

[4] Para substituted *vide* S.O. 1737(E), dated the 11th October, 2007

(6) The non-official Member and the Chairman shall have a fixed term of three years (from the date of the publication of the notification by the Central Government constituting the authority).

[5]Provided that wherever considered necessary and expedient, the Central Government may extend the term for a further period not exceeding twelve months.

(7) [6]All decisions of the SEIAA shall be taken in a meeting and shall ordinarily be unanimous;

Provided that, in case a decision is taken by majority, the details of views, for and against it, shall be clearly recorded in the minutes and a copy thereof sent to MoEF**.**

3A. [7]District Level Environment Impact Assessment Authority: -

(1) A District Level Environment Impact Assessment Authority hereinafter referred to as the DEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of four members including a Chairperson and a Member-Secretary.

(2) The District Magistrate or District Collector shall be the Chairperson of the DEIAA.

(3) The Sub-Divisional Magistrate or Sub-Divisional Officer of the district head quarter of the concerned district of the State shall be the Member-Secretary of the DEIAA.

(4) The other two members of the DEIAA shall be the senior most Divisional Forest Officer and one expert. The expert shall be nominated by the Divisional Commissioner of the Division or Chief Conservator of Forest, as the case may be. The term and qualifications of the expert fulfilling the eligibility criteria are given in Appendix VII to this notification.

(5) The members of the DEIAA who are serving officers of the concerned State Government or the Union Territory Administration shall be *ex-officio* members except the expert member.

(6) The District Level Expert Appraisal Committee hereinafter referred to as the DEAC shall comprise of eleven members, including a Chairman and a Member-Secretary.

(7) The senior most Executive Engineer, Irrigation Department in the district of respective State Governments or Union Territory Administration shall be the Chairperson of the DEAC.

(8) The Assistant Director or Deputy Director of the Department of Mines and Geology or District Mines Officer or Geologist of the district shall be the Member-Secretary of the DEAC in that order.

(9) A representative of the State Pollution Control Board or Committee, senior most Sub-Divisional Officer (Forest) in the district, representative of Remote Sensing Department or Geology Department or State Ground Water Department, one occupational health expert or Medical Officer to be nominated by the District Magistrate or District Collector, Engineer

[5] Provision inserted *vide* S.O. 1562(E), dated the 21st May, 2020 and subsequently amended *vide* S.O. 3752(E), dated the 20th October, 2020

[6] Para substituted *vide* S.O. 3067(E), dated the 1st December, 2009

[7] Inserted *vide* S.O.141 (E), dated the 15th January, 2016

from Zila Parishad, and three expert members to be nominated by the Divisional Commissioner or Chief Conservator of Forest, as the case may be, shall be the other members of the DEAC. The term and qualifications of the experts fulfilling the eligibility criteria are given in Appendix VII to this notification.

(10) The members of the DEAC who are serving officers of the concerned State Government or the Union Territory Administration shall be *ex-officio* members except the expert members.

(11) The District Magistrate or District Collector shall notify an agency to act as Secretariat for the DEIAA and the DEAC and shall provide all financial and logistic support for their statutory functions.

(12) The DEIAA and DEAC shall exercise the powers and follow the procedure as specified in the said notification, as amended from time to time.

(13) The DEAC shall function on the principle of collective responsibility and the Chairman shall endeavour to reach a consensus in each case and if consensus cannot be reached, the view of the majority shall prevail.

4. Categorization of projects and activities: -

(i) All projects and activities are broadly categorized in to two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man-made resources.

(ii) All projects or activities included as Category 'A' in the Schedule, including expansion and modernization of existing projects or activities and change in product mix, shall require prior environmental clearance from the Central Government in the Ministry of Environment and Forests (MoEF) on the recommendations of an Expert Appraisal Committee (EAC) to be constituted by the Central Government for the purposes of this notification;

(iii) All projects or activities included as Category 'B' in the Schedule, including expansion and modernization of existing projects or activities as specified in sub paragraph (ii) of paragraph 2, or change in product mix as specified in sub paragraph (iii) of paragraph 2, but excluding those which fulfill the General Conditions (GC) stipulated in the Schedule, will require prior environmental clearance from the State/Union Territory Environment Impact Assessment Authority (SEIAA). The SEIAA shall base its decision on the recommendations of a State or Union Territory Level Expert Appraisal Committee (SEAC) as to be constituted for in this notification. In the absence of a duly constituted SEIAA or SEAC, a Category 'B' project shall be considered at the Central Level as a Category 'B' project[8];

(iiia) [9] [10] Such Category 'B' projects, relating to the National defence or strategic or security importance or those as notified by the Central Government on account of exigencies such as pandemics, natural disasters or to promote environmentally friendly activities under National Programmes or Schemes or Missions or such projects which are inordinately delayed beyond the

[8] Words substituted *vide* S.O. 3067(E), dated the 1st December, 2009
[9] Inserted vide S.O. 2339(E), dated the 16th June, 2021
[10] Substituted vide S.O. 1886(E) dated 20th April,2022

stipulated timeline as laid down in this notification and also meet the criteria as laid down in this regard from time to time, shall be considered at the Central level as Category 'B' projects;

(iv)[11] The 'B2' Category projects pertaining to mining of minor mineral of lease area less than or equal to five hectare shall require prior environmental clearance from DEIAA. The DEIAA shall base its decision on the recommendations of DEAC, as constituted for this notification.

5.[12] Screening, Scoping and Appraisal Committees: -

The same Expert Appraisal Committees (EACs) at the Central Government, SEACs at the State or Union Territory level and DEAC at the district level shall screen, scope and appraise projects or activity in category 'A', 'B1 and B2' and 'B2' projects for mining of minor minerals of lease area less than and equal to five hectare respectively. EAC, SEACs and DEACs shall meet at least once every month.

(a) The composition of the EAC shall be as given in Appendix VI. The SEAC at the State or the Union Territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union Territory Administration with identical composition. DEAC at the district level shall be constituted by the Central Government as per the composition given in paragraph 3 A.

(b) The Central Government may with the prior concurrence of the concerned State Governments or the Union Territory Administration constitute one SEAC for more than one State or Union Territory for reasons of administrative convenience and cost.

(c) The Expert Appraisal Committee and State Level Expert Appraisal Committee shall be reconstituted after every three years:
Provided that wherever considered necessary and expedient, the Central Government may extend the term for a further period not exceeding twelve months.

(d) The authorised members of the EAC, SEACs and DEACs concerned, may inspect any site connected with the project or activity in respect of which the prior environmental clearance is sought for the purpose of screening or scoping or appraisal with prior notice of at least seven days to the project proponent who shall provide necessary facilities for the inspection.

(e) The EAC, SEACs and DEACs shall function on the principle of collective responsibility. The Chairperson shall endeavor to reach a consensus in each case and if consensus cannot be reached the view of the majority shall prevail.

6.[12] Application for Prior Environmental Clearance (EC): -

An application seeking prior environmental clearance in all cases shall be made by the project proponent[13] in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II after the identification of prospective site (s) for the project and/or activities to which the application relates; and in Form 1M for mining of minor minerals up to five hectare

[11] Inserted *vide* S.O. 141(E), dated the 15th January, 2016
[12] Para substituted *vide* S.O. 141(E), dated the 15th January, 2016 (This notification has been suspended by NGT in EA No. 55/2018 in OA No. 520/2016 in the matter of Vikrant Tongad vs. UoI vide order dated 11th December, 2018 and same has been appealed before Hon'ble Supreme Court and matter is sub-judice) and Para 5(c) substituted *vide* S.O. No. 1562(E), dated the 21st May, 2020 and subsequently amended *vide* S. O. 3752 (E), dated the 20th October, 2020.
[13] Words substituted *vide* S.O. 695(E), dated the 4th April, 2011

under Category 'B2' projects, as given in Appendix VIII, before commencing any construction activity, or preparation of land, or mining at the site by the project proponent. The project proponent shall furnish along with the application, a copy of the pre-feasibility project report, in addition to Form 1, Form 1A, and Form 1M; and in case of construction projects or activities (item 8 of the Schedule), a copy of the conceptual plan shall be provided instead of pre-feasibility report.

7. Stages in the Prior Environmental Clearance (EC) Process: -

7(i) For new projects or activities listed in the Schedule to this notification[14]: The environmental clearance process for new projects will comprise of a maximum of four stages, all of which may not apply to particular cases as set forth below in this notification. These four stages in sequential order are: -

- Stage (1) Screening (Only for Category 'B' projects and activities)
- Stage (2) Scoping
- Stage (3) Public Consultation
- Stage (4) Appraisal

I. **Stage (1) - Screening**:

(A) **[15]**In case of Category 'B' projects or activities, this stage will entail the scrutiny of an application seeking prior environmental clearance made in Form 1 by the concerned State Level Expert Appraisal Committee (SEAC) for determining whether or not the project or activity requires further environmental studies for preparation of an Environmental Impact Assessment (EIA) for its appraisal prior to the grant of environmental clearance depending upon the nature and location specificity of the project. The projects requiring an Environmental Impact Assessment report shall be termed Category 'B1' and remaining projects shall be termed Category 'B2' and will not require an Environment Impact Assessment report. For categorization of projects into B1 or B2 except item 8 (b), the Ministry of Environment and Forests shall issue appropriate guidelines from time to time.

(B) **[15]**The cases as specified in Appendix IX shall be exempted from prior environmental clearance.

II. [16]Stage (2)-Scoping:

(i)[17] "Scoping" refers to the process to determine detailed and comprehensive Terms of Reference (ToR) addressing all relevant environmental concerns for the preparation of an Environmental Impact Assessment and Environment Management Report in respect of the project or activity for which Prior Environmental Clearance is sought.

(ii) All projects or activities listed under Category "B2" of the schedule shall not require Scoping.

[14] Words inserted *vide* S.O.980(E), dated the 2nd March, 2021

[15] Renumbered para and Inserted para *vide* S.O. 141(E), dated the 15th January, 2016 (This notification has been suspended by NGT in EA No. 55/2018 in OA No. 520/2016 in the matter of Vikrant Tongad vs. UoI vide order dated 11th December, 2018 and same has been appealed before Hon'ble Supreme Court and matter is sub-judice)

[16] Substituted *vide* S.O. 751(E), dated the 17th February, 2020

[17] Was amended *vide* S.O.695(E), dated the 4th April, 2011,substituted vide S.O. 2559 dated 22nd August, 2013, S.O. 562(E) dated 26th February, 2014; S.O. 382(E) dated 3rd February, 2015, S.O. 996(E) dated 10th April, 2015, S.O 751(E) dated 17th February, 2020

(iii) Sector specific Standard Terms of References developed by the Ministry of Environment, Forest and Climate Change, from time to time shall be displayed on its website.

(iv) The Standard Terms of References shall be issued to the following projects or activities through online mode, on acceptance of application within 7 working days, without referring to EAC or SEAC by the Ministry or SEIAA, as the case may be:

(a) All Highway projects in Border States covered under entry (i) and (ii) of column (3) and (4) against item 7(f) of the Schedule;[18]

(b) All projects or activities proposed to be located in industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals; and

(c) All expansion proposals of existing projects having earlier Prior Environmental Clearance:

Provided that EAC or SEAC may recommend additional specific Terms of Reference in addition to the Standard ToR, if found necessary, for a project or activity, within 30 days from the date of acceptance of application.

(v) All new projects or activities other than specified in sub-paragraph (iv) above, shall be referred to the EAC or SEAC by the Regulatory Authority, as the case may be, within 30 days from the date of application, for recommending the specific ToR in addition to the Standard ToR, deemed necessary. In case, the regulatory authority does not refer the matter to the EAC or SEAC, as the case may be, within 30 days of date of application in Form-I, sector specific Standard ToR shall be issued, online, on 30th day, by the Regulatory Authority.

(vi) Applications for Terms of Reference may be rejected by the regulatory authority concerned on the recommendation of the EAC or SEAC concerned. In case of such rejection, the decision together with reasons for the same after due personal hearing shall be communicated to the applicant in writing within sixty days of the receipt of the application.

(vii) The project proponent shall prepare the EIA report based on the sector specific Standard ToR as well as additional specific ToR, if any, stipulated by the EAC or SEAC.

(viii) The Terms of Reference for the projects or activities except for River valley and Hydroelectric projects, issued by the regulatory authority concerned, shall have the validity of four years from the date of issue. In case of the River valley and Hydro-electric projects, the validity will be for five years.

(ix). [19]Notwithstanding anything contained above, the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Terms of Reference granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19) and subsequent lockdowns (total or partial) declared for its control, however, all

[18] Substituted vide S.O 382(E) dated 3rd February 2015, S.O 996(E) 10th April 2015, S.O 751(E) dated 17th February, 2020

[19] Inserted *vide* S. O. 221(E), dated the 18th January, 2021.

activities undertaken during this period in respect of the said Terms of Reference shall be treated as valid.

(x) [20]Notwithstanding anything contained above, the projects where construction and commissioning of proposed activities have not been completed within the validity period of the Environmental Clearance (EC) and a fresh application for EC has been submitted due to expiry of the said period of the EC, the concerned Expert Appraisal Committee or State Level Expert Committee, as the case may be, may exempt the requirement of public hearing subject to the condition that the project has been implemented not less than fifty percentage in its physical form or construction.

III. Stage (3) - Public Consultation:

(i) "Public Consultation" refers to the process by which the concerns of local affected persons and others who have plausible stake in the environmental impacts of the project or activity are ascertained with a view to taking into account all the material concerns in the project or activity design as appropriate. All Category 'A' and Category B1 projects or activities shall undertake Public Consultation, except the following: -

(a) modernization of irrigation projects (item 1(c) (ii) of the Schedule).

(b) all projects or activities located within industrial estates or parks (item 7(c) of the Schedule) approved by the concerned authorities, and which are not disallowed in such approvals.

(c) expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.

(cc)[21] maintenance dredging provided the dredged material shall be disposed within port limits.

(d)[21] All Building or Construction projects or Area Development projects (which do not contain any category 'A' projects and activities) and Townships (item 8 (a) and 8(b) in the Schedule to the notification).

(e) all Category 'B2' projects and activities.

(f) all projects or activities concerning national defence and security or involving other strategic considerations as determined by the Central Government.

(g) all linear projects such as Highways, pipelines, etc., in border States.[22]

(h)[23] all standalone pelletization plants, which were in existence and in operation on or before the 27th day of May, 2014 and have valid consent to establish and consent to operate from the concerned State Pollution Control Board or the Union Territory Pollution Control Committee.

[20] Inserted *vide* S.O. 1247(E), dated the 18th March, 2021
[21] Inserted/Substituted *vide* S.O. 3067(E), dated the 1st December, 2009
[22] Inserted vide S.O 382(E) dated 3rd Febuary,2015
[23] Inserted *vide* S.O. 2572(E), dated the 14th September, 2015

(ii) The Public Consultation shall ordinarily have two components comprising of:-

(a) a public hearing at the site or in its close proximity- district wise, to be carried out in the manner prescribed in Appendix IV, for ascertaining concerns of local affected persons;

(b) obtain responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity.

(iii) the public hearing at, or in close proximity to, the site(s) in all cases shall be conducted by the State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC) concerned in the specified manner and forward the proceedings to the regulatory authority concerned within 45 (forty-five) days[24] of a request to the effect from the applicant.

(iv) in case the State Pollution Control Board or the Union Territory Pollution Control Committee concerned does not undertake and complete the public hearing within the specified period, and/or does not convey the proceedings of the public hearing within the prescribed period directly to the regulatory authority concerned as above, the regulatory authority shall engage another public agency or authority which is not subordinate to the regulatory authority, to complete the process within a further period of forty five days.

(v) If the public agency or authority nominated under the sub paragraph (iii) above reports to the regulatory authority concerned that owing to the local situation, it is not possible to conduct the public hearing in a manner which will enable the views of the concerned local persons to be freely expressed, it shall report the facts in detail to the concerned regulatory authority, which may, after due consideration of the report and other reliable information that it may have, decide that the public consultation in the case need not include the public hearing.

(vi) For obtaining responses in writing from other concerned persons having a plausible stake in the environmental aspects of the project or activity, the concerned regulatory authority and the State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC) shall invite responses from such concerned persons by placing on their website the Summary EIA report prepared in the format given in Appendix IIIA by the applicant along with a copy of the application in the prescribed form, within seven days of the receipt of a written request for arranging the public hearing. Confidential information including non-disclosable or legally privileged information involving Intellectual Property Right, source specified in the application shall not be placed on the web site**.** The regulatory authority concerned may also use other appropriate media for ensuring wide publicity about the project or activity. The regulatory authority shall, however, make available on a written request from any concerned person the Draft EIA report for inspection at a notified place during normal office hours till the date of the public hearing. All the responses received as part of this public consultation process shall be forwarded to the applicant through the quickest available means.

(vii) After completion of the public consultation, the applicant shall address all the material environmental concerns expressed during this process, and make appropriate changes in the draft EIA and EMP. The final EIA report, so prepared, shall be submitted by the applicant to the

[24] Amended *vide* S.O. 1939 (E), dated the 13th November, 2006

concerned regulatory authority for appraisal. The applicant may alternatively submit a supplementary report to draft EIA and EMP addressing all the concerns expressed during the public consultation.

IV. Stage (4) - Appraisal:

(i) Appraisal means the detailed scrutiny by the Expert Appraisal Committee or State Level Expert Appraisal Committee of the application and other documents like the Final EIA report, outcome of the public consultations including public hearing proceedings, submitted by the applicant to the regulatory authority concerned for grant of environmental clearance. This appraisal shall be made by Expert Appraisal Committee or State Level Expert Appraisal Committee concerned in a transparent manner in a proceeding to which the applicant shall be invited for furnishing necessary clarifications in person or through an authorized representative. On conclusion of this proceeding, the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned shall make categorical recommendations to the regulatory authority concerned either for grant of prior environmental clearance on stipulated terms and conditions, or rejection of the application for prior environmental clearance, together with reasons for the same.

(ii) The appraisal of all projects or activities which are not required to undergo public consultation, or submit an Environment Impact Assessment report, shall be carried out on the basis of the prescribed application Form 1 and Form 1A as applicable, any other relevant validated information available and the site visit wherever the same is considered as necessary by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned.

(iii) The appraisal of an application shall be[25] completed by the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned within sixty days of the receipt of the final Environment Impact Assessment report and other documents or the receipt of Form 1 and Form 1A, where public consultation is not necessary and the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee shall be placed before the competent authority for a final decision within the next fifteen days .The prescribed procedure for appraisal is given in Appendix V ;

7(ii).[26] Prior Environmental Clearance (EC) process for Expansion or Modernization or Change of product mix in existing projects:

(a) All applications seeking prior environmental clearance for expansion with increase in the production capacity beyond the capacity for which prior environmental clearance has been granted under this notification or with increase in either lease area or production capacity in the case of mining projects or for the modernisation of an existing unit with increase in the total production capacity beyond the threshold limit prescribed in the Schedule to this notification through change in process and or technology or involving a change in the product –mix shall be made in Form I and they shall be considered by the concerned Expert Appraisal Committee or State Level Expert Appraisal Committee within sixty days, who will decide on the due diligence necessary including preparation of Environment Impact Assessment and public consultations and the application shall be appraised accordingly for grant of environmental clearance in respect of projects or activities other than falling in clause (b) and (c).

[25] Amended *vide* S.O. 1939(E), dated the 13th November, 2006
[26] Substituted *vide* S.O. 3518(E), dated the 23rd November, 2016, substituted word vide S.O 980(E) dated 2nd March,2021

(b) [27] **Existing projects (having Prior Environmental Clearance) with no increase in pollution load:** Any increase in production capacity in respect of processing or production or manufacturing sectors (listed against item numbers 2,3, 4 and 5 in the Schedule to this notification) with or without any change in (i) raw material-mix or (ii) product-mix or (ii) quantities within products or (ii) number of products including new products falling in the same category or (iv) configuration of the plant or process or operations in existing area or in areas contiguous to the existing area (for which prior environmental clearance has been granted) shall be exempt from the requirement of Prior Environmental Clearance provided that there is no increase in pollution load (derived on the basis of such Prior Environmental Clearance):

Provided that such exemption shall be applicable only consequent to -

A. the project proponent furnishing information regarding such changes along with no increase in pollution load certificate, from the environmental auditor or reputed institutions empanelled by the State Pollution Control Board or Union Territory Pollution Control Committee or Central Pollution Control Board or Ministry of Environment, Forest and Climate Change, as per the procedure laid down in Appendix-XIII, on PARIVESH portal as well as to the concerned State Pollution Control Board or Union Territory Pollution Control Committee.

   Note: If on verification, the State Pollution Control Board or Union Territory Pollution Control Committee, as the case may be, after giving the project proponent the opportunity of being heard, holds that such change or expansion or modernisation results in increase in pollution load, the exemption claimed under this clause shall not be valid and it shall be deemed that the project proponent was always liable to obtain prior environmental clearance, in respect of such change or expansion or modernisation, as per the clause (a) and the provisions of Environment (Protection) Act, 1986 shall apply accordingly;

B. installation and implementation of Online Continuous Monitoring System (OCMS) with at least 95% uptime, connected to the servers of the Central Pollution Control Board and State Pollution Control Board or Union Territory Pollution Control Committee concerned to report the quantity and quality, of emission and discharges:

   Provided further that the provisions of this clause shall not be applicable if such change or increase results in change in category of project or activity from Category-'B2' to either Category-'A' or Category 'B1'.

(c)[27]Any change in configuration of the plant or activity from the environmental clearance conditions during execution of the project after detailed engineering, in respect of projects or activities, falling in any item of the Schedule to this notification, shall not require prior environmental clearance, if there is no change in production capacity and there is no increase in pollution load subject to furnishing particulars of such changes on PARIVESH portal in the format as may be provided by the Government from time to time, before implementing such changes whereupon a system generated acknowledgement will be issued by the concerned Regulatory Authority. [28]

Explanation:- For the purpose of this sub-paragraph, "Pollution load" shall be determined on the basis of multiplication of quantity and concentration of different components and parameters (as provided or referred in the Prior Environment Clearance or the Environment Impact Assessment Report (EIA) and Environment Management Plan based on which such Prior Environment

[27] Para substituted *vide* notification number S.O.908 (E), dated the 2nd March, 2021
[28] Substituted Clause (c) of sub para (ii) of para 7 vide S.O 236(E) 16th January,2020

Clearance has been granted), in respect of emissions, effluents or discharge, solid, industrial hazardous waste and such other parameters notified under the Environment (Protection) Rules, 1986 as amended from time to time[29].

8. [30] **Grant or Rejection of Prior Environmental Clearance (EC):**

(i) The regulatory authority shall consider the recommendations of the **EAC or SEAC or DEAC** concerned and convey its decision to the applicant within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal Committee** concerned or in other words within one hundred and five days of the receipt of the final Environment Impact Assessment Report, and where Environment Impact Assessment is not required, within one hundred and five days of the receipt of the complete application with requisite documents, except as provided below.

(ii) The regulatory authority shall normally accept the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal** Committee concerned. In cases where it disagrees with the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal** Committee concerned, the regulatory authority shall request reconsideration by the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal** Committee concerned within forty five days of the receipt of the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal** Committee concerned while stating the reasons for the disagreement. An intimation of this decision shall be simultaneously conveyed to the applicant. The Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal Committee** concerned, in turn, shall consider the observations of the regulatory authority and furnish its views on the same within a further period of sixty days. The decision of the regulatory authority after considering the views of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal Committee** concerned shall be final and conveyed to the applicant by the regulatory authority concerned within the next thirty days.

(iii) In the event that the decision of the regulatory authority is not communicated to the applicant within the period specified in sub-paragraphs (i) or (ii) above, as applicable, the applicant may proceed as if the environment clearance sought for has been granted or denied by the regulatory authority in terms of the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal Committee** concerned.

(iv) On expiry of the period specified for decision by the regulatory authority under paragraph (i) and (ii) above, as applicable, the decision of the regulatory authority, and the final recommendations of the Expert Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal Committee** concerned shall be public documents.

(v) Clearances from other regulatory bodies or authorities shall not be required prior to receipt of applications for prior environmental clearance of projects or activities, or screening, or scoping, or appraisal, or decision by the regulatory authority concerned, unless any of these is sequentially dependent on such clearance either due to a requirement of law, or for necessary technical reasons.

---

[29] Para substituted *vide* notification number S.O.908 (E), dated the 2nd March, 2021

[30] Words in bold in the para were substituted *vide* S.O. 141(E), dated the 15th January, 2016

(vi) Deliberate concealment and/or submission of false or misleading information or data which is material to screening or scoping or appraisal or decision on the application shall make the application liable for rejection, and cancellation of prior environmental clearance granted on that basis. Rejection of an application or cancellation of a prior environmental clearance already granted, on such ground, shall be decided by the regulatory authority, after giving a personal hearing to the applicant, and following the principles of natural justice.

9.[31][32] Validity of Environmental Clearance (EC):

(i) The "Validity of Environmental Clearance" is meant the period from which a prior Environmental Clearance is granted by the regulatory authority, or may be presumed by the applicant to have been granted under sub-paragraph (iii) of paragraph 8, to the start of production operations by the project or activity; or completion of all construction. operations in case of construction projects relating to item 8 of the Schedule, to which the application for prior environmental clearance refers:

Provided that in the case of mining projects or activities, the validity shall be counted from the date of execution of the mining lease.

(ii) The prior environmental clearance granted for an existing or new project or activity shall be valid for a period of,-

(a) thirteen years in the case of River Valley projects or activities [item 1(c) of the Schedule];
(b) fifteen years in the case of Nuclear power projects or activities and processing of nuclear fuel [item 1(e) of the Schedule];
(c) ten years in the case of all other projects and activities other than the Mining projects and River Valley Projects and Nuclear power projects referred to in clauses (a) and (b).

(iii) In the case of Area Development projects and Townships [item 8(b)], the validity period of ten years shall be limited only to such activities as may be the responsibility of the applicant as a developer:

Provided that the period of validity of Environmental Clearance with respect to the Projects and Activities listed in this sub- paragraph and sub-paragraphs (ii) may be extended in respect of valid Environmental Clearance, by the regulatory authority concerned by a maximum period of two years in the case of River Valley projects, five years in the case of Nuclear power projects and processing of nuclear fuel and one year in the case of all other projects, if an application is made in the laid down proforma to the regulatory authority by the applicant within the validity period of the existing
Environment Clearance:

Provided further that the regulatory authority may also consult the concerned Expert Appraisal Committee before grant of such extension.

[31] Substituted vide S.O. 1807(E), dated 12th April,2022
[32] Re-numbered and then text in bold was amended *vide* S.O.1141 (E), dated the 29th April, 2015, word substituted vide S.O2571(E) dated 31st August,2015, word substituted vide S.O.141(E) dated 1st January,2016, further substituted *vide* S.O. 2944 (E), the 14th September, 2016

(iv) The prior Environmental Clearance granted for mining projects shall be valid for the project life as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier:

Provided that the period of validity of Environmental Clearance with respect to projects or activities included in this sub-paragraph may be extended by another twenty years, beyond thirty years, subject to the condition that the adequacy of the existing environmental safeguards laid down in the existing Environmental Clearance shall be examined by concerned Expert Appraisal Committee every five years beyond thirty years, on receipt of such application in the laid down proforma from the Project Proponent within the maximum validity period of Environmental Clearance of thirty years, and subsequently on receipt of such application in the laid down proforma from the Project Proponent within the validity period of the extended Environment Clearance, every five years for incorporating such additional environment safeguards in the Environmental Management Plan , as may be deemed necessary, till the validity of the mining lease or end of life of mine or fifty years, whichever is earlier.";

"(v) Where the application for extension under sub-paragraphs (ii), (iii) and (iv) has been filed in the laid down proforma".

(a) within thirty days after the validity period of Environmental Clearance, such cases shall be referred to concerned Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee and based on their recommendations, the delay shall be condoned at the level of the Joint Secretary in the Ministry of Environment, Forest and Climate Change or Member Secretary, State Level Expert Appraisal Committee or Member Secretary, District Level Expert Appraisal Committee, as the case may be;

(b) more than thirty days after the validity period of Environmental Clearance but less than ninety days after such validity period, then, based on the recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee, the delay shall be condoned with the approval of the Minister in charge of Environment, Forest and Climate Change or Chairman, as the case may be : Provided that no condonation for delay shall be granted for any application for extension filed beyond ninety days after the validity period of Environmental Clearance.

9A.[33] Notwithstanding anything contained in this notification, the period from the 1st April, 2020 to the 31st March, 2021 shall not be considered for the purpose of calculation of the period of validity of Prior Environmental Clearances granted under the provisions of this notification in view of outbreak of Corona Virus (COVID-19) and subsequent lockdowns (total or partial) declared for its control, however, all activities undertaken during this period in respect of the Environmental Clearance granted shall be treated as valid.

10. Post Environmental Clearance Monitoring:

(i) (a)[34] In respect of Category 'A' projects, it shall be mandatory for the project proponent to make public the environmental clearance granted for their project along with the environmental

[33] Inserted *vide* S.O.4254(E), dated the 27th November, 2020 and substituted *vide* S.O. 221(E), dated the 18th January, 2021.
[34] Inserted/re-numbered *vide* S.O.3067(E), dated the 1st December, 2009

conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the district or State where the project is located and in addition, this shall also be displayed in the project proponent's website permanently. (b) In respect of Category 'B' projects, irrespective of its clearance by MoEF / SEIAA/DEIAA, the project proponent shall prominently advertise in the newspapers indicating that the project has been accorded environment clearance and the details of MoEF website where it is displayed. (c) The Ministry of Environment and Forests and the State / Union Territory Level Environmental Impact Assessment Authorities (SEIAAs)/ the District Level Environment Impact Assessment Authority (DEIAA), as the case may be, shall also place the environmental clearance in the public domain on Government portal. (d) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(ii) It shall be mandatory for the project management to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in soft copies[35] to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

(iii) All such compliance reports submitted by the project management shall be public documents. Copies of the same shall be given to any person on application to the concerned regulatory authority. The latest such compliance report shall also be displayed on the web site of the concerned regulatory authority.

(iv)[36] The prescribed procedure for sand mining or river bed mining and monitoring is given in Appendix XII.

11. [37] Transferability of Environmental Clearance (EC):

(1) A prior environmental clearance granted for a specific project or activity to an applicant may be transferred during its validity to another legal person entitled to undertake the project or activity on application by the transferor, or by the transferee with a written "no objection" by the transferor, to, and by the regulatory authority concerned, on the same terms and conditions under which the prior environmental clearance was initially granted, and for the same validity period. No reference to the Expert Appraisal Committee or State Level Expert Appraisal Committee or **District Level Expert Appraisal**[38] Committee concerned is necessary in such cases.

"(1A) A prior-Environmental Clearance granted for a specific project, except mining projects may be split amongst two or more legal persons, entitled to undertake the project and transferred during the validity to another legal person on application made by the transferor in the format specified on PARIVESH portal to the concerned Regulatory Authority along with requisite documents. The concerned Regulatory Authority shall split and transfer the prior-Environmental Clearance, on recommendation of the concerned Expert Appraisal Committee to the other legal persons for the respective projects."[39]

[35] Substituted *vide* S.O. 5845(E), dated the 26th November, 2018.
[36] Inserted *vide* S.O. 141(E), dated the 15th January, 2016 (This notification has been suspended by NGT in EA No. 55/2018 in OA No. 520/2016 in the matter of Vikrant Tongad vs. UoI vide order dated 11th December, 2018 and same has been appealed before Hon'ble Supreme Court and matter is sub-judice)
[37] Para 11 renumbered as sub-para1 and inserted para 2 vide S.O. 811(E), dated the 23rd March, 2015
38 Word substituted vide S.O141(E) dated 15th January,2016
[39] Inserted vide S.O. 1832 (E), dated 21st April 2023

(2) Where an allocation of coal block is cancelled in any legal proceeding, or by the Government in accordance with law, the environmental clearance granted in respect of such coal block may be transferred, subject to the same validity period as was initially granted, to any legal person to whom such block is subsequently allocated, and in such case, obtaining of "no objection" from either the holder of environment clearance or from the regulatory authority concerned shall not be necessary and no reference shall be made to the Expert Appraisal Committee or the State Level Expert Appraisal Committee concerned.

(3) [40] [41] The prior Environmental Clearance vested with the previous lessee shall be deemed to have been transferred during its validity period in terms of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) as amended by the Mines and Minerals (Development and Regulation) Amendment Act, 2021 (16 of 2021) to the successful bidder of the mining leases, from the date of commencement of new lease for the remaining validity period (calculated from the date from which the said Environmental Clearance was initially granted), subject to the new lessee registering online on PARIVESH portal along with an undertaking to comply with all the conditions of the transferred Environmental Clearance"

(4) [42]Where an allocation of iron ore block pertaining to the State of Karnataka is cancelled in any legal proceeding, or by the Government in accordance with law, the environmental clearance granted in respect of such iron block may be transferred subject to the same validity period it was initially granted, to any legal person to whom such block is subsequently allocated, and in such case, obtaining of "no objection" from either the holder of environmental clearance or from the regulatory authority concerned shall not be necessary and no reference shall be made to the Expert Appraisal Committee or the State Level Expert Appraisal Committee concerned.

12. Operation of EIA Notification, 1994, till disposal of pending cases:

From the date of final publication of this notification the Environment Impact Assessment (EIA) notification number S.O.60 (E) dated 27th January, 1994 is hereby superseded, except in suppression of the things done or omitted to be done before such suppression[43] to the extent that in case of all or some types of applications made for prior environmental clearance and pending on the date of final publication of this notification, the Central Government may relax any one or all provisions of this notification except the list of the projects or activities requiring prior environmental clearance in Schedule[43], or continue operation of some or all provisions of the said notification, for a period not exceeding twenty four months[44] from the date of issue of this notification.

13. [45] Preparation and presentation of Environment Impact Assessment (EIA) report and Environment Management Plan(EMP).- The Environmental consultant organisations which are accredited for a particular sector and the category of project for that sector with the Quality Council of India (QCI) or National Accreditation Board for Education and Training (NABET) or any other agency as may be notified by the Ministry of Environment, Forest and Climate Change from time to

[40] Para inserted *vide* S.O 4241(E) dated 30/12/2016, Para substituted vide S.O. 1224(E), dated the 28th March, 2020
[41] Sub para 3 of Para(11) Substituted vide S.O 2817(E) dated 13th July,2021
[42] Inserted para vide S.O. 4241(E) dated 30th December,2016
[43] Amended *vide* S.O. 1939(E), dated the 13th November, 2006.
[44] Words substituted *vide* S.O. 1737(E), dated the 11th October, 2007.
[45] Inserted *vide* S.O. 648(E), dated the 3rd March, 2016.

time shall be allowed to prepare the Environmental Impact Assessment report and Environmental Management Plan of a project in that sector and category and to appear before the concerned Expert Appraisal Committee (EAC) or the State Expert Appraisal Committee (SEAC). The Ministry will also prepare a panel of national level reputed educational and research institutions to work as Environmental Consultant Organisations.

APPENDIX VI
(See paragraph 5)

COMPOSITION OF THE SECTOR/ PROJECT SPECIFIC EXPERT APPRAISAL COMMITTEE (EAC) FOR CATEGORY A PROJECTS AND THE STATE/UT LEVEL EXPERT APPRAISAL COMMITTEES (SEACs) FOR CATEGORY B PROJECTS TO BE CONSTITUTED BY THE CENTRAL GOVERNMENT `

1. The Expert Appraisal Committees (EACs) and the State/UT Level Expert Appraisal Committees (SEACs) shall consist of only professionals and experts fulfilling the following eligibility criteria:

Professional: The person should have at least (i) 5 years of formal University training in the concerned discipline leading to a MA/MSc Degree, or (ii) in case of Engineering /Technology/Architecture disciplines, 4 years formal training in a professional training course together with prescribed practical training in the field leading to a B.Tech/B.E./B.Arch. Degree, or (iii) Other professional degree (e.g. Law) involving a total of 5 years of formal University training and prescribed practical training, or (iv) Prescribed apprenticeship/article ship and pass examinations conducted by the concerned professional association (e.g. Chartered Accountancy),or (v) a University degree , followed by 2 years of formal training in a University or Service Academy (e.g. MBA/IAS/IFS). In selecting the individual professionals, experience gained by them in their respective fields will be taken note of.
Expert: A professional fulfilling the above eligibility criteria with at least 15 years of relevant experience in the field, or with an advanced degree (e.g. Ph.D.) in a concerned field and at least 10 years of relevant experience.

Age: Below 70 years. However, in the event of the non-availability of /paucity of experts in a given field, the maximum age of a member of the Expert Appraisal Committee may be allowed up to 75 years

2.[99] The Members of the EAC shall be Experts with the requisite expertise and experience in the following fields or /disciplines. In the event that persons fulfilling the criteria of "Experts" are not available, Professionals in the same field with sufficient experience may be considered:

- Environment Quality: Experts in measurement, monitoring, analysis and interpretation of data in relation to environmental quality
- Sectoral Project Management: Experts in Project Management or Management of Process or Operations or Facilities in the relevant sectors.
- Environmental Impact Assessment Process: Experts in conducting and carrying out Environmental Impact Assessments (EIAs) and preparation of Environmental Management Plans (EMPs) and other Management plans and who have wide expertise and knowledge of predictive techniques and tools used in the EIA process
- Risk Assessment
- Life Science (Floral and Faunal Management)
- Forestry and Wildlife
- Environmental Economics with experience in project appraisal

[99] Para substituted vide S.O. 1737 (E) dated 11th October, 2007; word in Para-2 amended & point-4 inserted vide S.O. 2600(E) 9th October, 2014 and amended vide S.O. 3752 dated 20.10.2020

- [99]Public Administration or Management covering various developmental sectors and environmental issues.

3. The Membership of the EAC shall not exceed 15 (fifteen) regular Members. However, the Chairperson may co-opt an expert as a Member in a relevant field for a particular meeting of the Committee.

4.[100] The Chairperson shall be an eminent person having experience in environmental policy related issues, in management or in public administration dealing with various developmental sectors.

5. The Chairperson shall nominate one of the Members as the Vice Chairperson who shall preside over the EAC in the absence of the Chairman /Chairperson.

6. A representative of the Ministry of Environment and Forests shall assist the Committee as its Secretary.
7. The maximum tenure of a Member, including Chairperson, shall be for 2 (two) terms of 3 (three) years each.
Provided that wherever considered necessary and expedient, the Central Government may extend the term of such member for a further period not exceeding twelve months.[101]

8. The Chairman / Members may not be removed prior to expiry of the tenure without cause and proper enquiry.

[100] Omitted vide S.O. 1737 dated 11th October, 2007; and inserted vide S.O. 2600(E) dated 9th October, 2014
[101] Entry inserted vide notification number S.O 1562 (E) dated 21st May 2020; Substituted word vide S.O 3752 (E) dated 20th Oct, 2020

APPENDIX - X[106]

[See paragraph 7 (iii) (a)]

PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT FOR SAND MINING OR RIVER BED MINING

The main objective of the preparation of District Survey Report (as per the Sustainable Sand Mining Guideline) is to ensure the following:

Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.

The report shall have the following structure:

1. Introduction
2. Overview of Mining Activity in the District
3 The List of Mining Leases in the District with location, area and period of validity
4. Details of Royalty or Revenue received in last three years
5. Detail of Production of Sand or Bajari or minor mineral in last three years
6. Process of Deposition of Sediments in the rivers of the District
7. General Profile of the District
8. Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.
9. Physiography of the District
10. Rainfall: month-wise
11. Geology and Mineral Wealth

In addition to the above, the report shall contain the following:

(a) District wise detail of river or stream and other sand source.
(b) District wise availability of sand or gravel or aggregate resources.
(c) District wise detail of existing mining leases of sand and aggregates.

A survey shall be carried out by the DEIAA with the assistance of Geology Department or Irrigation Department or Forest Department or Public Works Department or Ground Water Boards or Remote Sensing Department or Mining Department etc. in the district.

Drainage system with description of main rivers

S. No.	Name of the River	Area drained (Sq. Km)	% Area drained in the District
(1)			
(2)			

Salient Features of Important Rivers and Streams:

S. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin
(1)				
(2)				

[106] Inserted vide S.O. 141(E) dated 15th January, 2016; amended vide S.O 3611 (E) dated 25th July 2016

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)

Annual Deposition

S. No.	River or Stream	Portion of the river or stream recommended for mineral concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Total for the District						

A Sub-Divisional Committee comprising of (i) Sub-Divisional Magistrate, (ii) Officers from (a) Irrigation department, (b) State Pollution Control Board or Committee, (c) Forest department, (d) Geology or mining officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof.

Methodology adopted for calculation of Mineral Potential:

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or streams. As per the site conditions and location, depth of minable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50 % to 60 % of the area of a particular river or stream. For Example, in some hill States mineral constituents like boulders, river born Bajri, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river or stream.

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one

days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.
The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years.

II. PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT OF MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

The District Survey Report shall be prepared for each minor mineral in the district separately and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on district's website for twenty-one days. The comments received shall be considered and if found fit, shall be incorporated in the final Report to be finalised within six months by the DEIAA.
The District Survey Report for minor minerals other than sand mining or River bed mining shall be as per structure mentioned below: -

FORMAT FOR PREPARATION OF DISTRICT SURVEY REPORT FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER BED MINING

(1) Introduction;
(2) Overview of Mining Activity in the District;
(3) General Profile of the District;
(4) Geology of the District;
(5) Drainage of Irrigation pattern;
(6) Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.;
(7) Surface Water and Ground Water scenario of the district;
(8) Rainfall of the district and climatic condition;
(9) Details of the mining leases in the District as per the following format: -

SI No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Lessee	Mining lease Grant Order No. & Date	Area of Mining lease (ha)	Period of Mining Lease (Initial)		Period of Mining Lease (1^{st} /2^{nd} renewal)	
						From	**To**	**From**	**To**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Date of Commencement of Mining Operation	**Status (Working/Non-working/Temp. Working for dispatch, etc.)**	**Captive/ Non-Captive**	**Obtained Environmental Clearance (yes/No), if Yes Letter No. with date of grant of EC**	**Location of the Mining Lease (Latitude & Longitude)**	**Method of Mining (opencast/underground)**

11	12	13	14	15	16

(10) details of Royalty or Revenue received in last three years;
(11) details of Production of Minor Mineral in last three years;
(12) mineral Map of the District;
(13) list of Letter of Intent (LOI) Holders in the District along with its validity as per the following format:-
(14) total Mineral Reserve available in the District;

SI No.	Name of the Mineral	Name of the Lessee	Address & Contact No. of Letter of Intent Holder	Letter of Intent Grant Order No. & Date	Area of Mining lease to be allotted	Validity of LoI	Use (Captive/ Non-Captive)	Location of Mining lease (Latitude & Longitude)
1	2	3	4	5	6	7	8	9

(15) quality /Grade of Mineral available in the District;
(16) use of Mineral;
(17) demand and Supply of the Mineral in the last three years;
(18) mining leases marked on the map of the district;
(19) details of the area of where there is a cluster of mining leases viz. number of mining leases, location (latitude and longitude);
(20) details of Eco-Sensitive Area, if any, in the District;
(21) impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity;
(22) remedial Measures to mitigate the impact of mining on the Environment;
(23) reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan);
(24) risk Assessment & Disaster Management Plan;
(25) details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted);
(26) plantation and Green Belt development in respect of leases already granted in the District;
(27) any other information.

The District Environment Impact Assessment Authority (DEIAA) based on the nature and type of minor mineral in the District may include the additional parameters in the District Survey Report in consultation with the Department of Mines and Geology of the concerned State Government.

The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years.

\\TRUE COPY//

10 का.आ. 562(अ) तारीख 26 फ़रवरी 2014;

11. का.आ. 637(अ) तारीख 28 फ़रवरी 2014;

12. का.आ. 1599(अ) तारीख 25 जून 2014;

13. का.आ. 2601(अ) तारीख 7 अक्टूबर 2014;

14. का.आ. 2600(अ) तारीख 9 अक्टूबर 2014

15. का.आ. 3252(अ) तारीख 22 दिसम्बर 2014;

16. का.आ. 382(अ) तारीख 3 फरवरी, 2015;

17. का.आ. 811(अ) तारीख 23 मार्च, 2015;

18. का.आ. 996(अ) तारीख 10 अप्रैल 2015;

19. का.आ. 1142(अ) तारीख 17 अप्रैल 2015;

20. का.आ. 1141(अ) तारीख 29 अप्रैल 2015;

21. का.आ. 1834(अ) तारीख 6 जुलाई 2015;

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 15th January, 2016

S.O. 141(E).—Whereas in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986), a draft notification for making certain amendments in the Environment Impact Assessment Notification, 2006, issued *vide* number S.O. 1533(E), dated the 14th September 2006, was published under sub-rule (3) of rule (5) of the Environment (Protection) Rules, 1986, vide number S.O. 2588(E), dated 22nd September, 2015, inviting objections and suggestions from all persons likely to be affected thereby, within a period of sixty days from the date of publication on which copies of Gazette containing the said notification were available to the public;

And whereas, copies of said notification were made available to the public on 22nd September 2015;

And whereas, all objections and suggestions received in response to the above mentioned draft notification have been duly considered by the Central Government;

And whereas, in pursuance to the order of Hon'ble Supreme Court dated the 27th February, 2012 in I.A. No.12-13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., prior environmental clearance has now become mandatory for mining of minor minerals irrespective of the area of mining lease;

And whereas, as a result of the above said Order of Hon'ble Supreme Court, the number of cases which are now required to obtain prior environmental clearance has increased substantially;

And whereas, the Hon'ble National Green Tribunal, *vide* its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals;

And whereas, the State Governments have represented for streamlining the process of environmental clearance for mining of minor mineral;

And whereas, the Ministry of Environment, Forest and Climate Change in consultation with State Governments has prepared Guidelines on Sustainable Sand Mining detailing the provisions on environmental clearance for cluster, creation of District Environment Impact Assessment Authority and proper monitoring of sand mining using information technology and information technology enabled services to track the mined out material from source to destination;

Now, therefore, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments in the said notification, namely:-

In the said notification,-

(a) in paragraph 2, after the words "in the said Schedule", the following words shall be inserted, namely:-

"and at District level, the District Environment Impact Assessment Authority (DEIAA) for matters falling under Category 'B2' for mining of minor minerals in the said Schedule";

(b) after paragraph 3, the following paragraph shall be inserted, namely:-

"3 A. District Level Environment Impact Assessment Authority:-

(1) A District Level Environment Impact Assessment Authority hereinafter referred to as the DEIAA shall be constituted by the Central Government under sub-section (3) of section 3 of the Environment (Protection) Act, 1986 comprising of four members including a Chairperson and a Member-Secretary.

(2) The District Magistrate or District Collector shall be the Chairperson of the DEIAA.

(3) The Sub-Divisional Magistrate or Sub-Divisional Officer of the district head quarter of the concerned district of the State shall be the Member-Secretary of the DEIAA.

(4) The other two members of the DEIAA shall be the senior most Divisional Forest Officer and one expert. The expert shall be nominated by the Divisional Commissioner of the Division or Chief Conservator of Forest, as the case may be. The term and qualifications of the expert fulfilling the eligibility criteria are given in Appendix VII to this notification.

(5) The members of the DEIAA who are serving officers of the concerned State Government or the Union territory Administration shall be *ex-officio* members except the expert member.

(6) The District Level Expert Appraisal Committee hereinafter referred to as the DEAC shall comprise of eleven members, including a Chairman and a Member-Secretary.

(7) The senior most Executive Engineer, Irrigation Department in the district of respective State Governments or Union territory Administration shall be the Chairperson of the DEAC.

(8) The Assistant Director or Deputy Director of the Department of Mines and Geology or District Mines Officer or Geologist of the district shall be the Member-Secretary of the DEAC in that order.

(9) A representative of the State Pollution Control Board or Committee, senior most Sub-Divisional Officer (Forest) in the district, representative of Remote Sensing Department or Geology Department or State Ground Water Department, one occupational health expert or Medical Officer to be nominated by the District Magistrate or District Collector, Engineer from Zila Parishad, and three expert members to be nominated by the Divisional Commissioner or Chief Conservator of Forest, as the case may be, shall be the other members of the DEAC. The term and qualifications of the experts fulfilling the eligibility criteria are given in Appendix VII to this notification.

(10) The members of the DEAC who are serving officers of the concerned State Government or the Union territory Administration shall be *ex-officio* members except the expert members.

(11) The District Magistrate or District Collector shall notify an agency to act as Secretariat for the DEIAA and the DEAC and shall provide all financial and logistic support for their statutory functions.

(12) The DEIAA and DEAC shall exercise the powers and follow the procedure as specified in the said notification, as amended from time to time.

(13) The DEAC shall function on the principle of collective responsibility and the Chairman shall endeavor to reach a consensus in each case and if consensus cannot be reached, the view of the majority shall prevail. ";

(c) in paragraph 4, after sub-paragraph (iii), the following sub-paragraph shall be inserted, namely:-

"(iv) The 'B2' Category projects pertaining to mining of minor mineral of lease area less than or equal to five hectare shall require prior environmental clearance from DEIAA. The DEIAA shall base its decision on the recommendations of DEAC, as constituted for this notification." ;

(d) for paragraph 5, the following paragraph shall be substituted, namely:-

"5. Screening, Scoping and Appraisal Committees:-

The same Expert Appraisal Committees (EACs) at the Central Government, SEACs at the State or Union territory level and DEAC at the district level shall screen, scope and appraise projects or activity in category 'A', 'B1 and B2' and 'B2' projects for mining of minor minerals of lease area less than and equal to five hectare respectively. EAC, SEACs and DEACs shall meet at least once every month.

(a) The composition of the EAC shall be as given in Appendix VI. The SEAC at the State or the Union territory level shall be constituted by the Central Government in consultation with the concerned State Government or the Union

territory Administration with identical composition. DEAC at the district level shall be constituted by the Central Government as per the composition given in paragraph 3 A.

(b) The Central Government may with the prior concurrence of the concerned State Governments or the Union territory Administration constitute one SEAC for more than one State or Union territory for reasons of administrative convenience and cost.

(c) The EAC and SEAC shall be reconstituted after every three years.

(d) The authorised members of the EAC, SEACs and DEACs concerned, may inspect any site connected with the project or activity in respect of which the prior environmental clearance is sought for the purpose of screening or scoping or appraisal with prior notice of at least seven days to the project proponent who shall provide necessary facilities for the inspection.

(e) The EAC, SEACs and DEACs shall function on the principle of collective responsibility. The Chairperson shall endeavor to reach a consensus in each case and if consensus cannot be reached the view of the majority shall prevail.";

(e) for paragraph 6, the following paragraph shall be substituted, namely:-

"6. Application for Prior Environmental Clearance (EC):-

An application seeking prior environmental clearance in all cases shall be made by the project proponent in the prescribed Form 1 annexed herewith and Supplementary Form 1A, if applicable, as given in Appendix II after the identification of prospective site (s) for the project and/or activities to which the application relates; and in Form 1M for mining of minor minerals up to five hectare under Category 'B2' projects, as given in Appendix VIII, before commencing any construction activity, or preparation of land, or mining at the site by the project proponent. The project proponent shall furnish along with the application, a copy of the pre-feasibility project report, in addition to Form 1, Form 1A, and Form 1M; and in case of construction projects or activities (item 8 of the Schedule), a copy of the conceptual plan shall be provided instead of pre-feasibility report.";

(f) in paragraph 7,-

(i) in sub-paragraph (i), under the heading "I. Stage (1)- Screening:", the existing sub-paragraph shall be lettered as sub-paragraph "(A)" and after sub-paragraph as so lettered, the following sub-paragraph shall be inserted, namely:-

"(B) The cases as specified in Appendix IX shall be exempted from prior environmental clearance." ;

(ii) after sub-paragraph 7 (ii), the following sub-paragraph shall be inserted, namely:-

"7 (iii) Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals:

(a) The prescribed procedure for preparation of District Survey Report for sand mining or river bed mining and mining of other minor minerals is given in Appendix X.

(b) The prescribed procedure for environmental clearance for mining of minor minerals including cluster situation is given in Appendix XI.";

(g) in paragraph 8,-

(i) for the letters and word "EAC or SEAC", the words and letters "EAC or SEAC or DEAC" shall be substituted;

(ii) for the words "Expert Appraisal Committee or State Level Expert Appraisal Committee" wherever they occur, the words "Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee" shall be substituted;

(h) in paragraph 9, in sub-paragraph (i),-

for the words "Expert Appraisal Committee or State Level Expert Appraisal Committee", the words "Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee" shall be substituted;

(i) in paragraph 10, after sub-paragraph (iii), the following sub-paragraph shall be inserted, namely:-

"(iv) The prescribed procedure for sand mining or river bed mining and monitoring is given in Appendix XII.";

(j) in paragraph 11, -

for the words "Expert Appraisal Committee or State Level Expert Appraisal Committee", the words "Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee" shall be substituted;

(k) in the Schedule,-

(i) for item 1 (a) and the entries relating thereto, the following item and entries shall be substituted, namely:-

(1)	(2)	(3)	(4)	(5)
"1(a)	(i) Mining of minerals	≥50 ha of mining lease area in respect of non-coal mine lease >150 ha of mining lease area in respect of coal mine lease Asbestos mining	<50 ha of mining lease area in respect of non-coal mine lease ≤150 ha of mining lease area in respect of coal mine lease	General Conditions shall apply except: (i) for project or activity of mining of minor minerals of Category 'B2' (up to 25 ha of mining lease area); (ii) River bed mining projects on account of inter-state boundary.

		irrespective of mining area		**Note:** (1) Mineral prospecting is exempted. ''; (2) The prescribed procedure for environmental clearance for mining of minor minerals including cluster situation is given in Appendix XI."; (3) The mining leases which have obtained environmental clearance under Environment Impact Assessment Notification, 1994 and Environment Impact Assessment Notification, 2006 shall not require fresh environmental clearance during renewal provided the project has valid and subsisting environmental clearance.
	(ii) Slurry pipelines (coal lignite and other ores) passing through national parks or sanctuaries or coral reefs, ecologically sensitive areas.	All projects.		

(l) after Appendix VI, the following appendices shall be inserted, namely:-

"APPENDIX VII

(See paragraph 3 A)

Qualifications and terms for the Experts in DEIAA and DEAC

1. **Qualification:** The person should have at least (i) 5 years of formal University training in the concerned discipline leading to a MA or M Sc Degree or (ii) in case of Engineering/ Technology/ Architectural discipline, 4 years formal training course together with prescribed practical training in the field leading to a B. Tech/ B.E./ B. Arch. Degree, or (iii) Other professional degree (e.g. MBA etc.) involving a total of 5 years of formal University training and prescribed practical training, or (iv) Prescribed apprenticeship/ article ship and pass examinations conducted by the concerned professional associations (e.g. Chartered Accountancy) or (v) a University degree, followed by two years of formal training in a University or Service Academy (e.g. MBA/MPA etc.). In selecting the individual professionals, experience gained by them in their respective fields will be taken note of.
2. **Expert:** A professional fulfilling the above eligibility criteria with at least 10 years of relevant experience in the field or with an advanced degree (e.g. Ph. D) in a concerned field with at least 5 years of relevant experience.
3. **Age:** Below 70 years. However, in the event of non-availability of paucity of experts in a given field, the maximum age of a member may be allowed up to 75 years.
4. **Fields:** Experts in Mining, Geology, Hydrology, Remote Sensing, Environment Quality, Environment Impact Assessment Process, Risk Assessment, Life Sciences, Marine Sciences, Forestry and Wildlife, Environmental Economics, Bio-diversity, and River Ecology.

5. **Tenure:** The maximum tenure of expert members shall be for two terms of three years each.

6. The Expert Members may not be removed prior to expiry of the tenure without cause and proper enquiry.

APPENDIX VIII
(See paragraph 6)
FORM 1 M
APPLICATION FOR MINING OF MINOR MINERALS UNDER CATEGORY 'B2' FOR LESS THAN AND EQUAL TO FIVE HECTARE

(II) Basic Information

(viii) Name of the Mining Lease site:
(ix) Location / site (GPS Co-ordinates):
(x) Size of the Mining Lease (Hectare):
(xi) Capacity of Mining Lease (TPA):
(xii) Period of Mining Lease:
(xiii) Expected cost of the Project:
(xiv) Contact Information:

Environmental Sensitivity

Sl. No.	Areas	Distance in kilometer / Details
1.	Distance of project site from nearest rail or road bridge over the concerned River, Rivulet, Nallah etc.	
2.	Distance from infrastructural facilities Railway line National Highway State Highway Major District Road Any Other Road Electric transmission line pole or tower Canal or check dam or reservoirs or lake or ponds In-take for drinking water pump house Intake for Irrigation canal pumps	
3.	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	
4.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	
5.	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	
6.	Inland, coastal, marine or underground waters	
7.	State, National boundaries	
8.	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	
9.	Defence installations	
10.	Densely populated or built-up area, distance from nearest human habitation	
11.	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	
12.	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	
13.	Areas already subjected to pollution or environmental damage. (those where existing legal environmental standards are exceeded)	
14.	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions)	

15.	Is proposed mining site located over or near fissure / fracture for ground water recharge	
16.	Whether the proposal involves approval or clearance under the following Regulations or Acts, namely:- (a) The Forest (Conservation) Act, 1980; (b) The Wildlife (Protection) Act, 1972; (c) The Coastal Regulation Zone Notification, 2011. If yes, details of the same and their status to be given.	
17.	Forest land involved (hectares)	
18.	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders or directions of the Court, if any, and its relevance with the proposed project.	

(Signature of Project Proponent
Along with name and address)

APPENDIX – IX
[See paragraph 7(i) (B)]
EXEMPTION OF CERTAIN CASES FROM REQUIREMENT OF ENVIRONMENTAL CLEARANCE

The following cases shall not require prior environmental clearance, namely:-

1. Extraction of ordinary clay or sand, manually, by the Kumhars (Potter) to prepare earthen pots, lamp, toys, etc. as per their customs.
2. Extraction of ordinary clay or sand, manually, by earthen tile makers who prepare earthen tiles.
3. Removal of sand deposits on agricultural field after flood by farmers.
4. Customary extraction of sand and ordinary earth from sources situated in Gram Panchayat for personal use or community work in village.
5. Community works like de-silting of village ponds or tanks, construction of village roads, ponds, bunds undertaken in Mahatama Gandhi National Rural Employment and Guarantee Schemes, other Government sponsored schemes, and community efforts.
6. Dredging and de-silting of dams, reservoirs, weirs, barrages, river, and canals for the purpose of their maintenance, upkeep and disaster management.
7. Traditional occupational work of sand by Vanjara and Oads in Gujarat *vide* notification number GU/90(16)/ MCR-2189(68)/5-CHH, dated the 14th February, 1990 of the Government of Gujarat.
8. Digging of well for irrigation or drinking water.
9. Digging of foundation for buildings not requiring prior environmental clearance.
10. Excavation of ordinary earth or clay for plugging of any breach caused in canal, nala, drain, water body, etc., to deal with any disaster or flood like situation upon orders of District Collector or District Magistrate.
11. Activities declared by State Government under legislations or rules as non-mining activity with concurrence of the Ministry of Environment, Forest and Climate Change, Government of India.

APPENDIX - X
[See paragraph 7 (iii) (a)]
PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT

The main objective of the preparation of District Survey Report (as per the Sustainable Sand Mining Guideline) is to ensure the following:

Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.

The report shall have the following structure:

1. Introduction
2. Overview of Mining Activity in the District
3 The List of Mining Leases in the District with location, area and period of validity
4. Details of Royalty or Revenue received in last three years
5. Detail of Production of Sand or Bajari or minor mineral in last three years
6. Process of Deposition of Sediments in the rivers of the District
7. General Profile of the District
8. Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.

9. Physiography of the District
10. Rainfall: month-wise
11. Geology and Mineral Wealth

In addition to the above, the report shall contain the following:

(a) District wise detail of river or stream and other sand source.
(b) District wise availability of sand or gravel or aggregate resources.
(c) District wise detail of existing mining leases of sand and aggregates.

A survey shall be carried out by the DEIAA with the assistance of Geology Department or Irrigation Department or Forest Department or Public Works Department or Ground Water Boards or Remote Sensing Department or Mining Department etc. in the district.

Drainage system with description of main rivers

S. No.	Name of the River	Area drained (Sq. Km)	% Area drained in the District

Salient Features of Important Rivers and Streams:

S. No.	Name of the River or Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)

Annual Deposition

S. No.	River or Stream	Portion of the river or stream recommended for mineral concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Total for the District						

A Sub-Divisional Committee comprising of Sub-Divisional Magistrate, Officers from Irrigation department, State Pollution Control Board or Committee, Forest department, Geology or mining officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof.

Methodology adopted for calculation of Mineral Potential:

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or streams. As per the site conditions and location, depth of minable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50 % to 60 % of the area of a particular river or stream. For example in some hill States mineral constituents like boulders, river born Bajri, sand up

to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river or stream.

The District Survey Report shall be prepared for each minor mineral in the district separately and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on district's website for twenty one days. The comments received shall be considered and if found fit, shall be incorporated in the final Report to be finalised within six months by the DEIAA.

The District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years.

APPENDIX - XI

[See paragraph 7 (iii) (b)]

PROCEDURE FOR ENVIRONMENTAL CLEARANCE FOR MINING OF MINOR MINERALS INCLUDING CLUSTER

The following policy shall be followed for environmental clearance of mining of minor minerals including cluster situation:-

(1). The data provided by the States (Sustainable Sand Mining Guidelines) shows that most of the mining leases for minor minerals are of lease area less than 5 hectare. It is also reported that in hill States getting a stretch in river with area more than 5 hectare is very uncommon. So the size of lease for minor minerals including river sand mining will be determined by the States as per their circumstances.

(2). The mining of minor minerals is mostly in clusters. The Environment Impact Assessment or Environment Management Plan are required to be prepared for the entire cluster in order to capture all the possible externalities. These reports shall capture carrying capacity of the cluster, transportation and related issues, replenishment and recharge issues, geo-hydrological study of the cluster area. The Environment Impact Assessment or Environment Management Plan shall be prepared by the State or State nominated Agency or group of project proponents in the Cluster or the project proponent in the cluster.

(3). There shall be one public consultation for entire cluster after which the final Environment Impact Assessment or Environment Management Plan report for the cluster shall be prepared.

(4). Environmental clearance shall be applied for and issued to the individual project proponent. The individual lease holders in cluster can use the same Environment Impact Assessment or Environment Management Plan for application for environmental clearance. The cluster Environment Impact Assessment or Environment Management Plan shall be updated as per need keeping in view any significant change.

(5). The details of cluster Environment Impact Assessment or Environment Management Plan shall be reflected in each environmental clearance in that cluster and DEAC, SEAC, and EAC shall ensure that the mitigative measures emanating from the Environment Impact Assessment or Environment Management Plan study are fully reflected as environmental clearance conditions in the environmental clearance's of individual project proponents in that cluster.

(6). A cluster shall be formed when the distance between the peripheries of one lease is less than 500 meters from the periphery of other lease in a homogeneous mineral area.

(7). Form 1M, Pre-Feasibility Report and mine plan for Category 'B2' projects for mining of minor minerals shall be prepared by the Registered Qualified Person or Accredited Consultants of Quality Council of India, National Accreditation Board for Education and Training. The Environment Impact Assessment or Environment Management Plan for Category 'A' and Category 'B1' projects shall be prepared by the accredited consultants of Quality Council of India, National Accreditation Board for Education and Training.

(8). The SEIAAs shall have supervisory jurisdiction over the DEIAAs and decisions of DEIAA shall be reviewed by the SEIAA without prejudice to any provisions under any existing law.

Schematic Presentation of Requirements on Environmental Clearance of Minor Minerals including cluster situation

Area of Lease (Hectare)	Category of Project	Require-ment of EIA / EMP	Require-ment of Public Hearing	Require-ment of EC	Who can prepare EIA/ EMP	Who will apply for EC	Authority to appraise/ grant EC	Authority to monitor EC compliance
EC Proposal of Sand Mining and other Minor Mineral Mining on the basis of individual mine lease								
0 – 5ha	**'B2'**	Form –1M, PFR and Approved Mine Plan	No	Yes	Project Proponent	Project Proponent	DEAC/ DEIAA	DEIAA SEIAA SPCB CPCB MoEFCC Agency

> 5 ha and < 25 ha	**'B2'**	Form –I, PFR and Approved Mine Plan and EMP	No	Yes	Project Proponent	Project Proponent	SEAC / SEIAA	nominated by MoEFCC
≥ 25ha and < 50ha	**'B1'**	Yes	Yes	Yes	Project Proponent	Project Proponent	SEAC/ SEIAA	
≥ 50 ha	**'A'**	Yes	Yes	Yes	Project Proponent	Project Proponent	EAC/ MoEFCC	
EC Proposal of Sand Mining and other Minor Mineral Mining in cluster situation								
Cluster area of mine leases up to 5 ha	**'B2'**	Form –1M, PFR and Approved Mine Plan	No	Yes	State, State Agency, Group of Project Proponents, Project Proponent	Project Proponent	DEAC/ DEIAA/	DEIAA SEIAA SPCB CPCB MoEFCC Agency nominated by MoEFCC
Cluster area of Mine leases > 5 ha and < 25 ha with no individual lease > 5 ha	**'B2'**	Form –I, PFR and Approved Mine Plan and one EMP for all leases in the Cluster	No	Yes	State, State Agency, Group of Project Proponents, Project Proponent	Project Proponent	DEAC/ DEIAA/	
Cluster of mine leases of area ≥ 25 hectares with individual lease size < 50ha	**'B1'**	Yes	Yes	Yes	State, State Agency, Group of Project Proponents, Project Proponent	Project Proponent	SEAC/ SEIAA	
Cluster of any size with any of the individual lease ≥ 50ha	**'A'**	Yes	Yes	Yes	State, State Agency, Group of Project Proponents, Project Proponent	Project Proponent	EAC/ MoEFCC	

APPENDIX - XII

[See paragraph 10 (iv)]

PROCEDURE FOR MONITORING OF SAND MINING OR RIVER BED MINING

1. The security feature of Transport Permit shall be as under:

   (a) Printed on Indian Banks' Association (IBA) approved Magnetic Ink Character Recognition (MICR) Code paper.

   (b) Unique Barcode.

   (c) Unique Quick Response (QR) code.

   (d) Fugitive Ink Background.

   (e) Invisible Ink Mark.

   (f) Void Pantograph.

   (g) Watermark.

2. Requirement at Mine Lease Site:

   (a) Small Size Plot (Up to 5 hectare): Android Based Smart Phone.

(b) Large Size Plots (More than 5 hectare): CCTV camera, Personal Computer (PC), Internet Connection, Power Back up.

(c) Access control of mine lease site.

(d) Arrangement for weight or approximation of weight of mined out mineral on basis of volume of the trailer of vehicle used.

3. Scanning of Transport Permit or Receipt and Uploading on Server:

(a) Website: Scanning of receipt on mining site can be done through barcode scanner and computer using the software;

(b) Android Application: Scanning on mining site can be done using Android Application using smart phone. It will require internet availability on SIM card;

(c) SMS: Transport Permit or Receipt shall be uploaded on server even by sending SMS through mobile. Once Transport Permit or Receipt get uploaded, an unique invoice code gets generated with its validity period.

4. Proposed working of the system:

The State Mining Department should print the Transport Permit or Receipt with security features enumerated at Paragraph 1 above and issue them to the mine lease holder through the District Collector. Once these Transport Permits or Receipts are issued, they would be uploaded on the server against that mine lease area. Each receipt should be preferably with pre-fixed quantity, so the total quantity gets determined for the receipts issued.

When the Transport Permit or Receipt barcode gets scanned and invoice is generated, that particular barcode gets used and its validity time is recorded on the server. So all the details of transporting of mined out material can be captured on the server and the Transport Permit or Receipt cannot be reused.

5. Checking On Route:

The staff deployed for the purpose of checking of vehicles carrying mined mineral should be in a position to check the validity of Transport Permit or Receipt by scanning them using website, Android Application and SMS.

6. Breakdown of Vehicle:

In case the Vehicle breakdown, the validity of Transport Permit or Receipt shall be extended by sending SMS by driver in specific format to report breakdown of vehicle. The server will register this information and register the breakdown. The State can also establish a call centre, which can register breakdowns of such vehicles and extend the validity period. The subsequent restart of the vehicle also should be similarly reported to the server or call centre.

7. Tracking of Vehicles:

The route of vehicle from source to destination can be tracked through the system using check points, RFID Tags, and GPS tracking.

8. Alerts or Report Generation and Action Review:

The system will enable the authorities to develop periodic report on different parameters like daily lifting report, vehicle log or history, lifting against allocation, and total lifting. The system can be used to generate auto mails or SMS. This will enable the District Collector or District Magistrate to get all the relevant details and shall enable the authority to block the scanning facility of any site found to be indulged in irregularity. Whenever any authority intercepts any vehicle transporting illegal sand, it shall get registered on the server and shall be mandatory for the officer to fill in the report on action taken. Every intercepted vehicle shall be tracked.

The monitoring of mined out mineral, environmental clearance conditions and enforcement of Environment Management Plan will be ensured by the DEIAA, SEIAA and the State Pollution Control Board or Committee. The monitoring arrangements envisaged above shall be put in place not later than three months. The monitoring of enforcement of environmental clearance conditions shall be done by the Central Pollution Control Board, Ministry of Environment, Forest and Climate Change and the agency nominated by the Ministry for the purpose.".

[No. Z-11013/98/2014-IA-II (M)]

MANOJ KUMAR SINGH, Jt. Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii) *vide* number S.O. 1533 (E), dated the 14th September, 2006 and subsequently amended *vide* the following numbers :-

1. S.O. 1737 (E) dated the 11th October, 2007;
2. S.O. 3067 (E) dated the 1st December, 2009;
3. S.O. 695 (E) dated the 4th April, 2011;
4. S.O. 2896 (E) dated the 13th December, 2012;
5. S.O. 674 (E) dated the 13th March, 2013;
6. S.O. 2204 (E) dated the 19th July 2013;
7. S.O. 2555 (E) dated the 21st August, 2013;
8. S.O. 2559 (E) dated the 22nd August, 2013;
9. S.O. 2731 (E) dated the 9th September, 2013;
10. S.O. 562 (E) dated the 26th February, 2014;
11. S.O. 637 (E) dated the 28th February, 2014;
12. S.O. 1599 (E) dated the 25th June, 2014;
13. S.O. 2601 (E) dated the 7th October, 2014;
14. S.O. 2600 (E) dated the 9th October, 2014
15. S.O. 3252 (E) dated the 22nd December, 2014;
16. S.O. 382 (E) dated the 3rd. February, 2015;
17. S.O. 811 (E) dated the 23rd March, 2015;
18. S.O. 996 (E) dated the 10th April, 2015;
19. S.O. 1142 (E) dated the 17th April, 2015;
20. S.O. 1141 (E) dated the 29th April, 2015;
21. S.O. 1834 (E) dated the 6th July, 2015.

Printed by the Manager, Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

\\TRUE COPY//

ANNEXURE A-3

सत्यमेव जयते

SUSTAINABLE SAND MINING MANAGEMENT GUIDELINES 2016



पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
इंदिरा पर्यावरण भवन, जोर बाग रोड, नई दिल्ली–110 003
Ministry of Environment, Forest and Climate Change
Indira Paryavaran Bhavan, Jor Bagh Road, New Delhi - 110 003
www.moef.nic.in

SUSTAINABLE SAND MINING MANAGEMENT GUIDELINES

TABLE OF CONTENTS

Sl.No.	CONTENTS	Page
01	Foreword Preface	03 05
02	Executive Summary	07
03	Introduction	08
04	Need for Policy Guidelines	09
05	Objective of the Guidelines	09
06	The Effect of Sand and Gravel Mining	11
07	General Approach to Sustainable Sand and Gravel Mining	14
08	The World Scenario	16
09	Indian Scenario	18
10	The Price Elasticity for Demand of Sand	19
11	Process of Sediment Transport	19
12	Sustainable Sand and Gravel Mining Guidelines	21
13	The Structure of District Survey Report	24
14	Management Plan	28
15	Marine Sand Mining and Impact on Marine Biodiversity	33
16	Reducing Consumption of Sand	34
17	The Report of the Committee headed by Secretary, MoEF - 2010	35
18	Regime of Law and Administrative Orders Relating to Mining of Minor Minerals	40
19	The Issues and Management of Mining In Cluster	49
20	Management of Sand Deposited after Flood on Agricultural Field of Farmers	58
21	Mining of Sand from Agricultural Field	60
22	Customary Rights on Sand Mining	60
23	Desilting of Reservoirs / Barrages / Annecuts / Lakes / Canals	61
24	Mining Plan	62
25	Evaluating The Impact Of Sand Mining	62
26	Monitoring System for Sustainable Sand Mining	64
27	Administrative Structure for Environmental Clearance and Ensuring Compliance of EC Conditions	67
28	Exemption of Certain Cases from being Considered as Mining and Requirement of Environmental Clearance	72
29	Standard Environmental Conditions for Sand Mining	73

APPENDIX

Sl.No.	CONTENTS	Page
30	Table - 1: Revenue from Sand Mining in State / UT	79
31	Table - 2: Number of Mining Leases in State	80
32	Table - 3: Average Size of Sand Mining Leases in State / UT: 2014-15	81
33	Table - 4: Average Period of Sand Mining Leases in State / UT	82
34	Table - 5: Common Method and Practice of Sand Mining in the State / UT	83
35	Table - 6: Suggestions / Recommendations from states for Environmentally Sustainable Sand Mining	85
36	Table - 7: Best Practice of Sand Mining adopted in District / State / UT	93
37	Table - 8: Status of Promulgation of Rule on Sand Mining in the State / UT	95
38	Table - 9: Normal Dates of Onset and withdrawal of South-West Monsoon	97

EXECUTIVE SUMMARY

The sand and gravel are one of the most important construction materials. Ensuring their availability is vital for the development of the infrastructure in the country. There are different sources of sand and gravel, the most important among them is the river. As the requirement of these construction materials is on rise, they also are very vital for the health, physical character of the river and the different important functions of the river. The extraction of sand and gravel from the river bodies has to be regulated and done with adoption of required environmental safeguards.

For making available these resources, a mapping of these resources at the district level, identification of appropriate sites for extraction, appraisal of the extraction process, putting in place the required environmental safeguards, and rigorous monitoring of the volume of extracted material is required to ensure sustainability of the entire process.

The district is the unit of administration which is best placed to do the mapping of these resources, adopt the best environmental practices for extraction of these materials and monitor its extraction and movement. The large number of leases which are awarded, the scattered geographical location of the availability of these materials and decentralized requirement and usage of the sand and aggregates also places districts in a unique position to play a vital role in adoption of environmental safeguards needed for sustainable extraction of river sand and gravel.

Recommendations for management of sustainable sand extraction are the key objective of the Guidelines. Emphasis is given to the setting up of monitoring plans that will provide data on profile changes and sediment transport capacity to enable the authorities to evaluate the long-term effect of the mining activities both upstream and downstream of sand extraction sites.

Special emphasis is given on monitoring of the mined out material, which is key to the success of environment management plan. So use of IT and IT enabled services for effective monitoring of the quantity of mined out material and transportation along with process reengineering has been made a part of the Guideliness. The Guidelines proposes delegation of responsibility and authority to the cutting edge level i.e. the District Environment Impact Assessment Authority along with streamlining the process of impact assessment, environment management plan and environment clearance in cluster situation.

Promotion of manufactured sand, artificial sand and alternative technologies in construction materials and processes are also required for reducing the dependence and demand on naturally occurring sand and gravel. Development of slag sand, sand from stone chips and there certification under BIS is an important step in this direction.

INTRODUCTION

Sustainable Development is built on three pillars - environmental, social and economic. Sustainable development cannot be achieved if the environment is protected but poverty is prevalent in a significant part of the population. Similarly, sustainable development cannot be achieved through inappropriate economic growth, if it undermines the environment in which people and businesses exists. These Guideliness support that fundamental concept, promoting environmental protection, limiting negative physiological, hydrological and social impacts under pinning sustainable economic growth.

Sand and gravel have long been used as aggregate for construction of roads and building. Today, the demand for these materials continues to rise. In India, the main sources of sand are river flood plain, coastal sand, paleo channel sand, and sand from agricultural fields.

River sand mining is a common practice as habitation concentrates along the rivers and the mining locations are preferred near the markets or along the transportation route, for reducing the transportation cost. River sand mining can damage private and public properties as well as aquatic habitats. Excessive removal of sand may significantly distort the natural equilibrium of a stream channel.

Removing sediment from the active channel bed in river interrupt the continuity of sediment transport through the river system, disrupting the sediment mass balance in the river downstream and induces channel adjustments (usually incision) extending considerable distances (commonly one kilometer or more) beyond the extraction site.

The magnitude of the impact basically depends on the magnitudes of the extraction relative to bed load sediment supply and transport through the reach. Implementation of the principles and processes outlined in this Guidelines will limit the negative externalities of sand and gravel mining.

NEED FOR POLICY GUIDELINES

Sand is naturally occurring granular material composed of finely divided rock and mineral particles between 150 micron to 4.75 mm in diameter (IS 383-1970). Sand is formed due to weathering of rocks due to mechanical forces. In the process the weathered rocks forms gravel and then sand.

Sand and gravel together known as aggregate, represent the highest volume of raw material used on earth after water. The mining of aggregate has been continuing for many years. Now the mining of aggregates has reached a level threatening the environment and ecosystem besides also reaching a level of scarcity that would threaten the economy. It is recommended that sand & aggregate mining, and quarrying should be done only after sound scientific assessment and adopting best practices to limit the impact on the environment.

It is also felt that the greater use of substitute material (Manufactured Sand, artificial sand etc.) & construction technology, and sustainable use of the resource could drastically reduce adverse impact of mining on the environment.

OBJECTIVE OF THE GUIDELINES

The Guideliness has been based on the following principles:

- Uncontrolled sand mining is not sustainable.
- Compliance with present and future legislation and regulations on the subject is mandatory and not voluntary.
- Each lease holder should be given the opportunity to self-regulate to the extent that it can demonstrate compliance with legislation and regulations.
- Where self- regulation fails to deliver compliance with legislation and regulations, increased formal enforcement and monitoring should be implemented with punitive measures applied in line with the legal framework.
- There is a need to protect the environment and the right of the population to live in clean and safe surroundings, with the need to use natural resources in a way that will make a positive and sustainable contribution to the economy.

The main objectives of the Guidelines

- To ensure that sand and gravel mining is done in environmentally sustainable and socially responsible manner.
- To ensure availability of adequate quantity of aggregate in sustainable manner.
- To improve the effectiveness of monitoring of mining and transportation of mined out material.

- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Avoid aggradation at the downstream reach especially those with hydraulic structures such as jetties, water intakes etc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and in-stream habitats.
- Avoid pollution of river water leading to water quality deterioration.
- To prevent depletion of ground water reserves due to excessive draining out of ground water.
- To prevent ground water pollution by prohibiting sand mining on fissures where it works as filter prior to ground water recharge.
- To maintain the river equilibrium with the application of sediment transport principles in determining the locations, period and quantity to be extracted.
- Streamlining and simplifying the process for grant of environmental clearance (EC) for sustainable mining.

THE EFFECT OF SAND AND GRAVEL MINING

Mining within or near riverbed has a direct impact on the stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. Alteration or modification of the above attributes may cause hazardous impact on ecological equilibrium of riverine regime. This may also cause adverse impact on in-stream biota and riparian habitats. This disturbance may also cause changes in channel configuration and flow-paths.

The effects of sand and gravel mining are as follows:

a) Extraction of bed material in excess of replenishment by transport from upstream causes the bed to lower (degrade) upstream and downstream of the site of removal.

b) In-stream habitat is impacted by increase in river gradient, suspended load, sediment transport and sediment deposition. Excessive sediment deposition for replenishment increases turbidity which prevents penetration of light required for photosynthesis and reduces food availability of aquatic fauna.

c) Riparian habitat including vegetative cover on and adjacent to the river banks it controls erosion, provide nutrient inputs into the stream and prevents intrusion of pollutants in the stream through runoff. Bank erosion and change of morphology of the river can destroy the riparian vegetative cover.

d) Bed degradation are responsible for channel shifting, causing loss of properties and degradation of landscape, it can also undermine bridge supports, pipe lines or other structures.

e) Degradation may change the morphology of the river bed, which constitutes one aspect of the aquatic habitat.

f) Degradation can deplete the entire depth of gravelly bed material, exposing other substrates that may underlie the gravel, which could in turn affect the quality of aquatic habitat. Lowering of ground water table in the flood plain because of lowering of riverbed level as well as river water level takes place because of extraction and draining out of excessive ground water from the adjacent areas. So, if a floodplain aquifer drains to the stream, groundwater levels can be lowered as a result of bed degradation.

g) Lowering of the water table can destroy riparian vegetation.

h) Excessive pumping of ground water in the process of mining in abandoned channels depletes ground water causing scarcity of irrigation and drinking water. In extreme cases it may create ground fissures and subsidence in adjacent areas.

i) Flooding is reduced as bed elevations and flood heights decrease, reducing hazard for human occupancy of floodplains and the possibility of damage to engineering works.

j) The supply of overbank sediments to floodplains is reduced as flood heights decrease.

k) An un-scientific and unregulated sand and gravel mining tends to increase channel bank

scouring and erosion. This causes a large degree of meandering of rivers and sometimes it could be in kms.

l) Rapid bed degradation may induce bank collapse and erosion by increasing the heights of banks.

m) Polluting ground water by reducing the thickness of the filter material especially if mining is taking place at top of recharge fissures.

n) Choking of sand layer which acts as filter for ingress of ground water from river by dumping of finer material, compaction of filter zone due to movement of heavy vehicles. It also reduces the permeability and porosity of the filter material.

o) Removal of gravel from bars may cause downstream bars to erode if they subsequently receive less bed material than is carried downstream from them by fluvial transport.

p) Ecological effects on bird nesting, fish migration, angling, etc.

q) Indiscrete mining activities lead to increased concentration of suspended sediment in the river which in turn causes siltation of water resources projects.

r) Un-scientific and unregulated sand and gravel mining leads to the severe health hazards like air quality degradation and dust fog.

s) Direct destruction from heavy equipment operation; discharges from equipment and refueling.

t) Biosecurity and pest risks.

u) Impacts on coastal processes.

The other deleterious impacts of indiscrete mining include

Loss of riparian habitat resulting from direct removal of vegetation along the stream bank to facilitate the use of a dragline or through the process of lowering the water table, bank undercutting, and channel incision. The physical composition and stability of substrates are altered as a result of in-stream mining and most of these physical effects may exacerbate sediment entrainment in the channel.

Furthermore, the process of in-stream mining and gravel washing produces fine sediments under all flow conditions, resulting in a deposition of fine sediment in riffles as well as other habitats at low discharge. Excess sediment is considered the greatest pollutant in waters and constitutes one of the major environmental factors in the degradation of stream fisheries.

However, in-stream mining may contribute additional sediment to downstream reaches due to the disruption of substrate stability. Once sediment enters the stream, it is best to let natural geomorphological and hydrological processes reach a dynamic equilibrium, rather than further exacerbating the situation by additional disturbance.

All other things being equal:

a) Extracting gravel from an excavation that does not penetrate the water table and is located away from an active stream channel should cause little or no change to the natural hydrological processes unless the stream captures the pit during periods of flooding.

b) In-stream extraction of gravel from below the water level of a stream generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the water level.

c) In-stream extraction of gravel below the deepest part of the channel (the thalweg) generally causes more changes to the natural hydrological processes than limiting extraction to a reference point above the thalweg.

d) Excavating sand and gravel from a small straight channel with a narrow floodplain generally will have a greater impact on the natural hydrological processes than excavations on a braided channel with a wide floodplain.

e) Extracting sand and gravel from a large river or stream will generally create less impact than extracting the same amount of material from a smaller river or stream.

f) Over-extraction of gravel can destabilise channels and banks, and/or affect the ecologic functioning of rivers particularly if undertaken at the wrong time, or in the wrong place, or in a way that damages the river bed or margins.

GENERAL APPROACH TO SUSTAINABLE SAND AND GRAVEL MINING

Following considerations should be kept in mind for sand / gravel mining:

a) Parts of the river reach that experience deposition or aggradation shall be identified first. The Lease holder/ Environmental Clearance holder may be allowed to extract the sand and gravel deposit in these locations to manage aggradation problem.

b) The distance between sites for sand and gravel mining shall depend on the replenishment rate of the river. Sediment rating curve for the potential sites shall be developed and checked against the extracted volumes of sand and gravel.

c) Sand and gravel may be extracted across the entire active channel during the dry season.

d) Abandoned stream channels on terrace and inactive floodplains be preferred rather than active channels and their deltas and flood plains. Stream should not be diverted to form inactive channel.

e) Layers of sand and gravel which could be removed from the river bed shall depend on the width of the river and replenishment rate of the river.

f) Sand and gravel shall not be allowed to be extracted where erosion may occur, such as at the concave bank.

g) Segments of braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.

h) Sand and gravel shall not be extracted within 200 to 500 meter from any crucial hydraulic structure such as pumping station, water intakes, and bridges. The exact distance should be ascertained by the local authorities based on local situation. The cross-section survey should cover a minimum distance of 1.0 km upstream and 1.0 km downstream of the potential reach for extraction. The sediment sampling should include the bed material and bed material load before, during and after extraction period. Develop a sediment rating curve at the upstream end of the potential reach using the surveyed cross- section. Using the historical or gauged flow rating curve, determine the suitable period of high flow that can replenish the extracted volume. Calculate the extraction volume based on the sediment rating curve and high flow period after determining the allowable mining depth.

i) Sand and gravel could be extracted from the downstream of the sand bar at river bends. Retaining the upstream one to two thirds of the bar and riparian vegetation is accepted as a method to promote channel stability.

j) Flood discharge capacity of the river could be maintained in areas where there are significant flood hazard to existing structures or infrastructure. Sand and gravel mining may be allowed to maintain the natural flow capacity based on surveyed cross- section history.

k) Alternatively, off-channel or floodplain extraction is recommended to allow rivers to replenish the quantity taken out during mining.

l) The Piedmont Zone (Bhabhar area) particularly in the Himalayan foothills, where riverbed material is mined, this sandy-gravelly track constitutes excellent conduits and holds the greater potential for ground water recharge. Mining in such areas should be preferred in locations selected away from the channel bank stretches.

m) Mining depth should be restricted to 3 meter and distance from the bank should be 3 meter or 10 percent of the river width whichever less.

n) The borrow area should preferably be located on the river side of the proposed embankment, because they get silted up in course of time. For low embankment less than 6 m in height, borrow area should not be selected within 25 m from the toe/heel of the embankment. In case of higher embankment the distance should not be less than 50 m. In order to obviate development of flow parallel to embankment, cross bars of width eight times the depth of borrow pits spaced 50 to 60 meters centre-to-centre should be left in the borrow pits.

o) Demarcation of mining area with pillars and geo-referencing should be done prior to start of mining.

THE WORLD SCENARIO

Sand and gravel are mined world-wide and account for the largest volume of solid material extracted globally. Formed by erosive processes over thousands of years, they are now being extracted at a rate far greater than their renewal. Furthermore, the volume being extracted is having a major impact on rivers, deltas and coastal and marine ecosystems, resulting in loss of land through river or coastal erosion, lowering of the water table and decrease in the amount of sediment supply. Despite the colossal quantities of sand and gravel being used, increasing dependence on them and the significant impact that their extraction has on the environment, this issue needs far better attention and awareness.

Globally, between 47 and 59 billion tonnes of material is mined every year of which sand and gravel, known as aggregates, account for both the largest share (from 68% to 85%) and the fastest growth in extraction increase. Although more sand and gravel are mined than any other material, reliable data on their extraction is not available. The absence of global data on aggregates mining makes environmental assessment very difficult and has contributed to the lack of awareness about this issue. One way to estimate the global use of aggregates indirectly is through the production of cement for concrete (concrete is made with cement, water, sand and gravel). The production of cement is reported by 150 countries and it reached 3.7 billion tonnes in 2012 (USGS, 2013a). For each tonne of cement, the building industry needs about six to seven times more tonnes of sand and gravel (USGS, 2013b). Thus, the world's use of aggregates for concrete can be estimated at 25.9 billion tonnes a year for 2012 alone.

Added to this are all the aggregates used in land reclamation, shoreline developments and road embankments (for which the global statistics are unavailable), added to this is the 180 million tonnes of sand used in industry (USGS, 2012). Aggregates also contribute to 90% of asphalt pavements and 80% of concrete roads (Robinson and Brown, 2002). Taking all these estimates into account, a conservative estimate for the world consumption of aggregates exceeds 40 billion tonnes a year.

This large quantity of material cannot be extracted and used without a significant impact on the environment. Extraction has an impact on biodiversity, water turbidity, water table levels and landscape and on climate through carbon dioxide emissions from transportation. There are also socio-economic, cultural and even political consequences. In some extreme cases, the mining of marine aggregates has changed international boundaries, such as through the disappearance of sand islands in Indonesia (New York Times, 2010; Guerin, 2003).

The impacts of sand mining can be mainly categorized as follows:

IMPACTS ON	DESCRIPTION
Biodiversity	Impacts on related ecosystems (for example; fisheries)
Land losses	Both inland and coastal through erosion
Hydrological functions	Change in water flows, flood regulation and marine currents
Water supply	Through lowering of the water table and pollution
Infrastructures	Damage to bridges, river embankments and coastal infrastructures
Climate	Directly through transport emissions
Landscape	Coastal erosion, changes in deltaic structures, quarries, pollution of rivers
Extreme events	Decline of protection against extreme events (flood, drought, storm surge)

World over sand was until recently extracted in land quarries and riverbeds; however, a shift to marine and coastal aggregates mining has occurred due to the decline of inland resources. River and marine aggregates remain the main sources for building and land reclamation. For concrete, in-stream gravel requires less processing and produces high-quality material while marine aggregate needs to be thoroughly washed to remove salt. If the chloride is not removed from marine aggregate, a structure built with it might collapse after few decades due to corrosion of steel reinforced structures. Most sand from deserts cannot be used for concrete and land reclaiming, as the wind erosion process forms round grains that do not bind well.

INDIAN SCENARIO

The data on consumption of sand and aggregate in country is not available with any source. It can be derived indirectly from the usage of cement, construction of roads and stowing of mines. The trend for aggregates extraction can be estimated using cement production as a proxy.

Cement production has multiplied three-fold in the last 20 years from 1.37 billion tonnes of cement in 1994 to 3.7 billion tonnes in 2012 (USGS, 2013a) mainly as a result of rapid economic growth in Asia (UNEP and CSIRO, 2011). Five countries: China (58%), India (6.75%), the United States (2%), Brazil and Turkey - produce 70% of the world's cement (USGS, 2013c). The consumption of cement is expected to reach 324 million tonnes, which equates to use of 2.2 billion tonnes of aggregates. This is in addition to sand and aggregates used in stowing of mines, industry and other allied usage.

In India the main sources of sand are:

(a) River (riverbed and flood plain).

(b) Lakes and reservoirs.

(c) Agricultural fields (Haryana).

(d) Coastal / marine sand.

(e) Palaeo-channels (Bikaner in Rajasthan).

THE PRICE ELASTICITY FOR DEMAND OF SAND

As the price elasticity of demand for sand is inelastic (-0.88), any increase in price in absence of marketable alternative will not have any significant impact on demand. Use of crushed stones or other substitute material should be promoted. The regional context of aggregate resources, market demand, and the environmental impacts of various alternatives must be understood before any site-specific proposal for aggregate extraction can be reviewed.

Evaluation of aggregate supply and demand should be undertaken on the basis of production-consumption regions, encompassing the market for aggregate and all potential sources of aggregate within an economical transport distance. The finite nature of high-quality alluvial gravel resources must be recognized, and high-quality PCC-grade aggregates should be reserved only for the uses demanding this quality material (such as concrete). Alternative sources should be used in less demanding applications (such as road sub-base). Part replacement with fly ash in roads and embankments be promoted in place of sand and aggregates.

The environmental costs of sand mining should be incorporated into the price of the product so that alternative sources that require more processing but have less environmental impact become more attractive.

PROCESS OF SEDIMENT TRANSPORT

The loose boundary (consisting of movable material) of an alluvial channel deforms under the action of flowing water and the deformed bed with its changing roughness (bed forms) interacts with the flow. The resulting movement of the bed material (sediment) in the direction of flow is called sediment transport and a critical bed shear stress must be exceeded to start the particle movement.

Such a critical shear stress is referred as incipient (threshold) motion condition, below which the particles will be at rest and the flow is similar to that on a rigid boundary. Some sediment particles roll or slide along the bed intermittently and some others saltate (hopping or bouncing along the bed). The material transported in one or both of these modes is called 'bed load'.

Finer particles (with low fall velocities) are entrained in suspension by the fluid turbulence and transported along the channel in suspension. This mode of transport is called 'suspended load'. Sometimes finer particles from upland catchment (sizes which are not present in the bed material), called 'wash load', are also transported in suspension. The combined bed material and wash load is called 'total load'.

Bed load ranges from a few percent of total load in lowland rivers to perhaps 15% in Mountain Rivers to over 60% in some arid catchments. Although a relatively small part of the total sediment load, the arrangement of bed load sediment constitutes the architecture of sand, and gravel-bed channels.

The rate of sediment transport typically increases as a power function of flow; that is, a doubling of flow typically produces more than a doubling in sediment transport and most sediment transport occurs during floods. The environmental impacts from in-stream mining can be avoided, if the annual bed load is calculated and aggregate extraction is restricted to that value or some portion of it. To accurately limit extraction to some portion of bed load, the amount of sediment that passes the in-stream mining site during a given period of time must be calculated.

There is a large amount of uncertainty in the process of calculating annual rates of bed load transport. How much coarse material is moved, how long it remains in motion as also how far it moves depends on the size, shape & packing of the material and the characteristics of the river flow.

Downstream movement commonly occurs as irregular bursts of short-distance movement separated by longer periods, when the particles remain at rest. Because bed load changes from hour-to-hour, day-to-day, and year-to-year, estimating annual bed load rates is a dynamic process involving careful examination.

Constant variations in the flow of the river make the channel floor and riverbanks a dynamic interface, where some materials are being eroded while others are being deposited. The net balance of this activity, on a short- term basis, is referred to as scour or fill.

On a long-term basis, continued scour results in erosion (degradation), while continued fill results in deposition (aggradation).

A general indicator of the stability of a stream relates to the amount of vegetation present. Gravel bars that are vegetated or where the gravel is tightly packed, generally indicate streams, where the gravel supply is in balance. Streams with excessive gravel generally have gravel bars with little or no vegetation, and are surfaced with loosely packed gravel.

SUSTAINABLE SAND AND GRAVEL MINING GUIDELINES

The broad principle on which any sustainable sand mining Guidelines / policy can be based is that river/ natural resources must be utilized for the benefit of the present and future generation, so river resources should be prudently managed and developed. The preparation of District Survery Report is an important initial step.

The Processes under the Guidelines:

(a) Identification of areas of aggradation / deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited. Use of satellite imagery for identifying areas of sand deposit and quantity be done.

(b) Calculation of annual rate of replenishment and allowing time for replenishment after mining in area.

(c) Identifying ways of scientific and systematic mining.

(d) Identifying measures for protection of environment and ecology.

(e) Determining measures for protection of bank erosion.

(f) A bench mark (BM) with respect to mean sea level (MSL) should be made essential to in-mining channel reaches (MCR). Below which no mining shall be allowed.

(g) Identifying steps for conservation of mineral.

(h) Permanent gauging facilities (for discharge and sediment both) should be made compulsory for the sites having excessive mining in consultation with Central Water Commission or any competent State Agency.

(i) Implementing safeguards for checking illegal and indiscrete mining.

Following the above processes, to begin with it is important to prepare a survey document mapping the status of sand sources in a district. This survey should be conducted and report be prepared for each district. Though it is an acceptable fact that rivers cut across districts and States and every river is an ecosystem in itself. But, keeping in view the fact that the district is the most established unit of administration at which this kind of survey, planning and monitoring can be ensured effectively, it is proposed that every district will prepare this document taking the river stretch in that district as an ecological unit and inventorising other sources of sand in the district.

Besides, the production of aggregate in a particular area is a function of availability of natural resources, the size of the population, the economy of the area and various developmental and infrastructural works being undertaken in the area.

The natural resources must be utilized in environment friendly manner in scientific and systematic way and with the objective of sustainable development the policy on the subject should have provisions for protection of environment & ecology. These factors can be accounted for in a most efficient manner at district level.

The sustainable mining plan needs to be dynamic. A survey should be carried out by the District Environment Impact Assessment Authority (DEIAA) with the assistance of Geology Department, Irrigation Department, Forest Department, Public Works Department, Ground Water Boards, Remote Sensing Department and Mining Department etc. in the district at regular intervals.

The survey shall contain:

1. District wise detail of river or stream and other sand source.
2. District wise availability of sand or gravel or aggregate resources.
3. District wise detail of existing mining leases of sand and aggregates.

Based on this survey document, the action plan shall divide the river/ stream/ other sources of the District into the following categories:

1. River / Stream beds sections / other sources suitable for extraction of sand and aggregates.
2. River / Stream beds sections / other sources prohibited for extraction of sand and aggregates.

The river/ streams/ other sources of sand and aggregate are studied on following parameters:

a) Geomorphological studies

i) Place of origin
ii) Catchment area.
iii) General profile of river stream.
iv) Annual deposition factor.
v) Replenishment.
vi) Total potential of minor mineral in the river bed.

b) Geological studies

i) Lithology of catchment area.
ii) Tectonics and structural behavior of rocks.

c) Climatic Factors

i) Intensity of rainfall.
ii) Climate Zone.
iii) Temperature variation

The following points to be considered while selecting the river / stream for mining besides the above parameters:

i) A stable river is able to constantly transport the flow of sediments produced by watershed such that it's dimensions (width and depth) pattern and vertical profile are maintained without aggrading (building up) or degrading (scouring down).

ii) The amount of boulders, cobbles, pebbles, and sand deposited in river bed equals to the amount delivered to the river from catchment area and from bank erosion minus amount transported downstream each year.

iii) It is compulsive nature of river to meander in their beds and therefore they will have to be provided with adequate corridor for meandering without hindrance. Any attempt to diminish the width of the corridor (floodway) and curb the freedom to meander would prove counterproductive.

iv) Erosion and deposition is law of nature. The river stream has to complete its geomorphological cycles from youth, mature to old age.

v) River capturing is unavoidable.

vi) Fundamentally the lowest point of any stream is fixed by sea level.

This survey document should be prepared in the district based on direct and indirect benefits of mining and identification of the potential threats to the river / stream beds in the district.

Besides, calculating the carrying capacity of the river / stream beds / other sources to find out maximum quantity available to be allowed for removal each year from the sources, it should also provide various measures to regulate sand and aggregate mining in a systemic way.

It has to provide for environmentally safe depth of mining and safeguards of banks by prescribing safe distance from banks. It is required that there should be a Sub-Divisional Committee which should visit each site and make recommendation. The Committee should comprise of Sub-Divisional Magistrate, Officers from Irrigation department, State Pollution Control Board or Committee, Forest department, Geology or mining officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof.

THE STRUCTURE OF DISTRICT SURVEY REPORT

The report can have following structure:

1. Introduction
2. Overview of Mining Activity in the District
3 The List of Mining Leases in the District with location, area and period of validity
4. Details of Royalty or Revenue received in last three years
5. Detail of Production of Sand or Bajari or minor mineral in last three years
6. Process of Deposition of Sediments in the rivers of the District
7. General Profile of the District
8. Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.
9. Physiography of the District
10. Rainfall: month-wise
11. Geology and Mineral Wealth

12. Drainage System with description of main rivers.

Sl.No.	NAME OF RIVER	AREA DRAINED (Sq. Km)	% AREA DRAINED

13. Salient Features of Important Rivers and Streams:

Sl.No.	Name of the River / Stream	Total Length in the District (in Km)	Place of origin	Altitude at Origin

14. Methodology Adopted for Calculating of Mineral Potential

The mineral potential is calculated based on field investigation and geology of the catchment area of the river/ streams. As per the policy of the State and location, depth of minable mineral is defined. The area for removal of mineral in a river or stream can be decided depending on geo-morphology

and other factors, it can be 50% to 60% of the area of a particular river/stream, e.g. in Himachal Pradesh mineral constituents like boulders, river born bajari, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river/ stream.

The specific gravity of each mineral constituent is different. While calculating the mineral potential, the average specific gravity is taken as 2.25. The percent of mineral constituent like boulder, river bajari, sand also varies for different river and streams. While calculating the mineral potential the percentage of each mineral constituent is taken as, Boulders 35-40%, Bajari - 30-35%, Sand 25-30% and 5-10% for silt and clay.

The quantum of deposition varies from stream to stream depending upon factors like catchment lithology, discharge, river profile and geomorphology of the river course. There are certain geomorphological features developed in the river beds such as channel bar, point bar etc. where annual deposition is more even two to three meters.

For illustration one example of Yamuna River in Sirmaour district of Himachal Pradesh is given below:

Portion of the River / Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
From Downstream of confluence with Tons River to Behral near Haryana and Uttar Pradesh border	31	478	14818000	16803612

Note: Considering the density of river bed material to be **1.89 g/cm^3**

Present Status of Mining

This gives the detail of mining leases already in operation in this stretch, area and production in last three years from these leases is calculated.

Mineral Potential is calculated in following way:

Mineral Potential

Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
5601204	6801462	4400946	16803612

Annual Deposition

336072	408088	264057	1008217

Recommendation:

From the above it is clear that about 16803612 metric tonnes of mineral is available up to depth of one meter in the river bed of Yamuna in Sirmour district.
The annual deposition is 1008217 MT.
The average annual production is 80000 MT.
So, 16723612 MT of mineral can be safely removed.

In similar manner it should be calculated for each river and stream in the district and compiled in following format:

Sl.No.	River/ Stream	Portion of the river / stream recommended for mineral concession	Length of the recommended area for mineral concession (in kilometer)	Average width of the recommended area for mineral concession (in meters)	Area recommended for mineral concession (in sq.mtrs.)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Total for the District						

About the size of the mining leases for the aggregates it should be borne in mind that a river / stream can be divided into two zones, which in-turn is dynamic i.e. the zone of erosion and

zone of deposition. These zones of deposition and erosion are extended in different patches in the river.

Any mining lease granted in larger tract can cover both the zones, and mining activity in zone of erosion can further aggravate the problem of erosion and as such the mining activity can be allowed only in the zone of the deposition. The mining leases of larger areas in rivers are neither in interest of environment nor in the interest of mineral conservation.

In Himalayan states the rivers and wasteland has been mostly classed as forest land and mining on that requires diversion of forest land and payment of compensatory afforestation and NPV etc. The land in river beds in hilly tracts and many small rivers at any one site seldom exceed 5 hectare, so not allowing sand mining leases less than 5 hectare on river beds further aggravates the situation. So the size of mining lease for river sand mining should be determined by the State as per the local situation.

MANAGEMENT PLAN

1. River Bed Mining Recommendations:

a) Permit Mining Volume Based on Measured Annual Replenishment

In the first year following adoption of the management plan, a volume equal to the estimated annual replenishment could be extracted from the reach of channel. Replenishment (up to the elevation of the selected channel configuration) would need to occur before subsequent extraction could take place. The concept of annual replenishment accounts for the episodic nature of sediment transport. For example, during wet periods with high stream flows, and a high contribution of sediment from hill slopes and tributaries, monitoring data would show that sand and gravel bars are replenished quickly. During drought periods with low stream flow, and little sediment supply or transport, monitoring data would likely show that bars were replenished at a slower rate.

The use of monitoring data is essential in measuring when actual replenishment occurs. The use of the concept of annual replenishment protects long-term channel stability as well as aquatic and riparian habitat by extracting a volume sustainable by watershed processes.

b) Establish an Absolute Elevation below Which No Extraction May Occur (Minimum Enveloped Level or Redline).

The absolute elevation below which no mining could occur or "redline" would be surveyed on a site-specific basis in order to avoid impacts to structures such as bridges and to avoid vegetation impacts associated with down-cutting due to excessive removal of sediment. An extraction site can be determined after setting the deposition level at 1 m above natural channel thalweg elevation, as determined by the survey approved by mine plan approving authority.

c) Limit River Bed Extraction Methods to Bar Skimming

If mining is limited to the downstream end of the bar with a riparian buffer on both the channel and hill slope (or floodplain) side, bar skimming would minimise impacts. Other methods such as excavation of trenches or pools in the low flow channel lower the local base level, and maximise upstream (head cutting and incision) and downstream (widening and braiding) impacts. In addition, direct disturbance of the substrate in the low flow channel should be avoided. Trenching on bars may be beneficial in the future if the river becomes severely aggraded, flat, shallow and braided. Trenching of bars may initially impact a smaller area of riparian habitat than skimming - as a result of excavating deeper rather than shallow skimming of a large area. However, over the

long-term, the upstream and downstream effects of a trench on the bar or in the channel may offset any short-term benefit derived from this method.

d) Extract Sand and Gravel from the Downstream Portion of the Bar:

Retaining the upstream one to two thirds of the bar and riparian vegetation while excavating from the downstream one to two third of the bar is accepted as a method to promote channel stability and protect the narrow width of the low flow channel necessary for aquatic life. Sand and gravel would be re-deposited in the excavated downstream one to two thirds of the bar (or downstream of the widest point of the bar) where an eddy would form during sediment transporting flows. In contrast, if excavation occurs on the entire bar after removing existing riparian vegetation, there is a greater potential for widening and braiding of the low flow channel.

e) Concentrate Activities to Minimise Disturbance:

River bed extraction activities should be concentrated or localised to a few bars rather than spread out over many bars. This localisation of extraction will minimise the area of disturbance of upstream and downstream effects. Skimming decreases habitat and species diversity - these effects should not be expanded over a large portion of the area.

f) Review Cumulative Effects of Sand and Gravel Extraction:

The cumulative impact of all mining proposals should be reviewed on an annual basis to determine if cumulative riverine effects or effects to the estuary are likely.

g) Maintain Flood Capacity:

Flood capacity in the river should be maintained in areas where there are significant flood hazards to existing structures or infrastructure.

h) Establish a Long-term Monitoring Program:

Monitoring of changes in bed elevation and channel morphology, and aquatic and riparian habitat upstream and downstream of the extraction would identify any impacts of sand and gravel extraction to biologic resources. Long-term data collected over a period of decades as sand and gravel extraction occurs will provide data to use in determining trends.

i) Minimise Activities That Release Fine Sediment to the River:

No washing, crushing, screening, stockpiling, or plant operations should occur at or below the streams "average high water elevation," or the dominant discharge. These and similar activities have the potential to release fine sediments into the stream, providing habitat conditions harmful to local fish.

j) Retain Vegetation Buffer at Edge of Water and Against River Bank:

Riparian vegetation performs several functions essential to the proper maintenance of geomorphic and biological processes in rivers. It shields river banks and bars from erosion. Additionally, riparian vegetation, including roots and downed trees, serves as cover for fish, provides food source, works as a filter against sediment inputs, and aids in nutrient cycling. More broadly, the riparian zone is necessary to the integrity of the ecosystem providing habitat for invertebrates, birds and other wildlife.

k) The River Bed mining should only be allowed during the dry season.

No River bed mining should be permitted during rainy season (see Appendix 9).

l) An Annual Status and Trends Report:

This report should review permitted extraction quantities in light of results of the monitoring program, or as improved estimates of replenishment become available. The report should document changes in bed elevation, channel morphology, and aquatic and riparian habitat. The report should also include a record of extraction volumes permitted, and excavation location. Finally, recommendations for reclamation, if needed should be documented.

2. Off-Channel or Floodplain Extraction Recommendations

a) Floodplain Extraction should be set back from the Main Channel

In a dynamic alluvial system, it is not uncommon for meanders to migrate across a floodplain. In areas where sand and gravel occurs on floodplains or terraces, there is a potential for the river channel to migrate toward the pit. If the river erodes through the area left between the excavated pit and the river, there is a potential for "river capture," a situation where the low flow channel is diverted though the pit. In order to avoid river capture, excavation pits should set back from the river to provide a buffer, and should be designed to withstand the 100-year flood (100-year ARI). Adequate buffer widths and reduced pit slope gradients are preferred over engineered structures which require maintenance in perpetuity. Hydraulic, geomorphic, and geotechnical studies should be conducted prior to design and construction of the pit and bund. In addition to river capture, extraction pits create the possibility of stranding fish.

b) The maximum depth of Floodplain Extraction should remain above the Channel Thalweg

Floodplain pits should not be excavated below the elevation of the thalweg in the adjacent channel. This will minimise the impacts of potential river capture by limiting the potential for head cutting and the potential of the pit to trap sediment. A shallow excavation (above the water table) would provide a depression that would fill with

water part of the year, and develop seasonal wetland habitat. An excavation below the water table would provide deep water habitat.

c) Side Slopes of Floodplain Excavation Should Range from 3:1 to 10:1

Side slopes of a floodplain pit should be graded to a slope that ranges from 3:1 to 10:1. This will allow for a range of vegetation from wetland to upland. Steep side slopes excavated in floodplain pits on other systems have not been successfully reclaimed, since it is difficult for vegetation to become stabilised. Terrace pits should be designed with a large percentage of edge habitat with a low gradient which will naturally sustain vegetation at a variety of water levels.

d) Place Stockpiled Topsoil above the 25-year Return Period or ARI Level

Stockpiled topsoil can introduce a large supply of fines to the river during a flood event and degrade fish habitat. Storage above the 25-year flood (25-year ARI) inundation level is sufficient to minimise this risk.

e) Floodplain Pits Should Be Restored to Wetland Habitat or Reclaimed for Agriculture

The key to successful restoration or reclamation is to conserve or import adequate material to re-fill the pit, while ensuring that pit margins are graded to allow for development of significant wetland and emergent vegetation.

f) Establish a Long-term Monitoring Program

A long-term monitoring program should provide data illustrating any impacts to river stability, groundwater, fisheries, and riparian vegetation. The monitoring program should assess the success of any reclamation or restoration attempted.

g) An Annual Status and Trends Report

The status and trends report described previously should include a section on the hydrologic and biologic components of floodplain pit reclamation.

3. Extraction Methods

The important methods of sand and gravel mining operations are as below:

a) **Bar scalping or skimming** is extraction of sand and gravel from the surface of bars. This method generally requires that surface irregularities be smoothed out and that the extracted material be limited to what could be taken above an imaginary line sloping upwards and away from the water from a specified level above the river's water surface at the time of extraction (typically 0.3 - 0.6 m (1-2 ft). Bar scalping is commonly repeated year after year. To maintain the hydraulic control provided to upstream by the Riffle head, the preferred method of bar scalping is now generally to leave the top one-third (approximately) of the bar undisturbed, mining only from the downstream two-

thirds.

b) Dry-Pit Channel Mining

Dry-pit channel mines are pits excavated within the active channel on dry intermittent or ephemeral stream beds. Dry pits are often left with abrupt upstream margins, from which head cuts are likely to propagate upstream.

c) Wet-Pit Channel Mining

Wet-pit mining involves excavation of a pit in the active channel below the surface water in a perennial stream or below the alluvial groundwater table.

d) Bar Excavation

A pit is excavated at the downstream end of the bar as a source of aggregate and as a site to trap sand and gravel. Upon completion, the pit may be connected to the channel at its downstream end to provide side channel habitat.

e) Channel-wide River bed Mining

In rivers with a highly variable flow regime, sand and gravel are commonly extracted across the entire active channel during the dry season. The bed is evened out and uniformly (or nearly so) lowered.

4. Reclamation Plans

Reclamation plans should include:

a) A baseline survey consisting of existing condition cross-section data: Cross-sections must be surveyed between two documented endpoints set back from the top of bank, and elevations should be referenced to bench mark;

b) The proposed mining cross-section data should be plotted over the baseline data to illustrate the vertical extent of the proposed excavation;

c) The cross-section of the replenished bar should be the same as the baseline data. This illustrates that the bar elevation after the bar is replenished will be the same as the bar before extraction;

d) A planimetric map showing the aerial extent of the excavation and extent of the riparian buffers;

e) A planting plan developed by a plant ecologist familiar with the flora of the river for any areas such as roads that need to be restored;

f) A monitoring plan: The appropriate reclamation plans can turn river-bed and floodplain sand and gravel mining operations into something perceived by the public as desirable.

MARINE SAND MINING AND IMPACT ON MARINE BIODIVERSITY

The mining of marine aggregates is increasing significantly. Marine sand mining has had an impact on seabed flora and fauna. Dredging and extraction of aggregates from the benthic (sea bottom) zone destroys organisms, habitats and ecosystems and deeply affects the composition of biodiversity, usually leading to a net decline in faunal biomass and abundance or a shift in species composition. Aggregate particles that are too fine to be used are rejected by dredging boats, releasing vast dust plumes and changing water turbidity, resulting in major changes to aquatic and riparian habitats over large areas.

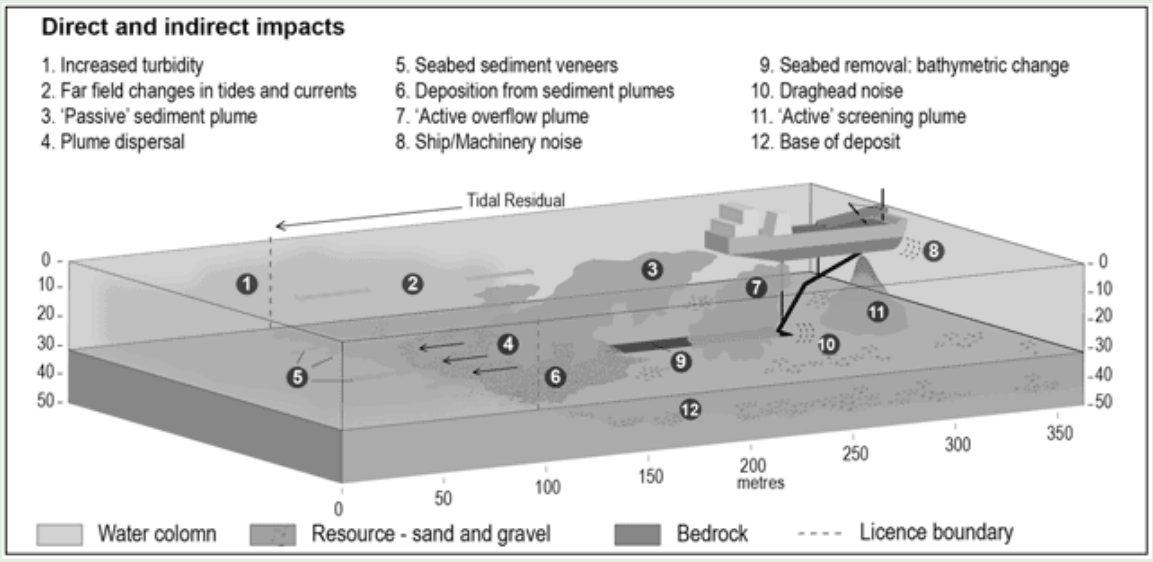


Figure: Direct and indirect consequences of aggregates dredging on the marine environment.

Source: Tillin, H.M., Houghton, A.J., Saunders, J.E., Drabble, R. and Hull, S.C., 2011. Direct and Indirect Impacts of Aggregate Dredging, Marine Aggregate Levy Sustainability Fund (MALSF). Science Monograph Series 1, 1-46.

REDUCING CONSUMPTION OF SAND

Because sand is still very cheap - sand itself is freely accessible; only extraction and transportation costs need to be covered - there is little or no incentive to induce a change in our consumption. Despite the very high value of minerals found in the sand, it is mostly used for concrete or is buried under highways. Recycled building and quarry dust material can be a substitute for sand. Concrete rubble should be recycled to avoid using aggregates, at least for low-quality uses.

Substitutes for sand are available. Quarry dust could be used to replace sand in general concrete structures. The replacement of sand by up to 40% of incinerator ash exhibits higher compressive strength than regular cement mortars. Some desert sand can be used if mixed with other material. There are alternatives for building houses, including wood, straw and recycled material. However, the current building industry is geared toward concrete know-how and equipment.

Training of architects and engineers, new laws and regulations, and positive incentives are needed to initiate a shift for lowering our dependency on sand. Renewable and recycled materials need to be targeted for building houses and roads. Use of Manufactured Sand (M-Sand) also needs to be promoted.

Alternative sources of sand and gravel, which accumulate at the bottom of dams, can also be targeted. Their use would address the problem of these aggregates accumulating which leads to a reduced capacity of dams to store water and could result in the dams' water intakes being blocked. Dams regularly release large amounts of water to flush out aggregates.

The important standard setting bodies in India are taking steps to promote the usage of alternatives to sand and gravel. Bureau of Indian Standards, the National Standards Body of the country, considering the scarcity of sand and coarse aggregates from natural sources, has evolved number of alternatives which are ultimately aimed at conservation of natural resources apart from promoting use of various waste materials without compromising in quality.

These measures include permitting in the Concrete Code (IS 456) as also in the National Building Code of India, the use of slag - a waste from steel industry, fly ash - a waste from thermal power plants, crushed over-burnt bricks and tiles - waste from clay brick and tile industry, in plain cement concrete as an alternative to sand/natural aggregate, subject to fulfilling the requirements of the Code. This Code, further, encourages use of fly ash and ground granulated blast furnace slag as part replacement of ordinary Portland cement in plain as well as reinforced cement concrete.

The Indian Standard on concrete mix design (IS 10262) has been upgraded to include guidance and examples of designing concrete mixes using fly ash and slag. Provisions for compliance for requisite quality of concrete made using fly ash and slag have been duly covered for the manufacturers of ready-mixed concrete in the Indian Standard Code of practice for RMC (IS 4926).

BIS has also formulated an Indian Standard Specification for artificial lightweight aggregates covering manufactured aggregates, such as foamed blast furnace slag, bloated clay aggregate, sintered fly ash aggregate and cinder aggregate (IS 9142).

A series of Indian Standards has also been formulated on various precast concrete products such as solid and hollow concrete blocks, light weight concrete blocks, autoclaved aerated concrete blocks, preformed foam concrete blocks, partial prefabricated concrete flooring and roofing units, concrete pipes, etc, all permitting use of fly ash and slag.

THE REPORT OF THE COMMITTEE HEADED BY SECRETARY, MoEF - 2010

A Committee headed by Secretary, Ministry of Environment and Forest was set up on the subject in 2010. The Committee considered this subject in detail and prepared a report. The important parts of the report are as follows:

Definition of Minor Mineral:

The term 'minor mineral' is defined in clause (e) of Section 3 of MMDR Act, 1957: '3 (e) "minor minerals" means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and any other material which the Central Government may, by Notification in the Gazette of India declare to be a minor mineral;'

The term `ordinary sand' used in clause (e) of Section 3 of the MMDR Act, 1957 has been further clarified in rule 70 of the MCR, 1960 as:

(iv) Purposes of stowing in coal mines,
(v) For manufacture of silvicrete cement,
(vi) Manufacture of sodium silicate and for
(vii) Manufacture of pottery and glass.

Additionally, the Central Government has declared the following minerals as minor minerals:

Sl.No.	Minor Minerals
i)	Boulder
ii)	Shingle
iii)	Chalcedony pebbles used for ball mill purposes only
iv)	Lime shell, kankar and limestone used in kilns for manufacture of lime used as building material
v)	Murrum

Sl.No.	Minor Minerals
vi)	Brick-earth
vii)	Fuller's earth
viii)	Bentonite
ix)	Road metal
x)	Reh-matti

Sl.No.	Minor Minerals
xi)	Slate and shale when used for building material
xii)	Marble
xiii)	Stone used for making household utensils
xiv)	Quartzite and sandstone when used for purposes of building or for making road metal and household utensils
xv)	Saltpetre, and

xvi)	Ordinary earth (Used for filling or leveling purposes in construction or embankments, roads, railways building).

REGIME OF LAW AND ADMINISTRATIVE ORDERS RELATING TO MINING OF MINOR MINERALS

The Entry 54 of List 1 in Schedule VII to the Constitution of India is the entry which empowers the Parliament in respect of 'Regulation of Mines and Minerals Development. Entry 23 of List 2 of the same Schedule, read with Article 246 (3) of the Constitution confers legislative powers on the State Legislature in respect of Regulation of Mines and Mineral Development, but, this power is subject to the provisions of List 1 with respect to the regulation and development under the control of the Union. The Parliament, with the object to amend and consolidate the law relating to the regulation of labour and safety in mines enacted the Mines Act, 1952. Section 2 (JJ) of the Mines Act, 1952 defines "minerals" to mean, all substances which can be obtained from the earth by mining, digging, drilling, dredging, hydraulicing, quarrying or by any other operation and includes mineral oils (which, in turn, include natural gas and petroleum). On 1st June, 1958, the Mines and Minerals (Development and Regulation) Act, 1957 was promulgated. This Act provides, inter alia, for general restrictions on undertaking prospecting and mining operations, the procedure for obtaining prospecting licenses or mining leases in respect of the land in which the minerals vests in the Government, the rule making power for regulating the grant of prospecting licenses and mining leases, special powers of Central Government to undertake prospecting or mining operations in certain cases, and for development of minerals.

The protection of natural environment is one of the fundamental duties of every citizen under Article 51-A of the Constitution of India. Article 48-A of the Constitution, obliged the State to endeavor to protect and improve the environment and to safeguard the forests and wild life of the country. The Environment (Protection) Act and Rules, 1986 were enacted and came into force on 19th November, 1986. The object of this Act is to provide for the protection and improvement of environment and for matters connected therewith. Under provisions of the Act and Rules of 1986, MoEFCC has issued various Notifications regulating the mining of minor minerals, specifically stating the procedures that were required to be complied by persons intending to carry on such mining activity and for the authorities to regulate the same.

Prior to 1994, there was no specific regime in place in relation to mining activity being carried out. The Notification issued by MoEF on 27th January, 1994, in exercise of the powers vested in it under Sub-Rule 3 of Rule 5 of the Rules of 1986 and Sub Section (1) and Clause (v) of Sub-Section (2) of Section 3 of the Act of 1986, prescribed the requirement and procedure for seeking Environmental Clearance for the projects listed in Schedule I. Schedule I of this Notification did not list mining projects of minor minerals. On the contrary, the projects covered under S. No. 20 of Schedule I of this Notification were only "mining projects (major mineral) with leases more than 5 hectares".

It provided for the constitution of Expert Committees and preparation of Environmental Impact Assessment Report which was to be evaluated and assessed by the Impact Assessment Agency. In exercise of its statutory powers afore-indicated, the Central Government on 14th September, 2006,

issued a Notification, i.e., 'Environment Impact Assessment Notification, 2006'. In terms of this Notification, the projects as stated in the Schedule to this Notification required prior Environmental Clearance as per the procedure. The projects have been categorised into two kinds, i.e., Category 'A' and Category 'B' under Clause 2 of the Notification. Projects under Category 'A' were required to take prior Environmental Clearance by MoEFCC. For Category 'B' projects, Environmental Clearance was to be given by State Environment Impact Assessment Authority (SEIAA).

The mining of minerals (both major and minor) were brought under the ambit of the EIA Notification, 2006. The mine lease area of more than equal to 50 ha was Category 'A' and mine lease area less than 50 ha and more than equal to 5 ha was category 'B' project. Mine lease area of less than 5 ha (both major and minor) was kept out of EIA Notification purview.

The Notification of 2006 came to be amended by Notification dated 1st December, 2009. It included the category of non-coal mine and coal mine lease and provided that non-coal mine lease of area more than equal to 5 ha and less than 50 ha will be category 'B' and mine lease area more than equal to 50 ha will be category 'A'. Similarly, mine lease area of more than equal to 5 ha and less than 150 ha for coal mine lease will be category 'B' and mine lease area of coal mine more than 150 ha will be category 'A'. Here again mining lease area of less than 5 ha (both coal and non-coal mine) was kept out of EIA Notification purview.

The Hon'ble Supreme Court, vide its order dated 27.2.2012 in I.A. No.12-13 of 2011 in SLP (C) No.19628-19629 of 2009 titled Deepak Kumar etc. v/s State of Haryana & Ors. has inter alia ordered *"We, in the meanwhile, order that leases of minor mineral including their renewal for an area of less than five hectares be granted by the States/Union Territories only after getting environmental clearance from the MoEF."*

Hon'ble Apex Court in Deepak Kumar's case (supra) extensively examined the environmental concerns, in the context of mining of minor minerals, considering its impact on the environment. The Apex Court observed that Extraction of alluvial material from within or near a streambed has a direct impact on the stream's physical habitat characteristics. These characteristics include bed elevation, substrate composition and stability, in-stream roughness elements, depth, velocity, turbidity, sediment transport, stream discharge and temperature. Altering these habitat characteristics can have deleterious impacts on both in-stream biota and the associated riparian habitat. The demand for sand continues to increase day by day as building and construction of new infrastructures and expansion of existing ones is continuous thereby placing immense pressure on the supply of the sand resource and hence mining activities are going on legally and illegally without any restrictions. Lack of proper planning and sand management cause disturbance of marine ecosystem and also upset the ability of natural marine processes to replenish the sand. Quarrying, mining and removal of sand from in-stream and upstream of several rivers, which may have serious environmental impact on ephemeral, seasonal and perennial rivers and river beds and sand extraction may have an adverse effect on bio-diversity as well. Further it may also lead to bed degradation and sedimentation having a negative effect on the aquatic life.

Apex Court observed that without conducting any study on the possible environmental impact on/

in the river beds and else- where the auction notices have been issued. Hon'ble Apex Court observed that "We are of the considered view that when we are faced with a situation where extraction of alluvial material within or near a river bed has an impact on the rivers physical habitat characteristics, like river stability, flood risk, environmental degradation, loss of habitat, decline in biodiversity, it is not an answer to say that the extraction is in blocks of less than 5 hectares, separated by 1 kilo meter, because their collective impact may be significant, hence the necessity of a proper environmental assessment plan".

In order to ensure compliance of the aforesaid order of the Hon'ble Supreme Court, MoEF issued an OM No.L-11011/47/2011-IA.II(M) dated 18.05.2012 stating inter alia that all mining projects of minor minerals including their renewal, irrespective of the size of the lease would henceforth require prior EC and that the projects of minor minerals with lease area less than 5 ha would be treated as Category "B" as defined in EIA Notification, 2006 and will be considered by the respective State Environment Impact Assessment Authorities (SEIAAs) notified by MoEF and following the procedure prescribed under the EIA Notification, 2006.

On 24th June, 2013, MoEF issued another Office Memorandum stating Guideliness for consideration of proposals for grant of Environmental Clearance under the Notification of 2006 for mining of 'brick earth' and 'ordinary earth' having lease area of less than 5 hectares. Referring to the judgment of the Hon'ble Supreme Court in the case of Deepak Kumar (supra) and its Office Memorandum dated 18th May, 2012, it further considered that the 'brick kiln' manufactures had stated that it was a small scale activity requiring that certain depth should be kept outside the purview of Environmental Clearance. Having considered various aspects, examining the recommendations of the Expert Committee, constituted by MoEF, finally it was directed as follows:

"(a) The activities of borrowing / excavation of 'brick earth' and ordinary earth', upto an area of less than 5 ha, may be categorized under 'B2' Category subject to the following Guideliness in terms of the provisions under '7.I Stage(1)-Screening' of EIA Notification, 2006:

(i) The activity associated with borrowing/excavation of 'brick earth' and 'ordinary earth' for purpose of brick manufacturing, construction of roads, embankments etc. shall not involve blasting.

(ii) The borrowing/excavation activity shall be restricted to a maximum depth of 2 m below general ground level at the site.

(iii) The borrowing/excavation activity shall be restricted to 2 m above the ground water table at the site.

(iv) The borrowing/excavation activity shall not alter the natural drainage pattern of the area.

(v) The borrowed/excavated pit shall be restored by the project proponent for useful purpose(s).

(vi) Appropriate fencing all around the borrowed/excavated pit shall be made to prevent any mishap.

(vii) Measures shall be taken to prevent dust emission by covering of borrowed/excavated earth during transportation.

(viii) Safeguards shall be adopted against health risks on account of breeding of vectors in the water bodies created due to borrowing/excavation of earth.

(ix) Workers / labourers shall be provided with facilities for drinking water and sanitation.

(x) A berm shall be left from the boundary of adjoining field having a width equal to at least half the depth of proposed excavation.

(xi) A minimum distance of 15 m from any civil structure shall be kept from the periphery of any excavation area.

2. (a) The concerned SEIAA while considering granting environmental clearance for such activity for brick earth / ordinary earth will prescribe the Guideliness as stated at (i) to (xi) above and specify that the clearance so granted shall be liable to be cancelled in case of any violation of above Guideliness.

(b) Notwithstanding what has been stated at (a) above, the following will apply:

(i) No borrowing of earth / excavation of 'brick earth' or 'ordinary earth' shall be permitted in case the area of borrowing/ excavation is within 1 km of boundary of national parks and wild life sanctuaries.

(ii) In case the area of borrowing / excavation is likely to result into a cluster situation i.e. if the periphery of one borrow area is less than 500 m from the periphery of another borrow area and the total borrow area equals or exceeds 5 ha, the activity shall become Category 'B 1' Project under the EIA Notification, 2006. In such a case, mining operations in any of the borrow areas in the cluster will be allowed only if the environmental clearance has been obtained in respect of the cluster. This issues with the approval of the Competent Authority."

These directions which were specific only to 'brick earth' and 'ordinary earth' activities for areas less than 5 hectares, as decided to be categorised as 'B 2' Category projects, subject to the restrictions stated in the memorandum, provided that if the cluster area exceeded 5 hectares, then it would become Category 'B 1' and would not be treated as Category 'B 2' projects. The above Office Memorandum was not dealing with the issues of sand mining or any other minor mineral activity except 'brick earth' and 'ordinary earth'. Further, MoEF has issued an amendment to EIA Notification vide Notification S.O. 2731 (E) dated 9th September 2013 and amended the EIA Notification, 2006 for item 1 (a) as follows:

(1)	(2)	(3)	(4)	(5)
"1(a)	(i) Mining of minerals.	≥ 50 ha of mining lease area in respect of non-coal mine lease	<50 ha of mining lease area in respect of minor minerals mine lease ; and < 50 ha ≥5 ha of mining lease area in respect of other non-coal mine lease.	General Conditions shall apply except for project or activity of less than 5 ha of mining lease area for minor minerals: Provided that the above exception shall not apply for project or activity if the sum total of the mining lease area of the said project or activity and that of existing operating mines and mining projects which were accorded environment clearance and are located within 500 metres from the periphery of such project or activity equals or exceeds 5 ha.
		>150 ha of mining lease area in respect of coal mine lease.	≤ 150 ha ≥ 5 ha of mining lease area in respect of coal mine lease.	(i) Prior environmental clearance is required at the stage of renewal of mine lease for which an application shall be made up to two years prior to the date due for renewal. Further, a period of two years with effect from the 4th April, 2011 is provided for obtaining environmental clearance for all those mine leases, which were operating as

(1)	(2)	(3)	(4)	(5)
				on the 4th April, 2011 with requisite valid environmental clearance and which have fallen due for renewal on or after the 4th November, 2011: Provided that no fresh environmental clearance shall be required for a mining project or activity at the time of renewal of mining lease, which has already obtained environmental clearance under this notification.
	(ii) Slurry pipelines (coal lignite and other ores) passing through national parks or sanctuaries or coral reefs, ecologically sensitive areas.	All projects.		(ii) Mineral prospecting is exempted.

In this Notification a new category of minor mineral was introduced and it was provided that mining lease area of minor mineral less than 50 ha will be category 'B' and will require EC. Accordingly the minor mineral mining projects having less than 5 hectare of lease area are required to be appraised by the SEIAA/SEAC of respective State for granting environment clearance. It was provided that the project or activity of less than 5 ha of mining lease area for minor minerals will be exempt from the General Conditions. Simultaneously the concept of cluster was introduced and it was provided that the exemption of applicability of General Conditions shall not apply for project or activity if the sum total of the mining lease area of the said project or activity and that of existing operating mines and mining projects which were accorded EC and are located within 500 m from the periphery of such project or activity equal or exceeds 5 ha.

The Ministry, on 24th December, 2013, issued another Office Memorandum for consideration of proposals for grant of Environmental Clearance regarding categorisation of Category 'B' projects into Category 'B (1)' and 'B (2)'. Mining of minor minerals had been separately dealt with in this Office Memorandum. This Office Memorandum stated that no river sand mining project with mining lease area of less than 5 hectares may be considered for grant of Environmental Clearance. Such area up to 25 hectares would be categorised as 'B (2)' and such projects were to be considered, subject to the stipulations stated therein. This Office Memorandum stated that no Environmental Clearance would be granted for extraction of minor minerals from any riverbed where the area is less than 5 hectares. Sand mining, in area other than riverbeds, would be permitted, only if the Project Proponent takes Environmental Clearance.

The Ministry vide Notification No. S.O. 1599 (E) dated 25.06.2014 reduced the area of 10 kilo meter to 5 kilo meters for applicability of General Conditions increasing the delegation to States by taking out projects located in 5 to 10 kilo meter of interstate boundary, CEPI, and, PAs from category 'A'.

The anomaly created by the Notification dated 09.09.2013 was corrected vide Notification No. S.O. 2601 (E) dated 7th October 2014, and category of minor mineral was deleted and mining leases were again classed as non-coal mine and coal mine and mining lease area of less than 50 ha was made category 'B' for non-coal mine and mine lease area of less than equal to 150 ha for coal mine was made category 'B'. The mine lease area of less than 5 ha was exempt from the applicability of General Conditions and cluster concept of Notification dated 09.09.2013 was retained.

Notification S.O. 2601 (E) dated 7th October 2014 provides as follows:

(1)	(2)	(3)	(4)	(5)
"1(a)	(i) Mining of minerals.	≥ 50 ha of mining lease area in respect of non-coal mine lease. >150 ha of mining lease area in respect of coal mine lease. Asbestos mining irrespective of mining area.	<50 ha of mining lease area in respect of non-coal mine lease. ≤ 150 ha of mining lease area in respect of coal mine lease.	General Conditions shall apply except for project or activity of less than 5 ha of mining lease area: Provided that the above exception shall not apply for project or activity if the sum total of the mining lease area of the said project or activity and that of existing operating mines and mining projects which were accorded environment clearance and are located within 500 metres from the periphery of such project or activity equals or exceeds 5 ha. Note: (i) Prior environmental clearance is required at the stage of renewal of mine lease for which an application shall be made up to two years prior to the date due for renewal. Provided that no fresh environmental clearance shall be required for a mining project or activity at the time of renewal of mining lease, which has already obtained environmental clearance under this notification. (ii) Mineral prospecting is exempted. "
	(ii) Slurry pipelines (coal lignite and other ores) passing through national parks or sanctuaries or coral reefs, ecologically sensitive areas	All projects.		

The NGT vide order dated 13.01.2015 (O.A. No. 123 of 2014 and M.A. No. 419 of 2014) has declared the Notification dated 09.09.2013 as invalid, inoperative and quashed it. The above order has also quashed the paragraph 4 (b) (i) of O.M. dated 24th June 2013 which provided that "No borrowing of earth / excavation of 'brick earth' or 'ordinary earth' shall be permitted in case the area of borrowing / excavation is within 1 km of boundary of national parks and wild life sanctuary." Though this provision was taken from the observation of Hon'ble Supreme Court in W.P. No. 435 of 2012 (Goa Foundation Vs. Union of India) and order dated 04.08.2006 of Supreme Court in *T.N. Godavarman Thirumulpad v. Union of India & Ors.* Supreme Court has taken a view that 1 km. from the boundaries of National Parks and Sanctuaries would be a safety zone, subject to the orders that may be made in IA No.1000 regarding Jamua Ramgarh Sanctuary and the State will not grant any Temporary Working Permit (TWP) in these safety zones comprising 1 km. from the boundaries of National Parks and Sanctuaries.

Similarly the proviso at paragraph 2 (iii) of O.M. dated 24.12.2013 which says that "No river sand mining project, with mine lease area less than 5 ha, may be considered for granting EC" has been quashed. This condition was taken from the recommendations of the Committee headed by the Secretary, MoEF constituted in 2010. The above proviso were quashed on the ground that as EIA Notification places no such restriction, so same cannot be imposed by an executive order and many hill States find it very difficult to get an area equal to or more than 5 ha. in riverbed. The information made available by the States also makes it clear that majority of the mining leases of sand are of area less than 5 hectares.

STANDARD ENVIRONMENTAL CONDITIONS FOR SAND MINING

Impact Category	S.No.	Environmental Conditions
Stakeholder Engagement	1	In the case of private land not owned by the lease holder an affidavit should be obtained regarding consent of the concerned land owner (s) for carrying out the mining operation.
	2	Stakeholder awareness and ability to raise concerns and getting it to be addressed.
	3	Implementation of Action Plan on the issues raised during the Public Hearing. The Proponent shall complete all the tasks as per the Action Plan submitted with the budgetary provisions during the Public Hearing.
	4	Having valid lease and all the permits is very much needed.
	5	To establish a Monitoring Committee including Local Panchayat, to check on traffic due to transportation and submit an annual report on the same.
	6	The directions given by the Hon'ble Supreme Court of India vide order dated 27.02.2012 in Deepak Kumar case [SLP(C) Nos. 19628-19629 of 2009] and order dated 05.08.2013 of the Hon'ble National Green Tribunal in application No. 171/2013 may be strictly followed.
	7	All the provisions made and restrictions imposed as covered in the Minor Mineral Rule, shall be complied with, particularly regarding Environment Management Practices and its fund management and Payment of compensation to the land owners.
Sustainable Mining Practices	8	District level Survey Report should be prepared and area suitable for mining and area prohibited for mining be identified.
	9	The depth of mining in Riverbed shall not exceed one meter or water level whichever is less, provided that where the Joint Inspection Committee certifies about excessive deposit or over accumulation of mineral in certain reaches requiring channelization, it can go up to 3 meters on defined reaches of the River.
	10	No River sand mining be allowed in rainy season.
	11	To submit annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production,

		then the mining activity / production levels shall be decreased / stopped accordingly till the replenishment is completed.
	12	Ultimate working depth shall be up to 3.0 m from Riverbed level and not less than one meter from the water level of the River channel whichever is reached earlier. In hilly terrain this depth be preferably restricted to one meter.
	13	In River flood plain mining a buffer of 3 meter to be left from the River bank for mining.
	14	In mining from agricultural field a buffer of 3 meter to be left from the adjacent field.
	15	Mining shall be done in layers of 1 meter depth to avoid ponding effect and after first layer is excavated, the process will be repeated for the next layers.
	16	To maintain safety and stability of Riverbanks i.e. 3 meter or 10% of the width of the River whichever is more will be left intact as no mining zone.
	17	No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations.
	18	No blasting shall be resorted to in River mining and without permission at any other place.
	19	Depending upon the location, thickness of sand, deposition, agricultural land/Riverbed, the method of mining may be manual, semi-mechanized or mechanized; however, manual method of mining shall be preferred over any other method.
Identification and Preparation of Mining Site	20	Mining should be done only in area / stretch identified in the District Level Survey Report suitable for mining and so certified by the Sub-Divisional Level Committee after site visit.
	21	Mining should begin only after pucca pillar marking the boundary of lease area is erected at the cost of the lease holder after certification by the mining official and its geo coordinates are made available to the District Level Committee.
	22	The top soil in case of surface land mining shall be stored temporarily in an earmarked site and concurrently used for land reclamation.

Monitoring the Mining of Mineral and its Transportation	23	The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle, person in-charge of vehicle and mine plan. This should be produced before officers of Central Government and State for inspection.
	24	For each mining lease site the access should be controlled in a way that vehicles carrying mineral from that area are tracked and accounted for.
	25	The State / District Level Environment Committee should use technology like Bar Coding, Information and Communications Technology (ICT), Web based and ICT enabled services, mobile SMS App etc. to account for weight of mineral being taken out of the lease area and the number of trucks moving out with the mineral.
	26	There should be regular monitoring of the mining activities in the State to ensure effective compliance of stipulated EC conditions and of the provisions under the Minor Mineral Concessions Rules framed by the State Government.
Noise Management	27	Noise arising out of mining and processing shall be abated and controlled at source to keep within permissible limit.
	28	Restricted working hours. Sand mining operation has to be carried out between 6 am to 7 pm.
Air Pollution and Dust Management	29	The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly.
	30	Air Pollution due to dust, exhaust emission or fumes during mining and processing phase should be controlled and kept in permissible limits specified under environmental laws.
	31	The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Wheel washing facility should be installed and used.
Management of Visual Impact	32	The mining operations are to be done in a systematic manner so that the operations shall create a major visual impact on the site.
Bio-Diversity Protection	33	Restoration of flora affected by mining should be done immediately. Twice the number of trees destroyed by mining to be planted preferably of indigenous species. Each EC holder should plant and maintain for lease period at least 5 trees per hectare in area near lease.
	34	No mining lease shall be granted in the forest area without forest clearance in accordance with the provisions of the Forest Conservation Act, 1980 and the rules made thereunder.

	35	Protection of turtle and bird habitats shall be ensured.
	36	No felling of tree near quarry is allowed. For mining lease within 10km of the National Park / Sanctuary or in Eco-Sensitive Zone of the Protected Area, recommendation of Standing Committee of National Board of Wild Life (NBWL) have to be obtained as per the Hon'ble Supreme Court order in I.A. No. 460 of 2004.
	37	Spring sources should not be affected due to mining activities. Necessary Protection measures are to be incorporated.
Management of Instability and Erosion	38	Removal, stacking and utilization of top soil in mining are should be ensured. Where top soil cannot be used concurrently, it shall be stored separately for future use keeping in view that the bacterial organism should not die and should be spread nearby area.
	39	The EC should stipulate conditions for adequate steps to check soil erosion and control debris flow etc. by constructing engineering structures
	40	Use of oversize material to control erosion and movement of sediments
	41	No overhangs shall be allowed to be formed due to mining and mining shall not be allowed in area where subsidence of rocks is likely to occur due to steep angle of slope.
	42	No extraction of stone / boulder / sand in landslide prone areas.
	43	Controlled clearance of riparian vegetation to be undertaken
Waste Management	44	Site clearance and tidiness is very much needed to have less visual impact of mining.
	45	Dumping of waste shall be done in earmarked places as approved in Mining Plan.
	46	Rubbish burial shall not be done in the Rivers.
Pollution Prevention	47	The EC holder shall take all possible precautions for the protection of environment and control of pollution.
	48	Effluent discharge should be kept to the minimum and it should meet the standards prescribed.
Protection of Infrastructure	49	Mining shall not be undertaken in a mining lease located in 200-500 meter of bridge, 200 meter upstream and downstream of water supply / irrigation scheme, 100 meters from the edge of National Highway and railway line, 50 meters from a reservoir, canal or building, 25 meter from the edge of State Highway and 10 meters from the edge of other

		roads except on special exemption by the Sub-Divisional level Joint Inspection Committee.
	50	For carrying out mining in proximity to any bridge or embankment, appropriate safety zone (not less than 200 meters) should be worked out on case to case basis, taking into account the structural parameters, location aspects and flow rate, and no mining should be carried out in the safety zone so worked out.
	51	Mining activities shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical, and archeological importance.
Enhancement Road Safety	52	Vehicles used for transportation of sand are to be permitted only with **of** fitness and PUC Certificates.
	53	Junction at takeoff point of approach road with main road be properly developed with proper width and geometry required for safe movement of traffic by concession holder at his own cost.
	54	Project Proponent shall ensure that the road may not be damaged due to transportation of the mineral; and transport of minerals will be as per IRC Guideliness with respect to complying with traffic congestion and density.
	55	No stacking allowed on road side along National Highways.
Closure and Reclamation of Mined Out Area	56	The Project Proponent shall undertake phased restoration, reclamation and rehabilitation of land affected by mining and completes this work before abandonment of mine.
	57	Restoration, reclamation and rehabilitation in cluster should be done systematically and jointly by each EC holder in that cluster. This should be appropriately reflected as EC condition in each EC in cluster.
	58	Site specific plan with eco-restoration should be in place and implemented.
Health and Safety	59	Health and safety of workers should be taken care of.
	60	Transport of mineral will not be done through villages / habitations.
	61	The Project Proponent shall make arrangement for drinking water, first aid facility (along with species specific anti-venom provisioning) in case of emergency for the workers.

	62	Project Proponent shall implement the Disaster Management Plan if the mine lease area is located in Seismic Zone-IV. Project Proponent shall appoint a Committee to have a check over any disaster to warn workers well before for the safety of the workers. Emergency helpline number will be displayed at all levels.
	63	Project Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted.
Monitoring the Impact of Mining	64	The Project Proponent shall report monitoring data on replenishment, traffic management, levels of production, River Bank erosion and maintenance of Road etc.
Mineral Conservation	65	Use of alternate material such as M-sand in place of natural River sand shall be encouraged in order to reduce stress on natural eco-system.

APPENDIX: TABLE - 6

SUGGESTIONS / RECOMMENDATIONS FROM STATES / UTs FOR ENVIRONMENTALLY SUSTAINABLE SAND MINING

Sl.No.	STATE / U.T	SUGGESTIONS / RECOMMENDATIONS FOR ENVIRONMENTALLY SUSTAINABLE SAND MINING
01	Andaman & Nicobar	The quantum of extractable sand fixed at 22581 cubic meter should be enhanced. This limit has been fixed by the orders of Hon'ble Supreme Court subject to study by National Institute of Oceanography.
02	Arunachal Pradesh	1. For environmentally sustainable sand mining a strict and comprehensive sand mining policy need to be framed.
		2. River sand is becoming a scarce commodity and hence exploring alternative to it has become imminent. Manufactured sand is a good alternative both for fine as well as coarse sand used in concrete.
		3. Sand mining should be restricted to surface collection only without the use of heavy machinery.
		4. Due to turbulent and inaccessible nature of rivers flowing in the hilly terrains of the state, deposition of the sand in the river bed is very negligible and except for few quarries in the foothills and plains, most of the notified quarries are boulders and mining of sand is very negligible.
		5. In view of environment related issues the grant of mining lease for river bed minor mineral viz. sand, gravel, shingle, aggregate, boulder are kept in abeyance and extraction of these minerals is regulated only by grant of mining permits, that too not exceeding 3000 cubic meter in one permit.
		6. For scientific mining of sand and other minor minerals Guideliness has been prepared and accordingly Geo-Technical Committee has been constituted under the chairmanship of ADC/SDO in the district level to determine the quantity of quarriable mineral that can be safely removed and also to give technical clearance for notification of quarries of smaller size, preferably within one hectare.
03	Chhattisgarh	1. While attempting to prepare a model Guidelines / policy for the country, the differences that exist in different states may be taken into account. It may be tried to take all stakeholders along.

* States/UTs not mentioned have not provided the data.

Sl.No.	STATE / U.T	SUGGESTIONS / RECOMMENDATIONS FOR ENVIRONMENTALLY SUSTAINABLE SAND MINING
		2. To ease the process of EC granting, SEIAA may have benches across the State with each bench having a SEAC under it. Time bound clearance with ease of access and grant.
		3. Sand mining with use of machinery should be allowed.
		4. Road construction material like murram should be exempted from EC considering their local / pocket occurrences and impossibility of obtaining EC.
		5. Considering the traffic issue at urban areas and to reduce intermediaries like storage point dealers, night mining with adequate lighting should be allowed.
		6. To make the availability of sand from local rivulet / streams the river bank to in-stream mine area distance should be reduced from 10 meter to 3 meters.
04	NCT of Delhi	1. Location of sand mining should be identified by a committee comprising of revenue deptt., Irrigation Deptt., CGWB, SPCB, Forest Department and mining department. Mining area should distinctly be marked at site, before allowing mining.
		2. Depth of mining should be restricted to 3 mtrs or water level, whichever is less and that to from aggradation areas. The side slope of excavation should be less than 3:1.
		3. Requirement of sand and gravel should be reduced by utilization of construction and demolition waste. It requires not only legislative support but also awareness campaign among the society.
		4. Guidelines should be distinctly clear and easy to understand covring do's and don't during mining operation.
		5. Sufficient safe distance should be left between mining site and adjoining engineering structures like embankment, spurs, bed bars, bridges, reservoir and regulator etc.
		6. Security amount should be sufficient enough to compel the agency to carry out rehabilitation, corrective measures and to ensure strict compliance of conditions of lease. S.D. should be released after inspection of committee and recording of certificate that agency complied with the lease conditions.
		7. Mining may be carried out by state agency instead of private agaencies.

* States/UTs not mentioned have not provided the data.

Sl.No.	STATE / U.T	SUGGESTIONS / RECOMMENDATIONS FOR ENVIRONMENTALLY SUSTAINABLE SAND MINING
05	Himachal Pradesh	1. Working cum Environment Management Plan has been made mandatory. The mining activities are allowed after submission of environment clearance.
		2. In compliance of order of Hon'ble Supreme Court dated 27.02.2012 in Deepak Kumar case, the Himachal Pradesh has repealed its rules called the Himachal Pradesh Minor Mineral (Concession) and Mineral (Prevention of illegal mining, transportation and Storage) Rule, 2015 in accordance to the recommendation of the Ministry of Environment & Forest and rules circulated by the Ministry of Mines. Hence the State of Himachal Pradesh has complied with the above directions of the Hon'ble Apex Court,
		3. Therefore the condition of applicability of Environment Clearance on the area less than 5 hectare shall be exempted.
		4. Further keeping in view, the peculiar topography, geography and socio-economic fabric of the State, the condition for the minimum size of the lease should be exempted as the rivers are in youth stage forming different land forms, land holdings are less, population is thin and scattered and the demand of minor mineral is limited, which could be met out locally by exploiting local resources on the small scale.
06	Jammu & Kashmir	1. Uniform Guidelines be framed for sand mining and river bed mining as they cannot be segregated.
		2. Identification of sand belts be made in consultation with CGWB and while framing Guideliness CGWB may be taken on board.
		3. Sand mining leases less than 5 hectare be exempted from EC and comprehensive policy may be made for hilly states for easing the process of grant of lease.
07	Jharkhand	1. Machine should not be used in sand mining. Only manual mining should be done.
		2. The depth of mining shall be restricted to 3 meter / water level whichever is less.
		3. No mining should be carried out in proximity of any bridge / embankment.
		4. In-stream mining should not be allowed.
		5. Mining should be done in accordance with an approved mining plan.

* States/UTs not mentioned have not provided the data.

Sl.No.	STATE / U.T	SUGGESTIONS / RECOMMENDATIONS FOR ENVIRONMENTALLY SUSTAINABLE SAND MINING
		6. EC should be valid for settlement period subject to ceiling of five years.
08	Karnataka	1. Undertaking sand mining activity through a Government agency to be governed by District Level Sand Monitoring Committee headed by Deputy Commissioner.
		2. The area should be properly surveyed and mapped with the help of GPS to assign geo coordinates and accordingly erect boundary pillars so as to avoid illegal and unscientific mining.
		3. Depth of sand available may be indicated in a contour map using suitable drilled holes to ensure sand mining do not exceed one meter depth.
		4. Once thickness is established sand mining may be permitted to one meter depth where the thickness of sand is more than three meter deep. If the thickness of sand is less than three meter, sand mining shall not be permitted.
		5. Sufficient spacing shall be ensured from one block to another block and sufficient time gap shall be provided for replenishment before undertaking mining activity in the same block.
		6. Mining activity shall be restricted to only non-monsoon season and in the area that is exposed.
		7. No in-stream mining shall be permitted.
		8. No stream should be diverted for the purpose of sand mining. No natural water course and/ or water resources are obstructed due to mining operations.
		9. Site specific plan with eco-restoration should be in place.
		10. Sand mining shall be undertaken only by manual method without use of earth moving equipment such as JCB etc. Use of mechanized boats for sucking sand from in-stream area shall be strictly prohibited.
		11. Appropriate safety zones shall be maintained in proximity to any bridge / and / or embankment and other permanent structures. No sand mining shall be undertaken in such safety / buffer zones. Guideliness issued by the Ministry of Mines in this regard shall also be adhered to.
		12. The quarrying activity shall not intersect subterranean water level and ground water table.

* States/UTs not mentioned have not provided the data.



Enforcement & Monitoring Guidelines for Sand Mining



Ministry of Environment, Forest and Climate change

January, 2020

Table of Content

Sl. No.	Contents	Page
1	Introduction	02
2	Need for Policy Guidelines	04
3	Objective of Guidelines	09
4	Requirements for Monitoring & Enforcement	10
5	Replenishment Study	27
6	Enforcement Provisions	34
7	Recommendation of High Power Committee	41
8	General Approach for Sustainable Sand Mining	45
9	Monitoring Mechanism	48

Table of Annexure

Annexure		Page
Annexure - I	Details of Sand/M-Sand Sources	64
Annexure - II	List of Potential Mining Leases (Expiring & Proposed)	65
Annexure - III	Cluster & Contiguous Cluster details	66
Annexure - IV	Transportation Routes for individual leases and leases in Cluster	67
Annexure – V	Final List of Potential Mining Leases (Existing & Proposed)	68
Annexure - VI	Final List of Cluster & Contiguous Cluster	69
Annexure - VII	Final Transportation Routes for individual leases and leases in Cluster	70
Annexure - VIII	Salient provision for sand mining in the state of Tamil Nadu	71

1.0 INTRODUCTION

The Ministry of Environment Forest & Climate Change formulated the Sustainable Sand Management Guidelines 2016 which focuses on the Management of Sand Mining in the Country. But in the recent past, it has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring.

Section 23 C of MMDR, Act 1957 empowered the State Government to make rules for preventing illegal mining, transportation and storage of minerals. But in the recent past, it has been observed that there was large number of illegal mining cases in the Country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment.

India is developing at a faster pace and much technological advancement has already been taken place in the surveillance and remote monitoring in the field of mining. Thus, it is prudent to utilize the technological advancement for the effective monitoring of the mining activities particularly sand mining in the country.

Use of latest remote surveillance and IT services helps in effective monitoring of the sand mining activity in-country and also assist the government in controlling the illegal mining activity in the country. Thus, there is a need for an effective policy for monitoring of sand mining in the Country which can be enforced on the ground. These guidelines focus on the effective monitoring of the sand mining since from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public. Further, the effective monitoring and enforcement require efforts from not only Government agencies but also by consumers and the general public.

It is the responsibility of every citizen of India to protect the environment and effective monitoring can only be possible when all the stakeholders viz. Central Government, State Government, Leaseholders/Mine Owners, Distributors, Dealers, Transporters and Consumers (bulk & retail) will contribute towards sustainable mining, and comply with all the statutory provisions. It is felt necessary to identify the minimum requirements across all geographical region to have a uniform protocol for monitoring and enforcement of regulatory provision prescribed for sustainable sand and gravel mining.

This document will serve as a guideline for collection of critical information for enforcement of the regulatory provision(s) and also highlights the essential infrastructural requirements necessary for effective monitoring for Sustainable Sand Mining.

The document is prepared in consideration of various orders/directions issued by Hon'ble NGT in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams.

Further, this document is supplemental to the existing "Sustainable Sand Mining Management Guideline-2016" (SSMG-2016), and these two guidelines viz. "Enforcement & Monitoring Guidelines for Sand Mining" (EMGSM-2020) and SSMG-2016 shall be read and implemented in sync with each other. In case, any ambiguity or variation between the provision of both these document arises, the provision made in "Enforcement & Monitoring Guidelines for Sand Mining-2020 "shall prevail.

2.0 NEED FOR POLICY GUIDELINES

The Ministry of Environment, Forest & Climate Change (MoEF&CC) published Environmental Impact Assessment Notification 1994 which is only applicable for the Major Minerals more than 5 ha. In order to cover the minor minerals also into the preview of EIA, the MoEF&CC issued EIA Notification 2006 for Major & Minor Mineral more than 5 Ha. The Hon'ble Supreme Court in its Judgment dated the 27th February 2012 in I.A. No.12- 13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc. made prior environment clearance mandatory for mining of minor minerals irrespective of the area of mining lease. In order to comply with the judgment of Hon'ble Supreme Court, the Ministry issued S.O.141 (E) dated 15.01.2016. Further, MoEF&CC published Sustainable Sand Mining Management Guidelines 2016 for scientific and sustainable sand mining in the Country. The recommendations for the management of sustainable sand extraction are the key objective of the Guidelines. Special emphasis is given on monitoring of the mined out material, which is key to the success of the environmental management plan. Use of IT and IT-enabled services for effective monitoring of the quantity of mined out material and transportation along with process re-engineering has been made a part of the Guidelines. Guidelines support the fundamental concept, promote environmental protection, limit negative physiological, hydrogeological and social impacts underpinning sustainable economic growth.

The Hon'ble NGT in its order dated 04.09.2018 in O.A. 173/2018 in the matter of Sudarsan Das vs. State of West Bengal & Ors. Inter-alia observed that "***There can be no two views that an effective institutional monitoring mechanism is required not only at the stage when Environmental Clearance is granted but also at subsequent stages". "The guidelines focus on the preparation of District Survey Report and the Management Plan" … We are of the view that all the safeguards which are suggested***

in sustainable sand mining guidelines as well as notification dated 15.01.2016 ought to be scrupulously followed."...It is a known fact that in spite of the above-suggested guidelines being in existence, on the ground level, illegal mining is still going on. The existing mechanism has not been successful and effective in remedying the situation." ..." Since there is an utter failure in the current monitoring mechanism followed by the State Boards, SEIAAs and DEIAAs, it is required to be revised for effective monitoring of sand and gravel mining and a dedicated monitoring mechanism be set up."

The Hon'ble NGT in its order dated 04.09.2018 in O.A. 173/2018 in the matter of Sudarsan Das vs. State of West Bengal & Ors. directed that ***MoEF&CC has issued directions from time to time under Section 3 and 5 of the Environment (Protection) Act, 1986. The MoEF&CC needs to revise its directions keeping in mind the following:***

- *Mining Surveillance System discussed in para 23 above be finalized in consultation with ISRO Hyderabad.*
- *Safeguards suggested in Sustainable Sand Mining Guidelines published by the MoEF&CC in the year 2016.*
- *Suggestions in the High Power Committee Report.*
- *The requirement of demarcation of boundaries being published in respect of different leases in the public domain.*
- *Need to issue SOP laying down mechanism to evaluate loss to the ecology and to recover the cost of restoration of such damage from the legal or illegal miners. Such evaluation must include the cost of mining material as well as the cost of ecological restoration and the net present value of future ecosystem services forgone.*
- *Need to set up a dedicated institutional mechanism for effective monitoring of sand and gravel mining which may also take care of mining done without any Environmental Clearance as well as mining done in violation of Environmental Clearance conditions.*

- *The Mining Department may make a provision for keeping apart at least 25% of the value of mined material for the restoration of the area affected by the mining and also for compensating the inhabitants affected by the mining.*

- *One of the conditions of every lease of mine or minerals would be that there will be independent environmental audit at least once in a year by reputed third party entity and report of such audit be placed in the public domain.*

- *In the course of such an environmental audit, a three-member committee of the local inhabitants will also be associated. Composition of three members committee may preferably include ex-servicemen, a former teacher and former civil servant. The Committee will be nominated by the District Magistrate.*

The Hon'ble NGT in its order dated 05.09.2018 in O.A. 44/2016 in the matter of Mushtakeem Vs. MoEF & CC & Ors. Inter-alia observed the following:

"Para 20. In Original Application No. 481/2016, the allegation is that there is the connivance of the District Administration with the miners and mining is going in violation of conditions of Environmental Clearance. According to the applicant, an effective mechanism is required to be evolved so that illegal mining does not place."

"Para 22. We proceed to consider the main question proposed for the consideration stated earlier hereinabove as to ***how to ensure the protection of the environment by checking illegal mining."***

"Para 23. We have dealt with the identical issue relating to the illegal sand mining in the border districts in the State of West Bengal and Odisha in the order dated 04th September 2018 in Sudarsan Das Vs. State of West Bengal & Ors., Original Application No. 173 of 2018. We have directed the MoEF&CC to revise the guidelines on the subject for an effective mechanism for sand mining, relevant portions of which are reproduced below: -..."

The Hon'ble NGT in its order dated 10.09.2018 in O.A. 304/2015 in the matter of Jai Singh & Anr.Vs. Union of India Ors. inter-alia observed the following:

"Para 6. After disposal of the above matters, a disturbing event widely reported in media which took place on 07th September 2018 has been brought to our notice. ***A Deputy Ranger who tried to stop illegal mining was killed by mining mafia at Morena in the State of M.P.***

"Para 7. The above disturbing event may also be kept in mind by the MoEF, while considering the issuance of revised guidelines in light of the judgment dated 05th September 2018 (Supra)."

The Hon'ble NGT in its order dated 05.04.2019 in O.A. 360/2015 in the matter of National Green Tribunal Bar Association & Anr.Vs. Union of India & Ors. inter-alia observed the following:

"*The 2016 Guidelines need revision in the light of the report of High Powered Committee in September 2016, failure of Monitoring mechanism followed by State Boards, SEIIAs, DEIAAs and MSS system developed by Ministry of Mines & IBM with the assistance of BISAG and MAITY and other observations quoted in paras 12 to 15 above.*

50. As noted earlier in paras 17, 23, 27, 31 and 35, States of West Bengal, Odisha, Gujarat, Karnataka, Maharashtra, Punjab, Haryana and Uttar

Pradesh are required to follow SSMG, 2016 as may be revised by MoEF&CC and even other States where illegal sand mining is taking place.

The States may review the monitoring mechanism in terms of several directions of the Tribunal and guidelines of MoEF&CC.

The international conservation concern regarding natural wealth is a universal demand. Article 51(a) subsection (G) of the constitution requires every citizen of India to protect and improve the natural environment including forest, lakes, rivers, wildlife and to have compassion for the living creature.

The Hon'ble Supreme Court in the case of M.C. Mehta Vs. Kamal Nath (1997) 1 SCC 388 held that under Article of Indian Constitution incorporates the "Public Trust Doctrine" and as such extents to the protection of all-natural resources which includes the protection of flora and fauna.

The Hon'ble Supreme Court in the case of Vellore Citizens Welfare Forum Vs. Union of India & Ors (1996) held that the precautionary principle is part of the Environmental Law in India. It further stated that onus of proof is on the actor of the developer/industrialize to show that its actions are environmentally benign."

3.0 OBJECTIVE OF GUIDLINES

- Identification and Quantification of Mineral Resource and its optimal utilization.
- To regulate the Sand & Gravel Mining in the Country since its identification to its final end-use by the consumers and the general public.
- Use of IT-enabled services & latest technologies for surveillance of the sand mining at each step.
- Reduction in demand & supply gaps.
- Setting up the procedure for replenishment study of Sand.
- Post Environmental Clearance Monitoring.
- Procedure for Environmental Audit.
- To control the instance of illegal mining.

4.0 REQUIREMENTS FOR MONITORING & ENFOCEMENT

Sustainable Sand Mining Management Guidelines (SSMMG) 2016 and past experience suggest that the source of sand in India are through

a) River (riverbed and flood plain),
b) Lakes and reservoirs,
c) Agricultural fields,
d) Coastal / marine sand,
e) Palaeo-channels and
f) Manufactured Sand (M-Sand).

The SSMMG-2016 highlights the identification of the sand mining sources, replenishment of the River Bed Material (Sand, Boulder, Gravel, Cobble etc.), preparation of Districts Survey Report, and Standard Environmental Conditions suitable for sand mining projects.

The necessary requirements to comply with the direction of Hon'ble NGT and to facilitate effective monitoring and enforcement of regulatory provision for sand mining in the country are as follows:

i) Identification of sand mining sources, its quantification and feasibility for mining considering various environmental (proximity of protected area, wetlands, creeks, forest etc.) and other factors such as important structures, places of archaeological importance, habitation, prohibited area etc.

ii) The mining lease auctioned by State government as per their Minor Mineral Concession Rules are granted of Letter of Intent (LoI), but it has been observed that many of the sites are not suitable w.r.t environmental aspects. In most of the cases, the unplanned grant of mining lease leads to formation of cluster and/or contiguous cluster

of small mining leases which sometimes is difficult to regulate and monitor. In order to address such issues, more emphasis is required on the preparation of District Survey Report and its format for reporting,

iii) Mining Plan is an important document to assist the mine owner to operate the mine in a scientific manner. States have their own format for preparation of mining plan and it is observed that recording of the initial level of mining lease at shorter interval say 25m X 25 m grid interval is not present.

iv) There is no practice for regular replenishment study to ascertain the rate of depositing, plan and section needs to be prepared based on the restrictions provided in letter of intent and provisions of Sustainable Sand Mining Management Guidelines 2016.

v) Environmental Clearance is a process wherein the regulatory authorities after considering the potential environment impact of mining clearance is granted with a set of specific & standard conditions to carry out mining operations, but often it is observed that letter of intent is granted for a location which has less potential for mining and not feasible for environment-friendly mining. This leads to an unnecessary financial burden on the mine owners and litigations. Thus, LoI should be preferably granted for those locations which have the least possibility of an impact on the environment and nearby habitation.

vi) It is the responsibility of the mine owner to obtain all the statutory clearance and comply with the conditions stipulated in the clearance letter. Mining should be carried out within the mining lease area as per

approved mining plan or mining plan concurred by other regulatory authorities.

vii) Mining operation also involves transportation of mineral from the mining area to end-user and its necessary that movement of the mineral needs to be monitored.

The State Government already have power under section 23c of MMDR, Act 1957 to make rules for preventing illegal mining, transportation and storage of minerals. However, there are instances of illegal mining which shows that there is a need for strengthening the system of mineral dispatch and its monitoring. This document provides good practices already under implementation by various states for regulating the mineral sale, dispatch, storage, transportation and use.

viii) The river reaches with sand provide the resource and thus it is necessary to ascertain the rate of replenishment of the mineral. Regular replenishment study needs to be carried out to keep a balance between deposition and extraction. This document provides the procedure to be followed for conducting replenishment study.

ix) Even after all the regulatory procedure and policy being in place, there are instances where illegal mining is taking place. There is a need for regular surveillance of the sand mining reaches. The monitoring agencies can monitor the sites remotely by using Unmanned Artificial Vehicles (UAVs)/Drone which is now a viable option. The drone can also be used for reserves estimation, quantity estimation, land use monitoring. This document highlights possible use of IT/Satellite/Drone technology for effective monitoring of sand mining.

4.1 Identification of possible sand mining sources and preparation of District Survey Report (DSR)

4.1.1 Preparation of District Survey Report.

"Sustainable Sand Mining Guidelines, 2016" issued by MoEF&CC requires preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease/LoI. The guidelines emphasize detailed procedure to be followed for the purpose of identification of areas of aggradation/ deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited. Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining; identifying measures for protection of environment and ecology and determining measures for protection of bank erosion, benchmark (BM) with respect to mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed.

The Hon'ble NGT in its Judgment dated 08.12.2017 in the matter of Anjani Kumar vs State of Uttar Pradesh & Ors. inter-alia mentioned the following regarding sand mining in the Uttar Pradesh.

> *"It states that the main object of preparation of District Survey Report is to ensure identification of areas of aggradation/deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining area. Thus, the environmental protection requires a strictly regulated mining in terms of area, quantity as well as most importantly replenishment thereof."*

"The data collection and declared for preparation of DSR shall take precedence over other data and would form the foundation for providing mining lease in terms of Appendix- x to the Notification dated 15th January 2016 must be prepared by the statutory authority stated therein i.e. DEIAA prior to awarding of permits for carrying on mining activity in any part of the State of UP."

The Hon'ble High Court of Jharkhand at Ranchi in its orders dated the 11th April 2018 and 19th June 2018 in W.P. (PIL) No. 1806 of 2015, in the matter of Court on its Own Motion Versus the State of Jharkhand & Others with W.P. (PIL) No. 290 of 2013, in the matter of Hemant Kumar Shilkarwar Versus the State of Jharkhand & Others, has inter-alia directed the preparation of District Survey Report for minor minerals other than Sand and Bajri or delegation of the powers for preparation of format of District Survey Report of minor minerals other than sand and Bajri to the State Government and/or District Environment Impact Assessment Authority and District Expert Appraisal Committee. To comply with the direction of Hon'ble High Court the Ministry has issued S.O. 3611(E) dated 25.07.2018, wherein, the procedure of preparation of DSR is mentioned. But it is felt that still there is other information that needs to be reported in DSR to make it a comprehensive DSR.

Therefore, preparation of District Survey Report is a very important step and sustainable sand mining in any part of the country will depends on the quality of District Survey Report.

Considering the importance of district survey report, the Ministry of Environment Forest and climate change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand mining.

a) District Survey Report for sand mining shall be prepared before the auction/e-auction/grant of the mining lease/Letter of Intent (LoI) by Mining department or department dealing the mining activity in respective states.

b) The first step is to develop the inventory of the River Bed Material and Other sand sources in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand (M-Sand). The source will include rivers, de-siltation of reservoir/dams, Patta lands/Khatedari Land, M-sand etc.

The revenue department of Kerala already conducted river mapping and sand auditing of around 20 rivers of Kerala which is a good example wherein the profile of rivers was created at regular intervals and aggradation/deposition was identified along with water level. In the same study, benchmarks were also created at a prominent location at regular interval for future surveying. Such study helps the mining departments to identify the source of sand.

Thus, it is proposed that for preparation of district survey report, the auditing of rivers needs to be carried out. There is already a provision under MMDR Act 2015 for National Mineral Exploration Trust (MET) wherein a 2% of royalty amount to be deposited in the trust. This fund is used for mineral exploration in the country. The Sand Auditing is also a sort of identification of mineral and State Government may request Central Govt. for proving funds for river auditing. The Central Govt. (Ministry of Mines) may also explore the possibilities for providing the funds for river auditing. The other option is that State Govt. may conduct such studies by its own fund and the same may be recovered from the leaseholders to whom the mining lease will be allocated.

c) District Survey Report is to be prepared in such a way that it not only identifies the mineral-bearing area but also define the mining and no mining zones considering various environmental and social factors.

d) Identification of the source of Sand & M-Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/Khtedari lands. The details in case of Rivers such as [name, length of river, type (Perennial or Non-Perennial), Villages, Tehsil, District], in case of Lakes, Ponds, Dams, De-silting locations [Name, owned/maintained by (State Govt./PSU), area, Villages, Tehsil, District] in case of Patta land/Khtedari lands [Owner Name, Sy No, Area, Agricultural/Non-Agricultural, Villages, Tehsil, District], in case of M-Sand Plant [Owner Name, Sy No, Area, Quantity/Annum, Villages, Tehsil, District], needs to be recorded as per format given in **Annexure-I.**

e) Defining the sources of Sand/M-Sand in the district is the next step for identification of the potential area of deposition/aggradation wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and original ground level (OGL) to be recorded and area of aggradation/deposition needs to be ascertained by comparing the level difference between the outside riverbed OGL and water level. Once the area of aggradation/deposition are identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central ¾th part of the river, width needs to be identified on a map. Out of the ¾th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining ¼th area needs to be kept as no mining zone for the

protection of banks. The specific gravity of the material also needs to be ascertained by analyzing the sample from a NABL accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

Note: As physical survey with conventional method is time-consuming, use of unmanned aerial vehicle (UAV) may be explored to carry out the survey and finalizing the original ground level and for developing a 3D model of the area.

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

g) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc. and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area.

h) Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered.

i) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.

j) The final area selected for the mining should be then divided into mining lease as per the requirement of State Government. It is suggested the mining lease area should be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradation into smaller

mining leases should be avoided as it leads to loss of mineral and indirectly promote illegal mining.

k) Cluster situation shall be examined. A cluster is formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha.

l) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed when one cluster is at a distance of 2.5 Km from the other cluster.

m) The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibility of replenishment of material. In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market. Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.

n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so

selected should be verified by the State Government for its carrying capacity.

o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as **Annexure-II**. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in **Annexure-III**. The details of the transportation need to be provided as in **Annexure IV.**

p) **Public consultation-**The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the sub-divisional committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatedari land, de-siltation location (ponds/lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per **Annexure-V.** The details regarding cluster and contiguous cluster needs to be provided in **Annexure-VI**. The details of the transportation need to be provided in **Annexure-VII.**

4.2 Grant of Letter of Intent to those mining leases which are falling in potential mining zone

The State Government shall issue letter of intent as per procedure laid down in their Minor Mineral Concession Rules with due consideration of final district survey report. The State Government shall ensure that all the letter of intent shall have complete details of the mining lease including geo-coordinate of the corner points, the involvement of forest land, distance from the forest land, distance from the protected area, distance from other sites of archaeological importance, details of the cluster situation etc. The demarcation of the boundaries of LoI/Lease area shall be placed in public domain along with LoI/lease deed details.

The LOI should not be granted for mining area falling on both riverbed and outside riverbed. Therefore, in the same lease, both types of area should not be included.

The authority responsible for grant of lease for sand mining shall ensure that annual audit of the sand mining process, production and compliance of the imposed conditions by regulatory authority (Environmental clearance or mine plan) shall be one of the essential condition of the lease agreement. The annual audit report shall be submitted to the district administration, which shall be put in public domain through the district website. Any deviation observed shall be appropriately and in-accordance with applicable law shall be dealt by the concerned authority and corrective measures shall also be taken to restoration of ecological/environmental damage, if observed.

4.3 Mining Plan

The preparation of Mining Plan is also very important. The mining plan should include the original ground level recorded at an interval not more than 10M x 10M along & across the length of the river. In addition to this-levels, outside the mining lease and bank of the river up to meters needs to be recorded. In the mining plan, there should be 3 plates for each year production & development planning (pre-monsoon, monsoon and post-monsoon). The time period of monsoon should be defined in the DSR. At the time of review of the mining plan, the details of the replenishment study conducted for all the years needs to be included in the mining plan. The Mining Plan should include the certificate from PCCF on forest land, distance from the protected area, past production details for mining leases seeking expansion.

Following considerations shall be kept in mind for sand/gravel mining while approving mining plan

a) Parts of the river reach that experience deposition or aggradation shall be identified. The Leaseholder/ Environmental Clearance holder may be allowed to extract the sand and gravel deposit in these locations to manage aggradation problem.

b) The distance between sites for sand and gravel mining shall depend on the replenishment rate of the river. Sediment rating curve for the potential sites shall be developed and checked against the extracted volumes of sand and gravel.

c) Sand and gravel may be extracted across the entire active channel during the dry season.

d) Abandoned stream channels on the terrace and inactive floodplains be preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form the inactive channel.

e) Layers of sand and gravel which could be removed from the river bed shall depend on the width of the river and replenishment rate of the river.

f) Sand and gravel shall not be allowed to be extracted where erosion may occur, such as at the concave bank.

g) Segments of the braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.

h) Sand and gravel shall not be extracted up to a distance of 1 kilometre (1 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a minimum of 250 meters on the upstream side and 500 meters on the downstream side.

i) The sediment sampling should include the bed material and bed material load before, during and after the extraction period. Develop a sediment rating curve at the upstream end of the potential reach using the surveyed cross-section. Using the historical or gauged flow rating curve, determine the suitable period of high flow that can replenish the extracted volume. Calculate the extraction volume based on the sediment rating curve and high flow period after determining the allowable mining depth.

j) Sand and gravel could be extracted from the downstream of the sand bar at river bends. Retaining the upstream one to two-thirds of the bar and riparian vegetation is accepted as a method to promote channel stability.

k) The flood discharge capacity of the river could be maintained in areas where there is a significant flood hazard to existing structures or infrastructure. Sand and gravel mining may be allowed to maintain the natural flow capacity based on surveyed cross-section history. Alternatively, off-channel or floodplain extraction is recommended to allow rivers to replenish the quantity taken out during mining.

l) The Piedmont Zone (Bhabhar area) particularly in the Himalayan foothills, where riverbed material is mined, this sandy-gravelly track constitutes excellent conduits and holds the greater potential for groundwater recharge. Mining in such areas should be preferred in locations selected away from the channel bank stretches.

m) Mining depth should be restricted to 3 meters and distance from the bank should be ¼th or river width and should not be less than 7.5 meters.

n) The borrow area should preferably be located on the riverside of the proposed embankment because they get silted in the course of time. For low embankment, less than 6 m in height, borrow area should not be selected within 25 m from the toe/heel of the embankment. In the case of the higher embankment, the distance should not be less than 50 m. In order to obviate the development of flow parallels to the embankment, crossbars of width eight times the depth of borrow pits spaced 50 to 60 meter center-to-center should be left in the borrow pits.

o) Demarcation of mining area with pillars and geo-referencing should be done prior to the start of mining.

p) A buffer distance /un-mined block of 50 meters after every block of 1000 meters over which mining is undertaken or at such distance as may be the directed/prescribed by the regulatory authority shall be maintained.

q) A buffer distance /unmined block of 50 meters after every block of 1000 meters over which mining is undertaken or at such distance as may be the directed/prescribed by the regulatory authority shall be maintained.

r) River bed sand mining shall be restricted within the central 3/4th width of the river/rivulet or 7.5 meters (inward) from river banks but up to 10% of the width of the river, as the case may be and decided by regulatory authority while granting environmental clearance in consultation with irrigation department. Regulating authority while regulating the zone of river bed mining shall ensure that the objective to minimize the effects of riverbank erosion and consequential channel migration are achieved to the extent possible. In general, the area for removal of minerals shall not exceed 60% of the mine lease area, and any deviation or relaxation in this regard shall be adequately supported by the scientific report.

s) Mining Plan for the mining leases(non-government) on agricultural fields/Patta land shall only be approved if there is a possibility of replenishment of the mineral or when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market.

The minerals reserve for river bed area is calculated on the basis of maximum depth of 3 meters and margins, width and other dimensions as mentioned in para (s) above. The area multiplied by depth gives the volume and volume multiplied with bulk density gives the quantity in Metric Ton. In case of river bed, mineable material per hectare area available for actual mining shall not exceed the maximum quantity of 60,000 MT per annum.

4.4 Obtaining Environmental & Other Statutory Clearance

The LOI Holder/Lease Holder to obtain Environmental and Other Statutory Clearances from the concerned authorities as per provision of applicable laws.

4.5 Baseline date before Commencement of Mining Operations

Baseline data in respect of the initial level of mining lease in the interval not more than 25 X 25 meters shall be collected for record by leaseholder. The level of river bed upstream and downstream up to 100 meters also needs to be recorded. The area outside the mining lease/river bank (if lease boundary coincides with mining lease) up to 100 meters from both the banks/mining lease needs to surveyed for initial level.

4.6 Additional measures where project proponent is selected by a bidding

In those states where sand plots are auctioned to the highest bidder, the following is suggested:

It has been observed that bidders try to form a cartel and bids are received for certain plots where legal mining is done, and bids for certain other plots don't elicit any response. Sand from these un-

auctioned plots is then excavated using the same machinery deployed for the excavation of adjacent plot which might have been auctioned off. It is not easily possible for the field machinery to prevent such illegal activities. This may be prevented by having plot of larger size. plots are large in size as possible are identified for auction. Care may be taken to ensure that no continuous stretch of plot in the river bed is divided for auction. A continuous stretch of plot shall be preferred for auction, and the attempt may not be made to auction it off in pieces.

5.0 REPLENISHMENT STUDY

The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessing sand extraction. Mining within or near riverbed has a direct impact on the stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. Alteration or modification of the above attributes may cause an impact on the ecological equilibrium of the riverine regime, disturbance in channel configuration and flow-paths. This may also cause an adverse impact on in-stream biota and riparian habitats. It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river stretch, it is imperative to have a study of replenishment of material during the defined period.

5.1 Generic Structure of Replenishment Study

Initially replenishment study requires four surveys. The first survey needs to be carried out in the month of April for recording the level of mining lease before the monsoon. The second survey is at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the offset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned.

The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the Central Water Commission and Indian Meteorological Department. The excavation will, therefore, be limited to estimated replenishment estimated with consideration of other regulatory provisions.

5.2 Methodology for Replenishment Study

The replenishment estimation is based on a theoretical empirical formula with the estimation of bedload transport comprising of analytical models to calculate the replenishment estimation. The iso-pluvial maps of IMD can be used for estimation of rainfall. Catchment yield is computed using different standard empirical formulas relevant to the geographical and channel attributes. eg. Strange's Monsoon runoff curves for runoff coefficient). Peak flood discharge for the study area can be calculated by using Dickens, Jarvis and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport using Ackers and White Equation or similar can be made. A simulation model is used with basic data generated from the field in the pre-study and post-study period (preferably pre-monsoon and post-monsoon) to estimate the volume of replenished material. The particle size distribution and bulk density of the deposited material are required to be assessed from a NABL recognized laboratory. Considering the bulk density and the volume, the estimation of replenishment in weight will be calculated after considering safeguards and stability of the slopes and riverine regime. Some of the common methods used for field data acquisition for replenishment study

5.2.1. Physical survey of the field by the conventional method

i. The conventional survey technical using DGPS and other survey tools are used to define the topography, contours and offsets of the lease area. The survey should clearly depict the important attributes of the stretch of the river and its nearby important civil and other feature of importance. Such information will provide the eligible spatial area for mining. The contour and the elevation benchmarks will provide the baseline data for assessing the pre and post-study period scenario.

ii. Physical benchmarks are to be fixed at appropriate intervals (preferable 1 in 30 m) and the Reduced Level (RL) shall be validated from a nearby standard RL. These RL should be engraved on a steel plate (Bench Plate) and shall be fixed and placed at locations which are free from any damages and are available in pre and post-study period. The bench plates shall be available for use during the mining period as reference for all mining activity. Reference pillar may also be used in place of Bench Plates with visible and readable demarcation on the ground as common reference points to control the topographic survey and mining activity.

iii Baseline data on elevation status for a grid of 10 m x 10 m is preferred to have accuracy in the assessment. It is expected that two consecutive cross-sections in longitudinal and lateral direction should not be more than 10-meter distance apart, however, the regulatory authority may fix these intervals depending on the geographical and site-specific conditions, only and after providing the scientific reason for such deviation.

iv The changes observed in the elevation in per and post scenario at each node should be depicted in graphical forms with an appropriate scale to estimate the area of deposition and erosion. These graphical

presentations should depict the active channel regime and the flow bed elevation with other important features required to be considered for estimation of the mining area. The area of deposition and erosion shall be calculated for each cross-section after giving due regard to the stability and safety of active channel banks, and other features of importance. The elevation level shall be in reference to the nearest bench-plates established for the purpose.

v The levels (MSL & RL) of the corner point of each grid should be identifiable and safety barriers (Non-Mining) demarcated as restricted in consensus with Mineral Concession Rules of respective State, and the provision mentioned in this Sustainable Sand Mining Management Guidelines.

vi A clear identification is required to be highlighted between grids under mineable and grids under the non-mineable area. These baseline data (pre and post) be subjected to stimulation with the help of data mine software to derive at the replenishment area and corresponding volume and estimated weight.

vii The database should be structured in a tabulated form clearly depicting the nomenclature of the section lines, latitude and longitude of the starting point, chain-age and respective levels of all the points taken on that section line.

viii Net area shall be derived after the summation of the area of deposition minus area of erosion for each cross-section. The volume will be estimated by multiplying the distance between two cross-sections with the average of net area of these two consecutive cross-sections.

ix One sample per 900 square meters (30 m x 30 m) shall be preferred sample density for assessment of bulk density for estimation of deposition rate. Care should be taken that the sample for assessment

of bulk density is taken from the deposition zone and not from erosion. However, depending on the site condition, river morphology and geographical condition, sample density may be adjusted. Reason for such deviation shall be appropriately highlighted in the report with supporting scientific data.

5.2.2. Use of UAV/Drone and other image data processing techniques

With the development in image data processing tools and its accuracy acceptability, Drone/UAV fitted with the advance camera are used for survey purposes. Such technology has promising potential in the survey of sand mining zones due to its fast and reliable output deliveries. The survey is conducted using a set of instruments and compatible software to utilized the properly referenced data for depicting the topography of the study area. Instrument calibration and software compatibility and its validation with the ground data are an essential requirement for using this technique.

The details of the instruments their limitation and software used shall be demonstrated in the form of the accuracy assessment report, through a chapter in the replenishment study report. Other details to be incorporated in the report with regard to the study using such imaginary techniques shall highlight the followings:

a) **Flight Planning:** - The lease co-ordinates and the flight plan devised to capture the front and side overlap percentages for in each flight in reference to global coordinates (Kml or SHP file) system. The software used for the purpose and its details along with limitations with basic analytical assumptions.

b) **Block file generation:** - This operation concerns the selection of the sensor model and the definition of block properties, the addition of

imagery to the block file, marking of GCPs, generation of tie points and refining of the model.

c) **Interior orientation:** - The interior orientation of the stereo pair rational polynomial coefficients (RPC) used, which should be bundled with the scenes. RPCs are coefficient, which is used by photogrammetric software to represent the ground to-image viewing geometry.

d) **Exterior orientation:** For exterior orientation, ground control points shall be used, which are collected from the DGPS survey.

e) **Aero Triangulation:** - A critical phase in photogrammetric mapping is to rectify the satellite imagery at an appropriate tract on the surface of the earth. This is accomplished by collecting horizontal and vertical data [GCP's] to ascertain the spatial location of a number of features that are visible and measurable on the aerial images – this process is often called control bridging, which refers to passing horizontal and vertical information from one aerial image to the next.

f) **Ortho Generation:** - After running the above steps; the software shall automatically generate orthorectified imagery.

g) **DTM extraction:** For extraction of DTM, Generated point cloud data classified manually to extract bare earth.

5.2.3 Accuracy Assessment of Aerial Data:

To check the accuracy of DTM generated by Aerial data, few points are selected and compared with on-site by using DGPS instrument for the ground-truthing purpose. It is preferred to do ground-truthing at minimum 5 locations spread evenly across the lease area. The readings from the DGPS instrument are then compared with the Drone data for accuracy assessment

purpose. A comparative chart will be prepared in comparison of Data related to ground-truthing (by DGPS) and from Drone. Such accuracy assessment report shall a chapter of the replenishment study.

5.2.4 Replenishment study shall have the details of

- List of instruments
- List of software
- Establishment of Benchmark by putting No. of pillar points and various Ground Control Points (GCP) at the site.
- Ground Control Points (GCP) Collection: - Various GCPs were observed by using DGPS for Permanent Benchmarks and for control points.
- The summary of the elevation data from each section's profile based on the post-monsoon the survey should have mentioned in the table form.
- The detail of post-monsoon survey data in the tabular form shall be
- The detailed comparison of both pre-monsoon and post-monsoon elevation data shall be attached
- Cross-sectional depiction of deposition and erosion for each section in pre and post-deposition season shall be given supported by relevant field study data and plan.

6.0 ENFORCEMENT

6.1 Mining Operation:

The mining operations should be strictly carried out in accordance with the approved mining plan and after complying with all the conditions stipulated in Environmental & Other Statutory Clearance. Mine owner shall follow the operational procedure (for sale, dispatch, storage, reserve reconciliation and transportation) as may be defined by the concerned state government in its monitoring guidelines. Mine owner should comply with the recommendation and suggestion made by the High Power Committee as applicable.

6.2 Post Environment Clearnace Monitoring:

It's the responsibility of the EC Holder to comply with the Environmental Clearance conditions and upload the six-monthly EC compliance report on the website of the Ministry. For the category, 'A' mines (>100 Ha individual & cluster) Regional Office of the MoEF&CC are entrusted to carry out EC Monitoring and for the Category 'B' Mines by SEIAA. The monitoring shall be carried out as per the procedure/schedule suggested by MoEF&CC from time to time. MOEF&CC vide its notification S.O. 637(E) dated 28.02.2014 has delegated the power to State/Union Territory Environmental Impact Assessment Authority to issue show cause notice to project proponent in case of violation of Conditions of Environmental Clearance issued by the said authority and to issue direction for keeping the said EC in abeyance or withdrawing it. Thus, for category 'B' (0 to 100 Ha) projects SEIAAs are responsible for EC monitoring.

6.3 Environment Audit:

The Hon'ble NGT in its order dated 04.09.2018 in O.A. 173/2018 in the matter of Sudarsan Das vs. State of West Bengal & Ors. Inter-alia directed

that "*One of the conditions of every lease of mine or minerals would be that there will be independent environmental audit at least once in a year by reputed third party entity and report of such audit be placed in the public domain. In the course of such an environmental audit, a three-member committee of the local inhabitants will also be associated. Composition of three member's committee may preferably include ex-servicemen, a former teacher and former civil servant. The Committee will be nominated by the District Magistrate.*

The gazette notification on environmental audit has been issued by the Ministry of Environment and Forests on March 13, 1992 (amended vide notification GSR 386 (E) dated April 22, 1993). This notification applies to every person carrying on an industry, operation or process requiring consent to operate under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981), or both, or authorization under the Hazardous Waste (Management and Handling) Rules, 1989, issued under the Environment (Protection) Act, 1986 (29 of 1986). The notification requires that an Environmental Statement for the financial year ending the 31st March be submitted to the concerned State Pollution Control Board, on or before the 30th September of the same year.

It is suggested that NABET Accredited consultant may be engaged for Environment Audit and during the course of the audit, a three-member committee nominated by District Magistrate shall be associated.

6.4 Monitoring of Sale & Purchase of Sand:

6.4.1 In order to curb illegal mining it is very necessary that the general public is aware of the legal source of sand and RBM suppliers. The Ministry of Mines issued ***Sand Mining Framework 2018*** wherein it has proposed two mechanisms for the online sale of sand depending on whether there is a free market for sand in the State or the prices are regulated by the Government.

Para 1.2.12.2 Under the market model

In the case of the market model, all the lessees/ certified dealers in the State should register themselves on the online portal/ mobile app. For registering, the lessee/ certified dealer will have to enter the details of its concession/ stockyard, location, the quantity of sand expected on a weekly basis, as per the approved mining plan. Once registered, the online portal/ app will display the name of the reach/ stockyard and sand could be booked by the consumer from those leases/ stockyards and prices up to the delivery level. Further, the lessee/ certified dealer needs to regularly update the sand available in the reach/ stockyard, and they can decide the price at which they want to sell their sand. Anyone who wishes to purchase sand in the State will have the following options for buying:

1. *Mobile app*
2. *Online portal*
3. *Customer care/ telephone call*
4. *Licensed traders*

The consumer needs to register on the portal and log in using his/her credentials (Aadhar card based only). After logging in, the portal will display the entire list of reaches/ stockyards along with the quantity of sand available in those reaches/ stockyards and the quality and price of

sand. The consumer can filter/ sort the reaches/ stockyards based on such parameters as location, quality and price, and book from the lease/ stockyard he/she wishes to. The consumer should also have the option to purchase the sand by ordering at customer care. Also, stockyards should be made around all the major consumption hubs in the State based on their estimated demand.

Para 1.2.12.3 Controlled market prices

In case the prices are regulated by the State Government, the only difference from the previous model is that the price of sand at the river reach/ stockyard shall be uniform across the State/ district based on the quality and transportation lead. A consumer after logging in may choose the reach/ stockyard from which he/she wishes to purchase the sand. The payment for booking the sand in both the cases should be made on the portal/ app so that proper accounting of the sale of sand can be maintained by the Government. Also, stockyards should be made around all the major consumption hubs in the State based on their estimated demand.

It is suggested that the State Government should develop an online portal for sale and purchase of Sand & RBM. In addition to this State Government shall decide on the model viz. *Under market model or Controlled market prices or both* to be adopted for their respective States. The State Government shall accordingly modify their Minor Mineral Concession Rules within 6 months of publication of these guidelines. It is suggested that the controlled price model is more effective in controlling illegal sand mining. Because if the State Government is the only agency to provide the sand in the State, then price and supply of sand can be controlled more effectively. There will be no confusion in the consumers about legality of the purchase as the only source of sand provider is the State Government through its network of registered stockiest, retailers and transporters. The consumers

can fill the online request, pay the amount, select the transporter and give its feedback after the receipt of the sand. The transportation can also be controlled as the tippers used for transportation is registered tippers with GPS facility, the transportation route is well defined for easy monitoring, control over overloading of tippers, control over spillage of mineral etc. The State Govt. shall also make provision for penalizing the persons/agency buying the sand and RBM from the illegal sources.

6.4.2 The Ministry of Mines in its Sand Mining Framework also mentioned the following different level of monitoring:

Para 1.2.13.1 Level 1- Reach/ Stockyard level monitoring

For monitoring of the active reaches:

a. *Quantity of sand to be extracted from the reach should be based on the quantity of sand assessed in the reach by the Joint Inspection Team.*

b. *The lease boundary should be demarcated with geo-coordinates or geo-fenced to ensure that sand extraction is going on only within the permitted area.*

c. *De-casting from river beds should be monitored on a regular basis to keep a track of excavated quantity.*

d. *After every two years, a mandatory audit of the quantity extracted and quantity permitted along with the replenishment rate.*

e. *Mandatory e-pass/ e-permit should be made available at reach level for transportation of any sand by any GPS enabled vehicle with the provision of entering the vehicle number of the sand carrying vehicle and expected delivery address and customer name/ mobile number. Also, provision should be made available for stockyards/ stockiest of sand. In the case of*

nomination based (controlled pricing) business model, the margin of private stockist should be capped over a fixed percentage of notified prices.

f. At the stockyard, the stock supervisor should verify the authenticity of online payment receipt before issuing the transit pass. The loading of sand should be monitored electronically and all transporting vehicles should pass through an electronically monitored weighbridge. g. Real-time data capture for transportation

Para 1.2.13.2 Level 2 - Transportation monitoring

To make transportation monitoring effective and useful, all the sand carrying vehicles (tractors/ trucks) should be registered with the department and GPS equipment should be installed in all the sand carrying vehicles. Weighbridges with CCTV should be installed at all the stockyards, active reaches to ascertain the exact quantity of sand being transported in the vehicle. Check posts with CCTV cameras should be established near all major consumption centres to check if all the transporting vehicles are carrying a valid transport permit. The transport permit generated should contain the security features mentioned under section 5.11 so that one permit cannot be re-used by generating photocopies of the permit.

Para 1.2.13.3 Level 3 - End consumer monitoring/ bulk consumer

For end consumer monitoring, a customer grievance redressal center should be established to enquire about the grievances faced by the sand consumers. The telephone number of the call center should be advertised so that it reaches the general public through which anyone in the State can register his/her complain related to the sand, be it in terms of price or any other grievance. Additionally, profiles of customers should be analyzed such as the delivery of sand at the same address, usage pattern and its comparison with the estimated usage, as mentioned in purpose, etc. Further, surprise checking

should be conducted by the district level committee staff as per instructions of the monitoring agency.

Para 1.2.13.4 Level 4 - Indirect monitoring

Indirect monitoring can be done by determining sand consumption through the quantum of cement sales in the State, as the sale of cement is quite organized and data is easily available at the State level and district levels for the same. From district-wise cement consumption, the further trend of sand consumption can be derived. Any anomalies in the sand consumption/demand can be analyzed further.

Note: *The above monitoring mechanism is just a suggestion and the States may visit Andhra Pradesh and Telangana to study the monitoring mechanism in greater detail.*

It is suggested that State Government may consult with concern department of State of Telangana and Tamil Nadu to have better understanding on their experience and knowledge in adopting best sand mining enforcement provisions and monitoring practices and frame their own regulatory regime and monitoring framework. The framework of monitoring should essential include online sale & purchase of River Bed Material/ Auction of leases, Sand from rivers and other sources, online monitoring of excavation, storage and transportation of mineral for control of illegal mining.

The respective State Governments shall develop the online Sale & Purchase System after defining the model viz. Under market model or Controlled market prices model. The level of monitoring needs to be defined and guidelines need to be finalized by the respective State Governments as per their requirement with due consideration of suggestive guideline in this document. These all measure will help in curbing illegal mining.

7.0 Recommendations of High Power Committee:

A high power committee (HPC) was constituted by Hon'ble National Green Tribunal to assess the status of illegal mining the stretch of River Yamuna, under the chairmanship of Secretary, Ministry of Environment Forest & Climate Change. The committee after exhaustive field survey and interaction with stakeholders and having surprise visits submitted a comprehensive report on river sand mining along with certain recommendations on enforcement requirements and monitoring essentials. The same is provided in the following section for consideration of monitoring / regulatory authority to adopt applicable provisions in their monitoring framework and also to ensure that the infrastructural requirements recommended by the HPC are put in use at all locations including the lease area.

7.1 Recommendations of High Power Committee (HPC)

The following recommendation of the High Power Committee shall be considered while framing the monitoring mechanism by the State Government.

i. Project Proponent must ensure that following security features are included in the Transport Permission/Permits (TP) so that duplicate/fraudulent/forged TPs for transport, not accounted for in the IT-based system, is not possible.:

(a) Printed on Indian Bank Association (IBA) approved
(b) Magnetic Ink Character Recognition Code (MICR) paper;
(c) Unique Barcode;
(d) Unique Quick Response Code (QR);
(e) Fugitive Ink Background;
(f) Invisible Ink Mark;
(g) Void Pantograph;
(h) Watermark.

ii. Project Proponent must ensure that CCTV camera, Personal Computer (PC) or laptop, Internet Connection, Power Back up, access control of mine lease site; and arrangement for weight or approximation of weight of mined out mineral on basis of volume of the trailer of vehicle used at mine lease site are available.

iii. The PP has to enter the destination, distance between plot and destination, vehicle number etc in the system. After scanning, unique bar code number, invoice date time and validity date-time are generated by the software which gets printed individually on each TP Validity of TP is calculated based on the distance between plot and destination. After validity time is over the TP stands invalid.

iv. The officers involved in monitoring should be provided with mobile application and/or bar code scanners using which the TP can be checked anywhere on road. As soon as the bar or QR code on TP gets scanned through using the mobile application and/or scanner or vehicle number is entered into the application or sent by SMS to a predefined number, all details of TP such as plot details, vehicle details, validity time, etc. should be fetched from the server. This means if anything is re-written on TP and attempt is made to reuse the same, it can be traced immediately. Various reports can be generated using the system showing daily lifting reports and user performance report. This way the vehicles carrying sand can be tracked from source to destination.

v. The facility to fetch details using mobile app, website and SMS may be made available to the general public as well. However, they shall not be allowed to stop the vehicles to check the transportation. The only option that they should have is to check vehicle numbers of the passing vehicle in the mobile app or SMS for the validity of the pass. The only result that should be available to them should be if the vehicle carrying sand has a

valid permit at the relevant point of time or not. If the citizen finds that the vehicle doesn't have such a permit, as ascertained from mobile app or website or SMS, he should alert local authorities, who shall then take further action as per the law.

vi. In case, the vehicle break-down, the validity of Transport Permit or Receipt shall be extended by sending SMS by the driver in specific format to report the breakdown of the vehicle. The server will register this information and register the breakdown. The State can also establish a call center, which can register breakdowns of such vehicles and extend the validity period. The subsequent restart of the vehicle also should be similarly reported to the server/call center.

vii. The route of the vehicle from source to destination shall be tracked through the system using checkpoints, Radio-frequency identification (RFID) tags, and Global Positioning System (GPS) tracking.

viii. The system shall enable the Authorities to develop a periodic report on different parameters like daily lifting report, vehicle log/ history, lifting against allocation, and total lifting. The system can be used to generate auto mails/SMS. This will enable the District Collector / Magistrate and other authorities to get all the relevant details and will enable the authority to block the scanning facility of any site found to be indulged in irregularity. Whenever any authority intercepts any vehicle transporting illegal sand, it shall get registered on the server and shall be mandatory for the officer to fill in the report on action taken. Every intercepted vehicle should be tracked.

ix. It is necessary to prevent any truck/vehicle from transporting sand out of the identified plot bypassing the strong IT enabled system. Therefore, at each of the sand plot, the following additional measures should be taken.

(a) There shall be one entry and exit point provided for trucks/vehicles. The said entry point should have facilities as mentioned above. In case, it is necessary to have more than one entry/exit points, all such points shall have checkpoints with facilities as mentioned above. All other possible ways of entry/exit should be closed using barriers like compound, trench, etc. All provisions shall be made to not make it possible for any vehicle to enter or exit without entry into the computerized system.

(b) All such points should have 24X7 CCTV coverage, the footage of which should be made available online to the district administration. In cases, where sufficient internet bandwidth is not available, it may be deposited with the district administration on a weekly basis. If possible, the entry/exit points should have boom barriers which will record the vehicles entering and exiting the plot.

8.0 GENERAL APPROACH TO SUSTAINABLE SAND MINING

8.1 Pre-requisite for starting sand mining operation

i) All district to prepare a comprehensive mining plan for the district as per the provision of District Survey Report. These reports shall be put on the website of District Administration. No mining shall be allowed in the area which has not been identified in the comprehensive mining plan of the District.

ii) Replenishment study should be conducted on regular basis.

iii) All potential rivers mining zone/area shall be identified and put for auction with proper geo-tagged details by the auctioning authority concerned.

iv) The latitude and longitude of each mining lease shall be clearly mentioned in Letter of Intent issued to the potential mine lease. Such information shall be provided on the website of the district administration.

v) The provision of these guidelines shall be considered while identifying the potential stretches /locations and boundaries of the leases for the minable area.

vi) The LoI holder shall seek Environmental Clearance as per the provision of EIA Notification, and the regulatory authority shall ensure that the provision suggested in "Sustainable Sand Mining & Management 2016" and in this documents, as applicable are part of the clearance conditions.

vii) There shall be no river bed mining operation allowed in monsoon

period. The period as defined by IMD Nagpur for each state shall be adhered with.

viii) The monitoring infrastructures including weighbridge and adequate fencing of the lease area, CCTV, Transport permits, etc, as suggested in this document shall be ensured in order to reduce unrecorded dispatch.

ix) Regular monitoring of mined minerals and its transportation and storage shall be ensured and all information shall be captured at centralized database so that easy tracking of illegal material can be done.

x) Annual audit of each mining lease shall be carried out wherein three independent member of repute, nominated by District administration shall also participate.

8.2 Mining of Sand from Agricultural Fields

This practice is prevalent in Haryana; to ensure that mining from outside doesn't affect rivers, no mining is permitted in an area up to a width of 100 meters from the active edge of embankments or distance prescribed by Irrigation department whichever is critical. The top layer of soil varying between 1 and 2 meters is removed and stacked separately and thereafter the sand deposit which maybe 10-15 meter deep is mined. After removing the sand layer up to a maximum depth of 09 meters or the maximum mineable minerals, as permitted by competent authority. The topsoil stacked is spread out on the field and the same is brought under the cultivation. Though the level of this land (mined out area) is lowered to the depth of the excavation and in initial years of cultivation the productivity is low, but the productivity of the fields improves with continued cultivation and addition of organic manure in the field. In Haryana, some leases are of large area

(ranging from 1000 hectare to 2000 hectare) and agricultural fields and river bed both are included in the same lease for mining.

The following recommendations should be kept in mind for mining in such leases:

1. Mining of sand in such mine leases will require environment clearance.
2. The lease should be of sand mining either from the agricultural field or river. In the same lease, both types of area should not be included.
3. The sand mining from the agricultural field is being done in Haryana for a long time and it can be done in a more sustainable manner without adverse impact on agricultural productivity if proper environmental safeguards are taken.
4. The slope of mining area adjacent to agricultural fields should be proper (preferably 45 degree) and adequate gap (minimum 10 feet) be left from adjacent agricultural field to avoid erosion and scouring.

The provision for sand mining in agricultural field may be permitted, whenever replenishment of sand occurs due to natural phenomena.

Permission may also be granted by competent authority (District administration) for excavation of sand/Soil from agricultural fields, after due diligence of this prevailing condition in order to avoid any unacceptable impact on the environment and nearby livelihood from agriculture provided such objective of such excavation mining of Soil/Sand in limited increase the productivity of sand agricultural field.

9.0 MONITORING MECHANISM

9.1 Illegal Mining

The Hon'ble Supreme Court in its Judgment dated 2.08.2017 in W.P 114 of 2014 in the matter of Common Cause Vs Union of India & Ors, inter-alia passed the following:

Para 128. *The simple reason for not accepting this interpretation is that Rule 2(ii-a) of the MCR was inserted by a notification dated 26th July 2012 while we are concerned with an earlier period. That apart, as mentioned above, the holder of a mining lease is required to adhere to the terms of the mining scheme, the mining plan and the mining lease as well as the statutes such as the EPA, the FCA, the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981. If any mining operation is conducted in violation of any of these requirements, then that mining operation is illegal or unlawful. Any extraction of a mineral through an illegal or unlawful mining operation would become illegally or unlawfully extracted mineral."*

In view of above Judgement, any mining activities which are not governed under the provision of Environment (Protection) Act, 1985, The Water (Prevention & Control of Pollution Act, 1974, The Air (Prevention & Control of Pollution) Act, 1981, Forest Conservation Act-1980, Wildlife Protection Act - 1972, shall be considered as illegal mining within the provision of section 21(5) of Mines and Minerals (Development & Regulation) Act, 1957 (MMDR Act) and the concerned authority shall take necessary action within the provision of MMDR Act.

As per the provision of 23(C) of MMDR Act, the State Government is empowered to make rules for preventing illegal mining, and transportation

& storage of Illegal minerals. All such mining which qualifies under illegal, shall be dealt with in the provision of MMDR Act by the concern authorities.

State Pollution Control Board (SPCB) is the nodal authority in the State for dealing with cases related to pollution or environment management coming under the purview of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981 and the Environment Protection Act 1986. SPCB shall initiate appropriate action under the provision of these acts for non-compliance of violation of the provisions.

9.2 Environmental Damage due to illegal mining

The environmental damages incurred or resulting due to illegal mining shall be assessed by a committee constituted by District Administration having expertise from relevant fields, and also having independent representation of locals and State Pollution Control Board. Guidelines for assessment of ecological damages prescribed by the State Government or Concerned Pollution Control Boards or any other authority shall be applicable and compensation as fixed shall be paid by the project proponent, in light of Hon'ble National Green Tribunal orders.

9.3 Monitoring of Mining near Inter-district or inter-state boundary

There are situations where bifurcated river becomes district boundaries or state boundaries in such situation it is difficult to assess the mining potential, or to have close monitoring and enforcement of the regulatory provision. Such challenges have been identified and dealt with in SSMG-2016. However, in the absence of any standardized procedure, the monitoring has not been effectively practiced. This has been highlighted by the High Power Committee constituted by NGT in the matter pertaining to illegal mining.

The districts/state sharing the boundary shall constitute the combined task force for monitoring of mined materials, mining activity and also should actively participate in the preparation of DSR by providing appropriate inputs. In such cases, the draft DSR so prepared shall be put up for public consultation in both the districts through respective district administration website.

The task force shall meet every quarter to reconcile the data collected during the period and identify any gap/ lapses based on the outcome of such meeting. The respective district shall take action/ corrective measures. Effort shall be made for real-time data sharing between both the district.

The task –force shall include essentially the representative of respective districts from the mining department, transport department, regional office of SPCB concerned and a reputed citizen nominated by district administration. The Taskforce shall be headed by officer not less than ADM rank and quarterly outcome shall be submitted to District administration.

In addition to the above, there is a need for strict surveillance, particularly at night. The State of Gujarat has already initiated a program called '*Trinetra*' for night surveillance by using night-vision drones to control illegal mining incidents. This program is giving satisfactory results. Such type of system may also be developed by each State within a reasonable time.

A typical standard operating procedure for assessing illegal mining by the committee constituted shall, but not limited to, include the steps given in the following table. However, the process of assessing can be modified based on site-specific conditions and any deviation shall be recorded in the report with proper justification.

Suggestive standard Practice for assessing illegal mining

Step 1	The assessment team should collect the information and documents prescribed in the Pre-Requisite section.
Step 2	The assessment team should verify the applicability/validity of statutes under EPA-1986, Air and Water Act, MMDR 1957, State Mines and Mineral Rules, etc.
Step 3	Field visit should be conducted for identification of mining lease area (in hectare) and boundary pillar constructed to indicate the same.
Step 4	With the help of GPS instrument, the team should assess the area where any extraction or mining have been carried out on the day of visit and calculate the mined-out area in a hectare.
Step 5	If available, the team may avail the use of latest satellite images for calculating the total mined out area.
Step 6	The team should verify the Ground / Surface Level (in meter above MSL) of at least 04 highest points in or around the area where mining has been done. The Ground/surface level will then be computed based on averaging of 04 highest points verified by the team.
Step 7	With the help of Depth Measurement kit or any depth measuring instruments, the depth should be measured for at least 04 points in the mined-out area. For computing, the depth, averaging of the value obtained at 04 points should be done.
Step 8	Verification of compliance conditions of Environmental Clearance and Consent to operate, mining methodology under Mining Plan
Step 9	Identification of vulnerable impacts observed on the field and non-compliance of conditions of Environmental Clearance and Consent to Operate.

Step 10	Field Survey for identification, monitoring and verification of ecological species based on the information available and documents mentioned in the Pre-requisite section.
Step 11	Preparation of inventory of machinery used/observed on the field (optional)
Step 12	Preparation of inventory of hydraulic structures observed on the field (optional)
Step 13	Water sampling for assessment of water quality including physical and biological parameters. (optional)
Step 14	Reconciliation collation of data/information and compilation to maintain violation.
Step 15	Identification of restoration plan and computation of cost of the restoration plan.

9.4 Monitoring Mechanism

A uniform monitoring mechanism is required to assess the regulatory provision in quantitative terms, with robust institutional and legal framework. Based on past experience and suggestions available, the following requirements are suggested for defining a mechanism for monitoring of mining activities which will help in identification of mining which is operating either illegally or are violating the regulatory provisions. Some suggestion will facilitate direct or indirect information to help in such an assessment.

1. All precaution shall be taken to ensure that the water stream flows unhindered and process of Natural river meandering doesn't get affected due to mining activity.

2. River mining from outside shall not affect rivers, no mining shall be permitted in an area up to a width of 100 meters from the active edge of embankments or distance prescribed by the Irrigation department.

3. The mining from the area outside river bed shall be permitted subject to the condition that a safety margin of two meters (2 m) shall be maintained above the groundwater table while undertaking mining and no mining operation shall be permissible below this level unless specific permission is obtained from the Competent Authority. Further, the mining should not exceed nine-meter (9 m) at any point in time.

4. Survey shall be carried out for identifying the stretches having habitation of freshwater turtles or turtle nesting zones. Similarly, stretches shall be identified for other species of significant importance to the river eco-system. Such stretch with adequate buffer distance shall be declared as no-mining zone and no mining shall be permitted. The regulatory authority as defined for granting Environmental Clearance, while considering the application of issuance of ToR and/or EC for the adjacent block (to non-mining zone) of mining shall take due precaution and impose requisite conditions to safeguard the interest of such species of importance.

5. District administration shall provide detailed information on its website about the sand mines in its district for public information, with an objective to extend all information in public domain so that the citizens are aware of the mining activities and can also report to the district administration on any deviation observed. Appropriate feedback and its redressal mechanism shall also be made operational. The details shall include, but not limited to, lease area, geo-coordinates of lease area and mineable area, transport routes, permitted capacity, regulatory conditions for operation including mining, environmental and social commitments etc.

6. A website needs to be maintain to track the movement of centralised sand mining and a Centralised server system should be made to manage the data related to sand mining across India.

7. The mineral concession holders shall maintain electronic weighbridges at the appropriate location identified by the district mining officer, in order to ensure that all mined minerals from that particular mine are accounted for before the material is dispatched from the mine. The weighing bridge shall have the provision of CCTV camera and all dispatch from the mine shall be accounted for.

8. The mineral movement shall be monitored and controlled through the use of transit permit with security features like printing on IBA approved MICR papers, Unique bar/QR, fugitive ink background, invisible ink mark, void pantographs and watermarks papers or through use of RFID tagged transit permits and IT /IT-enabled services. Such monitoring system shall be created and made operationalised by State Mining department and district level mining officer shall be responsible for ensuring that all legal and operational mines are connected and providing the requisite information on the system. Regular check and associated report shall be submitted to DLTF and uploaded on the website.

9. State Government shall constitute a District Level Task Force (DLTF) under the Chairmanship of Deputy Commissioner/District Magistrate/Collector with Superintendents of Police and other related senior functionaries (District Forest Officer, District transport officer, Regional officer- SPCBs, Senior Officer of Irrigation Department, District Mining Officer) with one/two independent member nominated by the Commissioner concerned. The independent member shall be retired government officials/teacher or ex-serviceman or ex-judiciary member.

The DLTF shall keep regular watch over the mining activities and movement of minerals in the district. The DLTF shall have its regular meeting, preferably every month to reconcile the information from the mining activity, and other observations made during the month and take appropriate corrective and remedial action, which may include a recommendation for revoking mining lease or environmental clearance. The DLTF may constitute an independent committee of the expert to assess the environmental or ecological damage caused due to illegal mining and recommend recovery of environmental compensation from the miner's concern. The recommendation may also include action under the provision of E(P) Act, 1986.

10. The area not identified for mining due to restriction or otherwise are also to be monitored on a regular basis by the DLTF. Any observations of mining activity from the restricted area shall be reported and corrective measures shall be initiated on an urgent basis by the DLTF.

11. The dispatch routes shall be defined in the Environmental Clearance and shall be avoided through densely habituated area and the increase in the number of vehicle movement on the road shall be in agreement with the IRC guidelines / carrying capacity of the road. The alternate and dedicated route shall be explored and preferred for movement of mining to avoid inconvenience to the local habitat. The mining production capacity, by volume/weight, shall be governed by total permissible dispatch calculated based on the carrying capacity of dispatch link roads and accordingly, the production should be regulated.

12. The movement of minerals shall be reconciled with the data collected from the mines and various Naka/check posts. Other measures may also include a general survey of the potential mineable area in the district

which has not been leased/auctioned or permitted for mining due to regulatory or other reasons.

13. The location and number of check post requirement shall be reviewed by DLTF on a regular basis so that appropriate changes in location/number could be made as per the requirement. Such review shall be carried out on a regular basis for the district on inter-state boundary or district providing multiple passages between two districts of different states.

14. The district administration shall compile the information from their district of the permitted and legal mined out minerals and other details and share such information and intelligence with the officials of the adjoining district (Inter or/and Intra State) for reconciliation. The information shall include the area of operation, permissible quantity, mined out minerals (production) the permitted route etc., and other observations, especially where the mine lease boundary is congruent with the district boundary. Such coordination meeting shall be held on a quarterly basis, alternatively in two district headquarters or any other site in two districts decided mutually by the District Magistrate.

15. The mining department shall include submission of an annual environmental audit report as one of the conditions in the mining lease agreement. The annual audit for each river bed mining lease shall be carried out and the audit report shall be uploaded on the website of district administration. The audit shall be carried out by an independent team of 3 members nominated by District Collector/Magistrate/Commissioner comprising of Ex-Serviceman, Ex-Government officials of repute, Professor or Person having experience of mining/environment. The guidelines and method of the audit shall reflect adequately the monitor-able parameters and output and reflect

the compliance status with respect to the conditions imposed by the regulatory authorities including conditions of Environmental clearance.

16. The in-situ and ex-situ environmental mitigative measures stipulated as EMP, CER, CSR and other environmental and safety conditions in mines including the welfare of labours shall properly reflect in the audit report.

9.5 Suggestive additional requirements are

i. The requirement at the Mine Lease Site:

a. Small Size Plot (Up to 5 hectares): Android Based Smart Phone.
b. Large Size Plots (More than 5 hectares): CCTV camera, Personal Computer (PC), Internet Connection, Power Back up.
c. Access control of mine lease site.
d. Arrangement for weight or approximation of the weight of mined out mineral on the basis of the volume of the trailer of vehicle used.

ii. Scanning of Transport Permit or Receipt and Uploading on Server:

a. Website: Scanning of receipt on mining site can be done through barcode scanner and computer using the software;

b. Android Application: Scanning on mining site can be done using Android Application using a smartphone. It will require internet availability on SIM card;

c. SMS: Transport Permit or Receipt shall be uploaded on the server even by sending SMS through mobile. Once Transport Permit or Receipt get uploaded, a unique invoice code gets generated with its validity period.

iii. Proposed working of the system:

The State Mining Department should print the Transport Permit or Receipt with security features and issue them to the mining leaseholder through the District Collector. Once these Transport Permits or Receipts are issued, they would be uploaded on the server against that mine lease area. Each receipt should be preferable with pre-fixed quantity, so the total quantity gets determined for the receipts issued. When the

Transport Permit or Receipt barcode gets scanned and invoice is generated, that particular barcode gets used and its validity time is recorded on the server. So all the details of transporting of mined out material can be captured on the server and the Transport Permit or Receipt cannot be reused.

iv. Checking On Route:

The staff deployed for the purpose of checking of vehicles carrying mined mineral should be in a position to check the validity of Transport Permit or Receipt by scanning them using the website, Android Application and SMS.

v. Breakdown of Vehicle:

In case the vehicle break-down, the validity of Transport Permit or Receipt shall be extended by sending SMS by the driver in specific format to report the breakdown of the vehicle. The server will register this information and register the breakdown. The State can also establish a call center, which can register breakdowns of such vehicles and extend the validity period. The subsequent restart of the vehicle also should be similarly reported to the server or call center.

vi. Tracking of Vehicles:

The route of the vehicle from source to destination can be tracked through the system using checkpoints, RFID Tags, and GPS tracking.

vii. Alerts or Report Generation and Action Review:

The system will enable the authorities to develop a periodic report on different parameters like daily lifting report, vehicle log or history, lifting against allocation, and total lifting. The system can be used to generate auto mails or SMS. This will enable the District Collector or District Magistrate to get all the relevant details and shall enable the authority to block the scanning facility of any site found to be indulged in irregularity. Whenever any authority intercepts any vehicle transporting illegal sand, it shall get registered on the server and shall be mandatory for the officer to fill in the report on action taken. Every intercepted vehicle shall be tracked.

The monitoring of mined out mineral, environmental clearance conditions and enforcement of Environment Management Plan will be ensured by the regulatory authority and the State Pollution Control Board or Committee. The monitoring arrangements envisaged above shall be put in place. The monitoring of enforcement of environmental clearance conditions shall be done by the Central Pollution Control Board, Ministry of Environment, Forest and Climate Change and the agency nominated by the Ministry for the purpose.

Some of the State has followed the SSMMG-2016 and has also improvised or customized on the provisions given therein, and are successfully in operation. Salient provision adopted at different stages of sand mining in the state of Tamil Nadu is given as **Annexure VIII.**

9.6 Actions against illegal excavation and transport

Solapur district administration in Maharashtra had adopted a multi-pronged strategy to penalize the persons involved in illegal excavation and transport which resulted in a significant increase in revenue earned by the state. Following rules and procedures as mentioned in these guidelines will add to the costs of PP. Those involved in illegal activities are not required to bear these costs and this will make their supply in the market cheaper (though illegal). This will put the players running their business by following rules and procedures laid down by the government to disadvantage as far as the selling price is considered. Therefore, it is necessary to come down heavily on those involved in illegal excavation/transport, so that there is no incentive for players to abide by the rules.

The following action may be taken to achieve this deterrence against illegal business:

1. The action should be taken under all legal options available simultaneously. Thus, after identifying the case of illegal excavation, storage and/or transport of minor minerals (including sand), fine should be levied as per the land revenue laws/code(s) of the state. In addition, FIR should be lodged in the police station under relevant sections of law including sec 379 IPC. In addition, action under the Motor Vehicle Act, 1989 and relevant rules should initiate to cancel/suspend the driving license of the driver and permit of the vehicle. Further, action should be initiated under provisions in the Income Tax Act, 1961 for unaccounted income and under the Central Goods and Services Act, 2017 for non-payment of GST. (Earlier this was done under the state act pertaining to Value Added Tax/Sales Tax). Habitual offenders should also be taken up under local state laws for externment and/or preventive action. It is clarified that as per law, it is possible to take all actions under various laws

simultaneously for one offence. What is prohibited in law is an action under the same law for the same act more than once.

2. The action should be taken against all persons responsible. Often, there is a tendency to penalize only the drivers of the vehicles. The mafia of illegal mining and transport is much bigger and drivers are only one part of the system. It is necessary to identify all those involved in the offence. It is usually not possible to reach the place of excavation without creating a motorable pathway up to the same through land which may be private land. Such role of such landowners needs to be looked into for each offence and proceeded against simultaneously. Further, the role of vehicle owners needs to be probed. Role of the person who allowed his land to be used for illegal excavation and storage should also be examined. Lastly, the person who purchases such sand should also be probed. The legal proceedings stated above needs to be initiated against all of these together. An attempt should be made to fix the financial responsibility in joint and several ways so that recovery is easier.

3. There may be discretion available in law about the extent of the penalty to be levied. If such discretion is very wide, then it is advisable that guidelines may be laid down to reduce such discretion in law for levying penalties. For example, in Maharashtra, Land Revenue Code, fine of any amount of penalty up to thrice the value of the sand can be levied. Solapur district administration had instructed Tahsildars and SDMs not to use discretion and levy the fine of three times the value. Availability of discretion makes junior level functionaries susceptible to pressures and it may also lead to corrupt practices.

4. It is emphasized that actions, as stated above, are most important to ensure that the IT-based system works. If these exemplary actions are not taken against everyone, it shall create a strong disincentive to those

involved in legal excavation and transportation. For IT-based (or any other) legal system to work, it is necessary to ensure that illegal system stops working altogether.

Annexure-I

Details of Sand/M-Sand Sources

a) Rivers:

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size(Ha)

c) Patta Lands/Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum

Note: For inclusion of M-Sand Plant/Patta Land in DSR the plant/landowners need to submit the request to the Mining Department with complete details. Inclusion in DSR does not give them the right to operate the M-Sand Plant/Sand Mining lease.

Annexure-II

List of Potential Mining Leases (existing & proposed)

Rivers

River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing / Proposed

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing & proposed)

Name of Reservoir /Dams	Maintain /Controlled by State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)	Quantity MT / Year	Existing /Proposed

M-Sand Plants :(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum	Existing/Proposed

Annexure-III

Cluster & Contiguous Cluster details

Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area of Cluster (Ha)	Total Mineral Excavation (Ton)

Annexure-IV

Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tippers /day of lease	Number of tippers /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location

Cluster No	Transportation Route No	Number of tippers /day of cluster	Number of tippers /day of all the clusters on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location

Annexure-V

Final List of Potential Mining Leases (existing & proposed)

Rivers

River Details	Lease Details	Area (in Ha)	Distance (in KM) from PA/BR/WC/	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in (MT/Yr) (Mine depth max as 3 m)	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing /Proposed

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed

De-Siltation Location: (Lakes/Ponds/Dams etc.) (Existing & proposed)

Name of Reservoir/ Dams	Maintain/ Controlled by State Govt./PSU etc.	Location	Distt.	Tehsil	Village	Size(Ha)	Quantity MT/Year	Existing/ Proposed

M-Sand Plants :(existing & proposed)

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity MT/Annum	Existing/Proposed

Annexure-VI

Final List of Cluster & Contiguous Cluster

Clusters:

River Name	Cluster No.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No	Number of leases in the cluster	Location (Riverbed /Patta Land)	Distance between clusters	Village	Area of Cluster (in Ha)	Total Mineral Excavation (Ton)

Annexure-VII

Final Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No	Number of tippers /day of lease	Number of tippers /day of all the lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location

Cluster No	Transportation Route No	Number of tippers /day of cluster	Number of tippers /day of all the clusters on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The road will be Constructed by Govt/Lease Owner	Route Map & Location

Annexure VIII

Salient provision for sand mining in the state of Tamil Nadu

STEPS TO BE FOLLOWED BEFORE EXECUTION:

- The state as a policy should endeavor to have single authority/agency responsible for all river sand mining in the state with an objective to ease the gap in demand and supply and accordingly, take necessary measures including planning, monitoring of mined material and its transport, and to curb illegal mining and sale of materials.

- The prospective site for sand quarry may be identified based on the availability of adequate sand deposits along the river beds, which hinders the free flow of water and results in flooding during monsoon seasons. Emphasis may be given to such quarry sites which is more viable for replenishment.

- A detailed study may be conducted by engaging expert from reputed Institutions to identify prospective sand reaches, assessment of the impact of sand quarrying on the Ground Water Table and water availability, conduct bore log details and study the social and environmental aspects. The generic requirement for replenishment study is to be followed.

- Once the site is identified for prospective sand quarry site based on the detailed replenishment study, the concerned department shall submit the proposal with the geo-tagged boundary of the proposed mining Precise Area Proposal to the District Collector for approval.

- A joint inspection may be carried out by the RDO/Sub-Collector, Assistant/Deputy Director,

- Executive Engineer, TWAD Board and the PWD officials to consider the various factors before giving consent to the proposal.

- The RDO concerned along with Revenue officials may verify the revenue records of the proposed sand quarrying area and give the NOC.

- The AD/DD Mines may verify the presence of permanent structures such as tower line, bridge, monuments if any, in the vicinity of the proposed mining site as per Tamil Nadu Minor Mineral Concession Rules,1959 (As per Rule 36 " there shall be no quarrying of sand in any river bed or adjoining area or any other area which is located within 500 meter radial distance from the location of any bridge, water supply system, infiltration well or pumping installation of any of the local bodies or Central or State Government Department or the Tamil Nadu Water Supply and Drainage Board head works or any area identified for locating water supply schemes by any of the above mentioned Government Department or other bodies" and " The distance of 50 meter shall be measured in the case of railway, reservoir or canal horizontally from the outer toe of the bank or the outer edge of the cutting, as the case may be …. "). Also, the availability of minerals may be cross verified with the available DSR.

- The TWAD officials may verify the drinking water schemes located nearby the proposed quarry site and the minimum distance required as per statutory norms.

- Based on the feasibility report of the joint inspection by the Revenue, Tamil Nadu Water Supply and Drainage Board and Mining officials/experts, the District Collector may give consent for the Precise Area proposal.

- After getting Precise Area approval, a detailed Mining Plan and sketch shall be prepared by the Executive Engineer, PWD using the services of a NABET accredited consultant who holds the pivotal role in the preparation of mining plan. Due responsibility will be expected on the concerned consultant in the mining plan preparation taking care of adhering to all mining rules, existing as on date. The mining plan shall contain the details of quantity to be excavated, the period of mining, method of excavation, deployment of required machinery, Environment Management Plan (EMP), proposed number of laborers to be deployed and Conceptual Mining Plan, as per Rule 41 of TNMMC Rules 1959. It is also the duty of the consultant to give the safe distance of 50 m or twice the bank height from the toe of the riverbank, whichever is higher and fixing the Geo coordinates for boundaries using DGPS instruments.

- The concerned Executive Engineer, PWD shall submit the Mining Plan prepared by the NABET accredited consultant to the concerned Assistant/Deputy Director, Department of Geology and Mines for approval, as per Rule 42 of TNMMC 1959. After scrutiny, the Assistant/Deputy Director, Department of Geology will present the Mining plan before the State Level Environment Impact Assessment Authority (SEIAA) for granting Environmental Clearance.

- The Executive Engineer, PWD shall prepare Form I and Pre-feasibility report with the help of the consultant and submit to SEIAA for an area less than 50 Ha. or to the Ministry of Environment and Forest and Climate Change (MoEF&CC) for the area more than 50 Ha.

- The State Expert Appraisal Committee (SEAC) under SEIAA, consisting of experts from renowned fields such as Mines, Environment, Sociology etc. shall conduct a site inspection of the proposed sand quarry site and after intense scrutiny, may recommend the proposal to SEIAA for approval.

- SEIAA shall grant Environmental Clearance for the sand quarry proposal after analyzing all the statutory provisions and based on the recommendation of the SEAC.

- The Environmental Clearance shall be informed to the public with basic details through advertisement in at least two widely circulated local newspapers with at least one in the vernacular language of the locality, within 7 days of the receipt of the clearance.

- On receipt of the Environmental Clearance, the Executive Engineer, PWD shall apply for Consent to Establish (CTE), from the Tamil Nadu Pollution Control Board as per the Air and Water Act, to enter upon the sand quarry site and commence the preliminary works such as construction of temporary sheds, bio-toilets, formation of biodegradable road using sugar cane leaves etc., drilling of bore wells etc. as per the statutory requirements. After all the preliminary works are completed, the Executive Engineer, PWD shall apply for the Consent to Operate (CTO) from the Tamil Nadu Pollution Control Board. Earmarking boundary of the identified land site through the concrete posts along with red flags need to be established.

- On receipt of the CTO, the Executive Engineer, PWD shall request the consent of the District Collector to commence the quarries. The District Collector shall request the Taluk Level Task Force comprising of Tahsildar, Inspector of Police, Officials from the Departments of Geology and Mining, Transport and Forest, Assistant Engineer, PWD and the Village Administrative Officer concerned, to verify the compliance of all preconditions mentioned in the Environmental Clearance and grant necessary permission to start the functioning of new sand quarries.

II. STEPS TO BE FOLLOWED DURING EXECUTION:

- Before the commencement of mining operations, the depth of sand quarrying needs to be measured accurately using Advanced technology and new gadgets like Total Stations, Global Positioning System (GPS) instruments etc. The Total Station and GPS instruments also need to be calibrated before measurement. Both the traditional and modern techniques may be infused in the right blend to get an accurate measure of the depth. A clear contour map (0.25m interval) of the levels within 2Km (one Km U/s and one Km D/s) needs to be prepared and submitted to both the Project Director, Sand Quarrying Operations and all the Monitoring Committee members. The depth of sand quarrying shall be restricted to 1 m from the theoretical/design bed level.

- The mining area must be demarcated at a minimum distance of at least 50 m away from the river embankment on either side. The boundaries of the quarries may be fixed with reference to the existing survey marks from the survey fields adjacent to the river. Sand quarrying lease area shall be demarcated on the ground with pucca stone or concrete pillars to show the present natural bed level and the depth of mining allowed.

- Modern techniques such as drone survey may be adopted to assess the depth and quantity of the mined area. Boundary pillars shall be erected at an interval of 50 m each on all four sides of the sand quarry site with red flags on every pillar and also in site pillars. The levels of shoal height, river bed height and depth to be excavated up to one meter downwards shall be marked in the pillars to avoid any deviation from the approved depth of excavation.

- It shall be ensured that no sand quarrying of any type is undertaken with 50m of the distance mentioned in the proposal (whichever is higher)

from both the banks of the river to control and avoid erosion of river banks.

- Temporary access roads or Katcha roads shall be formed between the banks of the river and the mining area with locally available bio-degradable materials such as sugarcane waste (bagasse), hay, etc.

- Proper entry and exit point for the movement of loading vehicles in and out of the sand quarry site shall be carefully located taking into consideration the habitations/settlements in the area.

- To monitor the groundwater level during sand quarrying operations, a network of existing wells may be established around the sand quarrying area and new piezometers must be installed at all sand quarry sites. Monitoring of Ground Water Quality in the vicinity (one Km radius from the sand quarrying site) shall be carried out once in two months.

- Periodic Monitoring (at least four times in a year – pre-monsoon, Monsoon, Post monsoon and winter) once in each season shall be carried out by PWD and the data thus collected may be sent regularly to SEIAA/TNPCB. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out, which includes immediate stopping of mining.

- Similar to the Baseline studies for data on water, soil and air etc., that is being done before the sand quarrying operations, the air and water quality may be checked periodically by Tamil Nadu Pollution Control Board to ensure that no pollution is caused due to Sand Quarrying Operations. 10. Safety gadgets such as earplugs, goggles, respiratory

devices, luminescent vests etc. may be provided to the workers at the sand quarry site.

- First aid kit with all essentials shall be kept ready at all quarry/depot site, in case of any emergency.

- To prevent air pollution due to the dust during sand quarrying operations and safeguard the persons in the sand quarry and depot site, constant water sprinkling on the pathways and dust prone areas may be done. The sand loaded vehicles are to be covered with a tarpaulin before moving out of the quarries/depots.

- Suitable depots shall be located in the vicinity of the sand quarry site to facilitate the sale of sand. While selecting the site for depots, it must be ensured that the site is within 25 km from the sand quarry site and has an area of around 10-15 Acres with parking facilities and proper entry and exit for smooth movement of the vehicles. The depot site shall preferably be a Government poramboke land, foreshore area of tank bund etc., near an NH/SH/MDR/ODR. In the absence of any Government land in the vicinity, private Patta land may be leased out and rent fixed as per the approved Government rates applicable therein.

- Permission must be obtained from the Electricity Board for power supply to operate the CCTV cameras at sand quarry site and depots.

- Minimum of two CCTV cameras, one each at the entry and exit point and one PTZ camera may be installed at all quarries/depots to monitor illegality if any taking place in the sand quarry/depot.

- To ensure uninterrupted seamless live streaming of videos from the surveillance cameras, a high-speed Internet Lease Line connection may

be made available at all quarries/depots. Arrangements may also be made for online monitoring of the sand quarrying, Centre for Assessing Real-Time Sand Mining (CARS) that could be located at the office of the Project Director in Chennai.

- The live streaming of the videos shall be monitored at a Centralised control room and the data shall be stored in the Server for future references. A robust Customer Care may also be functional 24 x 7 at the Control Room, to redress the grievance of the public.

- Drop gates shall be installed at the entry and exit points of all quarries/depots.

- Display boards shall be erected in local vernacular language at sand quarry/depot site, in the nearest village by which sand transportation will be carried and at the entrance of the village road from the main road.

- The concerned authority of PWD shall call for e-tender to select the contractors for loading/raising of sand at the quarry site, transporting contractors to transport sand from the quarry site to depots and loading/maintenance contractors at depots.

- Sand shall be loaded in the quarries in the PWD tendered GPS fitted vehicles and online transmit permit shall be issued by the competent authorities in PWD to the transporting vehicles to transport sand from the quarry to depots.

- On the arrival of the sand shunting vehicles from quarry to the depot, an online authentication shall be done to confirm the arrival of the

appropriate quantity of sand mentioned in the transport permit into the depot.

- The loading of sand from the depots shall be carried out by booking through the online portal "www.tnsand.in" as done presently. Online transit passes will also be issued to the loaded vehicles which could be verified by using an Android app "TNsand Investigator".

- During operation of the quarries, the PWD officers shall ensure that at no point in time, the depth of quarry exceeds 1 m depth from the river bed level and quarrying is done in a uniform manner over the entire mining area to avoid overexploitation and formation of pits at fixed places.

- Proper registers may be maintained at the entry and exit points of the sand quarry/depot sites and a Loading Register may be made available during inspection. An Inspection Register and a Complaint Register may be made available at the sand quarry/depot site.

- The functioning time of quarries/depots shall be from 7.00 AM to 6.00 PM. No sand transporting vehicles to be parked inside the quarry/depot site during night time.

- A copy of the approved mining plan may be kept at the quarry site for ready reference.

- Photographs and sketch showing the pit dimensions, depth etc. may be recorded every week and maintained in the sand quarry. The Executive Engineer, PWD may inspect each sand quarry on a weekly basis and ensure that mining activities are taking place within the approved boundaries/depth.

- The sand quarrying activity shall be stopped if the entire quantity is quarried even before the expiry of the sand quarry lease period and the same shall be mentioned by the PWD authorities.

- The Taluk Level Taskforce shall inspect the quarries every fortnight, as per G.O. (Ms) No. 135 of Industries Department, dated 13.11.2009 and record the status of the compliance in the registers maintained at the sand quarry site.

- The Taluk Level Task Force has to submit its inspection report to the District Level Task Force chaired by the District Collector. The District Level Task Force has to be convened every month to discuss cases of illegal quarrying. An Environmentalist from reputed State / Central Institution and a legal expert on environmental matters may be part of the District Level Task Force. The District Level Task Force shall also dispose of the petitions on illegal sand quarrying after due enquiry and scrutiny, and pass orders within a period of two months from the date of receipt of the complaint. If any person is aggrieved with the orders passed by the District Level Task Force, an appeal may be preferred before the Appellate Forum.

- The District Collector shall take necessary steps to strengthen the existing District and Taluk Level Committees and act on the complaints received, if any, on illegal sand quarrying and take strict remedial measures to rectify the same in a time-bound manner. The District Level Task Force may send its monthly report to the Appellate Forum formed as per G.O. (Ms) No. 27 of Industries Dept. dated 17.02.2015.

- The Appellate Forum shall hear the appeals filed against the orders passed by the District Level Task Force. The Appellate Forum comprises

of the Secretaries to Government from Industries Department, Public Works Department, Revenue Department, Environment and Forests Department, Commissioner of Geology and Mining and an Expert from a reputed Government Institution.

- The Appellate Forum may convene once in 2 months to deliberate on the reports from the District Level Task Force and shall dispose of the appeals made by the petitioners aggrieved with the orders passed by the District Level Task Force.

- Periodical Capacity building and sensitization of PWD officials on the environmental and legal aspects of sand quarrying may be made mandatory. Continuous training and awareness programs shall be scheduled and conducted by IIT/Anna University for the PWD staff to keep themselves aware of the best practices in this field. It may be ensured that the enforcement officials from the Departments of Revenue, Police, Geology and Mining and Transport in the districts where quarries are situated are given adequate training and capacity building on their duties and responsibilities with respect to inspection of sand quarries and sand transporting vehicles at specified time intervals.

- No blasting shall be carried out any point in time.

- It is the obligation of the Public Works Department to run the quarry in an environmentally friendly and ecologically sustainable manner.

- The Hon'ble High Court-appointed Monitoring Committee shall inspect the sand quarries periodically and submit a report to the Hon'ble High Court.

- The PWD should explore/take necessary steps to introduce Mining Surveillance System (MSS) in line with MSS evolved by the Indian Bureau of Mines and Bhaskaracharya Institute for Space Applications and Geo-informatics (BISAG).

III. STEPS TO BE FOLLOWED AFTER EXECUTION:

- A Judicious mine closure plan may be formulated once the quarry is closed after exhaustion of the quantity of sand.

- Reclamation works may be factored into the contract agreement and strict monitoring by the PWD officials may be initiated to scrupulously follow up the mine closure plan.

- It may be ensured that the total quantity of sand permitted in the EC shall not be exceeded in any case.

- After the exhaustion of the quantity of sand, the sheds constructed at the quarry site may be removed. All the roads and pathways may be levelled so that there is no obstruction for the normal flow in the river.

- All the records/registers may be carefully maintained by the PWD for future reference.

\\TRUE COPY//

ANNEXURE A-5

REPORT OF THE JOINT COMMITTEE IN O.A No 194 OF 2020 AS PER ORDER DATED 07.10.2020 OF HON'BLE NATIONAL GREEN TRIBUNAL (SOUTHERN ZONE), CHENNAI

1.0 PREAMBLE

In the Original Application No. 194 of 2020 (SZ), filed by Shri. Sarvabhoum Bagali Vs State of Karnataka, the Hon'ble National Green Tribunal (NGT), Chennai issued an Order on 07.10.2020 with the following directions:

" *11. In order to ascertain the impact of such conditions on Environment, we feel it appropriate to appoint a Joint Committee comprising of 1) a Senior Scientist from Regional Office, Ministry of Environment, Forests and Climate Change (MoEF&CC), Regional office, Bangalore, 2) a Senior officer from State Environment Impact Assessment Authority (SEIAA), State of Karnataka 3) Senior officer from Central Pollution Control Board and 4) Senior Officer from Director of Mining and Geology of the respective Districts namely, Gadag, Raichur and Kalburgi of State of to inspect the areas in question and submit a factual and consider the nature of conditions imposed, its impact on sand mining whether they are in violation of the Sustainable Sand Mining Policy issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC), Whether there are any violations committed by the persons to whom the Environmental Clearances were granted regarding excess mining than the quantity permitted and the depth of mining that is being done and what is the impact of environment on account of use of semi mechanised machineries for the purpose of sand mining which is not permissible as per the Sustainable Sand Mining Policy of 2020 as well and if any violation is found to assess the environmental compensation and also further action taken to rectify the deficiency if any, in the conditions imposed and submit a factual as well as action taken report.*

12. State Environment Impact Assessment Authority Bangalore shall be the nodal agency for coordination and also for co-ordination and for providing all necessary logistics for purpose".

2.0 COMPOSITION OF THE JOINT COMMITTEE

Based on the directions of the Hon'ble NGT, State Environment Impact Assessment Authority, Karnataka being the Nodal Institution sought nominations from all the concerned agencies and pursuant to receipt of nominations, a Joint Committee with the following Members was constituted:

1	A Senior officer from Regional Office, Ministry of Environment, Forest and Climate Change (MoEF&CC), Bangalore	**A. Sri.E.Thirunanavukkarasu, (For Raichur)** Scientist-"E"/ Additional Director **B. Dr. Murali Krishna, (For Gadag)** Scientist-"D"/ Joint Director, **C. Dr. S. Prabhu For Kalburgi)** Scientist-"C"/ Deputy Director
2	A Senior officer from Central Pollution Control Board (CPCB)	**Smt. Anjana Kumari V** Scientist "D", CPCB, Regional Directorate, Bangalore
3	Senior Officer from Department of Mining and Geology, Gadag District	**Sri.Rajesh D.S** Senior Geologist, Gadag
4	Senior Officer from Department of Mining and Geology, Raichur District	**Sri. Vishwanath. M** Senior Geologist, Raichur
5	Senior Officer from Department of Mining and Geology, Kalburgi District	**Sri.Mohan S** **Deputy Director (In charge),** DMG, Kalburgi
6	A Senior officer from State Environment Impact Assessment Authority (SEIAA), Karnataka	**Sri. Kiran Kumar. B.S** Scientific Officer Grade-1, Department of Forest, Environment and Ecology,

The Joint Committee comprising of following officials inspected a total of 38 project sites in the districts of Raichur, Gadag and Kalburgi during the months of November and December 2020 to ascertain the factual status of compliance to Environmental Clearance (EC) conditions. During the inspections, the following officials from the office of DMG also accompanied the Joint Committee:

1. Sri. Pushpalatha, Deputy Director, DMG
2. Sri. Gopi Krishna, Geologist, Raichur
3. Sri. Syed Fazil, Geologist, Raichur
4. Sri. Manjunath. Geologist, Raichur
5. Sri.Umesh, Geologist, Gadag

6. Sri. Santhosh. Geologist, Gadag
7. Sri. Chauhan. AEE, Kalaburgi, DMG.
8. Sri.Riyaz,Geologist, Kalaburgi, DMG.

3.0 PROCEDURE FOR GRANT OF SAND MINING LEASES IN THE STATE OF KARNATAKA

During the inspection the Joint Committee had discussions with concerned officials of Department of Mines & Geology and obtained the information on procedure followed in issuing of Grant of Lease for sand blocks in river bed, nala & patta lands. The brief note on procedure followed is given below:

3.1 PROCEDURE FOLLOWED IN GRANTING LEASE

As per the Sustainable Sand Mining Policy-2016 and 31(R) of Karnataka Minor Mineral Concession Rules -1994 (KMMCR) of amendment of 2016, Sand blocks will be inspected and identified with co-ordinates in river bed & Nalas for the puropose of Tender-Cum-Action or reservation for Government works. With the assistance of Departments of Revenue, PWD, Forests, and DMG the approximate quarriable sand available in each identified block is estimated by restricting quarrying depth to 1 to 3 meter or water level whichever is less.

After recommendations of the Taluk Committee, District Committee notifies in the official Gazette for grant of quarrying lease through auction for sand quarrying or extraction by Government Departments.

Tender-cum-auction is done through online. Highest price offer is declared as the successful bidder; the successful bidder obtains Quarry Plan, Environmental Clearance, as per Chapter-II-A of KMMCR-1994 of amendment of 2016. Sand quarrying permission is issued up to a period for five years. The sand leases are sanctioned in patta land as per the State Government notification after obtaining quarry plan & Environmental Clearance for the period of five years.

The District Level Sand Monitoring Committee ensures stipulation of following conditions as per the New Sand Policy, 2016, KMMCR, 1994 and Amendment,2016 and as per the Sustainable Mining Management Guidelines,2016:

a) No sand quarrying shall be undertaken without a quarrying plan and Environmental Clearance.

b) Lessee shall make Stockyard, Office, CC Camera, Weigh Bridge near to the sand block.

c) Quarrying shall be done in accordance with MOEF Guidelines.

d) Instream, mining sand extraction and loading to vehicles directly from river is prohibited. So, lessee should store mining sand in stockyard.

e) Lessee should mine as per the mine plan without damaging safety zone and riverbed.

f) Sand quarrying activity shall be in accordance with terms and conditions of the EC

g) The sand has to be mined in the sand lease blocks and to be stored in stockyard.

h) No Sand quarrying shall be allowed within a radius of 500 meters from water supply.

i) Permits shall be issued to vehicles having GPS.

j) The vehicles having non-communication mode, shall not be issued with permit and shall not be allowed to load sand.

k) Permits issued for transportation of Sand shall be obtain sign in the Check Post.

l) Mechanized boats and dredgers in river sand quarrying are prohibited.

m) Usage of backhoe equipment like JCB is allowed as per Chapter IV – B, 31-R of Karnataka Minor Mineral Concession Rules -1994 & its amendments.

n) Sand stored in stockyard, shall be disposed by issuing Computerised Mineral Dispatch Permits (CMDR) to the transporters.

4.0. DELIBERATIONS OF THE JOINT COMMITTEE

Hon'ble National Green Tribunal in its order dated 07.10.2020 directed the Joint Committee to look into the following:

i. *to inspect the areas in question and consider the nature of conditions imposed, its impact on sand mining whether they are in violation of the Sustainable Sand Mining Policy issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC)*

ii. *whether there are any violations committed by the persons to whom the Environmental Clearances were granted regarding excess mining than the quantity permitted and the depth of mining that is being done*

iii. *what is the impact of environment on account of use of semi mechanised machineries for the purpose of sand mining which is not permissible as per the Sustainable Sand Mining Policy issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC) in the year 2016 and Sustainable Sand Mining Policy of 2020 as well and*

iv. if any violation is found to assess the environmental compensation and also further action taken to rectify the deficiency if any, in the conditions imposed

In order to deliberate on the above given Terms of References (ToR), the Joint Committee inspected 36 mines in Gadag & one each in Raichur & Gulbarga Districts. The detailed report of individual blocks of Gadag, Raichur & Kulburgi is given as **Annexure I, II and III** respectively. The Joint Committee had examined various documents like mine lease, Environmental Clearance and the Compliance status with the prevailing regulations and guidelines etc., Based on the above, each ToR has been deliberated in detail and following are the observations/comments:

4.1. *inspect the areas in question and consider the nature of conditions imposed, its impact on sand mining whether they are in violation of the Sustainable Sand Mining Policy issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC)*

The Joint Committee noted that conditions stipulated in the Environmental clearance are relating to installation of dust control measures, implementation of water conservations measures, advertisement on grant of EC, improvement of transport route, constitution of Environmental Management Cell, Submission of half yearly compliance report to Regional Office of the MoEFCC etc,.

The Joint Committee after perusal of EC's issued to 38 sand mines noted that with regard to area that is allocated for sand mining leases are ranging from 2.20 acres (lowest) to 12.0 acres (highest).

During the visit, mine owners expressed technical difficulties / non-viabilities in installing the dust control measures and implementation of water conservations measures. It is noted that EC stipulated a condition as "Mineral *handling area shall be provided with the adequate number of high efficiency dust extraction system. Loading and unloading areas including the transfer points should also have efficient dust control arrangement. These should be properly maintained and operated."*

The Committee opined that the dust extraction could be installed and effectively operated in a closed area, whereas here both the mining as well as the sand storage area are done in an open area and hence it would be technically not feasible. Further, the dust pollution is naturally prevented due to the moisture content and the density of the sand. Moreover, the dust settles down within few meters of the activity (within the site itself) due to density of

sand particle. **In view of the above, the Joint Committee opines that this condition is not so relevant for sand mining operations. Instead of dust extraction, water sprinkling at stock yard may be insisted in the Environmental clearance.**

As regards, water conservation, it is noted that EC stipulates a condition as " *The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board within 3 months and report be submitted to the Authority*." In general water conservation involves minimisation of water usage, recycling and rainwater harvesting etc,. Whereas, in this instant case there is neither water usage nor waste water generation in the sand mining. Since all the mining sites are located either in riverbed or nallas, no separate rainwater harvesting measures are required. **In view of the above, the committee opined that this condition is not so relevant for sand mining.**

As regards, CSR, the mine owners have informed that they pay District Mineral Fund (DMF) which is used in the CSR activities in the vicinity of the project and also carry out certain activities viz distribution of tree saplings, issue of books for the school students etc, hence, stipulation of separate conditions on CSR amounts to duplication. **The Joint Committee noted that for each metric ton of sand an amount of Rs. 5/- is collected as CSR Fee and Rs. 11/- is collected as EMF during the generation of online permits.**

As regards non- constitution of Environmental Management Cell (EMC), the Joint Committee felt that it may not be viable for such mines to have a separate Environment Management cell in view of the number of workers engaged and their educational quality, nature of activity etc, and hence the mine owners may utilise the service of accredited environmental consultant/laboratory for the environmental management instead of having their own EMC.

In view of the above, the Committee opined that conditions on dust extraction system, water conservation, Environmental Management Cell, CSR need to be revisited. The MoEFCC / SEIAA need to consider suitable modification of above conditions in the Environmental Clearance for such sand mining projects in future.

With regard to compliance with Sustainable Sand Mining Management Guidelines, 2016, it is noted that the Sand mining is not allowed in streams and no sand areas are identified for sand mining activity in a pond/tank. Mechanized boats and dredgers in river sand mining are prohibited, however usage of backhoe equipment like JCB is allowed as per Chapter IV–B, 31-R of KMMCR, 1994 & its amendment-2016. Further, the Sustainable mining practices under Sustainable Sand Mining Management Guidelines, 2016, provides the following:

"Depending upon the location, thickness of sand, deposition, agricultural land/riverbed, the method of mining may be manual, semi mechanized or mechanized". In many sand leases in Yamuna River semi mechanized method is allowed by MoEFCC. Copy of an EC is enclosed at **Annexure-IV.**

The above reveal that the conditions of Environmental Clearance are in line with the Sustainable Sand Mining Policy.

4.2. *whether there are any violations committed by the persons to whom the Environmental Clearances were granted regarding excess mining than the quantity permitted and the depth of mining that is being done*

Depth of Mining: According to the DMG, the mining sites are periodically inspected, and the encroachment and depth of mining are monitored. Since all the storage and movement of mined materials are monitored through geo-fencing, computerised e-permit, transport through GPS fitted vehicle, any excess mining either through encroachment of outside mine lease area or beyond the depth permitted, will be traced and fine are imposed which is about double the cost of the mined material. Moreover, the sand availability also restricts the depth of mines. In view of the above, in general, the mines are not mining beyond the permitted depth.

The Joint Committee after perusal of EC's issued to 38 sand mines noted that with regard to depth of mining activity that is being allowed from case to case varies from depth ranging from 0.145 metres to 3 metres.

Further, the Joint Committee also noted during the inspections that no mine is undertaking blasting/ drilling activities, no mining is done in any streams, no mining is undertaken in safety zone, adequate buffer of 7.5 metres is being left and no mining is being done outside the lease area.

Excess Mining: As per the information provided by DMG, Gadag, the EC was granted to the lessee-Srinahalli Block-1 on 13th June 2017, more sand deposited in lease area during 2019-20. Therefore lessee has requested for enhancing the annual permitted quantity for 69000 MT/Annum fro 21825 MT approved and also submitted the modified Quarry Plan to Department of Mines & Geology. After field observation, Senior Geologist Department of Mines & Geology Gadag has verified and approved the modified Quarry Plan for 69000 MT/Annum Further lessee has submitted the approved modified Quarry Plan to SEIAA Karnataka. The lessee extracted 13,374.56 MT excess sand in 2019-20 anticipating environmental clearance from SEIAA but couldn't get the clearance. Therefore,

compensation of Rs 81,59,089/-(at the rate of Rs. 609/MT) has been collected from the lease holder.

4.3. *what is the impact of environment on account of use of semi mechanised machineries for the purpose of sand mining which is not permissible as per the Sustainable Sand Mining Policy issued by the Ministry of Environment, Forests and Climate Change (MoEF & CC) in the year 2016 and Sustainable Sand Mining Policy of 2020 as well.*

Environmental Impacts due to mining: The Joint Committee noted that the likely impacts from such mining activity may include noise from the operation of machineries like JCB, dust from mining, loading/ unloading, disturbance to the flora/ fauna if present at/close to the mine site, change of hydrology and related issues if the depth of mining is more etc. and among all the inspected mines, it is noted that the maximum depth being allowed is 3 metres.

Dust pollution: The Committee noted that the moisture content in the sand naturally prevents generation of dust pollution. Moreover, the dust settles down within the site itself due to density of sand particle. The ambient air quality monitoring carried out by these mine sites revealed that the dust particles (particulate matter) are within the permissible limit. Water sprinkling is carried out on haul roads to control the dust generated from the plying of vehicles. Joint Committee opines that the transport route from mining site to the stock yard and to main road shall be improved and water sprinkling shall be carried out to control the dust generated from the plying of vehicles. **The Committee noted that no wind barriers provided at many stockyards and hence the proper wind barriers shall be provided on all sides at stock yards to prevent dust pollution.**

Noise Pollution: It is learnt from the local that only manual mining is being carried out in the above mines and as per the noise levels monitoring reports the noise level varies are within the permissible limit.

Eco- Sensitive Area: The Joint Committee noted that no Eco- Sensitive Area's exist within the vicinity of leased sand mining areas.

Water Pollution: The Joint Committee noted that since there is no wastewater generation from the sand mining activities, no water pollution is occurring.

The Joint Committee opines that impact due to the usage of semi mechanised machineries in mining can be minimised if the above measures are followed and the depth of mining is limited to less than three meters.

The usage of semi mechanized, or mechanized mining may be permitted as per the Sustainable Sand Mining Management Guidelines, 2016, only in case of the blocks where the depth of sand deposition is more than three meters and depth of mining can be permitted more than one meter. Mining up to one-meter depth should be by manual only.

4.4. *if any violation is found to assess the environmental compensation and also further action taken to rectify the deficiency if any, in the conditions imposed*

According to DMG, Gadag District, out of 36 mines in the District, three mines **(Annexure-V)** have not commenced mining activity and 12 mines **(Annexure-VI)** have carried out mining activity in an average of 15 days only from the lease granted date due to local issues, sand quality and the lease area was continuously submerged. Lease holders produced less than 1000 MT sand from the granted area.

The joint Committee noted that there are certain non- compliances of EC conditions in all other mines (21 in Gadag and one each in Kalburgi and Raichur) especially relating to installation of dust control measures, implementation of water conservations measures, advertisement on grant of EC in newspapers, rain water harvesting measures, improvement of transport route, constitution of Environmental Management Cell, submission of half yearly compliance report to Regional Office of the MoEFCC etc,. by almost all the leased sand miners. **The Joint Committee is of the view that imposing such non-relevant conditions in the Environmental Clearance has led to such non-compliances and hence MoEFCC / SEIAA may relook into such conditions while according Environmental Clearance as some of the conditions are practically not-feasible for implementation by small sand mining leases.**

However, as regards the non- compliances of EC, mine owners have been directed to take action to comply with the conditions and submit a Action taken report / Action plan with time schedule. Few Sand mine lease holders have submitted compliance report along with latest ambient air quality monitoring report, noise level report etc,. and the monitoring

reports reveal that all the parameters are within the limit. However, there are few short comings such as improvement & maintenance of approach road, wearing of personnel protective equipment by workers, advertisement about grant of EC etc.

In view of the least importance given by the lease owners on Environmental Clearance compliances and to bring attention and importance on Environmental Clearance, the committee felt that a lump sum amount, say Rs Two to Three lakhs may be imposed on all 23 mines as Environmental compensation.

4.5.1. Details of Penalties imposed /collected by DMG for illegal Sand Mining Activities / violations.

As per the information provided by the DMG, the Joint Committee noted that amongst the inspected 38 sand mines, fines/ penalties have been imposed for certain mines as detailed below:

Table 1: Details of Penalties imposed /collected by DMG for illegal Sand Mining Activities / violations.

Sl.No.	Name of the mine lease	Violation	Penalty collected, Rs
Gadag District			
1	Gangapur Sand Mining-Block 1-.	The lessee has constructed temporary road in the river and excavation by using Hitachi which is against the EC conditions. In stream sand mining which is against the EC conditions	5,00,000 1,00,000
2	Gangapura Sand Mining-Block 2	The lessee has constructed temporary road in the river and excavation by using Hitachi which is against the EC conditions.	5,02,880
3	Hesaruru Sand Mining-Block 4		5,02,200
4	Shingatalur Sand	-do-	5,00,000 from

	Mining- Block 1-		each lessee
5	Shingtaloor Sand Mining Block 2		
6	Shingataloor Sand Mining- Block 3		
7	Shiranahalli Sand Mining- Block 1 -		
9	Hesarur Sand Mining- Block 2		
10	Srinahalli Block-1	Lessee carried out mining anticipating grant of Environmental clearance.	81,59,089
Kaburgi District			
11	Ghattaraga- Block 15	Lessee transported sand without permit	85,04,039 (Lessee sought a waiver from Court for remaining balance of Rs. 83,51,700/-)
Raichur District			
12	Joladahadegi- Block 2	The lessee undertaken 127 trips of sand mine without permit For using heavy machinery (Hitachi)	19,01,952 2,00,000

4.4.2 Environmental Compensation*:* It can be seen from the above tables that there is excess sand mining by one of mine lease- Srinahalli Block-1. The EC was granted to the lessee-Srinahalli Block-1 on 13th June 2017, more sand deposited in lease area during 2019-

20. Therefore lessee has requested for enhancing the annual permitted quantity for 69000 MT/Annum fro 21825 MT approved and also submitted the modified Quarry Plan to Department of Mines & Geology. After field observation, Senior Geologist Department of Mines & Geology Gadag has verified and approved the modified Quarry Plan for 69000 MT/Annum Further lessee has submitted the approved modified Quarry Plan to SEIAA Karnataka. The lessee extracted 13,374.56 MT excess sand in 2019-20 anticipating environmental clearance from SEIAA but couldn't get the clearance. Therefore, compensation of Rs 81,59,089/-(at the rate of Rs. 609/MT) has been collected from the lease holder.

The Joint Committee has calculated environmental compensation based on the Judgement of Hon'ble NGT(PB) dated 26.02.2021 in OA 360 of 2015.

Table 3: Details of the Environmental compensation

Sl.N	No Name of the lessee	Excess mined Quantity, MT	Environmental compensation calculated based on the above, Rs	Penalty collected, Rs.
1	Srinahalli Block-1	13397.52	86,50,757	81,59,089

Calculation on Environmental Compensation is enclosed at **Annexure- VII.**

It can be seen from the above two table that the Environmental Compensation worked out based on the Judgement of Hon'ble NGT(PB) dated 26.02.2021 in OA 360 of 2015 is more than the penalty levied by DMG. The excess amount may be recovered from the lessee.

5.0 CONCLUSION AND FINAL RECOMMENDATIONS

i. **The Joint Committee observed that the conditions of Environmental clearances are in line with the Sustainable Sand Mining Policy.**

ii. **The Committee felt that the conditions stipulated in the Environmental Clearance such as dust extraction in mineral handling area (storage area), water conservation, etc are not so relevant for these mines hence conditions on dust extraction system, water conservation, Environmental Management Cell, CSR need to be revisited. The mine owners may utilise the service of accredited environmental consultant / laboratory for the environmental**

management instead of having their own Environment Management Cell. The MoEFCC / SEIAA need to consider suitable modification of above conditions in the Environmental Clearance for such sand mining in future.

iii. **The usage of semi mechanized, or mechanized mining may be permitted as per the Sustainable Sand Mining Management Guidelines, 2016, only in case of the blocks where the depth of sand deposition is more than three meters and depth of mining can be permitted more than one meter. Mining up to one-meter depth should be by manual only.**

iv. **The District/Taluka Sand Committee & DMG office shall be strengthened with additional manpower & advanced infrastructure facilities for strict vigilance on illegal mining activities.**

v. **Audit on the quantity permitted, quantity mined out, rate of replenishment etc shall be conducted every year.**

vi. **In addition to the imposition of penalty, cancellation of mine lease in case of any violation- encroachment, excess mining etc, and barring the lease owner in participating in Auction for a particular period say one to two years, may be considered.**

vii. **All the relevant Regulations and Guidelines shall be followed strictly in granting mining lease, carrying out the mining activity and monitoring.**

viii. **The CC Cameras at stock yard shall be connected to the servers of District / Taluk Sand Monitoring Committees/ DMG for monitoring.**

ix. **The CC Cameras shall be installed at check post on the sand transport route and connected to the servers of District / Taluk Sand Monitoring Committees/ DMG for monitoring.**

x. **The transport route from mining site to the stock yard and to main road shall be improved and water sprinkling shall be carried out to control the dust generated from the plying of vehicles.**

xi. In view of the least importance given by the lease owners on EC compliances and to bring attention and importance on EC, the committee felt that a lump sum amount, say Rs. 2-3 lakhs may be imposed on all 23 operating mines as Environmental compensation.

xii. In case of continuance of non- compliances, the SEIAA, Karnataka to take action as per the powers delegated under S.O 637 (E) dated 28.02.2014

***

Shri E. Thirunavukkarasu.
Scientist 'E',
Integrated Regional Office,
Ministry of Environment, Forest and Climate Change, Bangalore

Smt. Anjana Kumari V
Scientist D,
Central Pollution Control Board,
Regional Directorate,
Bangalore

Dr. Murali Krishna.
Scientist D,
Integrated Regional Office,
Ministry of Environment, Forest and Climate Change, Bangalore.

Dr. Prabhu.
Scientist C,
Integrated Regional Office,
Ministry of Environment, Forest and Climate Change, Bangalore.

Sri.Rajesh D.S
Senior Geologist
Department of Mines & Geology
Gadag

Shri Kiran Kumar B S.
Scientific Officer, Grade-I,
SEIAA
Dept of Forest, Ecology and Environment, Government of Karnataka.

Sri. Vishwanath. M
Senior Geologist
Department of Mines & Geology (NZ)
Raichur

Sri.Mohan S
Deputy Director (In charge)
Department of Mines & Geology
Kalburgi

\\TRUE COPY//

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 1 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

ANNEXURE A-6

(2022) 2 Supreme Court Cases 348

3J

(BEFORE L. NAGESWARA RAO, SANJIV KHANNA AND B.R. GAVAI, JJ.)

STATE OF BIHAR AND OTHERS . . Appellants;

Versus

PAWAN KUMAR AND OTHERS . . Respondents.

Civil Appeals Nos. 3661-62 of 2020†, Order dated November 10, 2021

Environment Law — Mining and Industries — Mining lease — Grant of — Preparation of District Survey Report (DSRs) through private consultants for identification of potential sites for mining — Whether necessary

— In view of provision for constitution of Sub-Divisional Committees comprising of officers of State Government from various Departments for identification of potential sites for mining in the Enforcement and Monitoring Guidelines for Sand Mining, 2020, and notification issued by MoEF and CC of 2016, held, there was no necessity of DSRs being prepared through private consultants — It would also unnecessarily burden public exchequer

— Ministry of Environment, Forest and Climate Change (MoEF and CC) in accordance with directions of National Green Tribunal, had issued Enforcement and Monitoring Guidelines for Sand Mining (2020 Guidelines) — In accordance with 2020 Guidelines, DSR is required to be prepared before auction/e-auction/grant of mining lease by Mining Department or Department dealing with mining activity in respective States — For this, a Sub-Divisional Committee is required to be formed which, after site visit, is required to decide regarding suitability of sites for mining — Sub-divisional committee is further required to record its reasons for selecting mining lease in patta land — With advent of modern technology, various technological gadgets like drones and satellite imaging, etc. can be used for identification of potential sites and preparation of DSR and also to check misuse and unauthorised mining

— Therefore, when 2020 Guidelines as well as notification issued by MoEF and CC of 2016 itself provide for constitution of Sub-Divisional Committees comprising of officers of State Government from various Departments for identification of potential sites for mining, there would be no necessity of DSRs being prepared through private consultants as directed by Tribunal — Sub-divisional committee consists of various officers from Revenue Department, Irrigation Department, State Pollution Control Board, Forest Department and Geology and Mining Department of State Government — They are better equipped to visit sites and prepare draft DSR for district concerned — Apart from that, preparation of DSR through private consultants would also unnecessarily burden public exchequer — Exercise of preparation of DSR for purpose of mining in State in all the districts directed to be undertaken afresh — Draft DSRs shall be prepared by Sub-Divisional Committees — Further until DSRs are finalised and granted

† Arising from the Judgment and Order in *Pawan Kumar* v. *State of Bihar*, 2020 SCC OnLine NGT 2848 (National Green Tribunal, Original Application No. 40 of 2020, dt. 14-10-2020) **[Modified]**

SCC Online Web Edition, © 2024 EBC Publishing
Page 2 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

approval by State Expert Appraisal Committee and State Environment Impact Assessment Authority, State Government permitted to continue with legal mining activities (Paras 10 to 16)

Pawan Kumar v. *State of Bihar*, 2020 SCC OnLine NGT 2848, *modified*

Satendra Pandey v. *Ministry of Environment, Forest & Climate Change*, 2018 SCC OnLine NGT 2388; *Deepak Kumar* v. *State of Haryana*, (2012) 4 SCC 629, *referred to*

RM-D/68186/C

Chronological list of cases cited ***on page(s)***

1. 2020 SCC OnLine NGT 2848, *Pawan Kumar* v. *State of Bihar* 349*d*, 350*a-b*, 350*f*, 350*g-h*, 351*a*, 353*d*, 353*f-g*
2. 2018 SCC OnLine NGT 2388, *Satendra Pandey* v. *Ministry of Environment, Forest & Climate Change* 349*e-f*, 350*c-d*, 351*d-e*, 351*e*
3. (2012) 4 SCC 629, *Deepak Kumar* v. *State of Haryana* 351*e*

ORDER

Per Court

1. The present appeals challenge the judgment and order dated 14-10-2020, passed by the National Green Tribunal, Principal Bench, New Delhi (hereinafter referred to as "the Tribunal") in *Pawan Kumar* v. *State of Bihar*[1], thereby issuing the following directions: (SCC OnLine NGT para 103)

> "*103.* ... (*i*) Having regard to the findings at (*a*), (*b*) and (*c*) above, we direct the State to undertake further exercise for preparation of a fresh DSR for the Banka District.
>
> (*ii*) As DEIAA is not functioning as a consequence of the decision of the Tribunal in *Satendra Pandey*[2], the DSR shall be prepared through a consultant(s) accredited by the National Accreditation Board of Education and Training/Quality Control Council of India in terms of OM of MoEF & CC dated 16-3-2010.
>
> (*iii*) The DSR so prepared shall be submitted to the District Magistrate who shall verify the DSR only in respect of the relevant facts pertaining to the physical and geographical features of the district which shall be distinct from the scientific findings based on the parameters prescribed in the SSMMG-2016. After such verification, the District Magistrate shall forward the DSR for examination and evaluation by the State Expert Appraisal Committee ("SEAC") having regard to the fact that SEIAA comprises of technical/scientific experts. SEAC after appraisal of the report shall forward it to SEIAA for consideration and approval if it meets all scientific/ technical requirements.

1 2020 SCC OnLine NGT 2848

2 *Satendra Pandey* v. *Ministry of Environment, Forest & Climate Change*, 2018 SCC OnLine NGT 2388

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 3 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

(*iv*) While preparing the DSR, the MoEF & CC accredited agency/ consultant shall scrupulously follow the procedure and the parameters laid down under the SSMMG-2016 and EMGSM-2020 read in sync with each other."

2. The appellant State of Bihar has assailed the said judgment and order dated 14-10-2020[1], on various grounds.

3. Shri Atmaram Nadkarni, learned Senior Counsel appearing on behalf of the State of Bihar submitted that the Tribunal has grossly erred in holding that unless the State Expert Appraisal Committee (hereinafter referred to as "SEAC") and the State Environment Impact Assessment Authority (hereinafter referred to as "SEIAA") grants approval to the District Survey Report (hereinafter referred to as "DSR") for the purpose of mining of sand, the same cannot be carried out. He submitted that the Tribunal has further held that the very invitation of the tenders without preparing the DSR in accordance with the judgment of the Tribunal in *Satendra Pandey* v. *Ministry of Environment, Forest & Climate Change*[2] could not have been done. He submitted that after the tenders are invited in accordance with the DSR prepared by the District Level Committee, the successful bidder will be required to prepare a mining plan and unless such a mining plan is approved by SEAC and SEIAA, the environmental clearance would not be granted and in turn, mining activities cannot be carried out. He submitted that the finding of the Tribunal is like putting the cart before the horse.

4. Shri Nadkarni further submitted that the Tribunal has also grossly erred in holding that the DSRs prepared by the State were without following the requisite procedure and without considering the relevant factors. He submitted that not only the procedure as prescribed under the relevant rules and regulations was complied with, but the voluminous material in support of the same was also placed on record before the Tribunal. He submitted that the Tribunal has not taken into consideration the said material. He therefore submitted that the judgment and order passed by the Tribunal dated 14-10-2020[1], needs to be set aside and the State needs to be permitted to finalise the tenders received by it.

5. Shri Nadkarni further submitted that on account of the orders passed by the Tribunal, the old lessees are continuing with the mining activities by paying a meagre amount to the State Government. He therefore submitted that on account of this, a huge loss would be caused to the public exchequer. In the alternative, he submitted that the State, at least, needs to be permitted to undertake mining activities through Bihar State Mining Corporation until the DSRs are finalised in accordance with the judgment[1] of the Tribunal.

1 *Pawan Kumar* v. *State of Bihar*, 2020 SCC OnLine NGT 2848
2 2018 SCC OnLine NGT 2388

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 4 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

6. Shri P.S. Patwalia, learned Senior Counsel appearing on behalf of the original applicant vehemently opposed the appeals. He submitted that the Tribunal has rightly held[1] that the DSRs are not prepared in accordance with the relevant rules as well as policy guidelines. He submitted that it is apparently clear that the State has taken into consideration only financial enrichment without considering the environmental aspects.

7. Though, we have heard the learned counsel for both the parties at length on merits, we find that it will be appropriate that the appeals are kept pending for further consideration and till then, certain interim orders are passed.

8. It cannot be in dispute that though the developmental activities are not stalled, the environmental issues are also required to be addressed. A balanced approach of sustainable development ensuring environmental safeguards, needs to be resorted to. At the same time, it also cannot be ignored that when legal mining is banned, it gives rise to mushroom growth of illegal mining, resulting into clashes between sand mafias, criminalisation and at times, loss of human lives. It also cannot be disputed that sand is required for construction of public infrastructural projects as well as public and private construction activities. A total ban on legal mining, apart from giving rise to illegal mining, also causes huge loss to the public exchequer.

9. Taking into consideration these aspects of the matter, we propose to issue certain interim directions.

10. The Tribunal, in *Satendra Pandey*[2], has found that the Notification dated 15-1-2016, which provided environmental clearance to be given by the District Environment Impact Assessment Authority (hereinafter referred to as "the DEIAA") was not in consonance with the judgment of this Court in *Deepak Kumar* v. *State of Haryana*[3]. The Tribunal therefore in *Satendra Pandey*[2], had directed Ministry of Environment, Forest and Climate Change (hereinafter referred to as "MoEF and CC") to take steps to revise the procedure laid down in the Notification dated 15-1-2016. It is to be noted that MoEF and CC, in accordance with the directions of the Tribunal, had issued Enforcement and Monitoring Guidelines for Sand Mining (hereinafter to referred to as "the 2020 Guidelines") in the month of January 2020.

11. Chapter 4 of the 2020 Guidelines deals with identification of possible sand mining sources and preparation of DSR. It will be relevant to refer to Clauses 4.1.1(*a*), (*o*) and (*p*) of the 2020 Guidelines:

> "4.1. *Identification of possible sand mining sources and preparation of District Survey Report (DSR)*
>
> 4.1.1. *Preparation of District Survey Report.*
>
> * * *

1 *Pawan Kumar* v. *State of Bihar*, 2020 SCC OnLine NGT 2848
2 *Satendra Pandey* v. *Ministry of Environment, Forest & Climate Change*, 2018 SCC OnLine NGT 2388
3 (2012) 4 SCC 629

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 5 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

(*a*) District Survey Report for sand mining shall be prepared before the auction/e-auction/grant of the mining lease/ Letter of Intent ("LoI") by Mining Department or department dealing the mining activity in respective states.

* * *

(*o*) Potential site for mining having its impact on the forest, protected area, habitation, bridges, etc. shall be avoided. For this, a Sub-Divisional Committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as *Annexure II*. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in *Annexure III*. The details of the transportation need to be provided as in *Annexure IV*.

(*p*) *Public consultation*—The comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the Sub-Divisional Committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & patta land/khatedari land, de-siltation location (ponds/ lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per *Annexure V*. The details regarding cluster and contiguous cluster needs to be provided in *Annexure VI*. The details of the transportation need to be provided in *Annexure VII*."

12. It could thus be seen that in accordance with the 2020 Guidelines, the DSR is required to be prepared before the auction/e-auction/grant of mining lease by Mining Department or Department dealing with mining activity in the respective States. It is further provided that the potential site for mining having its impact on the forest, protected area, habitation and bridges should be avoided. For this, a Sub-Divisional Committee is required to be formed which, after the site visit, is required to decide regarding the suitability of the sites for mining. The Sub-Divisional Committee is further required to record its reasons for selecting the mining lease in the patta land. Various details are required to be given in the annexures appended to the said policy.

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 6 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

13. It is further to be noted that Appendix X of the Notification dated 15-1-2016, issued by MoEF and CC also provides for composition of the Sub-Divisional Committee:

> "A Sub-Divisional Committee comprising of Sub-Divisional Magistrate, Officers from Irrigation Department, State Pollution Control Board or Committee, Forest Department, Geology or Mining Officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof."

14. It is to be noted that with the advent of modern technology, various technological gadgets like drones and satellite imaging, etc. can be used for identification of the potential sites and preparation of the DSR and also to check misuse and unauthorised mining.

15. We further find that when the 2020 Guidelines as well as the notification issued by MoEF and CC of 2016 itself provide for constitution of Sub-Divisional Committees comprising of the officers of the State Government from various Departments for identification of the potential sites for mining, there would be no necessity of the DSRs being prepared through private consultants as directed by the Tribunal in the impugned order[1]. The Sub-Divisional Committee consists of various officers from Revenue Department, Irrigation Department, State Pollution Control Board, Forest Department and Geology and Mining Department of the State Government. They are better equipped to visit the sites and prepare the draft DSR for the district concerned. Apart from that, preparation of DSR through private consultants would also unnecessarily burden the public exchequer. We are therefore of the view that the direction in that regard issued by the Tribunal requires to be modified. We are further of the considered view that until the DSRs are finalised and granted approval by SEAC and SEIAA, it is appropriate that certain necessary arrangements are permitted so that the State can continue with legal mining activities. This apart from preventing illegal mining activities, would also ensure that the public exchequer is not deprived of its share in legalised mining.

16. We therefore find it appropriate to substitute the directions issued by the Tribunal vide judgment and order dated 14-10-2020[1], with the following directions:

16.1. The exercise of preparation of DSR for the purpose of mining in the State of Bihar in all the districts shall be undertaken afresh. The draft DSRs shall be prepared by the Sub-Divisional Committees consisting of the Sub-Divisional Magistrate, Officers from Irrigation Department, State Pollution Control Board or Committee, Forest Department, Geological or Mining Officer. The same shall be prepared by undertaking site visits and also by using modern technology. The said draft DSRs shall be prepared within a

1 *Pawan Kumar* v. *State of Bihar*, 2020 SCC OnLine NGT 2848

SCC Online Web Edition, © 2024 EBC Publishing Pvt. Ltd.
Page 7 Monday, January 15, 2024
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: http://www.scconline.com
TruePrint™ source: Supreme Court Cases, © 2024 Eastern Book Company. The text of this version of this judgment is protected by the law declared by the Supreme Court in Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1 paras 61, 62 & 63.

period of 6 weeks from the date of this order. After the draft DSRs are prepared, the District Magistrate of the district concerned shall forward the same for examination and evaluation by SEAC. The same shall be examined by SEAC within a period of 6 weeks and its report shall be forwarded to SEIAA within the aforesaid period of 6 weeks from the receipt of it. SEIAA will thereafter consider the grant of approval to such DSRs within a period of 6 weeks from the receipt thereon.

16.2. Needless to state that while preparing DSRs and the appraisal thereof by SEAC and SEIAA, it should be ensured that a strict adherence to the procedure and parameters laid down in the policy of January 2020 should be followed.

16.3. Until further orders, we permit the State Government to carry on mining activities through Bihar State Mining Corporation for which it may employ the services of the contractors. However, while doing so, the State Government shall ensure that all environmental concerns are taken care of and no damage is caused to the environment.

17. List the matter after 20 weeks.

———

\\TRUE COPY//

ANNEXURE A-7

STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), BIHAR

2nd Floor, BELTRON Bhawan, Shastri Nagar, Patna – 800023.

Ref. No.- 132 Patna, Dated: - 07/04/2022

MINUTES OF 08th MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC). BIHAR CONSTITUTED ON 12.08.2021

VENUE: SEIAA Office

DATE: 25thMarch, 2022

Minutes/Proceeding of the Meeting

1. **Opening Remarks of the Chairman:** The Chairman extended warm welcome to all the participants of the meeting. Thereafter, the meeting was opened for the proceeding as per the agenda adopted for this meeting.

2. **Confirmation of Minutes of 07thMeeting (07/2022)** vide ref.no.100 dated 11.03.2022 **of State Expert Appraisal Committee held on** 04th &05th March, 2022. The State Expert Appraisal Committee, hereinafter called the SEAC, was informed that no representation has been received regarding projects considered in meeting held on 04th & 05th March, 2022. Minutes of the meeting of SEAC were confirmed.

3. **Consideration of Proposals**: The SEAC considered proposals as per the agenda adopted for the 08th meeting (08/2022) circulated vide Ref. No.-114, dated-21.03.2022 and Ref. No.- 116, dated - 24.03.2022. The key points of deliberations held were as follows.

4. With regard to the proposals submitted for the District Survey Report (DSR) the Committee members considered and deliberated extensively on the District Survey Report (DSR), received for various districts, in the light of the Hon'ble Supreme Court's Order dated 10.11.2021 in Civil Appeal No. 3661-3662 of 2020 [Procedure and parameters laid down in the policy of Sustainable Sand Mining Management

xvii. Old and new proposed Ghats must be mentioned in the DSR. (List,Map & KML file).

xviii. District Border line (Bold mark) should be mentioned in the maps/images/KML file in all DSR.

xix. All the primary and secondary data should be supported by proper references and documentary support along with the page number in the compliance report of revised DSR.

xx. The replenishment study is not conducted by the concerned district. Whenever replenishment study conducted, submit the table of estimation of sand resources in Pre-monsoon and post-monsoon period for the sand deposit, with respect to the Reduced Level.

xxi. FMISC (Flood Management Improvement Support Center), a R&D unit under WRD (Water Resource Department) at Anishabad has high resolution satellite maps of river systems of Bihar. District Authorities may contact the office of FMISC for procurement of geo-referenced maps of the river to support the DSR.

AGENDA ITEM NO. 23

Revised District Survey Report for Jamui district (E-mail dated:-23.03.2022 and Hardcopy Received date:- 24.03.2022)

Application along with letter from the District Magistrate vide letter No. 466, dated 21.03.2022 was submitted to SEAC, Bihar on 24th March, 2022 for the evaluation of the District Survey Report (DSR), revised as per the comments made by the SEAC.

Earlier in the meeting dated 06th, 07th, & 08th January 2022, the Committee had directed to submit the revised District Survey Report (DSR) as mentioned in the proceeding of that meeting. The compliance was submitted by concerned District in the light of the above said meeting, the same was placed before the committee and the concerned district representative made a presentation. The Committee observed infirmities and found not satisfactory. As such concerned district representative was directed to correct the DSR as follows :-

i. Clear and high resolution color images of the proposed ghats should be submitted with DSR including the date of photographs/ GPS location for identification of potential sand mining area.

ii. All river main channel bed sand mining is proposed. Why? Please justify.

iii. The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

iv. Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered, to justify the number and area of the sand ghats.

v. Mining area may be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradations into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promotes illegal mining.

vi. The DSRs should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the concerned sub-divisional committee for active consideration for necessary corrections, if any. Only after such consultation of the DSR should be submitted before the SEAC.

vii. The Committee observed that sand ghats have been proposed on the confluence/meanders/concavities/active Channels which require to be excluded from the DSR. No mining area should be proposed at any bank concavities to avoid bank erosion and river instability.

viii. The Committee was not shown any such map where 1/4th part of the area has been separated from central 3/4th part of the river as a minable and non-minable zone.

ix. In case sand ghat is located near by the Forest/ Wildlife Protected Area, (Bird Sanctuary / Wildlife Sanctuary / National Park / Tiger Reserve) a certificate regarding distance of such ghat from the boundary of Forest/ Protect Area as well as the notification status and extent of the Eco-Sensitive Zone issued by the Ministry of Environment, Forest and Climate Change, Govt. of India should be enclosed with the DSR.

x. If the proposed mining area has overlapping areas with previously allotted existing lease or already working or worked out mining lease then the same should be clearly depicted in the proposed mining area with different colour. Details about the quantity of Sand extracted from the overlapped area should be furnished duly certified from the concerned Department.

xi. Provide different colour map for proposed and existing sand mining area and also submit State, District Wildlife Sanctuary, Eco-Sensitive Zone boundary in different colour map and KML file to check the suitability of the mining site.

xii. Submit a map and KML file regarding aquatic animal found in river.

xiii. It should be for each mine area with respect to sand mining done. [Ghats wise details of quantity of sand extracted and revenue generated (annually) for the past three years]. Only Sand mining revenue should be included in DSR not brick kiln/other minerals revenue.

xiv. All the Annexures as prescribed in the EMGSM, 2020 should be duly filled and complete.

xv. Old and new proposed Ghats must be mentioned in the DSR. (List,Map & KML file).

xvi. All the primary and secondary data should be supported by proper references and documentary support along with the page number in the compliance report of revised DSR.

xvii. The replenishment study is not conducted by the concerned district. Whenever replenishment study conducted, submit the table of estimation of sand resources in Pre-monsoon and post-monsoon period for the sand deposit, with respect to the Reduced Level.

xviii. FMISC (Flood Management Improvement Support Center), a R&D unit under WRD (Water Resource Department) at Anishabad has high resolution satellite maps of river systems of Bihar. District Authorities may contact the office of FMISC for procurement of geo-referenced maps of the river to support the DSR.

AGENDA ITEM NO. 24

Revised District Survey Report for Arwal district (E-mail dated:-24.03.2022 and Hardcopy Received date:- 23.03.2022)

Application along with letter from the District Magistrate vide letter No. 330, dated 23.03.2022 was submitted to SEAC, Bihar on 23rd March, 2022 for the evaluation of the District Survey Report (DSR), revised as per the comments made by the SEAC.

Earlier in the meeting dated 06th, 07th, & 08th January 2022, the Committee had directed to submit the revised District Survey Report (DSR) as mentioned in the proceeding of that meeting. The compliance was submitted by concerned District in the light of the above

Resolution of the Committee:-

The final DSR should be prepared in a book format (may be spiral binded) with an index page referring the page numbers where the corrections / amendments were made, for quick reference, in a tabular format.

SEAC has unanimously decided to forward the above referred DSR$_s$ of the conce rned districts with the aforementioned observations for the consideration of SEIAA.

LIST OF PARTICIPANTS IN 08th MEETING OF SEAC, BIHAR HELD ON 25th MARCH 2022

S. No.	Name	Designation	Attended on 25.03.2022
1.	Dr. Gopal Sharma	Chairman	Present
2.	Dr. Ramakar Jha	Member	Present
3.	Dr. Bibha Kumari	Member	Present
4.	Dr. Anshumali	Member	Present through video link
5.	Dr. Aditya Mohanty	Member	Present through video link
6.	Shri Mokhtarul Haque	Member	Present
7.	Shri AjitSamaiyar	Member	Absent.
8.	Shri Ranjan Kumar	Member	Present.
9.	Shri S. Chandrasekar	Member Secretary	Present

Signature(s) of Members Present

Sd/
(Dr. Ramakar Jha)
Member, SEAC

Sd/
(Dr. Bibha Kumari)
Member, SEAC

Sd/
(Mokhtarul Haque)
Member, SEAC

Sd/
(Ranjan Kumar)
Member, SEAC

Sd/
(Dr. Anshumali)
Member, SEAC

Sd/
(Dr. Aditya Mohanty)
Member, SEAC

07/4/22

(S. Chandrasekar, IFS)
Member Secretary, SEAC

07.4.2022

(Dr. Gopal Sharma)
Chairman, SEAC

\\TRUE COPY//

ANNEXURE A-8

Item No. 03 & 04 (Court No. 1)

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

(By Video Conferencing)

Original Application No. 140/2021

(With report dated 31.03.2022)

Raj Kumar Applicant

Versus

State of U.P. & Ors. Respondent(s)

WITH

Original Application No. 141/2021

Ramkaran Karn Applicant

Versus

State of U.P. & Ors. Respondent(s)

Date of hearing: 06.05.2022

CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER
HON'BLE PROF. A. SENTHIL VEL, EXPERT MEMBER

Applicant: Mr. Vanshdeep Dalmia, Advocate

Respondent: Dr. Roshan Jacob, Secretary, Geology & Mining with Mr. Pradeep Misra, Advocate for the State of Uttar Pradesh & UPPCB

ORDER

1. Grievance in these two identical applications is against illegal mining. In O.A. No. 140/2021, mining is in the submerged water area at Gata No. 28 (Part) and 29, Khand No. 1, village Kanwara, District Banda, UP by M/s Durge Trading Company and in O.A. No. 141/2021 it is in the submerged water area at Gata No. 2/4, 2/23, 2/24 and 2/28, Khand No. -4, village-Bendakhadar, District Banda, UP by Ashish Kumar Gautam,

S/o Suresh Kumar Gautam. Common stand in both the matters is that the mining is in violation of Sustainable Sand Mining Management Guidelines (SSMMG), 2016 and Enforcement and Monitoring Guidelines for Sand Mining (EMGSM), 2020 and binding orders of this Tribunal, including order dated 30.05.2017 in *O.A. No. 78/2015 (CZ)* reported in *2017 SCC OnLine NGT 1097,* holding as follows: -

> *"In the light of the above,* ***we answer the question that has been referred to us that no river sand mining is permitted in the submerged area in accordance with the Sustainable Sand Mining Guidelines 2016 alternatively in so far as the issue whether it can be permitted in the submergence areas is concerned our answer to the same is that in submergence area which may be a wider area than the one actually submerged as a submergence area would encompass the full reservoir level of the river or the high flood level of the river recorded by in any case where the mineral is exposed and not in stream such sand mining in accordance with the Sand Mining Guidelines 2016 and the conditions imposed in the environmental clearance may be carried out****."***

2. Further order of this Tribunal relied upon by the applicants is order dated 26.02.2021 in *O.A. No. 360/2015, NGT Bar Association v. Virender Singh (State of Gujarat) and other connected matters*. Therein, on exhaustive review of the issues relating to sand mining, this Tribunal has issued directions, including the mechanism for enforcement of environmental norms, inter-alia as follows:-

> ***"****1to26..xxx……xxx……xxx*
>
> ***27. We direct all the States/UTs to strictly follow the SSMG-2016 read with EMGSM-2020 reinforced by mechanism for preparation of DSRs (in terms of directions of this Tribunal dated 14.10.2020 in Pawan Kumar, supra and 04.11.2020 in Rupesh Pethe, supra), Environment Management Plans, replenishment studies, mine closure plans, grant of EC (in terms of direction dated 13.09.2018 in Satendra Pandey, supra), assessment and recovery of compensation (as per discussion in Para 25), seizure and release of vehicles involved in illegal mining (in terms of order dated 19.02.2020 in Mushtakeem, supra), other safeguards against violations, grievance redressal, accountability of the designated officers and periodical review at higher levels. As already noted,***

EMGSM-2020 contemplates extensive use of digital technology, including remote sensing.

28. We further direct that periodic inspection be conducted by a five-members Committee, headed and coordinated by the SEIAA and comprising CPCB (wherever it has regional office), State PCB and two expert members of SEAC dealing with the subject. Where CPCB regional office is not available, if MoEF&CC regional office is available, its Regional Officer will be included in the Committee. Where neither CPCB nor MoEF&CC regional office exists, Chairman, SEIAA will tie up with the nearest institution of repute such as IIT to nominate an expert for being included in the Committee. Such inspection must be conducted at least thrice for each lease i.e. after expiry of 25% the lease period, then after 50% of the period and finally six months before expiry of the lease period for midway correction and assessment of damage, if any. The reports of such inspections be acted upon and placed on website of the SEIAA. Every lessee, undertaking mining, must have an environment professional to facilitate sustainable mining in terms of the mining plan and environmental norms. This be overseen by the SEIAA. Environment Departments may also develop an appropriate mobile App for receiving and redressing the grievances against the sand mining, including connivance of the authorities and also a mechanism to fix accountability of the concerned officers. Recommendations of the Oversight Committee for the State of UP quoted earlier may be duly taken into account.

The mechanism must provide for review at the level of the Chief Secretary at least once in every quarter, in a meeting with all concerned Departments in the State. The Chief Secretary UP may ensure further action in the light of the report of the Oversight Committee.

Similarly, at National level, such review needs to be conducted atleast once in a year by the Secretary, Environment in coordination with the Secretaries Mining and Jalshakti Ministries the CPCB."

3. It is submitted that no steps are being taken by the State of UP for compliance of directions of this Tribunal.

4. Vide order dated 02.07.2021 on consideration of the matter, the Tribunal directed Additional Chief Secretary, Mining, UP to furnish a report about the compliance status including the status of DSR and replenishment studies for Banda District and also in-stream mining in submerged water and monitoring mechanism.

5. The matter was last considered on 08.03.2022 and finding that no response was being filed by the Additional Chief Secretary, Mining, Uttar Pradesh, the Tribunal directed personal appearance of the ACS, Mining by V.C. and also directed the District Magistrate and State PCB to file a factual report. If anything, adverse was noticed, the PP was to be put to notice of these proceedings.

6. In pursuance of above, the ACS, Mining, UP is present in person by V.C. and report has been filed by the District Officer, Banda on 31.03.2022 as follows:

> *"xxx ……xxx……xxx*
>
> *10. That for Environmental impact assessment (E.I.A.) study ministry of environment and forest and climate change (MoEF&CC) has propounded Sustainable sand mining management guidelines 2016 and enforcement and monitoring guidelines for sand mining 2020. In compliance of this Guidelines Government of Uttar Pradesh has issued a Government order no 790(1)/86-2020 dated 01.06.2020. As per this Government order, Government of Uttar Pradesh has constituted a team of officials of Department of Geology and Mining, Revenue Department, Forest Department and Irrigation Department, who give recommendation for any new area to be included or any change in D.S.R.(District survey report). Till November 2022 a total of 296 areas has been added in District survey report (D.S.R.) in different districts of Uttar Pradesh.*
>
> *That in district Banda after proper study of replacement of Sand/Morrum on the areas the District Survey Report' (herein after referred as DSR) was prepared and loaded on District Administration Portal and objection of the public domain were also invited and after considering the objection the DSR finalised by the committee constituted by the Government of Uttar Pradesh on 23.11.2017.*
>
> *11. That in Compliance of Hon'ble NGT order dated 02.07.2021 OA no. 140/2021 Raj Kumar Versus State of UP and OA no. 141/2021 Ram Karan karn Versus State of UP, D.M Banda has authorised C.M.P.D.I (Central mine planing and Design Institute limited), a public sector enterprise of Government of India to do the replenishment study of rivers flowing in district Banda on dated 28.10.2021 C.M.P.D.I has started the replenishment study of rivers of banda district and the work is on progress. Its report will be soon provided to the hon'ble NGT.*

The copy of the order of D.M Banda dated 11.10.2021 and consent letter of C.M.P.D.I dated 19.10.2021 being annexed herewith as Annexure No.1, to this compliance report.

12. *That if the bid found to be highest and satisfactory per cubic metre then a letter of intent is issued in favour of such bidder and thereafter, the applicant should obtain approval on its mining plan and environmental clearance from the competent authority and thereafter the mining lease is executed in his favour.*

13. *That in the lease deed, the following terms are specifically mentioned:-*

    i. *The mining operations are to be carried only up to the depth of 3 metres, or up to the water level, whichever is less;*
    ii. *The safety zone should be worked out;*
    iii. *The mining operations will be done in accordance with the scheme mentioned in the Mining Plan;*
    iv. *The lessee will be bound to obey the terms and conditions of the environmental clearance;*
    v. *The mining will be done after sun-rise till sun-set;*
    vi. *In the monsoon season, no mining will be done;*
    vii. *Heavy machinery and Suction Machines will not be used for excavation of the mineral;*
    viii. *No temporary bridge or hinderance will be created in the flow of river water during the lease period;*
    ix. *That the Central Government framed Sustainable Sand Mining Management Guidelines 2016 with object of managing un-controlled sand mining in India.*

14. *That the Ministry of Environment, Forests & Climate Change, Government of India also framed Enforcement and monitoring Guidelines for Sand Mining in January 2020.*

15. *That list of mining leases, granted in District Banda for excavation of sand & morrum, at present, is being annexed herewith as Annexure No.2, to this compliance report.*

16. *That at the time, total 17 mining leases are in operation in Banda district and they have proper environmental clearances, as well as the consent issued by UPPB Lucknow under the provisions of "Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention Control of Pollution) Act, 1981."*

17 *That in compliance of the order dated 26.02.2021, passed by this Hon'ble Tribunal in 0.A. No.360 of 2015 (National Green Tribunal Bar Associations. Veerendra Singh (State of Gujarat & others), 5 members Committee has been constituted by the District Officer, Banda, vide office order No.2892/Khanij-30 Banda, dated 14.12.2021. In the said Monitoring Committee, the members as under:*

1. *Divisional Forest Officer, Banda Chairman*
2. *Mines Officer/Mines Inspector/ Surveyor, Mines Department, Banda Member*
3. *Executive Engineer, Irrigation & Water Resources department, Banda- Member*
4. *Concerned Tehsildar Member*
5. *Regional Officer, Pollution Control Board, Banda Member Secretary.*

A copy of the said office order dated 14.12.2021 issued by the District Officer, Banda, is being annexed herewith as Annexure No.3, to this compliance report.

18. *That the said Enforcement Committee is regularly watching the mining activities of 17 areas and if any lessee is found to violate the above mentioned terms and conditions, then after issuing the notice, necessary proceedings are initiated against him.*

19 *That in the Headquarters, Lucknow, as well as in the districts, Surveillance Systems have also been installed for prevention of over-loading of minerals, as well as without transit passes, and due to this so many electronic challans are automatically created and served on the lessees for recovery of Government dues of such mineral.*

20. *That this Hon'ble Tribunal has also directed for submission of the status report of the following sand, morrum areas*

S. No.	***Area***	***Status***
a)	*Khand No.1 Village Kanwara, Banda M/s Durga Trading Co.*	*mining activities are not being done by the lessee due to preparation of approach road*
b)	*Khand No.4 Village Banda Khadar, District Banda Ashish Kumar Gautam, S/o Shri Suresh Kumar Gautam*	*matter is pending before the Hon'ble Supreme court. (Ravi kumar vs State of U.P. Dairy No. 3177/2022) No mining activities are being done.*

”

7. A report has also been filed on 06.04.2022 by the Geology and Mining Department, UP which is by and large similar to the report of the District Officer, Banda referred to above.

8. We have heard learned Counsel for the Applicants and interacted with the ACS present in person by VC.

9. We find that replenishment study as required under the SSMG-2016 and EMGSM-2020 has not been undertaken prior to the auction in terms of para 5.1 of the EMGSM, 2020 which is reproduced below:

> ***"5.0 REPLENISHMENT STUDY***
>
> *The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessing sand extraction. Mining within or near riverbed has a direct impact on the stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. Alteration or modification of the above attributes may cause an impact on the ecological equilibrium of the riverine regime, disturbance in channel configuration and flow-paths. This may also cause an adverse impact on instream biota and riparian habitats. It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river stretch, it is imperative to have a study of replenishment of material during the defined period***.**
>
> ***5.1 Generic Structure of Replenishment Study***
>
> *Initially replenishment study requires four surveys. The first survey needs to be carried out in the month of April for recording the level of mining lease before the monsoon. The second survey is at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the offset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river.* ***Based on the replenishment rate future auction may be planned.***
>
> *The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the Central Water Commission and Indian Meteorological Department. The excavation will, therefore, be limited to estimated replenishment estimated with consideration of other regulatory provisions.***"**

10. With regard to the allegation of instream mining in submerged water, it has been orally stated by the ACS that no such instream mining is permitted. However, in the reports filed before this Tribunal, no such statement has been made on behalf of the State.

11. Accordingly, the ACS, Mining, UP has fairly stated that replenishment study will be conducted prior to auctions in future and with regard to the current leases, ongoing replenishment study will be expedited. In the light thereof, the leases will be renewed, if necessary. Such studies for all Districts in UP will be completed by December 31, 2022 and for Banda by June 30, 2022. She has further stated that the allegation of instream mining will be verified and if found true, the same will be discontinued.

12. In view of above, let the Replenishment studies be completed by credible institutions, following due procedure, in accordance with para 5 of EMSG, 2020. Further, no mining be permitted till replenishment studies are completed beyond the schedule laid down above. The State may ensure that the Regulatory authorities are adequately equipped and capable to assess quantities of mined material. With regard to instream mining, it may be ensured that the machineries permitted or used otherwise comply with "Semi mechanised" mining operations in true sense. In all mining potential districts, environmental damage assessment be carried out and annual assessment reports placed in public domain on the websites of the Mining Department as well as the PCB. Compliance of SSMG, 2016 and EMGSM, 2020 and earlier directions of this Tribunal may be ensured by an effective monitoring mechanism.

The applications are disposed of accordingly.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

Prof. A. Senthil Vel, EM

May 06, 2022
Original Application No. 140/2021
Original Application No. 141/2021
DV

\\TRUE COPY//

ANNEXURE A-9

State Environment Impact Assessment Authority, Bihar

2nd floor, Beltron Bhawan, Shastri Nagar, Patna - 800 023.

Ref. No. - 226 Patna, Date:- 20/05/2022

Minutes of the 21st meeting of SEIAA, Bihar, constituted on 12-08-2021 convened on 18th May, 2022.

A meeting of SEIAA was convened on Wednesday, 18th May, 2022.

Present: -

1.	Shri Atul Aditya Pandey	-	Chairman.
2.	Shri Arun Prakash	-	Member.
3.	Shri Sudhir Kumar	-	Member Secretary.

- *The SEIAA considered proposals as per the agenda adopted for 21st meeting vide Ref. No.- 217, dated- 17.05.2022 and Ref. No.- 223, dated- 18.05.2022.*

Agenda Item No.- 01

- ***Examination and evaluation of District Survey Report - 2021 for the following districts***

Jamui

- **Proposal discussed in SEAC** on 06th, 07th & 08th January, 2022 and 25th March, 2022 and recommended for Examination and evaluation of District Survey Report - 2021.

- **Observation / correction suggested by SEAC (25th March, 2022)**

a) Clear and high resolution color images of the proposed ghats should be submitted with DSR including the date of photographs/ GPS location for identification of potential sand mining area.

b) All river main channel bed sand mining is proposed. Why? Please justify.

c) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future

5

surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

d) Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered, to justify the number and area of the sand ghats.

e) Mining area may be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradations into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promotes illegal mining.

f) The DSRs should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the concerned sub-divisional committee for active consideration for necessary corrections, if any. Only after such consultation of the DSR should be submitted before the SEAC.

g) The Committee observed that sand ghats have been proposed on the confluence/meanders/concavities/active Channels which require to be excluded from the DSR. No mining area should be proposed at any bank concavities to avoid bank erosion and river instability.

h) The Committee was not shown any such map where 1/4th part of the area has been separated from central 3/4th part of the river as a minable and non-minable zone.

i) In case sand ghat is located near by the Forest/ Wildlife Protected Area, (Bird Sanctuary / Wildlife Sanctuary / National Park / Tiger Reserve) a certificate regarding distance of such ghat from the boundary of Forest/ Protect Area as well as the notification status and extent of the Eco-Sensitive Zone issued by the Ministry of Environment, Forest and Climate Change, Govt. of India should be enclosed with the DSR.

j) If the proposed mining area has overlapping areas with previously allotted existing lease or already working or worked out mining lease then the same should be clearly depicted in the proposed mining area with different colour. Details about the quantity of Sand extracted from the overlapped area should be furnished duly certified from the concerned Department.

k) Provide different colour map for proposed and existing sand mining area and also submit State, District Wildlife Sanctuary, Eco-Sensitive Zone boundary in different colour map and KML file to check the suitability of the mining site.

l) Submit a map and KML file regarding aquatic animal found in river.

m) It should be for each mine area with respect to sand mining done. [Ghats wise details of quantity of sand extracted and revenue generated (annually) for the past three years]. Only Sand mining revenue should be included in DSR not brick kiln/other minerals revenue.

n) All the Annexures as prescribed in the EMGSM, 2020 should be duly filled and complete.

o) Old and new proposed Ghats must be mentioned in the DSR. (List, Map & KML file).

p) All the primary and secondary data should be supported by proper references and documentary support along with the page number in the compliance report of revised DSR.

q) The replenishment study is not conducted by the concerned district. Whenever replenishment study conducted, submit the table of estimation of sand resources in Pre-monsoon and post-monsoon period for the sand deposit, with respect to the Reduced Level.

r) FMISC (Flood Management Improvement Support Center), a R&D unit under WRD (Water Resource Department) at Anishabad has high resolution satellite maps of river systems of Bihar. District Authorities may contact the office of FMISC for procurement of geo-referenced maps of the river to support the DSR.

s) The final DSR should be prepared in a book format (may be spiral binded) with an index page referring the page numbers where the corrections / amendments were made, for quick reference, in a tabular format.

➢ **Resolution of the SEAC:-**

SEAC has unanimously decided to forward the above referred DSR, of the concerned districts with the aforementioned observations for the consideration of SEIAA.

- **Resolve of the SEIAA:-**

The SEIAA examined the submitted District Survey Report for sand mining in Jamui district. It was observed that the points raised by SEAC have been complied with. Further, few of the ghats in the submitted DSR was revised as per the observations made. SEIAA resolved to approve the revised DSR.

Agenda Item No.- 02

- ***Examination and evaluation of District Survey Report - 2021 for the following districts***

Lakhisarai

- **Proposal discussed in SEAC** on 06th, 07th & 08th January, 2022 and 11th April, 2022 and recommended for Examination and evaluation of District Survey Report - 2021.

- **Observation / correction suggested by SEAC (11th April, 2022)**

a) Clear and high resolution colour images (photographs) of the proposed ghats should be submitted with DSR including the date of photographs/ GPS location for identification of/assess the potential sand mining area.

b) All the sand ghats are proposed on the main channel bed of the river for sand mining. This has to be explained / justified.

c) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

d) The DSR should be placed in the public domain for at least one month from the date of publication of the newspaper advertisement for obtaining comments of the general public. The comments so received shall be placed before the concerned sub-divisional committee for active consideration for necessary corrections, if any. Only after such consultations, the DSR should be submitted before the SEAC. [As per procedures laid down in EMGSM -2020 (Page No. 19 (P)]

\\TRUE COPY//

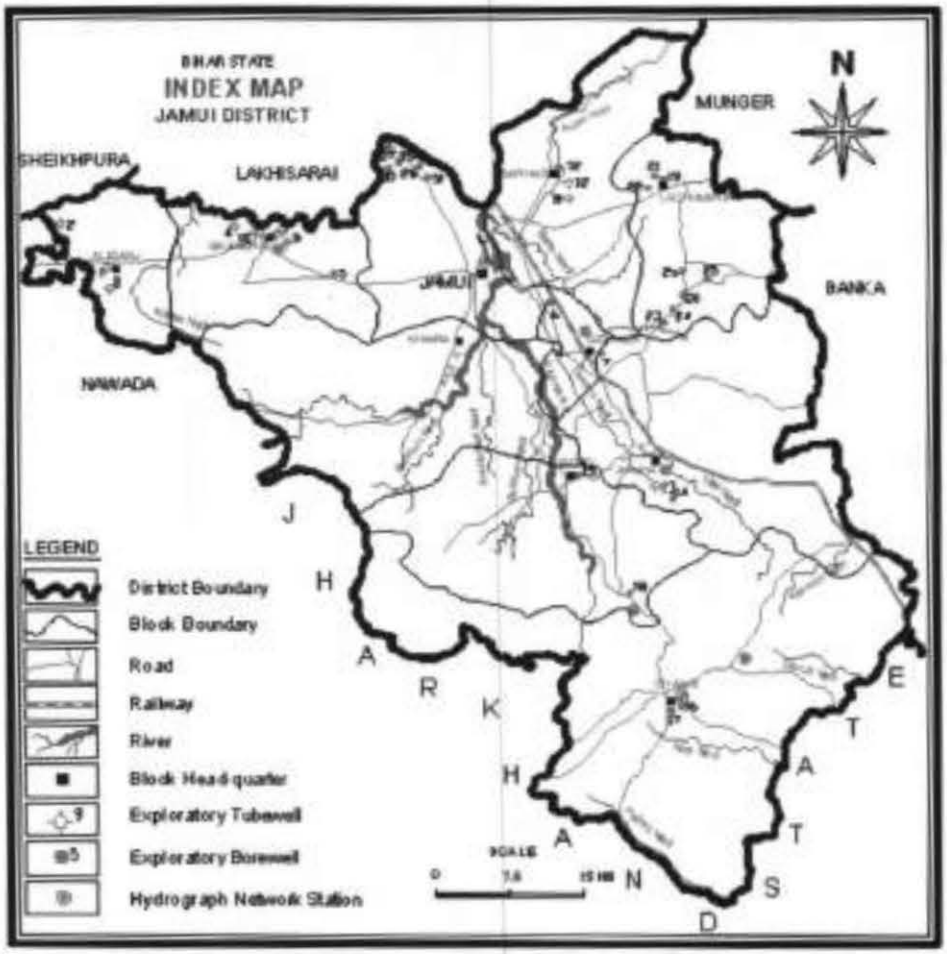
ANNEXURE A-10

बिहार सरकार

District Survey Report
Sand Mineral

DISTRICT- JAMUI (BIHAR)

As per Notification No.- S.O.141 (E), 15th January, 2016 of MOEF & CC, Govt. of India, Notification No.- S.O.3611 (E), 25th July, 2018, of MOEF & CC, Govt. of India and Enforcement & Monitoring Guidelines for Sand Mining, 2020



Prepared By

Sub Divisional Committee, Jamui

SEIAA, Bihar Secretary

Member SEIAA, Bihar

AGENDA ITEM NO.-23

District Survey Report for Jamui district
(E-mail dated: - 23.03.2022 and Hard Copy Received date: - 24.03.2022)

Recommendation of the committee (Vide SEAC, Bihar Ref LT. No.-132 Dt. 07.04.2022):

Sl. No.	Observations of the SEAC, Bihar	Action Taken
I	Clear and high-resolution color images of the proposed ghats should be submitted with DSR including the date of photographs/GPS location for identification of potential sand mining area	High-resolution color images of the proposed ghats are attached as **Annexure- IX & X (Page No.-88 to 123)**.
II	All river main channel bed sand mining is proposed. Why? Please justify	• Deposition of Sand mineral; • Due to non-perennial nature of the rivers these are almost dry after the monsoon period as well as sand deposition is found in entire river at almost location.; • To avoid illegal mining from un-leased area.
III	The permanent boundary pillars need to be erected after identification of area of aggradations and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.	The permanent boundary pillar shall be erected after auction by the department and preparation of the mine Plan.
IV	Demand and supply of the riverbed material through market survey needs to be carried out. In addition to this future demand for the next 5 year also needs to be considered, to justify the number and area of sand Ghats.	Demand and supply details are mentioned in **Page No.-18.**
V	Mining area may be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradations into smaller mining lease should be avoided as it leads to loss of mineral and indirectly promote illegal mining.	Mining area are selected as to cover the entire deposition area. Only buffer zone of around 50 meters have been left after 1000 meters of sand blocks. Map can be seen in **KML soft copy** and **Annexure-IX (Page No.- 88 to 114)**

SEIAA, Bihar

VI	The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received should be placed before the sub divisional committee for active consideration. Only after such consideration of DSR should be submitted before the SEAC.	DSR is place in public domain as on- **District public portal (online)at** Jamui.nic.in **on 03.03.2022** and advertised in daily newspaper **Dainik Jagran & Dainik Bhaskar on 03.04.2022.** **Annexure-XIV (Page No.-136 to 137)**
VII	The committee observed that the Ghats has been proposed on the confluence/ meanders/concavities/active channel which require to be excluded from the DSR. No mining area should be proposed at any bank concavities to avoid bank erosion and river stability.	As per the direction of SEAC the suggested sand ghats on the confluence/ meanders/ concavities/ active channel has been dropped and due to various reason proposed sand ghats are reduced to 48 out of 70. Details can be seen in **Table-12 (Page No. 59)**
VIII	The committee was not shown any such map where 1/4th part of the areas has been separated from central 3/4th part of the area as a mineable and non-mineable zone.	1/4th part of the areas has been separated from central 3/4th part of the area as a mineable area **Maps are attached as annexure-IX (Page No.-88 to 114).**
IX	In case sand ghat is located near by the Forest/Wildlife Protected Area, (Bird Sanctuary / Wildlife Sanctuary / National Park / Tiger Reserve) a certificate regarding distance of such ghat from the boundary of Forest/Protect Area as well as the notification status and extent of the Eco-Sensitive Zone issued by the Ministry of Environment, Forest and Climate Change, govt. of India should be enclosed with the DSR.	No sand ghat is located within 1 KM from Eco Sensitive Zone. and aal are outside the Wildlife Sanctuary/ national park/tiger reserve. Details of distance from bird Wildlife Sanctuary (**Bhimbandh WLS/Nagi- Nakti Bird Sanctuary**) is presented in **Table No. 14 (Page No. -60), Annexure-II (Page No. 64-68) & Annexure-V (Page No.-76-79)** **Annexure-XI(Page No.124 to 126)**
X	If the proposed mining area has been overlapping areas with previously allotted existing lease or already working or worked out mining lease that the same should be clearly depicted in the proposed mining area with different colour. Details about the quantity of sand extracted from the overlapped area should be furnished dully certified from the concerned department.	Overlapped area and minable mineral are details in table attached as **Annexure- VIII (Page No.-87)**
XI	Provide different colour map for proposed and existing sand mining	**Maps are attached as annexure-IX (Page No.-88 to 114)**

SEIAA, Bihar

	area and also submit, State, District Wildlife sanctuary, Eco Sensitive Zone Boundary in different colour maps and KML to check the suitability of the mining site.	
XII	Submit a map and KML file regarding aquatic animal found in river.	An undertaking regarding aquatic animal is attached as **annexure- XI (Page No.- 127)**
XIII	It should be for each mine area with respect to sand mining done. [Ghats wise details of quantity of sand extracted and revenue generated (annually) for the past three years.] Only Sand mining revenue should be included in DSR not brick kiln/other minerals revenue.	Revenue received as presented in **table -2 (Page No.-17)** production of sand in last three years are in **Table No. -3 (Page No.-18)**
XIV	All the Annexure prescribed in the EMGSM, 2020 should be dully filled and complete.	Complied and attached as **Annexure-1 to Annexure-VII (Page No. 62 to 860)**
XV	Old and new proposed Ghats must be mentioned in the DSR. (List, Map & KML file)	Old and new proposed are mentioned **Old Ghats in Table No. -1 (Page No. 14 to 16)** and new proposed ghats in **Table No.-8 (Page No.-48 to 56).**
XVI	All the primary and secondary data should be supported by paper references and documentary support.	complied
XVII	The replenishment study not conducted by the concerned district, whenever replenishment study conducted, submit the table of estimation of sand resources in pre monsoon & post monsoon period for the sand deposit with respect to the Reduce Level.	Agreed. Once replenishment study conducted table of estimation of sand resources in pre- monsoon and post-monsoon period for the sand deposit with respect to the reduce level will be submitted. minable depth is being taken only 1-meter bgl as replenishment study not carried during last three years.
XVIII	FMISC (Flood Management Improvement Support Centre), an R &D unit under WRD (Water Resource Department) has high resolution satellite maps of river system of Bihar. These comprises of recent as well as of past years. District authorities may contact the office of FMISC for procurement of geo referenced map of the river to support the DSR.	As per direction of the FMISC (Flood Management Improvement Support Centre), an R&D unit under WRD (Water Resource Department) high resolution satellite images are downloaded from www.sentinel-hub.com as **Annexure-IX (Page No.- 94 to 114)**

SEIAA, Bihar

INDEX

Sl. NO.	Description	Page No.
1	Introduction	8
2	Overview of Mining Activity in the District	13
3	The list of mining leases in the district with location, area and period of validity	14
4	Details of royalty or revenue received in last three year	17
5	Details Of Production of Sand Or Bajri Or Minor Mineral In Last Three Years	18
6	Process of deposition of sediments in the rivers of the district	19
7	General profile of the district	26
8	Land Utilization pattern in the district: Forest, Agriculture, Horticulture, Mining etc.	31
9	Physiography of the district	34
10	Rainfall: month-wise	40
11	Geology & mineral wealth	42
12	Drainage system with description of main rivers	54
13	Salient features of important rivers and streams	56

TABLE

Table No.	Description	Page No.
1	list of mining leases in the district with location, area and period of validity	14
2	Royalty or revenue received in last three years	17
3	Production of sand or bajri or minor mineral in last three years	18
4	Geographic profile of the district	27
5	Demographic profile of Jamui (census 2011)	28
6	Geological Succession and their occurrences distribution	42
7	River or stream of sand source	44
8	District wise availability of sand	45
9	Drainage pattern & sand source	54
10	Salient features of rivers/streams	56
11	Portion of river recommended for mineral concession	57
12	Mineral potential of the Jamui district	59
13	Annual deposition of sand	60
14	Distance of Proposed Sand Ghats from Eco Sensitive Zone/ Wild Life Sanctuary/ Protected Forest Area	60

SEIAA, Bihar

FIGURE

Figure No.	Description	Page No.
1	Mineral Map	13
2	Sedimentation process	19
3	District wise river basin of Bihar	20
4	Erosion of riverbed and deposition of sand mineral	21
5	Bed load particles travel with water flow	22
6	Sediment particles in strong water flow	23
7	Sediment that will remain suspended even when there is no water flow	23
8	Administrative Block Map, Jamui	27
9	Transportation Map, Jamui	28
10	Forest Cover Map, Bihar	31
11	Agriculture Map of Bihar	31
12	Bihar Horticulture Map	32
13	Wild Life Protected Area Map, Bihar	33
14	Geology of Bihar Map	34
15	Hydrological map	35
16	Pre & post monsoon water level map of Jamui	38
17	Soil Map, Jamui	38
18	Monthly temperature of Jamui	40
19	Monthly average rainfall of Jamui	41
20	Nakti Dam Bird Sanctuary	52
21	Nagi Dam Bird Sanctuary	53

ANNEXURE

Annexure	Description	Page No.
1	Details of Sand/M-Sand Sources	62
2	List of Potential Mining Leases (existing & proposed)	64
3	Cluster & Contiguous Cluster details	69
4	Transportation Routes for individual leases and leases in Cluster	71
5	Final List of Potential Mining Leases (existing & proposed)	76
6	Final List of Cluster & Contiguous Cluster	80
7	Final Transportation Routes for individual leases and leases in Cluster	82
8	Detail of overlapped area of proposed and existing sand ghats	87
9	High Resolution sand ghats satellite Image	88
10	Geo-tagged photographs of proposed sand ghats	115
11	Distance regarding certificates form Forest Dept.	124
12	An undertaking regarding aquatic animals	127
13	Specific Gravity of Sand test report	128
14	Advertisement of DSR in Public domain	136

PREFACE

The purpose and structure of District Survey Report has been discretely discussed under Para 7(iii) (a) and Annexure (x) of the notification issued by Ministry of Environment, Forest and Climate Change, Government of India on 15th January 2016 to which the Central Government makes the amendments by Notification dated 25 July 2018. The District Survey Report (DSR) is to be prepared in every district for each minor mineral. It will guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. The purpose of District Survey Report (DSR) is identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited.

The District Survey Report (DSR) is comprised of secondary data published and endorsed by various departments and websites about geology of the area, mineral wealth details, details of lease and mining activity in the district and revenue of mineral along with the primary data collected from ground survey with modern technology like satellite imagery, DGPS etc. This report also contains details of climatic conditions, hydrology, land pattern, forest, rivers, soil, agriculture, road, transportation, irrigation etc. The DSR would also help to calculate the annual rate of replenishment wherever applicable and allow time for replenishment.

District Survey Report of Sand Mining or River Bed Mining in the district is prepared in accordance with S.O. 141(E) dated 15.1.2016, notification S.O. 3611(E) dated 25.07.2018 of MoEF&CC, GoI & Enforcement and Monitoring Guidelines for Sand Mining 2020

Objective

The Main objective of the preparation of District Survey Report is to ensure the following:-

1. Identification of River Bed Sand with geo references.
2. Identification of other mineral resources if available.

SEIAA, Bihar

INTRODUCTION

The Ministry of Environment Forest & Climate Change formulated the Sustainable Sand Management Guidelines 2016, which focuses on the Management of Sand Mining in the Country. It has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring.

Section 23 C of MMDR, Act 1957 empowered the State Government to make rules for preventing illegal mining, transportation and storage of minerals. It has been observed that there was large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled illegal mining leads to loss of revenue to the state and degradation of the environment.

India is developing at a faster pace and much technological advancement has already been taken place in the surveillance and remote monitoring in the field of mining. Thus, it is prudent to utilize the technological advancement for the effective monitoring of the mining activities particularly sand mining.

Use of latest remote surveillance and IT services helps in effective monitoring of the sand mining activity in-country and also assist the government in controlling the illegal mining activity in the country. Thus, there is a need for an effective policy for monitoring of sand mining in the Country which can be enforced on the ground. These guidelines focus on the effective monitoring of the sand mining since from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public. Further, the effective monitoring and enforcement require efforts from not only Government agencies but also by consumers and the general public.

Preparation of District Survey Report:

Sustainable Sand Mining Guidelines, 2016 and **Enforcement & Monitoring Guideline for Sand Mining, 2020** issued by MoEF & CC require preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease/LoI. The guidelines emphasize detailed procedure to be followed

SEIAA, Bihar

for the purpose of identification of areas of aggradations/ deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited.

Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining; identifying measures for protection of environment and ecology and determining measures for protection of bank erosion, benchmark (BM) with respect to mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed.

Therefore, preparation of District Survey Report is a very important step and sustainable sand mining in any part of the country will depends on the quality of District Survey Report.

Considering the importance of district survey report, the Ministry of Environment Forest and climate change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand Mining.

a) District Survey Report for sand mining shall be prepared before the auction/e-auction/grant of the mining lease/Letter of Intent (LoI) by Mining department or department dealing the mining activity in respective states.
b) The first step is to develop the inventory of the River Bed Material and Other sand sources in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand. The source will include rivers, de-siltation of reservoir/dams, Patta lands/ Khatedari land etc.
c) District Survey Report is to be prepared in such a way that it not only identifies the mineral-bearing area but also define the mining and no mining zones considering various environmental and social factors.
d) Identification of the source of Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/Khtedari lands. The details in case of Rivers such as [name, length of river, type (Perennial or

SEIAA, Bihar

Non-Perennial), Villages, Tehsil, District], in case of Lakes, Ponds, Dams, De-silting locations [Name, owned/maintained by (State Govt./PSU), area, Villages, Tehsil, District] in case of Patta land/ Khtedari lands [Owner Name, Sl. No, Area, Agricultural/Non-Agricultural, Villages, Tehsil, District], in case of M-Sand Plant [Owner Name, Sl. No, Area, Quantity/Annum, Villages, Tehsil, District.

e) Defining the sources of Sand in the district is the next step for identification of the potential area of deposition/aggradations wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and original ground level (OGL) to be recorded and area of aggradation/deposition needs to be ascertained by comparing the level difference between the outside riverbed OGL and water level. Once the area of aggradations / deposition is identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central 3/4th part of the river, width needs to be identified on a map. Out of the 3/4th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining 1/4th area needs to be kept as no mining zone for the protection of banks. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

g) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc. and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area.

SEIAA, Bihar

h) Demand and supply of the river bed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered.

i) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.

j) The final area selected for the mining should be then divided into mining lease as per the requirement of State Government. It is suggested the mining lease area should be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradation into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promote illegal mining.

k) Cluster situation shall be examined. A cluster is formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than10 Ha.

l) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed when one cluster is at a distance of 2.5 Km from the other cluster.

m) The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibility of replenishment of material. In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. ***For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market***. Cluster situation as mentioned in **Annex-III** above is also applicable for the mining in Patta land/Khatedari land.

n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at

SEIAA, Bihar

this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.

o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc., shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as Annexure-II. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in Annexure-III. The details of the transportation need to be provided as in Annexure IV.

p) Public consultation- The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. ***The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public***. The comments so received shall be placed before the sub-divisional committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatedari land, desiltation location (ponds/lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per Annexure-V. The details regarding cluster and contiguous cluster provided in Annexure-VI. The details of the transportation provided in Annexure-VII.

q)

SEIAA, Bihar

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Jamui is one of the important districts in Bihar where different types of ores & Minerals are found. The hills of Laxmipur and Khaira are comprised of archaenschists including the iron ore. In Laxmipur, Sono and Chakai are the chief formation in gneiss basement complex. Mica mines lie in the portion of adjoining Hazaribag district. Beside these there is possibility of availability of lime stone, China clay, Magnese, Graphic Pegmite Termoline quartz etc. in the southern hills of the district. Ore of gold has been observed in Sono Block. Hilly areas of Jamui are also acquainted with valuable stone like Marble, Topaz, and American diamond, Sfatik, Manic etc. coals are found in hilly area of Barhat block.

The iron ore deposits reported from Mahjos village, Gold from Sono, Mica from Harni village and Beryl from Harni & its surrounding villages

Sand is one of the major mineral of Jamui district of Bihar. Yellow sand in Kiul, Barnar, Bunbuni, Sukhnar, Ulai, Anjana, Gajhi & Bajan are major source of revenue collection in district as well as soil / clay is actively mined for bricks and pottery industry



FIGURE 1: MINERAL MAP OF BIHAR

SEIAA, Bihar

THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA AND PERIOD OF VALIDITY

Detail of existing sand mines is as presented below-

Table No.1: List of Existing Sand Ghat in Jamui district

Sl. No.	Sand ghat /cluster	EC approved sand ghat	River	Area (Ha)	Co-ordinate	Latitudes	Longitudes	validity of EC	Leasee Name & address
1	Sand Ghat/Cluster-1	Satti and Ghadhi	Ulai	22	A	24°45'56.09" N	86°23'20.59" E	23-10-2025	M/S westlink Trading Pvt. Ltd. Kailshpuri, Banda, Uttar Pradesh, Pin: - 210001
					B	24°45'58.35" N	86°23'20.18" E		
					C	24°45'16.88" N	86°24'04.47" E		
					D	24°45'16.42" N	86°23'52.19" E		
2	Sand Ghat/Cluster-2	Gaushala	Ulai	24	A	24°46'00.30" N	86°21'50.74" E	05-11-2025	
					B	24°46'04.78" N	86°21'56.74" E		
					C	24°46'55.79" N	86°22'44.07" E		
					D	24°45'51.90" N	86°22'44.42" E		
3	Sand Ghat/Cluster-3	Chardhara And Amba	Ulai	23.5	A	24°46'30.88" N	86°21'04.83" E	05-11-2025	
					B	24°46'34.15" N	86°21'07.24" E		
					C	24°46'21.06" N	86°21'42.75" E		
					D	24°46'18.03" N	86°21'36.08" E		
4	Sand Ghat/Cluster-4	Sair And Pandeydih	Ulai	24	A	24°47'58.76" N	86°19'44.51" E	23-10-2025	
					B	24°48'00.45" N	86°19'45.30" E		
					C	24°47'37.53" N	86°20'34.18" E		
					D	24°47'27.38" N	86°20'27.02" E		
5	Sand Ghat/Cluster-5	Kali And Durga Mandir	Ulai	24	A	24°51'02.87" N	86°17'54.85" E	23-10-2025	
					B	24°51'10.32" N	86°18'01.98" E		
					C	24°50'28.14" N	86°18'40.97" E		
					D	24°50'22.83" N	86°18'33.74" E		
6	Sand Ghat/Cluster-6	Lotan And Ratanpur	Ulai	24	A	24°54'43.80" N	86°16'34.32" E	23-10-2025	
					B	24°54'46.82" N	86°16'37.54" E		
					C	24°54'13.09" N	86°16'47.33" E		
					D	24°54'15.18" N	86°16'40.52" E		
7	Sand Ghat/Cluster-7	Oraiya	Barnar	24	A	24°40'59.07" N	86°19'09.01" E	23-10-2025	
					B	24°40'59.10" N	86°19'20.36" E		
					C	24°40'43.05" N	86°19'29.31" E		
					D	24°40'35.44" N	86°19'25.00" E		
8	Sand Ghat/Cluster-8	Raksha Oraiya	Jharjhni	24	A	24°40'24.03" N	86°19'51.33" E	26-04-2026	
					B	24°40'25.42" N	86°19'54.65" E		
					C	24°39'32.39" N	86°19'49.56" E		
					D	24°39'42.84" N	86°19'34.65" E		
9	Sand Ghat/Cluster-9	Liptaya	Barnar	22	A	24°41'27.51" N	86°18'31.74" E	23-10-2025	
					B	24°41'38.23" N	86°18'39.41" E		
					C	24°41'30.83" N	86°18'56.03" E		
					D	24°41'19.05" N	86°18'46.89" E		
10	Sand Ghat/Cluster-10	Dumri	Barnar	24	A	24°42'27.96" N	86°18'12.94" E	23-10-2025	
					B	24°42'29.70" N	86°18'23.87" E		
					C	24°42'05.34" N	86°18'27.34" E		
					D	24°42'04.02" N	86°18'15.97" E		
11	Sand Ghat/Cluster-11	Judagi	Barnar	32.5	A	24°43'46.98" N	86°18'01.27" E	05-11-2025	
					B	24°43'50.28" N	86°18'05.20" E		
					C	24°43'25.61" N	86°18'17.96" E		
					D	24°43'22.80" N	86°18'08.85" E		

SEIAA, Bihar

12	Sand Ghat/Cluster-12	Sono	Barnar	21	A	24°44'22.38" N	86°17'28.47" E	05-11-2025
					B	24°44'25.23" N	86°17'37.26" E	
					C	24°44'06.68" N	86°17'47.27" E	
					D	24°44'03.13" N	86°17'33.35" E	
13	Sand Ghat/Cluster-13	Mandhata	Barnar	23.5	A	24°45'20.38" N	86°17'32.17" E	23-11-2025
					B	24°44'59.68" N	86°17'47.20" E	
					C	24°44'43.18" N	86°17'39.52" E	
					D	24°44'45.24" N	86°17'30.45" E	
14	Sand Ghat/Cluster-14	Balthar And Hajaro	Barnar	22.5	A	24°45'39.62" N	86°17'29.71" E	05-11-2025
					B	24°45'40.65" N	86°17'38.29" E	
					C	24°45'19.52" N	86°17'46.69" E	
					D	24°45'16.96" N	86°17'34.53" E	
15	Sand Ghat/Cluster-15	Kenduaa	Barnar	23	A	24°46'37.82" N	86°17'59.92" E	05-11-2025
					B	24°46'33.05" N	86°18'05.96" E	
					C	24°46'00.76" N	86°17'50.56" E	
					D	24°46'5.43" N	86°17'44.78" E	
16	Sand Ghat/Cluster-	Dinari	Barnar	24	A	24°47'41.66" N	86°17'39.52" E	23-10-2025
					B	24°47'42.57" N	86°17'50.29" E	
					C	24°47'20.33" N	86°17'52.00" E	
					D	24°47'18.22" N	86°17'42.82" E	
17	Sand Ghat/Cluster-17	Simriya	Barnar	24	A	24°51'16.82" N	86°16'21.74" E	05-11-2025
					B	24°51'22.85" N	86°16'35.21" E	
					C	24°51'08.00" N	86°16'45.03" E	
					D	24°51'01.20" N	86°16'31.11" E	
18	Sand Ghat/Cluster-18	Ghanshyam than Koluha	Barnar	24	A	24°51'48.70" N	86°16'01.41" E	23-10-2025
					B	24°51'55.99" N	86°16'11.93" E	
					C	24°51'40.98" N	86°16'26.30" E	
					D	24°51'32.84" N	86°16'15.95" E	
19	Sand Ghat/Cluster-19	Jogidih numar	Anjana	22.5	A	24°57'20.65" N	86°16'08.90" E	23-10-2025
					B	24°57'20.86" N	86°16'12.23" E	
					C	24°56'49.28" N	86°17'13.31" E	
					D	24°56'47.93" N	86°17'12.15" E	
20	Sand Ghat/Cluster-20	Urha And Bharari	Anjana	23.5	A	24°56'31.18" N	86°17'11.84" E	05-11-2025
					B	24°56'30.42" N	86°17'15.26" E	
					C	24°55'17.55" N	86°18'22.31" E	
					D	24°55'17.67" N	86°18'18.01" E	
21	Sand Ghat/Cluster-21	Panbharva	Kiul	22	A	24°48'16.73" N	86°09'30.21" E	23-10-2025
					B	24°48'20.55" N	86°09'26.41" E	
					C	24°48'34.70" N	86°09'58.51" E	
					D	24°48'25.71" N	86°09'58.31" E	
22	Sand Ghat/Cluster-22	Diddheshvar	Kiul	23.5	A	24°48'17.17" N	86°10'34.50" E	23-10-2025
					B	24°48'24.10" N	86°10'26.57" E	
					C	24°48'49.48" N	86°10'51.85" E	
					D	24°48'44.49" N	86°10'53.20" E	
23	Sand Ghat/Cluster-	Baribag	Kiul	24	A	24°48'43.91" N	86°11'24.11" E	26-04-2026
					B	24°48'54.46" N	86°11'29.00" E	
					C	24°48'34.91" N	86°11'56.14" E	
					D	24°48'27.86" N	86°11'51.83" E	
24	Sand Ghat/Cluster-24	Jaljoga	Kiul	23	A	24°49'19.20" N	86°12'19.02" E	23-10-2025
					B	24°49'16.27" N	86°12'25.45" E	
					C	24°48'40.36" N	86°12'18.47" E	
					D	24°48'43.21" N	86°12'12.31" E	
25	Sand Ghat/Cluster-25	Pakari	Kiul	24	A	24°49'39.35" N	86°12'51.94" E	05-11-2025
					B	24°49'43.28" N	86°12'56.79" E	
					C	24°49'17.11" N	86°12'49.36" E	
					D	24°49'19.38" N	86°12'48.82" E	
26		Bhaur	Kiul	23.5	A	24°50'29.61" N	86°12'45.02" E	

SEIAA, Bihar

	Sand Ghat/Cluster-26				B	24°50'26.47" N	86°12'50.45" E	23-10-2025	
					C	24°50'03.26" N	86°12'41.05" E		
					D	24°50'03.93" N	86°12'29.79" E		
27	Sand Ghat/Cluster-27	Parsa	Kiul	24	A	24°51'14.62" N	86°13'10.07" E	23-10-2025	
					B	24°51'13.53" N	86°13'15.10" E		
					C	24°50'42.76" N	86°13'11.72" E		
					D	24°50'39.89" N	86°12'59.62" E		
28	Sand Ghat/Cluster-28	Kendih	Kiul	23	A	24°52'08.81" N	86°13'42.69" E	23-10-2025	
					B	24°52'06.55" N	86°13'49.30" E		
					C	24°51'44.24" N	86°13'37.48" E		
					D	24°51'48.44" N	86°13'26.30" E		
29	Sand Ghat/Cluster-29	Nariyana Chaucho	Kiul	21.5	A	24°53'01.76" N	86°13'41.38" E	23-10-2025	
					B	24°53'01.97" N	86°13'52.35" E		
					C	24°52'39.63" N	86°13'55.04" E		
					D	24°52'39.42" N	86°13'44.29" E		
30	Sand Ghat/Cluster-30	Garsanda	Kiul	24	A	24°54'14.91" N	86°14'17.36" E	05-11-2025	
					B	24°54'10.08" N	86°14'23.27" E		
					C	24°53'48.64" N	86°14'05.06" E		
					D	24°53'51.92" N	86°13'56.38" E		
31	Sand Ghat/Cluster-31	Smarak	Kiul	22	A	24°54'56.31" N	86°14'13.76" E	05-11-2025	
					B	24°54'58.05" N	86°14'27.38" E		
					C	24°54'39.26" N	86°14'30.87" E		
					D	24°54'37.12" N	86°14'19.28" E		
32	Sand Ghat/Cluster-32	Kalyanpur	Kiul	21.5	A	24°55'33.79" N	86°14'21.21" E	23-10-2025	
					B	24°55'25.63" N	86°14'35.60" E		
					C	24°55'14.94" N	86°14'28.90" E		
					D	24°55'22.50" N	86°14'10.97" E		
33	Sand Ghat/Cluster-33	Bihari	Kiul	20.5	A	24°56'02.97" N	86°14'43.05" E	05-11-2025	
					B	24°56'00.37" N	86°14'56.89" E		
					C	24°55'41.17" N	86°14'46.38" E		
					D	24°55'42.90" N	86°14'37.68" E		
34	Sand Ghat/Cluster-34	Katauna	Kiul	22.5	A	24°56'14.94" N	86°15'09.64" E	23-10-2025	
					B	24°56'41.56" N	86°15'20.80" E		
					C	24°56'18.21" N	86°15'18.97" E		
					D	24°56'18.57" N	86°15'07.95" E		
35	Sand Ghat/Cluster-35	Satgama	Kiul	23.5	A	24°57'02.44" N	86°14'30.56" E	23-10-2025	
					B	24°57'06.52" N	86°14'47.77" E		
					C	24°56'55.32" N	86°14'55.05" E		
					D	24°56'48.50" N	86°14'35.89" E		

Source: District Mining Office, Jamui

SEIAA, Bihar

DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS

Table No.- 2 Royalty or revenue received in last three years			
Financial Year	(INR in Lakh)		
	2018-19	2019-20	2020-21
Sand	**0.00**	**1789.13**	**0.00**
Source: District Mining Office, Jamui			

SEIAA, Bihar

DETAIL OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS

Table No.- 3 Production of sand in last three years				
Sl. No.	Name of Minor Mineral	Production in MT		
		2018	2019	2020
1.	**Sand**	**0.00**	**720335**	**0.00**
Source: District Mining Office, Jamui				

Status of demand and Supply of Sand in the district

Due to rapid infrastructure development, the demand of construction material has increased. To supply this demand, mining of sand is done. This project operation will provide employment directly and indirectly to the people residing in vicinity, thus improving the Socio-economic status of the area.

The demand for sand is ever growing with the growth of the infrastructure sector. The mineral is used mainly in the construction activities like buildings, bridges etc. The requirement for the mineral is always high in the cities and towns. Therefore, there is always a good demand of the mineral in the domestic market.

As proposed around **127.6 lakh MT sand is to be extract annually from Kiul, Barnar, Ulai, Sukhnar, Bajan. Anjana, Bunbuni & Gajhi rivers in Jamui district of Bihar** and supplied to the whole district as well as neighbouring district.

There are several infrastructure projects like Road, Railway, bridge, govt. & private institution, building etc are under construction in the district and some are also to be in stated in near future. Since sand is one of the most important construction materials, there is huge demand in the district as well as in neighbouring districts like Sheikhpura, Munger, Begusarai, Samastipur, Dabhanga, Khagaria and other districts of Bihar.

SEIAA, Bihar

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Deposition of Sediments in the rivers:

Sediment is natural process and necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low.

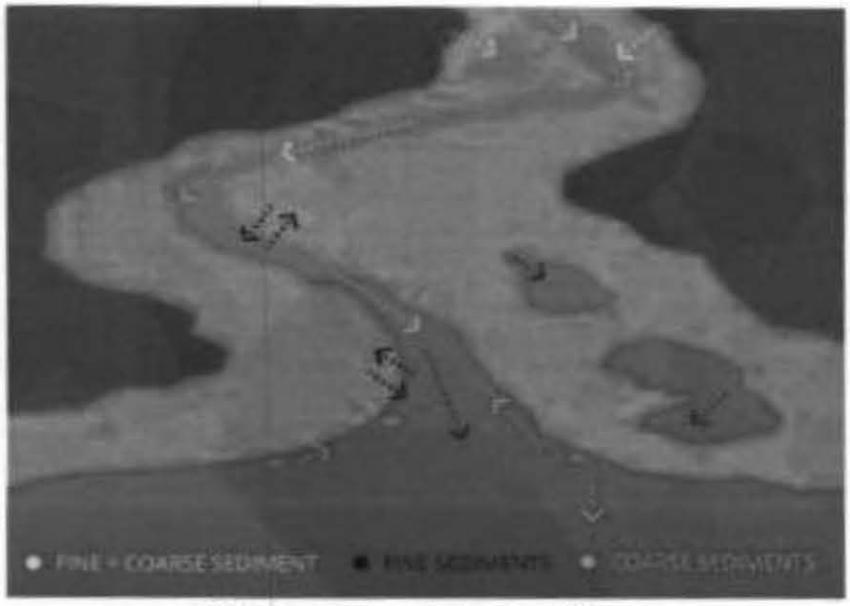


FIGURE 2: SEDIMENTATION PROCESS

Sediment transportation and Deposition is depends upon various factors like Slope of the Area, Annual Rainfall, Lithology, flow intensity of River, Geomorphology, Soil, Geology and Land use.

Jamui has a typical topography. The soil pattern of the district differs widely due to topography of the region. Important soil is sandy soils and alluvial soil of heavy texture having natural or alkaline reaction. Jhajha, Khaira, Sono, Chakai, Laxmipur block contain forest soil. A sizeable part of the plain of northern side of the district lies in the Basin of Kiul River and its tributaries.

SEIAA, Bihar

Geologically, the district forms part of the vast Indo-Gangetic alluvial tract. The origin of the Indo Gangetic tract as a whole is now attributed to the sag in the earth crust formed in the upper Eocene times between Gondwana land and the raising of Himalaya belt. The economic minerals found in the district are Sand and Soil. The sand deposits being an integral part of the dynamic river system to which it belongs. Therefore, as a part of natural cycle, the monsoon flow of every river carries with it replenishment of silt and washed out soil and clay from upstream areas in the catchment. This silt shall be removed during the sieving of sand before it is loaded into truck/tipper/trailer to carry to the consumers.

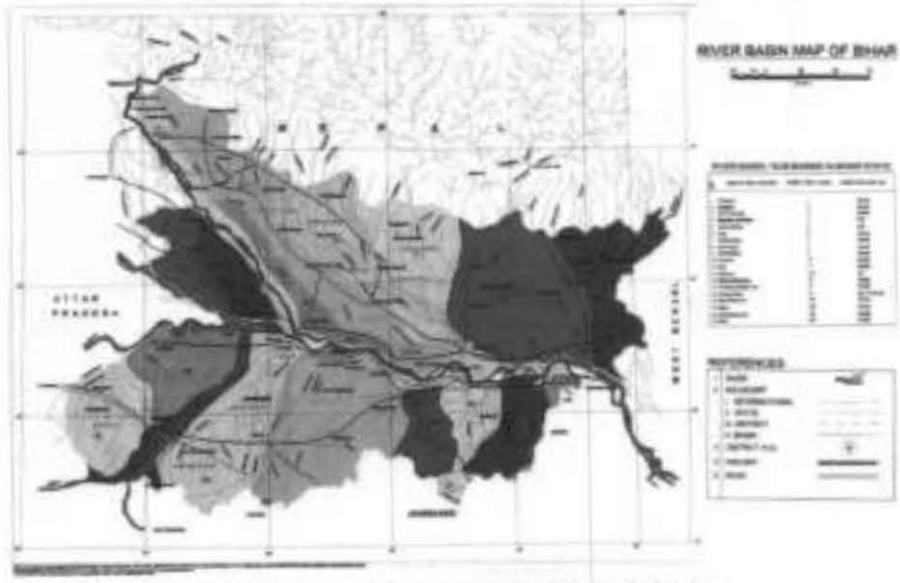


FIGURE 3: DISTRICT WISE RIVER BASIN OF BIHAR

The river sand exposed in the river beds of Ganga, Burhi Gandak, Bagmati, Koshi etc. And surrounding areas is the product of the deposition of the sediments brought and deposited in the flood plains of River Ganga. These sediments are of recent geological formation. The litho-units exposed within the river and surrounding areas have formed as water borne sediments brought by flood water during rainy season every year and deposited in riverbed. The litho units encountered in the riverbed and surrounding areas belongs to the Shiwalik super groups. The size of the sediments towards the source i.e. host rock is course and at the tail end of the river the grain size is reduced to smaller sizes resulted in the formation of clay beds. The following sequences have been observed in the area, i.e. Top soil/ Alluvium followed by sand deposition Sand and silt are deposited in the middle of the river whereas fine sand and soil are deposited at

SEIAA, Bihar

the fringe of the riverbanks. Soil/ alluvium varying in thickness from 0.20m to 0.60m constitute the top horizons in the area suitable for agriculture. River Ganga meanders through the area exposing the alluvium and soil at the banks. Sand is found in the river bed up to a depth of more than 3.0 m. The major part of bed remains dry as water flows in a single stream during the non monsoon seasons. Only during rainy seasons the entire flood plain has water, when there will be no mining done.

Constituents of minor mineral

The work done by a river consists of the following

1. Erosion
2. Transport of the material produced by erosion
3. Accumulation (deposition) of the transported material Constituents of minor mineral

The work done by a river consists of the following:

The erosion and transport of material go hand in hand with the deposition of the latter. There is none a single river that doesn't carry fragmental material and deposit it. Even at the early stages, in the development of a river, when the erosion and transport definitely prevails over accumulation, the material carried by the river is deposited in some of the sections. During youthful stage of the river, these deposits are unstable and when the volume of water and stream velocity increases (during flood), they may start moving again downstream. The load carried by a stream includes the rock waste

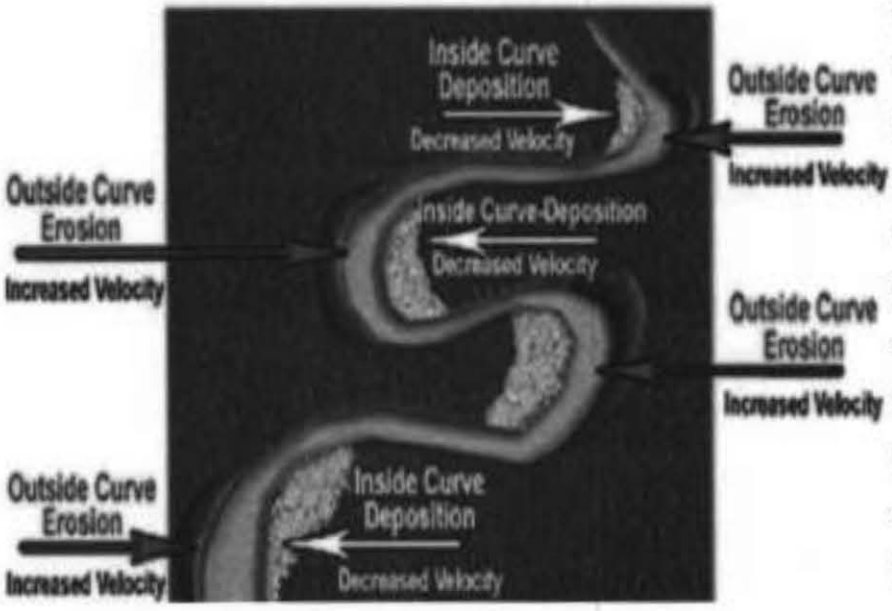


FIGURE 4: EROSION OF RIVERBED AND DEPOSITION OF SAND MINERAL

SEIAA, Bihar

supplied to it by rain wash, surface creep, slumping etc., by tributaries , external agents such as glaciers, wind, together with, acquired by its own erosion work. The term load doesn't specifically mean the maximum amount of debris, that a stream could carry in a given set of conditions, that amount is referred to as the transporting power or capacity of a river.

Sediment Transportation

Sediment transport is the movement of organic and inorganic particles by water. In general, greater the flow more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material. Another name for sediment transport is sediment load. The total load includes all particles moving as bed load, suspended load, and wash load.

a) **Bed Load**: Bed load is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterways. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bed load occurs when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bed load transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bed load. In situations where the flow rate is strong enough, some of the smaller bed load particles can be pushed up into the water column and become suspended.



FIGURE 5: BED LOAD PARTICLES TRAVEL WITH WATER FLOW

SEIAA, Bihar

b) **Suspended Load:** While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows



FIGURE 6: SEDIMENT PARTICLES IN STRONG WATER FLOW

c) **Wash Load**: The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow moving rivers is typically due the wash load. When the flow rate increases (increasing the suspended



FIGURE 7: SEDIMENT THAT WILL REMAIN SUSPENDED EVEN WHEN THERE IS NO WATER FLOW

SEIAA, Bihar

load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location.

The rate of sediment transport typically increases as a power function of flow; that is, a doubling of flow typically produces more than a doubling in sediment transport and most sediment transport occurs during floods. The environmental impacts from in-stream mining can be avoided, if the annual bed load is calculated and aggregate extraction is restricted to that value or some portion of it. To accurately limit extraction to some portion of bed load, the amount of sediment that passes the in-stream mining site during a given period of time must be calculated. There is a large amount of uncertainty in the process of calculating annual rates of bed load transport. How much coarse material is moved, how long it remains in motion as also how far it moves depends on the size, shape & packing of the material and the characteristics of the river flow. Downstream movement commonly occurs as irregular bursts of short-distance movement separated by longer periods, when the particles remain at rest. Because bed load changes from hour-to-hour, day-to-day, and year-to-year, estimating annual bed load rates is a dynamic process involving careful examination. Constant variations in the flow of the river make the channel floor and riverbanks a dynamic interface, where some materials are being eroded while others are being deposited. The net balance of this activity, on a short-term basis, is referred to as scour or fill. On a long-term basis, continued scour results in erosion (degradation), while continued fill results in deposition (aggradation). A general indicator of the stability of a stream relates to the amount of vegetation present. Gravel bars that are vegetated or where the gravel is tightly packed, generally indicate streams, where the gravel supply is in balance. Streams with excessive gravel generally have gravel bars with little or no vegetation, and are surfaced with loosely packed gravel.

Annual Replenishment of Mineral in River Bed Area/Sedimentation

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water).

SEIAA, Bihar

Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs. The term is commonly used as a synonym for sedimentary petrology and sedimentology.

Sedimentation is generally considered by geologically, in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments. The factors which affects the "Computation of Sediment":

a) Geomorphology & Drainage Pattern: The following geomorphic units plays important role:
   - → Structural Plain
   - → Structural Hill
   - → Structural Ridge
   - → Denudation Ridge & Valley
   - → Plain & Plateau of Gangetic plane
   - → Highly Dissected pediment
   - → Un-dissected pediment

b) Distribution of Basin Area River wise

c) Drainage System/Pattern of the area, Rainfall & Climate: Year wise Rainfall data for previous 10 years of Gangetic Basin/River

d) As per Dandy & Bolton study "Sediment Yield" can be related to
   - → Catchment Area and
   - → Mean Annual Run-off

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin.

SEIAA, Bihar

GENERAL PROFILE OF THE DISTRICT

Introduction

Jamui district is one of the thirty-eight districts of Bihar state. Jamui town is the administrative headquarters of this district. The area of the district is 3098 Sq. km.It lies between 24°23'15" and 25°08'30" North Latitude and 85°49'30" and 86°38'00" East Longitude. The district is bounded in the north by Sheikhpura, Lakhisarai and Munger district, in the west by Nawada district, in the east by Banka district and in the south by Jharkhand state boundary .The district comprises 10 administrative blocks, namely Jamui, Khaira, Gidhour, Jhajha, Sono, Chakai, Barhat, Laxmipur, Sikandra, Aliganj. Jamui township is the headquarters of the district.

Historical Background

Various literatures indicate the fact that Jamui was known as Jambhiyaagram. According to Jainism, the 24th Tirthankar lord Mahavir got divine knowledge in Jambhiyagram situated on the bank of river named Ujjihuvaliya. Another place of a divine light of Lord Mahavir was also traced as "Jrimbhikgram "on the bank of Rijuvalika River which resembles Jambhiyagram Ujjhuvaliya.

According to available literature, Jamui was related to Gupta and Pala rulers before 12th century. But after that this place became famous for Chandel rulers. Prior to Chandel Raj, this place was ruled by Nigoria, who was defeted by Chandels and the dynasty of Chandels founded in 13th century. The kingdom of Chandels spread over the whole of Jamui. Thus Jamui has a glorious history.

Administrative

Jamui district is one of the thirty-eight districts of Bihar state. Jamui town is the administrative headquarters of this district. The area of the district is 3132.8 Sq. km. Jamui Township is the headquarters of the district.

SEIAA, Bihar

Blocks: - The district comprises 10 administrative blocks, namely Jamui, Khaira, Gidhour, Jhajha, Sono, Chakai, Barhat, Laxmipur, Sikandra, Aliganj.

Number of Panchayats and villages in Jamui district are 153 and 1506 respectively.



FIGURE 8: ADMINISTRATIVE BLOCK MAP

Economic Profile

Agriculture is the mainstay of the economy. The main products are food grains, pulses, jackfruit, Mahua, etc. Jamui is one of the prominent manufacturers of Bidi & cement, iron & steel, salt, sugar, cotton & woollen textiles, kerosene oil, etc. Beedi rolling is widely done by women belonging low income families. Traditional small-scale industries are making utensil, iron grill & gates, etc. Minerals found are iron ore, coal, gneiss basement complex, ore of gold, marble, topaz and American diamond, Sfatik, Manic etc. Jamui has untapped reserves of mica, coal, gold, iron-ores, lime stone, china clay, manganese, graphic pegmite, termoline quartz, etc.

Geographic

Table 4: Geographic profile of Jamui	
Coordinates	Latitude: 24°23'15" to 25°08'30" N Longitude: 85° 49'30" to 86 °38'00" E
Temperature	45° C (Max.) 10° C (Min.)
Average rainfall	1102 mm
Area	3098 sq. Km
Altitude	36 meters.

Source: District Profile, Jamui

SEIAA Bihar

Demographic

Table 5: Demographic profile of Jamui (census 2011)	
Population	1756078
Population density	567 person/ km2
Population growth	25.54%
Sex ratio	921 per 1000 male
Literacy rate	62.16%
Languages spoken	Hindi, Angika and Urdu
Source: District Profile, Jamui	

Transport Infrastructure

Jamui district of Bihar is well connected with Road and railway network. One can easily reach by road from many major cities of India through NH-333, NH-333A and NH-114A.

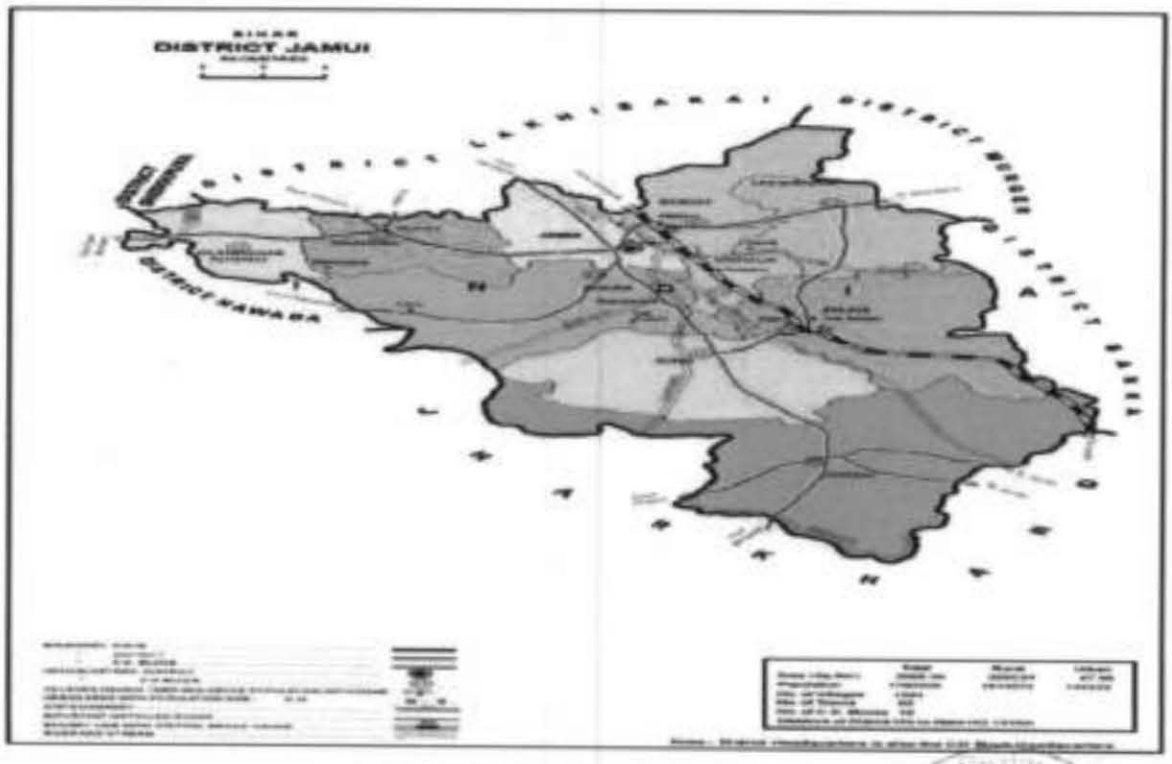


FIGURE 9: TRANSPORTATION MAP, JAMUI

SEIAA, Bihar

The Jamui is well connected with state capital and major cities of India through rail network. Jamui station located on Delhi-Howrah main rail road is located between Jhajha and Kiul station. More than two dozen trains are available daily to reach Jamui by railroad. Jamui railway station can be reached by road from Jamui city via the road. For this it would be appropriate to use auto and other vehicles from Jamui Station.

Jayaprakash Narayan International Airport in Patna is nearest airport around 161 kilometres in North-West direction.



Education

Major educational centres are located in the town of Jamui, which includes educational institutions and vocational institutions where students can learn music, dance, art and craft. Besides many governments' schools run, there are some colleges for the higher education, including a women's college.

Heritage & Tourism

Some of the tourist places of Jamui district are:

Giddheshwar Temple: The town of Gidhaur was the seat of kings during the British Raj. There is a famous temple of Lord Shiva situated on the top of stone boulders.

Simultalla: Jamui is dotted with hills and the small retreat town of Simultala falls within the Jhajha block. It is a beautiful hill station famous for its pleasant weather. It is supposed to be the Tapo-Bhumi of Sri Ram Krishna Paramhans, who founded Tara Math of Devi Bhagvati.

SEIAA, Bihar

Jain Mandir Dharmsala: Situated on the way of Kshatriya Kund Gram, the birth place of Lord Mahavira, is an ancient rest house (Dharmsala) of 65 rooms constructed for the Jain pilgrims. A Mandir of Lord Mahavir is inside the Dhamsala.

Kali Mandi Malaypur: Temple of goddess Kali is situated at village Malaypur. Kali Mela is held here every year.

Minto Tower in Gidhaur: Minto tower was built by the Maharaja of Gidhaur in 1909 to commemorate the visit of the then British Viceroy Lord Irwin to Gidhaur. It is in the middle of Gidhaur market. There are 12 large pillar and large sitting lions are placed on four outer pillar. The tower holds four-faced hour-bell clock.

Patneshwar Mandir: This is a temple of Lord Shiva situated 5 km from Jamui town. Nagi Dam Wildlife Sanctuary and Nakti Dam Wildlife Sanctuary spread over an area of 7.9 sq. km and 3.3 sq. km. respectively notified in 1987.

SEIAA, Bihar

LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.

Forest

The District contains 204734 acre forest which covers 21.28% of the total area. Forest resources are like leaf for plate, Kendu leaf, Building wood, furniture wood, rubber Gond etc.

In 1987 Jamui district became home to the Nagi Dam Wildlife Sanctuary, which has an area of 7.9 km². It is also home to the Nakti Dam Wildlife Sanctuary, which was established in 1987 and has an area of 3.3 km².

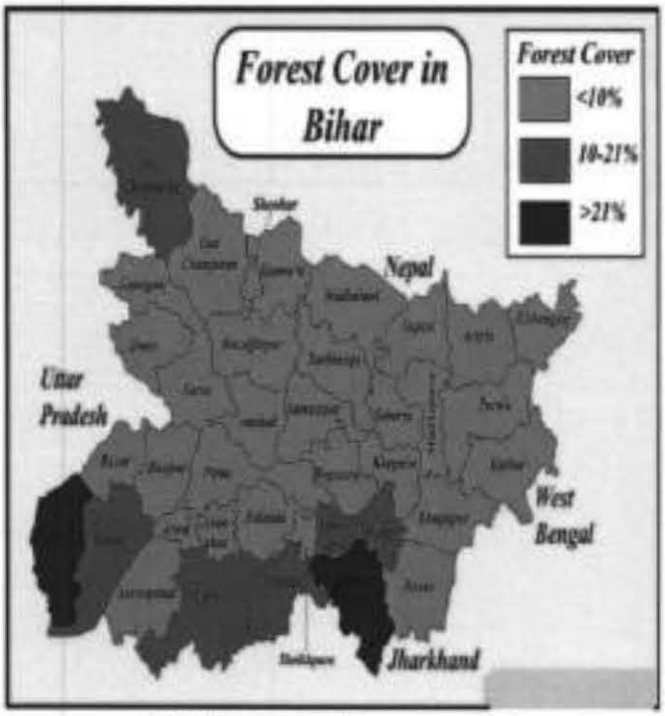


FIGURE 10: Forest Cover Map, Bihar

Agriculture

The economy of the district is agrarian in nature. The agricultural activities are largely confined to Kharif cultivation. As per the data of the Govt. of Bihar the Rice and Maize are the main Kharif crops cultivated by utilising the area of 73000 ha and 6300 ha respectively. The main Rabi crops are wheat, maize, Lentil, Mustard, Linseed etc. The Maize cultivated in about 22000 ha area.

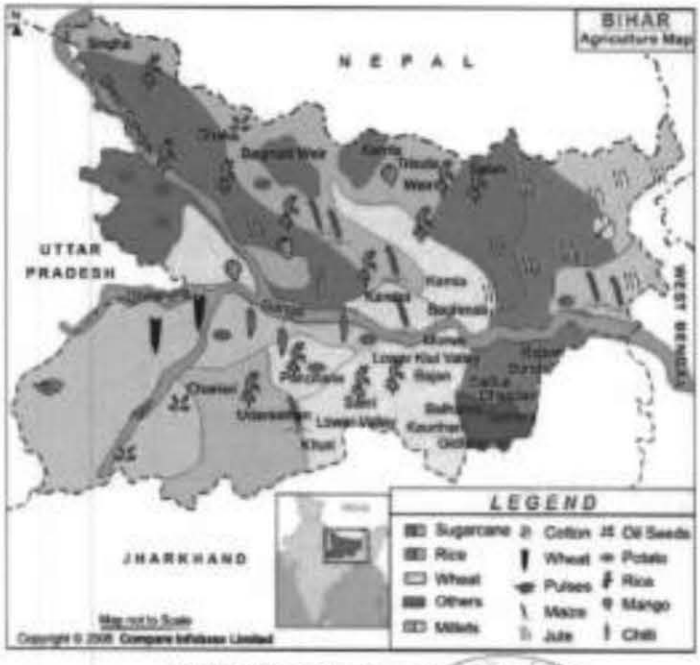


FIGURE 11: Agriculture Map, Bihar

SEIAA, Bihar

Jamui has alluvial soil, forest soil and sandy soils. Land use is mainly agricultural. Sizeable part of Jamui district comprises of plains which are paddy-growing. Prominent crops are rice and wheat, Maize, onion, jackfruit and Mahua are also produced. Cultivable land is 3,05,289 hectare out of which 76,955 hectare is under cultivation.

Irrigation

The groundwater is the main source of irrigation. About 78.32% of the total irrigated area is irrigated by dugwells and borewells whereas only 2.88 % is irrigated by Canal & Tanks. Kukurjhap dam, Garhi dam, Naki dam, Nakti dam, lower Kiul Jalasaya scheme and Gidheshwar payeen are the main source of irrigation

Horticultural

Jamui district is Under Low Level of Production in Horticultural Crops - Horticulture level of Horticultural Development has found in the district. These districts come under the periphery areas where there is a lack of infrastructure regarding horticultural crops. Floriculture in the district is now developing in the same fashion as compared to other crops. So, there is need to emphasis on these crops. Horticulture cultivation is always advantageous. The district- wise analysis of the area and production of

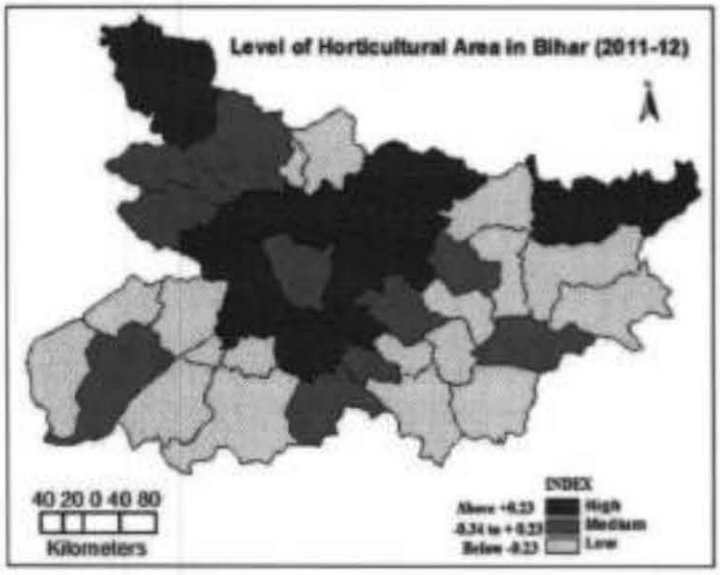


Table 2: Level of Production in Horticultural Crops in Bihar 2011-12.

Category	Name of the districts	Number in % districts
HIGH(>0.24)	Samastipur, Araria, Patna, Saran, Nalanda, W.Champaran Darbhanga, Kishanganj, Madhubani, Muzaffarpur	10(26.32)
MEDIUM (0.24-(-0.35)	Sheikhpura, Siwan, Rohtas, Vaishali, Gopalganj, Saharsa Begusarai, Arwal, Aurangabad, Sheohar, Munger, Khagria Nawada, Bhagalpur, Madhepura, E.Champaran.	16(42.10)
LOW(<-0.35)	Lakhisrai, Jamui, Banka, Purnia, Sitamarhi, Gaya, Katihar, Jehanabad, Bhojpur, Kaimur, Buxar, Supaul	12(31.5)

FIGURE 12: BIHAR HORTICULTURAL MAP, JAMUI

SEIAA, Bihar

horticultural crops (fruits, vegetables, and flowers) reveals a substantial spread of horticultural production across the district. The horticultural development in the district has is very low and placed among twelve districts namely Lakhisrai, Jamui, Banka, Purnia, Sitamarhi, Gaya, Katihar, Jehanabad, Bhojpur, Kaimur, Buxar and Supaul.

Mineral resources

Sand is one of the major mineral of Jamui district of Bihar. Yellow sand in Kiul river is major source of revenue collection in district as well as soil / clay is actively mined for bricks and pottery industry.

Jamui is one of the important district in Bihar where different types of ores & Minerals are found. The hills of Laxmipur and Khaira are comprised of archaenschists including the iron ore. In Laxmipur, Sono and Chakai the chief formation in gneiss basement complex. Mica mines lie in the portion of adjoining Hazaribag district. Beside these there is possibility of availability of lime stone, China clay, Magnese, Graphic Pegmite Termoline quartz etc. in the southern hills of the district. Ore of gold has been observed in Sono Block. Hilly areas of Jamui are also acquainted with valuable stone like Marble, Topaz, and American diamond, Sfatik, Manic etc. coals are found in hilly area of Barhat block. Land utilization patter is presented as below-

WILDLIFE PROTECTED AREA

The wildlife protected area in Bihar is marked in the Map below-



Figure 13 Wild Life Protected Area Map, Bihar

SEIAA, Bihar

PHYSIOGRAPHY OF THE DISTRICT

Jamui has a typical topography. The soil pattern of the district differs widely due to topography of the region. Important soils are sandy soils and alluvial soil of heavy texture having natural or alkaline reaction. Jhajha, Khaira, Sono, Chakai, Laxmipur block contain forest soil. A sizeable part of the plain of northern side of the district lies in the Basin of Kiul River and its tributaries. Most of the part of the district has hilly topography. Western portion of Jamui like Sikandra jamui a little part of khaira has plain area. Sikandra block is situated in alluvial zone. A sizeable part of the district comprises plains which are paddy-growing lands. Southern part of the district is covered with hill and forest characteristically reminiscent of the chhotanagpur plateau in physical features. Hills of the district are considered to be the out – laying extension of Vindhya Range. Southwest part of the district has another block of hills known as Gidheswar pahar.

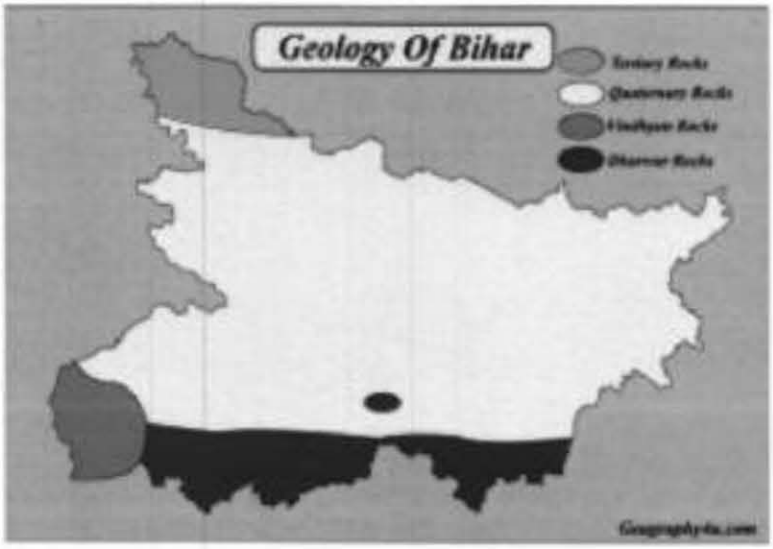


FIGURE 14: Geology of Bihar

The total wetland area in the district is 7,351 ha, which includes the area contributed by 328 small wetlands (< 2.25 ha) which comprises about 2 per cent of the geographical area of the district. Rivers/streams comprise about 64 per cent of wetland extent of the district that accounts for 4,684 ha. The other major wetland types are reservoirs/barrages (1,780 ha), tanks/ponds (347 ha) and natural waterlogged (182 ha).

The Bihar state can be broadly subdivided into three major unit's i.e., main physical sub-divisions is the Norhern Mountains, the Gangetic Plains and the

SEIAA, Bihar

Central Highlands. Northern Mountains comprises the Himalayan ranges including their foot hills. The Gangetic plains, situated between the Himalayas and the Deccan plateau, constitute the most fertile plains of the sub-basin ideally suited for intensive cultivation. The Central highlands lying to the south of the Great Plains consists of mountains, hills and plateaus intersected by valleys and river plains. They are largely covered by forests. Aravali uplands, Bundelkhand upland, Malwa plateau, Vindhyan and Narmada valley lie in this region. Predominant soil types found in the sub- basin are sandy, loamy, clay and their combinations such as sandy loam, loam, silty clay loam and loamy sand soils.

Geomorphology

The district has a diverse geomorphology ranging from hills to flood plains. The major geomorphic units are rocky upland, plateau / pediplain and alluvial plain.

There are three major hilly tracts, namely,

a) The hills of Batia-Jhajha area having strike in east-west direction lying in the northern fringe of Chakai plateau,
b) The Gidheshwar hills in the western part of the district and
c) The Kharagpur hills lying in north-eastern part of the district.

Attaining a height of 475 m amsl in Barhat block plateau representing oldest table land in the area is Chakai plateau. The pedi-plains having rolling topography have relief up to 300 m amsl. It extends from Batia to the south of Kharagpur hills and comprises residual soil overlain by mixture of sheet wash deposits. Alluvial plain is represented by Jamui terrace. It is made up of sediments derived from the denudation of Chakai plateau and Kharagpur hill. The thickness of alluvium in the northern part is about 80 m, while in southern part it reduces to 10 m. Other landforms such as escarpment, inselberg, valley fills are also present.

SEIAA, Bihar

Hydrogeology

Water bearing formation

Hydro-geologically, the district can be divided into two parts

(a) Hard rock/ fissured formation

(b) Unconsolidated / porous formation



FIGURE 15: HYDROLOGIICAL MAP

(a) Hard rock/ fissured formation: It comprises granite gneisses; quartzite and phyllites, while granite gneisses belong to Chotanagpur Gneissic Complex, quartzite and phyllites belong to Kharagpur Formation. The secondary porosities developed by means of weathering and / or fracturing. These are main repository of ground water in hard rock. In general these rocks form poor aquifers. The exploratory drilling data of this area reveal three to four sets of fractures/ joints occurs at different depths up to 200m bgl. Identification of groundwater potential area has been done based on study of lineaments picked up from satellite imageries. The zones of lineaments are potential areas for ground water exploration and recharge. Weathered residium, saprolite zone and fractures within 15-35m bgl depths constitute shallow aquifer in the hard rocks. In Jamui district 41 bore wells have been drilled in hard rock area to a maximum depth of 200m bgl at Mahadeo-Simaria village of Sikandra block. Depth of bore wells in these formations ranges from 60 to 200 m bgl. Ground water occurs under semi-confined condition in hard rock and discharge ranges from 1 to 10 lit. per second with drawdown of 12-18 m.

(b) Porous formation: The Quaternary alluvium constitutes this hydrogeological unit. The alluvial tract is confined to the Jamui terrace with sediment thickness

SEIAA, Bihar

ranging from 10 to 70 m. The variation in thickness of the alluvium is due to uneven bed-rock topography. Alluvium comprises clay, silt and sand. The occurrence of colluvial sediments is very common especially along foothills. Aquifers in this formation are in unconfined to semi-confined conditions. CGWB has drilled 16 tube wells in this formation. Maximum thickness of 70 m has been encountered in Arha village, Aliganj block. Drilling depth of tube wells ranges from 40 to 70 m bgl and the discharge varies from 5 to 20 lps.

Depth of Water Level

Depth to water level in Jamui district during pre-monsoon period (May 2011) varied from 5.87 to 14.20 m bgl, (Decadal mean is 5.70 to 12.83 m bgl) whereas, during the post-monsoon period (Nov. 2011) it was ranged from 2.84 to 11.85 (Decadal mean is (3.39 to 11.09 m bgl). Comparatively the groundwater level of marginal alluvium is deeper than the water level of hard rock area. Fig 4 & 5 depicts the depth to water level scenario in Jamui district.

During the pre-monsoon period, major part of the district has shown the water level in the range of 2-5 m bgl. however, in an elongated area of the western part of district the water level is observed more than 10 m bgl but during post-monsoon period, in the major part of the district the water level remains in the segment of 2-5 m bgl and a small patch in the almost central part of the district has shown water level more than 10 m bgl. The remaining part in the district is in the range of 5-10 m bgl.

The average water table elevation ranges from 80 to 310 m above mean sea level.

SEIAA, Bihar

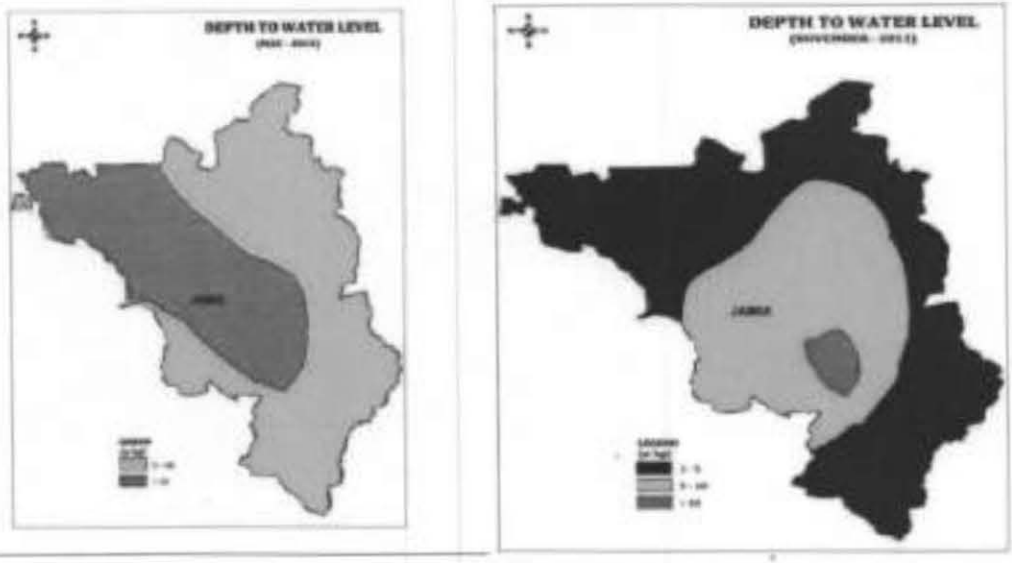


FIGURE 16: PRE-MONSOON & POST-MONSOON DEPTH TO WATER LEVEL MAP OF JAMUI DISTRICT.

Ground Water Quality

Chemical analysis (May-2011) of phreatic aquifer reveals pH value varying from 8.15-8.69 and EC from 390 to 1760 micro Seimens/cm. As per the concentration of chemical constituents given in Table 5. the ground water is by and large suitable for drinking and irrigation purposes. In some villages of Jamui and Lachhmipur block, viz., Nabinagar and Majhwe, higher concentration of fluoride above the permissible limit (1.5 ppm) has been observed. Fluoride concentration in Majhwe village has been detected in the fractures at a depth of 172.40 m bgl in granite rock. At some places in phreatic aquifers also the fluoride concentration is above the permissible limit.

Soil

The district consists mainly of alfisols and ultisols types of soils formed under different lithological and pedogenic conditions. The alfisols are developed mainly on the marginal alluvial area in the northern fringe of hard rock terrain. It occurs mainly in Jamui, Sikandra and Aliganj blocks. The soil in these blocks is called alluvial soil composed of clay, sand and gravel. The lower horizon is highly



FIGURE 17. Soil Map, Jamui

SEIAA, Bihar

ferrugenized. A variant of alfisols soil is red sandy soil occurring mainly in plateau and hilly regions. These soils have poor fertility and are suitable for high land crops. The ultisols occur mainly in Sono and Lakhimpur blocks. It contains argillic horizons and has low base status. Red and yellow soils occur in southern and eastern parts of Jamui town, while light brown to red yellow soil occur in the south of Jamui town in small patches.

SEIAA, Bihar

RAINFALL: MONTH-WISE

Climate

In Jamui the wet season is hot, oppressive, and overcast and the dry season is warm and mostly clear. Over the course of the year, the temperature typically varies from 50°F to 98°F and is rarely below 45°F or above 106°F.

The hot season lasts for 2.9 months, from March 26 to June 22, with an average daily high temperature above 93°F. The hottest month of the year in Jamui is May, with an average high of 98°F and low of 78°F. The cool season lasts for 1.9 months, from December 9 to February 6, with an average daily high temperature below 77°F. The coldest month of the year in Jamui is January, with

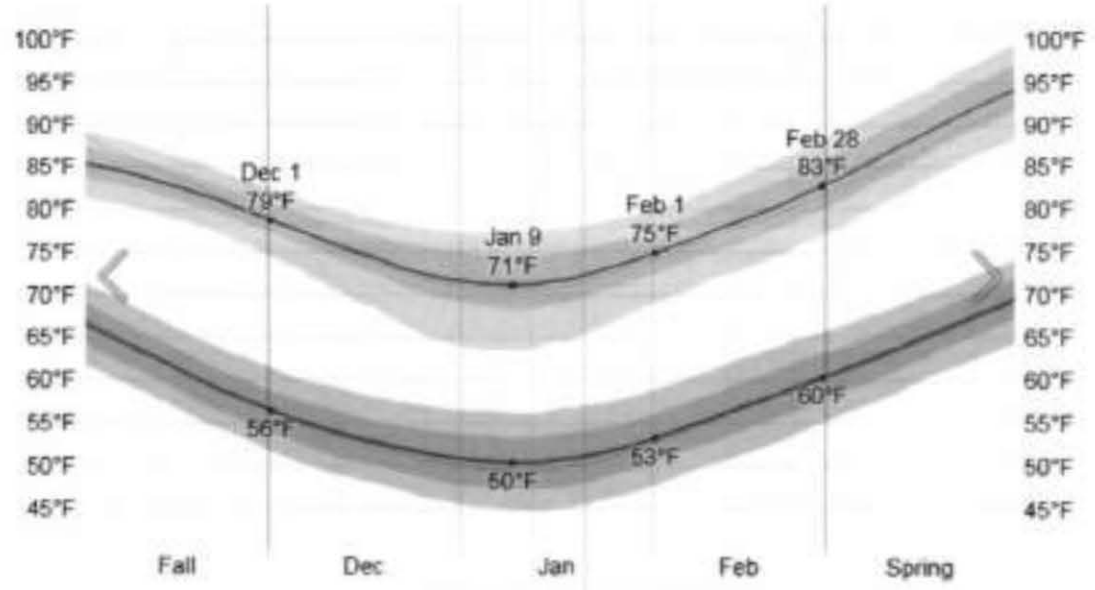


FIGURE 18: MONTHLY TEMP.

an average low of 51°F and high of 72°F a

0s shown in image below-

Rainfall

A wet day is one with at least 0.04 inches of liquid or liquid-equivalent precipitation. The chance of wet days in Jamui varies very significantly throughout the year.

The wetter season lasts 3.6 months, from June 8 to September 27, with a greater than 36% chance of a given day being a wet day. The month with the wet days

SEIAA, Bihar

in Jamui is July, with an average of 21.1 days with at least 0.04 inches of precipitation.

The drier season lasts 8.4 months, from September 27 to June 8. The month with the fewest wet days in Jamui is December, with an average of 1.0 days with at least 0.04 inches of precipitation.

The rainy period of the year lasts for 6.7 months, from April 16 to November 7, with a sliding 31-day rainfall of at least 0.5 inches. The month with the most rain in Jamui is July, with an average rainfall of 9.5 inches.

The rainless period of the year lasts for 5.3 months, from November 7 to April 16. The month with the least rain in Jamui is December, with an average rainfall of 0.2 inches.

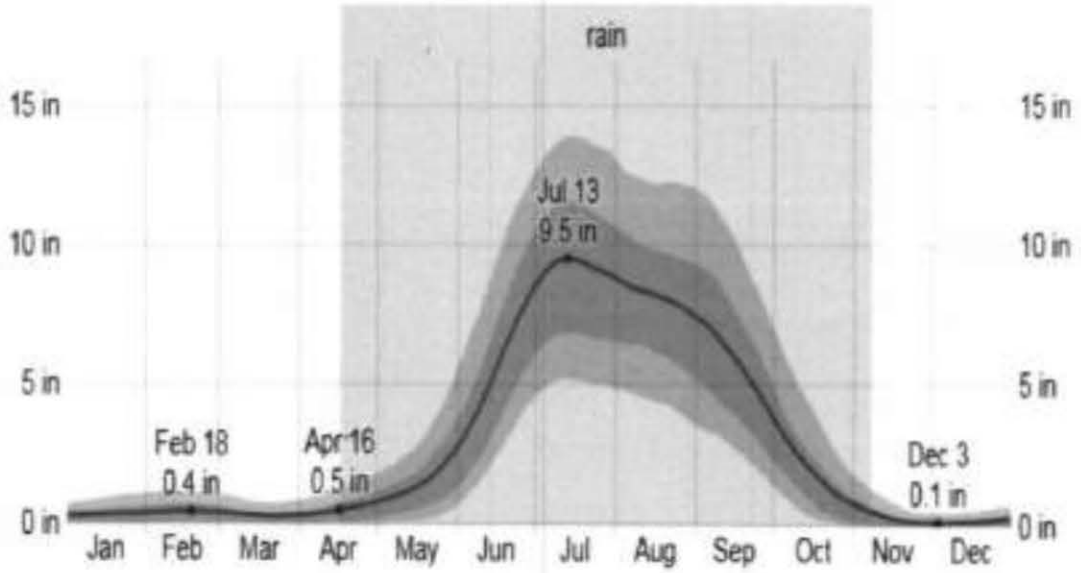


FIGURE 19: MONTHLY RAINFALL

SEIAA, Bihar

GEOLOGY AND MINERAL WEALTH

Geology

The main geological formation in the area is pre-cambrian rocks of Archaean age. The crystalline rocks in the district are mica schist, granite gneiss, quartzites & quartz schist, hornblende schist & mica pegmatites etc. These rock types constitute the hill ranges. The entire district is underlain by the rocks of wide variety of geological formation ranging in age from Archean to Recent. The main being Archeanproterozoic, permocarboniferous & recent.

Phyllite, mica-schist, granite gneiss & intrusive granite are the main geological formation of the district. Sporadic occurrence of dolerite, quartz pegmatites veins and quartzites are also found. Thin deposits of alluvium are found along the course of rivers.

Regional Geology

Geologically, it represents nearly two third of Bihar is under cover of Ganga basin composed of alluvium and masks the nature of basement rocks.

Table No. 6: Geological succession and their occurrences distribution

Age	Geology	Occurrences
Quaternary	Alluvial Deposits (sand, clay, silt, Fragments)	North Bihar Plain & Central Bihar Plain
Tertiary	Sand Stones& Clay Stones	North Champaran Hills
Gondwana	Coal Measures, Forming a series of small outlier basins	Banka District
Vindhyans	Sandstones, shales, Limestones etc.	Parts of Bahbhua and Rohtas Districts
Satpura	Schist, Phyllite, Quartzite	Part of Aurangabad, Gaya, Nawada, Nalanda, Sheikhpura and Munger District

SEIAA, Bihar

Proterozoic	Schist, amphibolites, quartzite, granites, dolerites and pegmatites	Nawada, Jamui and Banka
Archaean	Gneisses, Granites, Schists, Phyllites, quartzites, amphibolites & intrusive all metamorphosed sedimentary and igneous rocks	Part of Aurangabad, Gaya, Nawada, Jamui, Banka and Bhagalpur

The tertiaries are exposed in Masan area of North Champaran District, as series of low hillocks. They represent Upper Siwaliks of the Sub-Himalayas and consist of sandstone and clay stone, disturbed by folding and thrust faulting. The entire sequence here occurs as inliers in the alluvial terrain. The Quaternary of North Bihar Plains, between the tortuous course of Ganga and Himalayan foothills, are represented by Older Alluvium Group (OAG) (Bhangar) and Newer Alluvium Group (NAG) (Khader). The OAG is represented by Mirganj Formation, Khajauli Formation and Madhubani Formation in Gandak basin, Gandak- Kosi interfluves and Kosi basin, respectively. The NAG includes the Vaishali Formation, the Jainagar Formation and Purnea Formation in Gandak basin, Gandak-Kosi interfluve and Ganga-Kosi-Mahananda interfluves. In the whole region the uppermost formation is the Present Flood Plains, Diara formation, Channel Bars and Sand Dunnes. In central Bihar Plains the OAG forming the highest terrace, in the Son- Ganga alluvial tract, and NAG forming younger terraces, as Older Flood Plains, are exposed all along the Alluvial Upland. The Present Flood Plain deposits are confined with then channels. The Vindhyans, in Bihar, are exposed in Rohtas and Bhabhua districts as scarps and plateau. They comprise gritty to fine cemented sandstones, shales, flagstones, quartzites, sandy siltstones, limestone breccias and porcellanites, the shales often being pyritiferous. The Gondwana rocks occur as sporadic outlier basins, in the parts of Nalanda district. The main rock types are sandstones, fine to coarse or gritty sandstone, ironstone, shales, coal seams and boulder beds. They are largely cemented, jointed, fractured, faulted and intruded by dykes and sills. Along the northern fringe of the Chotanagpur Granite Gneiss Complex are low-grade supracrustals covering the Kharagpur hills, Rajgir hills and Gaya hills referred to as the Satpura Range, comprises schist, ferruginous phyllite, quartzite and phylliticshales. The Bihar Mica belt comprises a sequence of folded hornblende schist, amphibolites, mica-schist, quartzite and calc-silicates intruded by circular to oval shaped granitic plutons, dolerites, pegmatite and quartz veins. There are many old mines of mica

SEIAA, Bihar

in this belt. The Archaeans are the oldest rock formation in the state. The most predominant rock type is mainly of gneisses and granitic rocks with lesser amount of schist, quartzite, basic intrusive and pegmatoides. They are exposed in Aurangabad, Gaya, Nawada, Jamui, Bhagalpur and Banka districts.

Mineral Wealth

Jamui is one of the important districts in Bihar where different types of ores & Minerals are found. The hills of Laxmipur and Khaira are comprised of archaenschists including the iron ore. In Laxmipur, Sono and Chakai the chief formation is gneiss basement complex. Mica mines lie in the portion of adjoining Hazaribag district. Beside these there is possibility of availability of lime stone, China clay, Magnese, Graphic Pegmite Termoline quartz etc. in the southern hills of the district. Ore of gold has been observed in Sono Block. Hilly areas of Jamui are also acquainted with valuable stone like Marble, Topaz, and American diamond, Sfatik, Manic etc. coals are found in hilly area of Barhat block.

Detail of river or stream and other sand source

Table 7: River or stream of sand source

Sl. No.	Name river or stream and other sand source	Type of Mineral
1.	Kiul river	Yellow Sand
2.	Barnar river	
3.	Bunbuni river	
4.	Sukhnar river	
5.	Ulai river	
6.	Anjana river	
7.	Gajhi river	
8.	Bajan river	

Source: Field Study & Primary data collection

District wise availability of sand or gravel or aggregate resources;

Jamui is one of the important districts in Bihar where different types of ores & Minerals are found. The hills of Laxmipur and Khaira are comprised of archaenschists including the iron ore. In Laxmipur, Sono and Chakai are the

SEIAA, Bihar

chief formation in gneiss basement complex. Mica mines lie in the portion of adjoining Hazaribag district. Beside these there is possibility of availability of lime stone, China clay, Magnese, Graphic Pegmite Termoline quartz etc. in the southern hills of the district. Ore of gold has been observed in Sono Block. Hilly areas of Jamui are also acquainted with valuable stone like Marble, Topaz, and American diamond, Sfatik, Manic etc. coals are found in hilly area of Barhat block.

Sand is one of the major mineral of Jamui district of Bihar. Yellow sand in Kiul, Barnar, Bunbuni, Sukhnar, Ulai, Anjana, Gajhi & Bajan are major source of revenue collection in district. River wise availability of sand as identified by using modern technology and field survey are as presented below-

District wise detail of existing mining leases of sand and aggregates

District wise detail of existing mining leases of sand can be seen in **Table No.-1**

Table 8: District wise availability of sand

Sl. No.	Ghat Name	Area (Ha)	P	Latitude (N)	Longitude (E)	Remarks
			KIUL RIVER			
1	**BLOCK- 1** Mauza- Harni, Gadi, Bishunpur Block- Khaira Dist- Jamui	25.0	A	24°48'14.38"N	86° 9'21.53"E	
			B	24°48'27.42"N	86° 9'30.60"E	
			C	24°48'33.91"N	86° 9'48.30"E	
			D	24°48'35.85"N	86°10'0.55"E	
			E	24°48'34.53"N	86°10'6.30"E	
			F	24°48'29.98"N	86°10'6.42"E	
			G	24°48'28.63"N	86° 9'48.47"E	
			H	24°48'14.64"N	86° 9'25.33"E	
2.	**BLOCK- 2** Mauza- Badibag, Jaljoga,Fatehpur Block- Khaira Dist- Jamui	13.3	A	24°48'27.91"N	86°10'32.96"E	
			B	24°48'37.09"N	86°10'41.66"E	
			C	24°48'45.30"N	86°10'46.27"E	
			D	24°48'49.59"N	86°10'55.97"E	
			E	24°48'44.55"N	86°10'56.12"E	
			F	24°48'40.57"N	86°10'46.90"E	
			G	24°48'20.86"N	86°10'40.38"E	
3.	**BLOCK-3** Mauza- Badibag, Jaljoga,Fatehpur Block- Khaira Dist- Jamui	34.9	A	24°48'44.73"N	86°11'20.28"E	
			B	24°48'26.57"N	86°11'53.70"E	
			C	24°48'34.16"N	86°11'58.75"E	
			D	24°48'39.39"N	86°11'42.51"E	
			E	24°48'51.34"N	86°11'37.47"E	
			F	24°48'57.31"N	86°11'22.66"E	
4.	**BLOCK- 4** Mauza- Chandrashaili, Pakadi, Jaljoga Block- Khaira	14.4	A	24°48'55.49"N	86°12'16.52"E	
			B	24°49'2.05"N	86°12'11.77"E	
			C	24°49'13.39"N	86°12'14.25"E	
			D	24°49'22.42"N	86°12'26.89"E	

SEIAA Bihar

	Dist- Jamui		E	24°49'21.70"N	86°12'36.80"E	
			F	24°49'14.87"N	86°12'23.62"E	
			G	24°49'7.91"N	86°12'18.00"E	
5.	**BLOCK-5** Mauza- Bela, Bhaur, Pakdi Block- Khaira Dist- Jamui	23.4	A	24°50'27.13"N	86°13'4.85"E	
			B	24°50'31.62"N	86°12'57.09"E	
			C	24°50'24.93"N	86°12'43.44"E	
			D	24°50'16.01"N	86°12'33.14"E	
			E	24°50'8.16"N	86°12'41.85"E	
			F	24°50'18.82"N	86°12'49.99"E	
6.	**BLOCK- 6** Mauza- Sagdaha, Bela, Parsa Block- Khaira Dist- Jamui	10.2	A	24°50'33.22"N	86°12'59.05"E	
			B	24°50'47.74"N	86°13'10.65"E	
			C	24°50'52.96"N	86°13'13.27"E	
			D	24°50'47.45"N	86°13'13.80"E	
			E	24°50'36.83"N	86°13'9.49"E	
			F	24°50'29.18"N	86°13'5.61"E	
7.	**BLOCK- 7** Mauza- Sagdaha, Bela, Parsa Block- Khaira Dist- Jamui	13.1	A	24°50'36.55"N	86°12'59.51"E	
			B	24°50'36.73"N	86°12'56.24"E	
			C	24°51'6.77"N	86°13'8.00"E	
			D	24°51'6.34"N	86°13'11.74"E	
			E	24°50'43.58"N	86°13'5.35"E	
			F	24°50'36.47"N	86°12'59.62"E	
8.	**BLOCK- 8** Mauza- Sagdaha, Kendih, Bandra Block- Khaira Dist- Jamui	30.7	A	24°51'17.58"N	86°13'15.35"E	
			B	24°51'25.95"N	86°13'11.94"E	
			C	24°51'48.19"N	86°13'25.58"E	
			D	24°51'55.62"N	86°13'36.63"E	
			E	24°51'48.64"N	86°13'39.97"E	
			F	24°51'38.44"N	86°13'33.34"E	
			G	24°51'26.64"N	86°13'19.84"E	
9.	**BLOCK- 9** Mauza- Chancho, Chandabag Block- Khaira Dist- Jamui	31.4	A	24°52'57.93"N	86°13'58.58"E	
			B	24°52'50.97"N	86°13'54.03"E	
			C	24°53'6.13"N	86°13'43.03"E	
			D	24°53'14.11"N	86°13'55.98"E	
			E	24°53'7.95"N	86°13'59.18"E	
			F	24°53'3.51"N	86°13'56.45"E	
10.	**BLOCK- 10** Mauza- Nimarang, Garsanda, Bhachhiar & Chandabag Block- Jamui Dist- Jamui	30.5	A	24°53'36.62"N	86°14'6.21"E	
			B	24°53'31.84"N	86°14'2.20"E	
			C	24°53'45.22"N	86°13'52.67"E	
			D	24°54'0.47"N	86°14'1.44"E	
			E	24°54'10.91"N	86°14'12.32"E	
			F	24°54'3.34"N	86°14'17.37"E	
			G	24°53'54.09"N	86°14'7.03"E	
			H	24°53'43.66"N	86°14'4.61"E	
			I	24°53'36.80"N	86°14'6.23"E	
11.	**BLOCK- 11** Mauza- Garo Nawada Block- Jamui Dist- Jamui	30.7	A	24°54'45.26"N	86°14'30.83"E	
			B	24°54'47.45"N	86°14'25.66"E	
			C	24°54'55.23"N	86°14'20.01"E	
			D	24°55'12.31"N	86°14'18.04"E	
			E	24°55'29.77"N	86°14'24.33"E	
			F	24°55'25.32"N	86°14'29.56"E	
			G	24°54'57.47"N	86°14'28.53"E	
12.	**BLOCK- 12**	9.43	A	24°55'11.30"N	86°14'11.28"E	

SEIAA, Bihar

	Mauza- Garo Nawada Block- Jamui Dist- Jamui		B	24°55'18.87"N	86°14'7.97"E	
			C	24°55'32.33"N	86°14'15.37"E	
			D	24°55'31.97"N	86°14'20.72"E	
13.	**BLOCK- 13** MAUZA- SATGAMA BLOCK- JAMUI Dist- Jamui	65.9	A	24°56'0.34"N	86°14'34.46"E	
			B	24°56'36.44"N	86°14'45.05"E	
			C	24°56'36.04"N	86°14'54.15"E	
			D	24°56'27.20"N	86°15'0.84"E	
			E	24°56'1.07"N	86°14'53.97"E	
			F	24°55'47.58"N	86°14'45.80"E	
14	**BLOCK- 14** MAUZA- Katauna BLOCK- JAMUI Dist- Jamui	51.8	A	24°56'24.74"N	86°15'24.16"E	
			B	24°56'40.72"N	86°15'18.82"E	
			C	24°56'54.51"N	86°14'56.87"E	
			D	24°56'40.90"N	86°14'54.81"E	
			E	24°56'26.67"N	86°15'6.77"E	
			F	24°56'11.55"N	86°15'18.19"E	
15	**BLOCK- 15** MAUZA- SATGAMA BLOCK- JAMUI Dist- Jamui	17.6	A	24°57'5.82"N	86°14'39.77"E	
			B	24°56'44.77"N	86°14'48.07"E	
			C	24°56'45.75"N	86°14'37.02"E	
			D	24°57'2.46"N	86°14'30.63"E	
	BARNAR RIVER					
16.	**BLOCK-1** Mahgaon BLOCK- Sono DIST- Jamui	7.41	A	24°38'58.63"N	86°19'43.79"E	
			B	24°39'7.95"N	86°19'43.95"E	
			C	24°39'18.64"N	86°19'47.83"E	
			D	24°39'20.29"N	86°19'43.72"E	
			E	24°39'10.24"N	86°19'39.70"E	
			F	24°38'59.56"N	86°19'41.07"E	
17.	**BLOCK-2** Mahgaon Block- Sono, Distt.- Jamui	6.76	A	24°39'43.32"N	86°19'43.03"E	
			B	24°39'51.20"N	86°19'39.97"E	
			C	24°39'58.59"N	86°19'46.85"E	
			D	24°40'2.58"N	86°19'52.69"E	
			E	24°39'57.47"N	86°19'50.89"E	
			F	24°39'51.67"N	86°19'46.82"E	
18.	**BLOCK- 3** Tola Rajpur Block- Sono Dist- jamui	41.3	A	24°40'48.59"N	86°19'22.76"E	
			B	24°40'52.22"N	86°19'13.36"E	
			C	24°41'16.96"N	86°19'6.48"E	
			D	24°41'33.28"N	86°18'53.97"E	
			E	24°41'34.73"N	86°18'55.40"E	
			F	24°41'26.08"N	86°19'13.80"E	
			G	24°41'12.14"N	86°19'20.42"E	
19.	**BLOCK- 4** Tola Asrahua, Tola Bhalsom Block- Sono, Dist- Jamui	24.3	A	24°41'19.75"N	86°18'40.67"E	
			B	24°41'39.95"N	86°18'23.58"E	
			C	24°41'41.92"N	86°18'29.45"E	
			D	24°41'21.02"N	86°18'57.97"E	
20.	**BLOCK- 5** Mauza- Dumari Block- Sono Dist- jamui	42.6	A	24°41'43.54"N	86°18'34.39"E	
			B	24°42'37.85"N	86°18'24.08"E	
			C	24°42'34.69"N	86°18'17.39"E	
			D	24°42'7.56"N	86°18'18.45"E	
			E	24°41'46.33"N	86°18'26.85"E	
21.	**BLOCK- 6** Tola Jugri		A	24°43'31.23"N	86°18'18.51"E	
			B	24°43'45.48"N	86°18'13.35"E	

SEIAA. Bihar

	Block- Sono Dist- Jamui	29.7	C	24°43'49.07"N	86°18'2.43"E	
			D	24°43'30.98"N	86°18'3.82"E	
			E	24°43'12.44"N	86°18'15.34"E	
22.	**BLOCK- 7** Balthar & Hajaro Block- Sono Dist- jamui	40.6	A	24°44'31.23"N	86°17'39.48"E	
			B	24°44'59.09"N	86°17'48.36"E	
			C	24°45'21.73"N	86°17'47.46"E	
			D	24°45'29.60"N	86°17'41.22"E	
			E	24°44'35.87"N	86°17'33.98"E	
23.	**BLOCK- 8** Kendua, Dehuridih Block- Khaira Dist- jamui	42.0	A	24°45'58.19"N	86°17'50.38"E	
			B	24°46'17.19"N	86°18'2.21"E	
			C	24°46'38.84"N	86°18'8.40"E	
			D	24°46'42.68"N	86°18'0.60"E	
			E	24°46'7.31"N	86°17'42.60"E	
24.	**BLOCK- 9** Manjhgayan Block- Khaira Dist- jamui	42.2	A	24°47'14.59"N	86°17'53.29"E	
			B	24°47'47.37"N	86°17'52.38"E	
			C	24°48'22.24"N	86°17'41.28"E	
			D	24°48'10.95"N	86°17'38.07"E	
			E	24°47'25.14"N	86°17'45.17"E	
25.	**BLOCK- 10** Kagesar Block- Khaira Dist- jamui	19.5	A	24°48'54.17"N	86°17'2.91"E	
			B	24°48'36.64"N	86°17'27.51"E	
			C	24°48'45.53"N	86°17'25.77"E	
			D	24°49'3.36"N	86°17'8.37"E	
26.	**BLOCK- 11** Maura, Bandhora Block-Khaira Dist- Jamui	38.1	A	24°49'21.12"N	86°17'15.42"E	
			B	24°49'41.66"N	86°17'13.82"E	
			C	24°50'4.91"N	86°17'22.81"E	
			D	24°49'50.83"N	86°17'3.07"E	
			E	24°49'37.33"N	86°17'1.25"E	
			F	24°49'20.67"N	86°17'8.49"E	
27.	**BLOCK- 12** Simria Block- Khaira Dist- jamui	29.7	A	24°50'58.11"N	86°16'50.43"E	
			B	24°51'26.71"N	86°16'29.94"E	
			C	24°51'19.33"N	86°16'21.05"E	
			D	24°50'53.03"N	86°16'44.53"E	
28.	**BLOCK- 13** Kolhua Block- Gidhaur Dist- jamui	37	A	24°51'31.73"N	86°16'30.96"E	
			B	24°51'58.21"N	86°16'11.07"E	
			C	24°51'42.22"N	86°16'2.33"E	
			D	24°51'35.08"N	86°16'12.03"E	
			E	24°51'23.38"N	86°16'20.58"E	
29.	**BLOCK- 14** Jogajhingoal Block- Gidhaur Dist- jamui	32.5	A	24°51'33.26"N	86°15'55.93"E	
			B	24°51'40.74"N	86°15'40.62"E	
			C	24°51'56.55"N	86°15'25.35"E	
			D	24°52'0.48"N	86°15'35.69"E	
			E	24°51'39.24"N	86°16'0.01"E	
30.	**BLOCK- 15** Changodih Block- Gidhaur Dist- jamui	26	A	24°52'15.67"N	86°15'20.91"E	
			B	24°52'53.55"N	86°14'49.38"E	
			C	24°52'43.53"N	86°14'49.43"E	
			D	24°52'27.31"N	86°15'0.63"E	
			E	24°52'13.35"N	86°15'18.62"E	
31.	**BLOCK- 16** Dabil Block- Gidhaur Dist- jamui	16.3	A	24°52'51.85"N	86°14'21.81"E	
			B	24°52'44.30"N	86°14'43.53"E	
			C	24°52'51.52"N	86°14'37.46"E	
			D	24°52'58.77"N	86°14'21.63"E	

SEIAA, Bihar

			E	24°53'9.11"N	86°14'7.55"E	
			F	24°53'5.65"N	86°14'6.59"E	
			BAJAN RIVER			
32.	**BLOCK-1** Dholkatwa Block-Barhat Dist- jamui	5.0	A	24°55'23.51"N	86°20'48.59"E	
			B	24°55'28.12"N	86°20'54.02"E	
			C	24°55'30.67"N	86°20'57.51"E	
			D	24°55'30.98"N	86°21'0.66"E	
			E	24°55'27.20"N	86°21'6.56"E	
			F	24°55'27.98"N	86°21'6.72"E	
			G	24°55'31.20"N	86°21'4.80"E	
			H	24°55'33.72"N	86°20'58.03"E	
			I	24°55'30.86"N	86°20'50.63"E	
			J	24°55'27.79"N	86°20'49.58"E	
			BUNBUNI RIVER			
33.	**BLOCK- 1** Vill- Fatehpur, Block- Khaira District- Jamui	9.4	A	24°47'38.18"N	86°11'43.47"E	
			B	24°47'49.46"N	86°11'46.04"E	
			C	24°47'58.76"N	86°11'42.40"E	
			D	24°47'48.76"N	86°11'37.86"E	
			E	24°47'41.62"N	86°11'39.59"E	
			F	24°47'36.06"N	86°11'38.90"E	
			ANJANA RIVER			
34.	**BLOCK- 1** Vill- Genadih, Block- Gidhaur, District- Jamui	5.0	A	24°53'48.74"N	86°19'44.06"E	
			B	24°53'55.50"N	86°19'35.24"E	
			C	24°53'54.70"N	86°19'29.79"E	
			D	24°53'52.23"N	86°19'29.14"E	
			E	24°53'49.52"N	86°19'38.73"E	
			F	24°53'44.93"N	86°19'42.29"E	
35.	**BLOCK- 2** Vill- Bijuahi, Block- Gidhaur, District- Jamui	5.0	A	24°55'33.98"N	86°17'46.44"E	
			B	24°55'42.91"N	86°17'40.71"E	
			C	24°55'51.85"N	86°17'39.24"E	
			D	24°55'44.79"N	86°17'35.19"E	
			E	24°55'37.91"N	86°17'39.82"E	
			F	24°55'33.40"N	86°17'45.54"E	
36.	**BLOCK- 3** Vill- Lathlathwa, Block- Gidhaur, District- Jamui	5.54	A	24°56'47.41"N	86°17'17.30"E	
			B	24°56'53.02"N	86°17'8.26"E	
			C	24°57'5.23"N	86°16'54.04"E	
			D	24°56'59.25"N	86°16'54.43"E	
			E	24°56'55.49"N	86°17'3.41"E	
			F	24°56'52.84"N	86°17'4.40"E	
			G	24°56'48.47"N	86°17'13.12"E	
			SUKHNAR RIVER			
37.	**BLOCK- 1** Vill- Tola Charghara Kohila, Block- Sono District- Jamui	2.42	A	24°43'11.18"N	86°16'23.19"E	
			B	24°43'10.88"N	86°16'24.80"E	
			C	24°42'57.06"N	86°16'29.27"E	
			D	24°42'56.46"N	86°16'27.29"E	
38.	**BLOCK- 2** Vill- Tola Charghara Kohila, Block- Sono District- Jamui	5.0	A	24°45'51.59"N	86°16'27.71"E	
			B	24°45'51.40"N	86°16'33.76"E	
			C	24°45'54.69"N	86°16'42.24"E	
			D	24°45'55.30"N	86°16'47.27"E	
			E	24°46'1.21"N	86°16'54.85"E	
			F	24°46'5.38"N	86°16'54.88"E	

SEIAA, Bihar

			G	24°46'5.24"N	86°16'52.29"E	
			H	24°46'0.11"N	86°16'50.93"E	
			ULAI RIVER			
39.	**BLOCK- 1** Vill- Tola Auria, Block- Jhajha, District- Jamui	15.5	A	24°44'46.67"N	86°24'33.52"E	
			B	24°44'32.31"N	86°24'51.20"E	
			C	24°44'34.03"N	86°24'52.23"E	
			D	24°44'43.66"N	86°24'44.42"E	
			E	24°44'46.95"N	86°24'37.64"E	
			F	24°44'49.61"N	86°24'37.20"E	
			G	24°44'58.77"N	86°24'12.46"E	
			H	24°44'56.86"N	86°24'9.46"E	
40.	**BLOCK-2** Vill- Tola Mahapur, Block- Jhajha, District- Jamui	14.4	A	24°45'10.46"N	86°24'9.44"E	
			B	24°45'3.88"N	86°24'8.74"E	
			C	24°45'10.46"N	86°23'59.47"E	
			D	24°45'17.45"N	86°23'56.62"E	
			E	24°45'25.52"N	86°24'0.14"E	
			F	24°45'27.91"N	86°24'7.80"E	
			G	24°45'18.98"N	86°24'4.76"E	
41.	**BLOCK-3** Vill- Tola Mahapur, Block- Jhajha, District- Jamui	9.42	A	24°45'6.33"N	86°23'51.94"E	
			B	24°44'59.71"N	86°24'4.39"E	
			C	24°45'0.92"N	86°24'5.40"E	
			D	24°45'11.83"N	86°23'55.77"E	
			E	24°45'21.17"N	86°23'53.64"E	
			F	24°45'13.24"N	86°23'49.49"E	
42.	**BLOCK-4** Vill- Tola Satighat, Block- Jhajha, District- Jamui	5.0	A	24°45'36.16"N	86°24'9.10"E	
			B	24°45'36.21"N	86°24'7.30"E	
			C	24°45'42.95"N	86°23'59.42"E	
			D	24°45'48.40"N	86°23'56.10"E	
			E	24°45'51.48"N	86°23'53.09"E	
			F	24°45'53.64"N	86°23'52.87"E	
			G	24°45'47.12"N	86°24'1.00"E	
			H	24°45'42.67"N	86°24'3.49"E	
43.	**BLOCK-5** Vill- Sidhesri, Block- Jhajha, District- Jamui	9.37	A	24°46'51.32"N	86°20'59.23"E	
			B	24°46'57.84"N	86°21'2.56"E	
			C	24°47'18.75"N	86°20'53.14"E	
			D	24°47'15.00"N	86°20'51.47"E	
44.	**BLOCK-6** Vill- Lotan, Block- Jamui, District- Jamui	9.76	A	24°54'36.14"N	86°16'48.38"E	
			B	24°54'27.03"N	86°16'52.09"E	
			C	24°54'25.10"N	86°16'48.24"E	
			D	24°54'32.58"N	86°16'45.47"E	
			E	24°54'39.74"N	86°16'36.31"E	
			F	24°54'48.31"N	86°16'34.65"E	
45.	**BLOCK- 7** Vill- Thegua, Block- Jamui, District- Jamui	13.3	A	24°54'51.29"N	86°16'18.99"E	
			B	24°54'48.70"N	86°16'13.48"E	
			C	24°54'52.41"N	86°16'5.09"E	
			D	24°55'3.40"N	86°15'56.65"E	
			E	24°55'14.56"N	86°16'0.23"E	
			F	24°55'1.26"N	86°16'4.91"E	
			G	24°54'54.72"N	86°16'10.56"E	
46.	**BLOCK-8** Vill- Sugi,	8.26	A	24°55'22.94"N	86°15'47.45"E	
			B	24°55'18.71"N	86°15'53.37"E	

SEIAA, Bihar

	Block- Jamui, District- Jamui		C	24°55'13.13"N	86°15'56.78"E	
			D	24°55'17.92"N	86°15'57.56"E	
			E	24°55'25.20"N	86°15'55.06"E	
			F	24°55'30.79"N	86°15'45.67"E	
			G	24°55'31.04"N	86°15'41.14"E	
47.	**BLOCK-9** Vill- Lathane Block- Jamui, District- Jamui	9.2	A	24°56'2.67"N	86°15'21.54"E	
			B	24°55'56.45"N	86°15'23.33"E	
			C	24°55'50.03"N	86°15'30.20"E	
			D	24°55'37.31"N	86°15'37.02"E	
			E	24°55'33.30"N	86°15'42.93"E	
			F	24°55'49.26"N	86°15'34.95"E	
		GAJHI RIVER				
48.	**BLOCK-1** Vill- Tola Baliadabar, Block- Chakai, District- Jamui	14.6	A	24°30'11.07"N	86°28'28.27"E	
			B	24°30'14.89"N	86°28'18.70"E	
			C	24°30'18.58"N	86°28'22.71"E	
			D	24°30'18.30"N	86°28'34.87"E	
			E	24°30'14.45"N	86°28'41.89"E	
			F	24°30'3.66"N	86°28'46.92"E	
			G	24°30'2.96"N	86°28'43.43"E	
			H	24°30'9.89"N	86°28'39.65"E	
			I	24°30'11.21"N	86°28'34.08"E	
						Source: Field Study & Primary data collection

Wildlife protected area /Eco sensitive Zone

Eco-Sensitive Zones (ESZs) are areas notified by the Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India around Protected areas, National Parks and Wildlife Sanctuaries. The purpose of declaring ESZs is to create some kind of "shock absorbers" to the protected areas by regulating and managing the activities around such areas. They also act as a transition zone from areas of high protection to areas involving lesser protection.

The Nakti Dam Bird Sanctuary is situated in Jamui District of Bihar and lies

SEIAA, Bihar

between latitude N 24.50' and N 24.51' and longitude E 86.26' and extends over an area of 337.85 hectare or 3.3875 square kilometres;

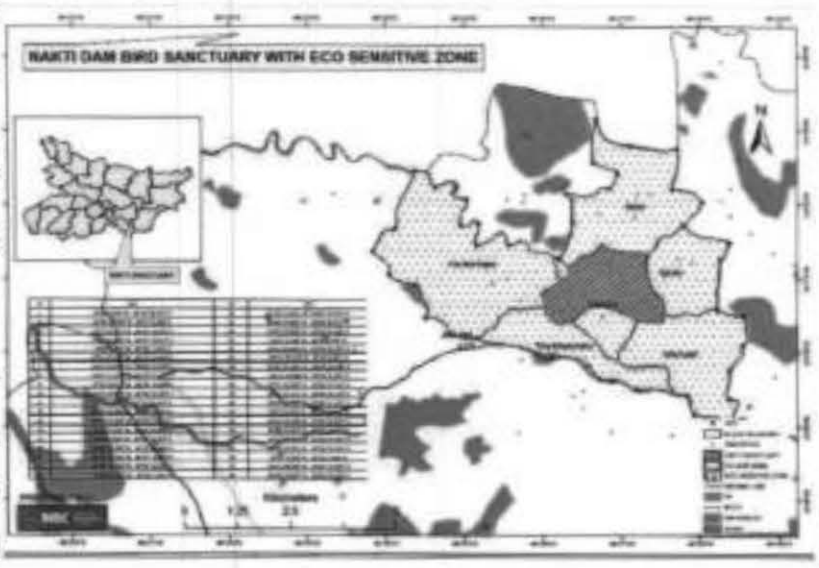


FIGURE 20: NAKTI DAM BIRD SANCTUARY

AND WHEREAS, the sanctuary with the water body of the reservoir and surrounding tract is the habitat of many important migratory and resident bird species including the Bar-Headed Goose, Lalsar, Brahmny Duck, Snake bird, Cormorant, Open Bill Stork, Hoopoe, White Breasted Kingfisher, Pied kingfisher, Red-vented Bulbul and Grey Horn Bill, Barn Owl, Falcon, Ibis, etc.;

AND WHEREAS, the storage of water in Nakti dam is caused by Nakti river and its tributaries during rainy season and it is necessary to conserve the catchment area nearby the dam to sustain the source of water. Conservation of local natural vegetation for habitat and reproduction of birds is necessary. Soil conservation is needed to prevent silting of dam to maintain the water level.

AND WHEREAS, it is necessary to conserve and protect the area, the extent and boundaries of which is specified in paragraph 1 of this notification around of the protected area of Nakti Dam Bird Sanctuary as Eco-sensitive Zone from ecological and environmental point of view and to prohibit industries or class of industries and their operations and processes in the said Eco-sensitive Zone.

The Nagi Dam Bird Sanctuary situated in the Jamui district of Bihar lies between latitude N 24 49' and longitude E 86.23' & E 86.24' is spread over an area of 2.0957 square kilometres;

AND WHEREAS, the storage of water in Nagi Dam is caused by Nagi River and its tributaries during rainy season and it is necessary to conserve the catchment

SEIAA, Bihar

area nearby the Dam to sustain the source of water. Conservation of local natural vegetation for habitat and reproduction of birds is necessary. Soil conservation is needed to prevent silting of dam and to maintain the water level;

AND WHEREAS this sanctuary with the water body of the reservoir and surrounding tract is the habitat of many important migratory and resident bird species including the Bar-headed goose, Lalsar, Brahmny duck, Snake bird, Cormorant, Open Bill Stork, Hoopoe, White breasted kingfisher, Pied kingfisher, Red-vented bulbul and Grey horn bill, Barn owl, Falcon, Ibis;

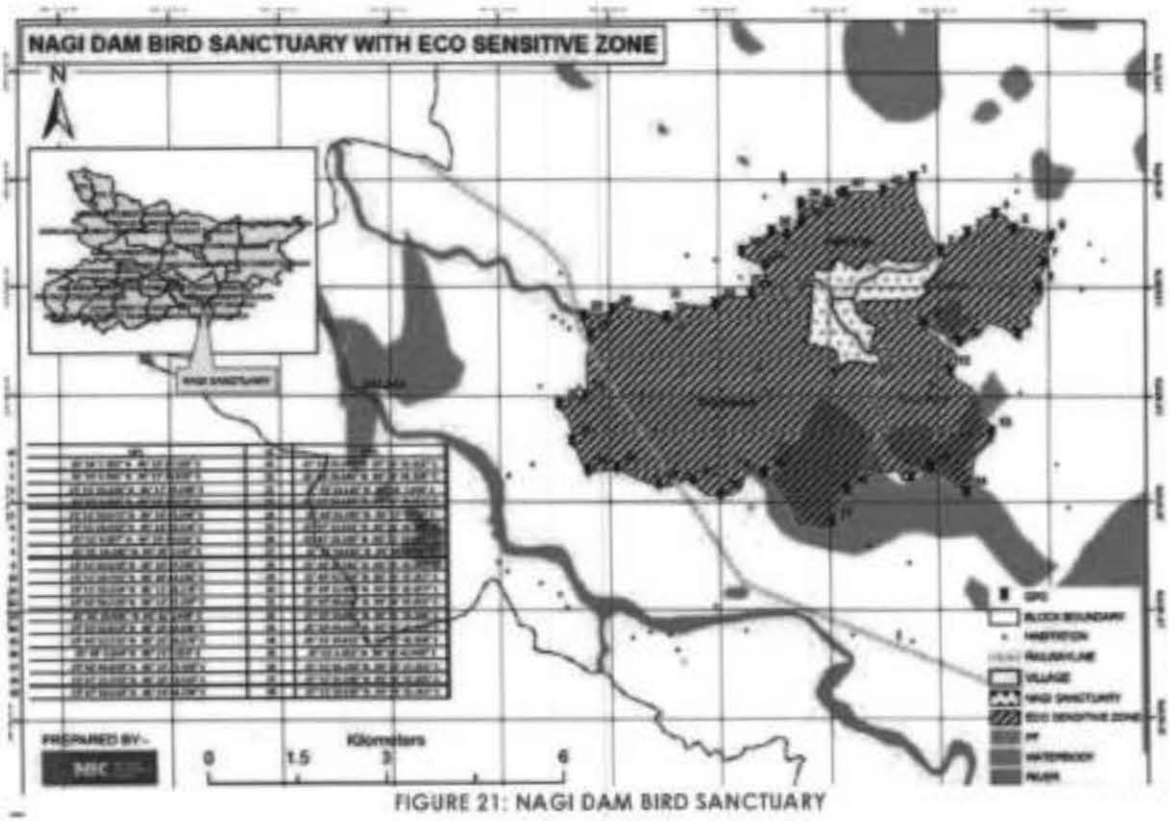


FIGURE 21: NAGI DAM BIRD SANCTUARY

AND WHEREAS, it is necessary to conserve and protect the area around the protected area of the Nagi Dam Bird Sanctuary as Eco-sensitive Zone from ecological and environmental point of view.

SEIAA, Bihar

DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS

Drainage pattern and sand source of the study area out of total geographical area 3098 Sq. Km. Detailed are as below-

Table 9: Drainage pattern & sand source

Sl. No.	River	Drained Area (Sq. Km)	% Area drained in the district	Description of main river
1	Kiul	18.40	0.6	The Kiul River is a tributary of Ganges. It originates in Giridih of Jharkhand and flows through Lakhisarai, Sheikhpura and Jamui di stricts of Bihar and join he Kiul originates from the Tisri Hill Range in Kharagdiha police station area of Giridih district. After forming the boundary of the district for a short distance it enters Jamui district through a narrow gorge near the Satpahari hill. It first flows in an easterly direction close to the southern base of the Girdheswari Hills. It turns northward at their eastern extremity and passes near the town of Jamui.
2.	Barnar	13.6	0.43	It is the sub tributaries river of kiul in the district of Jamui. Total length of the river is 52 km in the district and originates from Tola Jogia where its altitude is 243 m.
3.	Ulai	6.12	0.19	Ulai river is the flow towards the north in the district. Its nature is ephemeral. The total length of ulai river in the district is about 50 km. It is second mains resource of sediments in the district
4.	Bunbuni	1.04	0.03	Bunbuni river is also good sites for sediments accumulation, the total length is 11.5 km

SEIAA, Bihar

				and its origin is Bojhait where its altitude is 133 m. the drained area in the district is 1.04km. the percentage drained area in the district is 0.03
5.	Sukhnar	2.0	0.06	Sukhnar river is sub-tributaries of kiul river, sand source area and flows in Jamui district of Bihar. the total length of Sukhnar river 20 km. Its origin point is sonailtanr where its altitude is 140 m.
6.	Anjana	0.24	0.008	The river Anjana is such a small river which has a great role in the economic, social and cultural life of the district. The length of this river in the district of Jamui near about 12 km and its originates from Barhat where its altitude is 98 m. The total area drained in district is 0.24 km.
7.	Gajhi	0.40	0.01	It is also sub- tributaries of kiul river in the district. Total length in the district is 10 km and its origin place is Tola Jaruadih where its altitude is 319 m
8.	Balan	0.92	0.03	It is also sub-tributaries of kiul river in the district. Total length in the district is 31 km and its origin place is Tengahra where its altitude is 141m
Source: Wikipedia, rivers in Jamui and Primary data from google earth				

SEIAA, Bihar

SALIENT FEATURES OF IMPORTANT RIVERS AND STREAMS

Silent features of the important river in Jamui district of Bihar

Table 10: Salient features of rivers/streams

S. No.	Name of the River	Total Length in the District (in Km)	Place of origin	Altitude at Origin
1	Kiul	64	Tola Tetaria	312 m
2	Barnar	52	Tola Jogia	243 m
3	Ulai	50	Uparsapaha	290 m
4	Nakti	38	kita Kusauna	132 m
5	Bajan	31	Tengahra	141 m
6	Ajay	21.5	Burhiatanr	310 m
7	Sukhnar	20	Sonailtanr	140 m
8	Bandarbari	18	Bhelwa Mohanpur	122 m
9	Bahuar	13.5	Mathurapur	93 m
10	Nagi	13.5	Harhanja	126 m
11	Anjan	12	Barhat	98 m
12	Bunbuni	11.5	Bojhait	133 m
13	Chilka	10	Tola Gurarbaj	281 m
14	Gajhi	10	Tola Jaruadih	319 m
15	Badua	9.5	Tola Rupai	241 m
16	Nata	9	Matwalwa	78 m
17	Arghuti	8	Mainijor	147 m
18	Churiya	8	Gadi Mangrar	124 m
19	Darhwa	6.5	Tola Dadhwa	280 m
20	Jalua Jor	5.5	Kokahara	294 m
21	Singarjhor	4	Domachhorant	280 m
22	Agra	3.25	Gadikiajori	278 m

Source: Wikipedia, rivers in Jamui and Primary data from google earth and GPS instruments

The mineral potential is calculated based on field investigation, outcrop and geology of the catchment area of the river/ streams. As per the policy of the

SEIAA, Bihar

State and location, depth of minable mineral is defined. The area for removal of mineral in a river or stream can be decided depending on geo- morphology and other factors, it can be 50% to 60% of the area of a particular river/stream. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river/ stream.

There are 48 sand Ghats recognised in this district for mineral concession. For mapping of area of mineral concession, the district administration needs to conduct survey every year. Also need to conduct replenishment study as per norm of Enforcement & Monitoring Guidelines for Sand Mining 2020.

Table 11: Portion of river recommended for mineral concession

Portion of the River or stream Recommended for Mineral Concession	Length of area recommended for mineral concession in KM	Average width of area recommended for mineral concession in Meter	Area recommended for Mineral concession (in Sq.m.)	Mineable minerals potential (in metric ton (60% of total minerals potential)
KIUL RIVER				
Block-1	1.30	192	250000	309000
Block- 2	0.90	148	133000	164388
Block- 3	0.68	513	349000	431364
Block- 4	0.90	160	144000	177984
Block- 5	0.85	275	234000	289224
Block- 6	0.65	157	102000	126072
Block- 7	0.98	134	131000	161916
Block- 8	1.10	279	307000	379452
Block- 9	0.51	616	314000	388104
Block- 10	0.95	321	305000	376980
Block- 11	1.20	256	307000	379452
Block- 12	0.52	181	94300	116554.8
Block- 13	1.30	507	659000	814524
Block- 14	1.12	463	518000	640248
Block- 15	0.63	279	176000	217536
Total	**13.59**	**299**	**4023300**	**4972798.8**

• Specific gravity of sand as per NABL report- 2.06				
BARNAR RIVER				
Block- 1	0.65	114	74100	92921.4
Block- 2	0.54	125	67600	84770.4
Block- 3	1.50	275	413000	517902
Block- 4	0.89	273	243000	304722
Block- 5	1.60	266	426000	534204
Block- 6	0.56	530	297000	372438
Block- 7	1.60	254	406000	509124
Block- 8	1.26	333	420000	526680
Block- 9	1.70	248	422000	529188
Block- 10	0.76	257	195000	244530
Block- 11	1.00	381	381000	477774
Block- 12	1.00	297	297000	372438
Block- 13	0.90	411	370000	463980
Block- 14	1.00	325	325000	407550
Block- 15	1.30	200	260000	326040
Block- 16	1.00	163	163000	204402
Total	**17.26**	**278**	**4759700**	**5968663.8**
• Specific gravity of sand as per NABL report- 2.09				
BAJAN RIVER				
Block- 1	0.63	79	50000	62100
Total	**0.63**	**79**	**50000**	**62100**
• Specific gravity of sand as per NABL report- 2.07				
BUNBUNI RIVER				
Block- 1	0.57	165	94000	113928
Total	**0.57**	**165**	**94000**	**113928**
• Specific gravity of sand as per NABL report- 2.02				
ANJANA RIVER				
Block- 1	0.45	111	50000	63300
Block- 2	0.5	100	50000	63300
Block- 3	0.72	77	55400	70136.4
Total	**1.67**	**96**	**155400**	**196736.4**
• Specific gravity of sand as per NABL report- 2.11				

SEIAA, Bihar

SUKHNAR RIVER				
Block- 1	0.5	48	24200	29911.2
Block- 2	0.75	67	50000	61800
Total	**1.25**	**58**	**74200**	**91711.2**
• Specific gravity of sand as per NABL report- 2.06				
ULAI RIVER				
Block- 1	1.4	111	155000	193440
Block- 2	0.68	212	144000	179712
Block- 3	0.6	157	94200	117561.6
Block- 4	0.64	78	50000	62400
Block- 5	0.7	134	93700	116937.6
Block- 6	0.7	139	97600	121804.8
Block- 7	0.75	177	133000	165984
Block- 8	0.6	138	82600	103084.8
Block- 9	0.9	102	92000	114816
Total	**6.97**	**139**	**942100**	**1175740.8**
• Specific gravity of sand as per NABL report- 2.08				
GAJHI RIVER				
Block- 1	0.86	170	146000	178704
total	**0.86**	**170**	**146000**	**178704**
• Specific gravity of sand as per NABL report- 2.04				
Source: Field Study & KML data				

Mineral Potential

Table 12: Mineral potential of the Jamui district

River	No. of Sand Ghat	Total area (Ha.)	Total mineral Reserve (MT)	Total Mineable Mineral Potential in MT (60% of total minerals Reserve)
Kiul river	15	402.33	8287998	4972798.8
Barnar river	16	475.97	9947773	5968663.8
Bajan river	1	5	103500	62100
Bunbuni river	1	9.4	189880	113928
Anjana river	3	15.54	327894	196736.4
Sukhnar river	2	7.42	152852	91711.2

SEIAA, Bihar

Ulai river	9	94.21	1959568	1175740.8
Gajhi river	1	14.6	297840	178704
Total	**48**	**1024.47**	**21267305**	**12760383**

- ***Considering mining depth 1m bgl***
- ***Total Mineable Mineral Potential considered 60% of Total mineral Reserve***

Source: Primary data

Annual deposition of sand

Table 13: Annual deposition of sand	
Total Mineable Mineral Potential (MT)	**Annual deposition**
12760383	**3828115**

Annual deposition is estimated @30% of Mineable Mineral Potential. It may increase or decrease subjected to natural calamities like fluvial action, wind erosion & geomorphological factor. Detailed deposition can be calculated on the basis of data collected by replenishment study.

Distance of Proposed Sand Ghats from Eco Sensitive Zone/ Wild Life Sanctuary/ Protected Forest Area

Table 14: Distance of Proposed Sand Ghats from Eco Sensitive Zone/ Wild Life Sanctuary/ Protected Forest Area

River Details	Sand Ghat Details	Distance from Eco Sensitive Zone (**ESZ**) in KM	Distance from **WLS/ FPA**(in KM)	Remarks
Kiul River	Block-1	18.5	0.1	Sand Ghats are outside of Eco Sensitive Zone/ Wild Life Sanctuary/ Protected Forest Area **(Bhimbandh Wild Life Sanctuary & Eco Sensitive area/ Nagi & Nakti Bird Sanctuary)**
	Block- 2	18	0.2	
	Block- 3	17	0.6	
	Block- 4	15	1.5	
	Block- 5	13	3	
	Block- 6	13	3	
	Block- 7	12	3.5	
	Block- 8	9	4.5	
	Block- 9	8	5	
	Block- 10	6.5	5.5	
	Block- 11	4	3	
	Block- 12	4	3	
	Block- 13	2	1	
	Block- 14	1.5	0.5	
	Block- 15	1	0.6	

SEIAA Bihar

Barnar River	Block- 1	15	2	
	Block- 2	11.5	4	
	Block- 3	11.5	4.5	
	Block- 4	11	4	
	Block- 5	11	4	
	Block- 6	9	3	
	Block- 7	8	3	
	Block- 8	6	2	
	Block- 9	6.5	0.3	
	Block- 10	7	1	
	Block- 11	7.5	2	
	Block- 12	9.5	4.5	
	Block- 13	10	6	
	Block- 14	11	6.5	
	Block- 15	8.5	7.5	
	Block- 16	8	7	
Bunbuni River	Block-1	16	1.5	
Sukhnar River	Block-1	11.5	0.6	
	Block-2	8	4	
Gajhi River	Block- 1	31	0.5	
Bajan River	Block-1	6.5	6	
Anjana River	Block-1	8	3	
	Block- 2	7	4	
	Block- 3	4.5	2	
Ulai River	Block-1	4	1.5	
	Block-2	2.5	3	
	Block-3	2.5	3	
	Block-4	1.5	3.5	
	Block- 5	1.5	2	
	Block- 6	6	4	
	Block- 7	5	3	
	Block- 8	4.5	2.5	
	Block- 9	3	1.5	

NOTE:

Details are based on distance from the ESZ/BS/PFA as per KML obtained from Aranya Bhawan, Dept. of Environment, Forest & Climate Change, Govt. of Bihar, Patna

Source: Primary Data & KML received from Aryana Bhawan, DoEF&CC, GoB.

All sand ghat as mentioned above in table is at least 1 KM far from Notified ECO Sensitive Zone

- **Bhimband Wild Life Sanctuary Notified by MOEF&CC, New Delhi Vide REGD. NO. D. L.-33004/99 NEW DELHI, TUESDAY, JANUARY 10, 2017/PAUSA 20, 1938**
- **Nagi & Nakti Bird Sanctuary notified by MOEF&CC, Bihar Vide S.O.-627 Dt. 22.07.1987 & S.O.- 643 Dt. 27.07.1987**

All sand ghats are also outside the protected forest area.

SEIAA, Bihar

ANNEXURE-I

Details of Sand

a) Rivers:

River Name	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Kiul river	64	Non- perennial
Barnar river	52	Non- perennial
Ulai river	50	Non- perennial
Bunbuni river	11.5	Non- perennial
Sukhnar river	20	Non- perennial
Anjana river	12	Non- perennial
Gajhi river	10	Non- perennial
Bajan river	31	Non- perennial

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

Name ofReservoir/ Dams	Maintain/ Controlled by State Govt./ PSU etc.	Location	District	Tehsil	Village	Size (Ha)
De-Siltation location (lake/ponds/Dams etc.) not found in the district						

SEIAA, Bihar

c) Patta Lands/ Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
Patta land/khatedari land is not found in the district for sand mining purpose.						

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
M-sand plants are not available in the district						



ANNEXURE-II

List of Potential Mining Leases (existing & proposed)Rivers

River Details	Lease Details	Area (In Ha)	Distance (inKM) from PA/ BR/ WC/ESZ	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to bemined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
Ulai	Cluster-1	22	1.5	3	No	823680	Sand	Existing
	Cluster-2	24	2	4	No	898560	Sand	Existing
	Cluster-3	23.5	1.6	3	No	879840	Sand	Existing
	Cluster-4	24	2	0.3	No	898560	Sand	Existing
	Cluster-5	24	6	2	No	898560	Sand	Existing
	Cluster-6	24	7	4.5	No	898560	Sand	Existing
Barnar	Cluster-7	24	12.5	3.2	No	902880	Sand	Existing
	Cluster-8	24	13	2	No	902880	Sand	Existing
	Cluster-9	22	12	4.5	No	827640	Sand	Existing
	Cluster-10	24	10.5	4	No	902880	Sand	Existing
	Cluster-11	32.5	9	3	No	1222650	Sand	Existing
	Cluster-12	21	9	2.5	No	790020	Sand	Existing
	Cluster-13	23.5	8	3	No	884070	Sand	Existing
	Cluster-14	22.5	8	3	No	846450	Sand	Existing
	Cluster-15	23	6	2.4	No	865260	Sand	Existing
	Cluster-16	24	6	1	No	902880	Sand	Existing
	Cluster-17	24	10	5	No	902880	Sand	Existing
	Cluster-18	24	11	6	No	902880	Sand	Existing
Anjana	Cluster-19	22.5	2.5	1	No	854550	Sand	Existing

	Cluster-20	23.5	5	2.5	No	892530	Sand	Existing
Kiul	Cluster-21	22	18	0.2	No	815760	Sand	Existing
	Cluster-22	23.5	17.5	0.3	No	871380	Sand	Existing
	Cluster-23	24	16.5	0.7	No	889920	Sand	Existing
	Cluster-24	23	15.5	1.5	No	852840	Sand	Existing
	Cluster-25	24	15	2.5	No	889920	Sand	Existing
	Cluster-26	23.5	14	2.5	No	871380	Sand	Existing
	Cluster-27	24	12	3.5	No	889920	Sand	Existing
	Cluster-28	23	10	5	No	852840	Sand	Existing
	Cluster-29	21.5	8.5	5.5	No	797220	Sand	Existing
	Cluster-30	24	6	5	No	889920	Sand	Existing
	Cluster-31	22	5	4	No	815760	Sand	Existing
	Cluster-32	21.5	3	2	No	797220	Sand	Existing
	Cluster-33	20.5	2	0.5	No	760140	Sand	Existing
	Cluster-34	22.5	1	0.5	No	834300	Sand	Existing
	Cluster-35	23.5	1	0.5	No	871380	Sand	Existing

s	Lease Details	Area (in Ha)	Distance (inKM) from PA/ BR/ WC/ESZ	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 1 meter	Mineral to bemined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
Kiul River	Block-1	25	18.5	0.1	No	309000	Sand	Proposed
	Block- 2	13.3	19.2	1.1	No	164388	Sand	Proposed
	Block- 3	34.9	17.0	0.7	No	431364	Sand	Proposed
	Block- 4	14.4	15.7	1.6	No	177984	Sand	Proposed

	Block- 5	23.4	13.3	9.1	77.4 Ha.	309000	Sand	Proposed
	Block- 6	10.2	12.2	9.4		164388	Sand	Proposed
	Block- 7	13.1	10.3	9.7		431364	Sand	Proposed
	Block- 8	30.7	10.1	9.1		177984	Sand	Proposed
	Block- 9	31.4	8.5	7.5	No	289224	Sand	Proposed
	Block- 10	30.5	7.4	6.5	No	126072	Sand	Proposed
	Block- 11	30.7	6.5	5.5	40.13 Ha.	161916	Sand	Proposed
	Block- 12	9.43	3.9	3.1		379452	Sand	Proposed
	Block- 13	65.9	3.2	2.1	135.3 Ha.	388104	Sand	Proposed
	Block- 14	51.8	2.3	1.2		376980	Sand	Proposed
	Block- 15	17.6	1.2	0.5		379452	Sand	Proposed
Barnar Rive	Block- 1	7.41	13.9	1.9	No	92921.4	Sand	Proposed
	Block- 2	6.76	11.7	3.9	No	84770.4	Sand	Proposed
	Block- 3	41.3	11.7	4.1	108.2 Ha.	517902	Sand	Proposed
	Block- 4	24.3	11.2	4.4		304722	Sand	Proposed
	Block- 5	42.6	9.0	3.1		534204	Sand	Proposed
	Block- 6	29.7	7.8	2.8	No	372438	Sand	Proposed
	Block- 7	40.6	6.2	2.0	No	509124	Sand	Proposed
	Block- 8	42	6.3	0.5	No	526680	Sand	Proposed
	Block- 9	42.2	7.2	0.9	No	529188	Sand	Proposed
	Block- 10	19.5	7.8	2.0	No	244530	Sand	Proposed
	Block- 11	38.1	9.3	4.6	No	477774	Sand	Proposed
	Block- 12	29.7	10.4	6.5	99.2 ha.	372438	Sand	Proposed
	Block- 13	37	11.0	6.8		463980	Sand	Proposed
	Block- 14	32.5	9.9	7.6		407550	Sand	Proposed
	Block- 15	26	9.0	7.1	44.3 ha.	326040	Sand	Proposed
	Block- 16	16.3	8.3	6.1		204402	Sand	Proposed
Bunbuni River	Block-1	9.4	16.7	1.1	No	113928	Sand	Proposed
Sukhnar	Block-1	2.42	11.8	0.4	No	29911.2	Sand	Proposed

River	Block-2	5	8.5	4.5	No	61800	Sand	Proposed
Gajhi River	Block- 3	14.6	32.0	0.6	No	178704	Sand	Proposed
Bajan River	Block-1	5	6.7	4.1	No	62100	Sand	Proposed
Anjana River	Block-1	5	8.1	2.9	No	63300	Sand	Proposed
	Block- 2	5	6.5	4.2	No	63300	Sand	Proposed
	Block- 3	5.54	4.8	2.7	No	70136.4	Sand	Proposed
Ulai River	Block-1	15.5	3.2	1.9	44.32 ha.	193440	Sand	Proposed
	Block-2	14.4	3.1	2.9		179712	Sand	Proposed
	Block-3	9.42	1.7	3.7		117561.6	Sand	Proposed
	Block-4	5.0	1.2	1.4		62400	Sand	Proposed
	Block- 5	9.37	6.3	4.2	No	116937.6	Sand	Proposed
	Block- 6	9.76	5.7	3.7	40.52 ha.	121804.8	Sand	Proposed
	Block- 7	13.3	4.6	2.6		165984	Sand	Proposed
	Block- 8	8.26	3.2	1.4		103084.8	Sand	Proposed
	Block- 9	9.2	3	1.5		114816	Sand	Proposed

Note:
The Distance from **Eco Sensitive Zone** & **WLS/Protected Forest area** is based on KML received from Aranya Bhawan, Dept. of Environment, Forest & Climate Change, Govt. of Bihar

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve (MT)	Total Mineral to be mined (MT)	Existing /Proposed
De-Siltation location (lake/ponds/Dams etc.) not found in the district								

De-Siltation Location: (Lakes/Ponds/ Dams etc.) (Existing &proposed)

Name of Reservoir /Dams	Maintain/ Controlled by StateGovt./ PSU etc.	Location	District	Tehsil	Village	Size(Ha)	Quantity MT/Year	Existing/ Proposed
Patta land/khatedari land is not found in the district for sand mining purpose.								

M-Sand Plants :(existing & proposed)

PlantName	Owner	District	Tehsil	Village	Geo- location	Quantity Tonnes/ Annum	Existing/ Proposed
M-sand plants are not available in the district							

SEIAA Bihar

ANNEXURE-III

Cluster & Contiguous Cluster detailsClusters:

River Name	ClusterNo.	Lease No	Location (Riverbed / Patta Land)	Village	Area (In Ha)	Total Excavation (ton)	Total Mineral Excavation (Ton)
Kiul River	Cluster No.-1	Block 5-8	Riverbed	Bela, Bhour, Sagdaha, Pakri, kendih & Bangra	77.4	1594440	956664
	Cluster No.-2	Block 11 -12	Riverbed	Garo Nawada & Kalyanpur	40.13	826678	496006.8
	Cluster No.-3	Block 13-15	Riverbed	Garo Nawada, Katauna & Satgama	135.3	2787180	1672308
Barnar	Cluster No.-4	Block 3 to 5	Riverbed	Rajpur, Tola Asrahua, Tola Balsam & Dumri	108.2	2261380	1356828
	Cluster No.-5	Block 12-14	Riverbed	Simria, Kolhua & Jogajhingoal	99.2	2073280	1243968
	Cluster No.-6	Block 15-16	Riverbed	Changodih & Dabil	44.3	925870	555522
Ulai	Cluster No.-7	Block 1- 4	Riverbed	Tola Auria, Tola Mahapur & Tola Satighat	44.32	921856	553113.6
		Block 6-9	Riverbed	Thegua, Sugi & Lathane	40.52	842816	505689.6

SEIAA, Bihar

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No.	Number of leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area of Clusters (Ha)	Total Mineral Excavation (Ton)
Kiul	Contiguous Cluster No.-1	Cluster No.-2 & cluster No.3	5	Riverbed	800 meters	Garo Nawada, Kalyanpur, Katauna & Satgama	175.43	2168314.8
Barnar	Contiguous Cluster No.-2	Cluster No.-5 & cluster No.6	5	Riverbed	550 meters	Simria, Kolhua, Jogajhingoal, Changodih & Dabil	143.5	1799490

SEIAA, Bihar

ANNEXURE-IV

Transportation Routes for individual leases and leases in Cluster

Lea se No	Transportation Route No.	Number of tippers/ days of lease	Number of tipper s/ day of all the lease on route	Length of Route in KM	Type of Road (Black Topped d/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
KIUL RIVER								
Block-1	SH-82	37	37	1	Unpaved	Pave with bricks & stone	Lease Owner	Attached
Block- 2	SH-82	20	20	0.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 3	SH-82	51	51	0.9	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 4	SH-82	21	21	1.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 5	SH-82	34	34	2.0	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 6	SH-82	15	15	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 7	SH-82	19	19	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 8	SH-82	45	45	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 9	NH-333	46	46	0.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached

SEIAA Bihar

Block- 10	NH-333	45	45	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 11	NH-333	45	45	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 12	NH-333A	14	14	1.4	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 13	NH-333A	97	97	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 14	NH-333A	76	76	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 15	NH-333A	26	26	1.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BARNAR RIVER								
Block- 1	NH-333	11	11	1.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 2	NH-333	10	10	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 3	NH-333	61	61	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 4	NH-333	36	36	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 5	NH-333	63	63	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 6	NH-333	44	44	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 7	NH-333	60	60	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 8	NH-333	62	62	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached

Block- 9	NH-333	62	62	1.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 10	NH-333	29	29	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 11	NH-333	56	56	1.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 12	NH-333	44	44	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 13	NH-333	54	54	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 14	NH-333	48	48	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 15	NH-333	38	38	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 16	NH-333	24	24	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BUNBUNI RIVER								
Block-1	SH-82	14	14	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
SUKHNAR RIVER								
Block-1	NH-333	4	4	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333	7	7	1.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
GAJHI RIVER								
Block-1	NH-333	21	21	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BAJAN RIVER								
Block-1	NH-333	7	7	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached

ANJANA RIVER								
Block-1	NH-333	7	7	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333	7	7	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-3	NH-333	8	8	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
ULAI RIVER								
Block-1	NH-333A	23	23	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333A	21	21	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-3	NH-333A	14	14	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-4	NH-333A	7	7	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-5	NH-333A	14	14	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-6	NH-333A	14	14	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-7	NH-333A	20	20	0.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-8	NH-333A	12	12	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-9	NH-333A	14	14	0.4	Unpaved	Paved with bricks & stone	Lease Owner	Attached

SEIAA, Bihar

Cluster No	Transportation Route No.	Number of tippers /days of lease	Number of tipper s/ day of all the lease on route	Length of route in KM	Type of Road (Black Topped d/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
Cluster No.-1	SH-82	68	68	1.5 to 2.5	Unpaved /blacktopped	Unpaved road need be paved with brick & stone	Lease Owner	Attached
Cluster No.-2	NH-333 & 333A	59	59	1.4 to 2.5			Lease Owner	
Cluster No.-3	NH-333A	199	199	1.5 to 2.5			Lease Owner	
Cluster No.-4	NH-333	130	130	0.5			Lease Owner	
Cluster No.-5	NH-333	146	146	1.5 to 2			Lease Owner	
Cluster No.-6	NH-333	62	62	1			Lease Owner	
Cluster No.-7	NH-333	65	65	0.5 to 2			Lease Owner	
Cluster No.-8	NH-333	60	60	0.3 to 0.6			Lease Owner	

SEIAA Bihar

ANNEXURE-V

Compliance to Enforcement and Monitoring Guidelines for Sand Mining- 2020

List of Potential Mining Leases (existing & proposed)Rivers

River Details	Lease Details	Area (in Ha)	Distance (inKM) from PA/ BR/ WC/ESZ	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 3 meters	Mineral to bemined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
Ulai	Cluster-1	22	1.5	3	No	823680	Sand	Existing
	Cluster-2	24	2	4	No	898560	Sand	Existing
	Cluster-3	23.5	1.6	3	No	879840	Sand	Existing
	Cluster-4	24	2	0.3	No	898560	Sand	Existing
	Cluster-5	24	6	2	No	898560	Sand	Existing
	Cluster-6	24	7	4.5	No	898560	Sand	Existing
Barnar	Cluster-7	24	12.5	3.2	No	902880	Sand	Existing
	Cluster-8	24	13	2	No	902880	Sand	Existing
	Cluster-9	22	12	4.5	No	827640	Sand	Existing
	Cluster-10	24	10.5	4	No	902880	Sand	Existing
	Cluster-11	32.5	9	3	No	1222650	Sand	Existing
	Cluster-12	21	9	2.5	No	790020	Sand	Existing
	Cluster-13	23.5	8	3	No	884070	Sand	Existing
	Cluster-14	22.5	8	3	No	846450	Sand	Existing
	Cluster-15	23	6	2.4	No	865260	Sand	Existing
	Cluster-16	24	6	1	No	902880	Sand	Existing
	Cluster-17	24	10	5	No	902880	Sand	Existing

SEIAA Gujarat

	Cluster-18	24	11	6	No	902880	Sand	Existing
Anjana	Cluster-19	22.5	2.5	1	No	854550	Sand	Existing
	Cluster-20	23.5	5	2.5	No	892530	Sand	Existing
Kiul	Cluster-21	22	18	0.2	No	815760	Sand	Existing
	Cluster-22	23.5	17.5	0.3	No	871380	Sand	Existing
	Cluster-23	24	16.5	0.7	No	889920	Sand	Existing
	Cluster-24	23	15.5	1.5	No	852840	Sand	Existing
	Cluster-25	24	15	2.5	No	889920	Sand	Existing
	Cluster-26	23.5	14	2.5	No	871380	Sand	Existing
	Cluster-27	24	12	3.5	No	889920	Sand	Existing
	Cluster-28	23	10	5	No	852840	Sand	Existing
	Cluster-29	21.5	8.5	5.5	No	797220	Sand	Existing
	Cluster-30	24	6	5	No	889920	Sand	Existing
	Cluster-31	22	5	4	No	815760	Sand	Existing
	Cluster-32	21.5	3	2	No	797220	Sand	Existing
	Cluster-33	20.5	2	0.5	No	760140	Sand	Existing
	Cluster-34	22.5	1	0.5	No	834300	Sand	Existing
	Cluster-35	23.5	1	0.5	No	871380	Sand	Existing

River Details	Lease Details	Area (in Ha)	Distance (inKM) from PA/ BR/ WC/ESZ	Distance from Forest Area (in KM)	Mining leases within 500 meters (if yes cluster area)	Total excavation in Tonnes /Annum considering digging depth max as 1 meter	Mineral to bemined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
Kiul River	Block-1	25	18.5	0.1	No	309000	Sand	Proposed
	Block- 2	13.3	19.2	1.1	No	164388	Sand	Proposed

	Block- 3	34.9	17.0	0.7	No	431364	Sand	Proposed
	Block- 4	14.4	15.7	1.6	No	177984	Sand	Proposed
	Block- 5	23.4	13.3	9.1	77.4 Ha.	309000	Sand	Proposed
	Block- 6	10.2	12.2	9.4		164388	Sand	Proposed
	Block- 7	13.1	10.3	9.7		431364	Sand	Proposed
	Block- 8	30.7	10.1	9.1		177984	Sand	Proposed
	Block- 9	31.4	8.5	7.5	No	289224	Sand	Proposed
	Block- 10	30.5	7.4	6.5	No	126072	Sand	Proposed
	Block- 11	30.7	6.5	5.5	40.13 Ha.	161916	Sand	Proposed
	Block- 12	9.43	3.9	3.1		379452	Sand	Proposed
	Block- 13	65.9	3.2	2.1	135.3 Ha.	388104	Sand	Proposed
	Block- 14	51.8	2.3	1.2		376980	Sand	Proposed
	Block- 15	17.6	1.2	0.5		379452	Sand	Proposed
	Block- 1	7.41	13.9	1.9	No	92921.4	Sand	Proposed
	Block- 2	6.76	11.7	3.9	No	84770.4	Sand	Proposed
	Block- 3	41.3	11.7	4.1	108.2 Ha.	517902	Sand	Proposed
	Block- 4	24.3	11.2	4.4		304722	Sand	Proposed
	Block- 5	42.6	9.0	3.1		534204	Sand	Proposed
	Block- 6	29.7	7.8	2.8	No	372438	Sand	Proposed
	Block- 7	40.6	6.2	2.0	No	509124	Sand	Proposed
Barnar Rive	Block- 8	42	6.3	0.5	No	526680	Sand	Proposed
	Block- 9	42.2	7.2	0.9	No	529188	Sand	Proposed
	Block- 10	19.5	7.8	2.0	No	244530	Sand	Proposed
	Block- 11	38.1	9.3	4.6	No	477774	Sand	Proposed
	Block- 12	29.7	10.4	6.5	99.2 ha.	372438	Sand	Proposed
	Block- 13	37	11.0	6.8		463980	Sand	Proposed
	Block- 14	32.5	9.9	7.6		407550	Sand	Proposed
	Block- 15	26	9.0	7.1	44.3 ha.	326040	Sand	Proposed
	Block- 16	16.3	8.3	6.1		204402	Sand	Proposed

SEIAA, Bihar

Bunbuni River	Block-1	9.4	16.7	1.1	No	113928	Sand	Proposed
Sukhnar River	Block-1	2.42	11.8	0.4	No	29911.2	Sand	Proposed
	Block-2	5	8.5	4.5	No	61800	Sand	Proposed
Gajhi River	Block- 3	14.6	32.0	0.6	No	178704	Sand	Proposed
Bajan River	Block-1	5	6.7	4.1	No	62100	Sand	Proposed
Anjana River	Block-1	5	8.1	2.9	No	63300	Sand	Proposed
	Block- 2	5	6.5	4.2	No	63300	Sand	Proposed
	Block- 3	5.54	4.8	2.7	No	70136.4	Sand	Proposed
Ulai River	Block-1	15.5	3.2	1.9	44.32 ha.	193440	Sand	Proposed
	Block-2	14.4	3.1	2.9		179712	Sand	Proposed
	Block-3	9.42	1.7	3.7		117561.6	Sand	Proposed
	Block-4	5.0	1.2	1.4		62400	Sand	Proposed
	Block- 5	9.37	6.3	4.2	No	116937.6	Sand	Proposed
	Block- 6	9.76	5.7	3.7	40.52 ha.	121804.8	Sand	Proposed
	Block- 7	13.3	4.6	2.6		165984	Sand	Proposed
	Block- 8	8.26	3.2	1.4		103084.8	Sand	Proposed
	Block- 9	9.2	3	1.5		114816	Sand	Proposed

Note:
The Distance from **Eco Sensitive Zone** & **WLS/Protected Forest area** is based on KML received from Aranya Bhawan, Dept. of Environment, Forest & Climate Change, Govt. of Bihar

Patta Lands/Khatedari Land: (existing & proposed)

Owner	Sy. No	Area	District	Tehsil	Village	Total Reserve(MT)	Total Mineral to be mined (MT)	Existing /Proposed
Patta land/khatedari land is not found in the district for sand mining purpose.								

De-Siltation Location: (Lakes/Ponds/ Dams etc.) (Existing &proposed)

Name ofReservoir/ Dams	Maintain/ Controlled by StateGovt./ PSU etc.	Location	District	Tehsil	Village	Size (Ha)	Quantity MT/Year	Existing/ Proposed
De-Siltation location (lake/ponds/Dams etc.) not found in the district								

M-Sand Plants :(existing & proposed)

PlantName	Owner	District	Tehsil	Village	Geo- location	Quantity Tonnes/ Annum	Existing/ Proposed
M-sand plants are not available in the district							

ANNEXURE-VI

Compliance to Enforcement and Monitoring Guidelines for Sand Mining- 2020

Final Cluster & Contiguous Cluster detailsClusters:

River Name	ClusterNo.	Lease No	Location (Riverbed / Patta Land)	Village	Area (in Ha)	Total Excavation (ton)	Total Mineral Excavation (Ton)
Kiul River	Cluster No.-1	Block 5-8	Riverbed	Bela, Bhour, Sagdaha, Pakri, kendih & Bangra	77.4	1594440	956664
	Cluster No.-2	Block 11 -12	Riverbed	Garo Nawada & Kalyanpur	40.13	826678	496006.8
	Cluster No.-3	Block 13-15	Riverbed	Garo Nawada, Katauna & Satgama	135.3	2787180	1672308
Barnar	Cluster No.-4	Block 3 to 5	Riverbed	Rajpur, Tola Asrahua, Tola Balsam & Dumri	108.2	2261380	1356828
	Cluster No.-5	Block 12-14	Riverbed	Simria, Kolhua & Jogajhingoal	99.2	2073280	1243968

SEIAA, Bihar

	Cluster No.-6	Block 15-16	Riverbed	Changodih & Dabil	44.3	925870	555522
Ulai	Cluster No.-7	Block 1- 4	Riverbed	Tola Auria, Tola Mahapur & Tola Satighat	44.32	921856	553113.6
		Block 6-9	Riverbed	Thegua, Sugi & Lathane	40.52	842816	505689.6

Contiguous Clusters:

River Name	Contiguous Cluster No.	Cluster No.	Number of leases in the cluster	Location (Riverbed / Patta Land)	Distance between clusters	Village	Area of Clusters (Ha)	Total Mineral Excavation (Ton)
Kiul	Contiguous Cluster No.-1	Cluster No.-2 & cluster No.3	5	Riverbed	800 meters	Garo Nawada, Kalyanpur, Katauna & Satgama	175.43	2168314.8
Barnar	Contiguous Cluster No.-2	Cluster No.-5 & cluster No.6	5	Riverbed	550 meters	Simria, Kolhua, Jogajhingoal, Changodih & Dabil	143.5	1799490

SEIAA, Bihar

ANNEXURE-VII

Compliance to Enforcement and Monitoring Guidelines for Sand Mining- 2020

Transportation Routes for individual leases and leases in Cluster

Lease No	Transportation Route No.	Number of tippers/ days dlease	Number of tippers/ day of all the lease on route	Length of Route in KM	Type of Road (Black Toppedd/ unpaved)	Recommendation for road(Black Topped/ unpaved)	The roadwill be Constructed byGovt/ Lease Owner	Route Map & Location
KIUL RIVER								
Block-1	SH-82	37	37	1	Unpaved	Pave with bricks & stone	Lease Owner	Attached
Block- 2	SH-82	20	20	0.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 3	SH-82	51	51	0.9	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 4	SH-82	21	21	1.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached

SEIAA Bihar

Block- 5	SH-82	34	34	2.0	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 6	SH-82	15	15	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 7	SH-82	19	19	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 8	SH-82	45	45	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 9	NH-333	46	46	0.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 10	NH-333	45	45	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 11	NH-333	45	45	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 12	NH-333A	14	14	1.4	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 13	NH-333A	97	97	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 14	NH-333A	76	76	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 15	NH-333A	26	26	1.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BARNAR RIVER								
Block- 1	NH-333	11	11	1.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 2	NH-333	10	10	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 3	NH-333	61	61	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached

SEIAA, Bihar

Block- 4	NH-333	36	36	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 5	NH-333	63	63	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 6	NH-333	44	44	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 7	NH-333	60	60	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 8	NH-333	62	62	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 9	NH-333	62	62	1.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 10	NH-333	29	29	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 11	NH-333	56	56	1.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 12	NH-333	44	44	1.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 13	NH-333	54	54	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 14	NH-333	48	48	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 15	NH-333	38	38	0.8	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block- 16	NH-333	24	24	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BUNBUNI RIVER								
Block-1	SH-82	14	14	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached



SUKHNAR RIVER								
Block-1	NH-333	4	4	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333	7	7	1.2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
GAJHI RIVER								
Block-1	NH-333	21	21	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
BAJAN RIVER								
Block-1	NH-333	7	7	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
ANJANA RIVER								
Block-1	NH-333	7	7	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333	7	7	2.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-3	NH-333	8	8	1	Unpaved	Paved with bricks & stone	Lease Owner	Attached
ULAI RIVER								
Block-1	NH-333A	23	23	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-2	NH-333A	21	21	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-3	NH-333A	14	14	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-4	NH-333A	7	7	2	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-5	NH-333A	14	14	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached

SEIAA, Bihar

Block-6	NH-333A	14	14	0.3	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-7	NH-333A	20	20	0.6	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-8	NH-333A	12	12	0.5	Unpaved	Paved with bricks & stone	Lease Owner	Attached
Block-9	NH-333A	14	14	0.4	Unpaved	Paved with bricks & stone	Lease Owner	Attached

Cluster No	Transportation Route No.	Number of tippers /days of lease	Number of tippers/ day of all the lease on route	Length of route in KM	Type of Road (Black Toppedd/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The roadwill be Constructed byGovt/ Lease Owner	Route Map & Location
Cluster No.-1	SH-82	68	68	1.5 to 2.5	Unpaved /blacktopped	Unpaved road need be paved with brick & stone	Lease Owner	Attached
Cluster No.-2	NH-333 & 333A	59	59	1.4 to 2.5			Lease Owner	
Cluster No.-3	NH-333A	199	199	1.5 to 2.5			Lease Owner	
Cluster No.-4	NH-333	130	130	0.5			Lease Owner	
Cluster No.-5	NH-333	146	146	1.5 to 2			Lease Owner	
Cluster No.-6	NH-333	62	62	1			Lease Owner	
Cluster No.-7	NH-333	65	65	0.5 to 2			Lease Owner	
Cluster No.-8	NH-333	60	60	0.3 to 0.6			Lease Owner	

SEIAA, Bihar

ANNEXURE-VIII

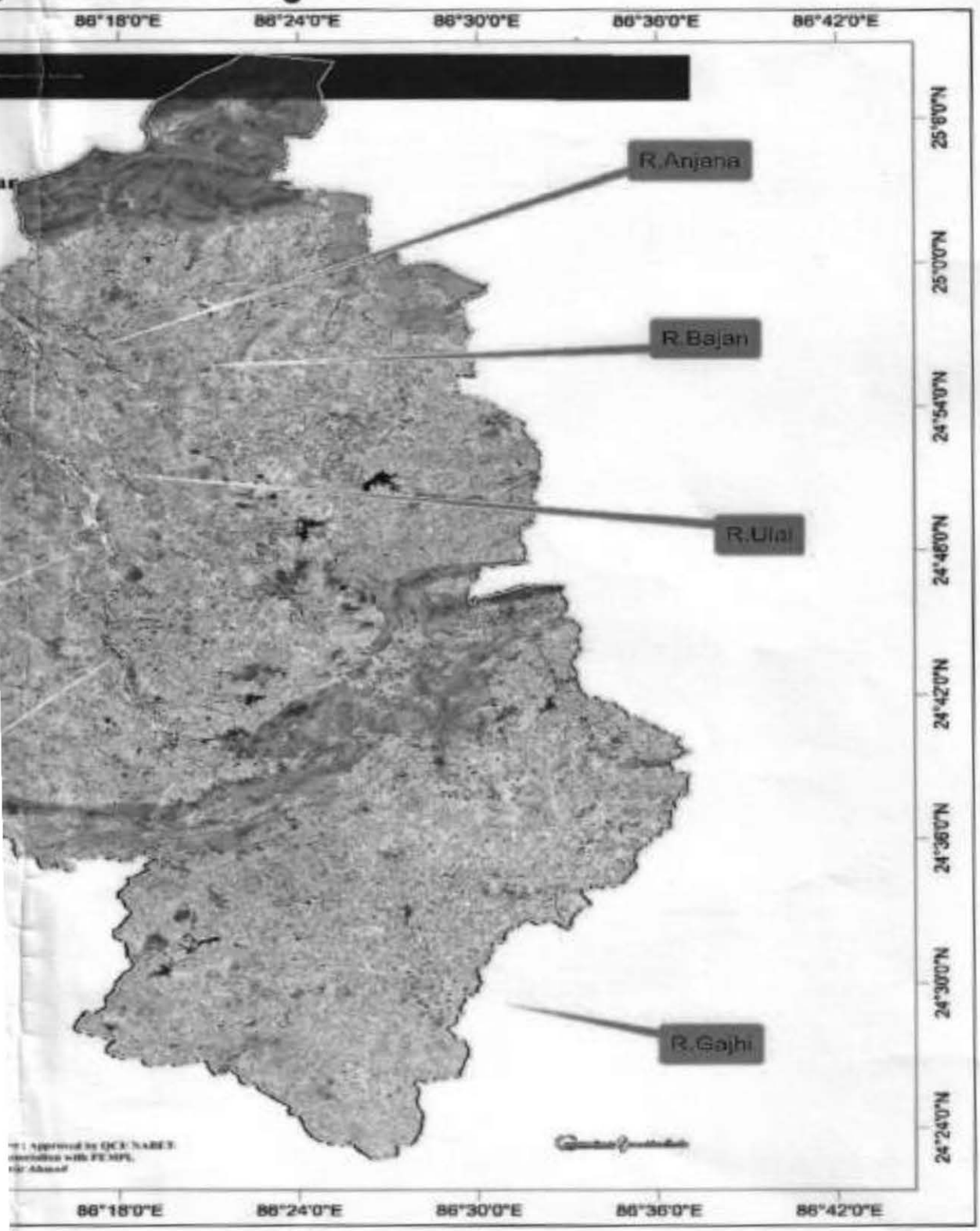
Detail of overlapped area of proposed and existing sand ghats

Sl No	River Name	Overlapped No.	Existing Sand Ghat /Cluster	Proposed Sand Ghat(S)	Area Overlapped in Ha.	Mineable Quantity in Mt in Overlapped Area
1	Ulai	1	Cluster-1	Block-2	3.5	43680
2	Ulai	2	Cluster-1	Block-3	0.21	2620.8
3	Ulai	3	Cluster-1	Block-4	3.0	37440
4	Ulai	4	Cluster-6	Block-6	5.84	72883.2
5	Barnar	5	Cluster-7	Block-3	3.2	40128
6	Barnar	6	Cluster-8	Block-2	4.05	50787
7	Barnar	7	Cluster-9	Block-4	9.5	119130
8	Barnar	8	Cluster-10	Block-5	13	163020
9	Barnar	9	Cluster-11	Block-6	15.7	196878
10	Barnar	10	Cluster-13	Block-7	11.4	142956
11	Barnar	11	Cluster-14	Block-7	1.68	21067.2
12	Barnar	12	Cluster-15	Block-8	21.1	264594
13	Barnar	13	Cluster-16	Block-9	9.43	118252.2
14	Barnar	14	Cluster-17	Block-12	10.5	131670
15	Barnar	15	Cluster-18	Block-13	13.3	166782
16	Anjana	16	Cluster-19	Block-3	3.3	41778
17	Anjana	17	Cluster-20	Block-2	3	37980
18	Kiul	18	Cluster-21	Block-1	12.4	153264
19	Kiul	19	Cluster-22	Block-2	6.38	78856.8
20	Kiul	20	Cluster-23	Block-3	9.5	117420
21	Kiul	21	Cluster-24	Block-4	6.96	86025.6
22	Kiul	22	Cluster-26	Block-5	9.9	122364
23	Kiul	23	Cluster-27	Block-6	1.56	19281.6
24	Kiul	24	Cluster-27	Block-7	6.64	82070.4
25	Kiul	25	Cluster-28	Block-8	4.0	49440
26	Kiul	26	Cluster-29	Block-9	2.1	25956
27	Kiul	27	Cluster-30	Block-10	9.83	121498.8
28	Kiul	28	Cluster-31	Block-11	3.75	46350
29	Kiul	29	Cluster-32	Block-11	3.75	46350
30	Kiul	30	Cluster-32	Block-12	2.45	30282
31	Kiul	31	Cluster-33	Block-13	8.25	101970
32	Kiul	32	Cluster-34	Block-13	15.1	186636
33	Kiul	33	Cluster-35	Block-15	8.4	103824
Total					**242.68**	**3023235.6**

SEIAA, Bihar

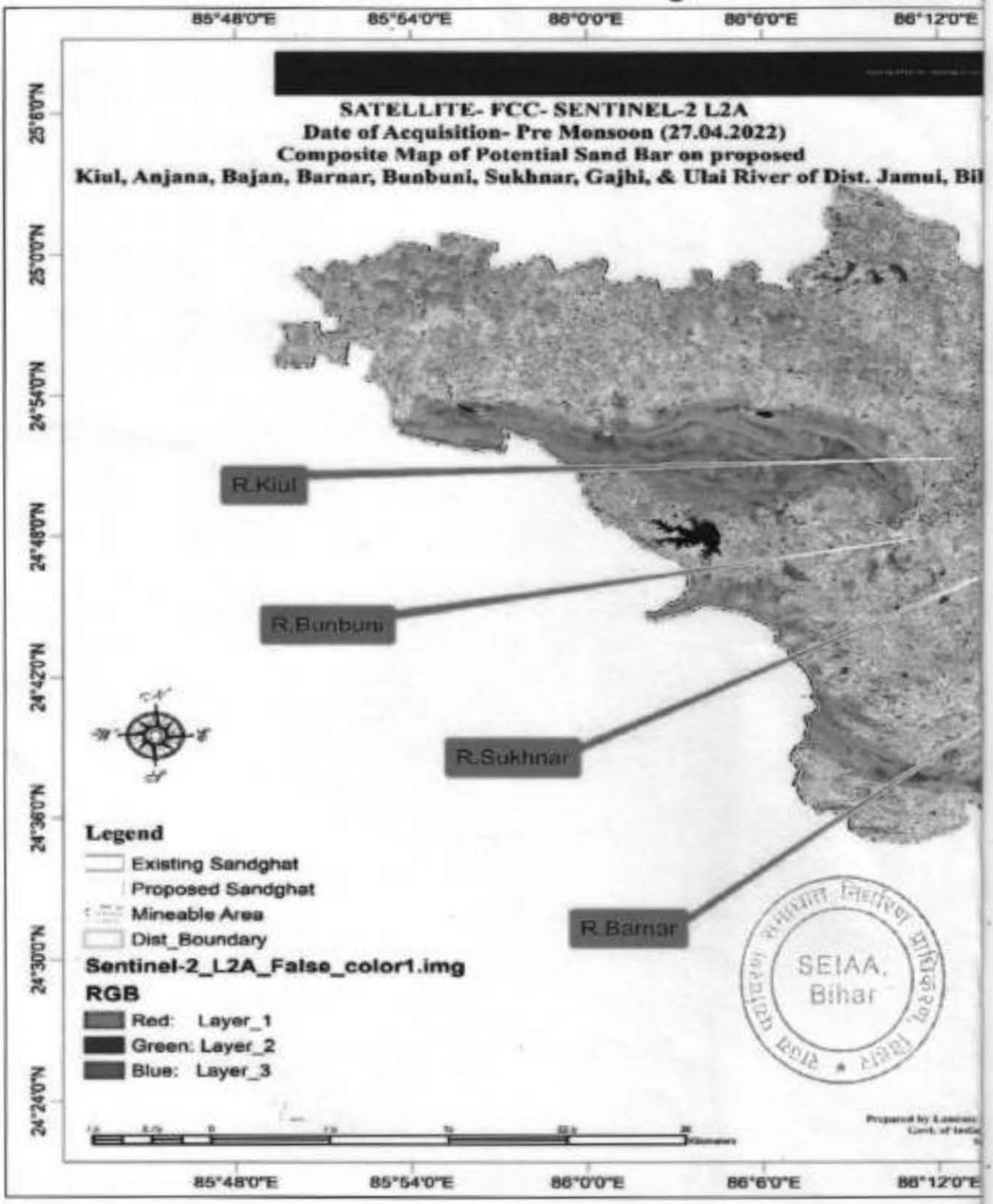
URE-IX

ghats satellite Image



ANNEX

High Resolution sand





Colour	Discription
Blue	Existing sand ghat
Green	Proposed sand ghat
Red	Minable Area
Orange	Overlapped Area

SEIAA, Bihar

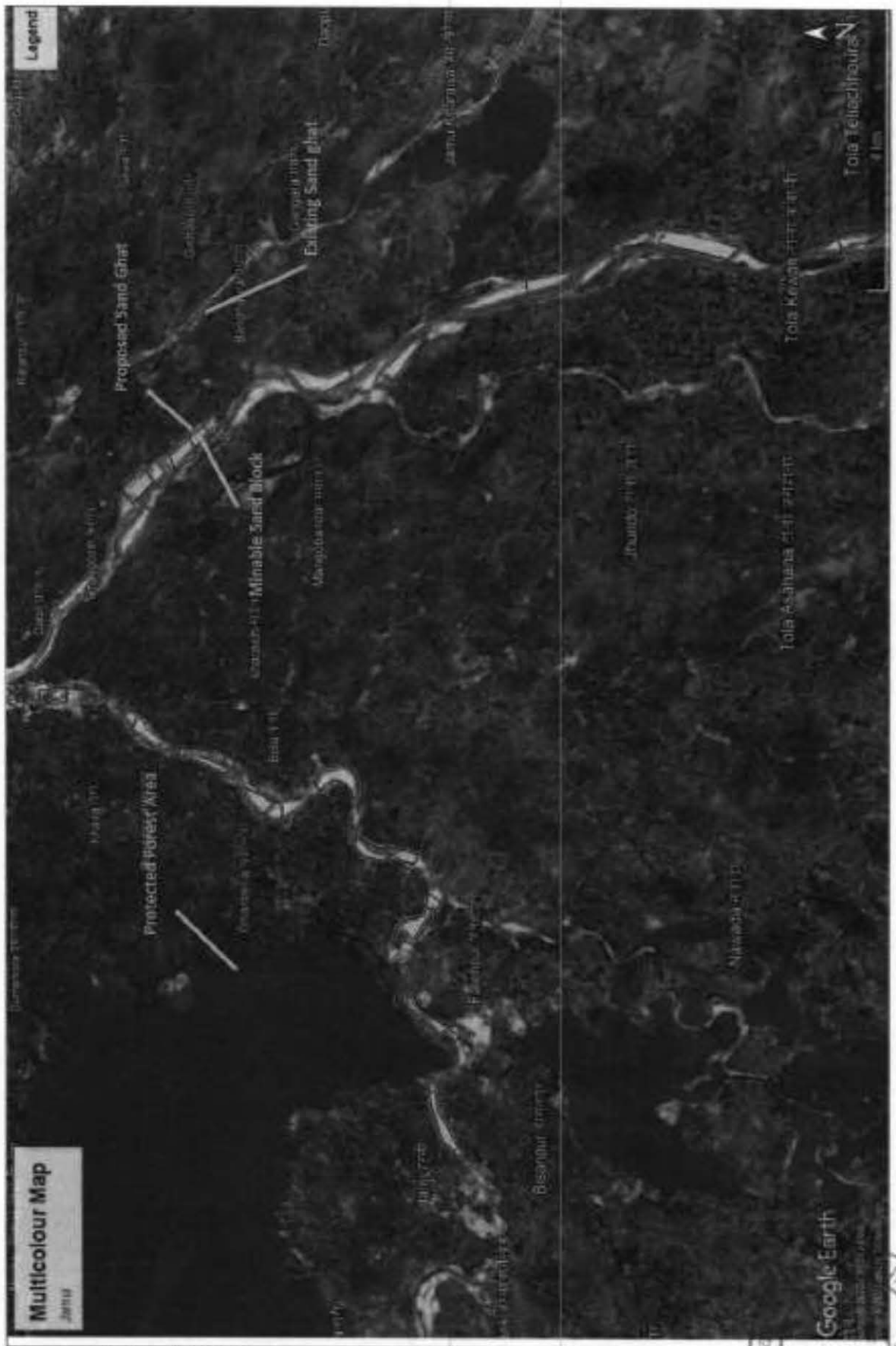
Nagi Nakti Bird Sanctuary
Eco Sensitive Zone
Bhimbandh Wilf Life
Sanctuary
Legend
N
20 km



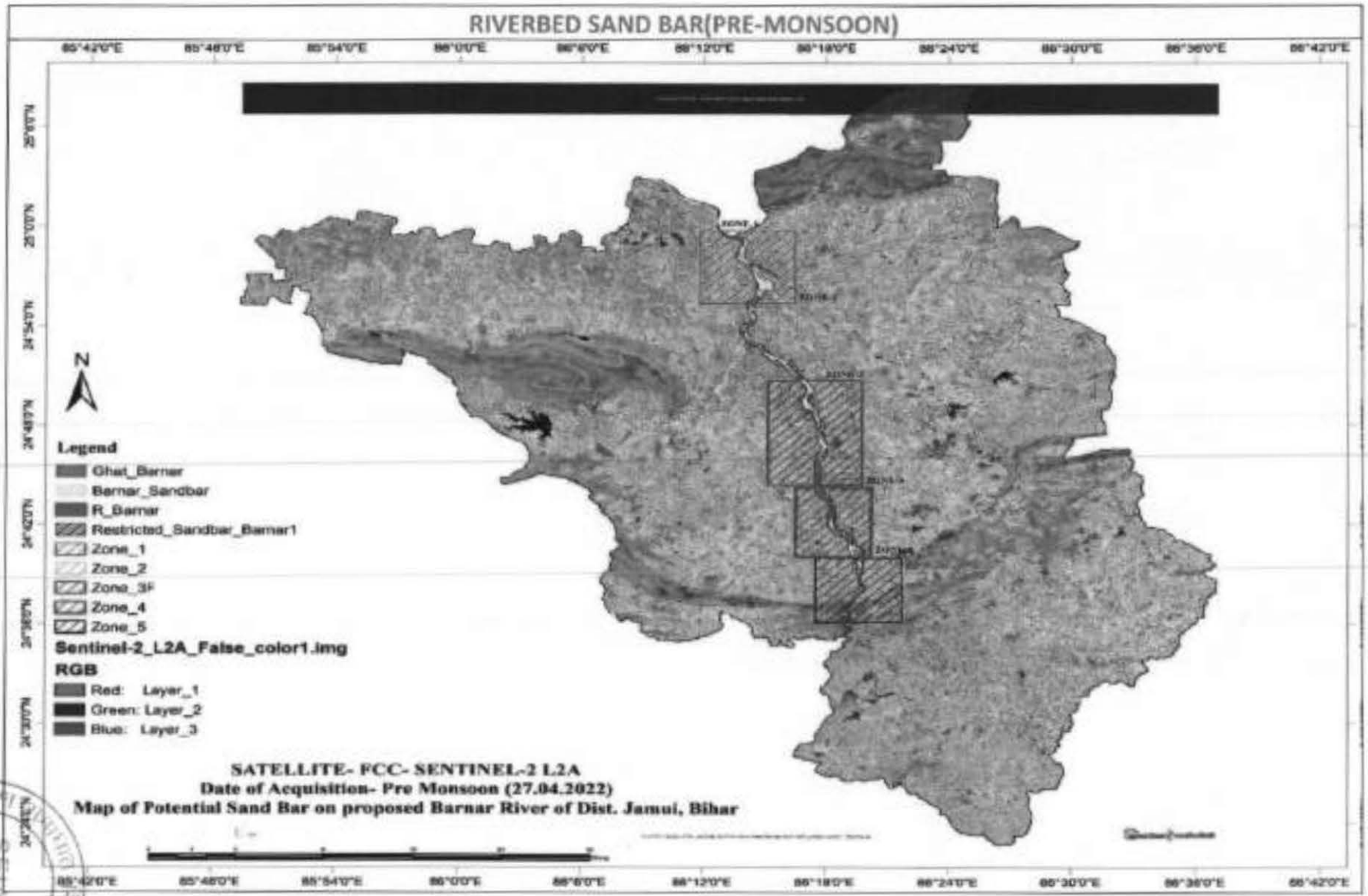
Colour Discription

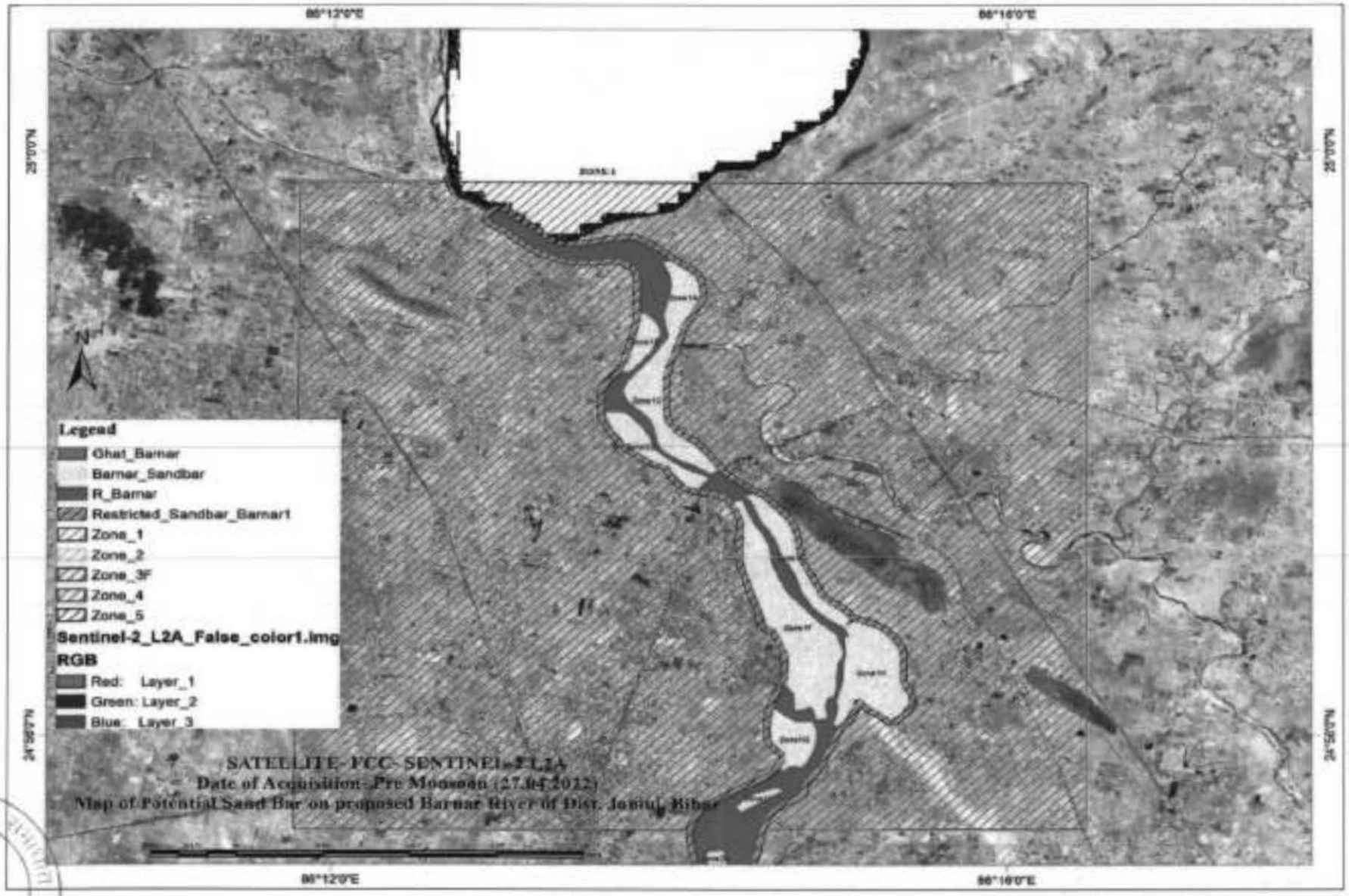
Blue - Existing sand ghat
Green - Proposed sand ghat
Red - Minable Area
Orange - Overlapped Area

SEIAA, Bihar



Colourline Discription
Blue - Existing Sand Ghat
Green - Proposed Sand Ghat
Red - Minable Area
Orange - Overlapped Area

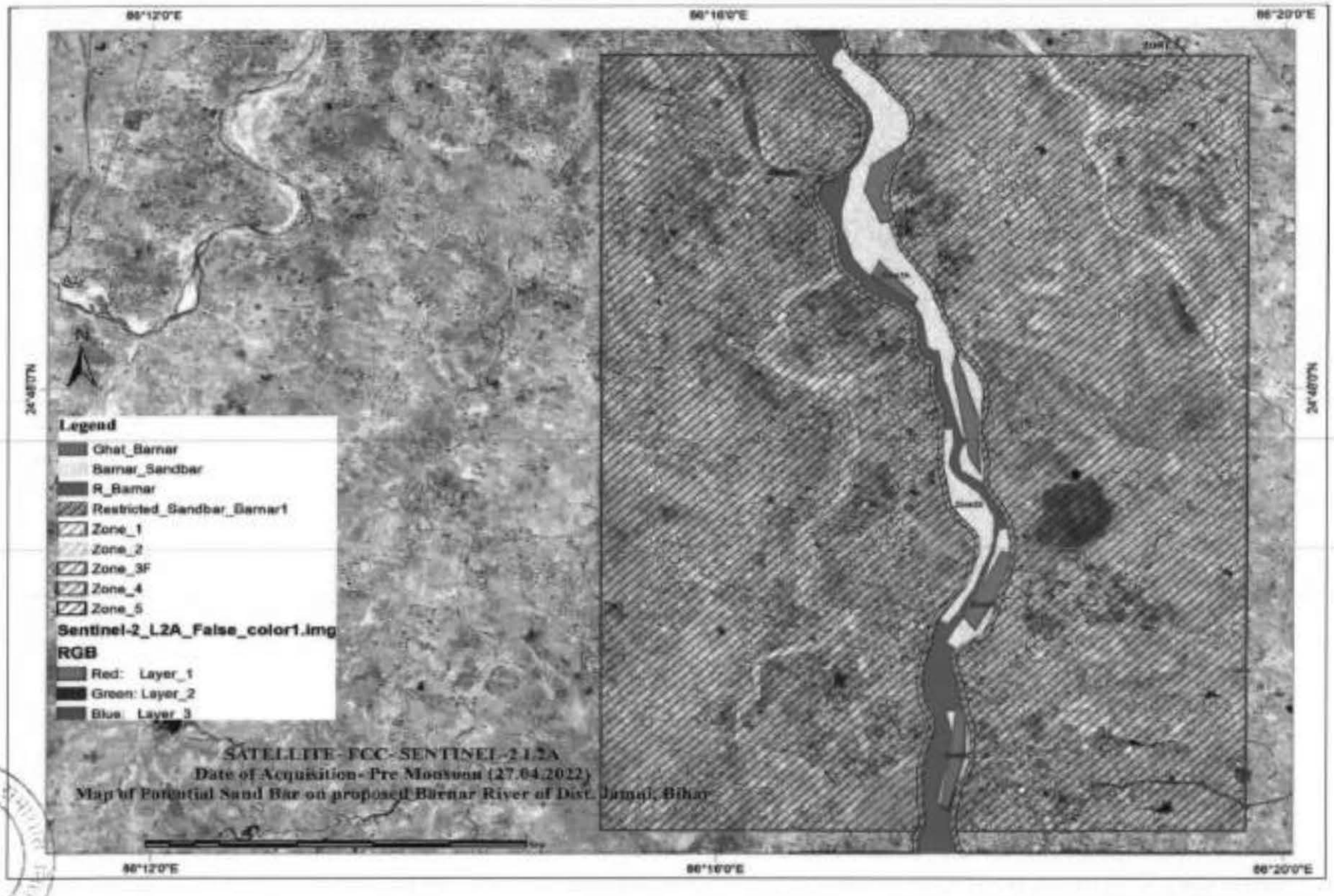

RIVERBED SAND BAR(PRE-MONSOON)
85°42'0"E
85°48'0"E
85°54'0"E
86°0'0"E
86°6'0"E
86°12'0"E
86°18'0"E
86°24'0"E
86°30'0"E
86°36'0"E
86°42'0"E
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar


86°12'0"E
86°16'0"E
25°0'0"N
24°56'24"N
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3F
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar

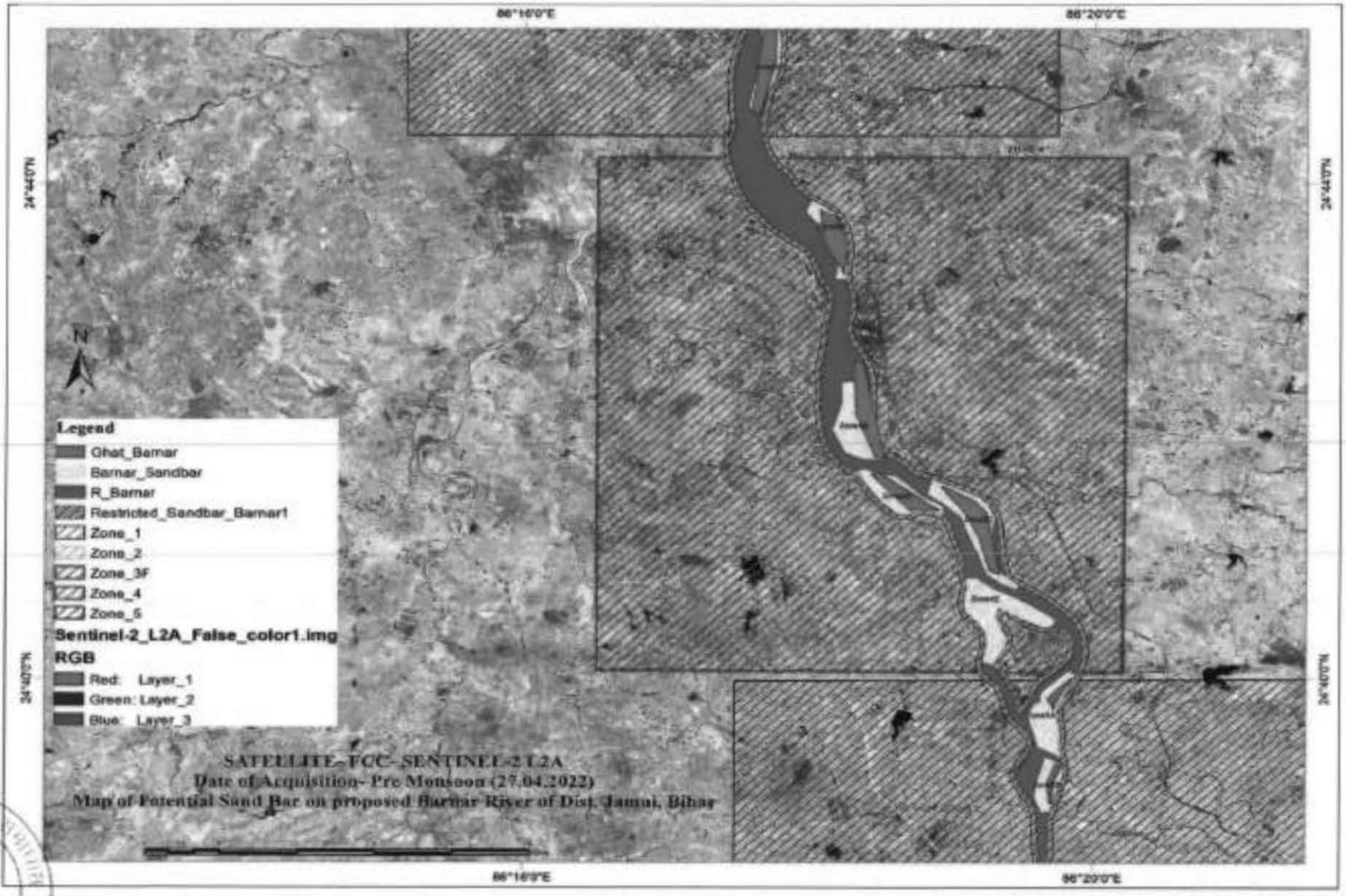
SEIAA Bihar


86°12'0"E
86°16'0"E
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3F
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE - FCC - SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar
24°52'0"N
86°12'0"E
86°16'0"E

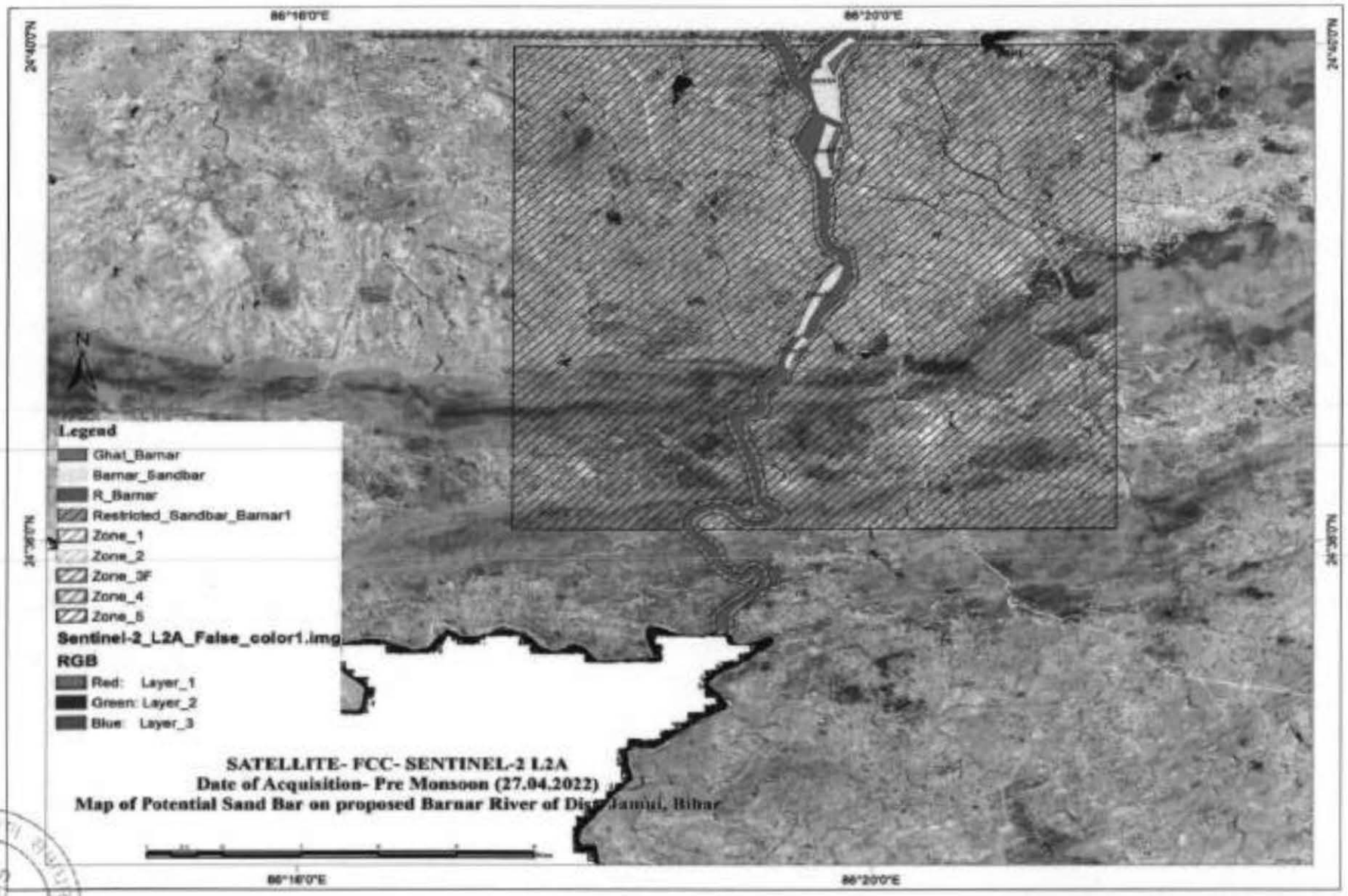
355


86°12'0"E
86°16'0"E
86°20'0"E
24°48'0"N
24°48'0"N
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3F
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar
86°12'0"E
86°16'0"E
86°20'0"E

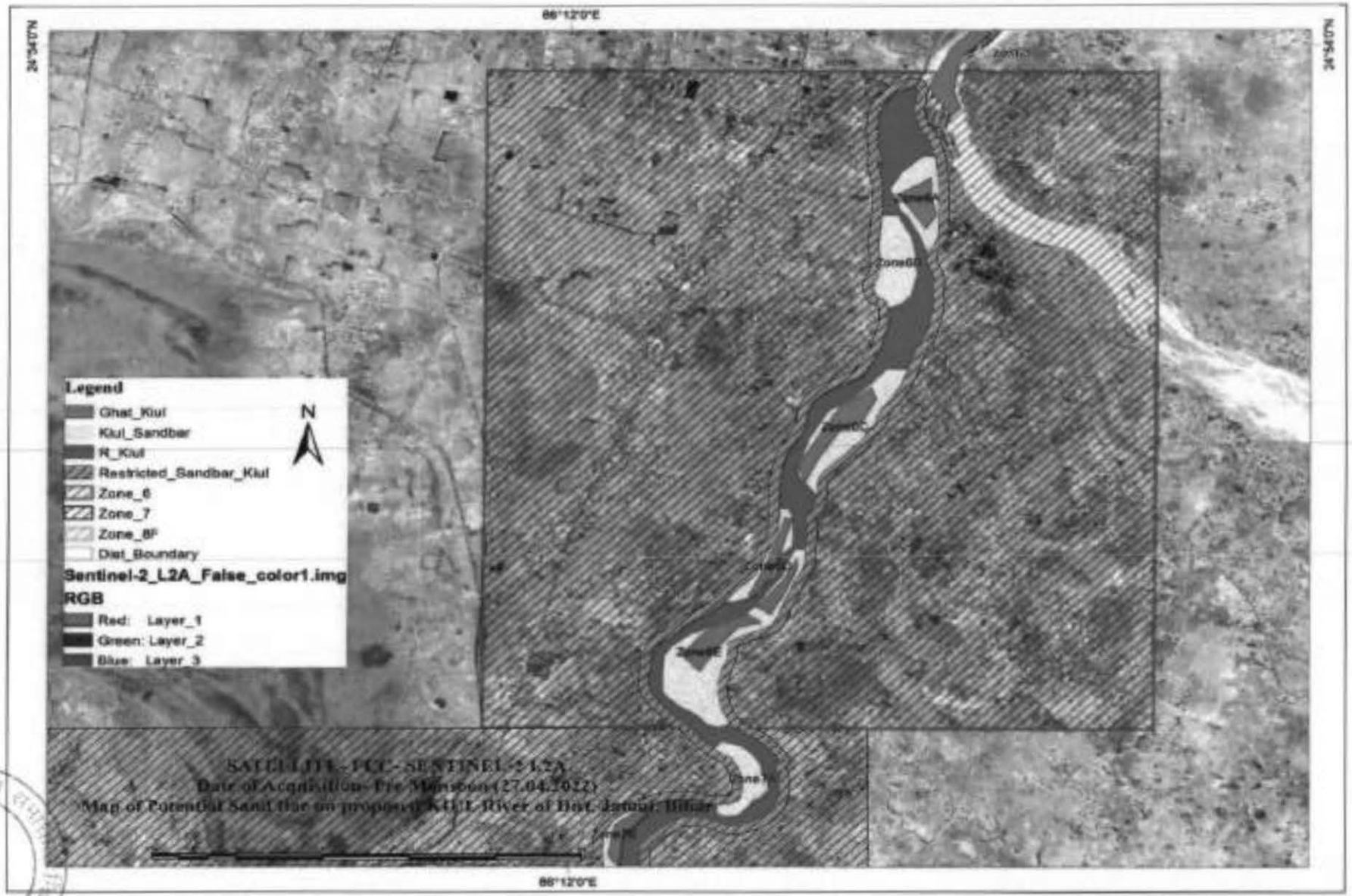
SEIAA, Bihar


86°16'0"E
86°20'0"E
24°44'0"N
24°42'0"N
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3F
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar

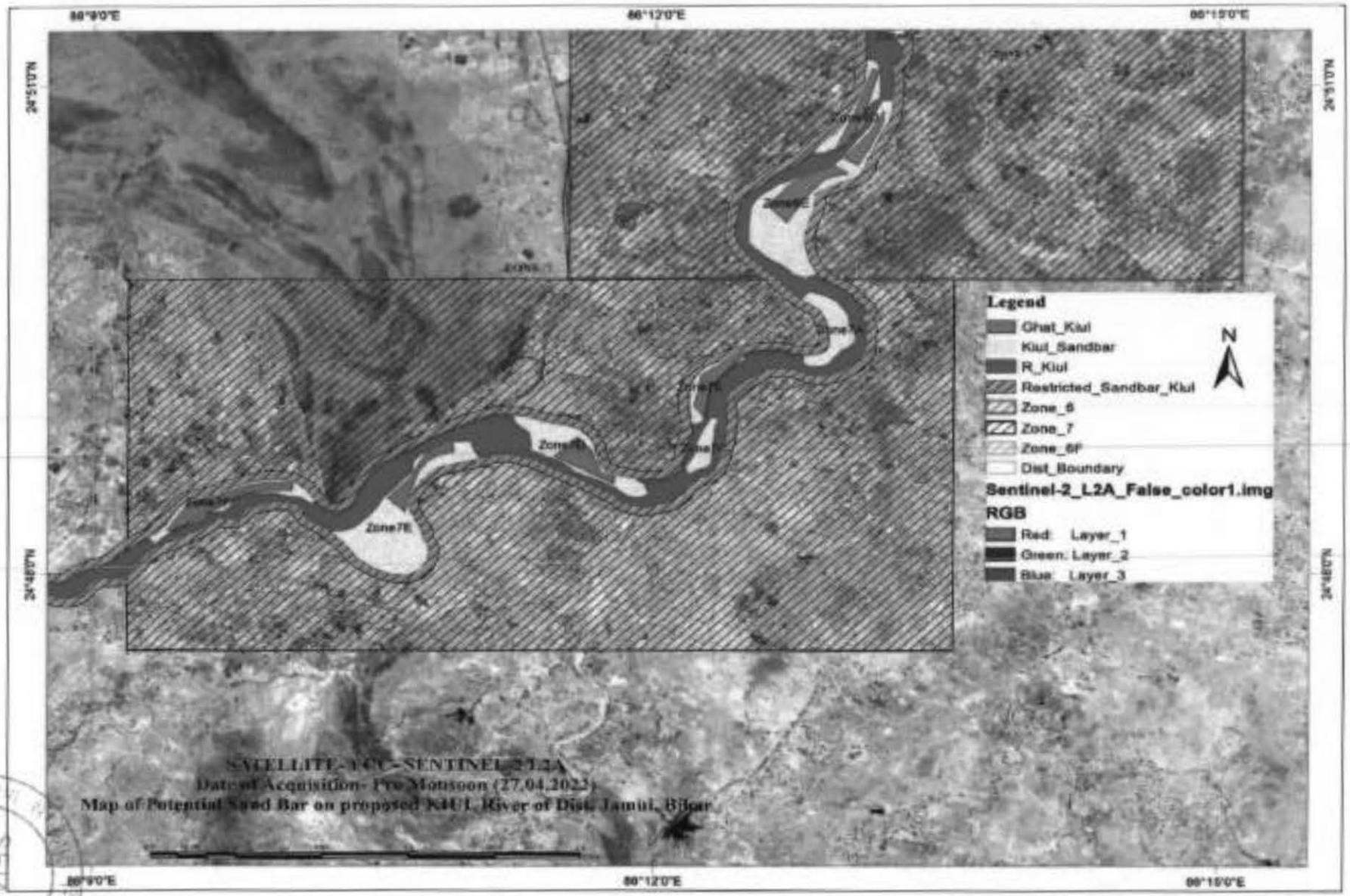
SEIAA, Bihar


86°18'0"E
86°20'0"E
24°40'0"N
24°38'0"N
N
Legend
Ghat_Barnar
Barnar_Sandbar
R_Barnar
Restricted_Sandbar_Barnar1
Zone_1
Zone_2
Zone_3F
Zone_4
Zone_5
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Barnar River of Dist. Jamui, Bihar

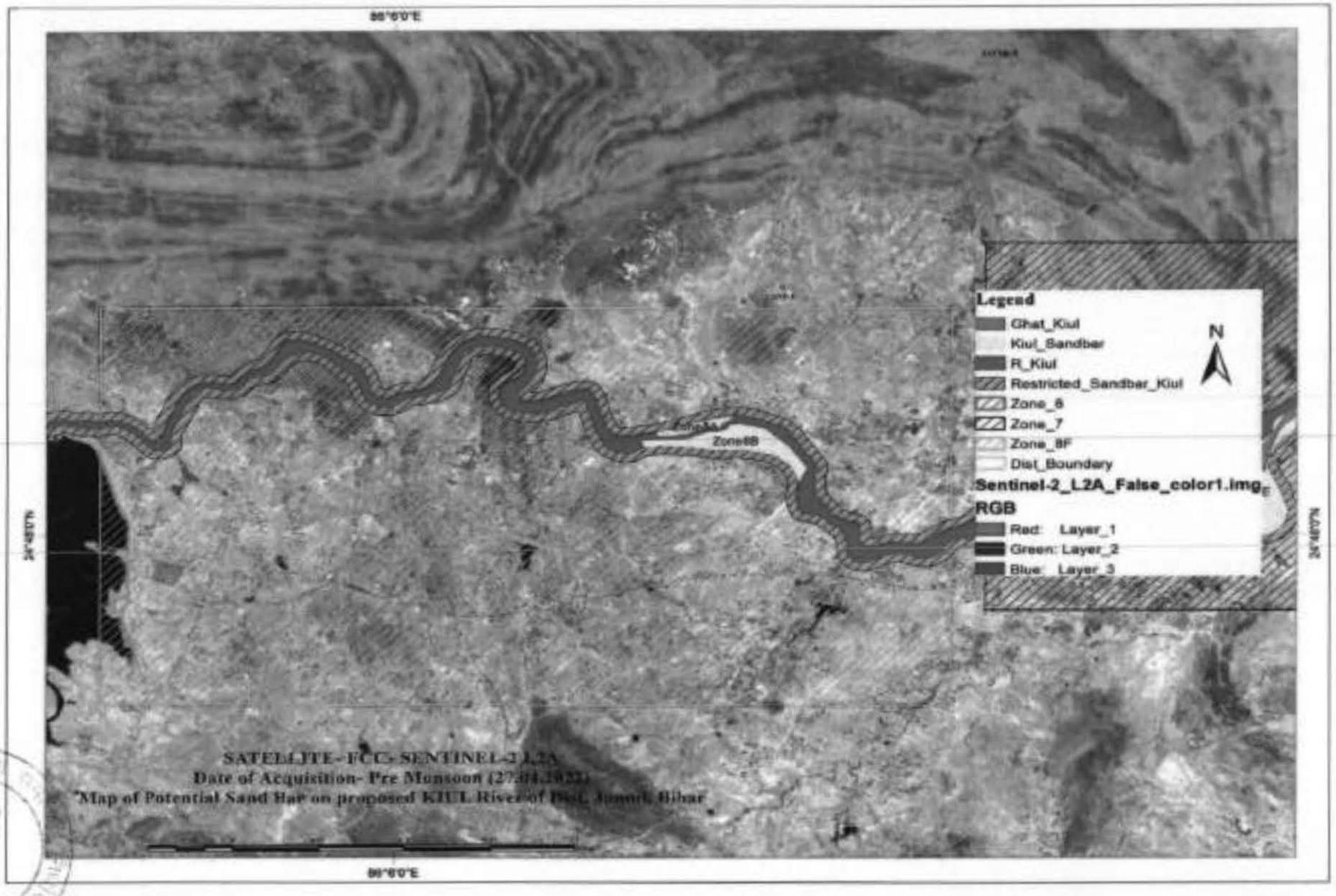
SEIAA Bihar


86°12'0"E
25°5'0"N
Legend
Ghat_Kiul
Kiul_Sandbar
R_Kiul
Restricted_Sandbar_Kiul
Zone_6
Zone_7
Zone_8F
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
Zone6F
Zone7F
Zone8F
SATELLITE - FCC - SENTINEL - 2 L2A
Date of Acquisition- Pre Monsoon(27.04.2022)
Map of Potential Sand Bar on proposed KIUL River of Dist. Jamui, Bihar

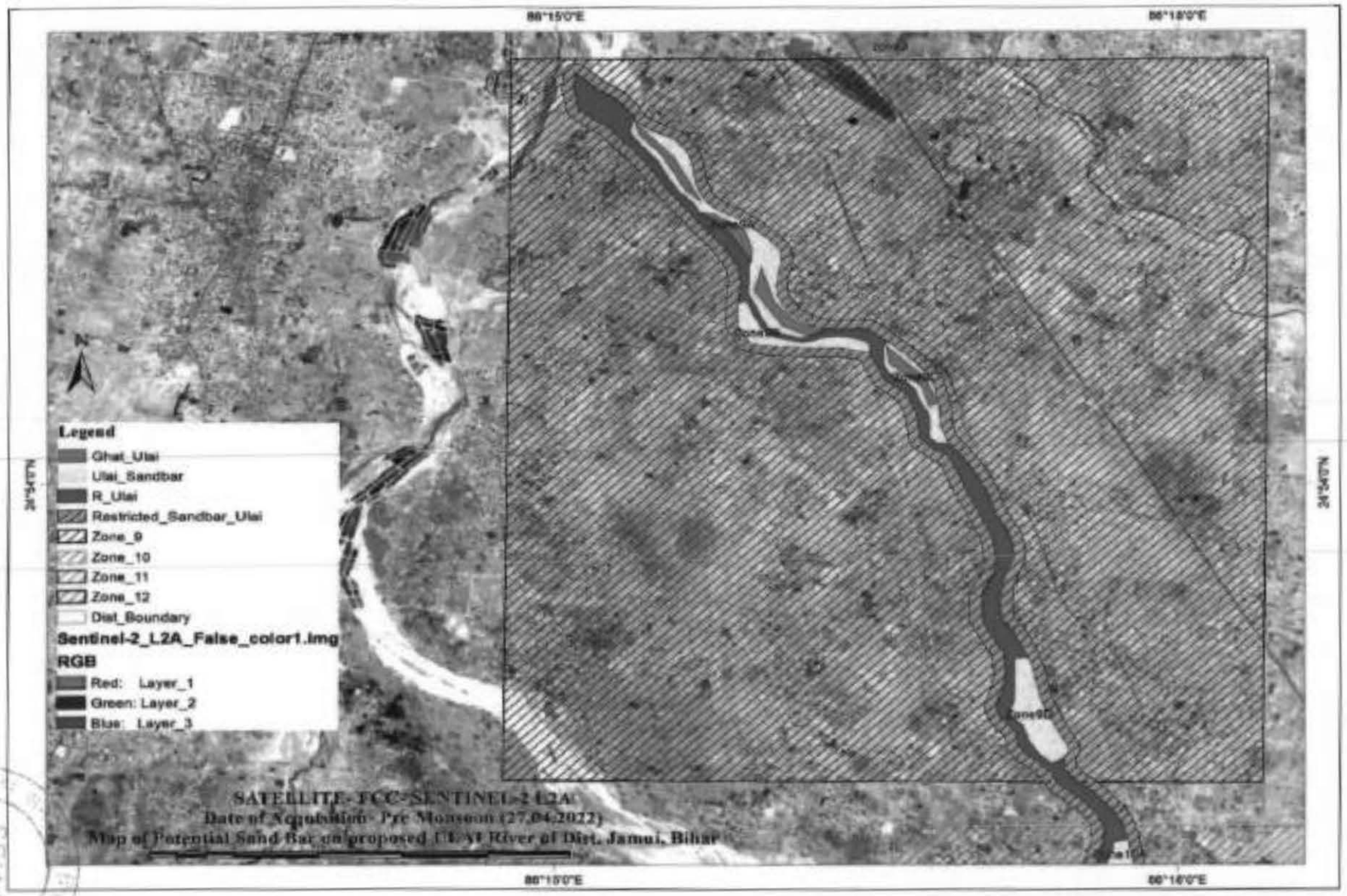
SEIAA, Bihar

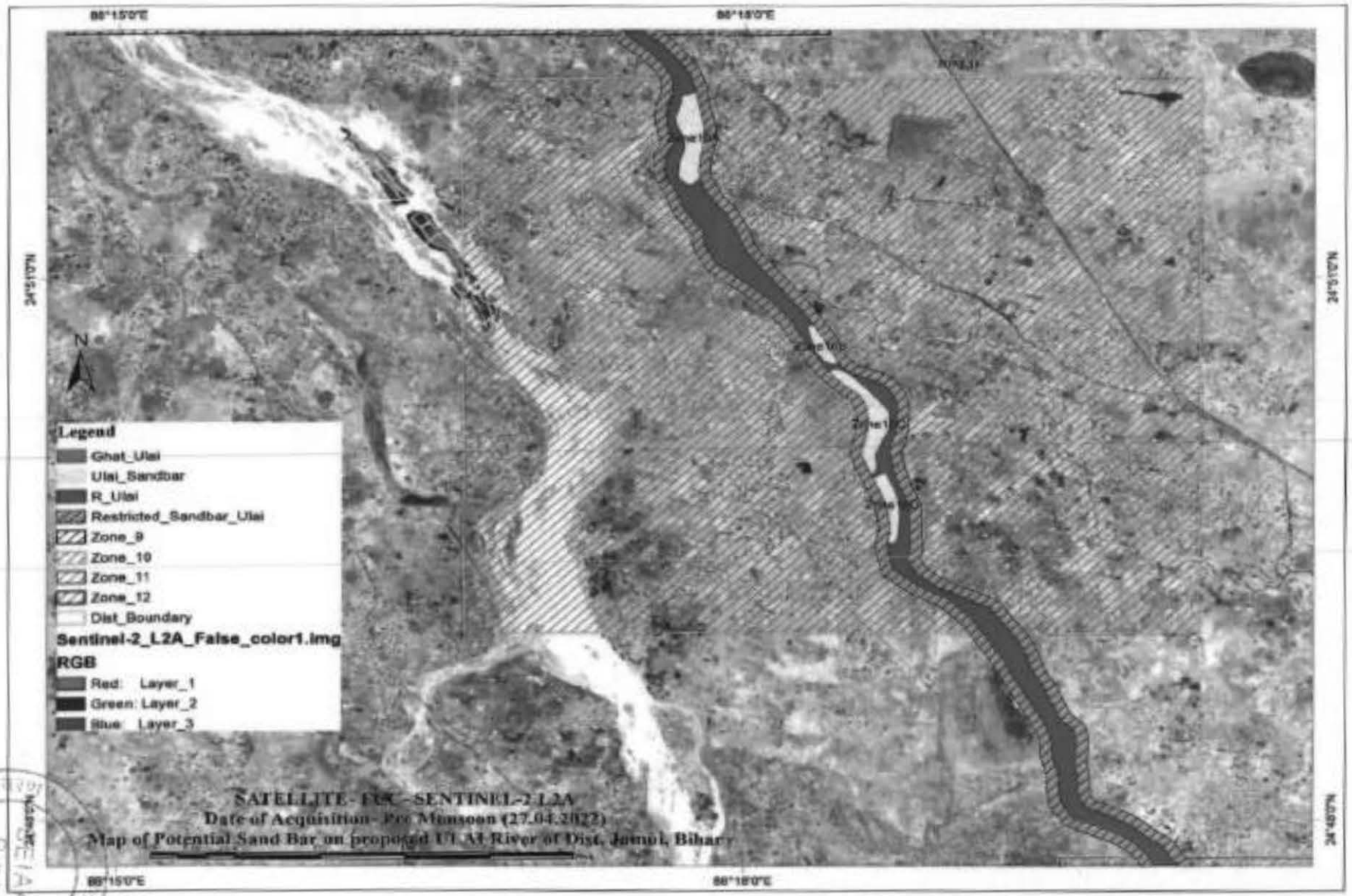

86°9'0"E
86°12'0"E
86°15'0"E
24°51'0"N
24°48'0"N
Legend
Ghat_Kiul
Kiul_Sandbar
R_Kiul
Restricted_Sandbar_Kiul
Zone_6
Zone_7
Zone_6F
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
Zone7E
SATELLITE - FCC - SENTINEL 2 L2A
Date of Acquisition- Pre Monsoon (27.04.2023)
Map of Potential Sand Bar on proposed KIUL River of Dist. Jamui, Bihar

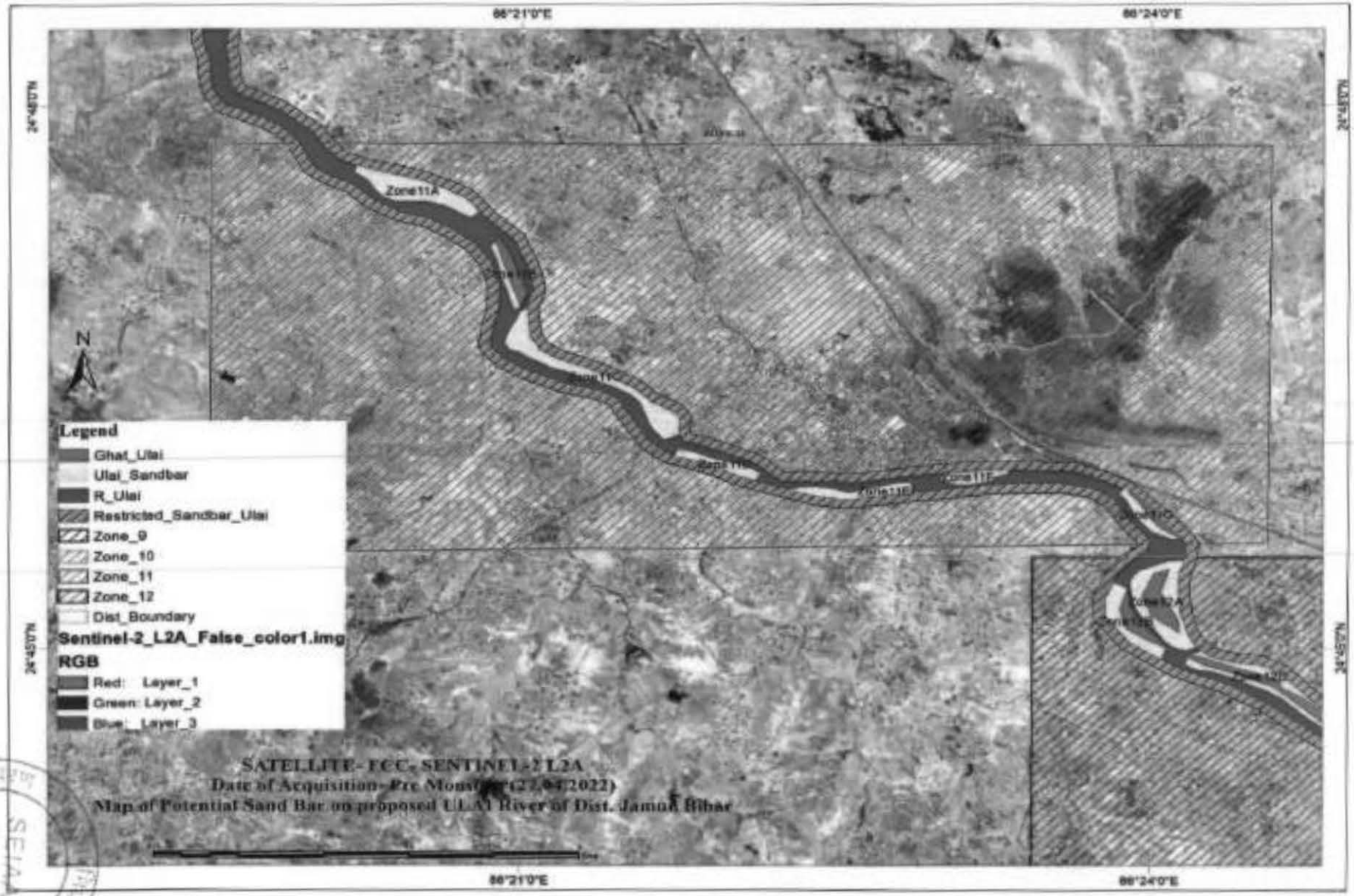
SEIAA Bihar


Legend
Ghat_Kiul
Kiul_Sandbar
R_Kiul
Restricted_Sandbar_Kiul
Zone_6
Zone_7
Zone_8F
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
Zone6B
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
*Map of Potential Sand Bar on proposed KIUL River of Dist. Jamui, Bihar

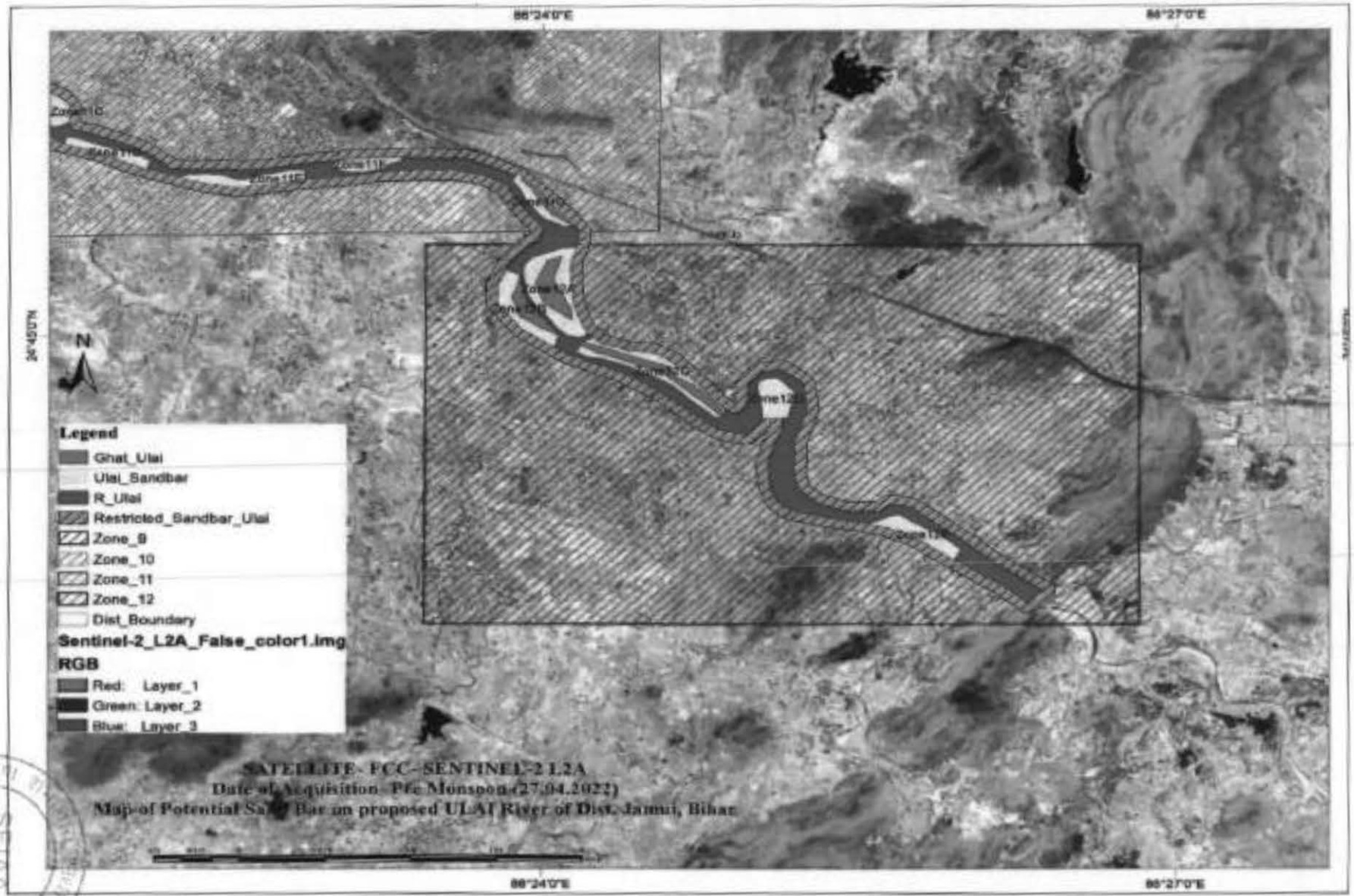
SEIAA Bihar


86°15'0"E
86°16'0"E
24°54'0"N
Legend
Ghat_Ulai
Ulai_Sandbar
R_Ulai
Restricted_Sandbar_Ulai
Zone_9
Zone_10
Zone_11
Zone_12
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed UL At River of Dist. Jamui, Bihar

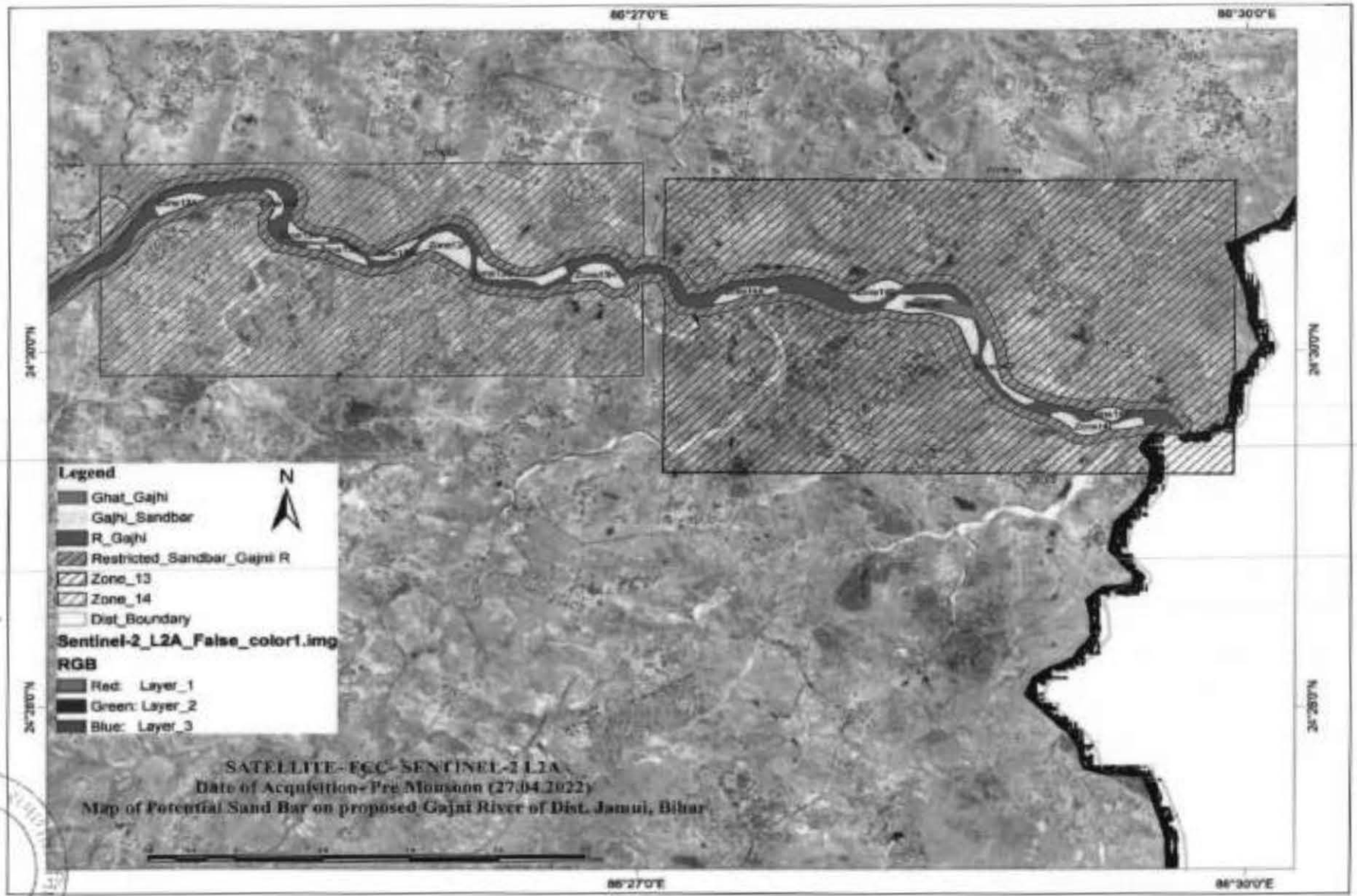

86°15'0"E
86°18'0"E
24°15'0"N
24°18'0"N
N
Legend
Ghat_Ulai
Ulai_Sandbar
R_Ulai
Restricted_Sandbar_Ulai
Zone_9
Zone_10
Zone_11
Zone_12
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE - ESA - SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed UL AI River of Dist. Jamui, Bihar


86°21'0"E
86°24'0"E
24°48'0"N
24°45'0"N
Zone11A
N
Legend
Ghat_Ulai
Ulai_Sandbar
R_Ulai
Restricted_Sandbar_Ulai
Zone_9
Zone_10
Zone_11
Zone_12
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon(22.04.2022)
Map of Potential Sand Bar on proposed ULAI River of Dist. Jamui Bihar

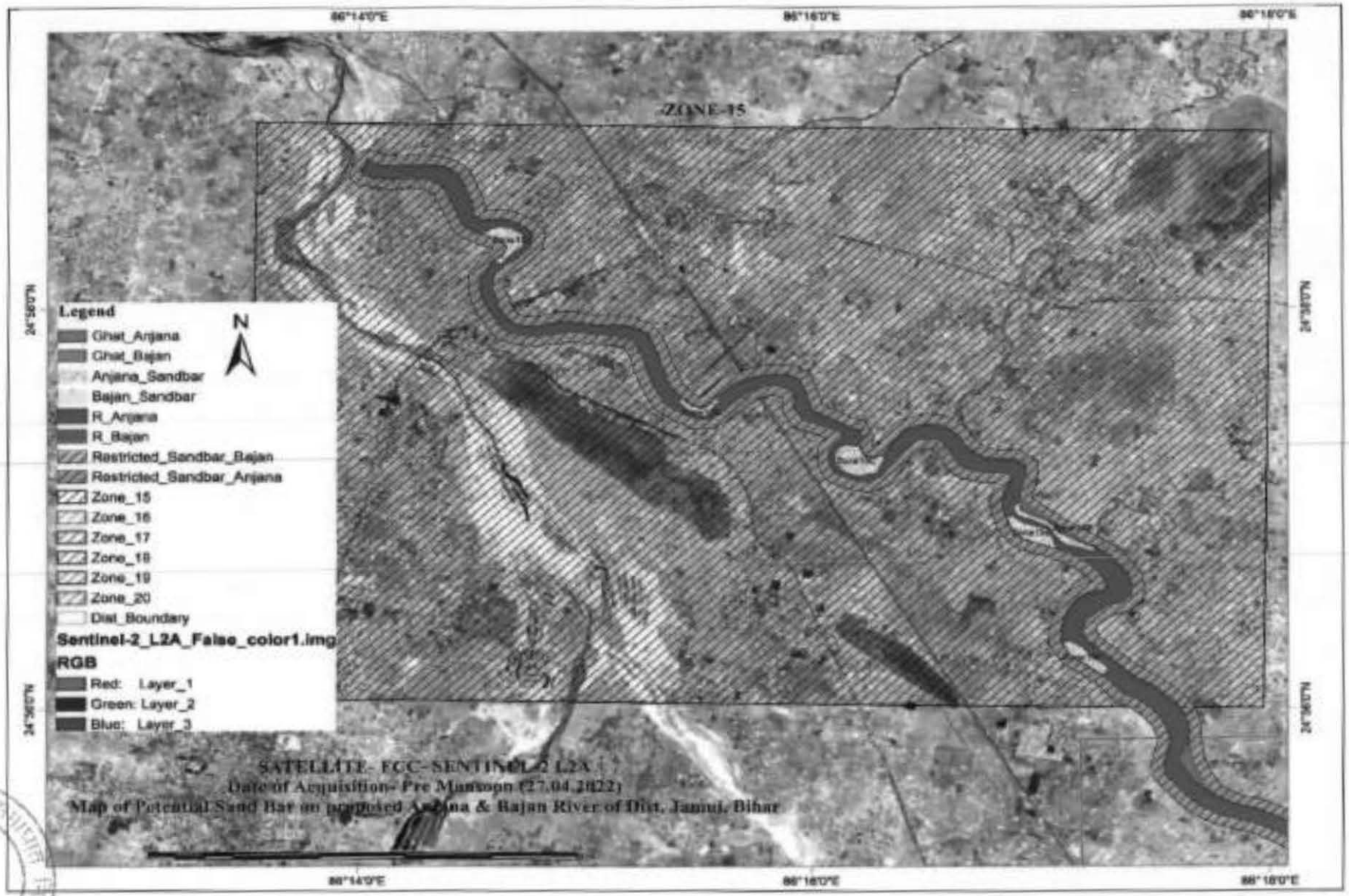
364


86°24'0"E
86°27'0"E
24°45'0"N
N
Legend
Ghat_Ulai
Ulai_Sandbar
R_Ulai
Restricted_Sandbar_Ulai
Zone_9
Zone_10
Zone_11
Zone_12
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon(27.04.2022)
Map of Potential Sand Bar on proposed ULAI River of Dist. Jamui, Bihar

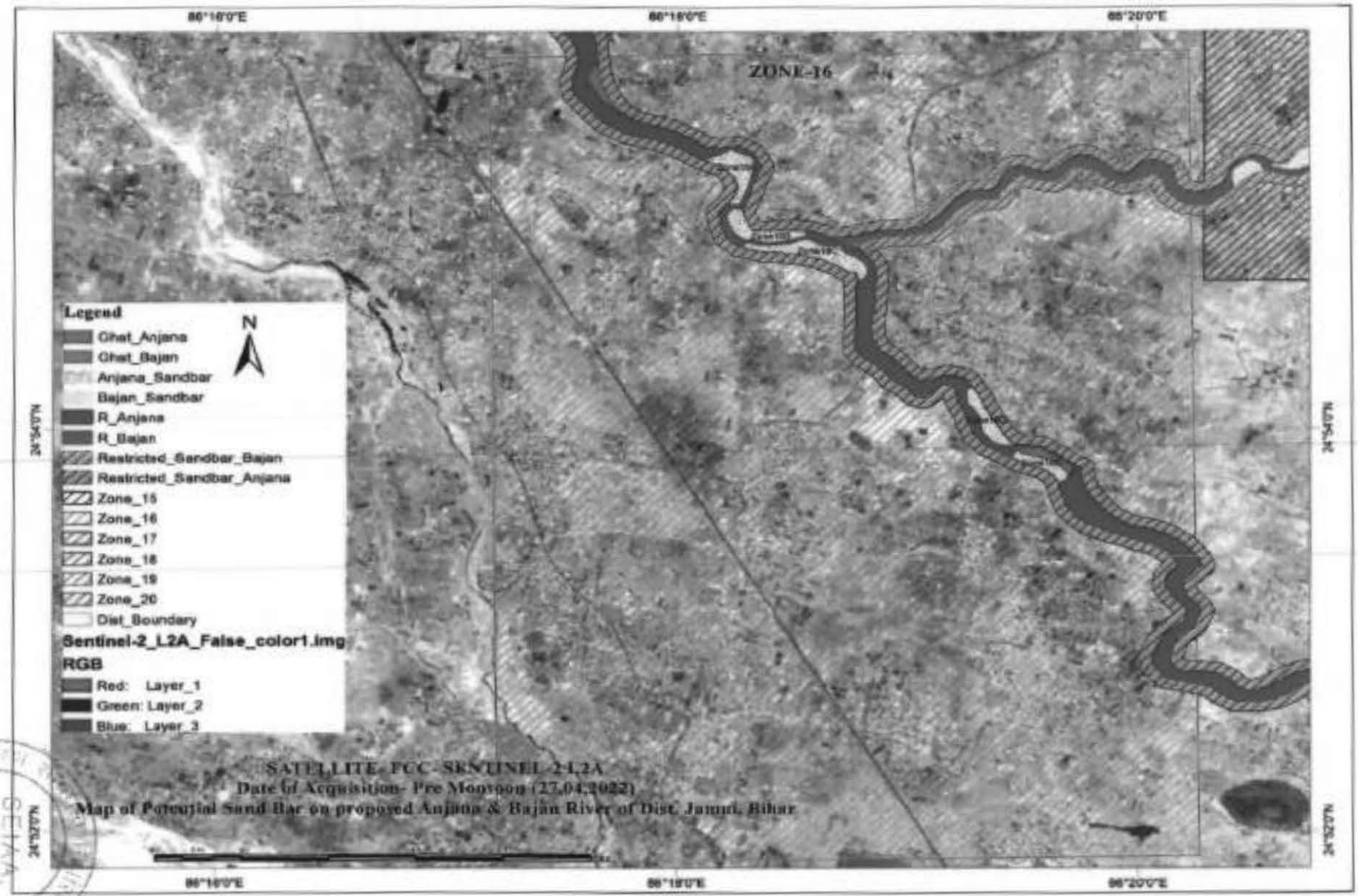
SEWA, Bihar


86°27'0"E
86°30'0"E
24°30'0"N
24°28'0"N
Legend
N
Ghat_Gajhi
Gajhi_Sandbar
R_Gajhi
Restricted_Sandbar_Gajni R
Zone_13
Zone_14
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Gajni River of Dist. Jamui, Bihar

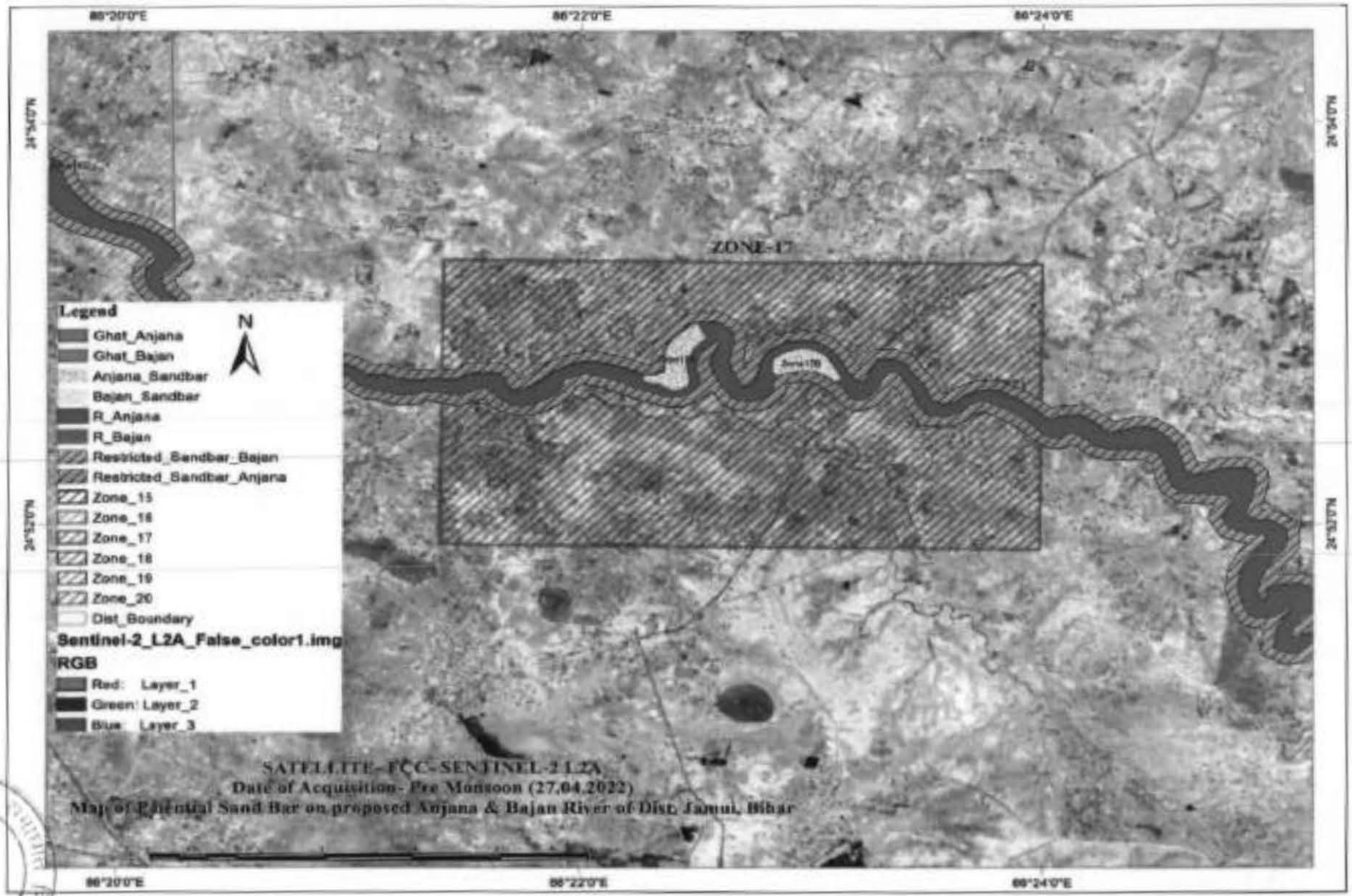
SEIAA Bihar


86°14'0"E
86°16'0"E
86°18'0"E
24°58'0"N
24°56'0"N
ZONE-15
Legend
Ghat_Anjana
Ghat_Bajan
Anjana_Sandbar
Bajan_Sandbar
R_Anjana
R_Bajan
Restricted_Sandbar_Bajan
Restricted_Sandbar_Anjana
Zone_15
Zone_16
Zone_17
Zone_18
Zone_19
Zone_20
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
SATELLITE- FCC-SENTINEL-2 L2A
Date of Acquisition- Pre Mansoon (27.04.2022)
Map of Potential Sand Bar on proposed Anjana & Bajan River of Dist. Jamui, Bihar

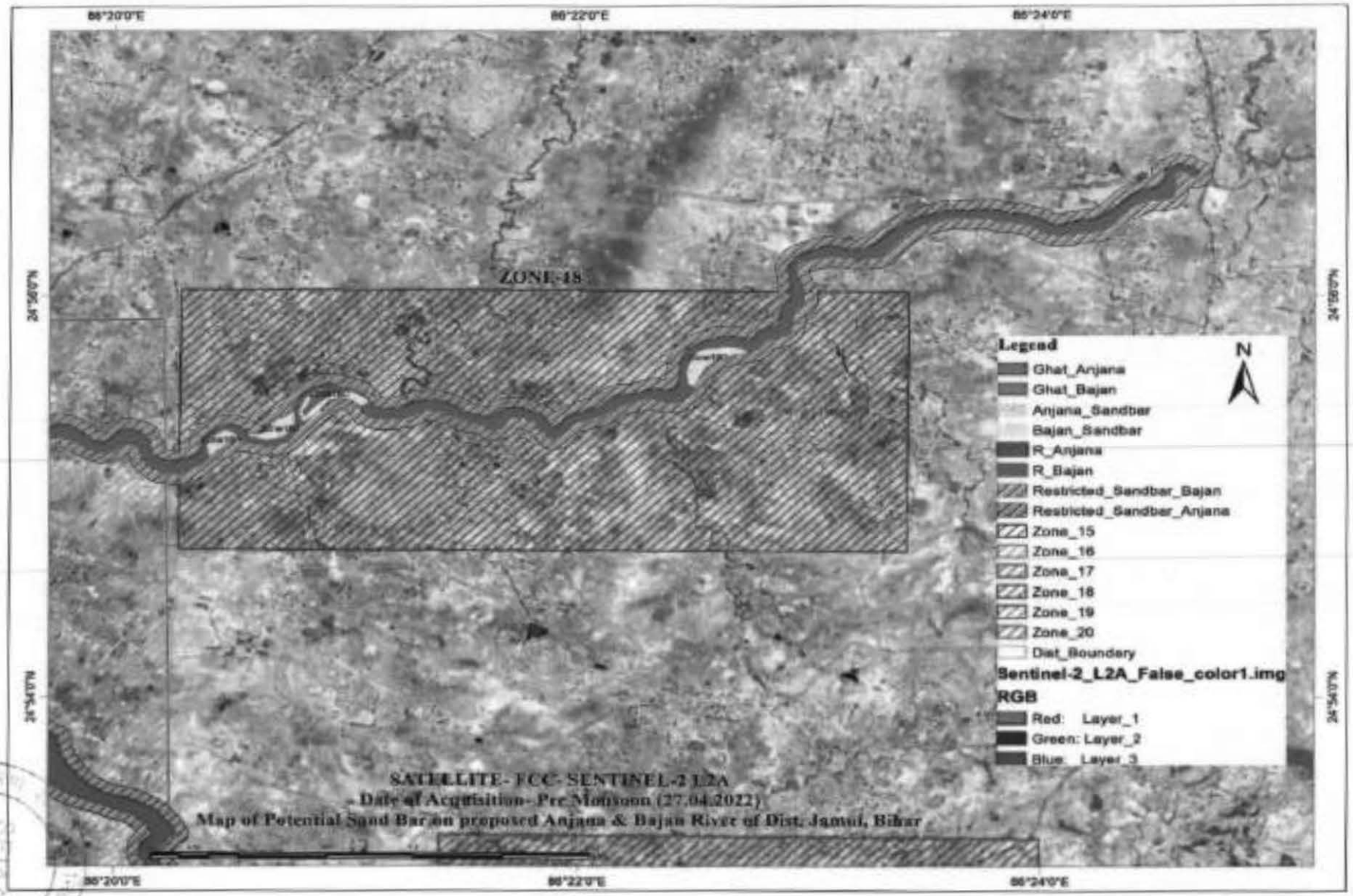
SEIAA Bihar

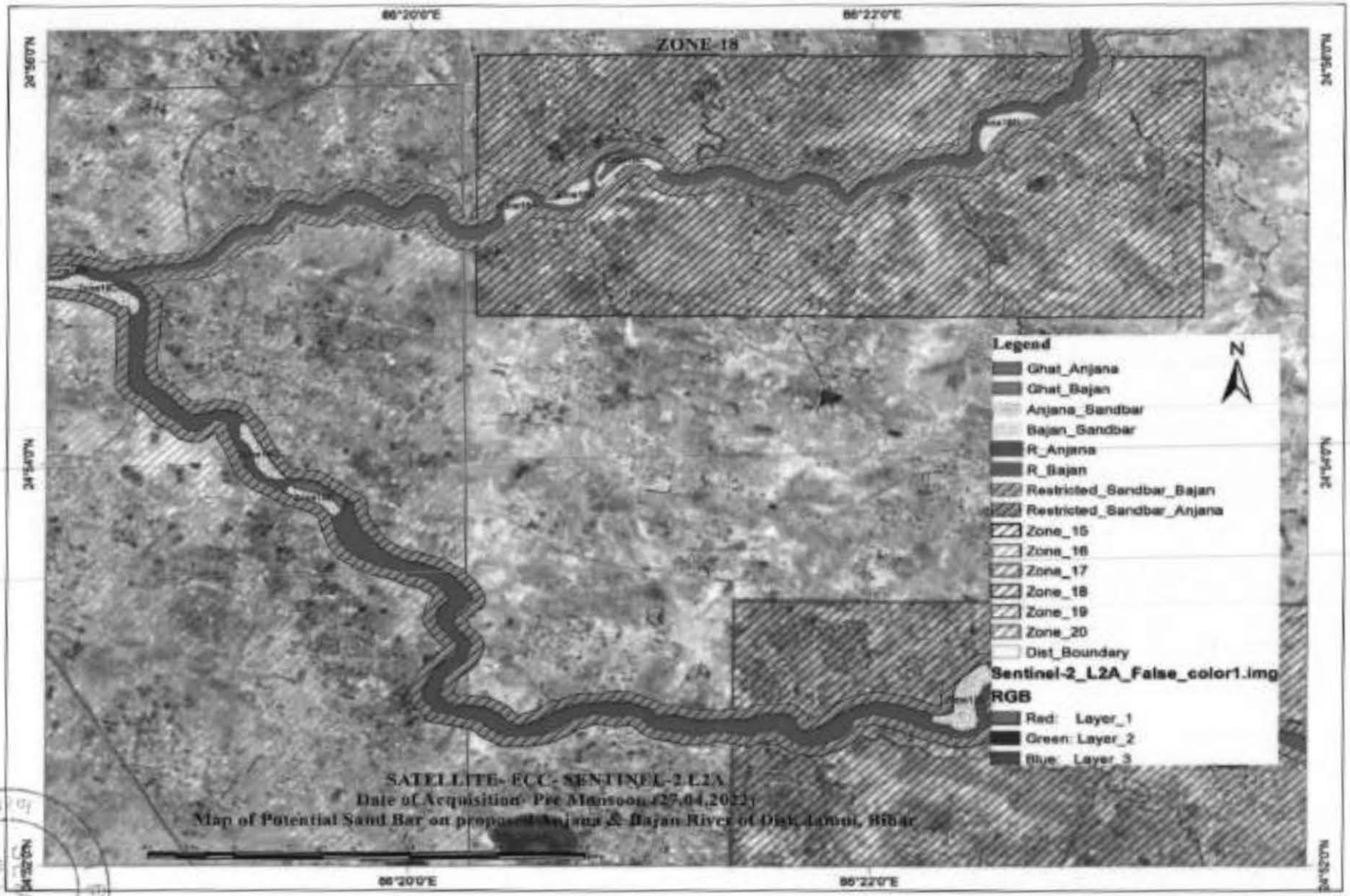

86°16'0"E
86°18'0"E
86°20'0"E
ZONE-16
Legend
Ghat_Anjana
Ghat_Bajan
Anjana_Sandbar
Bajan_Sandbar
R_Anjana
R_Bajan
Restricted_Sandbar_Bajan
Restricted_Sandbar_Anjana
Zone_15
Zone_16
Zone_17
Zone_18
Zone_19
Zone_20
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
SATELLITE- FCC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Anjana & Bajan River of Dist. Jamui, Bihar

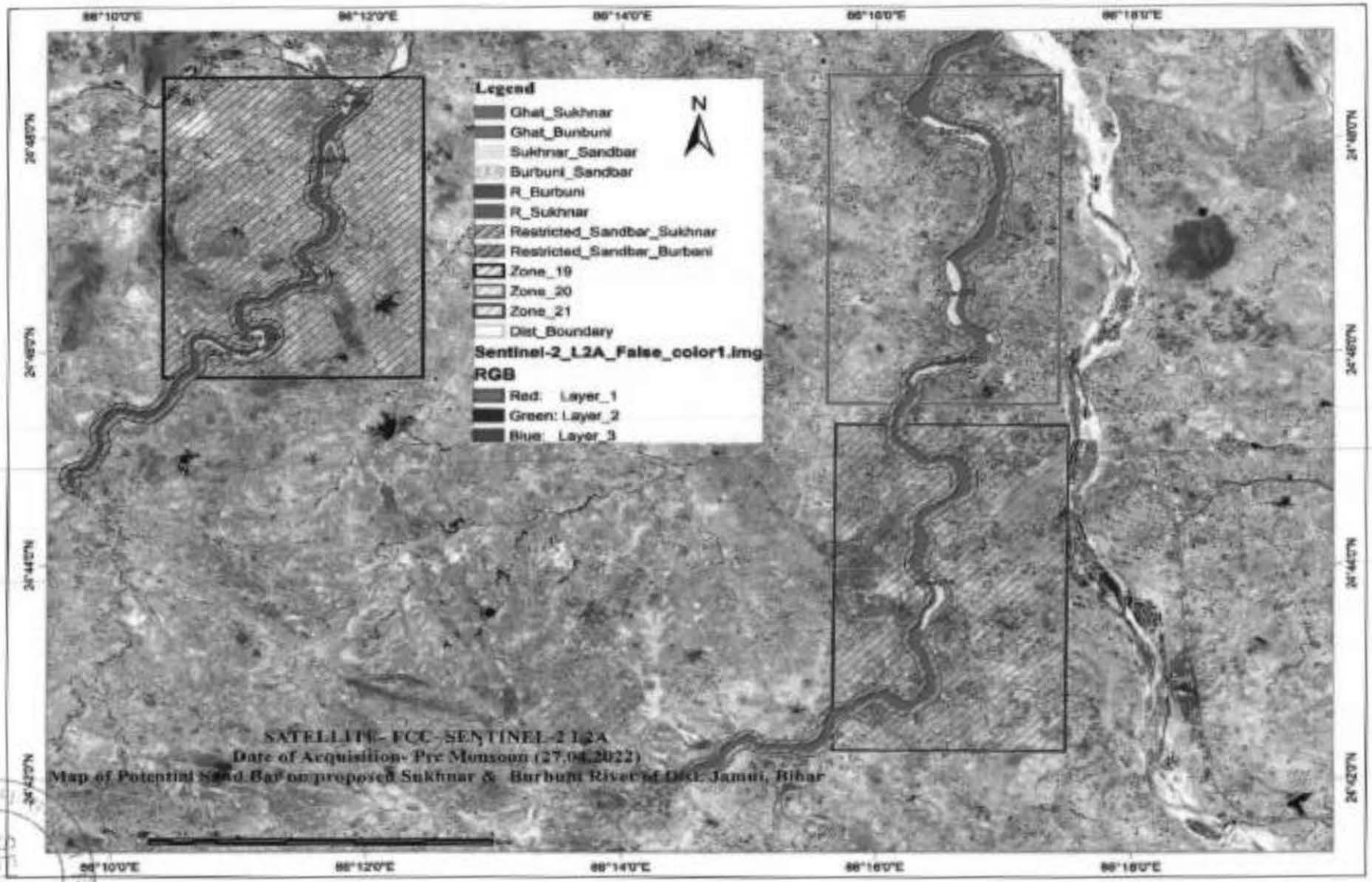
368


86°20'0"E
86°22'0"E
86°24'0"E
24°5'24"N
24°3'24"N
ZONE-17
Legend
Ghat_Anjana
Ghat_Bajan
Anjana_Sandbar
Bajan_Sandbar
R_Anjana
R_Bajan
Restricted_Sandbar_Bajan
Restricted_Sandbar_Anjana
Zone_15
Zone_16
Zone_17
Zone_18
Zone_19
Zone_20
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
SATELLITE- FCC-SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Anjana & Bajan River of Dist. Jamui, Bihar

SEIAA, BIHAR


86°20'0"E
86°22'0"E
86°24'0"E
24°58'0"N
24°56'0"N
ZONE-18
Legend
N
Ghat_Anjana
Ghat_Bajan
Anjana_Sandbar
Bajan_Sandbar
R_Anjana
R_Bajan
Restricted_Sandbar_Bajan
Restricted_Sandbar_Anjana
Zone_15
Zone_16
Zone_17
Zone_18
Zone_19
Zone_20
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
SATELLITE- FCC- SENTINEL-2 L2A
- Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Anjana & Bajan River of Dist. Jamui, Bihar


86°20'0"E
86°22'0"E
ZONE-18
Legend
Ghat_Anjana
Ghat_Bajan
Anjana_Sandbar
Bajan_Sandbar
R_Anjana
R_Bajan
Restricted_Sandbar_Bajan
Restricted_Sandbar_Anjana
Zone_15
Zone_16
Zone_17
Zone_18
Zone_19
Zone_20
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
SATELLITE- ECC- SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Anjana & Bajan River of Distt.Lakhisarai, Bihar


86°10'0"E
86°12'0"E
86°14'0"E
86°16'0"E
86°18'0"E
24°39'0"N
24°38'0"N
24°37'0"N
24°36'0"N
Legend
Ghat_Sukhnar
Ghat_Bunbuni
Sukhnar_Sandbar
Burbuni_Sandbar
R_Burbuni
R_Sukhnar
Restricted_Sandbar_Sukhnar
Restricted_Sandbar_Burbani
Zone_19
Zone_20
Zone_21
Dist_Boundary
Sentinel-2_L2A_False_color1.img
RGB
Red: Layer_1
Green: Layer_2
Blue: Layer_3
N
SATELLITE - FCC -SENTINEL-2 L2A
Date of Acquisition- Pre Monsoon (27.04.2022)
Map of Potential Sand Bar on proposed Sukhnar & Burbuni River of Dist. Jamui, Bihar

SEAA, Bihar

Area Covered & quantity of sand

Sl. No.	River	Sand bar Zone	Approx. Area (Ha.)	Sand quantity m^3 (1 m depth)
1	Barnar	Zone-1A	20.60	206000
2		Zone-1B	12.20	122000
3		Zone-1C	42.06	420600
4		Zone-1D	21.94	219400
5		Zone-1E	28.12	281200
6		Zone-1F	94.30	943000
7		Zone-1G	22.13	221300
8		Zone-1H	59.91	599100
9		Zone-1I	4.45	44500
10		Zone-2A	15.11	151100
11		Zone-2B	22.16	221600
12		Zone-2C	14.49	144900
13		Zone-2D	2.69	26900
14		Zone-2E	175.13	1751300
15		Zone-2F	56.75	567500
16		Zone-2G	28.54	285400
17		Zone-3A	247.58	2475800
18		Zone-3B	48.72	487200
19		Zone-3C	41.18	411800
20		Zone-3D	27.13	271300
21		Zone-4A	19.96	199600
22		Zone-4B	40.07	400700
23		Zone-4C	46.24	462400
24		Zone-4D	30.19	301900
25		Zone-4E	48.83	488300
26		Zone-5A	31.30	313000
27		Zone-5B	16.94	169400
28		Zone-5C	12.03	120300
29		Zone-5D	3.33	33300
30	Kiul	Zone-6A	28.26	282600
31		Zone-6B	28.78	287800
32		Zone-6C	44.02	440200
33		Zone-6D	15.32	153200
34		Zone-6E	66.63	666300

SEIAA, Bihar

35		Zone-7A	16.77	167700
36		Zone-7B	11.93	119300
37		Zone-7C	7.93	79300
38		Zone-7D	33.77	337700
39		Zone-7E	60.37	603700
40		Zone-7F	23.39	233900
41		Zone-8A	5.18	51800
42		Zone-8B	27.38	273800
43	Ulai	Zone-9A	49.93	499300
44		Zone-9B	12.83	128300
45		Zone-9C	15.01	150100
46		Zone-9D	21.82	218200
47		Zone-10A	14.13	141300
48		Zone-10B	3.55	35500
49		Zone-10C	13.01	130100
50		Zone-10D	5.93	59300
51		Zone-11A	17.67	176700
52		Zone-11B	8.83	88300
53		Zone-11C	22.14	221400
54		Zone-11D	5.56	55600
55		Zone-11E	7.42	74200
56		Zone-11F	5.19	51900
57		Zone-11G	7.47	74700
58		Zone-12A	25.86	258600
59		Zone-12B	14.60	146000
60		Zone-12C	20.76	207600
61		Zone-12D	9.00	90000
62		Zone-12E	8.45	84500
63	Gajhi	Zone-13A	4.66	46600
64		Zone-13B	2.03	20300
65		Zone-13C	2.87	28700
66		Zone-13D	4.02	40200
67		Zone-13E	2.77	27700
68		Zone-13F	9.14	91400
69		Zone-13G	6.87	68700
70		Zone-13H	6.79	67900
71		Zone-14A	4.25	42500
72		Zone-14B	5.82	58200
73		Zone-14C	15.90	159000

SEIAA, Bihar

74		Zone-14D	5.15	51500
75		Zone-14E	2.27	22700
76		Zone-14F	7.64	76400
77		Zone-14G	3.29	32900
78		Zone-14H	3.54	35400
79	Anjana	Zone-15A	3.84	38400
80		Zone-15B	1.55	15500
81		Zone-15C	6.43	64300
82		Zone-15D	4.25	42500
83		Zone-15E	4.03	40300
84		Zone-15F	3.02	30200
85		Zone-16A	6.50	65000
86		Zone-16B	5.99	59900
87		Zone-16C	9.32	93200
88		Zone-16D	4.81	48100
89		Zone-16E	4.64	46400
90		Zone-17A	11.13	111300
91		Zone-17B	8.05	80500
92	Bajan	Zone-18A	2.66	26600
93		Zone-18B	3.54	35400
94		Zone-18C	6.73	67300
95		Zone-18D	5.39	53900
96	Bunbuni	Zone-19A	3.36	33600
97		Zone-19B	9.53	95300
98		Zone-19C	2.30	23000
99		Zone-19D	4.03	40300
100		Zone-19E	6.10	61000
101	Sukhnar	Zone-20A	12.25	122500
102		Zone-20B	12.94	129400
103		Zone-20C	10.22	102200
104		Zone-21A	8.31	83100

Methodology

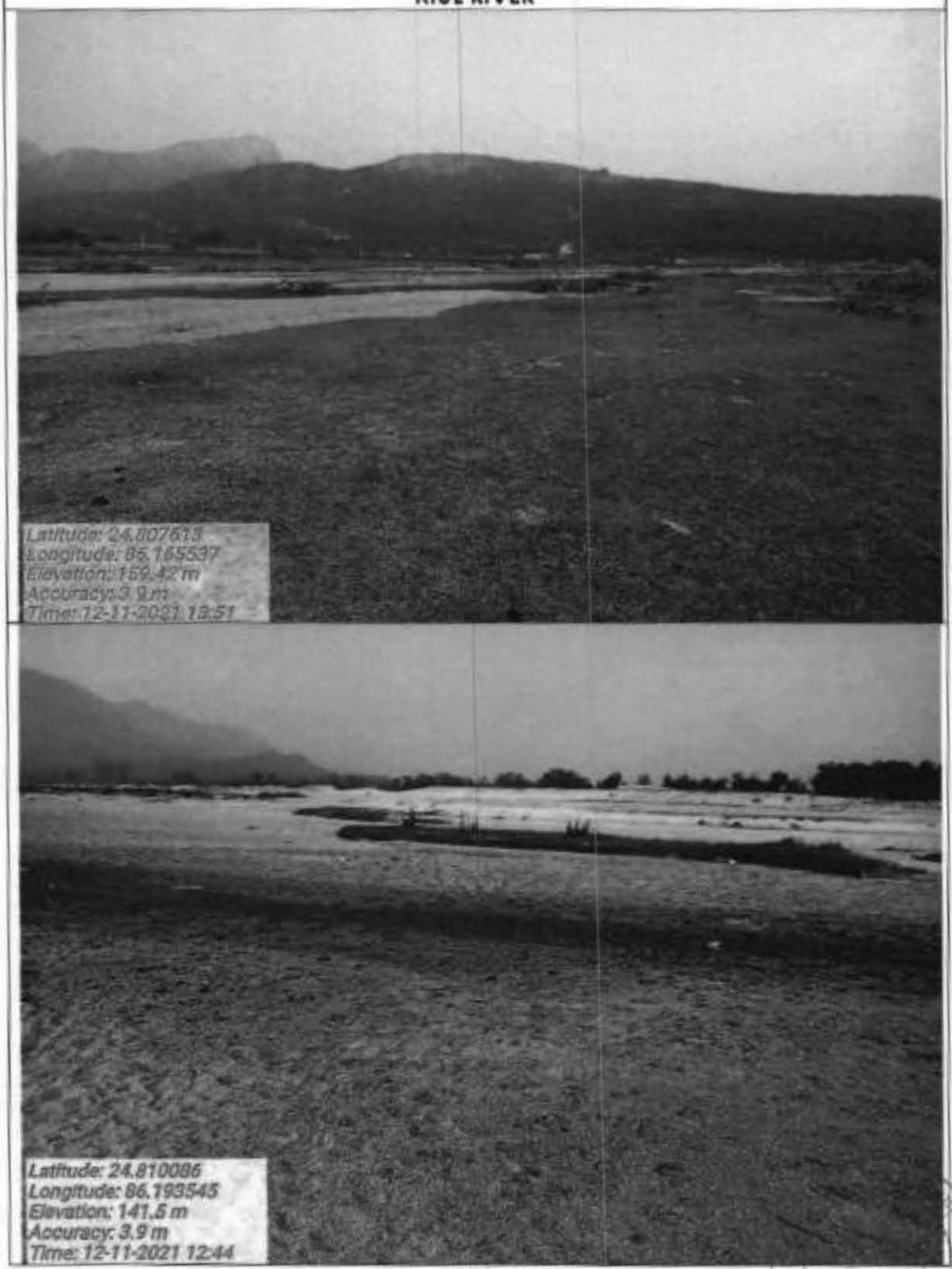
Methodology of sand bar identification Sand bar in the are identified through satellite imagery acquired on 27th of April, 2022.

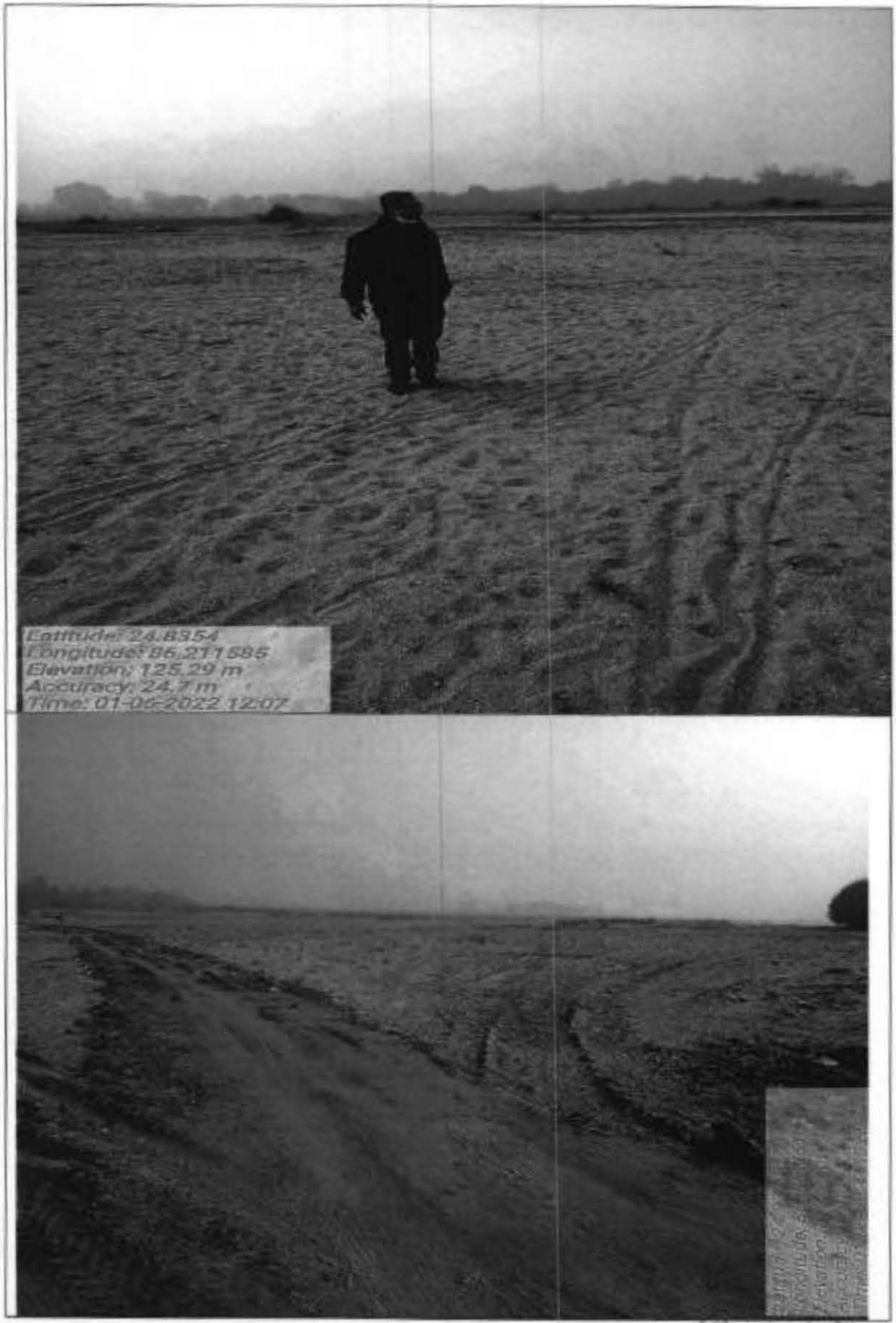
SEIAA, Bihar

ANNEXURE-X

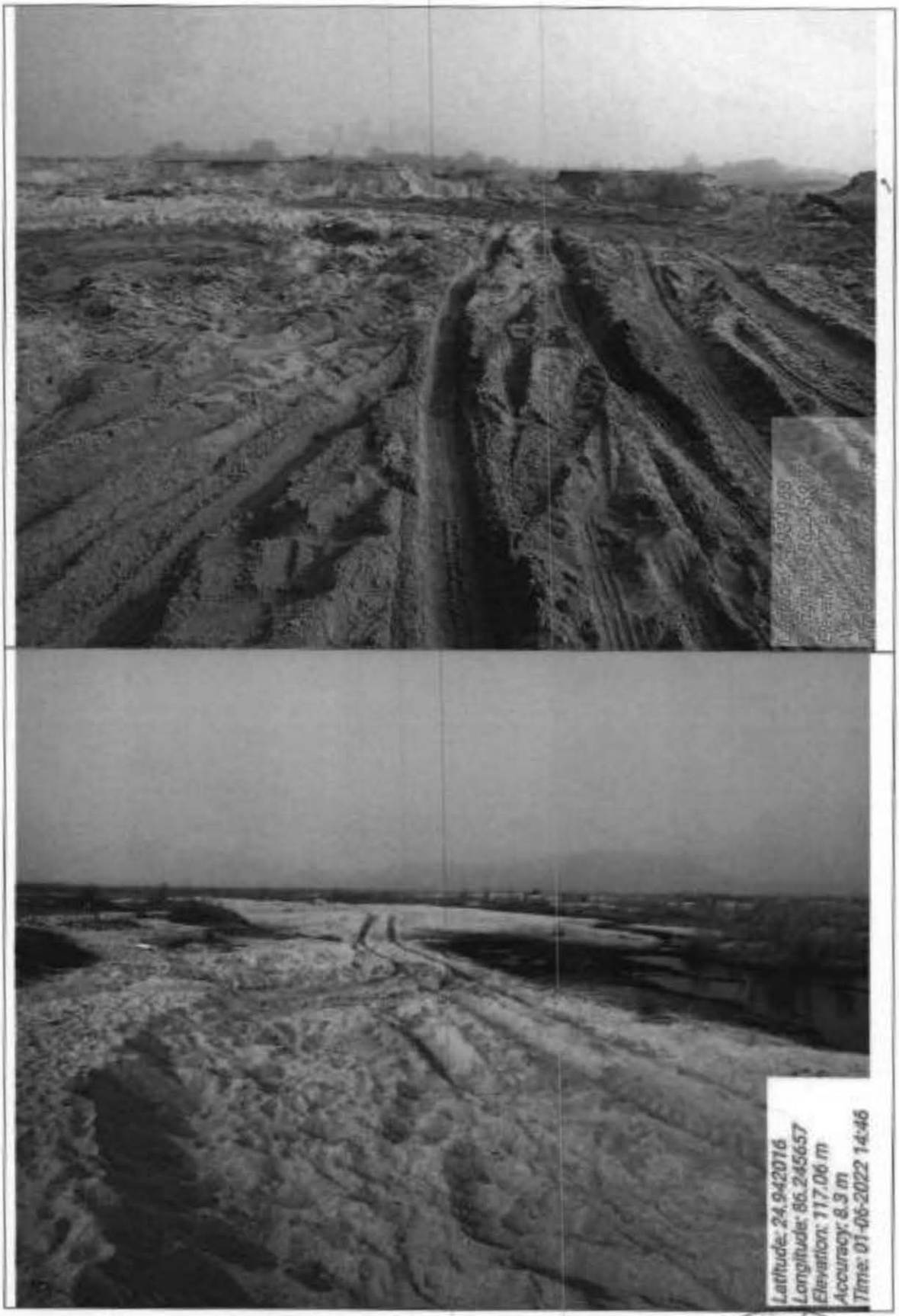
Geo-tagged photographs of proposed sand Ghats

KIUL RIVER




Latitude: 24.8354
Longitude: 86.211585
Elevation: 125.29 m
Accuracy: 24.7 m
Time: 01-06-2022 12:07

SEIAA, Bihar


Latitude: 24.942016
Longitude: 86.245657
Elevation: 117.06 m
Accuracy: 8.3 m
Time: 01-06-2022 14:46

SEIAA, Bihar



BARNAR RIVER




Latitude: 24.678805
Longitude: 86.322901
Elevation: 155.84±8 m
Accuracy: 8.7 m
GPSTime: 01-07-202201:13:25 PM


Latitude: 24.74937
Longitude: 86.296177
Elevation: 131.65±2 m
Accuracy: 13.7 m
GPSTime: 01-07-202212:11:44 PM

SEIAA, Bihar


Latitude: 24.863494
Longitude: 86.226236
Elevation: 82.47±16 m
Accuracy: 13.7 m
GPSTime: 01-06-202202:27:49 PM
Latitude: 24.864526
Longitude: 86.2674
Elevation: 88.02±32 m
Accuracy: 13.9 m
GPSTime: 01-06-202201:20:51 PM

SEIAA, Bihar


Latitude: 24.864889
Longitude: 86.266529
Elevation: 109.27±12 m
Accuracy: 24.9 m
GPSTime: 01-06-202201:18:03

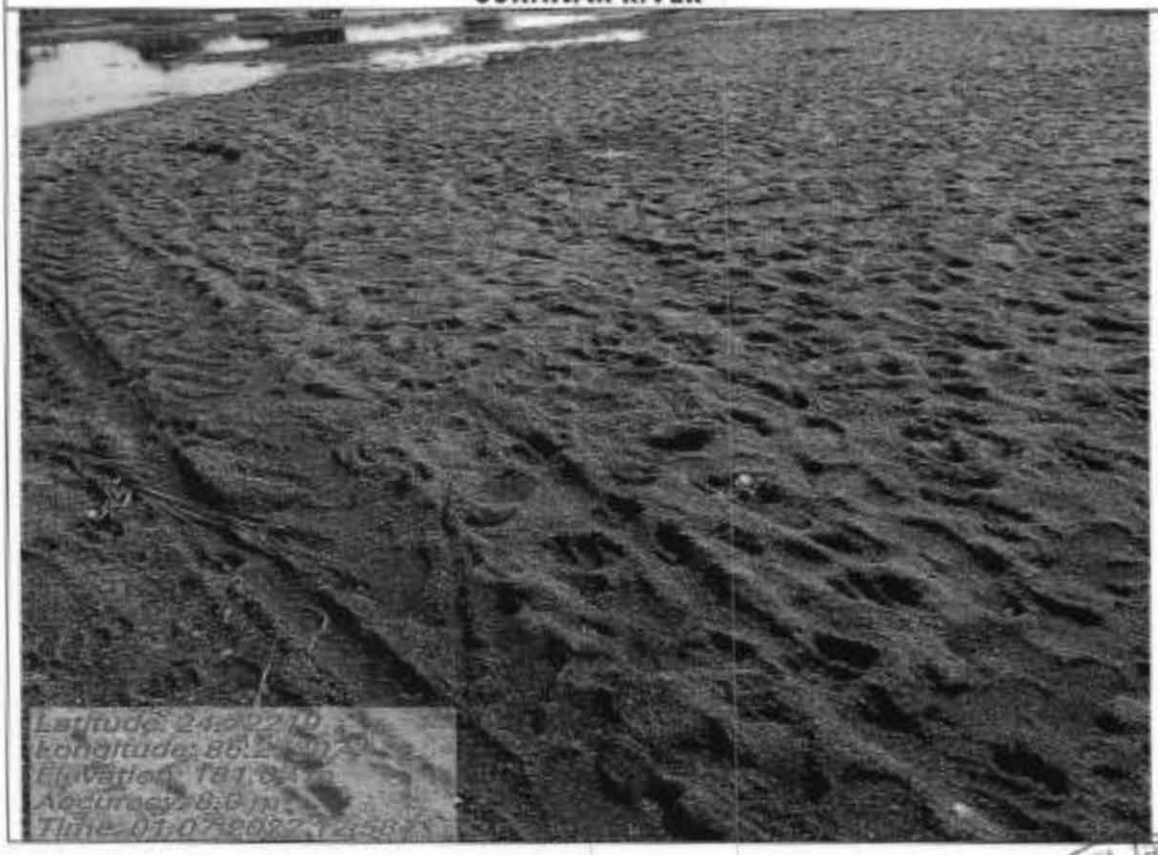

Latitude: 24.877588
Longitude: 86.249127
Elevation: 79.79±12 m
Accuracy: 11.0 m
GPSTime: 01-06-202212:47:23

SEIAA, Bihar

GAJHI RIVER



SUKHNAR RIVER



SEIAA, Bihar

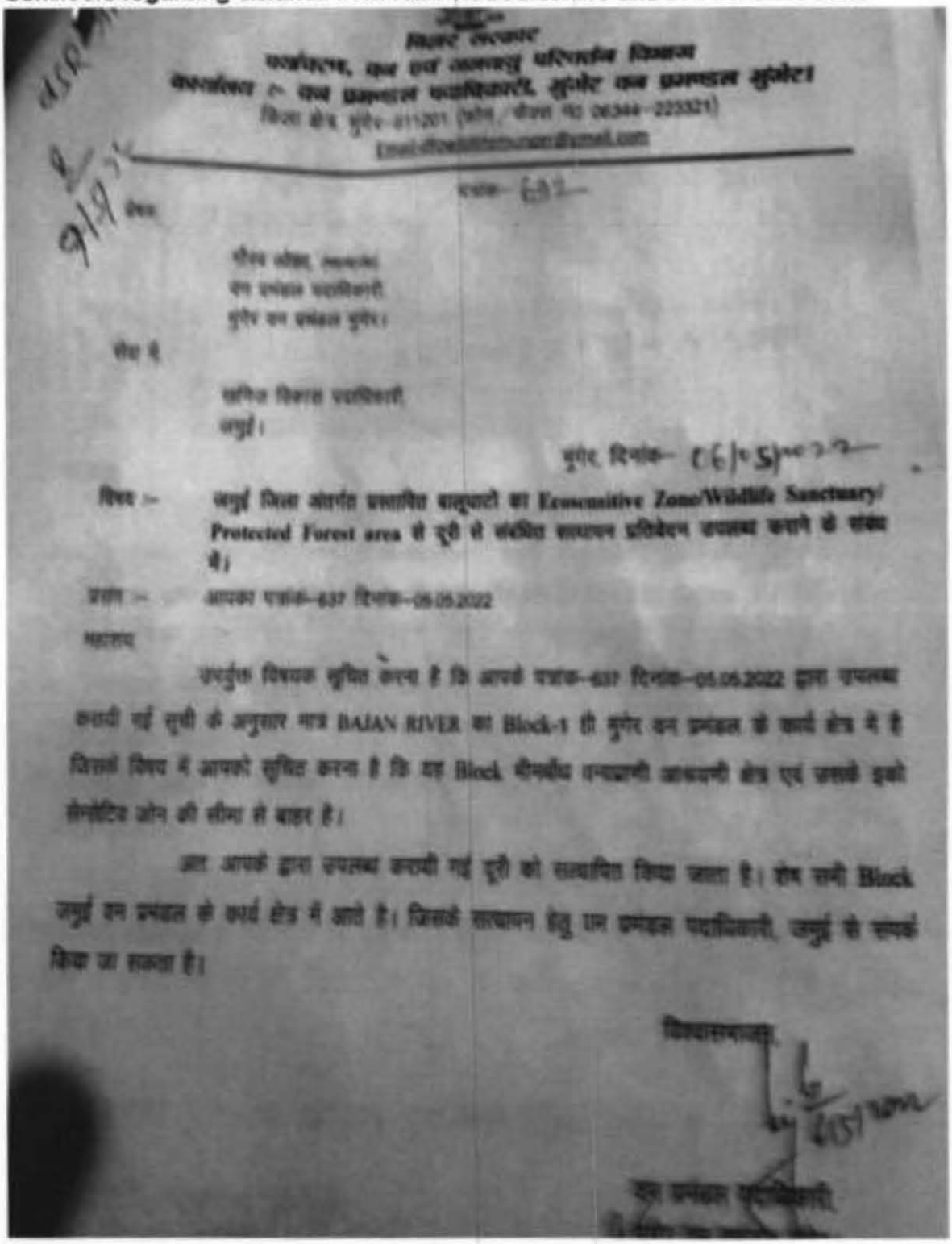
ULAI RIVER



SEIAA, Bihar

ANNEXURE-XI

Certificate regarding distance from Protected Forest are and Eco-sensitive Zone



बिहार सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन विभाग
कार्यालय :- वन प्रमंडल पदाधिकारी, मुंगेर वन प्रमंडल मुंगेर।
फैक्स नंबर मुंगेर-811201 (फोन / फैक्स नं0 06344-223321)
[email redacted]

पत्रांक- 637

सेवा में,

वरीय क्षेत्र सहायक,
वन प्रमंडल पदाधिकारी,
मुंगेर वन प्रमंडल मुंगेर।

सेवा में,

खनिज विकास पदाधिकारी,
जमुई।

मुंगेर दिनांक- 06/05/2022

विषय :- जमुई जिला अंतर्गत प्रस्तावित बालूघाटों का Ecosensitive Zone/Wildlife Sanctuary/ Protected Forest area से दूरी से संबंधित सत्यापन प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :- आपका पत्रांक-637 दिनांक-05.05.2022

महाशय

उपर्युक्त विषयक सूचित करना है कि आपके पत्रांक-637 दिनांक-05.05.2022 द्वारा उपलब्ध कराई गई सूची के अनुसार नाम BAJAN RIVER का Block-1 जो मुंगेर वन प्रमंडल के कार्य क्षेत्र में है जिसके संबंध में आपको सूचित करना है कि यह Block वीरभौंरिया पंचायत अंतर्गत आरक्षित क्षेत्र एवं उससे इको सेन्सेटिव जोन की सीमा से बाहर है।

अतः आपके द्वारा उपलब्ध कराई गई सूची को सत्यापित किया जाता है। साथ सभी Block जमुई वन प्रमंडल के कार्य क्षेत्र में आते है। जिसके सत्यापन हेतु वन प्रमंडल पदाधिकारी, जमुई से संपर्क किया जा सकता है।

विश्वासभाजन

वन प्रमंडल पदाधिकारी

SEIAA, Bihar

कार्यालय :–वन प्रमंडल पदाधिकारी, जमुई वन प्रमंडल, जमुई।

अशोक राजपथ रोड नं. 02, जमुई। पिनकोड– 811307, फोन नं0– 06345–222036
E-mail:FD-jamuidiv@gmail.com

पत्रांक :– 954 दिनांक :– 12/7/22

प्रेषक,

पीयूष कुमार बरनवाल, भा.व.से.
वन प्रमंडल पदाधिकारी,
जमुई वन प्रमंडल, जमुई।

सेवा में,

खनिज विकास पदाधिकारी,
जमुई।

विषय :– जमुई जिला अन्तर्गत प्रस्तावित बालूघाटों का **Ecosensitive Zone/Wild Life Sanctuary/ Protected Forest Area** से दूरी से संबंधित सत्यापन प्रतिवेदन उपलब्ध कराने के संबंध में।

प्रसंग :– आपका पत्रांक–614 खनन, दिनांक–25.04.2022

महाशय,

उपर्युक्त विषयक प्रसंगाधीन पत्र के संबंध में सूचित करना है कि जमुई वन प्रमंडल अंतर्गत नागी–नकटी पक्षी आश्रयणी के ECO- SENSITIVE ZONE से बाहर है। इस संदर्भ में पक्षी आश्रयणी के ECO- SENSITIVE ZONE एवं वन क्षेत्र की सीमा से दूरी निम्नवत् है :–

क्रमांक	नदी का नाम	ब्लॉक नं0	पी0एफ/आर0 एफ0 की अनुमानित दूरी	नागी–नकटी पक्षी आश्रयणी की दूरी
1.	किउल	1	0.5 कि0मी0	23 कि0मी0
2.	किउल	2	1 कि0मी0	22 कि0मी0
3.	किउल	3	1.5 कि0मी0	20 कि0मी0
4.	किउल	4	2 कि0मी0	19 कि0मी0
5.	किउल	5	2 कि0मी0	18 कि0मी0
6.	किउल	6	4 कि0मी0	18 कि0मी0
7.	किउल	7	4 कि0मी0	18 कि0मी0
8.	किउल	8	4 कि0मी0	18 कि0मी0
9.	किउल	9	12 कि0मी0	18 कि0मी0
10.	किउल	10	12 कि0मी0	18 कि0मी0
11.	किउल	11	9 कि0मी0	18 कि0मी0
12.	किउल	12	5 कि0मी0	18 कि0मी0
13.	किउल	13	5 कि0मी0	20 कि0मी0
14.	किउल	14	2 कि0मी0	19 कि0मी0
15.	किउल	15	3 कि0मी0	20 कि0मी0
16.	बरनार	1	8 कि0मी0	21 कि0मी0
17.	बरनार	2	10 कि0मी0	18 कि0मी0
18.	बरनार	3	11 कि0मी0	16 कि0मी0
19.	बरनार	4	9 कि0मी0	16 कि0मी0
				15 कि0मी0

SEIAA, Bihar

20.	बरनार	5	7 कि०मी०	13 कि०मी०
21.	बरनार	6	7 कि०मी०	12 कि०मी०
22.	बरनार	7	3 कि०मी०	10 कि०मी०
23.	बरनार	8	1 कि०मी०	10 कि०मी०
24.	बरनार	9	9 कि०मी०	11 कि०मी०
25.	बरनार	10	13 कि०मी०	11 कि०मी०
26.	बरनार	11	8 कि०मी०	13 कि०मी०
27.	बरनार	12	8 कि०मी०	14 कि०मी०
28.	बरनार	13	9 कि०मी०	15 कि०मी०
29.	बरनार	14	9 कि०मी०	15 कि०मी०
30.	बरनार	15	9 कि०मी०	15 कि०मी०
31.	बरनार	16	12 कि०मी०	16 कि०मी०
32.	बुनबुनी	1	7 कि०मी०	20 कि०मी०
33.	सुखनार	1	6 कि०मी०	16 कि०मी०
34.	सुखनार	2	7 कि०मी०	14 कि०मी०
35.	उलाई	1	5 कि०मी०	7 कि०मी०
36.	उलाई	2	9 कि०मी०	7 कि०मी०
37.	उलाई	3	5 कि०मी०	5 कि०मी०
38.	उलाई	4	6 कि०मी०	6 कि०मी०
39.	उलाई	5	7 कि०मी०	15 कि०मी०
40.	उलाई	6	10 कि०मी०	16 कि०मी०
41.	उलाई	7	8 कि०मी०	17 कि०मी०
42.	उलाई	8	7 कि०मी०	18 कि०मी०
43.	गजही	1	13 कि०मी०	35 कि०मी०

नोट :– आजन एवं बाजन नदी बालू घाट इस वन प्रमंडल अंतर्गत नहीं पड़ता है।

सूचनार्थ एवं आवश्यक कार्रवाई हेतु प्रेषित।

विश्वासभाजन,

12/202

वन प्रमंडल पदाधिकारी,
जमुई वन प्रमंडल जमुई।

राज्य समीक्षा निर्धारण प्राधिकार
SEIAA,
Bihar

ANNEXURE-XII

Undertaking regarding aquatic animal

UNDERTAKING

This is to undertake that no aquatic animals' life shall be harmed during mining from the proposed sand ghats in Jamui district & all the environmental parameters will be taken care of during the mining period.

खनिज विकास पदाधिकारी
जमुई

SEIAA, Bihar

ANNEXURE-XIII

Specific Gravity of Sand test report

RAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To District Mining Office Jamui	UUI No.:TC102142200000000327
	Date of Receipt: 24.02.2022
	Date of Testing: 24.02.2022-25.02.2022
Description of Sample: Bunbuni Sand	Date of Report: 25.02.2022
Name of River: Bunbuni	Name of Ghat: Near Manjhia
Ref No : Nill	

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.02	-

END OF REPORT

Authorised Signatory

Rappid Test Lab Pvt.Ltd.
Block-A,Raut City Commercial Complex,Garibhara Khagaul Patna-801105(Bihar)

SEIAA, Bihar

RAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To District Mining Office Jamui	ULR No.:TC102142200000038F
	Date of Receipt: 24.02.2022
	Date of Testing: 24.02.2022-25.02.2022
Description of Sample: Barnar Sand	Date of Report: 25.02.2022
Name of River: Barnar	Name of Ghat: Near Tola Kodharia
Ref No : Nill	

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.09	-

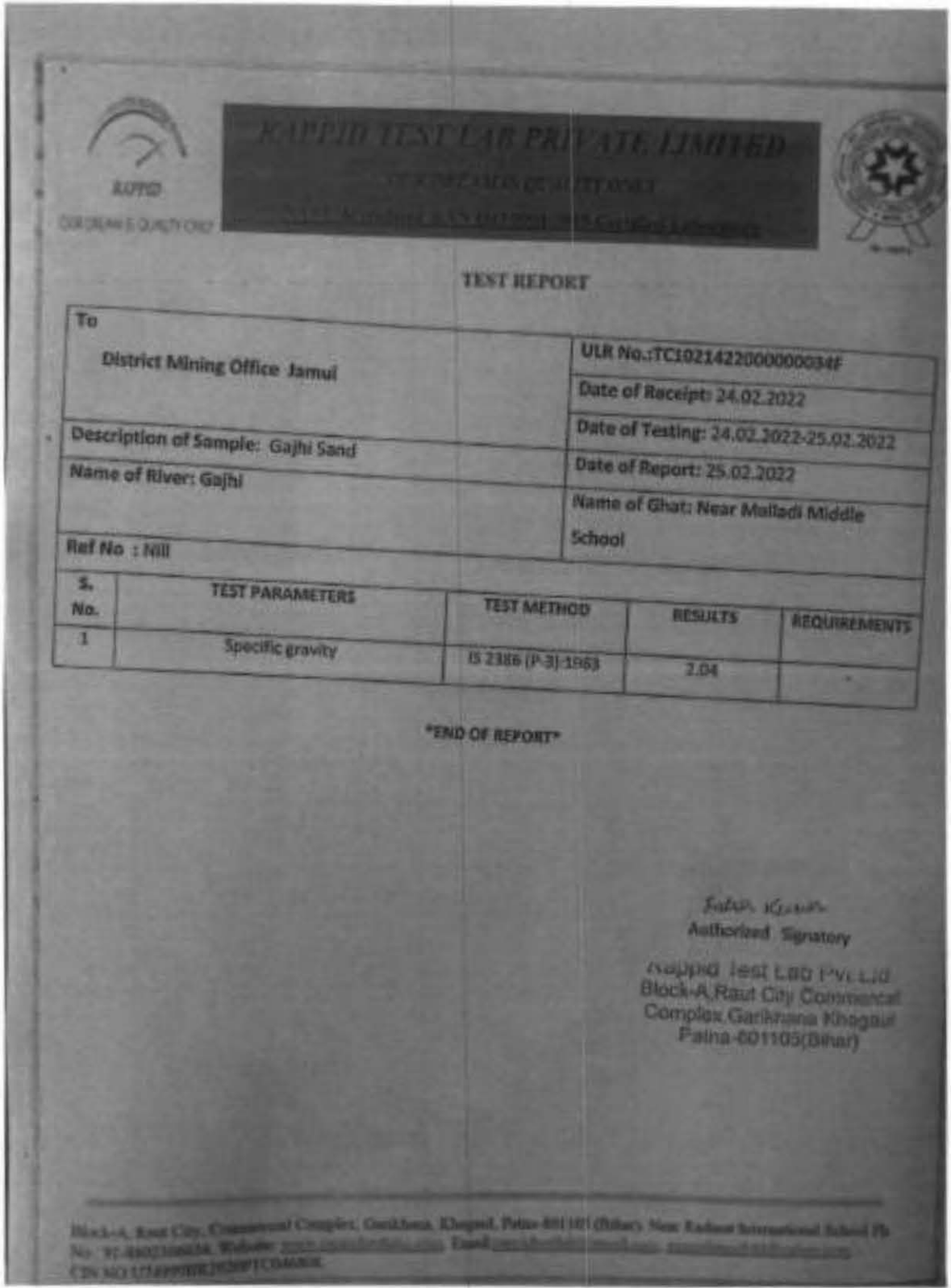
END OF REPORT

Authorized Signatory

Rappid Test Lab Pvt.Ltd.
Block-A,Raut City Commercial
Complex,Garikhana Khagaul
Patna-801105(Bihar)

Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Patna-801105 (Bihar). Near Kothari International School Ph No.: 91-8002344334, Website: www.rappidtestlab.com, Email: rappidtestlab@gmail.com, rappidtestlab@yahoo.com
CIN NO:U74999BR2020PTC046868.

SEIAA, Bihar



KAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To	ULR No.:TC102142200000034F
District Mining Office Jamui	Date of Receipt: 24.02.2022
Description of Sample: Gajhi Sand	Date of Testing: 24.02.2022-25.02.2022
Name of River: Gajhi	Date of Report: 25.02.2022
Ref No : Nill	Name of Ghat: Near Malladi Middle School

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3) 1963	2.04	-

END OF REPORT

Authorized Signatory

Kappid Test Lab Pvt. Ltd.
Block-A,Raut City Commercial
Complex Garikhana Khagaul
Patna-801105(Bihar)

SEIAA, Bihar

[redacted]

TEST REPORT

To	ULR No.:TC102142200000003IF
District Mining Office Jamui	Date of Receipt: 24.02.2022
Description of Sample: Anjana Sand	Date of Testing: 24.02.2022-25.02.2022
Name of River: Anjana	Date of Report: 25.02.2022
Ref No : Nill	Name of Ghat: Naya Gaon

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.11	-

END OF REPORT

Authorized Signatory

Rappid Test Lab Pvt Ltd
Block-A,Raut City Commercial Complex,Gardhana Khagaul
Patna-801105(Bihar)

[redacted]

SEIAA, Bihar

RAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To District Mining Office Jamui	ULR No.:TC10214220000000037F
	Date of Receipt: 24.02.2022
	Date of Testing: 24.02.2022-25.02.2022
Description of Sample: Ulai Sand	Date of Report: 25.02.2022
Name of River: Ulai	Name of Ghat: Near Mahuli village
Ref No : Nill	

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.08	-

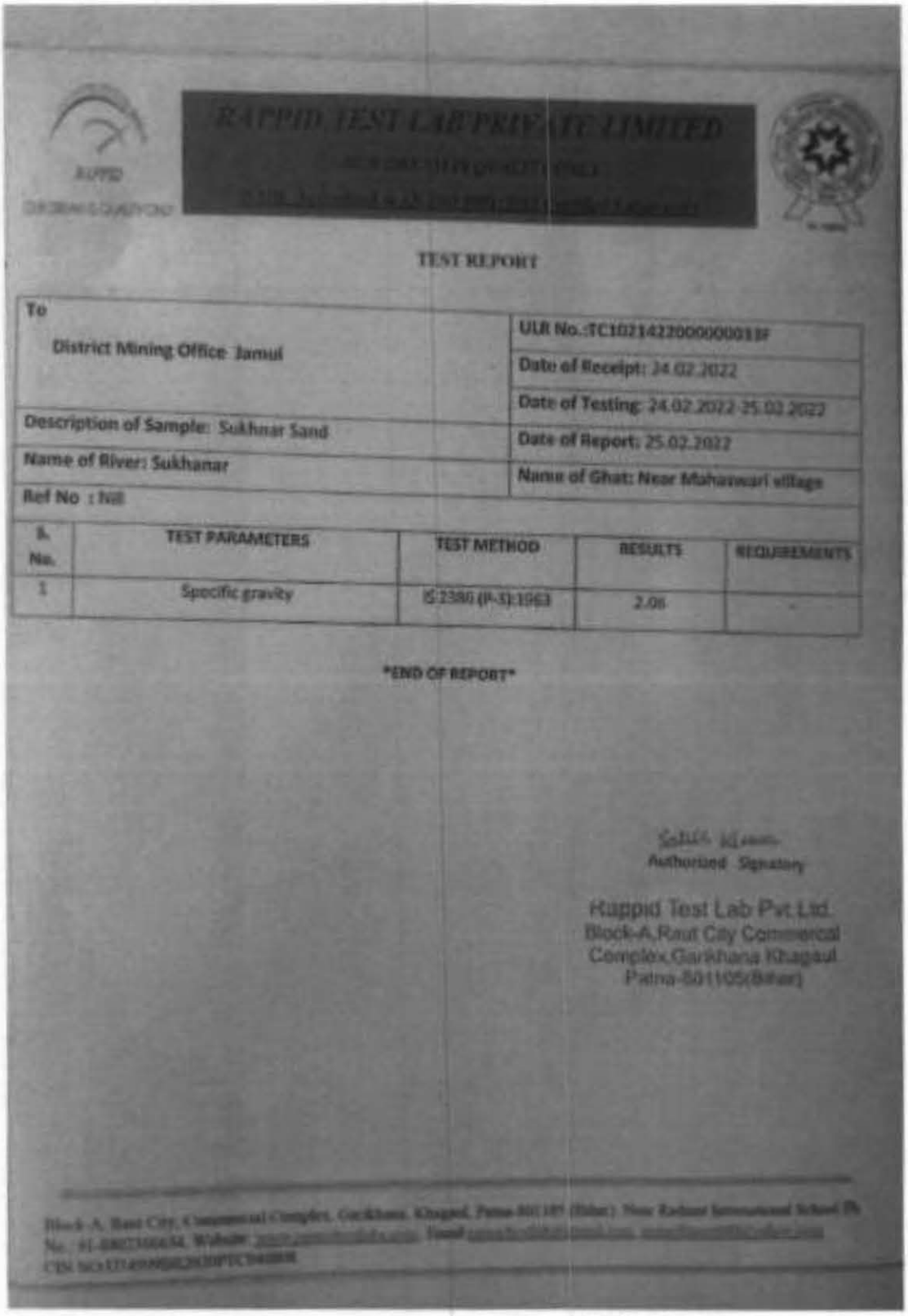
END OF REPORT

Authorised Signatory

Rappid Test Lab Pvt Ltd
Block-A,Raut City Commercial
Complex,Gardihsana Khagaul
Patna-801105(Bihar)

Block-A, Raut City Commercial Complex, Gardihsana, Khagaul, Patna-801105 (Bihar). Near Radiant International School Ph No. +91-8802346534, Website: www.rappidtestlab.com, Email: rappidtestlab@gmail.com, rappidtestlab@yahoo.com
CIN NO.U74999BR2020PTC044658

SEIAA, Bihar



RAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To District Mining Office: Jamui	ULR No.:TC102142200000001F
	Date of Receipt: 24.02.2022
	Date of Testing: 24.02.2022-25.02.2022
Description of Sample: Sukhnar Sand	Date of Report: 25.02.2022
Name of River: Sukhanar	Name of Ghat: Near Maharwari village
Ref No : Nil	

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS:2386 (P-3):1963	2.06	-

END OF REPORT

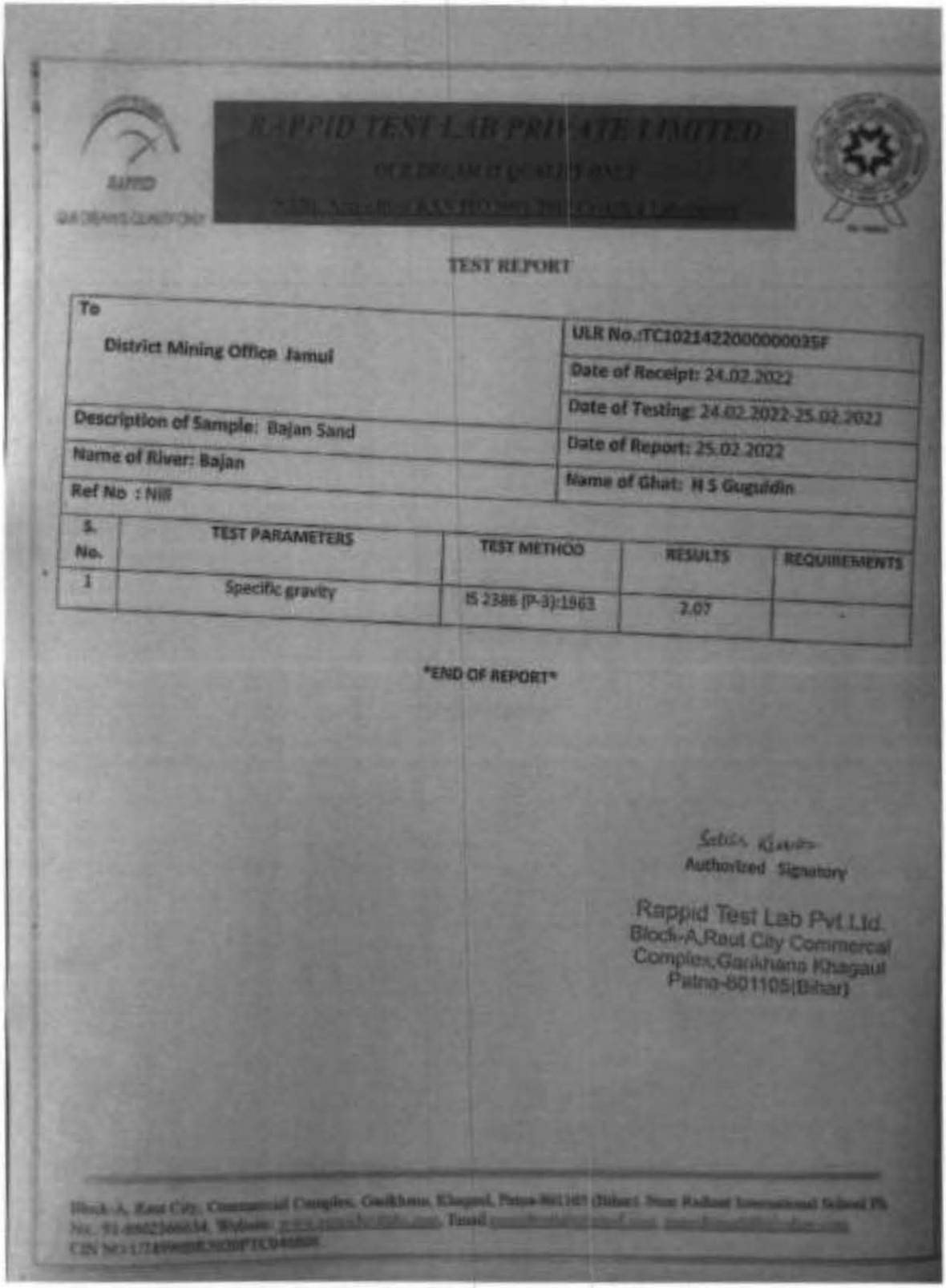
Authorised Signatory

Rappid Test Lab Pvt.Ltd.
Block-A,Raut City Commercial
Complex,Garikhana Khagaul
Patna-801105(Bihar)

Block-A, Raut City, Commercial Complex, Garikhana, Khagaul, Patna-801105 (Bihar). Near Kashyap International School Ph. No. : 91-8002166434, Website: www.rappidtestlab.com, Email: rappidtestlab@gmail.com, rappidtestlab@yahoo.com
CIN NO:U74999BR2020PTC048808

Scanned with CamScanner

SEIAA. Bihar



RAPPID TEST LAB PRIVATE LIMITED

TEST REPORT

To District Mining Office Jamui	ULR No.:TC102142200000003SF
	Date of Receipt: 24.02.2022
Description of Sample: Bajan Sand	Date of Testing: 24.02.2022-25.02.2022
Name of River: Bajan	Date of Report: 25.02.2022
Ref No : Nill	Name of Ghat: H S Guguddin

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.07	-

END OF REPORT

Authorized Signatory

Rappid Test Lab Pvt Ltd.
Block-A,Raut City Commercial
Complex,Gaikhana Khagaul
Patna-801105(Bihar)

Block-A, Raut City Commercial Complex, Gaikhana, Khagaul, Patna-801105 (Bihar). Near Radiant International School Ph No. 91-8602566634. Website: [illegible]. Email [illegible]
CIN NO:U74999BR2020PTC046808

SEIAA, Bihar

[redacted]

TEST REPORT

To District Mining Office Jamui	ULR No.:TC102142200000003IF Date of Receipt: 24.02.2022 Date of Testing: 24.02.2022-25.02.2022
Description of Sample: Kiul Sand	Date of Report: 25.02.2022
Name of River: Kiul	Name of Ghat: Khairma
Ref No : Nil	

S. No.	TEST PARAMETERS	TEST METHOD	RESULTS	REQUIREMENTS
1	Specific gravity	IS 2386 (P-3):1963	2.06	-

END OF REPORT

Authorised Signatory

Rappid Test Lab Pvt.Ltd.
Block-A,Raut City Commercial
Complex,Gardhara Khagaul
Patna-801105(Bihar)

[redacted]

Scanned with CamScanner

SEIAA, Bihar

ANNEXURE-XIV
Advertisement of DSR in Public domain

जमुई
JAMUI

HOME ABOUT DISTRICT DIRECTORY DEPARTMENT TOURISM NOTICE
CITIZEN SERVICES MEDIA GALLERY FORMS

HOME / DOCUMENT / Distrct survey report of Mining department, jamui

Distrct survey report of Mining department, jamui

Distrct survey report of Mining department, jamui

Title	Date	View / Download
Distrct survey report of Mining department, jamui	03/03/2022	View (7 MB)

WEBSITE POLICIES HELP CONTACT US FEEDBACK

Content Owned by District Administration
© jamui . Developed and hosted by National Informatics Centre,
Ministry of Electronics & Information Technology,
Government of India

Last Updated: May 04, 2022

SEIAA, Bihar



जिला खनन कार्यालय, जमुई

--:::आम सूचना:::--

खनिज विकास पदाधिकारी,
जमुई।

भवन निर्माण विभाग
कार्यपालक अभियंता, पटना परिक्षण भवन प्रमंडल
दानापुर, पटना का कार्यालय

SEIAA, Bihar

REFERENCE

- **Udyog Mitra, Bihar** https://www.udyogmitrabihar.in/docs/dp/jamui.pdf
- **Centre for Ground Water Board (CGWB)** http://cgwb.gov.in/District_Profile/Bihar/Jamui.pdf
- **Census of India (2011)** https://www.census2011.co.in/census/district/75-jamui.html
- **Climate and Average Weather Year Round in Jamui** https://weatherspark.com/y/111254/Average-Weather-in-Jam%C5%AB%C4%AB-India-Year-Round
- **Flood Hazard Atlas – Bihar (Verson 2.0)**

.....

SEIAA, Bihar

समाहरणालय, जमुई।

(खनन शाखा)

प्रत्रांक 660 / एम0, जमुई, दिनांक 13.05.2022

प्रेषक,

समाहर्त्ता,
जमुई।

सेवा में,

सदस्य सचिव,
SEIAA बिहार।

विषयः– जमुई जिला से संबंधित DSR में वांछित सुधार कर SEIAA बिहार को उपलब्ध कराने के संबंध में।

प्रसंगः– SEAC बिहार का पत्रांक–132 पटना दिनांक–07.04.22 एवं खान एवं भूत्व बिहार पटना का पत्रांक–1796 / एम0, पटना दिनांक–18.04.22

महाशय,

उपरोक्त प्रासंगिक विषय के संबंध में कहना है कि SEAC बिहार के पत्रांक–132 पटना दिनांक–07.04.22 में दिये गए निदेश/टिप्पणी के अलोक में जमुई जिला से संबंधित जिला सर्वेक्षण प्रतिवेदन (DSR) प्रारूप में वांछित सुधार कर एवं अनुमंडलीय समिति से अनुमोदनोरान्त अग्रेत्तर कार्रवाई हेतु भेजी जाती है।

विश्वासभाजन
13/05/2022
समाहर्त्ता
जमुई।

13/5/22
खनिज विकास पदाधिकारी,
13.05.22 जमुई।

SEIAA, Bihar

Scanned by TapScanner

अनुमंडल पदाधिकारी जमुई की अध्यक्षता में जमुई जिला का जिला सर्वेक्षण प्रतिवेदन (DSR) प्रारूप को तैयार करने हेतु गठित कमिटी का दिनांक–13.05.22 को आयोजित बैठक की कार्यवाहीः–

उपस्थितिः– पंजी के अनुसार

1 सर्वप्रथम बैठक में उपस्थित सभी सदस्यों का स्वागत किया गया तत्पश्चात् बैठक की कार्यवाही प्रारम्भ की गई।

2 सदस्य सचिव SEAC बिहार के ज्ञापांक–132 दिनांक–07.04.22 एवं श्री अंशुल कुमार,संयुक्त सचिव, खान एवं भूतत्व विभाग बिहार, पटना का पत्रांक–1796/एम, पटना दिनांक–24.01.22 के अनुपालन में SEAC बिहार द्वारा जिन 18 बिंदुओं पर टिप्पणी/ निदेश दिया गया था उन विन्दुओं पर समिति के सभी सदस्यों के साथ विस्तृत चर्चा की गई।

3 SEAC बिहार द्वारा वांछित 18 विन्दुओं पर संशोधित सूचना के प्रारूप पर समिति के सभी सदस्यों द्वारा सहमति व्यक्त की गई एवं अनुमोदन हेतु प्रस्ताव प्रस्तुत किया गया।

4 सभी सदस्यों द्वारा उक्त वांछित संशोधित सूचना को अनुमोदित किया गया, जिस पर आवश्यक कार्रवाई हेतु समाहर्त्ता जमुई द्वारा SEIAA बिहार को भेजा जाना है।

अन्त में सभी सदस्यों को धन्यवाद ज्ञापन के साथ बैठक की कार्यवाही समाप्त की गई।

13/05/22

अनुमंडल पदाधिकारी,
जमुई।

प्रतिलिपिः–समाहर्त्ता, जमुई का वांछित संशोधित सूचना SEIAA को भेजे जाने हेतु समर्पित।

13/05/22

अनुमंडल पदाधिकारी,
जमुई।

SEIAA, Bihar

अनुमंडल पदाधिकारी जमुई की अध्यक्षता में जमुई जिला का जिला सर्वेक्षण प्रतिवेदन (DSR) प्रारूप को तैयार करने हेतु गठित कमिटी का दिनांक–13.05.22 को आयोजित बैठक की कार्यवाही:–

उपस्थिति:– पंजी के अनुसार

1 सर्वप्रथम बैठक में उपस्थित सभी सदस्यों का स्वागत किया गया तत्पश्चात् बैठक की कार्यवाही प्रारम्भ की गई।

2 सदस्य सचिव SEAC बिहार के ज्ञापांक–132 दिनांक–07.04.22 एवं श्री अंशुल कुमार,संयुक्त सचिव, खान एवं भूतत्व विभाग बिहार, पटना का पत्रांक–1796/एम, पटना दिनांक–24.01.22 के अनुपालन में SEAC बिहार द्वारा जिन 18 बिंदुओं पर टिप्पणी/ निदेश दिया गया था उन विन्दुओं पर समिति के सभी सदस्यों के साथ विस्तृत चर्चा की गई।

3 SEAC बिहार द्वारा वांछित 18 विन्दुओं पर संशोधित सूचना के प्रारूप पर समिति के सभी सदस्यों द्वारा सहमति व्यक्त की गई एवं अनुमोदन हेतु प्रस्ताव प्रस्तुत किया गया।

4 सभी सदस्यों द्वारा उक्त वांछित संशोधित सूचना को अनुमोदित किया गया, जिस पर आवश्यक कार्रवाई हेतु समाहर्त्ता जमुई द्वारा SEIAA बिहार को भेजा जाना है।

अन्त में सभी सदस्यों को धन्यवाद ज्ञापन के साथ बैठक की कार्यवाही समाप्त की गई।

खान निरीक्षक, जमुई।	खान निरीक्षक, जमुई।	अंचलाधिकारी जमुई/खैरा/सिकंदर।	अंचलाधिकारी, बरहट/लक्ष्मीपुर/झाझा/सोनो	खनिज विकास पदाधिकारी जमुई।

क्षेत्रिय पदाधिकारी, बिहार राज्य प्रदू० नियंत्रण पर्षद, बेगुसराय।	वनो के क्षेत्र पदा०, जमुई।	सहायक अभियंता, सिंचाई प्रमंडल सिकंदरा लक्षीपुर –सह–झाझा।	सहायक वन संरक्षक, जमुई–सह–वन क्षेत्र पदा० झाझा।	अनुमंडल पदाधिकारी जमुई।

ज्ञापांक 659 /एम, खनन, जमुई दिनांक– 13.05.22

प्रतिलिपि:– समाहर्त्ता, जमुई का वांछित संशोधित सूचना SEIAA, को भेजे जाने हेतु समर्पित।

13/05/22
अनुमंडल पदाधिकारी,
जमुई।

SEIAA, Bihar

\\TRUE COPY//

ANNEXURE A-11

ITEM NO.30 COURT NO.5 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 Nos. 3661-3662/2020

THE STATE OF BIHAR & ORS. Appellant(s)

VERSUS

PAWAN KUMAR & ORS. Respondent(s)

(IA No. 1753/2022 - APPLICATION FOR PERMISSION
IA No. 167322/2021 - APPLICATION FOR PERMISSION
IA No. 152114/2021 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 47509/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 68075/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 46824/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 63521/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 43428/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 159424/2021 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 156591/2021 - CLARIFICATION/DIRECTION
IA No. 155246/2021 - CLARIFICATION/DIRECTION
IA No. 154733/2021 - CLARIFICATION/DIRECTION
IA No. 47768/2022 - CLARIFICATION/DIRECTION
IA No. 163455/2021 - DISCHARGE OF ADVOCATE ON RECORD
IA No. 160960/2021 - EARLY HEARING APPLICATION
IA No. 115437/2020 - EX-PARTE AD-INTERIM RELIEF
IA No. 163457/2021 - EXEMPTION FROM FILING AFFIDAVIT
IA No. 115442/2020 - EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT
IA No. 156592/2021 - EXEMPTION FROM FILING O.T.
IA No. 46828/2022 - EXEMPTION FROM FILING O.T.
IA No. 115441/2020 - EXEMPTION FROM FILING O.T.
IA No. 155249/2021 - EXEMPTION FROM FILING O.T.
IA No. 17968/2021 - EXEMPTION FROM FILING O.T.
IA No. 47771/2022 - EXEMPTION FROM FILING O.T.
IA No. 43430/2022 - EXEMPTION FROM FILING O.T.
IA No. 152115/2021 - EXEMPTION FROM FILING O.T.
IA No. 3909/2022 - EXEMPTION FROM FILING O.T.
IA No. 47510/2022 - EXEMPTION FROM FILING O.T.
IA No. 130609/2020 - INTERVENTION APPLICATION
IA No. 17966/2021 - INTERVENTION APPLICATION
IA No. 14978/2021 - INTERVENTION APPLICATION
IA No. 152111/2021 - INTERVENTION/IMPLEADMENT
IA No. 3906/2022 - INTERVENTION/IMPLEADMENT
IA No. 47506/2022 - INTERVENTION/IMPLEADMENT
IA No. 156589/2021 - INTERVENTION/IMPLEADMENT
IA No. 68074/2022 - INTERVENTION/IMPLEADMENT
IA No. 26899/2021 - INTERVENTION/IMPLEADMENT

IA No. 46823/2022 - INTERVENTION/IMPLEADMENT
IA No. 154731/2021 - INTERVENTION/IMPLEADMENT
IA No. 47760/2022 - INTERVENTION/IMPLEADMENT
IA No. 11770/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 31813/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 115436/2020 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 17469/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 3908/2022 - STAY APPLICATION)

Date : 30-05-2022 These matters were called on for hearing today.

CORAM :
HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MS. JUSTICE HIMA KOHLI

For Parties **Mr. Atmaram N.S. Nadkarni, ASG**
Mr. Rishi K. Awasthi, Adv.
Mr. Azmat Hayat Amanullah, AOR
Mr. Piyush Vatsa, Adv.
Mr. Prashant Kumar, Adv.
Mr. Tirupati Gaurav S., Adv.

Mr. Rajiv Shankar Dvivedi, AOR

Mr. Vanshdeep Dalmia, AOR
Suchakshu Jain, Adv.

Ms. Aishwarya Bhati, ASG
Mr. Rajeev K.Ranjan,Adv
Ms. Archana Pathak Dave,Adv
Mr. Bimal Roy Jad,Adv
Ms. Suhashini Sen, Adv.
Mr. Gurmeet Singh Makker, AOR

Mr. Arvind Kumar, Adv.
Mr. Aditya Singh, AOR
Mr. Shubham Singh, Adv.

Mr. Dharmendra Kumar Sinha, AOR

Ms. Savita Singh, AOR

Mr. Rohit Kumar Singh, AOR

Mr. Rajat Mittal, AOR

Mr. Siddhant Buxy, AOR

Mr. Pinaki Misra, Sr. Adv.
Mr. Pankaj Bhagat, AOR
Mr. Kripa Shankar Prasad, Adv.
Ms. Ritu Rajkumari, Adv.

Mr. Aakash Sirohi, AOR

Mr. Ansar Ahmad Chaudhary, AOR
Mr. Sumit Kumar Sharma, Adv.
Ms. Shehla Chaudhary, Adv.
Md. Anas Chaudhary, Adv.

Ms. Rita Jha, AOR
Ms. Nishtha Kumar, AOR

Mr. Ankit Kumar Lal, AOR

Mr. Anand Varma, AOR

Mr. Santosh Mishra, Adv.

UPON hearing the counsel the Court made the following

O R D E R

We have heard Mr. Atmaram N.S. Nadkarni, learned Additional Solicitor General appearing for the appellant(s), Mr. Vanshdeep Dalmia, learned counsel appearing on behalf of respondent(s) and Mr. Pinaki Mishra, learned senior counsel appearing for intervenor.

Taking into consideration the mining issues in the State of Bihar, we had issued certain directions vide order dated 10th November, 2021 setting down time lines as to within how much period the draft DSRs will be prepared by the sub-divisional committees as directed by us. We had also fixed a time line for the SEAC as well as SEIAA within which period they will consider the said DSRs.

The matter again came up before this Bench to consider various interlocutory applications. A detailed order again came to be

passed on 18th January, 2022. Vide another order dated 31st March, 2022, we had extended the interim order for a further period of eight weeks.

Now, it is a common ground that DSRs have been granted final approval by SEAC as well as SEIAA.

Though it is contended by Shri Dalmia and Shri Mishra that the said DSRs are not free from flaws, we do not find necessary to go into the said issues at this stage. The parties are always at liberty to take recourse to such remedies as are available in law.

However, now since the DSRs have been finalised in pursuance to our order dated 10th November, 2021, there should be no impediment for the State of Bihar to proceed further for inviting tenders or auction of sand blocks in accordance with the DSRs which have already been approved.

With these observations, we post the matter for further orders on 11th August, 2022.

(NEETA SAPRA)
COURT MASTER (SH)

(RANJANA SHAILEY)
COURT MASTER (NSH)

\\TRUE COPY//

ANNEXURE A-12

ITEM NO.62 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

IA 137877/2022,137884/2022, in Civil Appeal No(s). 3661-3662/2020

THE STATE OF BIHAR & ORS. Appellant(s)

VERSUS

PAWAN KUMAR & ORS. Respondent(s)

(IA No. 137884/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 137877/2022 - APPROPRIATE ORDERS/DIRECTIONS)

Date : 19-09-2022 These matters were called on for hearing today.

CORAM :
HON'BLE MR. JUSTICE B.R. GAVAI
HON'BLE MR. JUSTICE C.T. RAVIKUMAR

For Appellant(s) Mr. Atmaram N.S. Nadkarni, Sr. Adv.
Mr. Rishi K. Awasthi, Adv.
Mr. Prashant Kumar, Adv.
Ms. Ritu Arora,Adv.
Mr. Piyush Vatsa, Adv.
Mr. Azmat Hayat Amanullah, AOR

For Respondent(s) Mr. Vanshdeep Dalmia, AOR

Mr. Rajiv Shankar Dvivedi, AOR

Ms. Aishwarya Bhati, Ld. ASG
Mr. Anish Kumar Gupta, Adv.
Mr. Bimal Roy Jad, Adv.
Ms. Archana Pathak Dave, Adv.
Ms. Suhasini Sen, Adv.
Ms. Ruchi Kohli, Adv.
Mr. Gurmeet Singh Makker, AOR

Mr. Arvind Kumar, Adv.
Mr. Aditya Singh, AOR

Mr. Ansar Ahmad Chaudhary, AOR
Ms. Rita Jha, AOR
Ms. Nishtha Kumar, AOR
Mr. Ankit Kumar Lal, AOR
Mr. Anand Varma, AOR

Ms. Shweta Sand, Adv.
Mr. Dharmendra Kumar Sinha, AOR

Mr. Ajit Upadhaya, Adv.
Ms. Mamta Srivastava, Adv.

Ms. Savita Singh, AOR
Mr. Rohit Kumar Singh, AOR
Mr. Rajat Mittal, AOR
Mr. Siddhant Buxy, AOR

Mr. Pinaki Misra, Sr. Adv.
Mr. Pankaj Bhagat, AOR
Mr. Kripa Shankar Prasad, Adv.

Mr. Aakash Sirohi, AOR

UPON hearing the counsel the Court made the following

O R D E R

IA 137877/2022,137884/2022

Issue notice.

By way of ad interim order, there shall be stay of proceedings before the learned National Green Tribunal, Eastern Zone, Kolkata in O.A. No.130 of 2022, O.A. No.131 of 2022 and O.A. No.136 of 2022, in the meantime.

List the appeals for hearing on 01.11.2022.

(Geeta Ahuja)
Astt. Registrar-Cum-Ps

(Anju Kapoor)
Court Master

\\TRUE COPY//

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 1 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

ANNEXURE A-13

2023 SCC OnLine SC 504

In the Supreme Court of India

(BEFORE B.R. GAVAI, VIKRAM NATH AND SANJAY KAROL, JJ.)

I.A. Nos. 131377, 147102, 195467, 195468, 205092 of 2022
I.A. Nos. 162283 and 162284 of 2022
In
I.A. D. No. 125746 of 2022
With
I.A. Nos. 118604, 118606, 119400, 119401, 119404, 137132, 137138, 137140 And 137143 of 2022
I.A. Nos. 5764, 6804 and 10911 of 2023
In the Matter of:
Writ Petition (Civil) No. 202 of 1995

In Re : T.N. Godavarman Thirumulpad ... Petitioner (s);

Versus

Union of India and Others ... Respondent(s).

I.A. Nos. 131377, 147102, 195467, 195468, 205092 of 2022, I.A. Nos. 162283 and 162284 of 2022, I.A. D. No. 125746 of 2022, I.A. Nos. 118604, 118606, 119400, 119401, 119404, 137132, 137138, 137140 And 137143 of 2022, I.A. Nos. 5764, 6804 and 10911 of 2023 and Writ Petition (Civil) No. 202 of 1995

Decided on April 26, 2023

Advocates who appeared in this case:

Amicus Curiae Mr. A.D.N. Rao, Sr.Adv.
Mr. K. Parameshwar, Adv.
Mr. M.V. Mukunda, Adv.
Ms. Arti Gupta, Adv.
Ms. Kanti, Adv.
Counsel for parties Ms. Aishwarya Bhati, ASG
Ms. Suhasini Sen, Adv.
Ms. Shagun Thakur, Adv.
Ms. Manisha Chava, Adv.
Mr. K.M. Natraj, ASG
Mr. Sharath Nambiar, Adv.
Mr. Vatsal Joshi, Adv.
Mr. Vinayak Sharma, Adv.

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 2 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mr. Anuj S. Udupa, Adv.
Mr. Nakul Chengappa, Adv.
Mr. Chitransh Sharma, Adv.
Ms. Indira Bhakar, Adv.
Mr. Gurmeet Singh Makker, AOR
Mr. Shreekant Neelappa Terdal, AOR
Ms. Mrinal Elkar Mazumdar, Adv.
Mr. Mukesh Kr. Verma, Adv.
Mr. Neeraj Kr. Sharma, Adv.
Ms. Indira Bhakar, Adv.
Mr. Harish Pandey, Adv.
Dr. N. Visakamurthy, Adv.
Dr. Manish Singhvi, Sr. Adv.
Ms. Shubhangi Agarwal, Adv.
Mr. Milind Kumar, AOR
Mr. Jaideep Gupta, Sr.Adv.
Mr. Nishe Rajen Shonker, AOR
Mrs. Anu K Joy, Adv.
Mr. Alim Anvar, Adv.
Mr. Chanchal Kumar Ganguli, AOR
M/s. PLR Chambers And Co., AOR
Mr. Syed Mehdi Imam, AOR
Mr. T. Harish Kumar, AOR
M/s. Mitter & Mitter Co., AOR
M/s. Lawyer S Knit & Co, AOR
Mr. Raj Kishor Choudhary, AOR
Mr. Shuvodeep Roy, AOR
Mr. Sai Shashank, Adv.
Mr. Deepayan Dutta, Adv.
Mr. Gaichangpou Gangmei, AOR
Mr. Abhishek Chaudhary, AOR
Mr. S. R. Setia, AOR
Ms. Charu Mathur, AOR
Mr. A. Venayagam Balan, AOR
Mr. C. L. Sahu, AOR
Ms. Sumita Hazarika, AOR
Ms. Abha R. Sharma, AOR
Ms. Asha Gopalan Nair, AOR
Mr. E. M. S. Anam, AOR
Ms. K. V. Bharathi Upadhyaya, AOR

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 3 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mr. Rajiv Mehta, AOR
Mr. T. V. George, AOR
Mr. Krishnanand Pandeya, AOR
Mr. Neeraj Shekhar, AOR
Dr. Sumit Kumar, Adv.
Mr. Keshav Baheti, Adv.
Mr. Harsh Narwal, Adv.
Mr. Sudhir Kulshreshtha, AOR
Ms. Binu Tamta, AOR
Mr. B V Deepak, AOR
Mr. T. N. Singh, AOR
Mr. Punit Dutt Tyagi, AOR
Mr. Rathin Das, AOR
Mr. Ratan Kumar Choudhuri, AOR
Mr. G. Prakash, AOR
Mr. Rauf Rahim, AOR
Mrs. Rekha Pandey, AOR
Mr. Gopal Singh, AOR
Mr. Sudhir Kumar Gupta, AOR
Mr. A. N. Arora, AOR
Mr. Irshad Ahmad, AOR
Ms. C. K. Sucharita, AOR
Mrs. Anjani Aiyagari, AOR
Ms. Hemantika Wahi, AOR
Mr. Mohd. Irshad Hanif, AOR
Mr. Amar Kumar Raizada, Adv.
Ms. Ruby Mohd Wasim, Adv.
Ms. Mala Diwedi, Adv.
Ms. Pinky, Adv.
Mr. P. V. Yogeswaran, AOR
Mr. Jitendra Mohan Sharma, AOR
Ms. Malini Poduval, AOR
Mr. Jai Prakash Pandey, AOR
Mr. Ajit Pudussery, AOR
Mr. Pradeep Kumar Bakshi, AOR
Mr. K. L. Janjani, AOR
Mr. Naresh K. Sharma, AOR
Ms. A. Sumathi, AOR
Mr. Radha Shyam Jena, AOR
Mr. Ram Swarup Sharma, AOR

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 4 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mrs. Bina Gupta, AOR
Mrs. Rani Chhabra, AOR
Ms. Divya Roy, AOR
Mr. Tarun Johri, AOR
Mr. S. C. Birla, AOR
Mr. P. R. Ramasesh, AOR
Mr. Shibashish Misra, AOR
M/s. Parekh & Co., AOR
M/s. K J John And Co, AOR
Mr. Pratap Venugopal, Adv.
Ms. Surekha Raman, Adv.
Mr. Akhil Abraham Roy, Adv.
Mr. Abhishek Anand, Adv.
Mr. V. Balachandran, AOR
Ms. Baby Krishnan, AOR
Ms. Bina Madhavan, AOR
Mr. K. V. Vijayakumar, AOR
Mr. Umesh Bhagwat, AOR
Mrs. M. Qamaruddin, AOR
Mr. H. S. Parihar, AOR
Mr. Kuldip Singh, AOR
Mr. Ranjan Mukherjee, AOR
Mr. Ashok Mathur, AOR
Mr. P. N. Gupta, AOR
Mr. Sarad Kumar Singhania, AOR
Mr. E. C. Agrawala, AOR
Mr. S.. Udaya Kumar Sagar, AOR
Ms. Madhu Moolchandani, AOR
Mr. T. Mahipal, AOR
Mr. Rajat Joseph, AOR
Mr. Vijay Kari Singh, Adv.
Mr. Hrishikesh Chitaley, Adv.
Mr. Gopal Prasad, AOR
Ms. Jyoti Mendiratta, AOR
Mr. Raj Kumar Mehta, AOR
M/s. M. V. Kini & Associates, AOR
Mr. Rakesh K. Sharma, AOR
Ms. S. Janani, AOR
M/s. Arputham Aruna And Co, AOR
Mrs. Nandini Gore, AOR

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 5 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mr. Amit Anand Tiwari, AOR
Ms. Pratibha Jain, AOR
Mr. Tejaswi Kumar Pradhan, AOR
Mrs. Kanchan Kaur Dhodi, AOR
Mr. Surya Kant, AOR
Mr. E. C. Vidya Sagar, AOR
Ms. Sujata Kurdukar, AOR
Ms. Sharmila Upadhyay, AOR
Mr. Rajeev Singh, AOR
Mr. Prashant Kumar, AOR
Mr. Dharmendra Kumar Sinha, AOR
Mr. P. Parmeswaran, AOR
Mr. Shiva Pujan Singh, AOR
Mr. Rajesh Singh, AOR
Mrs. B. Sunita Rao, AOR
Mr. Kamal Mohan Gupta, AOR
Mr. Sudarsh Menon, AOR
Mr. Ramesh Babu M. R., AOR
Mr. Vikrant Singh Bais, AOR
Mr. Lakshmi Raman Singh, AOR
Mr. Himanshu Shekhar, AOR
Mr. Parth Shekhar, Adv.
Mr. Shubham Singh, Adv.
Ms. Monica Haseja, Adv.
Ms. Md Sontu Mia, Adv.
Ms. Purva, Adv.
Ms. Arun Kumar Jaiswal, Adv.
Mrs. Manik Karanjawala, AOR
Mr. M. C. Dhingra, AOR
Mr. Ejaz Maqbool, AOR
Mr. Rajesh, AOR
M/s. Corporate Law Group, AOR
Mr. M. Yogesh Kanna, AOR
Mr. Kaushik Choudhury, AOR
Dr. Manish Singhvi, Sr. Adv.
Mr. Sandeep Kumar Jha, AOR
Ms. Anzu. K. Varkey, AOR
Mr. Vivek Jain, AOR
Mr. Abhishek Atrey, AOR
Dr. Abhishek Atrey, Adv.

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 6 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Ms. Vidyottma Jha, Adv.
Mr. M. R. Shamshad, AOR
Mr. Ajay Marwah, AOR
Mr. Adhitya Srinivasan, Adv.
Mr. Tapan Masta, Adv.
Mr. Sanjay Shukla, Adv.
Mr. Siddharth Dharmadhikari, Adv.
Mr. Aaditya Aniruddha Pande, AOR
Mr. Bharat Bagla, Adv.
Ms. Shreya Saxena, Adv.
Ms. Yamini Singh, Adv.
Mr. Sourav Singh, Adv.
Mr. Naveen Kumar, AOR
Mr. Guntur Pramod Kumar, AOR
Ms. Mayuri Raghuvanshi, AOR
Mr. Sanjay Upadhyay, Adv.
Mr. Salik Shafique, Adv.
Mr. Kazi Sangay Thupden, Adv.
Ms. Eisha Krishna, Adv.
Ms. Mansi Bacheni, Adv.
M/s. V. Maheshwari & Co., AOR
M/s. Cyril Amarchand Mangaldas, AOR
Mr. Abhinav Mukerji, AOR
Ms. Ruchira Goel, AOR
Ms. Surbhi Mehta, AOR
Ms. Adarsh Nain, AOR
Mr. Kumar Anurag Singh, Adv.
Mr. Anando Mukherjee, AOR
Ms. Tulika Mukherjee, Adv.
Mr. Shwetank Singh, Adv.
Mr. Siddhartha Jha, AOR
Mr. A. Karthik, AOR
Ms. Seita Vaidyalingam, AOR
M/s. Venkat Palwai Law Associates, AOR
Mr. Vinod Sharma, AOR
Ms. Swati Ghildiyal, AOR
Ms. Devyani Bhatt, Adv.
Mr. Nishanth Patil, AOR
Mr. Chirag M. Shroff, AOR
Dr. Joseph Aristotle S., AOR

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 7 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mr. Nishit Agrawal, AOR
Ms. Vanshaja Shukla, AOR
Mr. Narendra Kumar, AOR
Mr. Raghvendra Kumar, Adv.
Mr. Anand Kumar Dubey, Adv.
Mr. S. Gowthaman, AOR
Mr. Sandeep Rana, Adv
Ms. Sabina Shahid, Adv.
Mr. Rajeev Kumar Dubey, Adv.
Mr. Kamlendra Mishra, AOR
Mr. Somesh Chandra Jha, AOR
Mr. Sunil Kumar Sharma, AOR
Mr. P. S. Sudheer, AOR
Mr. Sunny Choudhary, AOR
Mrs. Kirti Renu Mishra, AOR
Dr. Monika Gusain, AOR
Mr. P. K. Manohar, AOR
Ms. Archana Pathak Dave, Adv.
Ms. Deepanwita Priyanka, AOR
Mr. Shailesh Madiyal, AOR
Mr. Vaibhav Sabharwal, Adv.
Mr. Akshay Kumar, Adv.
Mr. Naveen Kumar, AOR
Mr. James P. Thomas, AOR
Mr. Saket Singh, Adv.
Mrs. Sangeeta Singh, Adv.
Mrs. Niranjana Singh, AOR
Mr. Dhaval Mehrotra, AOR
Mr. B. K. Pal, AOR
Ms. Shalini Kaul, AOR
Mr. Sarvam Ritam Khare, AOR
Mr. Gaurav Agrawal, AOR
Mr. Shubhranshu Padhi, AOR
Mr. Aravindh S., AOR
Ms. Uma Bhuvaneswari.c, Adv.
Mr. Abbas, Adv.
M/s. D.S.K. Legal, AOR
Ms. Purnima Krishna, AOR
Mrs. Pragya Baghel, AOR
Mrinal Gopal Elker, AOR

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 8 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Mr. Devvrat Singh, Adv.
Ms. Astha Sharma, AOR
Mr. Gopal Balwant Sathe, AOR
Mr. V. N. Raghupathy, AOR
Mr. Manendra Pal Gupta, Adv.
Mr. Amrish Kumar, AOR
Mr. M.K.S. Menon, Adv.
Ms. Usha Nandini V., Adv.
Mr. Biju P. Raman, Adv.
Mr. Ravi Lamod, Adv.
Mr. Arun Kumar Jaiswal, Adv.
Mr. Ravindra S. Garia, AOR
Mr. Shashank Singh, Adv.
Mr. Madan Chandra Karnatka, Adv.

The Judgment of the Court was delivered by

B.R. GAVAI, J.:—

I.A. NO. 131377 OF 2022:

1. The present I.A. is filed by the Union of India praying for modification/clarification of the order passed by this Court dated 3rd June 2022[1] in I.A. No. 1000 of 2003 in WP(C) No. 202 of 1995.

2. The applicant specifically seeks modification of the directions contained in paragraphs 56.1 and 56.5 of the order dated 3rd June 2022 (supra). The said paragraphs are reproduced hereinbelow:

> "56.1. Each protected forest, that is, national park or wildlife sanctuary must have an ESZ of minimum one kilometre measured from the demarcated boundary of such protected forest in which the activities proscribed and prescribed in the Guidelines of 9-2-2011 shall be strictly adhered to. For Jamua Ramgarh Wildlife Sanctuary, it shall be 500 m so far as subsisting activities are concerned.
>
> .....
>
> 56.5. In the event any activity is already being undertaken within the one kilometre or extended buffer zone (ESZ), as the case may be, of any wildlife sanctuary or national park which does not come within the ambit of prohibited activities as per the 9-2-2011 Guidelines, such activities may continue with permission of the Principal Chief Conservator of Forests of each State or Union Territory and the person responsible for such activities in such a situation shall obtain necessary permission within a period of six months. Such permission shall be given once the Principal Chief Conservator of Forests is satisfied that the activities concerned do not come within the prohibited list and were continuing prior to passing of this

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 9 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

order in a legitimate manner. No new permanent structure shall be permitted to come up for whatsoever purpose within the ESZ."

3. The clarification/modification of paragraph 56.1 of the order dated 3rd June 2022 (supra) is sought to the extent that the Eco-Sensitive Zones (for short, "ESZs") which have already been notified (final and draft) by the Ministry of Environment Forests and Climate Change (for short, "MoEF & CC") or the proposals for which have been received in the Ministry be exempted from the directions therein. The applicant also sought modification to the extent that paragraph 56.1 of the order dated 3rd June 2022 (supra) may not be made applicable where National Parks and Wildlife Sanctuaries are located along inter-State boundaries and/or common boundaries. Modification/clarification of the directions in paragraph 56.5 of the order dated 3rd June 2022 (supra) in its entirety is additionally sought.

4. We have heard Ms. Aishwarya Bhati, learned Additional Solicitor General (for short, "ASG") appearing on behalf of the applicant, Shri K. Parameshwar, learned *amicus curiae* as well as Senior Counsel appearing on behalf of various State Governments.

5. It is submitted that the Government of India has already issued Guidelines on 9th February 2011 (hereinafter referred to as the "said Guidelines") for declaration of ESZs around National Parks and Wildlife Sanctuaries. The said Guidelines were framed after consulting the National Board for Wildlife (hereinafter referred to as "NBWL"), and all the State and Union Territory Governments. The said Guidelines provide a detailed procedure for submitting a proposal for declaration of the areas around National Parks and Wildlife Sanctuaries as ESZs. It is further submitted that the said Guidelines itself contain various activities which have been categorized as prohibited, regulated and permitted.

6. It is further submitted that the direction as contained in paragraph 56.5 of the order dated 3rd June 2022 (supra) is likely to cause great hardship to the citizens residing in the ESZs. It is further submitted that the said directions provide that if any activity is already being undertaken within one kilometre or extended buffer zone (ESZ), and which does not come within the ambit of prohibited activities as per the said Guidelines, such activities may continue with the permission of the Principal Chief Conservator of Forests (for short, "PCCF") of each State or Union Territory and the person responsible for such activities in such a situation shall obtain necessary permission within a period of six months. The said Guidelines further provide that such permission shall be given once the PCCF is satisfied that the activities concerned do not come within the prohibited list and were

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 10 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

continuing prior to passing of this Court's order dated 3rd June 2022 (supra) in a legitimate manner. It is further submitted that the direction that no new permanent structure shall be permitted to come up for whatsoever purpose within the ESZs would also cause great hardship.

7. It is further submitted that insofar as the direction in paragraph 56.1 of the order dated 3rd June 2022 (supra) is concerned, it mandates that each protected forest, that is, National Park or Wildlife Sanctuary, must have an ESZ of minimum one kilometre measured from the demarcated boundary of such protected forest in which the activities proscribed and prescribed in the said Guidelines shall be strictly adhered to. Insofar as Jamua Ramgarh Wildlife Sanctuary is concerned, it is directed that the ESZ shall be 500 meters so far as subsisting activities are concerned.

8. The learned ASG, *amicus curiae* and Senior Counsel appearing on behalf of various States submitted that in respect of various National Parks and Wildlife Sanctuaries, already final notifications had been issued, prescribing the boundaries for the ESZs. In some cases, the draft notifications are pending and in some other cases, the proposals for issuance of draft and final notifications are pending with the Government of India.

9. It is submitted that there cannot be a uniform boundary for all the National Parks and Wildlife Sanctuaries. It is further submitted that there cannot also be a uniform boundary for a particular National Park or Wildlife Sanctuary. At times, it may be longer on one side and shorter on the other side depending on various circumstances.

10. It is submitted that the rights of the citizens who are residing in the Protected Areas are settled under the provisions of Sections 18 to 25A of the Wild Life (Protection) Act, 1972 (hereinafter referred to as “1972 Act”) whereas there is no settlement of rights of citizens residing in ESZs. The citizens therein continue to reside and are also continuing with their daily avocation like farming etc. It is submitted that various developmental activities like construction of schools, dispensaries, anganwadis, public health centres etc. are required to be undertaken in such areas. Not only that, but if the direction not to make any construction is continued, the persons residing therein would not be in a position to construct or reconstruct houses on their own land. It is submitted that the procedure prescribed for obtaining the permission of the PCCF is very tedious. If such a direction is issued, the PCCF would be left with no other work but to consider the applications for continuation of such activities.

11. It is further submitted that though this Court has observed in paragraph 54 of the order dated 3rd June 2022 (supra) that the said

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 11 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Guidelines are reasonable, it has nevertheless issued directions which are in conflict with the said Guidelines.

12. It is further contended that the issue in I.A. No. 1000 of 2003 was restricted to prohibition of mining activities in and around Jamua Ramgarh Wildlife Sanctuary and prescribing ESZs for the said Wildlife Sanctuary only. As such, various State Governments did not have an opportunity to address this Court.

13. Having considered the rival submissions, we find it appropriate to refer to various orders passed by this Court on the issue of ESZs/Buffer Zones.

14. The first of such orders was passed by this Court on 16th September 2005[2]. It will be relevant to refer to paragraph 13 of the said order, which reads thus:

> "13. We have perused the affidavit dated 14-9-2005 filed by Mr Anurag Bajpai on behalf of MoEF and the statement showing the grant of temporary working permit in the last two years i.e. from 1-1 -2003 to 31-12-2004 in the national parks, sanctuaries and forest area. This is despite the order passed by this Court restraining the mining activities in these areas. Learned amicus curiae submits that the inspection of the government record shows a dismal picture and he would shortly file an application for taking appropriate action against the persons concerned. Pending filing of the said application and further orders, we again reiterate that without compliance with the environmental laws, in particular the permission under the Forest (Conservation) Act, 1980, no temporary working permission or temporary permit or any other permission by whatever name called shall be granted for mining activities in the aforesaid areas. *We further direct that no mining activity would continue under any temporary working permit or permission which may have been granted. It appears from the chart filed with the affidavit of Mr Anurag Bajpai that no temporary working permission is in operation as of today. If it is otherwise, an affidavit to that effect shall be filed within two weeks giving the particulars of such permission.*"
>
> [emphasis supplied]

15. It can thus clearly be seen that this Court directed that no mining activity would be permitted to continue under any temporary working permit or permission which may have been granted.

16. It will further be relevant to refer paragraph 15 of the said order, which reads thus:

> "15. MoEF is directed to place on record within three weeks its viewpoint on the question of area of buffer zone and other related matters such as should it be universal or place specific. This should

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 12 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

be done after also obtaining the viewpoint of the National Board of Wildlife."

17. It can thus be seen from the said paragraph that this Court directed MoEF to place on record within three weeks its viewpoint on the question of area of buffer zone and other related matters such as should it be universal or place specific. The Court further directed that this should be done after obtaining the viewpoint of the NBWL.

18. The second of such orders is passed on 4th August 2006[3]. The said order basically pertains to banning the mining activities in the National Parks, Sanctuaries and forest areas. The Court laid down various pre-conditions wherein temporary working permits could be granted.

19. The next order is passed on 4th December 2006[4]. In the said order, the Court expressed its anguish towards the various State Governments for not responding to the letter issued by MoEF dated 27th May 2005 requiring them to initiate measures for identification of suitable areas and submit detailed proposals at the earliest. It will be relevant to refer to paragraphs 3 and 4 of the said order, which read thus:

"3. The order earlier passed on 30-1-2006 [*Goa Foundation* v. *Union of India*, (2011) 15 SCC 793] refers to the decision which was taken on 21-1-2002 to notify the areas within 10 km of the boundaries of national parks and sanctuaries as eco-sensitive areas. The Letter dated 27-5-2005 is a departure from the decision of 21-1-2002. For the present, in this case, we are not considering the correctness of this departure. That is being examined in another case separately. Be that as it may, it is evident that the States/Union Territories have not given the importance that is required to be given to most of the laws to protect environment made after Rio Declaration, 1992.

4. The Ministry is directed to give a final opportunity to all States/Union Territories to respond to its Letter dated 27-5-2005. The State of Goa also is permitted to give appropriate proposal in addition to what is said to have already been sent to the Central Government. The communication sent to the States/Union Territories shall make it clear that if the proposals are not sent even now within a period of four weeks of receipt of the communication from the Ministry, this Court may have to consider passing orders for implementation of the decision that was taken on 21-1-2002, namely, notification of the areas within 10 km of the boundaries of the sanctuaries and national parks as eco-sensitive areas with a view to conserve the forest, wildlife and environment, and having regard to the precautionary principles. If the States/Union Territories now

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 13 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

fail to respond, they would do so at their own risk and peril."

20. It can be seen that this Court refers to its earlier order dated 30th January 2006 wherein a reference is made to the decision dated 21st January 2002 to notify the areas within 10 kilometres of the boundaries of National Parks and Sanctuaries as ESZs. Though the order records that the letter dated 27th May 2005 is a departure from the decision taken on 21st January 2002, the Court observes that, in the said case, the Court was not considering the correctness of the said departure. The Court therefore directed the Ministry to give a final opportunity to all States/Union Territories to respond to its Letter dated 27th May 2005. The said order states that the communication should mention that if the proposals were not sent within a period of four weeks from the receipt of the communication from the Ministry, this Court may have to consider passing orders for implementation of the decision that was taken on 21st January 2002, i.e., notification of the areas within 10 kilometres of the boundaries of the sanctuaries and National Parks as ESZs.

21. The next order of this Court is dated 21st April 2014 in the case of *Goa Foundation* v. *Union of India*[5]. It will be relevant to refer to the following observations of this Court in the said order:

> "49. .....The result is that the order passed by this Court saying that there will be no mining activity within one kilometre safety zone around national park or wildlife sanctuary has to be enforced and there can be no mining activities within this area of one kilometre from the boundaries of national parks and wildlife sanctuaries in the State of Goa."

22. The Court has clarified that there shall be no mining activity within one kilometre of the safety zone around National Park or Wildlife Sanctuary and that this has to be enforced. It is also reiterated that there can be no mining activities within this area of one kilometre from the boundaries of National Parks and Wildlife Sanctuaries in the State of Goa.

23. The Court thereafter refers to the earlier order dated 4th December 2006 (supra) in the said case and observed thus:

> "50. .....It will be clear from the order dated 4-12-2006 [*Goa Foundation* v. *Union of India*, (2011) 15 SCC 791] of this Court that this Court has not passed any orders for implementation of the decision taken on 21-1-2002 to notify areas within 10 km of the boundaries of national parks or wildlife sanctuaries as eco-sensitive areas with a view to conserve the forest, wildlife and environment. By the order dated 4-12-2006 [*Goa Foundation* v. *Union of India*,

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 14 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

(2011) 15 SCC 791] of this Court, however, the Ministry of Environment and Forests, Government of India, was directed to give a final opportunity to all States/Union Territories to respond to the proposal and also to refer to the Standing Committee of the National Board for Wildlife the cases in which environment clearance has already been granted in respect of activities within the 10 km zone from the boundaries of the wildlife sanctuaries and national parks. There is, therefore, no direction, interim or final, of this Court prohibiting mining activities within 10 km of the boundaries of national parks or wildlife sanctuaries."

24. It could thus be seen that the Court has specifically observed that this Court had not passed any orders for implementation of the decision taken on 21st January 2002 to notify areas within 10 kilometres of the boundaries of National Parks or Wildlife Sanctuaries as ESZs with a view to conserve the forest, wildlife and environment. The Court therefore clarified that there is no direction, interim or final, prohibiting mining activities within 10 kilometres of the boundaries of National Parks or Wildlife Sanctuaries.

25. It will be relevant to refer to paragraphs 87.3 and 88.1 of the said order, which read thus:

"87.3. Until the order dated 4-8-2006 [*T.N. Godavarman Thirumulpad* v. *Union of India*, (2010) 13 SCC 740] of this Court is modified by this Court in IA No. 1000 in *T.N. Godavarman Thirumulpad* v. *Union of India*, there can be no mining activities within one kilometre from the boundaries of national parks and sanctuaries in Goa.

88.1. MoEF will issue the notification of eco-sensitive zones around the national park and wildlife sanctuaries of Goa after following the procedure discussed in this judgment within a period of six months from today."

26. It can thus be seen that this Court has held that until the order dated 4th August 2006 (supra) is modified by this Court in IA No. 1000 of 2003 in the case of *T.N. Godavarman Thirumulpad* v. *Union of India*, there can be no mining activities within one kilometre from the boundaries of National Parks and Sanctuaries in Goa. The Court further directed MoEF to issue the notification of ESZs around the National Park and Wildlife Sanctuaries of Goa after following the procedure discussed in the said judgment. The same was directed to be done within a period of six months from the date of the said order.

27. The next relevant order would be dated 11th December 2018. It will be relevant to refer to the following part of the said order:

"The learned ASG has informed us that there are 104 National Parks and 558 Wildlife Sanctuaries making a total of 662 National

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 15 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Parks and Wildlife Sanctuaries in the country.

The proposals for declaring areas around these National Parks and Wildlife Sanctuaries as Eco Sensitive Zone have been received from State Governments/UT Administrations for 641 National Parks and Wildlife Sanctuaries. No proposals have been received in respect of 21 National Parks and Wildlife Sanctuaries.

The proposals have been accepted and Notification has been issued in respect of 289 National Parks and Wildlife Sanctuaries as on 26.11.2018 and draft Notification has been prepared in respect of 206 National Parks and Wildlife Sanctuaries.

The declaration with regard to Eco Sensitive Zone is under process with the Ministry of Environment, Forests and Climate Change (MoEF) as well as with the State Governments in respect of 4146 National Parks and Wildlife Sanctuaries.

We expect the Ministry of Environment, Forests and Climate Change to actively pursue the preparation of the draft Notification and to issue a final Notification at the earliest.

The proposals for 21 National Parks and Wildlife Sanctuaries in respect of which proposals have not yet been received by the MOEF are as follows:—

.....

It is submitted by the learned Amicus that this issue has been pending since sometime in December, 2006. 12 years have gone-by but no effective steps have been taken by the State Governments in respect of the National Parks and Wildlife Sanctuaries mentioned above.

Under the circumstances, we direct that an area of 10 Kms around these 21 National Parks and Wildlife Sanctuaries be declared as Eco Sensitive Zone by the MoEF. The declaration be made by the MoEF at the earliest.

Liberty is granted to the State Governments to move an application for modification of this order along with proposal only two weeks after submission of the proposals to the MoEF."

28. It can be seen that this Court has recorded the submissions of the learned ASG that there were 104 National Parks and 558 Wildlife Sanctuaries making a total of 662 National Parks and Wildlife Sanctuaries in the country. It was further recorded that the proposals for declaring areas around these National Parks and Wildlife Sanctuaries as ESZs had been received from the State Governments/Union Territories. It can further be seen that no proposals have been received in respect of 21 National Parks and Wildlife Sanctuaries. It further recorded that the proposals had been accepted and notification had been issued in respect of 289 National Parks and Wildlife Sanctuaries as

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 16 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

on 26th November 2018 and draft notification had been prepared in respect of 206 National Parks and Wildlife Sanctuaries. The Court therefore expected the MoEF & CC to actively pursue the preparation of the draft Notification and to issue a final Notification at the earliest. The Court then recorded 21 National Parks and Wildlife Sanctuaries in respect of which proposals have not yet been received by the MoEF & CC alongside its anguish that though 12 years had been passed, no effective steps have been taken by the State Governments in respect of the National Parks and Wildlife Sanctuaries named in the said order. Therefore, the Court directed that an area of 10 kilometres around these 21 National Parks and Wildlife Sanctuaries be declared as ESZs by the MoEF & CC. Liberty was granted to the State Governments to move an application for modification of the said order. However, it further directed that the application should be along with the proposal for declaration of ESZs.

29. It is to be noted that the learned Judges of this Court, in the case of *Goa Foundation*[6], had directed that the MoEF & CC shall follow the procedure and issue notification of ESZs under Rule 5 of the Environment (Protection) Rules, 1986 (hereinafter referred to as "1986 Rules"). The relevant provisions of the 1986 Rules are reproduced hereinbelow:

> "5. Prohibition and restriction on the location of industries and the carrying on of processes and operations in different areas.—(1) The Central Government may take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas:
>
> (*i*) Standards for quality of environment in its various aspects laid down for an area.
>
> (*ii*) The maximum allowable limits of concentration of various environmental pollutants (including noise) for an area.
>
> (*iii*) The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted.
>
> (*iv*) The topographic and climatic features of an area.
>
> (*v.*) The biological diversity of the area which, in the opinion of the Central Government needs to be preserved.
>
> (*vi*) Environmentally compatible land use.
>
> (*vii*) Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted.
>
> (*viii*) Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 or a sanctuary,

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 17 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

National Park, game reserve or closed area notified as such under the Wild Life (Protection) Act, 1972 or places protected under any treaty, agreement or convention with any other country or countries or in pursuance of any decision made in any international conference, association or other body.

(*ix*) Proximity to human settlements.

(*x*) Any other factor as may be considered by the Central Government to be relevant to the protection of the environment in an area.

(2) While prohibiting or restricting the location of industries and carrying on of processes and operations in an area, the Central Government shall follow the procedure hereinafter laid down.

(3) (*a*) Whenever it appears to the Central Government that it is expedient to impose prohibition or restrictions on the location of an industry or the carrying on of processes and operations in an area, it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

(*b*) Every notification under clause (*a*) shall give a brief description of the area, the industries, operations, processes in that area about which such notification pertains and also specify the reasons for the imposition of prohibition or restrictions on the location of the industries and carrying on of processes or operations in that area. (*c*) Any person interested in filing an objection against the imposition of prohibition or restrictions on carrying on of processes or operations as notified under clause (*a*) may do so in writing to the Central Government within sixty days from the date of publication in the notification in the Official Gazette.

(*d*) The Central Government shall within a period of one hundred and twenty days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may [within [seven hundred and twenty-five days [, and in respect of the States of Assam, Meghalaya, Arunachal Pradesh, Mizoram, Manipur, Nagaland, Tripura, Sikkim and Jammu and Kashmir in exceptional circumstance and for sufficient reasons within a further period of one hundred and eighty days,]] from such date of publication] impose prohibition or restrictions on location of such industries and the carrying on of any process or operation in an area:

[Provided that on account of COVID-19 pandemic, for the purpose of this clause, the period of validity of the notification expiring in the financial year 2020-2021 and 2021-2022 shall be extended up to

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 18 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

[30th June, 2022] or six months from the end of the month when the relevant notification would have expired without any extension, whichever is later.]

[(4) Notwithstanding anything contained in sub-rule (3), whenever it appears to the Central Government that it is in public interest to do so, it may dispense with the requirement of notice under clause (*a*) of sub-rule (3).]"

30. It is to be noted that Rule 5 of the 1986 Rules prescribes a detailed procedure for issuing notification prohibiting or restricting various activities in the specified areas. The said power flows from Sections 3(v) of the Environment (Protection) Act, 1986 (hereinafter referred to as "1986 Act").

31. A perusal of clause (viii) of sub-rule (1) of Rule 5 of the 1986 Rules would reveal that one of the factors that has to be taken into consideration for declaring ESZ is the proximity to a sanctuary, National Park, game reserve or closed area notified, as such under the 1972 Act. Sub-rule 3(a) of Rule 5 of the 1986 Rules requires that whenever it appears to the Central Government that it is expedient to impose prohibition or restrictions, it is required to give notice of its intention to do so by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time. As per sub-rule 3(b) of Rule 5, every such notification is required to give a brief description of the area, the industries, operations processes in that area about which such notification pertains and also specify the reasons for the imposition of prohibition or restrictions on the location of the industries on carrying out of the processes or operations in that area. Accordingly, as per sub-rule 3(c) of Rule 5, any person interested in filing an objection is entitled to file an objection to the Central Government within sixty days from the date of publication in the notification in the Official Gazette. The Central Government thereafter within the prescribed period provided under clause (d) of sub-rule (3) of Rule 5 of the 1986 Rules is required to issue a notification in the Official Gazette imposing such prohibition or restrictions in an area. This is required to be done only after considering all the objections received under clause (c) of sub-rule (3) of Rule 5 of the 1986 Rules. It can thus be seen that a detailed procedure is prescribed under the 1986 Rules for notifying ESZs.

32. It is to be noted that MoEF & CC has issued the said Guidelines for declaration of ESZs around the National Parks and Wildlife Sanctuaries.

33. The said Guidelines refer to a meeting of the Indian Board for Wildlife held on 21st January 2002, in which "Wildlife Conservation Strategy-2002" was adopted. Point No. 9 of the said Strategy

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 19 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

envisaged that lands falling within 10 kilometres of the boundaries of National Parks and Sanctuaries should be notified as eco-fragile zones under Section 3(v) of the 1972 Act and clause (viii) of sub-rule (1) of Rule 5 of the 1986 Rules. It further states that when the views were obtained from all the State Governments, some of the State Governments had raised concern over applicability of 10 kilometres range from the Protected Area boundary and informed that most of the human habitation and other areas including important cities in these States would come under the purview of ESZs and will adversely affect the development. The said Guidelines also refer to the National Wildlife Action Plan (2002-2016). The NBWL, in its meeting held on 17th March 2005, decided that the delineation of ESZs would have to be site specific and relate to regulation rather than prohibition of specific activities. The said decision was communicated to all the State Governments for compliance vide letter dated 27th May 2005.

34. The said Guidelines thereafter refer to the directions of this Court dated 4th December 2006. It also refers to the statutory provisions as contained in Section 5C (1) of the 1972 Act, Section 3 of the 1986 Act and Rule 5 of the 1986 Rules. The said Guidelines state that the purpose of declaring ESZs around National Parks and Sanctuaries is to create some kind of Shock Absorber for the Protected Areas. They would also act as a transition zone from areas of high protection to areas involving lesser protection. It also reiterates the decision of the NBWL that the activities in the ESZs would be of a regulatory nature rather than prohibitive nature unless and otherwise so required. Paragraph 4 of the said Guidelines notes that many of the existing Protected Areas have already undergone tremendous development in close vicinity to their boundaries. It refers to the Guindy National Park, Tamil Nadu, Sanjay Gandhi National Park, Maharashtra, etc. and notes that the Protected Areas are lying in the urban set up. It therefore observes that defining the extent of ESZs around Protected Areas will have to be kept flexible and Protected Area specific. It notes that the width of ESZs and type of regulations will differ from one Protected Area to another Protected Area. It however notes that, as a general principle, the width of the ESZs could go up to 10 kilometres around a Protected Area as provided in the Wildlife Conservation Strategy-2002. It further notes that in case where sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, are even beyond 10 kilometres width, these should be included in the ESZs. It further notes that even in context of a particular Protected Area, the distribution of an area of the ESZ and the extent of regulation may not be uniform all around and it could be of variable width and extent. The said Guidelines notes that though the directions were issued by this Court to all the

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 20 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

States/Union Territories, except a few States, several other States/Union Territories have not come forward with the proposals for declaration of ESZs. It was observed that this could be perhaps for want of guidelines in this regard. It further notes that this Court in its judgment and order dated 3rd December 2010 in a case relating to construction of park at Noida near Okhla Bird Sanctuary, observed that the ESZs around the Protected Areas had not been notified as the Government of India had not issued any guidelines in this regard.

35. It thereafter refers to the Committee under the Chairmanship of Shri Pronab Sen for identifying parameters for designating Ecologically Sensitive Areas in India.

36. The said Guidelines thereafter state in paragraph 6 that the basic aim of notifying ESZs is to regulate certain activities around National Park and Wildlife Sanctuary so as to minimize the negative impact of such activities on the fragile ecosystem encompassing the Protected Area. It states that the first step towards it is to prepare an inventory of the different land use patterns and the different types of activities, types and number of industries operating around each of the Protected Area as well as important Corridors. It states that the inventory could be done by the concerned Range Officers, who can take a stock of activities within 10 kilometres of the range. It further notes that a Committee comprising of the concerned Wildlife Warden, an Ecologist, an official from the Local Self Government and an official of the Revenue Department of the concerned area, could be formed to suggest the following:

(i) Extent of eco-sensitive zones for the Protected Area being considered.

(ii) The requirement of such a zone to act as a shock absorber

(iii) To suggest the best methods for management of the eco-sensitive zones, so suggested.

(iv) To suggest broad based thematic activities to be included in the Master Plan for the region.

37. It further notes that based on the above, the Chief Wildlife Warden could group the activities under the following categories:—

(i) Prohibited

(ii) Restricted with safeguards.

(iii) Permissible

38. The said Guidelines thereafter note that once the proposal for ESZs has been finalized, the same should be forwarded to the MoEF & CC for further processing and notification. An indicative list of details that need to be submitted along with the proposals is also appended to the said Guidelines.

39. The said Guidelines further note that where the boundary of a

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 21 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

Protected Area abuts the boundary of another State/Union Territory where it does not form part of any Protected Area, it should be the endeavour of both the State/Union Territory Governments to have a mutual consultation and decide upon the width of the ESZs around the Protected Area in question. The said Guidelines emphasize that the State Government should endeavour to convey a very strong message to the public that ESZs are not meant to hamper their day to day activities, but instead, are meant to protect the precious forests/Protected Areas in their locality from any negative impact, and also to refine the environment around the Protected Areas. It further notes that these guidelines are indicative in nature and the State/Union Territory Governments may use these as basic framework to develop specific guidelines applicable in the context of their National Parks, Wildlife Sanctuaries, important corridors etc. with a view to minimizing and preferably eliminating any negative impact on Protected Areas.

40. A list of the activities which are prohibited, regulated and permitted is contained in Annexure-I of the said Guidelines, which reads thus:

Sl. No.	Activity	Prohibited	Regulated	Permitted	Remarks
1.	Commercial mining	Y			Regulation sill not prohibit the digging of earth for construction or repair of houses for manufacture of country tiles or bricks for housing for personal
2.	Felling of trees		Y		With permission from appropriate authority
3.	Setting of saw mills	Y			
4.	Setting of industries causing pollution	Y			

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 22 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

	(Water, Air, Soil., Noise, etc.)				
5.	Establishment of hotels and resorts		Y		As per approved master plan, which takes care of habitats allowing no restriction on movement of wild animals
6.	Commercial use of firewood	Y			For hotels and other business related establishment
7.	Drastic change of agriculture systems		Y		
8.	Commercial use of natural water resources including ground water harvesting		Y		As per approved master plan, which takes care of habitats allowing no restriction on movement of wild animals.
9.	Establishment of major hydroelectric projects	Y			
10.	Erection of electrical cable		Y		Promote underground cabling
11.	Ongoing agriculture and horticulture			Y	However, excessive expansion of some of these

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 23 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

	practices local communities				activities should be regulated as per the master plan
12.	Rain Water harvesting			Y	Should be actively promoted
13.	Fencing of premises of hotels and lodges		Y		
14.	Organic farming			Y	Should be actively promoted
15.	Use of polythene bags by shopkeepers		Y		
16.	Use of renewable energy sources			Y	Should be actively promoted
17.	Widening of roads		Y		This should be done with proper EIA and mitigation measures
18.	Movement of vehicular traffic at night		Y		For commercial purpose
19.	Introduction of exotic species		Y		
20.	Use of production of any hazardous substances	Y			
21.	Undertaking activities				

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 24 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

	related to tourism like over-flying the National Park are by any aircraft, hot-air balloons				
22.	Protection of hill slopes and river banks		Y		As per the master plan
23.	Discharge of effluents and solid waste in natural water bodies or terrestrial are	Y			
24.	Air and vehicular pollution		Y		
25.	Sign board & hoardings		Y		As per the master plan
26.	Adoption of green technology for all activities			Y	Should be actively promoted.

41. It is to be noted that this Court in paragraph 54 of the order dated 3rd June 2022 (supra) has, in fact, held the said Guidelines to be reasonable and also accepted the view of the Standing Committee of the NBWL that uniform guidelines may not be possible in respect of each sanctuary or National Park for maintaining the ESZs. It is also observed that the sanctuaries like Sanjay Gandhi National Park and Guindy National Park in Mumbai shall form special cases. The said paragraph 54 is reproduced hereinunder:

> "54. In our opinion, the Guidelines framed on 9-2-2011 appear to be reasonable and we accept the view of the Standing Committee that uniform guidelines may not be possible in respect of each sanctuary or national park for maintaining ESZ. We are of the opinion, however, that a minimum width of 1 km ESZ ought to be

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 25 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

maintained in respect of the protected forests, which forms part of the recommendations of CEC in relation to Category B protected forests. This would be the standard formula, subject to changes in special circumstances. We have considered CEC's recommendation that the ESZ should be relatable to the area covered by a protected forest but the Standing Committee's view that the area of a protected forest may not always be a reasonable criteria also merits consideration. It was argued before us that the 1 km wide "no-development-zone" may not be feasible in all cases and specific instances were given for Sanjay Gandhi National Park and Guindy National Park in Mumbai and Chennai metropolis respectively which have urban activities in very close proximity. These sanctuaries shall form special cases."

42. It is to be noted that an elaborate and exhaustive list has been prepared by MoEF & CC of the activities which shall be prohibited, the activities which shall be regulated and the activities which shall be permitted.

43. In the application, it is stated that after the proposals are received from the State Governments/Union Territory Administrations, they are scrutinized in consultation with the Wildlife Institute of India, Dehradun, and in case of tiger reserves, with the National Tiger Conservation Authority. They are thereafter published in the Official Gazette of the Central Government in both Hindi and English. They are also placed in the public domain for 60 days for seeking comments of concerned stakeholders. The comments so received are compiled and scrutinized and observation of the concerned State Government/Union Territory Administration is sought on the same. The aforesaid requirements are in tune with the provisions of Rule 5 of 1986 Rules.

44. The application further states that the proposal is thereafter placed before an Expert Committee constituted for ESZ within the MoEF & CC. The said Committee comprises of the following:

(i) Indian Institute of Remote Sensing/Indian Space Research Organization,

(ii) Ministry of Jal Shakti,

(iii) Ministry of Rural Development,

(iv) Forest Survey of India,

(v) Town & Country Planning Organization, Government of India,

(vi) National Tiger Conservation Authority,

(vii) Wildlife Institute of India,

(viii) GB Pant Institute of Himalayan Environment & Development,

(ix) Indian Council of Forestry Research and Education,

(x) World Wildlife Fund,

(xi) Zoological Survey of India,

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 26 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

(xii) Botanical Survey of India,

(xiii) Salim Ali Centre for Ornithology and Natural History (SACON).

45. It is further stated in the application that based on the recommendation of the Expert Committee (ESZ), the Ministry finalizes the notification of ESZs and after due legal vetting by the Ministry of Law & Justice, final notifications specifying the ESZs around the Protected Areas are notified. It could thus be seen that an elaborate procedure including consideration by a Committee of Experts coming from 13 organizations having expertise in wildlife ecology, forest etc. is followed before a final notification prescribing ESZs is notified.

46. In the application filed by the Union of India, various illustrations have been given to point out as to how if the directions issued in paragraph 56.5 of the order dated 3rd June 2022 (supra) are not modified, a severe hardship would be caused to the millions of people. We refer to the same hereunder:

(i) "The ESZ around Nagarjunasagar Srisailam Tiger Reserve in Andhra Pradesh extends from 0 to 26 kilometres and 100 villages are situated within it (*Zero extent of ESZ is due to Krishna River and interstate boundary with Telangana*);

(ii) The ESZ around Valmiki Wildlife Sanctuary, Valmiki National Park and Valmiki Tiger Reserve in Bihar extends from 0 to 9 kilometres and 323 villages are situated within it (*zero extent of ESZ is towards Western side sharing inter-state boundaries with Uttar Pradesh and towards Northern side sharing international boundary with Nepal);*

(iii) The ESZ around Betla National Park, Palamau Wildlife Sanctuary, and Mahuadanr Wolf Sanctuary in Jharkhand extends from 0 to 9 kilometres and 382 villages are situated within it (*Zero extent of ESZ is due to Inter-State boundary);*

(iv) The ESZ around Cauvery Wildlife Sanctuary in Karnataka extends from 1 to 14.5 kilometres and 107 villages are situated within it;

(v) The ESZ around Kanha National Park and Phen Wildlife Sanctuary in Madhya Pradesh extends from 0 to 30 kilometres and 168 villages are situated within it (*Zero extent of Eco-sensitive Zone is towards the eastern side having interstate boundary with Chhattisgarh);*

(vi) The ESZ around Tadoba-Andhari Tiger Reserve in Maharashtra extends from 3 to 6 kilometres and 150 villages are situated within it;

(vii) The ESZ around Jaisamand Wildlife Sanctuary in Rajasthan extends from 1.6 to 8.9 kilometres and 83 villages are situated in it;

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 27 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

(viii) Even a small ESZ such as the one around Keoladeo National Park in Rajasthan which extends from 0.5 to 1.5 kilometres has 22 villages situated in it."

47. It would thus reveal that in the ESZ around Nagarjunasagar Srisailam Tiger Reserve in Andhra Pradesh, 100 villages are situated within it. In the ESZ around Valmiki Wildlife Sanctuary, Valmiki National Park and Valmiki Tiger Reserve in Bihar, 323 villages are situated within it. In the ESZ around Betla National Park, Palamau Wildlife Sanctuary, and Mahuadanr Wolf Sanctuary in Jharkhand, 382 villages are situated within it. In the ESZ around Cauvery Wildlife Sanctuary in Karnataka, 107 villages are situated within it. In the ESZ around Kanha National Park and Phen Wildlife Sanctuary in Madhya Pradesh, 168 villages are situated within it. In the ESZ around Tadoba-Andhari Tiger Reserve in Maharashtra, 150 villages are situated within it. In the ESZ around Jaisamand Wildlife Sanctuary in Rajasthan, 83 villages are situated in it. Even in a small ESZ around Keoladeo National Park in Rajasthan, 22 villages situated in it.

48. If the direction as issued by this Court in paragraph 56.5 of the order dated 3rd June 2022 (supra) is continued, then no permanent structure would be permitted to come up for whatsoever purpose in the aforesaid ESZs. As already pointed out from the aforesaid examples, hundreds of villages are situated within the ESZs in the country. If no permanent construction is to be permitted for any purpose, a villager who is desirous to reconstruct his house would not be permitted. Similarly, if there is an extension in their family and some additional construction is required for accommodating the enlarged family, the same would also not be permitted. Similarly, if the Government decides to construct schools, dispensaries, anganwadis, village stores, water tanks and other basic structures for improvement of the life of the villagers, the same would also not be permitted. The effect of the order will be to prevent the State or the Central Government from constructing roads and provide other facilities to the villagers.

49. If the order dated 3rd June 2022 (supra) is not modified, it will also be impossible for the Forest Departments to conduct eco-development activities around National Parks and Sanctuaries. The said activities are required with the dual objectives of protection of wildlife and provision of benefits for the local communities. MoEF & CC provides financial assistance to the States under the Centrally Sponsored Scheme-Integrated Development of Wildlife Habitats, which includes assistance for eco-development activities. These activities often involve construction of small structures which are permanent in nature in areas including ESZs. For example, the said activities which are likely to be prohibited are thus:

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 28 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

(i) The construction of community halls, bridges, threshing floors, fish-drying platforms, drinking water storage, etc., for the benefit of local communities/villages;

(ii) The construction of forest chowkies, watch towers, and other structures for protection of wildlife and forests;

(iii) The construction of interpretation centres, toilets and other basic structures for the environmental education of visitors to National Parks and sanctuaries.

50. It is further to be noted that there are various regulated and permissible activities. There are also certain projects of national and strategic importance such as construction of National Highways, Railways, Defence related infrastructure etc. The effect of the direction in 56.5 of the order dated 3rd June 2022 (supra) is that all such activities will be permanently prohibited. In this respect, it is to be noted that MoEF & CC has issued an Office Memorandum dated 17th May 2022 which required that any activity listed in Schedule of the EIA Notification 2006, when conducted in a notified ESZs, or in the case of *National Parks and Sanctuaries* for which no ESZ has been finally notified, when conducted within 10 kilometres of such National Park or Sanctuary, requires the consideration and recommendation of the NBWL or its Standing Committee in addition to the Environment Clearance under the 1986 Act. Additionally, activities which are regulated as per the specific ESZ notification, require approval as per that notification. As such, we find that there are inbuilt safeguards for preventing rampant construction and abuse of process which may be detrimental to the development and maintenance of wildlife habitats. It is further to be noted that if the direction as contained in paragraph 56.5 of the order dated 3rd June 2022 (supra) that even for continuation of existing activities, the permission of the PCCF of each State or Union Territory would be necessary, remains unmodified, taking into consideration that in each State or Union Territory there will be hundreds of villages wherein millions of people would be residing, the PCCF would be left with no other job except to consider such applications for permission to continue such activities. Even a farmer desirous to continue farming activities would be required to seek such permission. We find that such a direction is impossible to be implemented.

51. We are of the view that if such a direction is continued, rather than avoiding man-animal conflict, it will intensify the same. As observed in the said Guidelines, the requirement of declaring ESZs is not to hamper day to day activities of the citizens but is meant to protect the precious forests/Protected Areas from any negative impact, and to refine the environment around the Protected Areas.

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 29 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

52. As already discussed hereinabove, the necessity to have ESZs is to provide a buffer zone around the Protected Areas. The rights of the villagers residing in the Protected Areas are required to be settled in accordance with the provisions contained in the 1972 Act and such villagers are rehabilitated outside the Protected Areas. However, no such settlement of rights is available to the villagers residing in the ESZs areas. As stated in the said Guidelines, the purpose of declaring ESZs is not to hamper the day to day activities of the citizens. If the direction as issued is continued, it would certainly hamper the day to day activities of the citizens residing in ESZs. As such, we find that the said direction needs to be modified.

53. It is further to be noted that the NBWL, in its meeting dated 17th March 2005, has also recommended that the delineation of ESZs should project as regulation rather than prohibition of activities.

54. As was pointed out by the counsel for one of the States, the entire municipal area of the Sulthan Bathery Block Panchayat is situated within the ESZ area.

55. Insofar as direction in paragraph 56.1 of the order dated 3rd June 2022 (supra) is concerned, a perusal of various orders would reveal that this Court has not directed any minimum area from the demarcated boundary of such Protected Areas. The area to be declared as ESZ cannot be uniform and will be Protected Area specific. In some cases, it may be 10 kilometres on one side and 500 meters on the other side. In certain cases, it may not be possible to have a uniform minimum area by virtue of inter-state boundaries or a sea or a river beyond one side of the Protected Area. In any case, a detailed procedure is required to be followed as prescribed under Rule 5 of the 1986 Rules which we have already referred hereinabove. We find that once such a notification is issued after following the procedure prescribed under the 1986 Rules, the ESZs will have to be as per the said notification.

56. It is further to be noted that, as required under sub-rule (3) of Rule 5 of the 1986 Rules, before any final notification is issued, a draft notification is required to be published in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time. Any person interested in filing any objection to such a draft notification is entitled to file objection within a period of 60 days from the date of publication of the draft notification in the Official Gazette. We find that the Central Government can be directed to give a wide publicity to the draft notification so that all persons interested have knowledge about issuance of such draft notification.

57. It is pertinent to note that after following the aforesaid procedure, the matter is placed before the Expert Committee consisting

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 30 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

of 13 organizations having expertise in the relative field. As such, before an ESZ area is specified, various factors are taken into consideration. There are various factors which will determine the ESZs for a particular Protected Area. The circumstances may differ from one Protected Area to another Protected Area. As such, we find that the direction which prescribes a uniform one kilometre ESZ requires to be modified.

58. It is further to be noted that on the date of filing of the present application, final notifications have been issued in respect of 474 Protected Areas whereas draft notifications have been issued in respect of 102 Protected Areas. 73 proposals are pending. As already discussed hereinabove, this Court has already found the said Guidelines to be reasonable and has accepted the same. The Court has also accepted the view of the Standing Committee of the NBWL that uniform guidelines may not be possible in respect of each Sanctuary or National Park for maintaining ESZs. Though the Court has observed that a minimum width of one kilometre in ESZ ought to be maintained, in paragraph 56.6 of the order dated 3rd June 2022 (supra) itself, it has observed that minimum width of the ESZ may be diluted in overwhelming public interest but for that purpose the State or Union Territory concerned is required to approach Central Empowered Committee (CEC) and MoEF & CC. It has further observed that both these bodies shall give their respective recommendations before this Court and on that basis, the Court should pass appropriate order.

59. As already discussed hereinabove, the ESZs are required to be notified after following the procedure as prescribed under the 1986 Rules and the said Guidelines. Such notifications cannot be issued unless a close scrutiny at various levels including the scrutiny by Expert Committee consisting of experts from 13 organizations. As such, we find that the direction as contained in paragraph 56.6 of the order dated 3rd June 2022 (supra) also needs to be modified.

60. Insofar as the restriction on mining is concerned, we are of the considered view that it has been the consistent view of this Court that the mining activities within an area of one kilometre of the boundary of the Protected Areas will be hazardous for the wildlife. Though in the case of *Goa Foundation* (supra), the said directions were issued in respect of State of Goa, we find that such directions need to be issued on Pan-India basis.

61. We are therefore inclined to allow the present I.A. The direction in paragraph 56.1 of the order dated 3rd June 2022 (supra) is modified and clarified that the directions contained therein would not be applicable to the ESZs in respect of which a draft and final notification has been issued by the MoEF & CC and in respect of the proposals

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 31 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

which have been received by the Ministry.

62. We, however, direct the Central Government that wide publicity should be given to the draft notification which is required to be published under the provisions of clause (a) of sub-rule (3) of Rule 5 of the 1986 Rules. We further direct that the final notification to be published under clause (d) of sub-rule (3) of Rule 5 of the 1986 Rules shall not be given effect for a period of 30 days from the date of issuance thereof.

63. It is further directed that any person who is aggrieved with such a final notification would be entitled to approach this Court directly by filing an application in the present proceedings.

64. We further clarify that the direction contained in paragraph 56.1 of the order dated 3rd June 2022 (supra) would not be applicable where the National Parks and Sanctuaries are located on inter-State borders and/or share common boundaries.

65. We also modify the direction contained in paragraph 56.4 of the order dated 3rd June 2022 (supra) and direct that mining within the National Park and Wildlife Sanctuary and within an area of one kilometre from the boundary of such National Park and Wildlife Sanctuary shall not be permissible.

66. We also modify the directions contained in paragraph 56.5 of the order dated 3rd June 2022 (supra) and replace the same as under:

(i) The MoEF & CC and all the State/Union Territory Governments shall strictly follow the provisions in the said Guidelines dated 9th February 2011 and so also the provisions contained in the ESZs notifications pertaining to the respective Protected Areas with regard to prohibited activities, regulated activities and permissible activities;

(ii) We further direct that while granting Environmental and Forest Clearances for project activities in ESZ and other areas outside the Protected Areas, the Union of India as well as various State/Union Territory Governments shall strictly follow the provisions contained in the Office Memorandum dated 17th May 2022 issued by MoEF & CC.

67. All the other present I.As shall stand disposed of in terms of the above. No costs.

———

[1] (2022) 10 SCC 544

[2] (2006) 5 SCC 25

[3] (2010) 13 SCC 740

SCC Online Web Edition, © 2025 EBC Publishing Pvt. Ltd.
Page 32 Thursday, April 24, 2025
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2025 EBC Publishing Pvt. Ltd., Lucknow.

[4] (2011) 15 SCC 791

[5] (2014) 6 SCC 590

[6] (2014) 6 SCC 590

Disclaimer: While every effort is made to avoid any mistake or omission, this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification is being circulated on the condition and understanding that the publisher would not be liable in any manner by reason of any mistake or omission or for any action taken or omitted to be taken or advice rendered or accepted on the basis of this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification. All disputes will be subject exclusively to jurisdiction of courts, tribunals and forums at Lucknow only. The authenticity of this text must be verified from the original source.

\\TRUE COPY//

ANNEXURE A-14

STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), BIHAR

2nd Floor, BELTRON Bhawan, Shastri Nagar, Patna – 800023.

Ref. No. - 243. Patna Dated: - 09/08/2023.

MINUTES OF 23rd MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE (SEAC), BIHAR CONSTITUTED ON 12.08.2021

VENUE: SEIAA Office

DATE: 05th August 2023

Minutes/Proceeding of the Meeting

1. **Opening Remarks of the Chairman:** The Chairman and Members extended a warm welcome to each other and participants of the meeting. Thereafter, the meeting was opened for the proceedings as per the agenda adopted for the meeting.

2. **Confirmation of Minutes of 22nd Meeting (22/2023)** vide Ref. No. - 236, dated 02.08.2023 **of State Expert Appraisal Committee held on** 22nd July, 2023. The State Expert Appraisal Committee, hereinafter referred to as SEAC, was informed that no representation has been received regarding projects considered in the meeting held on 22nd July, 2023. The minutes of the meeting of the said SEAC was confirmed by the Committee.

3. **Consideration of Proposals**: The SEAC considered the proposals received as per the agenda adopted for the 23rd meeting (23/2023) vide Ref. No. 235 dated- 31.07.2023 and Ref. No. 238 dated- 03.08.2023. The key points of the deliberations held were as follows.

4. With regard to the proposals submitted for the mining / real-estate/ apartment/ residential building projects, industry, etc. and various issues concerning the green belt area/greenery, human health hazards, and status of Waste Management, etc. were thoroughly discussed and scrutinized.

SIA/8(a)/2427/2023, dated 07.07.2023. Final EIA report in the prescribed format was submitted to SEIAA, Bihar on 03rd August, 2023 for obtaining Environmental Clearance (EC).

The Project Proponent along with its environmental consultant M/s PARAMARSH (Servicing Environment and Development), made a presentation on the key parameters and salient features of the project. Based on discussion, the Committee found their presentation and proposal not satisfactory hence the Committee directed to project proponent submit the revised plan for the damage assessment/Remedial Plan and Community Augmentation Plan.

AGENDA ITEM NO. 14

Proposed Sand Mining Project on Kiul River at Lakhisarai , Kiul Cluster II (Block No. – 11 and 12) Sand Ghat of District – Lakhisarai, Area – 32.0 Ha. – Reg. Environmental Clearance,
(File No.: SIA/1(a)/2072/2022, Proposal No.: SIA/BR/MIN/430260/2023).

Environment Consultant: M/s P & M Solution.

Application along with filled up Form - I, Prefeasibility Report and Environment Management Plan in the prescribed format was submitted to SEIAA, Bihar on 15th December, 2022 for obtaining Terms of Reference (ToR). System Generated ToR was issued by SEIAA, Bihar vide SIA/1(a)/2072/2022, dated 11.01.2023 and Public Hearing was conducted by Bihar State Pollution Control Board, Patna on 13.05.2023. Final EIA report in the prescribed format was submitted to SEIAA, Bihar on 02nd August, 2023 for obtaining Environmental Clearance (EC).

The proposal has been mentioned in the District Survey Report (DSR) approved by the State Environment Impact Assessment Authority (SEIAA), Bihar vide letter no. 235, dated 23.05.2022.

The Project Proponent along with its environmental consultant M/s P & M solutions Limited, made a presentation on the key parameters and salient features of the project. Based on the discussion, the Committee found their presentation and proposal satisfactory and acceptable, hence the Committee decided to recommend the proposed proposal for grant of Environmental Clearance subject to the following additional conditions along with standard conditions mentioned in Annexure "**G**".

1. The proposed plantation (consisting of mixture of indigenous and fast growing species of trees must be created in one go and maintained. Plantation of (minimum 5 feet tall plants) must be planted in the 1st year of lease period and has to be maintained till the validity of Environmental Clearance.
2. The Project Proponent shall execute and conduct measurable CER activity like infrastructure creation for drinking water supply, solar power, rain water harvesting, Solid waste management facilities, sanitation essential furnitures for the local government schools and anganwadi Kendra, etc and display board must be placed for the information of the public, with intimation to the concerned District Magistrate and the concerned district level officer of the concerned department.
3. The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation to check over-exploitation beyond one meter depth.

AGENDA ITEM NO. 15

Proposed Sand Mining Project on Kiul River at Lakhisarai Block No. – 05 Sand Ghat of District – Lakhisarai, Area – 32.0 Ha. – Reg. Environmental Clearance, (File No.: SIA/1(a)/2268/2022, Proposal No.: SIA/BR/MIN/437696/2023).

Environment Consultant: M/s P & M Solution.

Application along with filled up Form - I, Prefeasibility Report and Environment Management Plan in the prescribed format was submitted to SEIAA, Bihar on 31st January, 2023 for obtaining Terms of Reference (ToR). System Generated ToR was issued by SEIAA, Bihar vide SIA/1(a)/2268/2023, dated 02.02.2023 and Public Hearing was conducted by Bihar State Pollution Control Board, Patna on 25.05.2023. Final EIA report in the prescribed format was submitted to SEIAA, Bihar on 02nd August, 2023 for obtaining Environmental Clearance (EC).

The proposal has been mentioned in the District Survey Report (DSR) approved by the State Environment Impact Assessment Authority (SEIAA), Bihar vide letter no. 235, dated 23.05.2022.

The Project Proponent along with its environmental consultant M/s P & M solutions Limited, made a presentation on the key parameters and salient features of the project. Based on discussion, the Committee found their presentation and proposal satisfactory and acceptable, hence the Committee decided to recommend the proposed proposal for grant of Environmental Clearance subject to the following additional conditions along with standard conditions in Annexure **"G"**.

1. The proposed plantation (consisting of mixture of indigenous and fast growing species of trees must be created in one go and maintained. Plantation of (minimum 5 feet tall plants) must be planted in the 1st year of lease period and has to be maintained till the validity of Environmental Clearance.
2. The Project Proponent shall execute and conduct measurable CER activity like infrastructure creation for drinking water supply, solar power, rain water harvesting, Solid waste management facilities, sanitation essential furnitures for the local government schools and anganwadi Kendra, etc and display board must be placed for the information of the public, with intimation to the concerned District Magistrate and the concerned district level officer of the concerned department.
3. The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation to check over-exploitation beyond one meter depth.

Consideration of Terms of Reference Proposal

AGENDA ITEM NO. 16

Proposed Industrial Estate Project "Industrial Area" at Mauza:- Mosama, Tehsil:- Warsaliganj, District:- Nawada, State:- Bihar; by M/s Bihar Industrial Area Development Authority (BIADA) [Total Plot Area:- 29.77 Ha. (2,97,767 m^2 / 73.58 Acres), Standalone Cement Grinding Project – 6.0 Million TPA (2 X 3.0 Million TPA)] – Reg. Terms of Reference.

(File No.: SIA/7(c)/2449/2023, Proposal No.: SIA/BR/INFRA1/433926/2023).

Environment Consultant: M/s PARAMARSH (Servicing Environment and Development).

Application along with filled up Form - I and Prefeasibility Report in the prescribed format was submitted to SEIAA, Bihar on 30th July, 2023 for obtaining Terms of Reference (ToR).

\\TRUE COPY//

ANNEXURE A-15

State Environment Impact Assessment Authority, Bihar

2nd floor, Beltron Bhawan, Shastri Nagar, Patna - 800 023.

Ref. No. - 263 Patna, Date:- 22/08/2023

Minutes of the 39th meeting of SEIAA, Bihar, constituted on 12-08-2021 convened on 16th August, 2023

A meeting of SEIAA was convened on Wednesday, 16.08.2023. Following members were present in the meeting.

Present: -

1.	Shri Atul Aditya Pandey	-	Chairman.
2.	Shri Arun Prakash	-	Member.
3.	Shri Sudhir Kumar	-	Member Secretary

Agenda Item No.- 01

Proposed Sand Mining Project on Son River at Aurangabad Son 26 Sand Ghat of District - Aurangabad, Area – 86.99 Ha. **(File No.: SIA/1(a)/2274/2022, Proposal No.: SIA/BR/MIN/436796/2023).**

- **Proposal discussed in SEAC** on 05th August, 2023 and recommended for Environmental Clearance with Standard conditions along with special conditions.

- **Resolve of the SEIAA:-**

In view of the consideration of SEAC and its recommendation to grant of Environmental Clearance (EC), the SEIAA resolved to grant EC with standard conditions in addition to special conditions i.e. **(a)** The proposed plantation consisting of mixture of indigenous and fast growing species of trees must be done and proper care must be taken. Plantation of a minimum of 5 feet tall plants must be done in the 1st year of lease period and properly maintained till the validity of Environmental Clearance. **(b)** The Project Proponent shall execute and conduct measurable CER activities like facilities for drinking water supply, infrastructure creation solar power, Rain Water Harvesting, Solid Waste Management Facilities, sanitation, essential furnitures for the local government schools and aganwadi Kendra. A display board must be placed for the information to the public (with

intimation to the concerned District Magistrate and the concerned district level officers of the concerned departments). The conditions be fulfilled along with standard conditions as imposed by the SEAC (Annexure – B) in its MoM (Ref. No. 243, dated 09.08.2023).

Agenda Item No.- 05

Proposed Sand Mining Project on Kiul River at Lakhisarai Kiul Cluster II (Block No. – 11 and 12) Sand Ghat of District – Lakhisarai, Area – 32.0 Ha. **(File No.: SIA/1(a)/2072/2022, Proposal No.: SIA/BR/MIN/430260/2023).**

- **Proposal discussed in SEAC** on 05th August, 2023 and recommended for Environmental Clearance with Standard conditions along with special conditions.

- **Resolve of the SEIAA:-**

In view of the consideration of SEAC and its recommendation to grant of Environmental Clearance (EC), the SEIAA resolved to grant EC with standard conditions in addition to special conditions i.e. **(a)** The proposed plantation consisting of mixture of indigenous and fast growing species of trees must be done and proper care must be taken. Plantation of a minimum of 5 feet tall plants must be done in the 1st year of lease period and properly maintained till the validity of Environmental Clearance. **(b)** The Project Proponent shall execute and conduct measurable CER activities like facilities for drinking water supply, infrastructure creation solar power, Rain Water Harvesting, Solid Waste Management Facilities, sanitation, essential furnitures for the local government schools and aganwadi Kendra. A display board must be placed for the information to the public (with intimation to the concerned District Magistrate and the concerned district level officers of the concerned departments). **(c)** The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation. The conditions be fulfilled along with standard conditions as imposed by the SEAC (Annexure – G) in its MoM (Ref. No. 243, dated 09.08.2023).

Agenda Item No.- 06

Proposed Sand Mining Project on Kiul River at Lakhisarai Block No. – 05 Sand Ghat of District – Lakhisarai, Area – 32.0 Ha. **(File No.: SIA/1(a)/2268/2022, Proposal No.: SIA/BR/MIN/437696/2023).**

- **Proposal discussed in SEAC** on 05th August, 2023 and recommended for Environmental Clearance with Standard conditions along with special conditions.

- **Resolve of the SEIAA:-**

In view of the consideration of SEAC and its recommendation to grant of Environmental Clearance (EC), the SEIAA resolved to grant EC with standard conditions in addition to special conditions i.e. **(a)** The proposed plantation consisting of mixture of indigenous and fast growing species of trees must be done and proper care must be taken. Plantation of a minimum of 5 feet tall plants must be done in the 1st year of lease period and properly maintained till the validity of Environmental Clearance. **(b)** The Project Proponent shall execute and conduct measurable CER activities like facilities for drinking water supply, infrastructure creation solar power, Rain Water Harvesting, Solid Waste Management Facilities, sanitation, essential furnitures for the local government schools and aganwadi Kendra. A display board must be placed for the information to the public (with intimation to the concerned District Magistrate and the concerned district level officers of the concerned departments). **(c)** The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation. SSSThe conditions be fulfilled along with standard conditions as imposed by the SEAC (Annexure – G) in its MoM (Ref. No. 243, dated 09.08.2023).

Agenda Item No.- 07

Proposed Sand Mining Project on Son River at Patna Cluster 13 (Patna Son 16) Sand Ghat of District – Patna, **(File No.: SIA/1(a)/2384/2023, Proposal No.: SIA/BR/MIN/301416/2023).**

- **Proposal discussed in SEAC** on 05th August, 2023 and recommended for Amendment in Terms of Reference with Standard conditions along with special conditions.

- **Resolve of the SEIAA:-**

In light of the application submitted by Proprietor – Shri Dhananjay Kumar, M/s Gokul Sai Udyog LLP on 24.07.2023 the proposal is referred back to SEAC.

\\TRUE COPY//

ANNEXURE A-16

ENVIRONMENTAL CLEARANCE

PARIVESH

(Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), BIHAR)

To,

The owner
GOPAL KUMAR
S/o - Kedar Prasad Sharma, At - Valipur, Pipariya, Lakhisarai (Bihar) - 811311

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/BR/MIN/430260/2023 dated 01 Aug 2023. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC23B001BR191749**
2.	**File No.**	SIA/1(a)/2072/2022
3.	**Project Type**	New
4.	**Category**	B
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Sand Mining Project at Kiul River Cluster II (Block No.- 11 & 12) Lakhisarai Sand Ghat over an area of 32.0 Hect.
7.	**Name of Company/Organization**	GOPAL KUMAR
8.	**Location of Project**	BIHAR
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 28/08/2023

(e-signed)
Mr. Sudhir Kumar
Member Secretary
SEIAA - (BIHAR)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

This is a computer generated cover page.

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,BIHAR

F. No.:- SIA/1(a)/2072/2022

Sub: **Proposed Sand Mining Project on Kiul River at "Cluster II (Block No. 11 & 12)" Sand Ghat, at Mauza:– Batta, Bhulai, Tehsil:– Lakhisarai, District:– Lakhisarai, State:- Bihar; Area:- 32 Ha [Total Production Capacity:- 192000 cum per Annum] – Environmental Clearance regarding.**

Reference:-

1. MoEF&CC ToR Proposal No. - **SIA/BR/MIN/408619/2022,** MoEF&CC EC Proposal No. - **SIA/BR/MIN/430260/2023** & SEIAA File No.:- **SIA/1(a)/2072/2022**.
2. Scrutiny fee submission dated 15-12-2022.
3. ToR issued date 11-01-2023.
4. Final EIA submission dated 02-08-2023.
5. SEAC meeting held on 05-08-2023 (For EC).
6. SEIAA meeting held on 16-08-2023 (For EC).

Sir,

This has reference to your online application for River Sand Mining by M/s **Gopal Kumar** for Mining of **Cluster II (Block No. 11 & 12)** Sand Ghat on Kiul River of District:- Lakhisarai, State:- Bihar. The details of the projects as mentioned in application are as below:-

Sl. No.	Item	Details
1.	Name of the project	Proposed Sand Mining Project on Kiul River at **"Cluster II (Block No. 11 & 12)"** Sand Ghat
2.	Area of the project	32 Ha
3.	Proposed Production	192000 cum per Annum
4.	Name of River	Kiul River
5.	Name of Mineral	River Sand
6.	Location of the Project	Mauza:– Batta, Bhulai, Tehsil:– Lakhisarai, District:– Lakhisarai, State:- Bihar.
7.	Latitude & Longitude	**Block No. 11** Corner 1 - 25° 02' 47.92" N 86° 09' 34.59" E Corner 2 - 25° 02' 53.12" N 86° 09' 40.42" E Corner 3 - 25° 02' 54.53" N 86° 09' 49.24" E Corner 4 - 25° 02' 50.44" N 86° 09' 59.81" E Corner 5 - 25° 02' 39.13" N 86° 10' 05.61" E Corner 6 - 25° 02' 32.89" N 86° 10' 04.84" E Corner 7 - 25° 02' 40.31" N 86° 09' 56.68" E Corner 8 - 25° 02' 48.38" N 86° 09' 51.86" E

		Block No. 12 Corner 1 - 25° 02' 56.01" N 86° 10' 08.35" E Corner 2 - 25° 02' 39.33" N 86° 10' 16.98" E Corner 3 - 25° 02' 34.17" N 86° 10' 21.42" E Corner 4 - 25° 02' 28.96" N 86° 10' 17.60" E Corner 5 - 25° 02' 49.26" N 86° 10' 04.13" E
8.	Water Requirement	Domestic Water – 01 KLD Dust Suppression – 02 KLD Green Development – 04 KLD Total Water Requirement – 07 KLD
9.	Manpower	45
10.	Project Cost of Project Site	Total Project Cost - **125860000/-** Environment Management Plan Cost Capital Cost - **04.465 Lakhs** Recurring Cost - **05.00 Lakhs**

PREMISES OF THE ENVIRONMENTAL CLEARANCE

This Environmental Clearance is being issued on the premises which have been substantiated / described in detail in the format of application along with enclosed affidavits / certificates / undertakings etc. furnished therewith by the project proponent:-

(i) Information provided, descriptions mentioned are complete, true and actual and no relevant fact has been concealed to obtain Environmental Clearance deceitfully by the project proponent.

(ii) River Sand Mining shall not be done in rainy Season (mid June to mid October) of each calendar year.

(iii) The Environmental Clearance holder shall take all possible precautions and safeguards for protection of Environment and control of pollution as well as road safety and mining shall be done in socially responsible manner.

Air, water, Noise pollution and visual impact due to mining operations / extraction / Transportation of mined mineral / over burden etc. shall be kept within prescribed limits in the operational area.

(iv) Mining shall only be done after obtaining valid mining lease / permit from the competent authorities and operations shall take place only within validity period of lease / permit.
All the provisions made and restrictions imposed as covered in the relevant minor mineral Rule, shall be complied with, particularly regarding EMP.

(v) *Dept. of Mines & Geology, Govt. of Bihar shall keep a strict vigil in the compliance of relevant provisions of applicable Bihar Minerals (Concession, Prevention of Illegal mining, Transportation and Storage) Rule 2019 and its amendment especially scientific execution of mining plan (as approved by they themselves) and report violations if any is found as well as action taken for the same.*

(vi) Project Proponent shall submit (to the SEIAA, Bihar, Regional Office of MoEF&CC at Ranchi, Bihar State Pollution Control Board) six monthly compliance report with evidence of the conditions within a fortnight after the end of every six month till validity period of Environmental Clearance.

(vii) *Environmental Clearance shall be liable to be revoked if furnished information, provided description / Certificates / Affidavits / Undertaking etc. are found false / concocted at any stage of its validity.*

(viii) *This Environmental Clearance is issued without affecting any court order / statutory other institutions as well as relevant other laws enacted by MoEF&CC, GoI, New Delhi.*

(ix) Mining and transportation of mined material from mine site to stock yard shall be done in the day time only to avoid noise pollution in the nearby human habitation area.

(x) No part of the mining area is in a protected or Reserve forest and it also does not fall either within a wildlife protected area or within its eco-sensitive zone.

(xi) Project Proponent shall intimate SEIAA immediately if there is any change in their official address / E-mail / Ph. No / Cell. no etc failing which communication sent to them on old address shall be considered as delivered.

A. Specific Condition

1. The Project Proponent shall obtain all necessary clearance/ permission from all concerned departments before commencement of mining works.
2. **The Environmental Clearance will be valid for mine lease period subject to a ceiling of 5 years.**

3. The project proponent before starting any activity /preparation of ground, on the leased area shall demarcate his lease hold by RCC pillars erected at the cost of lease holder after certification of the mining officer. On each pillar Geo-Coordinate and fore bearing/ back bearing shall be written with permanent paint mark as described in the mining plan. All the pillars should remain intact at same geo–coordinate. Establishment/ labeling of Benchmark at each pillars or ground control points.

4. Extraction of sand beyond annual production capacity is not permitted.

5. **Only manual method shall be used for the River Bed Mining.**

6. Extraction will be carried out up to a maximum depth of 1 meter from surface of mineral deposit and not less than one meter from the water level of the River channel whichever is earlier.

7. No mining shall be carried out in the areas prominently used by wild animals (birds and reptiles) for nesting. Restricted working hours-Sand mining operation has to be carried out between 6 am to 7 pm.

8. No mining shall be carried out in 3 meter wide strip from the river bank in a River flood plain and within flowing/live water channel.

9. To maintain the safety and stability of Riverbanks, 3 meter or 10% of the width of the River whichever is more will be left intact as "No Mining Zone".

10. No stream shall be diverted for the purpose of sand mining. No natural water course and / or water reservoirs shall be obstructed due to mining operations.

11. The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered vehicles / trucks only and the vehicle shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

12. The stacking area of mined-out sand which shall be situated near the mining site within a fenced area from all sides to avoid being spread in the nearby areas by high winds and the height of stacking should not exceed 2 meters. Transportation shall be confined to day time only that is from sunrise to sunset, to avoid inconvenience to local population in anyway.

13. Rubbish burial shall not be done in the Rivers.

14. Adequate steps shall be taken to check soil erosion and control of debris flow etc. by constructing engineering structures.

15. Mining activity shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical, and archaeological importance.

16. The approach road from loading point upto main road shall be properly developed with proper width and geometry required for safe movement of traffic by lease holder at his own cost.

17. Main haulage road in the mine shall be provided with permanent water sprinklers and other roads shall be regularly wetted with water tankers fitted with sprinklers.

18. Transportation of the Minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road-network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.

19. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

20. Project Proponent shall appoint a Monitoring committee to monitor the replenishment study, traffic management, levels of production, river Bank erosion and maintenance of Road etc.

21. Project Proponent shall submit the annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity / production levels shall be decreased / stopped accordingly till the replenishment is completed.

22. Regular monitoring of the flow rate of the springs and seasonal stream flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of

water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the SEIAA, Bihar, Regional office, Ranchi, Central Ground water Authority, Regional Director, Central Ground water Board, State Pollution Control Board and Central Pollution Control Board.

23. The project proponent shall abide by the Hon'ble Supreme Court order dated 08.01.2020 [Writ Petition 9 (s) (Civil No. (s) 114/2014]. Proposal of re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. In compliance to the direction dated 8th January, 2020 of Hon'ble Supreme Court in Writ Petitioner(s) Civil No. 114/2014, Common Cause Vs Union of India & Ors.

24. The individual sand ghat-miner will take appropriate measures to avoid parking of empty / loaded vehicles on nearest highway/ public roads to avoid traffic congestion.

25. Project Proponent will adhere to all applicable provisions of Sustainable Sand Mining Management Guidelines 2016 and Enforcement & Monitoring Guidelines for Sand Mining, 2020 (EMGSM – 2020) issued by Ministry of Environment, Forest and Climate Change, Government of India. In case, any ambiguity or variation between the provision of both these document arises, the provision made in "Enforcement and Monitoring Guidelines for Sand Mining – 2020" shall prevail.

26. All specific and general conditions which are of public concern at large shall be permanently displayed at a prominent place for public along with address and contact details of authority where the violation of EC conditions can be reported.

27. Project proponent shall erect a signboard on his project site and display information regarding name of the project, No. & date of validity period of EC, annual production capacity of the mineral and other relevant information for the general public.

B. General condition

1. No stacking of sand is allowed on road side of any public road including national highways/ State highways.

2. No labour camp shall be allowed in riverbed.

3. Provision shall be made for housing labour with all necessary infrastructure and facilities (outside mining Block and river-bed) such as fuel for cooking, toilets / mobile toilets, safe drinking water, First-Aid facilities, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

4. Labour & Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any adverse health impact due to exposure to dust and take corrective measures, if needed.

5. The Project Proponent shall make arrangements for safe drinking water, first aid facility along With anti-venom injection, in case of emergency for the workers.

6. The project proponent shall maintain register for production and dispatch of mineral and submit periodic return (six-monthly) to the SEIAA, Bihar / Regional Office of Ministry of Environment, Forest and Climate Change, Government of India, Ranchi. If the remaining period of lease is for less than a year, the Project Proponent shall submit a monthly return of production.

7. The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle and mine plan. This should be produced before officers of Central and State Government for inspection whenever asked for.

8. Regular monitoring of ground water table shall be carried out at the upstream and depth of water available in the adjoining dug-well.

9. Monitoring of Ambient Air Quality, Water Quality & Noise Quality shall be carried out as per the Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places of loading and unloading points & transfer points to reduce all sorts of fugitive emissions.

10. The funds earmarked for environmental protection measures should be kept in a separate bank account and should not be diverted for other purpose. Year-wise expenditure should be reported to the SEIAA, Bihar.

11. The Project proponent shall provide all necessary logistic support to the authorized officer of this authority as and when required. They will facilitate and assist the authority in site inspection and monitoring.

12. All the provisions made and restrictions imposed as envisaged in the Bihar Minor Mineral Rule, shall be complied with; particularly regarding Environment Management and payment of compensation to the affected land owner(s).

13. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Bihar.

14. The Ministry / SEIAA may alter / modify the above conditions or stipulate any additional condition(s) in the interest of environment.

15. Concealing of factual data or submission of false / fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal/suspension of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

16. The instruction contained herein above regarding air and noise pollution and details of mining proposals shall be displayed on Signboard in Hindi for the public information.

17. The SEIAA may impose additional conditions in the interest of Environment & Ecology whenever it becomes necessary to do so.

18. Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

C. Special Conditions

1. The proposed plantation consisting of mixture of indigenous and fast growing species of trees must be done and proper care must be taken. Plantation of a minimum of 5 feet tall plants must be done in the 1st year of lease period and properly maintained till the validity of Environmental Clearance.

2. The Project Proponent shall execute and conduct measurable CER activities like facilities for drinking water supply, infrastructure creation solar power, Rain Water Harvesting, Solid Waste Management Facilities, sanitation, essential furnitures for the local government

schools and Anganwadi Kendra. A display board must be placed for the information to the public (with intimation to the concerned District Magistrate and the concerned district level officers of the concerned departments).

3. **The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation.**

Sd/-
(Sudhir Kumar)
Member-Secretary
SEIAA, Bihar

Copy, through email, for information and necessary action to :–

1. The Secretary, Environment, Forest and Climate Change Deptt., Govt. of Bihar, Sinchai Bhawan, Patna - 15.
2. The Additional Chief Secretary, Mines and Geology Deptt., Govt. of Bihar, Vikas Bhawan, Patna - 15
3. The Chairman, SEAC, Bihar.
4. The Member Secretary, Bihar State Pollution Control Board, Patna-23.
5. The Director, Mines and Geology Deptt., Govt. of Bihar, Vikas Bhawan, Patna - 15
6. MoEF&CC, Integrated Regional Office, Ranchi, 2nd Floor, Headquarter - Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002.
7. Guard file.

(Sudhir Kumar)
Member Secretary,
SEIAA, Bihar

\\TRUE COPY//

ANNEXURE A-17

ENVIRONMENTAL CLEARANCE

PARIVESH (Pro-Active and Responsive Facilitation by Interactive, and Virtuous Environmental Single-Window Hub)

Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), BIHAR)

To,

The -1

VASHISHTHA NARAYAN SINGH CONSTRUCTIONS PRIVATE LIMITED

C/o - Vashishth Narayan Singh. At - Nurpur, Katara Bazar Samiti, Patna City, Patna -800008

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the SEIAA vide proposal number SIA/BR/MIN/437696/2023 dated 31 Jul 2023. The particulars of the environmental clearance granted to the project are as below.

1.	**EC Identification No.**	**EC23B001BR110268**
2.	**File No.**	SIA/1(a)/2268/2023
3.	**Project Type**	New
4.	**Category**	B
5.	**Project/Activity including Schedule No.**	1(a) Mining of minerals
6.	**Name of Project**	Sand Ghat Mining Project (Lakhisarai Block - 05) at Riverbed of Kiul River
7.	**Name of Company/Organization**	VASHISHTHA NARAYAN SINGH CONSTRUCTIONS PRIVATE LIMITED
8.	**Location of Project**	BIHAR
9.	**TOR Date**	N/A

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 28/08/2023

(e-signed)
Mr. Sudhir Kumar
Member Secretary
SEIAA - (BIHAR)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

This is a computer generated cover page.

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,BIHAR

F. No.:- SIA/1(a)/2268/2023

Sub: **Proposed Sand Mining Project on Kiul River at "Lakhisarai Kiul Block No. 05" Sand Ghat, at Mauza:– Jhinaura, Block:– Chanan, District:– Lakhisarai, State:– Bihar; Area:- 51.30 Ha [Total Production Capacity:- 307800 cum per Annum] – Environmental Clearance regarding.**

Reference:-

1. MoEF&CC ToR Proposal No. - **SIA/BR/MIN/415684/2023,** MoEF&CC EC Proposal No. - **SIA/BR/MIN/437696/2023** & SEIAA File No.:- **SIA/1(a)/2268/2023.**
2. Scrutiny fee submission dated 30-01-2023.
3. ToR issued date 02-02-2023.
4. Final EIA submission dated 02-08-2023.
5. SEAC meeting held on 05-08-2023 (For EC).
6. SEIAA meeting held on 16-08-2023 (For EC).

Sir,

This has reference to your online application for River Sand Mining by M/s **Vashistha Narayan Singh** for Mining of **Lakhisarai Kiul Block No.:– 05** Sand Ghat on Kiul River of District:- Lakhisarai, State:- Bihar. The details of the projects as mentioned in application are as below: -

Sl. No.	Item	Details
1.	Name of the project	Proposed Sand Mining Project on Kiul River at **"Lakhisarai Kiul Block No. 05"** Sand Ghat,
2.	Area of the project	51.30 Ha
3.	Proposed Production	307800 cum per Annum
4.	Name of River	Kiul River
5.	Name of Mineral	Sand
6.	Location of the Project	Mauza:– Jhinaura, Block:– Chanan, District:– Lakhisarai, State:– Bihar.
7.	Latitude & Longitude	Corner 1 - 25° 06' 08.20" N 86° 08' 44.86" E Corner 2 - 25° 05' 51.22" N 86° 08' 40.57" E Corner 3 - 25° 05' 41.52" N 86° 08' 30.13" E Corner 4 - 25° 05' 34.35" N 86° 08' 27.57" E

		Corner 5 - 25° 05' 43.36" N 86° 08' 09.70" E Corner 6 - 25° 05' 54.54" N 86° 08' 22.29" E Corner 7 - 25° 06' 09.44" N 86° 08' 28.55" E
8.	Water Requirement	Domestic Water – 01 KLD Dust Suppression – 9.6 KLD Green Development – 2.56 KLD Total Water Requirement – 13.16 ~ 13.20 KLD
9.	Manpower	36
10.	Project Cost of Project Site	Total Project Cost - **29,40,49,000** Environment Management Plan Cost Capital Cost - **09.13 Lakhs** Recurring Cost - **05.00 Lakhs**

PREMISES OF THE ENVIRONMENTAL CLEARANCE

This Environmental Clearance is being issued on the premises which have been substantiated / described in detail in the format of application along with enclosed affidavits / certificates / undertakings etc. furnished therewith by the project proponent:-

(i) Information provided, descriptions mentioned are complete, true and actual and no relevant fact has been concealed to obtain Environmental Clearance deceitfully by the project proponent.

(ii) River Sand Mining shall not be done in rainy Season (mid June to mid October) of each calendar year.

(iii) The Environmental Clearance holder shall take all possible precautions and safeguards for protection of Environment and control of pollution as well as road safety and mining shall be done in socially responsible manner.

Air, water, Noise pollution and visual impact due to mining operations / extraction / Transportation of mined mineral / over burden etc. shall be kept within prescribed limits in the operational area.

(iv) Mining shall only be done after obtaining valid mining lease / permit from the competent authorities and operations shall take place only within validity period of lease / permit.
All the provisions made and restrictions imposed as covered in the relevant minor mineral Rule, shall be complied with, particularly regarding EMP.

(v) *Dept. of Mines & Geology, Govt. of Bihar shall keep a strict vigil in the compliance of relevant provisions of applicable Bihar Minerals (Concession, Prevention of Illegal mining, Transportation and Storage) Rule 2019 and its amendment especially scientific execution of mining plan (as approved by they themselves) and report violations if any is found as well as action taken for the same.*

(vi) Project Proponent shall submit (to the SEIAA, Bihar, Regional Office of MoEF&CC at Ranchi, Bihar State Pollution Control Board) six monthly compliance report with evidence of the conditions within a fortnight after the end of every six month till validity period of Environmental Clearance.

(vii) *Environmental Clearance shall be liable to be revoked if furnished information, provided description / Certificates / Affidavits / Undertaking etc. are found false / concocted at any stage of its validity.*

(viii) *This Environmental Clearance is issued without affecting any court order / statutory other institutions as well as relevant other laws enacted by MoEF&CC, GoI, New Delhi.*

(ix) Mining and transportation of mined material from mine site to stock yard shall be done in the day time only to avoid noise pollution in the nearby human habitation area.

(x) No part of the mining area is in a protected or Reserve forest and it also does not fall either within a wildlife protected area or within its eco-sensitive zone.

(xi) Project Proponent shall intimate SEIAA immediately if there is any change in their official address / E-mail / Ph. No / Cell. no etc failing which communication sent to them on old address shall be considered as delivered.

A. <u>Specific Condition</u>

1. The Project Proponent shall obtain all necessary clearance/ permission from all concerned departments before commencement of mining works.
2. **The Environmental Clearance will be valid for mine lease period subject to a ceiling of 5 years.**

3. The project proponent before starting any activity /preparation of ground, on the leased area shall demarcate his lease hold by RCC pillars erected at the cost of lease holder after certification of the mining officer. On each pillar Geo-Coordinate and fore bearing/ back bearing shall be written with permanent paint mark as described in the mining plan. All the pillars should remain intact at same geo–coordinate. Establishment/ labeling of Benchmark at each pillars or ground control points.

4. Extraction of sand beyond annual production capacity is not permitted.

5. **Only manual method shall be used for the River Bed Mining.**

6. Extraction will be carried out up to a maximum depth of 1 meter from surface of mineral deposit and not less than one meter from the water level of the River channel whichever is earlier.

7. No mining shall be carried out in the areas prominently used by wild animals (birds and reptiles) for nesting. Restricted working hours-Sand mining operation has to be carried out between 6 am to 7 pm.

8. No mining shall be carried out in 3 meter wide strip from the river bank in a River flood plain and within flowing/live water channel.

9. To maintain the safety and stability of Riverbanks, 3 meter or 10% of the width of the River whichever is more will be left intact as "No Mining Zone".

10. No stream shall be diverted for the purpose of sand mining. No natural water course and / or water reservoirs shall be obstructed due to mining operations.

11. The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through covered vehicles / trucks only and the vehicle shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre.

12. The stacking area of mined-out sand which shall be situated near the mining site within a fenced area from all sides to avoid being spread in the nearby areas by high winds and the height of stacking should not exceed 2 meters. Transportation shall be confined to day time only that is from sunrise to sunset, to avoid inconvenience to local population in anyway.

13. Rubbish burial shall not be done in the Rivers.

14. Adequate steps shall be taken to check soil erosion and control of debris flow etc. by constructing engineering structures.

15. Mining activity shall not be done for mine lease where mining can cause danger to site of flood protection works, places of cultural, religious, historical, and archaeological importance.

16. The approach road from loading point upto main road shall be properly developed with proper width and geometry required for safe movement of traffic by lease holder at his own cost.

17. Main haulage road in the mine shall be provided with permanent water sprinklers and other roads shall be regularly wetted with water tankers fitted with sprinklers.

18. Transportation of the Minerals by road passing through the village shall not be allowed. A 'bypass' road should be constructed (say, leaving a gap of at least 200 meters) for the purpose of transportation of the minerals so that the impact of sound, dust and accidents could be mitigated. The Project Proponent shall bear the cost towards the widening and strengthening of existing public road-network in case the same is proposed to be used for the Project. No road movement should be allowed on existing village road network without appropriately increasing the carrying capacity of such roads.

19. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

20. Project Proponent shall appoint a Monitoring committee to monitor the replenishment study, traffic management, levels of production, river Bank erosion and maintenance of Road etc.

21. Project Proponent shall submit the annual replenishment report certified by an authorized agency. In case the replenishment is lower than the approved rate of production, then the mining activity / production levels shall be decreased / stopped accordingly till the replenishment is completed.

22. Regular monitoring of the flow rate of the springs and seasonal stream flowing in and around the mine lease shall be carried out and records maintained. Regular monitoring of water quality upstream and downstream of water bodies shall be carried out and record of monitoring data should be maintained and submitted to the SEIAA, Bihar, Regional office, Ranchi, Central Ground water Authority, Regional Director, Central Ground water Board, State Pollution Control Board and Central Pollution Control Board.

23. The project proponent shall abide by the Hon'ble Supreme Court order dated 08.01.2020 [Writ Petition 9 (s) (Civil No. (s) 114/2014]. Proposal of re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. In compliance to the direction dated 8th January, 2020 of Hon'ble Supreme Court in Writ Petitioner(s) Civil No. 114/2014, Common Cause Vs Union of India & Ors.

24. The individual sand ghat-miner will take appropriate measures to avoid parking of empty / loaded vehicles on nearest highway/ public roads to avoid traffic congestion.

25. Project Proponent will adhere to all applicable provisions of Sustainable Sand Mining Management Guidelines 2016 and Enforcement & Monitoring Guidelines for Sand Mining, 2020 (EMGSM – 2020) issued by Ministry of Environment, Forest and Climate Change, Government of India. In case, any ambiguity or variation between the provision of both these document arises, the provision made in "Enforcement and Monitoring Guidelines for Sand Mining – 2020" shall prevail.

26. All specific and general conditions which are of public concern at large shall be permanently displayed at a prominent place for public along with address and contact details of authority where the violation of EC conditions can be reported.

27. Project proponent shall erect a signboard on his project site and display information regarding name of the project, No. & date of validity period of EC, annual production capacity of the mineral and other relevant information for the general public.

B. General condition

1. No stacking of sand is allowed on road side of any public road including national highways/ State highways.

2. No labour camp shall be allowed in riverbed.

3. Provision shall be made for housing labour with all necessary infrastructure and facilities (outside mining Block and river-bed) such as fuel for cooking, toilets / mobile toilets, safe drinking water, First-Aid facilities, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

4. Labour & Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers shall be undertaken periodically to observe any adverse health impact due to exposure to dust and take corrective measures, if needed.

5. The Project Proponent shall make arrangements for safe drinking water, first aid facility along With anti-venom injection, in case of emergency for the workers.

6. The project proponent shall maintain register for production and dispatch of mineral and submit periodic return (six-monthly) to the SEIAA, Bihar / Regional Office of Ministry of Environment, Forest and Climate Change, Government of India, Ranchi. If the remaining period of lease is for less than a year, the Project Proponent shall submit a monthly return of production.

7. The EC holder shall keep a correct account of quantity of mineral mined out, dispatched from the mine, mode of transport, registration number of vehicle and mine plan. This should be produced before officers of Central and State Government for inspection whenever asked for.

8. Regular monitoring of ground water table shall be carried out at the upstream and depth of water available in the adjoining dug-well.

9. Monitoring of Ambient Air Quality, Water Quality & Noise Quality shall be carried out as per the Notification, as amended from time to time by the Central Pollution Control Board. Water sprinkling should be increased at places of loading and unloading points & transfer points to reduce all sorts of fugitive emissions.

10. The funds earmarked for environmental protection measures should be kept in a separate bank account and should not be diverted for other purpose. Year-wise expenditure should be reported to the SEIAA, Bihar.

11. The Project proponent shall provide all necessary logistic support to the authorized officer of this authority as and when required. They will facilitate and assist the authority in site inspection and monitoring.

12. All the provisions made and restrictions imposed as envisaged in the Bihar Minor Mineral Rule, shall be complied with; particularly regarding Environment Management and payment of compensation to the affected land owner(s).

13. No change in mining technology and scope of working should be made without prior approval of the SEIAA, Bihar.

14. The Ministry / SEIAA may alter / modify the above conditions or stipulate any additional condition(s) in the interest of environment.

15. Concealing of factual data or submission of false / fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal/suspension of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.

16. The instruction contained herein above regarding air and noise pollution and details of mining proposals shall be displayed on Signboard in Hindi for the public information.

17. The SEIAA may impose additional conditions in the interest of Environment & Ecology whenever it becomes necessary to do so.

18. Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

C. Special Conditions

1. The proposed plantation consisting of mixture of indigenous and fast growing species of trees must be done and proper care must be taken. Plantation of a minimum of 5 feet tall plants must be done in the 1st year of lease period and properly maintained till the validity of Environmental Clearance.

2. The Project Proponent shall execute and conduct measurable CER activities like facilities for drinking water supply, infrastructure creation solar power, Rain Water Harvesting, Solid

Waste Management Facilities, sanitation, essential furnitures for the local government schools and Anganwadi Kendra. A display board must be placed for the information to the public (with intimation to the concerned District Magistrate and the concerned district level officers of the concerned departments).

3. **The project proponent should undertake the sand mining limited to 1 meter (one meter) depth by manual excavation.**

Sd/-
(Sudhir Kumar)
Member-Secretary
SEIAA, Bihar

Copy, through email, for information and necessary action to :–

1. The Secretary, Environment, Forest and Climate Change Deptt., Govt. of Bihar, Sinchai Bhawan, Patna - 15.
2. The Additional Chief Secretary, Mines and Geology Deptt., Govt. of Bihar, Vikas Bhawan, Patna - 15
3. The Chairman, SEAC, Bihar.
4. The Member Secretary, Bihar State Pollution Control Board, Patna-23.
5. The Director, Mines and Geology Deptt., Govt. of Bihar, Vikas Bhawan, Patna - 15
6. MoEF&CC, Integrated Regional Office, Ranchi, **2nd Floor, Headquarter - Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand - 834002.**
7. Guard file.

(Sudhir Kumar)
Member Secretary,
SEIAA, Bihar

\\TRUE COPY//

ANNEXURE A-18

Government of Bihar
Department of Mines and Geology

No. 2-M.M. (B.)-31/23(Part)-5764/M. Patna

Dated: 07.12.2023

From,

Naiyyar Iqbal, I.A.S.
Director of Mines

To,

The Member Secretary,
State Environment Impact Assessment Authority,
Bihar, Patna.

Subject: **Regarding issuance of environmental clearance to Sandghats (Balughats) of 01 meter mining permission in various Districts.**

Sir,

On the above-mentioned subject, it is to submit that in the order passed on dated 28.03.2023 in Civil Appeal No. 3661-3662 /2020 by the Hon'ble Supreme Court, there has been ordered to SEIAA Bihar to issue environmental clearance for Navbandobast (New Settled) Sandghats upto dated 30.06.2023. Pursuant to above, due to not issuance of environmental clearance upto date for the purpose of about 50 Sandghats in few Districts (where, permission of Sand mining upto 01 meter depth is to be given), besides difficulty to availability of Sand to common public, there has been occurring loss of revenue as well and there remains strong probability of illegal mining also.

It is clear that despite correspondence in this regard by the State Environment Impact Assessment Authority to the Environment, Forest and Climate Change, Government of India, required progress in this case couldn't be seen.

In view of above, it is requested that in case of objection in giving permission of semi-mechanized operation according to the environmental clearance issued for the purpose of Cluster-02 Balughat (Sandghat) under Lakhisarai District, the State Environmental Impact Assessment Authority may kindly consider on giving environmental clearance with the permission of manual operation in other cases of Sand Mining upto 01 meter depth.

Yours faithfully

Sd/-

7.12.23
Director of Mines

Memorandum No. 5764/M., Patna, Dated: 7.12.2023

Copy to – Secretary, Environment, Forest and Climate Change Department, Bihar, Patna, for information please.

Sd/-
7.12.23
Director of Mines

\\TRUE COPY//

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 1 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

ANNEXURE A-19

2025 SCC OnLine SC 1789

In the Supreme Court of India

(BEFORE P.S. NARASIMHA AND A.S. CHANDURKAR, JJ.)

Civil Appeal No. 8055 of 2022

Union Territory of J&K (Previously State of Jammu & Kashmir) and Another ... Appellant(s);

Versus

Raja Muzaffar Bhat and Others ... Respondent(s).

With

Civil Appeal No. 68 of 2023

With

Civil Appeal No. of 2025

@ Diary No(s). 1007 of 2025

Civil Appeal No. 8055 of 2022, Civil Appeal No. 68 of 2023 and Civil Appeal No. of 2025 @ Diary No(s). 1007 of 2025

Decided on August 22, 2025

Advocates who appeared in this case :

Mr. Utsav Singh Bains, Adv., Mr. Akash Yadav, Adv. Mr. Yusuf, AOR, Mr. Narender Hooda, Sr. Adv., Mr. Shiv Bhatnagar, Adv., Ms. Pallvi Hooda, Adv., Ms. Kavya Manuja, Adv., Ms. Tannu, Adv., Ms. Seema Sindhu, Adv., Mr. Gaurav, Adv., Dr. Surender Singh Hooda, AOR, Mr. Yuvraj Nandal, Adv., Mr. G. M. Kawoosa, Adv. and Mr. Pashupathi Nath Razdan, AOR, for the Appellant(s);

Ms. Anitha Shenoy, Sr. Adv., Ms. Srishti Agnihotri, AOR, Ms. Itisha Awasthi, Adv., Ms. Sanjana Grace Thomas, Adv., Ms. Sadhana Madhavan, Adv. and Ms. Kavana Rao, Adv., for the Respondent(s).

JUDGMENT

Contents

1. Introduction of the issue:
2. Factual Background:
3. The Legal and Regulatory Regime:
4. The Environment (Protection) Act:
5. EIA Notifications 1994:
6. The Environment Impact Assessment Notification, 2006:
7. Decision of this Court in *Deepak Kumar* v. *State of Haryana*:
8. Environment Impact Assessment Notification, 2016:
   A. Establishment of District Level Environment Impact Assessment Authority (DEIAA) & District Expert Appraisal

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 2 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

Committee (DEAC) under Para 3A:
B. New category called Category B2 for sandmining in districts was introduced through para 4(iv):
C. Preparation of District Survey Report (DSR) Introduced through Para 7(iii):
D. Procedure for preparation of DSR introduced through Appendix X:
E. Challenge to the Notification 2016 the direction of NGT in Satendra Pandey's case:
9. The Sand Mining Guidelines and the Focus on Replenishment Study:
A. Sustainable Sand Mining Management Guidelines, 2016:
B. Enforcement and Monitoring Guidelines for Sand Mining, 2020:
10. Need for replenishment study:
11. Application of law to the facts of the present case

1. Introduction of the issue:

1. In *State of UP* v. *Gaurav Kumar*[1], we have declared that a valid and subsisting District Survey Report[2] is mandatory for grant of environmental clearance[3] for sand mining. We have also annulled certain environmental clearances, even though recommended by District Expert Appraisal Committee[4] and granted by District Level Environment Impact Assessment Authority[5], on the basis that a 'draft DSR' is untenable[6] in law. In this appeal we take a step further. District Survey Reports are prepared under para 7(iii) of EIA notification dated 15.01.2016[7] following the mandatory procedure laid down in Appendix X read with Sustainable Sand Mining Management Guidelines, 2016[8] and Enforcement and Monitoring Guidelines for Sand Mining, 2020[9]. The purpose and objective of preparing such District Survey Report is to scientifically locate the place for sand mining after *calculation of annual rate of replenishment for allowing mining in the area*.

2. Just as forest conservation requires assessment of tree growth rate before permitting timber harvesting to ensure that felling of trees does not exceed tree growth, a replenishment study enables us to take an informed decision as to whether sand mining can be permitted without degrading the rivers' natural balance. Importance of *replenishment study* is explained in the Sand Mining Guidelines 2020 as follows:

> "*The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessive sand extraction. Mining within or near riverbed has a direct impact on the*

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 3 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. Alteration or modification of the above attributes may cause an impact on the ecological equilibrium of the riverine regime, disturbance in channel configuration and flow-paths. This may also cause an adverse impact on in-stream biota and riparian habitats. It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river stretch, it is imperative to have a study of replenishment of material during the defined period."[10]

3. It is, therefore, compelling to hold that a DSR is valid and tenable only when a proper *replenishment study* is conducted.

2. Factual Background:

4. The facts germane to the issue, and necessary for disposal of these appeals are as follows: The project proponent submitted three proposals for undertaking mining activities in (i) Block 1, Driegam Bridge Downstream, Shaliganga Nallah Bed Mining Project, (ii) Block-2 Banderpora Upstream, Shaliganga Nallah Bed Mining Project and (iii) Block 4, Panzam Bridge to Trumbi Bridge (Lalgam) Downstream. The J&K UT Expert Appraisal Committee ("J&K UT EAC" hereinafter) in its 81st meeting dated 03.01.2022 discussed the said proposals and rejected the same, particularly on grounds that the proposed area of extraction is already over-exploited and is depleted due to heavy illegal mining. It also noted that the DSR prepared for the concerned district was not formulated as per guidelines as the same needs revision for including replenishment data.

5. In the meanwhile, the project proponent received '*Fit for Mining Certificate*' for Blocks 1, 2 and 4 from the Geology and Mining Department on 05.02.2022.

6. Following certification of mining department, the project proponent submitted its second proposal. Having considered the said proposal in its 87th meeting on 02.03.2022, the J&K UT EAC recommended the project for grant of EC. While recommending grant of EC, the J&K UT EAC clearly recorded and reiterated that DSR is not being formulated as per the guidelines.

7. Accepting the recommendations of the EAC, the State Environment Impact Assessment Authority[11] granted EC to the project proponent on 19.04.2022. While granting the EC, SEIAA restricted the depth of mining to maximum of 1 meter in view of "*non-availability of replenishment data"* in the DSR.

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 4 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

8. *Challenge to the grant of EC*: Aggrieved by the issuance of EC dated 19.04.2022, *person interested in environment*, respondent no. 1 filed an appeal before the National Green Tribunal[12] primarily impugning the grant of EC on the grounds that;

> *"i. The Environmental Clearances dated 19.04.2022 were granted without taking into account the grounds on which the previous proposals of the project proponent were rejected and continued to grant Environmental Clearances without due consideration of the same;*
>
> *ii. Violation of Rule 4(iv) of Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016 which prohibits any minor mineral concession being granted within a distance of 25 meters of any embankment;*
>
> *iii. The Environmental Clearances have been granted despite the District Survey Report not being prepared in line with the Guidelines, as noted by JKEAC;*
>
> *iv. Violations of conditions of the Environmental Clearances dated 19.04.2022 by the project proponent who undertook certain activities strictly prohibited under the Environmental Clearance."*
>
> (emphasis supplied)

9. The Tribunal, vide the order impugned before us allowed the appeal and set aside the EC dated 19.04.2022 finding it to be violative of environmental norms. Thus, the present appeals.

3. The Legal and Regulatory Regime:

10. The significance of mining for economic development, particularly in relation to industries involved in infrastructure development, energy, cement etc has long been recognised. In exercise of its legislative competence, Parliament enacted the Mines and Minerals (Development and Regulation) Act, 1957[13], for development and regulation of mines and minerals in the country. This legislation is, however, not concerned with safeguarding environmental interests. For that purpose, we have the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, and the Environment (Protection) Act, 1986, as well as policy measures such as the National Mineral Policies of 2008 and 2019.

4. The Environment (Protection) Act:

11. The Environment (Protection) Act, 1986 is a comprehensive legislation enacted with the object of protecting and improving the environment. Under Sections 3 and 5 of the Act, the Central Government is empowered to take all such measures as may be necessary for the purpose of preventing, controlling and abating

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 5 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

environmental pollution.

5. EIA Notifications 1994:

12. In exercise of the powers conferred under Sections 3 and 5, MoEF&CC issued the Environment Impact Assessment (EIA) Notification, 1994[14], which marked a significant shift in environmental governance by making prior environmental clearance mandatory for specified categories of industrial and development projects, including mining. The Notification laid down a procedural framework for assessing the likely environmental impact of proposed projects, mandating submission of detailed information, public consultation, and mitigation plans. Schedule I to the Notification listed 29 categories of projects requiring prior approval, with Item 20 expressly covering mining activities. Thus, the legislative intent was clear; no mining activity, whether new, expanded, or modernised could proceed without rigorous environmental scrutiny and express prior clearance from the competent authority.

6. The Environment Impact Assessment Notification, 2006:

13. The regulatory framework underwent further consolidation with the issuance of the EIA Notification dated 14.09.2006[15]. The 2006 Notification introduced a more elaborate, decentralised, and categorised approach to environmental appraisal. It classified projects into Category A and Category B, based on their potential environmental impact and scale, with Category A projects requiring clearance at the Central level and Category B projects at the State level, through the SEIAA. Para 2 of the 2006 Notification reads as under;

> *2. Requirements of prior Environmental Clearance (EC):— The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:*
>
> *(i) All new projects or activities listed in the Schedule to this notification;*
>
> *(ii) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;*
>
> *(iii) Any change in product - mix in an existing manufacturing*

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 6 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

unit included in Schedule beyond the specified range.

14. Para 5, 6 and 7 gives a detailed procedure for grant of prior EC. Further, Para 8 talks about the final stage of grant or rejection of prior EC. Para 9 deals with the tenure and validity of an EC while Para 10 provides for post grant monitoring. The Appendix III enumerates the generic structure of an EIA application and its essentials. Over the course of years, this EIA Notification, 2006 underwent various amendments further strengthening the EC norms and laying down of detailed procedure thereto.

7. Decision of this Court in Deepak Kumar *v.* State of Haryana:

15. While the statutory framework under the Environment (Protection) Act, 1986 and the EIA Notification of 2006 laid down the procedural architecture for environmental clearance, judicial intervention became necessary to address persisting regulatory lapses, particularly in the context of sand mining. A seminal instance of such intervention is found in *Deepak Kumar* v. *State of Haryana*[16], wherein the Supreme Court examined the legality of mining leases granted in the State of Haryana without prior environmental appraisal. This Court deprecated the practice of issuing auction notices for minor mineral extraction without first conducting scientific studies to assess the environmental impact. Emphasising the need for a precautionary approach, the Court underscored that no mining activity, however minor, could be permitted without an environmental clearance based on a proper *replenishment study* and sustainable extraction limits. This decision reaffirmed the necessity of grounding regulatory approvals in scientific analysis, and has since served as a judicial benchmark in ensuring that mining activities are aligned with environmental safeguards. This Court held as under:

> "*8..... Sand mining on either side of the rivers, upstream and instream, is one of the causes for environmental degradation and also a threat to the biodiversity. Over the years, India's rivers and riparian ecology have been badly affected by the alarming rate of unrestricted sand mining which damage the ecosystem of rivers and the safety of bridges, weakening of riverbeds, destruction of natural habitats of organisms living on the riverbeds, affects fish breeding and migration, spells disaster for the conservation of many bird species, increases saline water in the rivers, etc.*
>
> *9. Extraction of alluvial material from within or near a streambed has a direct impact on the stream's physical habitat characteristics. These characteristics include bed elevation, substrate composition and stability, instream roughness elements, depth, velocity, turbidity, sediment transport, stream discharge and temperature. Altering these habitat characteristics can have deleterious impacts*

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 7 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

on both instream biota and the associated riparian habitat. The demand for sand continues to increase day by day as building and construction of new infrastructures and expansion of existing ones is continuous thereby placing immense pressure on the supply of the sand resource and hence mining activities are going on legally and illegally without any restrictions. Lack of proper planning and sand management cause disturbance of marine ecosystem and also upset the ability of natural marine processes to replenish the sand.

10. We are expressing our deep concern since we are faced with a situation where the auction notices dated 3-6-2011 and 8-8-2011 have permitted quarrying, mining and removal of sand from instream and upstream of several rivers, which may have serious environmental impact on ephemeral, seasonal and perennial rivers and riverbeds and sand extraction may have an adverse effect on biodiversity as well. Further, it may also lead to bed degradation and sedimentation having a negative effect on the aquatic life. The rivers mentioned in the auction notices are on the foothills of the fragile Shivalik Hills. Shivalik Hills are the source of rivers like Ghaggar, Tangri, Markanda, etc. River Ghaggar is a seasonal river which rises up in the outer Himalayas between Yamuna and Satluj and enters Haryana near Pinjore, District Panchkula, which passes through Ambala and Hissar and reaches Bikaner in Rajasthan. River Markanda is also a seasonal river like Ghaggar, which also originates from the lower Shivalik Hills and enters Haryana near Ambala. During monsoon, this stream swells up into a raging torrent, notorious for its devastating power, as also, River Yamuna.

11. We find that it is without conducting any study on the possible environmental impact on/in the riverbeds and elsewhere the auction notices have been issued. We are of the considered view that when we are faced with a situation where extraction of alluvial material within or near a riverbed has an impact on the river's physical habitat characteristics, like river stability, flood risk, environmental degradation, loss of habitat, decline in biodiversity, it is not an answer to say that the extraction is in blocks of less than 5 ha, separated by 1 km, because their collective impact may be significant, hence the necessity of a proper environmental assessment plan.

* * *

25. Quarrying of river sand, it is true, is an important economic activity in the country with river sand forming a crucial raw material for the infrastructural development and for the construction industry but excessive instream sand and gravel mining causes the degradation of rivers. Instream mining lowers the stream bottom of rivers which may lead to bank erosion. Depletion of sand in the

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 8 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

streambed and along coastal areas causes the deepening of rivers which may result in destruction of aquatic and riparian habitats as well. Extraction of alluvial material as already mentioned from within or near a streambed has a direct impact on the stream's physical habitat characteristics.

26. We are of the considered view that it is highly necessary to have an effective framework of mining plan which will take care of all environmental issues and also evolve a long-term rational and sustainable use of natural resource base and also the bio-assessment protocol. Sand mining, it may be noted, may have an adverse effect on biodiversity as loss of habitat caused by sand mining will affect various species, flora and fauna and it may also destabilise the soil structure of river banks and often leaves isolated islands. We find that, taking note of those technical, scientific and environmental matters, MoEF, Government of India, issued various recommendations in March 2010 followed by the Model Rules, 2010 framed by the Ministry of Mines which have to be given effect to, inculcating the spirit of Article 48-A and Article 51-A(g) read with Article 21 of the Constitution."

(emphasis supplied)

8. Environment Impact Assessment Notification, 2016:

16. The observations made by this Court in *Deepak Kumar* (supra) laid down the jurisprudential foundation for requiring scientific scrutiny, particularly through District Survey Reports (DSRs) before permitting sand mining even at the local level. Recognising the ecological fragility of riverbeds and the unchecked nature of minor mineral extraction, the Central Government, in response to the said judgment, amended the EIA Notification of 2006 on 15.01.2016, to introduce a distinct regulatory framework for riverbed and sand mining. These amendments introduced specific procedures for cluster-based assessments and made *replenishment studies* integral to the clearance process. The preamble to the amended Notification is instructive and enables us to understand the purpose, scope, and statutory contours of the DSR, which now forms the central point of scrutiny in the present case. The preamble is as follows:

"And whereas, in pursuance to the order of Hon'ble Supreme Court dated the 27th February, 2012 in I.A. No. 12-13 of 2011 in Special Leave Petition (C) No. 19628-19629 of 2009, in the matter of Deepak Kumar *v.* State of Haryana, *prior environmental clearance has now become mandatory for mining of minor minerals irrespective of the area of mining lease;*

And whereas, as a result of the above said Order of Hon'ble Supreme Court, the number of cases which are now required to

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 9 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

obtain prior environmental clearance has increased substantially;

And whereas, the Hon'ble National Green Tribunal, vide its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals;

And whereas, the State Governments have represented for streamlining the process of environmental clearance for mining of minor mineral;

And whereas, the Ministry of Environment, Forest and Climate Change in consultation with State Governments has prepared Guidelines on Sustainable Sand Mining detailing the provisions on environmental clearance for cluster, creation of District Environment Impact Assessment Authority and proper monitoring of sand mining using information technology and information technology enabled services to track the mined out material from source to destination;

Now, therefore, in exercise of the powers conferred by subsection (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following amendments in the said notification, namely:—

In the said notification,-

(a) in paragraph 2, after the words "in the said Schedule", the following words shall be inserted, namely:— "and at District level, the District Environment Impact Assessment Authority (DEIAA) for matters falling under Category 'B2' for mining of minor minerals in the said Schedule";

(b) after paragraph 3, the following paragraph shall be inserted..."

A. Establishment of District Level Environment Impact Assessment Authority (DEIAA) & District Expert Appraisal Committee (DEAC) under Para 3A:

17. As is evident from the above extracted portion of the preamble to the EIA Notification 2016, two bodies namely, the DEIAA and DEAC have been established by inserting Para 3A to the EIA Notification, 2006 for grant of EC to a newly introduced category (by amending para 2), called category B2.

B. New category called Category B2 for sandmining in districts was introduced through para 4(iv):

18. Paragraph 4 of the EIA notification 2006 relating to categorization of projects and activities was also amended and category B2 falling within the jurisdiction of the DEIAA, acting on the decision and recommendation of DEAC is introduced.

C. Preparation of District Survey Report (DSR) Introduced through Para

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 10 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

7(iii):

19. Para 7 of the EIA Notification 2006 is of utmost importance as it relates to the process of EC for new projects which comprises of four stages namely, screening, scoping, public consultation and appraisal respectively. Para 7(ii) relates to process for expansion or modernisation or change of project mix in existing projects. It is in this paragraph relating to the process of EC in the EIA Notification 2006 that further amendment was made introducing sub-para (iii). Introduction of para 7(iii) for the first time contemplated, preparation of DSR for sand mining or river bed mining and mining of other minor minerals. Para 7(iii) now reads as under;

> "*7. Stages in the Prior Environmental Clearance (EC) Process for New Projects*
>
> *(i) ….*
>
> *(ii) …*
>
> *(iii) Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals:*
>
> *(a) The prescribed procedure for preparation of District Survey Report for sand mining or river bed mining and mining of other minor minerals is given in Appendix X.*
>
> *(b) The prescribed procedure for environmental clearance for mining of minor minerals including cluster situation is given in Appendix XI."*

D. Procedure for preparation of DSR introduced through Appendix X:

20. Procedure for preparation of the above referred DSR under para 7(iii) is laid down in great detail in Appendix X to the notification. Appendix X, apart from laying down the detailed procedure, also declares that the, "*District Survey Report shall form the basis for application for environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years*." Appendix X is as follows;

> "*PROCEDURE FOR PREPARATION OF DISTRICT SURVEY REPORT*
>
> *The main objective of the preparation of District Survey Report (as per the Sustainable Sand Mining Guideline) is to ensure the following:*
>
> *Identification of areas of aggradations or deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited and calculation of annual rate of replenishment and allowing time for replenishment after mining in that area.*
>
> *The report shall have the following structure:*
>
> *1. Introduction*
>
> *2. Overview of Mining Activity in the District*

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 11 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

3. The List of Mining Leases in the District with location, area and period of validity
4. Details of Royalty or Revenue received in last three years
5. Detail of Production of Sand or Bajari or minor mineral in last three years
6. Process of Deposition of Sediments in the rivers of the District
7. General Profile of the District
8. Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.
9. Physiography of the District
10. Rainfall: month-wise
11. Geology and Mineral Wealth

In addition to the above, the report shall contain the following:

(a) District wise detail of river or stream and other sand source.

(b) District wise availability of sand or gravel or aggregate resources.

(c) District wise detail of existing mining leases of sand and aggregates.

A survey shall be carried out by the DEIAA with the assistance of Geology Department or Irrigation Department or Forest Department or Public Works Department or Ground Water Boards or Remote Sensing Department or Mining Department etc. in the district.

Drainage system with description of main rivers

* * *

Methodology adopted for calculation of mineral potential

The mineral potential is calculated based on field investigation and geology of the catchment area of the river or streams. As per the site conditions and location, depth of minable mineral is defined. The area for removal of the mineral in a river or stream can be decided depending on geo-morphology and other factors, it can be 50 % to 60 % of the area of a particular river or stream. For example in some hill States mineral constituents like boulders, river born Bajri, sand up to a depth of one meter are considered as resource mineral. Other constituents like clay and silt are' excluded as waste while calculating the mineral potential of particular river or stream.

The District Survey Report shall be prepared for each minor mineral in the district separately and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on district's website for twenty one days. The comments received shall be considered and if found fit, shall be incorporated in the final Report to be finalised within six months by the DEIAA.

The District Survey Report shall form the basis for application for

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 12 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

environmental clearance, preparation of reports and appraisal of projects. The Report shall be updated once every five years."

(emphasis supplied)

21. The 2016 amendment also introduces Appendix XI in the context of preparation of DSR for sandmining or river bed mining of other minor minerals. The amendment also prescribes distinct procedure for EC for mining of minor minerals including cluster situation.

E. Challenge to the Notification 2016 the direction of NGT in Satendra Pandey's case:

22. Environmental concerns were expressed that the amendments brought about by the EIA notification 2016 did not translate into action the mandate of this Court's decision in *Deepak Kumar* (Supra). These concerns were considered by the NGT in *Satendra Pandey* v. *MoEFCC*[17] wherein the following directions were issued.

> *"22. For all these reasons, we direct that the procedure laid down in the impugned Notification be brought in consonance and in accord with the directions passed in the case of* Deepak Kumar *(supra) by (i) providing for EIA, EMP and therefore, Public Consultation for all areas from 5 to 25 ha falling under Category B-2 at par with Category B-1 by SEAC/SIEAA as well as for cluster situation wherever it is not provided; (ii) Form-1M be made more comprehensive for areas of 0 to 5 ha by dispensing with the requirement for Public Consultation to be evaluated by SEAC for recommendation of grant EC by SEIAA instead of DEAC/DEIAA; (iii) if a cluster or an individual lease size exceeds 5 ha the EIA/EMP be made applicable in the process of grant of prior environmental clearance; (iv) EIA and/or EMP be prepared for the entire cluster in terms of recommendation 5 (supra) of the Guidelines for the purpose of recommendations 6, 7 and 8 thereof; (v) revise the procedure to also incorporate procedure with respect to annual rate of replenishment and time frame for replenishment after mining closure in an area; (vi) the MoEF & CC to prepare guidelines for calculation of the cost of restitution of damage caused to mined-out areas along with the Net Present Value of Ecological Services forgone because of illegal or unscientific mining."*

9. The Sand Mining Guidelines and the Focus on Replenishment Study:

23. At this juncture, reference must be made to the Sustainable Sand Mining Management Guidelines 2016 and Enforcement and Monitoring Guidelines for Sand Mining 2020. They constitute binding directives for regulatory authorities, and their due observance is indispensable for safeguarding ecology and public interest.

A. Sustainable Sand Mining Management Guidelines, 2016:

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 13 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

24. The 2016 guidelines are based on the principle that unregulated sand mining is unsustainable and must be controlled. Compliance with existing and future laws is mandatory rather than optional. Leaseholders should be allowed to self-regulate, provided they demonstrate adherence to legal requirements. However, if self-regulation proves ineffective, stricter enforcement and monitoring will be necessary, with penalties imposed in accordance with the law. Additionally, environmental protection and public well-being must be prioritized, ensuring that natural resources are utilized responsibly to contribute positively and sustainably to the economy. The prime objective of the said Guidelines is to ensure that sand mining is done in an environmentally sustainable and socially responsible manner. The purpose and object of the guidelines is declared as under:

> *"Sustainable Development is built on three pillars - environmental, social and economic. Sustainable development cannot be achieved if the environment is protected but poverty is prevalent in a significant part of the population. Similarly, sustainable development cannot be achieved through inappropriate economic growth, if it undermines the environment in which people and businesses exists. These Guideliness support that fundamental concept, promoting environmental protection, limiting negative physiological, hydrological and social impacts under pinning sustainable economic growth.*
>
> *Sand and gravel have long been used as aggregate for construction of roads and building. Today, the demand for these materials continues to rise. In India, the main sources of sand are river flood plain, coastal sand, paleo channel sand, and sand from agricultural fields.*
>
> *River sand mining is a common practice as habitation concentrates along the rivers and the mining locations are preferred near the markets or along the transportation route, for reducing the transportation cost. River sand mining can damage private and public properties as well as aquatic habitats. Excessive removal of sand may significantly distort the natural equilibrium of a stream channel.*
>
> *Removing sediment from the active channel bed in river interrupt the continuity of sediment transport through the river system, disrupting the sediment mass balance in the river downstream and induces channel adjustments (usually incision) extending considerable distances (commonly one kilometer or more) beyond the extraction site.*
>
> *The magnitude of the impact basically depends on the magnitudes of the extraction relative to bed load sediment supply and transport through the reach. Implementation of the principles*

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 14 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

and processes outlined in this Guidelines will limit the negative externalities of sand and gravel mining."

25. Explaining the method and manner by which sustainable sand and gravel mining are to be undertaken, the guidelines provide that:

The broad principle on which any sustainable sand mining Guidelines/policy can be based is that river/natural resources must be utilized for the benefit of the present and future generation, so river resources should be prudently managed and developed. The preparation of District Survey Report is an important initial step.

The Processes under the Guidelines:

(a) Identification of areas of aggradation/deposition where mining can be allowed; and identification of areas of erosion and proximity to infrastructural structures and installations where mining should be prohibited. Use of satellite imagery for identifying areas of sand deposit and quantity be done.

(b) Calculation of annual rate of replenishment and allowing time for replenishment after mining in area.

(c) Identifying ways of scientific and systematic mining.

(d) Identifying measures for protection of environment and ecology.

(e) Determining measures for protection of bank erosion.

(f) A bench mark (BM) with respect to mean sea level (MSL) should be made essential to in mining channel reaches (MCR). Below which no mining shall be allowed.

(g) Identifying steps for conservation of mineral.

(h) Permanent gauging facilities (for discharge and sediment both) should be made compulsory for the sites having excessive mining in consultation with Central Water Commission or any competent State Agency.

(i) Implementing safeguards for checking illegal and indiscrete mining.

Following the above processes, to begin with it is important to prepare a survey document mapping the status of sand sources in a district. This survey should be conducted and report be prepared for each district. Though it is an acceptable fact that rivers cut across districts and States and every river is an ecosystem in itself. But, keeping in view the fact that the district is the most established unit of administration at which this kind of survey, planning and monitoring can be ensured effectively, it is proposed that every district will prepare this document taking the river stretch in that district as an ecological unit and inventorising other sources of sand in the district.

(emphasis supplied)

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 15 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

26. As per the 2016 Guidelines, the preparation of DSR is essential for (i) identification of areas of aggradation/deposition where mining can be allowed, (ii) calculation of annual rate of replenishment, (iii) identifying ways of scientific and systematic mining, (iv) implementing safeguards in place to ensure the mining carried out is sustainable. The scope of the DSR should include detailed information for each district, covering rivers, streams, and other sand sources, along with the availability of sand, gravel, and aggregate resources. It must also provide data on existing mining leases for these materials. Additionally, the classification of mining areas should distinguish between sections of rivers, streams, and other sources that are suitable for sand and aggregate extraction and those where such activities are strictly prohibited. It is further provided that such survey document shall be prepared in the district based on direct and indirect benefits of mining and identification of the potential threats to the river/stream beds in the district.

B. Enforcement and Monitoring Guidelines for Sand Mining, 2020:

27. While the 2016 guidelines focus on management of sand mining in the country, it was felt that there is a compelling need to provide guidelines for effective enforcement and also prescribe regulatory method for monitoring. With this objective, the Enforcement and Monitoring Guidelines for Sand Mining 2020 were issued. In paragraph 4, the 2020 guidelines provide the method of identification of possible sand mining source and preparation of the DSR and highlight that "*Preparation of District Survey Report is a very important step and sustainable sand mining in any part of the country will depends on the quality of District Survey Report*."

> *"4.1.1 Preparation of District Survey Report.*
>
> *Sustainable Sand Mining Guidelines, 2016" issued by MoEF&CC requires preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease/LoI. The guidelines emphasize detailed procedure to be followed for the purpose of identification of areas of aggradation/deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited. Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining; identifying measures for protection of environment and ecology and determining measures for protection of bank erosion, benchmark (BM) with respect to mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed."*

28. The 2020 Guidelines lay special emphasis on the necessity to

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 16 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

undertake replenishment study. It is provided thereunder that;

"*5.0 REPLENISHMENT STUDY*

The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessing sand extraction. Mining within or near riverbed has a direct impact on the stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. Alteration or modification of the above attributes may cause an impact on the ecological equilibrium of the riverine regime, disturbance in channel configuration and flow-paths. This may also cause an adverse impact on in-stream biota and riparian habitats. It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river stretch, it is imperative to have a study of replenishment of material during the defined period.

5.1 Generic Structure of Replenishment Study

Initially replenishment study requires four surveys. The first survey needs to be carried out in the month of April for recording the level of mining lease before the monsoon. The second survey is at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the offset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned.

The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the Central Water Commission and Indian Meteorological Department. The excavation will, therefore, be limited to estimated replenishment estimated with consideration of other regulatory provisions.

5.2. Methodology for Replenishment Study

5.2.1 Physical Survey of the field by the conventional method

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 17 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

5.2.2 Use of UAV/Drone and other image data processing techniques

5.2.3 Accuracy Assessment of Aerial Data

5.2.4 Replenishment study shall have the details of

• List of instruments

• List of software

• Establishment of Benchmark by putting No. of pillar points and various Ground Control Points (GCP) at the site.

• Ground Control Points (GCP) Collection: - Various GCPs were observed by using DGPS for Permanent Benchmarks and for control points.

• The summary of the elevation data from each section's profile based on the post-monsoon the survey should have mentioned in the table form.

• The detail of post-monsoon survey data in the tabular form shall be

• The detailed comparison of both pre-monsoon and post-monsoon elevation data shall be attached

• Cross-sectional depiction of deposition and erosion for each section in pre and post-deposition season shall be given supported by relevant field study data and plan."

10. Need for replenishment study:

29. From the foregoing analysis, it is apparent that in light of Guidelines, 2016 and the Guidelines, 2020, the absence of a replenishment study renders a DSR fundamentally defective. These guidelines categorically require that any assessment of mineable mineral quantity must be premised on scientific estimation of replenishment rates, failing which the DSR lacks the foundational data necessary to determine sustainable extraction limits.

30. Over the past two decades, environmental statutory and regulatory law in India has undergone significant evolution, particularly in response to the challenges posed by unregulated and unsustainable sand mining. Recognizing the adverse ecological impacts of such activities, successive legal and policy frameworks have progressively tightened the requirements for environmental compliance. In order to appreciate the present controversy, it was necessary to retrace the legal trajectory. Recently, this Court has discussed, in detail, the legal regime surrounding the preparation, nature, scope and importance of DSR in *Gaurav Kumar* (supra). However, the focal point for present discussion is the value that must be appended to *replenishment study* before EC is granted to mining operations.

31. Demand for construction-grade sand is growing at a tremendous rate and it is said that the world is expected to run out of this resource

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 18 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

by 2050. Construction-grade sand, can be found in aquatic environments, such as rivers and is a provisioning ecosystem service. Even under controlled circumstances, the practice of extracting sand from the riverbed and banks impacts the environment. In the physical environment, the primary effects are riverbed widening and lowering. In the biological environment, the overarching effect is a reduced biodiversity and stretches from the aquatic and shoreline flora and fauna to the whole floodplain area.[18] Due to easy access, river sand and gravel have been used extensively in construction projects. Depending on the mining operation method as well as morphologic and hydraulic characteristics of the river, sand mining may cause bed and bank erosion or other negative consequences for the river eco-system. It is, therefore, necessary to conduct appropriate studies, including that of replenishment to explore sustainable and cost-effective methods for river mining.[19]

32. Without a proper study of the existing position of the riverbed and its sustainability for further sand mining, grant of environmental clearances would be detrimental for the ecology. It has therefore been held that a detailed study leading to a preparation of the *replenishment report* is an integral part of the DSR. If the DSR becomes the foundation for consideration of an application for environmental clearance, then it is compelling to ensure replenishment studies are undertaken in advance and the report forms an integral part of the DSR.

33. In view of the existing legal regime that mandates preparation of *replenishment report* in a scientific manner and such a report forming an integral part of the District Survey Report, we hold that a District Survey Report without a proper replenishment study is equally untenable.

11. Application of law to the facts of the present case.

34. We will now consider the facts of the present case in light of the existing legal regime as applicable to sand mining. The Union Territory of Jammu & Kashmir, Department of Geology and Mining is said to have prepared the DSR of all the districts during the year 2017-2018 as per the MoEF&CC notification. The National Highway Authority of India awarded a contract to the project proponent on 30.03.2021 for construction of a 4-lane bypass/ring road around Srinagar City. By its letter dated 07.05.2021, it directed the department to grant permission for mining at the identified sites to the project proponent to enable it to undertake the project. The Government also directed the project proponent to apply for permission under Rule 91 of the J&K Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016. The Government reserved the four

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 19 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

mineral blocks for the project proponent to excavate, develop and utilise the mineral. The project proponent in turn applied for environment clearances (EC) for extraction of sand and gravel in the 3 blocks.

35. The Jammu & Kashmir Expert Appraisal Committee by its order dated 03.01.2022 initially rejected the proposal for environmental clearance (EC). However, when the project proponent received *fit for mining* certificate from the department on 05.02.2022, the project proponent re-applied for grant of environmental clearance and the same was granted by J&K Expert Appraisal Committee by its order dated 02.03.2022. The committee specifically recorded that the District Survey Report is not formulated as per guidelines and therefore it needs revision for including the *replenishment data*. In our opinion, the J&K EAC committed a serious error in proceeding further with the DSR once it realised that it is not formulated as per the MoEF&CC Notification 2016 and 2016 and 2020 Sand Mining Guidelines and also when the *replenishment data* is not complete. Further, the half-hearted approach adopted by the J&K EAC is evident from its final recommendation for grant of EC with *validity of only three years from the date of commencement of the mining operations duly certified by the District Mineral Officer concerned with intimation to the JKEIAA and JKPCB in view of non-availability of replenishment data.*

36. The J&K Environment Impact Assessment Authority granted the environment clearance on 19.04.2022. The environment clearance was made subject to the following conditions.

> *"The Environment clearance is subject to Revision of mining plan in terms of Section 4.3(r) of Enforcement Monitoring Guidelines for Sand Mining-2020, issued by Ministry of Environment, Forests and Climate Change where-under the area of removal of minerals shall not exceed 60% of the mine lease area and any deviation or relaxation in this regard shall be adequately supported by the scientific report. Mining depth be restricted to max. 1m in aggregate and bulk density of 2.0 be adopted for calculating mineral production subject to maximum production of 34800MT, in view non-availability of replenishment data in the DSRs."*

37. It is unfortunate that J&K EIAA compromised with regulatory integrity by granting the environment clearances (EC) on the basis of a DSR without a *replenishment report*. The compromise sought to be achieved by permitting the project proponent to go ahead with a "*restricted mining depth of maximum 1 meter and bulk density of 2.0 for production of the mineral and supplying it to maximum production of 34800 mt in view of non-availability of replenishment data*" is unacceptable. The illegality committed by the J&K EAC in so recommending is accentuated with the J&K EIAA in granting EC. This is

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 20 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

how regulatory failure occurs.

38. We have already indicated that the respondent no. 1 challenged the grant of environment clearance before the NGT. By the order impugned before us, the NGT allowed the appeal. We are in complete agreement with the following findings of the NGT:

> *"159. Learned Counsel appearing for PP also argued that mining activities only upto one meter depth was allowed and it takes care of absence of DSR and replenishment study but when questioned, could not show any provision where under if mining for one meter depth is allowed, in such a case requirement of preparation of DSR or replenishment study can be dispensed with. In fact, under EIA 2006 as amended by notifications dated 15.01.2016 and 25.07.2018, there is no exception in respect of preparation of DSR and the same thing has been reiterated in SSMG-2016 and EMGSM-2020.*
>
> *160. Non-preparation of DSR as per guidelines and absence of replenishment study is a fact which has not been disputed before us by Learned Counsel appearing for PP. Stand taken by respondent 1 and 4 in the written reply submitted before us also does not show anything otherwise."*

39. In view of the above discussion, we have no hesitation in upholding the decision of the NGT and dismissing the civil appeals of the UT of J&K, the NHAI and also that of the project proponent.

40. This takes us to issue no. 3, which relates to the allegation that project proponent has violated the J&K Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016. The Tribunal came to the conclusion that there is no evidence of such violation. As there is no cross appeal, this issue need not detain us any further.

41. Insofar as issues 4 and 5 are concerned, the allegation is that the project proponent has used heavy machines like JCB etc. for excavation. It is alleged by respondent no. 1, a person interested in environment conservation, that the activity is in violation of condition no. 53 of the EC. The condition is as follows:

> *"53. Mining shall be done manually minimally supported by semi-mechanized methods. Heavy machinery like JCBs, Excavators/L&T hydraulic excavators etc. should not be allowed. Emphasis should be given to employment of locally available labour force to address the socio-economic concerns of the locals."*

42. The Tribunal came to the conclusion that there is in fact a violation and therefore directed J&K Pollution Control Board to take appropriate action. There is no need for us to interfere with this direction. The J&K Pollution Control Board will take its decision after

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 21 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

giving the project proponent an opportunity of placing its case before it.

43. We are informed by Mr. Narender Hooda, learned senior counsel appearing on behalf of the project proponent that the project itself is complete and as such there is no further requirement of environment clearance. In this view of the matter, no further orders are necessary.

44. In view of the above, the appeals filed on behalf of the Union Territory of J&K, NHAI and the project proponent are dismissed. The parties shall bear their own costs.

———

[1] 2025 SCC OnLine SC 1069.

[2] Hereinafter, "DSR".

[3] Hereinafter, "EC".

[4] Hereinafter, "DEAC".

[5] Hereinafter, "DEIAA".

[6] *State of UP* v. *Gaurav Kumar*, 2025 SCC OnLine SC 1069.

[7] Issued under Environment (Protection) Act, 1986.

[8] Hereinafter, Sand Mining Guidelines, 2016.

[9] Hereinafter Sand Mining Guidelines, 2020.

[10] Guidelines formulated under Section 23C of MMDR Act, 1957.

[11] Hereinafter, "SEIAA".

[12] Hereinafter, "Tribunal".

[13] Hereinafter, "MMDR Act".

[14] Hereinafter, "1994 Notification".

[15] Hereinafter, "2006 Notification".

[16] (2012) 4 SCC 629. Hereinafter, "*Deepak Kumar*".

[17] 2018 SCC OnLine NGT 2388.

[18] E.S. Rentier, L.H. Cammeraat, The Environmental Impacts of River Sand Mining, Science of the Total Environment, Vol. 838, Part I, 2022.

[19] Hamed Haghnazar, *et al* - Evaluation of infilling and replenishment of river sand mining pits,

SCC Online Web Edition, © 2026 EBC Publishing Pvt. Ltd.
Page 22 Thursday, April 23, 2026
Printed For: Mr Vanshdeep Dalmia
SCC Online Web Edition: https://www.scconline.com
© 2026 EBC Publishing Pvt. Ltd., Lucknow.

Environmental Earth Sciences, Vol. 79 (14), 2020.

Disclaimer: While every effort is made to avoid any mistake or omission, this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification is being circulated on the condition and understanding that the publisher would not be liable in any manner by reason of any mistake or omission or for any action taken or omitted to be taken or advice rendered or accepted on the basis of this casenote/ headnote/ judgment/ act/ rule/ regulation/ circular/ notification. All disputes will be subject exclusively to jurisdiction of courts, tribunals and forums at Lucknow only. The authenticity of this text must be verified from the original source.

\\TRUE COPY//

ANNEXURE A-20

Govt. of Bihar

Mines and Geology Department
District- Jamui
Short Notice Inviting E-Auction for Settlement of Sand ghats
(Through E-Procurement mode over https://www.eproc2.bihar.gov.in)

बिहार बालू खनन नीति, 2019 (यथा संशोधित) तथा बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 (यथा संशोधित) में उल्लेखित प्रावधानों के तहत जमुई जिला के प्रत्यार्पित बालूघाटों/बालूखण्डों (विखण्डित) की आगामी पाँच वर्षों के लिए बंदोबस्ती हेतु अल्पकालीन निविदा निम्न कार्यक्रमानुसार आमंत्रित की जाती है:–

1. ई–नीलामी कार्यक्रमः–

क्र.सं.	बालूखण्ड/ बालूघाट	निविदा दस्तावेज बिक्री शुल्क (5,000/–रू0) जमाकर निविदा दस्तावेज डाउनलोड प्रारंभ करने की तिथि	अग्रधन राशि एवं ऑक्शन प्रोसेसिंग फीस ऑनलाईन जमा तथा निविदा दस्तावेज अपलोड करने की अंतिम तिथि एवं समय	तकनीकी निविदा की जाँच/मूल्यांकन कर सफल निविदादाताओं की सूची सिस्टम में संबंधित समाहर्त्ता द्वारा अपलोड करने की अंतिम तिथि	ई–नीलामी प्रारंभ होने की तिथि एवं समय	ई–नीलामी समाप्ति की तिथि एवं समय
I	ब्लॉक–04 (उलाई) टोला सती घाट	02.04.2026	20.04.2026 को अपराह्न 05:00 बजे तक	24.04.2026	30.04.2026 को समय 11:00 AM	30.04.2026 को समय 01:00 PM तक
II	ब्लॉक–06 (उलाई) लोटन,					
III	ब्लॉक–07 (उलाई) तेगुआ,					
IV	ब्लॉक–09 (उलाई) लथानय,					
V	ब्लॉक–07 (किउल) सगदाहा बेला परसा					
VI	ब्लॉक–03 (अनजना) लठलठवा,					
VII	ब्लॉक–09 (बरनार) मंझगायन					
VIII	ब्लॉक–16 (बरनार) दाबिल					
XIV	ब्लॉक–01 (बरनार) दाबिल					

2. बालूखण्डों/बालुघाटों की विस्तृत विवरणी जिला के वेबसाईट https://jamui.nic.in पर उपलब्ध है।
3. बालूघाटों की बंदोबस्ती ई–नीलामी प्रक्रिया ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in से करायी जाएगी।
4. ई–नीलामी द्वारा कराई जा रही बंदोबस्ती में भाग लेने वाले व्यक्तियों/कम्पनी/फर्म को ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in पर निबंधन कराना अनिवार्य होगा।
5. एतद् संबंधी समस्त सूचना (यथा– नीलामी कार्यक्रम, सुरक्षित जमा राशि, अग्रधन राशि, नीलामी प्रोसेसिंग शुल्क इत्यादि) विस्तृत रूप से जिला के वेबसाईट https://jamui.nic.in, विभागीय वेबसाईट https://state.bihar.gov.in/mines एवं ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in पर उपलब्ध है।
6. एतद् संबंधी समस्त सूचना हेतु ई–टेंडरिंग/ई–प्रोक्योरमेंट हेल्पडेस्क, हेल्पडेस्क, प्रथम तल, प्लॉट नं0–एम/22 रोड न0–25 श्री कृष्ण नगर, पटना–800001 दूरभाष संख्या–0612–2523006, 7542028164, समाहर्त्ता द्वारा प्राधिकृत पदाधिकारी, खनिज विकास पदाधिकारी, जमुई मो0–7781044723 खान निरीक्षक, जमुई जिला, मो0 नं0–7050850507,7209705515, 9431711300 एवं डाटाइंट्री ऑपरेटर मो0–8252831743 से सम्पर्क किया जा सकता है।

❖ विस्तृत जानकारी के लिए www.state.bihar.gov.in/prdbihar पर देखा जा सकता है।

23/3/26
खनिज विकास पदाधिकारी,
जमुई।

23/3/26
समाहर्त्ता,
जमुई।

बिहार सरकार

खान एवं भूतत्व विभाग

जिला	जमुई।

बिहार सरकार

जमुई जिला के बालूघाटों की बंदोबस्ती
हेतु नीलामी के कागजात

ई–प्रोक्योरमेंट मोड

https://www.eproc2.bihar.gov.in

अनुलग्नक–1

जिला खनन कार्यालय, जमुई।

निविदा दस्तावेज

बंदोबस्ती की अवधि– पट्टा संविदा निष्पादन की तिथि से 5 वर्षो के लिए

बालूघाटों की बंदोबस्ती के लिए शर्त्त एवं बंधेज।

(1) निविदा दस्तावेज में निम्नांकित विवरण है:–

i. निविदा के शर्त्त एवं बंधेज (अनुलग्नक 1)
ii. बन्दोबस्ती हेतु बालूघाटों की विवरणी (अनुलग्नक 2)
iii. तकनीकी निविदा का प्रपत्र (अनुलग्नक 3)
iv. बन्दोबस्ती हेतु चिन्हित कुल बालूघाटों की विवरणी (अनुलग्नक 4)

(2) पंजीयन की प्रक्रिया :–

(i) ई–ऑक्शन प्रक्रिया में भाग लेने वाले इच्छुक व्यक्तियों को ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in में सर्वप्रथम पंजीयन कराना अनिवार्य होगा। यदि बोलीदाता द्वारा पूर्व में ई–ऑक्शन में भाग लेने हेतु पंजीयन कराया जा चुका हो, तो पुनः पंजीयन की आवश्यकता नहीं है। संभावित बोलीदाताओं को नीलामी में भाग लेने हेतु एक वैध श्रेणी–3 डिजिटल हस्ताक्षर एवं यूजर आई0डी0 प्राप्त करना अनिवार्य है। पंजीकरण हेतु संबंधित बोलीदाता के पास एक वैध ई–मेल आई0डी0 होना अनिवार्य है।

(ii) ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in पर पंजीयन लिंक के द्वारा सर्वप्रथम पंजीयन करना होगा। पंजीयन पर क्लिक करने पर एक नई ऑनलाईन प्रपत्र में दर्शाये गये विवरण को दर्ज करना होगा। सम्पूर्ण विवरण दर्ज करने के पश्चात आपको नियम एवं शर्तो को स्वीकार करना होगा तथा विंडों में दर्शित CAPTCHA को दर्ज कर अपना पंजीयन कराना होगा। सारे विवरण दर्ज करने के बाद संबंधित दस्तावेज के साथ पंजीयन शुल्क का भुगतान इसी प्रक्रिया में किया जाना होगा। पंजीयन शुल्क केवल ऑन–लाईन https://www.eproc2.bihar.gov.in पोर्टल के माध्यम से ही प्राप्त किया जायेगा।

❖ संबंधित बालूघाटों/बालूखण्डों के लिये बेल्ट्रॉन द्वारा निर्धारित Auction Processing fee की विवरणी निम्नवत् है :–

Sr. No.	Reserve Price	Auction Processing fee
1	Up to 70 Lacs	590/-
2	More than 70 Lacs to 3 crore	3540/-
3	More than 3 crore	5900/-

(iii) इस प्रक्रिया को पूर्ण करने के पश्चात् पोर्टल के विडों पर निविदादाता द्वारा किया गया पंजीयन सफलतापूर्वक किया गया है, इसका संदेश प्राप्त होगा। यदि आवश्यकता हो तो संबंधित प्रपत्र का प्रिंट आउट भी प्राप्त कर सकते हैं। पंजीयन की वैद्यता 01 वर्ष के लिए होगी।

(iv) उपरोक्त प्रक्रिया के उपरांत आपको यूजर आई0डी0 एवं पासवर्ड प्राप्त होगा। इस यूजर आई0डी0 एवं पासवर्ड का उपयोग नीलामी की प्रक्रिया में भाग लेने के लिए कर सकेंगे।

(3) बालूघाटों की बन्दोबस्ती हेतु नीलामी की शर्त्त एवं बंधेज :–

(i) प्रत्येक खण्ड/बालू खण्ड/बालूघाट के लिये अलग–अलग निविदा कागजात का क्रय करना होगा एवं अलग–अलग अग्रधन राशि के साथ निविदा देनी होगी ।

(ii) एक व्यक्ति/समिति/फर्म/कम्पनी को अधिकतम दो बालू खण्डों अथवा 200 हेक्टेयर क्षेत्र, जो भी कम हो, के लिए बंदोबस्ती दी जाएगी। उक्त सीमा मात्र बिहार बालू खनन नीति, 2019 की कंडिका 5 (i) में

उल्लेखित नदियों यथा– सोन, चानन, किउल, फल्गु एवं मोरहर के बालूघाटों की बंदोबस्ती पर लागू होगी। ई–ऑक्शन सिस्टम में ही यह व्यवस्था इनबिल्ट (Inbuilt) रहेगी।

(iii) बन्दोबस्ती ई–निविदा–सह–नीलामी प्रक्रिया द्वारा की जायेगी।

(4) **पात्रता** :– निबंधित कम्पनियॉ, पार्टनरशीप, सोसाईटी, सहकारी संस्था सहित, सोल प्रोपराईटरशीप, व्यक्तियों और संस्थाओं के भागीदार को पात्रता के निम्नांकित मानदण्डों को पूरा करना होगा :–

(i) भारत का नागरिक होना।

(ii) पैन कार्ड धारी होना।

(iii) रॉयल्टी/जी0एस0टी0 निबंधन प्रमाण पत्र का होना :–
संबंधित जिला से जी0एस0टी0 निबंधन प्रमाण–पत्र/पूर्व से निबंधित नहीं रहने पर एक माह के अंदर निबंधन करा लेने संबंधी घोषणा–पत्र/शपथ–पत्र।

(iv) पिछले तीन वित्तीय वर्षों (वर्ष 2022–23, 2023–24 एवं 2024–25) के दौरान बीडर का औसत वार्षिक टर्नओभर उसके द्वारा बीड किये गये खंडों/बालू खंड/बालूघाट के सुरक्षित मूल्य के 35 प्रतिशत् से कम नही होना चाहिए। भागीदारी की दशा में, सभी सदस्यों के संयुक्त तकनीकी और वित्तीय क्षमता पर पात्रता के लिए विचार किया जाएगा।

(v) जिला पदाधिकारी/पुलिस अधीक्षक/ अनुमंडल पदाधिकारी द्वारा निर्गत आचरण प्रमाण–पत्र। आचरण प्रमाण पत्र में यह अंकित होना चाहिए की उनके विरुद्ध संज्ञेय अपराध का कोई मुकदमा नही है और उसका अच्छा नैतिक चरित्र है। गलत चरित्र प्रमाण पत्र समर्पित करने पर संबंधित निविदादाता द्वारा जमा की गई सभी राशि जप्त कर 02 वर्षों के लिए काली सूची में डाल दिया जायेगा एवं अन्य विधिसम्मत कार्रवाई की जाएगी।

(vi) विभाग/बिहार राज्य खनन निगम में किसी प्रकार का कोई बकाया नही हो। बकाया राशि की वसूली के लिए नीलाम पत्र वाद दर्ज रहने पर निविदा के लिए पात्र नहीं होंगे।

(vii) किसी राज्य/केन्द्र के विभाग का उपक्रम द्वारा काली सूची में नहीं डाला गया हो।

(5) **निविदा देने की प्रकिया :–**
केवल ऑन लाईन पद्धति ई–प्रोक्योरमेंट पोर्टल https://www.eproc2.bihar.gov.in

(6) **ई–ऑक्शन की प्रक्रिया :–**

(i) नीलामी की सूचना में दर्शित समय के पूर्व इच्छुक व्यक्ति को https://www.eproc2.bihar.gov.in पोर्टल में पंजीयन के समय प्राप्त यूजर आई0डी0 एवं पासवर्ड प्रविष्टि करना होगा।

(ii) पोर्टल में प्रविष्टि के उपरांत एक्टिविटी विंडों में क्लिक करना होगा। इस विंडों में क्लिक के उपरांत आपको ऑक्शन का चयन करना होगा।

(iii) अग्रधन एवं आवेदन शुल्क सफलता पूर्वक जमा करने के पश्चात् बोलीदाता बेल्ट्रॉन द्वारा प्रदान किये गये यूजर आई0डी0 का उपयोग करते हुए लॉगिन करेंगे एवं भुगतान रसीद के साथ सभी वांछित कागजात अपलोड करेंगे।

(7) **तकनीकी निविदा के लिए निम्नांकित कागजात पोर्टल पर अपलोड किया जाना होगा :–**

(क) निविदा देने वाले को कुल सुरक्षित जमा राशि का 25 प्रतिशत अग्रधन (Earnest Money) के रूप में ऑनलाईन माध्यम से स्वंय/कम्पनी/फर्म/संस्था के खाता से जमा करना होगा। निविदादाता को विगत 03 माह के बैंक खाता विवरणी की प्रति के साथ बैंक द्वारा निर्गत इस प्रभाव का एक प्रमाण पत्र ऑनलाईन अपलोड करना होगा।

(ख) निविदा की शर्त्तों एवं बंधेजों के प्रत्येक पृष्ठ पर मुहर के साथ हस्ताक्षर।

(ग) निविदा आवेदन पर मुहर के साथ हस्ताक्षर।

(घ) पैन कार्ड एवं आधार कार्ड की स्वअभिप्रमाणित फोटोप्रति।

(च) संबंधित जिला/निगम से स्वामिस्व स्वच्छता प्रमाण पत्र– पूर्व में अगर निविदादाता द्वारा वृहत खनिज का पट्टा अथवा लघु खनिज की बन्दोबस्ती/अनुज्ञप्ति ली गयी हो अथवा स्टॉकिस्ट अनुज्ञप्ति लिया गया हो तो संबंधित जिले के खनन पदाधिकारी/निगम से बकाया रहित प्रमाण पत्र लेकर जमा करना

होगा। यदि निविदादाता पूर्व में कोई बन्दोबस्ती/पट्टा/अनुज्ञप्ति नहीं लिये हो तो इस आशय का घोषणा– पत्र संलग्न करना होगा। बकाया राशि की वसूली के लिए नीलाम पत्र वाद दर्ज रहने पर निविदा के लिए पात्र नहीं होंगे।

(छ) जी0एस0टी0 निबंधन प्रमाण–पत्र/पूर्व से निबंधित नही रहने पर एक माह के अन्दर निबंधन करा लेने संबंधी घोषणा पत्र/शपथ पत्र। GST प्रमाण पत्र नहीं रहने पर सैद्धांतिक स्वीकृत्यादेश (LoI) निर्गत किया जा सकेगा किन्तु खनन के लिए अनुमति निबंधन के पश्चात ही होगी।

(ज) जिला पदाधिकारी/पुलिस अधीक्षक/ अनुमंडल पदाधिकारी द्वारा निर्गत आचरण प्रमाण–पत्र। आचरण प्रमाण पत्र में यह अंकित होना चाहिए की उनके विरुद्ध संज्ञेय अपराध का कोई मुकदमा नही है और उसका अच्छा नैतिक चरित्र है। गलत चरित्र प्रमाण पत्र समर्पित करने पर संबंधित निविदादाता द्वारा जमा की गई सभी राशि जप्त कर 02 वर्षों के लिए काली सूची में डाल दिया जायेगा एवं अन्य विधिसम्मत कार्रवाई की जाएगी।

(झ) फर्म/प्राईवेट लि0 कम्पनी के मामले में अद्यतन लेखा (Balance sheet)।

(ट) समिति के मामले मे अंकेक्षण रिपोर्ट।

(ठ) चार्टर्ड एकाउटेंट द्वारा सत्यापित **वित्तीय वर्ष** 2022–23, 2023–24 एवं 2024–25 का वार्षिक लेखा।

(ड) कम्पनी एवं अन्य के मामले में **वित्तीय वर्ष** 2022–23, 2023–24 एवं 2024–25 की आयकर रिटर्न की स्वअभिप्रमाणित प्रति।

(ढ) मेमोरेण्डम/आर्टिकल्स ऑफ एसोसिएशन/उप नियम। (व्यक्ति विशेष को छोड़कर अन्य मामले में)

(त) साझेदारी के मामले में साझेदारी दस्तावेज का स्व अभिप्रमाणित प्रति।

(थ) स्वअभिप्रमाणित दो पासपोर्ट साईज फोटों।

(द) समिति के मामले में उप नियम (Bye-laws) और कम्पनी के मामले में मेमोरेण्डम की प्रति।

(ध) इस आशय का शपथ पत्र कि निविदादाता/पार्टनरशिप फर्म/कंपनी के निदेशकों में से किसी को भी राज्य/केन्द्र सरकार के किसी उपक्रम द्वारा काली सूची में नहीं डाला गया है।

(न) अपलोड सभी कागजात स्पष्ट एवं पठनीय होना चाहिए। अपठनीय कागजात को स्वीकार नहीं किया जाएगा।

(8) सभी वांछित कागजातों को अपलोड करने के पश्चात् बोली आमंत्रण प्राधिकार (निविदा समिति) द्वारा दस्तावेजों की जाँच की जायेगी। केवल वैध दस्तावेज समर्पित करने वाले निविदादाताओं को ही ई–नीलामी की प्रक्रिया में भाग लेने हेतु स्वीकृति दी जायेगी।

(9) ऑक्शन मोड के चयन के उपरांत निविदादाता को संबंधित सम्पदा का चयन करना होगा, जिसके उपरान्त नीलामी में प्रदर्शित सम्पदाओं की सूची विंडों में दर्शित होगी।

(10) प्रत्येक बोलीदाता के कम्प्यूटर विंडों पर अन्य बोलीदाताओं की सर्वोच्च बोली ही प्रदर्शित होगी। बोलीदाता के नाम तथा पहचान पूर्णतः गोपनीय होगी।

(11) आवश्यकता पड़ने पर ऑन–लाईन निविदा प्रक्रिया प्रांरभ होने के पश्चात्, किन्तु प्रक्रिया पूर्ण होने के पूर्व कभी भी लिखित सूचना निर्गत कर नीलामी कार्यक्रम में परिर्वतन किया जा सकता है, जो मात्र ऑन–लाईन प्रदर्शित होगा। अतः बोलीदाता को https://www.eproc2.bihar.gov.in पोर्टल से सूचना देखते रहना होगा। बोलीदाता की ये जिम्मेवारी होगी कि वह पोर्टल का अवलोकन करते रहे। किसी अन्य माध्यम से सूचना नहीं दी जायेगी।

(12) किसी विशिष्ट सम्पदा के ई–नीलामी की प्रक्रिया में निर्धारित समय सीमा के अंतिम 05 मिनट में यदि किसी बोलीदाता द्वारा बोली समर्पित की जाती है तो सिस्टम द्वारा स्वतः बोली समाप्ति की अवधि को **केवल एक बार मात्र अगले एक घंटा की अवधि के लिए विस्तारित कर दिया जायेगा**। उसके बाद अवधि विस्तार नहीं किया जायेगा।

(13) सफलतम बोलीकर्ता को स्वचालित सिस्टम द्वारा ई–मेल एवं पोर्टल के माध्यम से उच्चतम बोलीकर्ता होने की सूचना दी जाएगी।

(14) बोली लगाते समय बोलीदाता के सभी आई0टी0 संसाधनों एवं उपकरणो के सुचारू रूप से कार्य करने संबंधी जिम्मेदारी पूर्ण रूप से बोलीदाता की होगी। किसी भी प्रकार की तकनीकी समस्या एवं इन्टरनेट

विच्छेद संबंधी मामलो में बेल्ट्रॉन/जिला खनन कार्यालय, जमुई अथवा खान एवं भूतत्व विभाग, बिहार सरकार की कोई जिम्मेदारी नहीं होगी। इस कारण से हुई क्षति के लिए बोलीदाता स्वयं जिम्मेदार होंगे।

(15) सभी इच्छुक निविदादाता ई–नीलामी हेतु पंजीकरण करने एवं ऑन–लाईन आवेदन करने से पूर्व नियम एवं शर्त्तो को अच्छी तरह से पढ़ ले। आवेदन करने के बाद यह माना जायेगा कि निविदादाताओं द्वारा नियम एवं शर्त्तो को ध्यान से पढ़ लिया गया है तथा सभी नियम शर्त्ते उनको मान्य है। बाद में इस संबंध में किसी भी प्रकार का दावा/आपत्ति अस्वीकार्य होगा।

(16) नीलामी की तिथि एवं समय ई–नीलामी कार्यक्रम में उल्लेखित है। सभी इच्छुक बोलीदाता यह सुनिश्चित हो लेंगे कि ई–नीलामी से संबंधित अपने सभी आई0टी0 संसाधनो एवं उपकरणों की समुचित जाँच कर ली है एवं निर्धारित नीलामी कार्यक्रम के अनुसार ही भाग लेंगे।

(17) ऑक्शन प्रोसेसिंग शुल्क एवं निविदा दस्तावेज शुल्क अप्रतिदेय (Non-Refundable) होगा। अतः इस संबंध में राशि वापसी से संबंधित किसी भी प्रकार के अनुरोध अथवा आवेदन पर विचार नहीं किया जायेगा और न ही इस संबंध में किसी प्रकार का कोई दावा अनुरक्षणीय (Non-Maintainable) होगा।

(18) ई–नीलामी की प्रक्रिया के तहत बोलीदाताओ द्वारा यदि किसी प्रकार की अनियमितता अथवा भ्रष्ट आचरण का प्रयोग किया जाता है तो उस नीलामी प्रक्रिया को तत्काल स्थगित किया जा सकता है। निविदा प्रक्रिया को रद्द करने का अधिकार समाहर्त्ता/ खान एवं भूतत्व विभाग के पूर्ण विवेकाधिकार में होगा।

(19) **बालूघाटों की बंदोबस्ती की प्रक्रिया एवं सफल निविदादाता का चयनः–**

(i) बालूघाटों की बंदोबस्ती उच्चतम डाकवक्ता/बोलीदाता के पक्ष में ई–निविदा–सह–नीलामी (e-tendering-cum-auction) के माध्यम से उन निविदादाताओं के बीच से की जाएगी जिनकी तकनीकी निविदा, निविदा दस्तावेजों में वर्णित पात्रताओं की शर्त्तो के अनुसार उपयुक्त पाई जाएगी।

(ii) जो व्यक्ति/समिति/फर्म/कम्पनी तकनीकी निविदा में सफल होंगे, सिर्फ उन्हीं निविदादाताओं को ई–नीलामी में भाग लेने का मौका दिया जायेगा। ई–नीलामी में जो उच्चतम डाकवक्ता होंगे वही सफल निविदादाता माने जायेंगे।

(iii) उच्चतम निविदादाता/डाकवक्ता द्वारा बन्दोबस्ती लेने से इन्कार करने या निर्धारित अवधि में अन्य औपचारिकताएं पूर्ण नहीं करने पर या असफल रहने पर उनकी जमा अग्रधन/ प्रतिभूति राशि जप्त कर ली जायेगी एवं अगले 02 वर्ष के लिए निविदा में भाग लेने से वंचित कर दिया जायेगा।

(iv) ई–नीलामी में न्यूनतम बोली की बढ़ोतरी राशि (Incremental Value) सुरक्षित जमा राशि की 10 प्रतिशत के बराबर होगी। वित्तीय बोली Incremental Value के गुणज (Multiple) में ही लगायी जा सकती है।

(v) तकनीकी निविदा में सफल निविदादाताओं द्वारा ई–नीलामी में भाग नहीं लेने के कारण नीलामी विफल हो जाने पर तकनीकी निविदा में सफल सभी निविदादाताओं की अग्रधन की राशि जप्त कर ली जाएगी।

(vi) एकल निविदा प्राप्त होने की स्थिति में पुनः अल्प निविदा आमंत्रित की जायेगी। दूसरी बार भी यदि और कोई निविदादाता नहीं आते हैं, तो एकल निविदा को सुरक्षित जमा के उपर बोली की स्थिति में समाहर्त्ता के अनुशंसा के साथ विभाग को भेजा जायेगा एवं विभाग का पूर्वानुमोदन प्राप्त होने पर एकल निविदादाता के पक्ष में बालूघाटो का नियमानुसार बंदोबस्ती की जा सकेगी।

(vii) नीलामी राशि केवल प्रथम वर्ष के लिए बंदोबस्ती की राशि मानी जाएगी। दूसरे वर्श एवं उसके बाद के वर्श की बंदोबस्ती राशि गत वर्ष की बंदोबस्ती राशि के 120 प्रतिशत के बराबर होगी।

(viii) अपेक्षित दस्तावेजों को पोर्टल पर अपलोड करने, अपेक्षित राशि के भुगतान, पट्टा संविदा के निष्पादन के बाद कार्य–आदेश उच्चतम डाकवक्ता के पक्ष में निर्गत किया जाएगा।

(ix) बंदोबस्तधारी बंदोबस्ती अवधि के दौरान नियमों/निविदा दस्तावेज के अधीन किये गये प्रावधानों के अनुसार संपूर्ण खनन एवं अन्य देय करों का भुगतान करेगा।

(20)सफल निविदादाता के चयन के बाद की औपचारिकताएँ :–

i. नीलामी के 05 कार्य दिवस के अंदर, उच्चतम डाकवक्ता से नीलामी राशि का 25 प्रतिशत का भुगतान, प्रतिभूति जमा, (इस प्रयोजनार्थ अग्रधन समायोजन योग्य है) के रूप में करने की अपेक्षा की जाएगी और सैद्धांतिक रूप से स्वीकृत्यादेश (LoI) उच्चतम डाकवक्ता के पक्ष में निर्गत किया जाएगा और उसके बाद उच्चतम डाकवक्ता निविदा पत्र में वर्णित अपेक्षित दस्तावेजों यथा–अनुमोदित खनन योजना, पर्यावरणीय अनापत्ति नियत कालावधि के अन्दर जमा करेगें। **प्रतिभूति राशि पर किसी तरह का कोई ब्याज देय नहीं होगा।**

ii. प्रतिभूति राशि बंदोबस्ती अवधि की समाप्ति के बाद लौटायी जाएगी बशर्त्ते कि कोई अन्य बकाया वसूल नहीं किया जाना हो।

iii. अग्रधन/प्रतिभूति जमा और नीलामी की किस्तों का भुगतान केवल ऑनलाईन माध्यम से ही स्वीकार किया जाएगा, जो–

(क) किसी व्यक्ति की दशा में ऑनलाईन राशि अंतरण अपने **स्वयं के बैंक खाते** से किया जाएगा।

(ख) भागीदारी फर्म की दशा में ऑनलाईन राशि अंतरण **संबंधित फर्म अथवा उसके भागीदारों के बैंक खाते** से किया जाएगा।

(ग) कंपनी की दशा में ऑनलाईन राशि अंतरण **संबंधित कंपनी या उसके प्रबंध निदेशक या उसके संबंधित निदेशकों के खाते** से किया जाएगा।

(घ) किसी भी कारण से ई–नीलामी रद्द होने के मामलें में, सफल डाकवक्ता द्वारा जमा की गई कोई भी राशि, जिसमें अग्रधन राशि एवं प्रतिभूति राशि आदि शामिल हो, को खान एवं भूतत्व विभाग, बिहार सरकार के विवेकाधिकार पर वापस किया जाएगा। हालांकि इस संबंध में **किसी तरह का ब्याज अथवा मुआवजे एवं नुकसान आदि के लिए कोई दावा मान्य नहीं होगा।**

iv. सफल निविदादाता को निविदा हेतु ऑनलाईन अपलोड किये गये सभी दस्तावेजो की स्वअभिप्रमाणित प्रति जिला खनन कार्यालय में 02 दिन में समर्पित किया जाना होगा।

v. सफल निविदादाता कंपनी/समिति/साझेदारी के मामलों में सभी निदेशकों/सदस्यों/प्रोपराईटर/साझेदारों की सूची एवं उनकी चल–अचल सम्पति की विवरणी तथा कंपनी/समिति/साझेदार की भी चल–अचल सम्पति की विवरणी 02 दिन में उपलब्ध करायेंगे। जिला खनन कार्यालय/खनिज विकास पदाधिकारी का इस विवरणी को प्राप्त करने की व्यक्तिगत जिम्मेवारी होगी एवं प्राप्त होने के उपरांत ही लेटर ऑफ इंटेंट/सैद्धातिक स्वीकृति निर्गत कराना सुनिश्चित करेंगे।

(21)वैधानिक अनापत्तिः– बालूघाट संचालन हेतु आवश्यक समस्त वैधानिक अनापत्ति/अनुमति (जैसेः– खनन योजना, पर्यावरणीय स्वीकृति, जल एवं वायु सहमति आदि सफल डाकवक्ता द्वारा प्राप्त की जाएगी। वैधानिक अनापत्ति/अनुमति प्राप्त करने के पश्चात् ही बालू खनन प्रारंभ किया जा सकेगा। वैधानिक अनापत्ति/अनुमति के बिना अथवा वैधानिक अनापत्ति/अनुमति में अनुज्ञात मात्रा से अधिक मात्रा या निर्धारित क्षेत्र से बाहर खनन किए जाने की दशा में सुसंगत नियमों के अनुसार संबंधित सफल डाकवक्ता/बंदोबस्तधारी पर कार्रवाई की जाएगी। वैधानिक अनापत्ति/अनुमति निम्नानुसार हैः–

i. **खनन योजनाः–**

(a) राज्य सरकार द्वारा खनन योजना, राज्य सरकार द्वारा प्राधिकृत एजेंसी अथवा विभाग द्वारा प्राधिकृत पदाधिकारी अथवा खनिज समानुदानधारक के माध्यम से तैयार की जा सकेगी, जिसमें उपरोक्त तीनों के द्वारा मान्यता प्राप्त अर्हित व्यक्ति/संस्थान से खनन योजना तैयार करने में मदद ली जा सकेगी।

(b) बंदोबस्तधारी द्वारा खनन योजना तैयार करने की स्थिति में सैद्धांतिक स्वीकृत्यादेश (LOI) निर्गत करने के अधिकतम 15 (पन्द्रह) दिनों के अन्दर बंदोबस्तधारी द्वारा खनन योजना विभाग में अनुमोदन हेतु समर्पित की जाएगी।

(c) निर्धारित समय में खनन योजना प्रस्तुत नहीं करने पर बंदोबस्तधारी को प्रथम एक सप्ताह के विलम्ब के लिए Rs. 1,00,000/– (रूपये एक लाख), अगले एक सप्ताह के लिए Rs. 2,00,000/– (रूपये दो लाख) एवं अगले दो सप्ताह के विलम्ब के लिए उच्चतम बोली का 0.5% जुर्माना अधिरोपित किया जाएगा। अधिरोपित जुर्माना जमा नहीं करने की स्थिति में जुर्माना की राशि

प्रतिभूति जमा में से काटी जाएगी। इसके पश्चात भी यदि बंदोबस्तधारी द्वारा खनन योजना/ पर्यावरणीय स्वीकृति हेतु आवेदन समर्पित नहीं किया जाता है तो समाहर्त्ता द्वारा बंदोबस्तधारी से कारणपृच्छा करने के उपरांत LOI रद्द कर प्रतिभूति राशि जप्त की जाएगी।

(d) समर्पित खनन योजना की प्राप्ति के एक सप्ताह के अन्दर विभाग द्वारा गठित समिति/ प्राधिकृत शैक्षणिक संस्थान के द्वारा स्वीकृति/ अस्वीकृति प्रदान की जायेगी। अस्वीकृति के कारणों को स्पष्ट रूप से अंकित किया जायेगा, ताकि संबंधित द्वारा अगले 15 (पन्द्रह) दिनों के अन्दर पुनः खनन योजना समर्पित की जा सके।

ii. **पर्यावरणीय स्वीकृति/संचालनार्थ सहमति** (CTE/CTO):–

(a) सभी खनिज समानुदान धारक अथवा राज्य सरकार द्वारा प्राधिकृत एजेंसी अथवा विभाग द्वारा प्राधिकृत पदाधिकारी प्रचलित पर्यावरणीय समाघात निर्धारण (EIA) अधिसूचना, प्रदूषण नियंत्रण पर्षद के आदेशों और भारत सरकार के पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय के सक्षम प्राधिकारी द्वारा निर्गत अंतिम अनुदेशों के अनुसार तथा पर्यावरण सुरक्षा अधिनियम के प्रावधानों के अनुसार निर्धारित समय सीमा में पूर्व पर्यावरण अनापत्ति प्राप्त कर लेंगे एवं नियमों का अनुपालन करेंगे। *वैसे बालूघाट जिसका पर्यावरणीय स्वीकृति पूर्व से ही प्राप्त है, तो पूर्व से प्राप्त पर्यावरणीय स्वीकृति का हस्तानान्तरण एवं हस्तान्तरित पर्यावरणीय स्वीकृति की वैद्यता समाप्ति से पहले भोश बचे बंदोबस्ती अवधि के लिए पर्यावरणीय स्वीकृति का अवधि विस्तार संबंधित बंदोबस्तधारी द्वारा नियमानुसार कराया जायेगा। पर्यावरणीय स्वीकृति की अवधि विस्तार की प्रत्यासा में बालूघाट बंद होने की स्थिति में कोई क्षति–पूर्ति का दावा मान्य नहीं होगा।*

(b) बंदोबस्तधारी द्वारा पर्यावरणीय स्वीकृति प्राप्त करने की स्थिति में उनके द्वारा खनन योजना अनुमोदन के अधिकतम 15 (पन्द्रह) **कार्य दिवस** के अन्दर टर्म ऑफ रेफरेन्स (ToR) स्वीकृति के लिए प्रस्ताव/आवेदन राज्य पर्यावरण समाघात निर्धारण प्राधिकार (SEIAA) के परिवेश पोर्टल पर समर्पित किया जाएगा।

(c) बंदोबस्तधारी द्वारा सैद्वान्तिक स्वीकृत्यादेश (LoI) प्राप्त होने के उपरांत संबंधित खनन पट्टा के लिए निकटतम मोनिटरिंग अवधि (Base Line Data Collection Period) समाप्ति से अधिकतम 07 (सात) **कार्य दिवस** के अन्दर प्रारूप पर्यावरण समाघात निर्धारण प्रतिवेदन (Draft EIA) एवं लोक सुनवाई के लिए निर्धारित शुल्क बिहार राज्य प्रदूषण नियंत्रण पर्षद के समक्ष जमा करेगा।

(d) बंदोबस्तधारी संबंधित खनन पट्टा के लिए सम्पन्न लोक सुनवाई की कार्यवाही निर्गत की तिथि से अधिकतम 07 (सात) **कार्य दिवस** के अन्दर अंतिम पर्यावरण समाघात निर्धारण प्राधिकार प्रतिवेदन (Final EIA), SEIAA, Bihar के समक्ष जमा करेगा।

(e) पर्यावरणीय स्वीकृति प्राप्त करने के क्रम में SEIAA द्वारा अपेक्षित मंतव्य 15 कार्य दिवसों में विभाग/ संबंधित समाहर्त्ता द्वारा उपलब्ध करा दिया जाएगा।

(f) पर्यावरणीय स्वीकृति प्राप्त करने के अधिकतम 07 (सात) **कार्य दिवस** के अन्दर बंदोबस्तधारी द्वारा CTE/CTO के लिए आवेदन बिहार राज्य प्रदूषण नियंत्रण पर्षद को समर्पित किया जाएगा।

(g) खनन योजना अनुमोदन के पश्चात निर्धारित समय में सक्षम प्राधिकार के समक्ष पर्यावरणीय स्वीकृति का आवेदन प्रस्तुत नहीं करने पर बंदोबस्तधारी को प्रथम एक सप्ताह के विलम्ब के लिए Rs-1,00,000/– (रूपये एक लाख), अगले एक सप्ताह के लिए Rs. 2,00,000/– (रूपये दो लाख) एवं अगले दो सप्ताह के विलम्ब के लिए उच्चतम बोली का 0.5% जुर्माना अधिरोपित किया जाएगा। अधिरोपित जुर्माना जमा नहीं करने की स्थिति में जुर्माना की राशि प्रतिभूति जमा में से काटी जाएगी। इसके पश्चात भी यदि खनन योजना/पर्यावरणीय स्वीकृति हेतु आवेदन समर्पित नहीं किया जाता है तो समाहर्त्ता द्वारा बंदोबस्तधारी को कारणपृच्छा करने के उपरांत LOI रद्द कर प्रतिभूति राशि जप्त की जाएगी।

iii. **खनन के लिए अनुमत मात्राः**– खनन योजना, पर्यावरणीय स्वीकृति तथा जल (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1974 तथा वायु (प्रदूषण निवारण एवं नियंत्रण) अधिनियम, 1981 के तहत प्राप्त सहमति मे वर्णित बालू की मात्रा (इनमें से जो भी कम हो) तक ही खनन अनुमान्य होगा। यदि अनुमोदित खनन योजना, पर्यावरणीय स्वीकृति तथा जल एवं वायु सहमति में खनन योग्य मात्रा कम किये जाने पर भी वार्षिक देय बंदोबस्ती राशि किसी स्थिति में कम नहीं की जाएगी।

(22) **बंदोबस्ती विलेख/पट्टा संविदा (डीड) निष्पादन करनाः–**

i. सफल डाकवक्ता द्वारा सभी वैधानिक अनापत्ति प्राप्त करने के उपरान्त 5 वर्षों की अवधि के लिए बालू खनन करने हेतु समानुदान/बन्दोबस्ती स्वीकृत किया जाएगा। सफल डाकवक्ता विहित प्रपत्र में संबंधित नियमानुसार बंदोबस्ती विलेख अथवा उसके समरूप एक प्रपत्र, कार्य आरंभ करने के पहले, निष्पादित करेगा तथा यथा विहित अपेक्षित प्रतिभूति राशि जमा देगा। बंदोबस्तधारी के पट्टे की अवधि विलेख/संविदा निष्पादन की तिथि से पॉच वर्षों के लिए विधिमान्य होगा।

ii. बंदोबस्तधारी को निष्पादित **संविदा का निबंधन संबंधित विभाग के प्रचलित नियमों के अधीन 15 दिनों के अन्दर** कराना अनिवार्य होगा।

(23) **बालू खनन की अनुमतिः–** बंदोबस्तधारी को सभी अपेक्षित वैधानिक अनापत्ति/अनुमति प्राप्त करने, अपेक्षित किस्त का भुगतान करने एवं पट्टा संविदा निष्पादन के बाद बालू खनन की अनुमति दी जाएगी।

(24) **भुगतान की शर्तेः–**

(i) नीलामी–राशि केवल प्रथम वर्ष के लिए बंदोबस्ती की राशि मानी जाएगी। दूसरे वर्ष और उसके बाद की बंदोबस्ती की राशि गत् वर्ष की बंदोबस्ती राशि के 120 प्रतिशत् के बराबर होगी।

(ii) प्रतिभूति जमा के अतिरिक्त बंदोबस्तधारी निम्नलिखित समय सारणी/भुगतान अनुसूची के अनुसार बंदोबस्ती की राशि का भुगतान करेगा :–

किस्त	भुगतान की नियत तारीख
प्रथम किस्त (50%)	(क) पट्टा एकरारनामा निष्पादन से पहले (पहले वर्ष के लिए) (ख) प्रथम वर्ष में पट्टा एकरारनामा निष्पादन की तिथि से एक वर्ष पूरा होने के 60 (साठ) दिन पूर्व और अनुक्रमिक वर्षों में इसी प्रक्रिया का पालन करते हुए जमा किया जायेगा।
द्वितीय किस्त (25%)	प्रत्येक समानुदान वर्ष की शुरूआत से 03 (तीन) माह पूरा होने से पहले।
तृतीय किस्त (25%)	प्रत्येक समानुदान वर्ष की शुरूआत से 06 (छः) माह पूरा होने से पहले।

प्रत्येक समानुदान वर्ष में बंदोबस्तधारी द्वारा पहली किस्त के भुगतान के समय दूसरी और तीसरी किस्तों की राशि के लिए पोस्टडेटेड चेक समाहर्त्ता, जमुई ‘‘ के समक्ष जमा की जायेगी। यदि किस्तों के भुगतान करने में बंदोबस्तधारी असफल होता है तो आगे ई–चालान सिस्टम द्वारा बंद कर दिया जाएगा और केवल अग्रिम भुगतान कर दिये जाने के बाद ही खोला जाएगा एवं इसके लिए किसी तरह के क्षतिपूर्ति का कोई दावा मान्य नहीं होगा।

(25) **GST का भुगतान :–** बंदोबस्तधारी को जी0एस0टी0 के रूप में प्रचलित दर के अनुसार राशि वाणिज्य कर विभाग को भुगतान करना होगा। जिला खनन् कार्यालय, जमुई में जी0एस0टी0 भुगतान का प्रमाण प्रत्येक किस्त के साथ देना होगा।

(26) **आयकर/अन्य करों का भुगतानः–** बंदोबस्तधारी को आयकर अधिनियम के तहत आयकर एवं उस पर नियमानुसार देय अधिभार का भुगतान आयकर विभाग के प्रचलित दर के अनुसार एक मुश्त करना होगा। यह राशि बंदोबस्ती राशि के प्रत्येक किस्त के साथ देय होगी। जिला खनन् कार्यालय, जमुई ‘‘द्वारा यह राशि आयकर मद में जमा करा दी जायेगी।

(27) **जिला खनिज फाउन्डेशनः–** सफल डाकवक्ता को बंदोबस्ती राशि का 2 प्रतिशत राशि DISTRICT MINERAL FOUNDATION, JAMUI के नाम से भुगतेय बैंक ड्राफ्ट के माध्यम से जिला खनिज फाउण्डेशन नियमावली, 2018 के अनुसार करना होगा।

(28) **बालू का विक्रय मूल्यः–** अंतिम उपयोगकर्त्ता अथवा आम जन हेतु बालू का मूल्य बाजार द्वारा विनिश्चित किया जाएगा। लेकिन लोकहित में समाहर्त्ता/खनन विभाग नीलामी राशि, अन्य खर्च, बंदोबस्तधारी का लाभ का अंतर इत्यादि को ध्यान में रखते हुए विक्रय दर निर्धारित कर सकेगा।

(29) **बालू खनन हेतु प्रतिबंधित क्षेत्रः–** बालू खनन हेतु प्रतिबंधित क्षेत्र प्रभावी नियमों के अनुसार होगें।

(30) (क) बालू खनन की अधिकतम गहराईः–

नदी तल में खनन की अधिकतम गहराई उस समय बिना खुदाई वाले तल स्तर से 01 मीटर अथवा जल स्तर जो भी कम हो, से अधिक नही होगी। लेकिन जिला सर्वेक्षण प्रतिवेदन में सृजित बालूघाटों के लिए प्रतिवेदन में उल्लेखित गहराई को मान्य किया जायेगा। उत्खनन के दौरान निर्मित सभी ऐसे गड्ढे नियमित आधार पर भर दिये जाऐंगे।

(ख) खनन योग्य मात्रा में वृद्धिः–

जिन बालूघाटों से बालू खनन 03 मीटर से कम अनुमान्य है, उन बालूघाटों के लिए भविष्य में पर्यावरण, वन एवं जलवायु परिर्वतन मंत्रालय एवं राज्य पर्यावरण समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा खनन योग्य गहराई 03 मीटर तक अनुमान्य किये जाने की स्थिति में खनन योग्य मात्रा में वृद्धि के अनुसार बंदोबस्ती राशि में भी समानुपातिक वृद्धि की जाएगी एवं इसका भुगतान बंदोबस्तधारी को करना होगा।

(31) बंदोबस्ती/समानुदान का प्रत्यार्पण–

i. बंदोबस्तधारी को बंदोबस्ती छोड़ने के पूर्व उस पंचांग वर्ष की सम्पूर्ण बंदोबस्ती राशि जमा करनी होगी। बंदोबस्ती प्रत्यार्पित करने की स्थिति में जमा सम्पूर्ण प्रतिभूति राशि के साथ–साथ भुगतान की गई अन्य राशि को जप्त कर ली जायेगी। साथ ही बंदोबस्तधारी के रूप में निर्गत भंडारण अनुज्ञप्ति भी स्वतः रद्द समझी जाएगी।

ii. बंदोबस्ती समर्पण के मामले में समाहर्त्ता द्वारा बकाया भुगतान के लिए 21 दिन का नोटिस देने के बाद भी राशि जमा नहीं करने पर बकाया वसूली के लिए बिहार एवं उड़ीसा लोक मांग अधिनियम, 1914 के तहत कार्यवाही प्रारंभ की जायेगी।

(32) **खनन योजना का हस्तानान्तरण** :– किसी भी खनिज समानुदान के समयपूर्व समाप्त किये जाने अथवा प्रत्यार्पित किये जाने की स्थिति में अनुमोदित खनन योजना नये बंदोबस्तधारी/अनुज्ञप्तिधारी/ समानुदानधारी के साथ बंदोबस्ती की स्थिति स्वतः स्थानान्तरित समझी जायेगी।

(33) **पर्यावरणीय स्वीकृति का हस्तानान्तरण** :– सरकार द्वारा विधि मान्य प्रक्रिया से बंदोबस्ती/अनुज्ञप्ति/ समानुदान रद्द किये जाने पर विधिक कार्रवाई या अनुज्ञप्तिधारी द्वारा प्रत्यार्पित किये जाने की स्थिति में वैसे खनिज अनुदान/पट्टा/बालूघाट/बालू खण्ड/खदान के लिए स्वीकृत पर्यावरणीय जिस अवधि के लिए पूर्व में निर्गत हो, उसे विधिमान्य ईकाई (Entity) को निर्धारित या विस्तारित अवधि के लिए स्थानान्तरित की जायेगी।

(34) ऑन लाईन बालू पोर्टल–

(क) बंदोबस्तधारी सभी उपभोक्ताओं (छोटे, मध्यम एवं बड़े) को बालू का विक्रय केवल ऑनलाइन मोड के माध्यम से करेगा। बंदोबस्तधारी द्वारा मासिक प्रगति प्रतिवेदन निश्चित रूप से विभागीय पोर्टल पर डाला जाएगा। बन्दोबस्तधारी को विभागीय पोर्टल/मोबाईल ऐप पर प्रतिदिन का खनन, भंडारण का ब्यौरा अद्यतन करना अनिवार्य होगा। इसका अनुपालन नहीं करने पर ई–चालान बंद किया जा सकता है।

(ख) बालू ढोने वाले सभी वाहन बालू के परिवहन के लिए आवश्यक रूप से ई–चालान की प्रिंटेड प्रति साथ रखेगें। सफल डाकवक्ता/बंदोबस्तधारी द्वारा बालूघाटो से बालू परिवहन के प्रयोजनार्थ अवैध, अनिबंधित या अनाधिकृत वाहन का उपयोग नहीं किया जाएगा। उल्लंघन की स्थिति में बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 (यथा संशोधित) के प्रावधानों के तहत जुर्माना की वसूली की जाएगी।

(35) **डिसिल्टिंग का जिम्मा लेने हेतु सरकार का अधिकारः**– नदी का प्रवाह, बॉधों की सुरक्षा तथा जीओ तकनीक एवं जल वैज्ञानिक विचारण के चलते नदियों का परिवेश बनाए रखने के लिए डिसिल्टेशन का अधिकार सरकार अपने पास आरक्षित रखती है। विभाग डिसिल्टिंग प्रक्रिया में निकाले गए बालू के निपटारे के लिए मार्गदर्शन निर्गत करेगी।

(36) **बालू–परिवहन विनियमित करने की शक्तिः**– अधिसूचना के माध्यम से विभाग, राज्य से अन्य राज्यों में बालू के निर्यात को नियंत्रित कर/रोक सकता है। इस क्रम में विभाग चेक पोस्ट, बैरियर धर्मकांटा इत्यादि अधिष्ठापित कर सकेगा।

यदि विभाग का विचार हो कि विधिपूर्ण प्राधिकार के बिना बालू का परिवहन एवं भंडारण के रोकने की दृष्टि से वैसा करना आवश्यक है तो वह लिखित आदेश द्वारा राज्य के भीतर किसी स्थान या स्थानों पर चेक पोस्ट लगाने या बैरियर स्थापित करने अथवा दोनों के लगाने हेतु निदेश करेगा।

(37) **पुनर्भरण अध्ययन** (Replenishment study):– बंदोबस्तधारी द्वारा मॉनसून के पहले और बाद नदी तल में बालू की मात्रा का पुनर्भरण अध्ययन (Replenishment study) अद्यतन तकनीक का उपयोग करते हुए भारत सरकार से मान्यता प्राप्त संस्थानों/एजेंसियो के माध्यम से कराया जाएगा और इसका एक प्रतिवेदन विभागीय पोर्टल पर एवं समाहर्त्ता को समर्पित करना होगा। विभाग/समाहर्त्ता द्वारा पुनर्भरण अध्ययन क्रियान्वित किए जाने की दशा में, अध्ययन का खर्च संबंधित बंदोबस्तधारी से वसूल किया जाएगा।

(38) **जल संसाधन विभाग से अनापत्तिः**– किसी बालूघाट से बालू उठाने की दशा में यदि लिंक रोड और बालूघाट के बीच कोई प्राकृतिक जल मार्ग/सिंचाई नहर पड़ती हो तो खनिज समानुदान धारक जल संसाधन विभाग की पूर्व अनुमति से बालू के परिवहन के लिए अस्थायी संरचनाएँ खड़ा कर सकेगा। पूर्व अनुमति के लिए ऐसे आवेदन जल संसाधन विभाग के संबंधित मुख्य अभियंता के समक्ष दिए जाएंगे। आवेदन की तिथि के एक माह के भीतर यदि इस संबंध में खनिज समानुदान धारक को कोई विनिश्चय संसूचित नहीं किया जाय तो यह समझा जाएगा कि संबंधित विभाग को इस प्रस्ताव में कोई आपत्ति नहीं है।

(39) **निगम द्वारा विहित दरों पर खनिजों का क्रय किया जानाः**– विभाग द्वारा सभी बंदोबस्तधारी को उत्खनित बालू का 50 प्रतिशत तक, निगम को पिट हेड मूल्य पर विक्रय करने का निदेश दे सकेगा।

(40) बंदोबस्तधारी द्वारा पर्यावरण, वन एवं जलवायु परिवर्त्तन मंत्रालय, भारत सरकार द्वारा निर्गत SSMMG- 2016, EMGSM- 2020, बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 (यथा संशोधित), बिहार बालू खनन नीति 2019 (यथा संशोधित) एवं अन्य संगत नियमावाली तथा अधिनियम के प्रावधानों का अक्षरशः अनुपालन किया जायेगा।

(41) **शास्तिः**– किसी नियम, शर्त्त एवं बंधेज के उल्लंघन के लिए बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली, 2019 (यथा संशोधित), बिहार बालू खनन नीति 2019 (यथा संशोधित) एवं अन्य प्रभावी नियमावली/अधिनियम के प्रावधानों के अनुसार शास्ति अधिरोपित की जाएगी।

(42) **सामान्य शर्त्तें :–**

(i) निविदादाता/सफल डाकवक्ता/बंदोबस्तधारी द्वारा ई–मेल के माध्यम से किया गया पत्राचार ही मान्य होगा।

(ii) बंदोबस्तधारी को बालू के परिवहन हेतु वाहन के चालक को ऑनलाईन ई–चालान (परिवहन चालान) निर्गत करना होगा। उसकी मूल प्रति (प्रिंट आउट) चालक के पास उपलब्ध रहना चाहिए।

(iii) बन्दोबस्ती लेने के बाद सभी बालूघाटों के लिये बालू के उत्तोलन कार्य में संलग्न सभी सहयोगी व्यक्तियों/प्रबंधकों की सूची, पूर्ण पता एवं फोटो के साथ एक माह के अन्दर समाहर्त्ता को उपलब्ध कराना एवं पोर्टल पर अपलोड करना होगा। यदि इसमें कोई बदलाव होता है तो उसकी भी सूची अविलम्ब पोर्टल पर अपलोड/उपलब्ध करायेंगे।

(iv) बंदोबस्तधारी नदी तट से 300 मी0 तक बालू का भंडारण कर सकते है जिसके लिए किसी प्रकार के भंडारण अनुज्ञप्ति की आवश्यकता नही होगी लेकिन भंडारण स्थल का Geo Co-ordinate , भंडारण मात्रा का विवरण ऑनलाईन पोर्टल पर देना होगा। नदी तट से 05 किलोमीटर के बाद बालू भंडारण करने के लिए किसी भी व्यक्ति/बंदोबस्तधारी को अलग से भंडारण अनुज्ञप्ति लेना होगा।

(v) बालू के उत्पादन एवं प्रेषण के लिये पंजी संधारित करनी होगी। बंदोबस्तधारी विहित प्रपत्र में बालू के उत्पादन तथा प्रेषण से संबंधित दैनिक, साप्ताहिक, मासिक एवं वार्षिक रूप से विवरणी (रिटर्न) ऑनलाईन पोर्टल पर समर्पित करेगा।

(vi) बंदोबस्तधारी नदी तट से बालू प्रेषण के बिन्दु पर एक साईनबोर्ड लगाएगा जिसपर बंदोबस्तधारी का नाम एवं पता, बंदोबस्ती की अवधि, स्थानीय मैनेजर का नाम एवं पता तथा बालू का विक्रय मूल्य प्रदर्शित किया जाएगा। यदि साईन बोर्ड निरीक्षण में नहीं पाया गया तो शास्ति अधिरोपित की जाएगी।

(vii) बंदोबस्तधारी श्रम विधियों के प्रावधानों के अनुसार आश्रय गृह, पीने का पानी, शिशु गृह (क्रेचेज) तथा फर्स्ट एड किट की व्यवस्था संबंधित बालूघाटों में लगे श्रमिकों के लिए करेगा।

(viii) बंदोबस्तधारी संबंधित क्षेत्रों का निरीक्षण करेगा तथा स्वयं/ अथवा अपने द्वारा अधिकृत प्रतिनिधियों के माध्यम से बालूघाटों का प्रचालन करेगा। किसी रूप में किये गये उपपट्टा (सबलेटिंग) के लिए बंदोवस्ती रद्द कर दी जाएगी। बालूघाटों/नदी तल तक बालू के परिवहन के प्रयोजनार्थ पहुँच पथ (अप्रोच रोड़) का निर्माण बंदोबस्तधारी द्वारा स्वयं अपने खर्च से किया जाएगा।

(ix) बालूघाट की सुरक्षा की जिम्मेदारी बंदोस्तधारी की होगी।

(x) बंदोबस्तधारी द्वारा सतत् बालू खनन प्रबंधन मार्गदर्शिका, 2016/2020/पर्यावरणीय स्वच्छता प्रमाण पत्र में विनिर्दिष्ट शर्त्तों के अनुरूप मशीन का प्रयोग किया जाएगा। महिला श्रमिकों से सूर्यास्त के बाद कोई कार्य नही लिया जायेगा।

(xi) बालू लदे सभी वाहनों को तारपोलिन से ढककर बालू का परिवहन करना अनिवार्य होगा।

(xii) खनिज की अनुपलब्धता, मार्ग व्यवधान, सीमा विवाद इत्यादि से संबंधित कोई व्यवधान अथवा अन्यान्य कारण से उत्तोलन में बाधा उत्पन्न होने पर सरकार द्वारा कोई क्षतिपूर्त्ति देय नहीं होगा।

(xiii) बंदोबस्तधारी पर्यावरण, वन एवं जलवायु परिवर्त्तन मंत्रालय /SEIAA द्वारा मॉनसून अवधि (जुलाई, अगस्त एवं सितम्बर माह में अथवा पर्यावरणीय स्वीकृति में यथा कथित) में नदी तल से खनन के लिए अधिरोपित रोक, खनिज संसाधनों की अनुपलब्धता, पहुँच पथ में किसी बाधा, सीमा विवाद अथवा उसके किसी अन्य कारण के चलते उत्पन्न किसी समस्या के कारण बालू के उत्पादन/प्रेषण में उत्पन्न अवरोध की दशा में किसी प्रतिपूर्ति का हकदार नही होगा।

(xiv) बंदोबस्तधारी वाहनों में सूखा बालू लादने की व्यवस्था यह सुनिश्चित करने के लिए करेगा कि बालू ढोने वाले वाहनों से सड़क पर पानी नही टपके। इसके लिए बंदोबस्तधारी नदी के किनारे से 300 मीटर की दूरी के भीतर बालू लादने के लिए सेकेण्डरी लोडिंग की व्यवस्था करेगा जिसके लिए अपेक्षित बालू जमा करने हेतु किसी लाईसेन्स की आवश्यकता नहीं होगी।

(xv) बंदोबस्तधारी बंदोबस्त क्षेत्र के भीतर किसी अवैध खनन के लिए जिम्मेवार होगें और पाई गई किसी शिकायत पर गंभीरता से विचार किया जाएगा तथा बंदोबस्तधारी के विरूद्ध अपराधिक मामला दायर किया जाएगा।

(xvi) बंदोबस्तधारी समाहर्त्ता द्वारा बालूघाटों के संचालन के संबंध में लोकहित में जारी निर्बंधनों और शर्त्तों तथा निदेशों का पालन करेगा।

(xvii) उपर्युक्त शर्त्तों का पालन नहीं करने पर कारण पृच्छा निर्गत कर बंदोबस्ती रद्द करने की कार्रवाई की जा सकेगी।

(xviii) बंदोबस्तधारी को खनन राजस्व/जी0एस0टी0/आयकर/स्टाम्प शुल्क/रजिस्ट्रेशन फीस का भुगतान नही करने की दशा में 30 दिनों के अंदर कारण स्पष्ट करने हेतु नोटिस दी जायेगी। निर्धारित अवधि के अंदर बंदोबस्तधारी द्वारा बकाए का भुगतान करने में असफल रहने की दशा में राशि वसूली की कार्रवाई के साथ–साथ बंदोबस्ती रद्द करने की भी कार्रवाई की जाएगी।

(xix) निविदादाता निविदा में भाग लेने के पूर्व अक्षांश–देशांतर के आधार पर तैयार किये गए नदी में बालूघाट क्षेत्रों में बालू की उपलब्धता, बालू निकासी हेतु परिवहन मार्गों, जल संसाधन विभाग के नदी में प्रतिबंधित क्षेत्रों तथा अन्य प्रतिबंधित क्षेत्रों के आलोक में अपने स्तर से तकनीकी जाँच कराकर पूर्ण रुप से संतुष्ट हो लेंगें। नीलामी के पश्चात किसी प्रकार का कोई आपत्ति/दावा स्वीकार नहीं किया जायेगा।

(xx) नीलामी हेतु प्रस्तावित बालूघाटों से संबंधित तकनीकी तथा अन्य बिन्दुओं यथा भूमि के अंचल, थाना, मौजा, खाता, खेसरा, रकबा तथा GPS Co-ordinate के संबंध में विवाद/त्रुटि पाए जाने पर संशोधन का अधिकार संबंधित जिला खनन कार्यालय का होगा। बालूघाटों का सीमांकन एवं नियमानुसार निर्धारित आयाम/विशिष्टियों का सीमा स्तंभ का अधिष्ठापन GPS Co-ordinate के अनुसार बालू बंदोवस्तधारी को कराना होगा तथा खनन के क्रम में संधारित कराना बंदोबस्तधारी की जवाबदेही होगी, जिसे RQP/ अंचलाधिकारी की उपस्थिति में प्रमाणित कराकर खनन कार्य कराना होगा। बालूघाटों के

निर्धारित क्षेत्र का Reduced Level (RL)/Pre-Level (PL) एवं Satellite images मानसून के पूर्व एवं बाद का समर्पित करना होगा।

(xxi) बालू का विक्रय निबंधित एवं व्यवसायिक वाहन के माध्यम से ही किया जायेगा। किसी भी परिस्थिति में अनिबंधित एवं बिना वाहन संख्या के (unrealistic vehicle) वाहन से बालू का विक्रय नही किया जायेगा। ट्रैक्टर इंजन एवं ट्रॉली दोनो का परिवहन विभाग में निबंधित होने के उपरान्त ही बालू का प्रेषण किया जाएगा। उल्लंघन किये जाने की स्थिति में जमा अग्रधन एवं अन्य राशि जप्त कर ली जायेगी।

(xxii) बालू बंदोबस्तधारी को बालू लदे भारी वाहनों का परिवहन जल संसाधन विभाग द्वारा नहरों एवं बांधो पर निर्मित प्रतिबंधित सड़क या परिवहन विभाग द्वारा प्रतिबंधित सड़क/पुल–पुलिया से नहीं करना है।

(xxiii) बालूघाट में रैयती/बंदोबस्त जमीन होने पर संबंधित रैयत से सहमति प्राप्त कर बालू का खनन करना होगा। यह जिम्मेदारी पूर्णतः बंदोबस्तधारी की होगी एवं विभाग से कोई क्षतिपूर्ति का दावा मान्य नहीं होगा।

(xxiv) बंदोबस्ती समाप्ति के पूर्व नदी तट से 300 मीटर के अन्दर भंडारित बालू को हटा लेना होगा अन्यथा भंडारित खनिज (बालू) सरकार की सम्पति मानकर उसका निष्पादन किया जायेगा।

(xxv) बंदोबस्तधारी द्वारा भंडारण अनुज्ञप्तिधारियों को भी भुगतान के आधार पर मासिक उत्पादन का 25 प्रतिशत बेचने का निदेश समाहर्त्ता/विभाग दे सकेगा एवं इसका अनुपालन करना अनिवार्य होगा।

(xxvi) निकाले गये खनिजों के लिए वार्षिक आधार पर की गई स्वामिस्व की संगणना वार्षिक बंदोबस्ती की राशि से अधिक होने पर बंदोबस्तधारी द्वारा निकाली गई अतिरिक्त मात्रा के लिए बंदोबस्ती राशि के अतिरिक्त स्वामिस्व का भुगतान करना होगा।

(xxvii) बंदोबस्तधारी को प्रत्येक सप्ताह खनन स्थल/घाट का कम से कम 04 फोटोग्राफ्स Geo Co-ordinate के साथ विभागीय पोर्टल पर अपलोड करना होगा।

(xxviii) बंदोबस्तधारी को सड़क, परिवहन एवं उच्च मार्ग मंत्रालय भारत सरकार के विशिष्टियों के अनुरूप **GPS युक्त वाहन ही प्रयोग करना होगा**, जिसमें वजन के प्रतिवेदन हेतु **Load shell उपकरण** लगाना अनिवार्य होगा। सफल डाकवक्ता/बंदोबस्तधारी परिवहन चालान विभाग में निबंधित वाहनों के लिए ही निर्गत करेंगे, जो GPS युक्त हो एवं जिसकी Tracking हेतु विभागीय पोर्टल पर डाटा शेयर किया जा सके।

(xxix) घाट पर ऐसी विशिष्टियों का धर्मकांटा का अधिष्ठापन बंदोबस्तधारी द्वारा स्वंय अपने खर्च पर किया जाएगा, जिसका Real time data विभागीय पोर्टल पर प्रदर्शित होगा। इस हेतु किसी भी प्रकार का क्षतिपूर्ति का दावा खान एवं भूतत्व विभाग के उपर मान्य नहीं होगा।

(xxx) स्रोत से गंत्तव्य की दुरी के GPS Data के अनुसार ई–चालान की वैधता अवधि को विभाग बदल/कम कर सकता है।

(xxxi) बंदोबस्तधारी को खनन/भंडारण एवं उनके द्वारा प्राप्त अनुज्ञप्ति स्थल का ड्रोन से Volumetric Analysis प्रतिमाह कराकर पोर्टल पर अपलोड करना होगा। विभाग/समाहर्त्ता द्वारा किसी ऐजेन्सी से कराया जाता है, तो उस पर हुए व्यय का भुगतान बंदोबस्तधारी को करना होगा।

(xxxii) बंदोबस्तधारी के Login से निर्गत ई–चालान एवं जमा रिटर्न को माना जायेगा कि बंदोबस्तधारी के किसी प्राधिकृत व्यक्ति द्वारा जाँच कर लिया गया है। बंदोबस्तधारी को प्रत्येक माह का मासिक रिर्टन ऑन लाईन जमा करना होगा।

(xxxiii) सर्वर मेन्टेनेन्स या विधि व्यवस्था हेतु ई–चालान बन्द किया जा सकता है एवं इस अवधि हेतु कोई क्षतिपूर्ति देय नहीं होगा।

(xxxiv) बंदोबस्तधारी द्वारा पर्यावरणीय स्वीकृति क्षेत्र से बाहर न स्वंय खनन करना है और न ही किसी को करने देना है। संबंधित बालूघाट से 100 मीटर की परिधि में यदि अवैध खनन पाया जाता है एवं इसकी सूचना यदि बंदोबस्तधारी द्वारा विभाग/संबंधित जिला खनन कार्यालय को नही दी जाती है, तो संबंधित बंदोबस्तधारी की संलिप्तता मानते हुए नियमानुसार कार्रवाई किया जायेगा।

(xxxv) Google earth pro/Bhuvan software से की गई Monitoring/प्राप्त साक्ष्य मान्य होंगे। इस आधार पर बंदोबस्तधारी के विरूद्ध शास्ति अधिरोपण/अन्य कार्रवाई की जाएगी।

(xxxvi) बंदोबस्तधारी द्वारा पर्यावरणीय स्वीकृति क्षेत्र से बाहर खनन करने, निर्धारित गइराई से ज्यादा खनन करने, पर्यावरणीय स्वीकृति के प्रावधानों के विरूद्ध खनन करने एवं **खनन योग्य मात्रा से अधिक खनन करने की कृत्य को अवैध खनन** माना जाएगा एवं बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली 2019, (समय–समय पर यथा संशोधित) के नियम– 56 के तहत संबंधित बंदोबस्तधारी के विरूद्ध जुर्माना राशि अधिरोपित की जाएगी। जुर्माना राशि जमा नहीं करने पर जमा अग्रधन की राशि से वसूली की जाएगी।

(xxxvii) बंदोबस्तधारी द्वारा बालूघाटों से बालू का परिवहन बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली 2019, (समय–समय पर यथा संशोधित) के प्रावधानों एवं इस संबंध में अन्य अधिसूचित नियम के तहत किया जाएगा। अनियमितता की स्थिति में उपरोक्त नियमावली के तहत जुर्माना लगाया जाएगा।

(xxxviii) बंदोबस्तधारी द्वारा बंदोबस्ती अवधि के दौरान किसी भी कारण से खनन कार्य नहीं करने की स्थिति में किसी भी प्रकार का मुआवजा/नुकसान एवं क्षतिपूर्ति का दावा मान्य नहीं होगा।

(xxxix) ई–नीलामी एवं बालूघाट की बंदोबस्ती अवधि के दौरान उत्पन्न किसी भी प्रकार का विवाद बिहार खनिज (समानुदान, अवैध खनन, परिवहन एवं भंडारण निवारण) नियमावली 2019, (समय–समय पर यथा संशोधित) के अधीन होगा।

(xl) खान एवं भूतत्व विभाग/समाहर्त्ता आवश्यकता पड़ने पर ड्रोन एवं अन्य अत्याधुनिक तकनीक का उपयोग करके बालूघाटों का सर्वेक्षण कर सकता है, ताकि यह सुनिश्चित हो सके कि बालूघाटों से बालू खनन की पूरी प्रक्रिया प्रचलित नियमों/प्रावधानों के अनुरूप हो रही है।

(xli) नीलामी के उपरांत यदि बंदोबस्तधारी द्वारा किसी कारणवश बंदोबस्ती अवधि के बीच में ही बंदोबस्ती का प्रत्यार्पण किया जाता है अथवा बंदोबस्ती छोड़ा जाता है, तो वैसी स्थिति में बंदोबस्तधारी को काली सूची में डालते हुए राज्यान्तर्गत बालूघाटों की ई–नीलामी में भाग लेने से अगले पॉच वर्षो के लिए बंचित कर दिया जायेगा।

****

25/3/26

खनिज विकास पदाधिकारी,
जमुई।

25/3/26

समाहर्त्ता,
जमुई।

अनुलग्नक–2

बंदोबस्ती हेतु बालूघाटों की विवरणी

जिला– जमुई।

क्रमांक	आवेदक का नाम एवं पता	खण्ड/बालू खण्ड/ बालूघाट की विवरणी	सुरक्षित जमा राशि	अभ्युक्ति।
1	2	3	4	5

आवेदक का हस्ताक्षर

नाम–

मोहर–

नोटः– *निविदादाता प्रकाशित निविदा में वर्णित बालूघाटों में से जिस/जिन बालूघाटों के लिए निविदा देने हेतु इच्छुक है सिर्फ उसी को भरकर निविदा प्रपत्र अपलोड करेगें।*

अनुलग्नक–3

बालूघाट की बंदोबस्ती हेतु तकनीकि निविदा का प्रपत्र

(निविदादाता अपने लेटर–हेड अथवा सादा कागज का प्रयोग करें।)

व्यक्ति का फोटो (व्यक्ति विशेष को छोड़कर अन्य मामले में प्रबंधक/ मैनेजिंग पार्टनर का फोटो)

1. निविदादाता का नाम : (समिति या प्राईवेट लि0 कम्पनी या फर्म के मामले में प्रबंधक/ अधिकृत हस्ताक्षर करने वालो का नाम)
2. पिता का नाम : (समिति या प्राईवेट लि0 कम्पनी या फर्म के सचिव/प्रबंधक/ अधिकृत हस्ताक्षर करने वाले के पिता का नाम)
3. पत्राचार का पता :
4. ई–मेल :
5. स्थायी पता :
6. सम्पर्क हेतु दूरभाष सं0 : (कार्या0) (आ0) (मो0)
7. पैन कार्ड संख्या एवं आधार कार्ड संख्या (स्वः अभिप्रमाणित छायाप्रति संलग्न करें) :
8. बकाया रहित प्रमाण–पत्र : (कृपया स्वअभिप्रमाणित छायाप्रति संलग्न करें) संबंधित जिला एवं निगम से स्वामिस्व स्वच्छता प्रमाण पत्र तथा अन्य जिलों के मामलें में घोषणा–पत्र/शपथ–पत्र।
9. Chartered Accoutant द्वारा सत्यापित वित्तीय वर्ष– 2022–23, 2023–24 एवं 2024–25 Annual Accounts (Profit and Loss Account सहित) की स्वअभिप्रमाणित प्रति संलग्न करें :
10. स्वअभिप्रमाणित दो पासपोर्ट साईज फोटों :
11. GST निबंधन प्रमाण–पत्र/पूर्व से निबंधित नहीं रहने पर एक माह के अंदर निबंधन करा लेने संबंधी शपथ–पत्र :
12. कम्पनी एवं अन्य के मामलें में वित्तीय वर्ष– 2022–23, 2023–24 एवं 2024–25 का आयकर रिटर्न/विवरणी की स्वअभिप्रमाणित प्रति। :
13. जिला पदाधिकारी/पुलिस अधीक्षक/ अनुमंडल पदाधिकारी द्वारा निर्गत आचरण प्रमाण–पत्र : (स्वअभिप्रमाणित छायाप्रति संलग्न करें)
14. समिति /फर्म/प्राईवेट लि0 कम्पनी के मामले में अद्यतन अंकेक्षण रिपोर्ट :
15. मेमोरेण्डम/आर्टिकल्स ऑफ एसोसियेशन/उप नियमः (कृपया संलग्न करें) (व्यक्ति विशेष को छोड़कर अन्य के मामले में)
16. साझेदारी फर्म के मामले में साझेदारी दस्तावेज की स्वअभिप्रमाणित छायाप्रति संलग्न करें। :

17. जिला का नाम :

18. बालूघाट ईकाई का विवरण जिसके लिये निविदा दी गई है। :

19. सुरक्षित जमा राशि :

20. अग्रधन की राशि तथा उसका पूर्ण विवरण :

i. बैक एवं शाखा का नाम–
ii. UTR No.-
iii. तिथि–
iv. राशि–
v. निविदादाता का बैंक खाता संख्या–

तिथि–

नाम एवं हस्ताक्षर

****

S.L	River name	Block/Cluster No.	Address of Sandghat/Cluster	Area (Ha.)	Co-ordinate	Latitude	Longitude	Mineable quantity (M^3)	Minimum Reserve Price (In Rs.)	EMD (In Rs.)
1	Ulai River	BLOCK-4	BLOCK-4 Mauz-Tola Satighat Block-JhaJha, Dist-jamui	5	A	24°45'36.16"N	86°24'9.10"E	30000	1,67,40,000/-	41,85,000/-
					B	24°45'36.21"N	86°24'7.30"E			
					C	24°45'42.95"N	86°23'59.42"E			
					D	24°45'48.40"N	86°23'56.10"E			
					E	24°45'51.48"N	86°23'53.09"E			
					F	24°45'53.64"N	86°23'52.87"E			
					G	24°45'47.52"N	86°24'1.00"E			
					H	24°45'42.67"N	86°24'3.49"E			
2	Ulai River	BLOCK-6	BLOCK-6 Mauz-Lotan BlaockJamui, Dist-Jamui	9.76	A	24°54'36.14"N	86°16'48.38"E	58560	3,95,28,000/-	98,82,000/-
					B	24°54'27.03"N	86°16'52.09"E			
					C	24°54'25.10"N	86°16'48.24"E			
					D	24°54'32.58"N	86°16'45.47"E			
					E	24°54'39.74"N	86°16'36.31"E			
					F	24°54'48.31"N	86°16'34.65"E			
3	Ulai River	BLOCK-7	BLOCK-7 Mauz-Thegua, Bl9ock-Jamui, Dist-Jamui	13.3	A	24°54'51.29"N	86°16'18.99"E	79800	5,09,92,200/-	1,27,48,050/-
					B	24°54'48.70"N	86°16'13.48"E			
					C	24°54'52.41"N	86°16'5.09"E			
					D	24°55'3.40"N	86°15'56.65"E			
					E	24°55'14.56"N	86°16'0.23"E			
					F	24°55'1.26"N	86°16'4.91"E			
					G	24°54'54.72"N	86°16'10.56"E			
4	Ulai River	BLOCK-9	BLOCK-9 Mauz-Lathane Block jamuiDist-jamui	9.2	A	24°56'2.67"N	86°15'21.54"E	55200	2,73,24,000/-	68,31,000/-
					B	24°55'56.45"N	86°15'23.33"E			
					C	24°55'50.03"N	86°15'30.20"E			
					D	24°55'37.31"N	86°15'37.02"E			
					E	24°55'33.30"N	86°15'42.93"E			
					F	24°55'49.26"N	86°15'34.95"E			
5	Kiul River	BLOCK-7	BLOCK-7 Mauz-sagdaha, Bela, Para Block-Khaira, Dist-jamui	13.1	A	24°50'36.55" N	86°12'59.51" E	78600	1,83,92,400/-	45,98,100/-
					B	24°50'36.73" N	86°12'56.24" E			
					C	24°51'6.77" N	86°13'8.00" E			
					D	24°51'6.34" N	86°13'11.74" E			
					E	24°50'43.58" N	86°13'5.35" E			
					F	24°50'36.47" N	86°12'59.62" E			
6	Anjana River	BLOCK-3	BLOCK-3 Mauza Lathlathwa Block Gidhaur, Dist-Jamui	5.54	A	24°56'47.41"N	86°17'17.30"E	33240	1,88,47,080/-	47,11,770/-
					B	24°56'53.02"N	86°17'8.26"E			
					C	24°57'5.23"N	86°16'54.04"E			
					D	4°56'59.25"N	86°16'54.43"E			
					E	4°56'55.49"N	86°17'3.41"E			
					F	4°56'52.84"N	86°17'4.40"E			
					G	24°56'48.47"N	86°17'13.12"E			
7	Barnar River	BLOCK-9	BLOCK-9 Mauz-Manjhagayan, Block-Khaira, Dist-jamui	42.2	A	24°47'14.59"N	86°17'53.29"E	253200	19,14,19,200/-	4,78,54,800/-
					B	24°47'47.37"N	86°17'52.38"E			
					C	24°48'22.24"N	86°17'41.28"E			
					D	24°48'10.95"N	86°17'38.17"E			
					E	24°47'25.14"N	86°17'45.17"E			
8	Barnar River	BLOCK-16	BLOCK-16 Mauz-Dabil, , Block-Gidhaur, Dist-jamui	16.30	A	24°52'51.85"N	86°14'21.81"E	97800	10,66,80,240/-	2,66,70,060/-
					B	24°52'44.30"N	86°14'43.53"E			
					C	24°52'51.52"N	86°14'37.46"E			
					D	24°52'58.77"N	86°14'21.63"E			
					E	24°53'09.11"N	86°14'07.55"E			
					F	24°53'05.65"N	86°14'06.59"E			
9	Barnar River	BLOCK-01	BLOCK-01 Mauz-Mahagan, Block-Sono, Dist-jamui	7.41	A	24°38'58.63"N	86°19'43.79"E	44460	3,56,12,460/-	89,03,115/-
					B	24°39'07.95"N	86°19'43.95"E			
					C	24°39'18.64"N	86°19'47.83"E			
					D	24°39'20.29"N	86°19'43.72"E			
					E	24°39'10.24"N	86°19'49.70"E			
					F	24°38'59.56"N	86°19'41.07"E			

\\TRUE COPY//

ANNEXURE A-21

IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION
I.A. NO. 85385 OF 2026
IN
CIVIL APPEAL NO. 3661-3662 OF 2020

IN THE MATTER OF:

STATE OF BIHAR & ORS …APPELLANTS

VERSUS

PAWAN KUMAR & ORS …RESPONDENTS

AND IN THE MATTER OF:

SANJEEV KUMAR BHARTI…APPLICANT/INTERVENOR

APPLICATION FOR DIRECTIONS

TO,

THE HON'BLE CHIEF JUSTICE OF INDIA AND HIS COMPANION JUSTICES OF THE SUPREME COURT OF INDIA.

THE HUMBLE APPLICATION OF THE APPLICANTABOVE NAMED

MOST RESPECTFULLY SHOWETH:

1. The Applicant herein is filing the present Application seeking appropriate directions from this Hon'ble Court in the captioned Civil Appeal No. 3661-3662 of 2020,praying for quashing of the DSR for District Jamui in State of Bihar, and/or certain Orders foradjudication of the correctness of the said DSR for District Jamui by appointing an Expert Committee/ CEC,and/or permitting the Applicant herein to challenge the DSR along

with the NIT dated 15.01.2026 before the Hon'ble National Green Tribunal (EZ).

2. The Applicant is a resident of District Jamui, Bihar whose Right to life is directly and immediately affected due to the illegal and unplanned mining proposed to be carried on in the District, Jamui, Bihar.

2. The Applicant is a farmer by occupation and has no personal interest in the presentmatter except to safeguard the environment and ensure that mining, if any, is done after following the requisite regulatory framework including the various decisions passed by this Hon'ble Court, Hon'ble NGT, the fundamental principles of Environmental rule of law, the Notifications and the Sustainable Sand Mining Guidelines, 2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020in this regard.

3. The Present Civil Appeal was preferred by the State of Bihar being aggrieved by the Judgment dated 14.10.2020 passed by the Hon'ble National Green Tribunal in OA No 40/2020/EZ whereby the Hon'ble Tribunal quashed the DSR for District Banka, State of Bihar along with the NIT dated 25.11.2019.

4. This Hon'ble Court by its Judgment dated 10.11.2021 in the present Civil Appeal passed certain directions regarding timelines and the procedure to be followed for preparationof DSRs and directed the State of Bihar to prepare DSRs in respect of all the districts in terms thereof.

   The True Copy of Order dated 10.11.2021 passed by this Hon'ble Court in the present Civil Appeal is annexed herewith as **Annexure A-1 at pgs** 16-30

5. That Pursuant to the aforesaid directions, the DSRs were finalised in the State of Bihar. The Original Applicanti.e. Respondent No. 1 as well as many intervenors raised objections on the merits and correctness of the DSRs that were prepared. It was stated that the said DSRs suffer from fundamental flaws and errors and have not been prepared in terms of the MOEF Sand Mining Guidelines 2016 and 2020. This Hon'ble Court vide Order dated 30.05.2022 recorded the said objection and permitted the parties to take recourse as available in law. Further the Hon'ble Court held that there should be noimpediment for the State of Bihar to proceed further for invitingtenders or auction of sand blocks in accordance with the DSRs whichhave already been approved.

   The relevant portionof the Order dated 30.05.2022 reads as under:

   "Though it is contended by Shri Dalmia and Shri Mishra that thesaid DSRs are not free from flaws, we do not find necessary to gointo the

said issues at this stage. The parties are always atliberty to take recourse to such remedies as are available in law.

However, now since the DSRs have been finalised in pursuanceto our order dated 10th November, 2021, there should be noimpediment for the State of Bihar to proceed further for invitingtenders or auction of sand blocks in accordance with the DSRs whichhave already been approved."

The True Copy of the Order dated 30.05.2022 passed by this Hon'ble Court in the present Civil Appeal is annexed herewith as **Annexure A-2 at pgs** 31-34

6. That the Respondent No.1filed IA No. 179091 of 2022 in present Appeal seeking a direction that the DSRs for all the districts be filed before this Hon'ble Court and the same be examined by a committee comprising of the MOEF and other experts. This Hon'ble Court vide order dated 02.12.2022 has issued notice on said IA alongwith other IAs.

The True Copy of the IA No. 179091 of 2022 filed by the Respondent No. 1 in the present Civil Appeal is annexed herewith as **Annexure A-3 at pgs** 35-54

The True Copy of order dated02.12.2022 passed in IA No.179091 of 2022 in present appeal is annexed herewith as **Annexure A-4 at pgs** 55-57.

7. That subsequently, certain Individuals/ Applicants filed various proceedings before the Hon'ble NGT(EZ Bench) registered OAs No. 130,131 & 136 of 2022, challenging the DSRs for District Bhojpur, Patna and Saran respectively on various grounds including that the said DSRs have been prepared without conducting a Replenishment Study and are in non-compliance of the Sustainable Sand Mining Guidelines, 2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020. That during the pendency of the OAs before the Hon'ble NGT, EZ, the State of Bihar filed IA No. 137877&137884/2022. This Hon'ble Court vide its Order dated 19.09.2022 stayed the proceedings before the Hon'ble Tribunal, EZ in OAs No. 130,131 & 136 of 2022.

   The True Copy of Order dated 19.09.2022 passed by this Hon'ble Court inIA No. 137877& 137884/2022 in the present Civil Appeal is annexed herewith as **Annexure A-5 at pgs** 58-59

8. It is humbly submitted that under the aegis of the aforesaid order, the DSRs prepared in respect of any of the districts in the State of Bihar could not have been challenged before any forum including the Hon'ble National Green Tribunal, as the veracity and correctness of the same were a subject matter before this Hon'ble Court. Additionally, no Court or authority would have entertained a challenge to any DSR since the same were prepared on the orders passed by this Hon'ble Court and further,

that the Order dated 19.09.2022 had stayed the proceedings before the Hon'ble NGT involving a challenge to DSRs prepared in three districts i.e. Bhojpur, Patna and Saran, in the State of Bihar.

9. The Mines and Geology Department, Government of Biharin pursuant to DSRprepared for District JamuiissuedNIT dated 15.01.2026seeking to Auction 8 blocks situated in District Jamui, Bihar which includes a large Mining lease area of 42 hectare and out of many such blocks, the Block-9, Mauz Manjhagaya, Block Khaira (as per the DSR itself) is within 0.3 km of a notified Wildlife Sanctuary. It is submitted that proximity to WLS isin violation of1 km ban imposed by this Hon'ble Court by Order dated 26.04.2023 passed in *'In re: T.N. GodavarmanThirumulpad', Writ Petition (Civil) No. 202 of 1995.*

   The True Copy of theDSR of District Jamui, Biharis annexed herewith as **Annexure A-6 at pgs** 60-202

   The True translated Copy of the NIT dated 15.01.2026 issued by the Mines and Geology Department, Government of Bihar is annexed herewith as **Annexure A-7 at pgs** 203-237

10. That it is submitted that mining activities being undertaken on the basis of the defective and illegal DSR would invariably cause irreversible damage to the river and the environment.

DEFECIENCIES IN THE DSR FOR DISTRICT JAMUI

11. It is submitted that the said DSR for District Jamuiis fundamentally flawed and does not conform to the requirements prescribed under theSustainable Sand Mining Guidelines, 2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020, the Judgment passed by this Hon'ble Court in Union Territory Of J & K (Previously State Of Jammu & Kashmir) &Anr Versus Raja Muzaffar Bhat & Ors Civil Appeal 8055 of 2022 2025 INSC 1025and thus ought to be quashed.

12. This Hon'ble Court vide its order dated 10.11.2022 in the present Civil Appeal emphasized the importance of the Sustainable Sand Mining Guidelines, 2016 and the Enforcement& Monitoring Guidelines for Sand Mining, 2020 and directed as follows:

> *"14 (ii) Needless to state that while preparing DSRs and the appraisal thereof by SEAC and SEIAA, it should be ensured that a strict adherence to the procedure and parameters laid down in the policy of January 2020 should be followed"*

13. That the Sustainable Sand Mining Guidelines,2016 and the Enforcement & Monitoring Guidelines for Sand Mining, 2020 mandate for an Annual Replenishment Study wherein 4 surveys including a Pre-monsoon survey and a Post monsoon survey are required to be done every year, which enable the State Government to ascertain the quantity of available sand and establish thereplenishment rate of the river, based on which

futureauctionsare planned and quantum of permissible quantity to be mined is determined.

It is submitted that the DSR for District Jamui expressly admits that no replenishment study has been carried out prior to preparation of the impugned DSR.

The Relevant Para of the DSR, Jamui admitting that No replenishment study was conducted, is as under:

"Once replenishment study conducted table of estimation of sand resources in pre- monsoon and post-monsoon period for the sand deposit with respect to the reduce level will be submitted minable depth is being taken only 1-meter bgl as ***replenishment study not caried during last three years****"*

14. This Hon'ble Court in a Judgment dated 22.08.2025 in Union Territory Of J & K (Previously State Of Jammu & Kashmir) &Anr Versus Raja Muzaffar Bhat & Ors Civil Appeal 8055 of 2022 2025 INSC 1025 has held that a Replenishment Study forms the foundational basis and an integral part of a DSR, and a DSR without a proper Replenishment Study is untenable in law. The Relevant extracts of the Judgment dated 22.08.2025 are extracted as under:

> *"29. From the foregoing analysis, it is apparent that in light of Guidelines, 2016 and the Guidelines, 2020, the absence of a*

replenishment study renders a DSR fundamentally defective. These guidelines categorically require that any assessment of mineable mineral quantity must be premised on scientific estimation of replenishment rates, failing which the DSR lacks the foundational data necessary to determine sustainable extraction limits.

32. Without a proper study of the existing position of the riverbed and its sustainability for further sand mining, grant of environmental clearances would be detrimental for the ecology. It has therefore been held that a detailed study leading to a preparation of the replenishment report is an integral part of the DSR. If the DSR becomes the foundation for consideration of an application for environmental clearance, then it is compelling to ensure replenishment studies are undertaken in advance and the report forms an integral part of the DSR.

33. In view of the existing legal regime that mandates preparation of replenishment report in a scientific manner and such a report forming an integral part of the District Survey Report, we hold that a District Survey Report without a proper replenishment study is equally untenable."

The DSR for District Jamui merely provides for a general description of the rivers and sand availability without demonstrating any actual calculation of mineral potential. No field investigations, Geomorphological assessment, Catchment area geology, Sediment transport analysis is shown to be carried out before preparation of the DSR.

The True Copy of the Judgment passed by this Hon'ble Court in in Union Territory Of J & K (Previously State Of Jammu & Kashmir) &Anr Versus Raja Muzaffar Bhat & Ors Civil Appeal 8055 of 2022(2025 INSC 1025)is annexed herewith as **Annexure A-8 at pgs** 238-269

15. It is submitted that the DSR of District Jamui suffers from several other serious shortcomings and infirmities, including:

a) Failure to identify no Mining Zones and/or Eco sensitive and fragile areas
b) Inclusion of Active River channels within mining area
c) Sand ghats within 1Km of Wildlife Sanctuary and/or Protected Forest Area or Eco Sensitive zones have been identified as mining zones.
d) The DSR is silent regarding the Distance from Eco-Sensitive Zones, impact on biodiversity, hydrological impact on reservoir ecosystem and impact on bird habitats/ flora and fauna.
e) Failure to erect Permanent boundary pillars.
f) Clusters identified are more than 10 ha which is impermissible under the MOEF Sand Mining Guidelines.
g) Mining being proposed in sub-merged water areas.
h) Mining is not restricted to 60% of the Mining lease area as mandated under the EMSGM, 2020.
i) Continuous stretches of large mining lease areas have been divided into smaller plots in violation of Clause 4.6 of the EMGSM, 2020 which prohibits the same as this exercise leads to illegal and unsustainable mining.
j) DSR violates Clause 12 of the EMGSM, 2020 as it was not placed in Public domain for public consultation.

ILLEGALITY IN THE NIT DATED 15.01.2026

16. That he Hon'ble NGT in its Judgment dated 6.05.2022 in *Raj Kumar v. State of U.P.*, OA No. 140/2021 held that a Replenishment Study is mandatorily to be conducted prior to e-Auctions in future and also for all current leases; and directed such replenishment studies is to be conducted by a credible institution in a time bound manner i.e. by 31st December

2022 for all Districts in U.P failing which no Mining shall be permitted. That the State of Uttar Pradesh preferred the Civil Appeal aggrieved by the abovementioned Judgment dated 06.05.2022. That this Hon'ble Court by its Order dated 29.11.2022 dismissed the said Civil Appeal No. 8035-8036 of 2022 filed by the State of UP and clarified that Replenishment studies for both years i.e. year ending 31.12.2021 as well as the current year ending 31.12.2022 has to be undertaken.

The True Copy of the Judgment dated 06.05.2022 passed by the Hon'ble Tribunal, Principal Bench in the case titled *'Raj Kumar v. State of U.P.', OA No. 140/2021*is enclosed herein and marked as **Annexure A-9at pgs** 270-278

The True Copy of the Order dated 29.11.2022 passed by this Hon'ble Court in Civil Appeal No. 8035-8036 of 2022is enclosed herein and marked as **Annexure A-10at pgs** 279-280

17. It is submitted that in the absence of a Replenishment Study, the State Authorities did not have any data to determinethe quantities of available Sand as have been auctioned in the NIT dated 15.01.2026, and thus the said NIT is illegal and untenable in law, being issued in complete dissonance of the Sustainable Sand Mining Guidelines, 2016 and the

Enforcement & Monitoring Guidelines for Sand Mining, 2020, Judgments passed by the this Hon'ble Court and by the Hon'ble NGT.

18. It is further submitted that the NIT dated 15.01.2026 is to be quashed on the sole ground thatone of the sand ghats being auctioned i.e. Block-9, Mauz Manjhagaya, Block Khaira, District Jamui admeasuring 42.2 ha is merely 0.3 Km away from a Wildlife Sanctuary, where mining is *per se* prohibited in terms of Judgment dated 26.04.2023 passed by this Hon'ble Court in *'In re: T.N. GodavarmanThirumulpad,Writ Petition (Civil) No. 202 of 1995*.

The True Copy of the Judgment dated 26.04.2023 passed by this Hon'ble Court in *'In re: T.N. GodavarmanThirumulpad',Writ Petition (Civil) No. 202 of 1995*is enclosed herein and marked as **Annexure A-11**

at pgs 281-352

19. That this Hon'ble Court may consider to direct a Committee of Experts/ CEC to examine the correctness of the DSR for District Jamui along with the NIT dated 15.01.2026

20. That present Application is made is *bona fide* in nature, and the balance of convenience is in favour of the Applicant. It is further submitted that no prejudice would be caused to any party, if the prayers as sought by the

Applicant are granted. That the Applicant also has a *prima facie* case in his favour. In fact, grave irreparable loss would be caused to the Applicant is the relief as sought in the present applicant is not allowed.

PRAYER:

In view of the aforesaid facts and circumstances, the Applicant herein respectfully prays that this Hon'ble Court may graciously be pleased to:

a) Pass an Order quashing the DSR for District Jamui, Bihar and the NIT dated 15.01.2026 for being in contravention of the Sustainable Sand Mining Guidelines, 2016 and the Enforcement& Monitoring Guidelines for Sand Mining, 2020 and having being prepared without conducting a Replenishment study;

Alternatively,

b) permit the Applicant herein to challenge the DSR for District Jamui, Bihar along with the NIT dated 15.01.2026 before the Hon'ble NGT, EZ;

c) Pass any such other order as this Hon'ble Court deems fit and proper in the facts and circumstances of this case.

FOR THIS ACT OF KINDNESS THE HUMBLE APPLICATION WILL AS IN DUTY BOUND EVERY PRAYER

FILED BY:

Dated: 11.03.2026 **(Rahul Khurana)**

Advocate for the Applicant

IN THE SUPREME COURT OF INDIA
CIVIL APPELLATE JURISDICTION

CIVIL APPEAL NO(S).3661-3662 OF 2020

THE STATE OF BIHAR & ORS. ETC. **Appellant(s)**

VERSUS

PAWAN KUMAR & ORS. ETC. **Respondent(s)**

WITH

CONTEMPT PETITION (C) NO(S). OF 2026
(@ DIARY NO. 24200 OF 2025)

O R D E R

CIVIL APPEAL NO(S).3661-3662 OF 2020

1. These Appeals are against the judgment and order dated 14.10.2020 passed by the National Green Tribunal in Original Application 40 of 2020 (EZ) and Original Application No. 57 of 2020 (EZ).

2. Learned counsels for the appellants as well as the respondents have submitted that the present appeals have become infructuous in view of the subsequent developments. Taking note of the submissions, we dispose of the civil appeals directing that the decision of the National Green Tribunal shall stand modified as per the directions passed by this Court on 10.11.2021.

3. Needless to say that grant of mining leases shall be governed by the existing legal regime, including the Environmental Impact Assessment (EIA) Notification, 2006 coupled with the amendments

made thereto from time to time.

4. With these observations, the Civil Appeals stand disposed of.

5. Pending application(s) including applications for impleadment and intervention also stand disposed of.

CONTEMPT PETITION (C) NO(S). OF 2026
(@ DIARY NO. 24200 OF 2025)

6. Mr. Pinaki Misra, learned senior counsel submits that a contempt petition, which is defective and not being listed before this Court may also be disposed of. In view of our orders passed in Civil Appeal Nos. 3661-3662 of 2020, nothing remains for consideration in the contempt petition(s). The contempt petition(s) stand(s) closed.

7. Pending application(s) including application for impleadment also stand dismissed.

……J.
[PAMIDIGHANTAM SRI NARASIMHA]

……J.
[ALOK ARADHE]

NEW DELHI;
APRIL 08, 2026

ITEM NO.28 COURT NO.6 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). 3661-3662/2020

THE STATE OF BIHAR & ORS. Appellant(s)

VERSUS

PAWAN KUMAR & ORS. Respondent(s)

IA No. 1753/2022 - APPLICATION FOR PERMISSION
IA No. 167322/2021 - APPLICATION FOR PERMISSION
IA No. 43428/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 110626/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 179091/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 159424/2021 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 68075/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 152114/2021 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 63521/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 64236/2023 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 46824/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 137884/2022 - APPROPRIATE ORDERS/DIRECTIONS
IA No. 155246/2021 - CLARIFICATION/DIRECTION
IA No. 154733/2021 - CLARIFICATION/DIRECTION
IA No. 156591/2021 - CLARIFICATION/DIRECTION
IA No. 163455/2021 - DISCHARGE OF ADVOCATE ON RECORD
IA No. 160960/2021 - EARLY HEARING APPLICATION
IA No. 115437/2020 - EX-PARTE AD-INTERIM RELIEF
IA No. 163457/2021 - EXEMPTION FROM FILING AFFIDAVIT
IA No. 115442/2020 - EXEMPTION FROM FILING C/C OF THE IMPUGNED JUDGMENT
IA No. 115441/2020 - EXEMPTION FROM FILING O.T.
IA No. 43430/2022 - EXEMPTION FROM FILING O.T.
IA No. 35522/2023 - EXEMPTION FROM FILING O.T.
IA No. 17968/2021 - EXEMPTION FROM FILING O.T.
IA No. 110627/2022 - EXEMPTION FROM FILING O.T.
IA No. 35520/2023 - EXEMPTION FROM FILING O.T.
IA No. 3909/2022 - EXEMPTION FROM FILING O.T.
IA No. 153533/2021 - EXEMPTION FROM FILING O.T.
IA No. 152115/2021 - EXEMPTION FROM FILING O.T.
IA No. 156592/2021 - EXEMPTION FROM FILING O.T.
IA No. 64565/2023 - EXEMPTION FROM FILING O.T.
IA No. 46828/2022 - EXEMPTION FROM FILING O.T.
IA No. 155249/2021 - EXEMPTION FROM FILING O.T.
IA No. 165176/2021 - EXEMPTION FROM FILING O.T.
IA No. 35526/2023 - EXEMPTION FROM FILING O.T.
IA No. 17966/2021 - INTERVENTION APPLICATION
IA No. 14978/2021 - INTERVENTION APPLICATION
IA No. 145432/2022 - INTERVENTION APPLICATION

IA No. 143010/2022 - INTERVENTION APPLICATION
IA No. 130609/2020 - INTERVENTION APPLICATION
IA No. 64232/2023 - INTERVENTION APPLICATION
IA No. 26899/2021 - INTERVENTION/IMPLEADMENT
IA No. 154731/2021 - INTERVENTION/IMPLEADMENT
IA No. 3906/2022 - INTERVENTION/IMPLEADMENT
IA No. 68074/2022 - INTERVENTION/IMPLEADMENT
IA No. 152111/2021 - INTERVENTION/IMPLEADMENT
IA No. 156589/2021 - INTERVENTION/IMPLEADMENT
IA No. 127070/2022 - MODIFICATION OF COURT ORDER
IA No. 143002/2022 - MODIFICATION OF COURT ORDER
IA No. 115436/2020 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 17469/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 11770/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 31813/2021 - PERMISSION TO FILE ADDITIONAL DOCUMENTS/FACTS/ANNEXURES
IA No. 148008/2022 - RECALLING THE COURTS ORDER
IA No. 3908/2022 - STAY APPLICATION

WITH
Diary No(s). 24200/2025 (XVII)

Date : 08-04-2026 These matters were called on for hearing today.

CORAM : HON'BLE MR. JUSTICE PAMIDIGHANTAM SRI NARASIMHA
HON'BLE MR. JUSTICE ALOK ARADHE

For Appellant(s) : Mr. Gaurav Kumar Bansal, Adv.
Mr. Vishnu Kumar Gupta, Adv.
Ms. Nandita Bansal, Adv.
Ms. Chandrika Upadhaya, Adv.
Mr. Aathrva Upadhaya, Adv.
Mr. Dipankar Das, Adv.
Ms. Rani Mishra, AOR

Mr. Atmaram N. S. Nadkarni, Sr. Adv.
Mr. Rishi Awasthi, Adv.
Mr. Azmat Hayat Amanullah, AOR
Mr. Piyush Vatsa, Adv.
Ms. Rebecca Mishra, Adv.

For Respondent(s) :Mr. Rajiv Shankar Dvivedi, AOR

Mr. Vanshdeep Dalmia, AOR
Ms. Anisha Jain, Adv.
Ms. Shambhavi Singh, Adv.
Ms. Prerna Cheema, Adv.

Ms. Aishwarya Bhati, A.S.G.

Ms. Archana Pathak Dave, A.S.G.
Mr. Gurmeet Singh Makker, AOR
Ms. Suhashini Sen, Adv.
Ms. Ruchi Kohli, Adv.
Ms. Chitrangda Rastrwara, Adv.
Mr. Raman Yadav, Adv.
Mr. Rohan Gupta, Adv.

Mr. Arvind Kumar, Adv.
Mr. Aditya Singh, AOR

Mr. Santosh Mishra, AOR
Ms. Shuchi Bharti, Adv.

Mr. Dharmendra Kumar Sinha, AOR
Mrs. Vandna Beri, Adv.
Mr. Kanishk Mor, Adv.

Mr. Rohit Kumar Singh, AOR
Ms. Sardhapurana Mukherjee, Adv.
Ms. Jahanvi Worah, Adv.
Ms. Shweta Priyadarshini, Adv.
Ms. Nishi Singh, Adv.
Ms. Bhagwati, Adv.
Mr. Rohit Khurana, Adv.
Mr. Shikher Gupta, Adv.

Mr. Pinaki Misra, Sr. Adv.
Mr. Sarthak Chaturvedi, Adv.
Mr. Vaibhav Maheshwari, Adv.
Ms. Dimple Sirohi, Adv.
Ms. Pritee Singh, Adv.
Ms. Geetanjali, Adv.
Mr. Sriram P., AOR
Mr. Velmurugan T, Adv.
Mr. P Raja, Adv.

Mr. Devashish Bharuka, Sr. Adv.
Mr. Rahul Khurana, AOR
Mr. Hasil Jain, Adv.
Mr. Ishan Sharma, Adv.

Mr. Pankaj Bhagat, AOR
Ms. Dolly Nair, Adv.
Mr. Ravi S Gupta, Adv.
Mr. Devesh Khandelwal, Adv.
Mr. Vipul Joshi, Adv.

Ms. Fauzia Shakil, AOR

Ms. Savita Singh, AOR

Mr. Rajat Mittal, AOR

Mr. Siddhant Buxy, AOR

Mr. Aakash Sirohi, AOR
Mr. Ansar Ahmad Chaudhary, AOR

Mr. Pankaj Bhagat, AOR
Ms. Dolly Nair, Adv.
Mr. Ravi S Gupta, Adv.
Mr. Devesh Khandelwal, Adv.
Mr. Vipul Joshi, Adv.

Ms. Rita Jha, AOR
Ms. Nishtha Kumar, AOR
Mr. Ankit Kumar Lal, AOR
Mr. Anand Varma, AOR

UPON hearing the counsel the Court made the following

O R D E R

IA No. 82785 and 85385 of 2026

1. Mr. Devashish Bharuka, learned senior counsel appearing for the applicants seeks permission to withdraw the aforesaid interlocutory application for availing other remedies.

2. Permission as sought for is granted.

3. IA No. 82785 and 85385 of 2026 are dismissed as withdrawn.

Civil Appeal Nos. 3661-3662 of 2020 and Contempt Petition(s) @ D.No. 24200 of 2025

4. The Civil Appeals are disposed of and Contempt Petition(s) stand(s) closed in terms of the Signed Order.

5. Pending application(s) including applications for impleadment and intervention also stand disposed of.

(KAPIL TANDON)
COURT MASTER (SH)

(NIDHI WASON)
ASSISTANT REGISTRAR

(Signed Order is placed on the file.)

\\TRUE COPY//

VAKALATNAMA

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, EASTERN BENCH, KOLKATA

ORIGINAL APPLICATION NO. OF 2026

IN THE MATTER OF:

SANJEEV KUMAR BHARTI ...APPLICANT

VERSUS

STATE OF BIHAR & ORS ...RESPONDENTS

KNOW ALL to whom these present shall come that I, Sanjeev Kumar Bharti aged about 33 years S/o Brahamdev Ydaav, R/o Tola Banjama, Sahiya, Jamui, Jhajha, Bihar - 811308, do hereby appoint:-

VANSHDEEP DALMIA
Advocate
206, Jor Bagh, New Delhi-110003
E:mail- vanshdeepdalmia@gmail.com M. No.9810077085, Enrl. No. D/1376/2009

(hereinafter called the Advocate) to be my Advocate in the above noted case and authorise him:-

To act, appear and plead in the above noted case in this Court or in any other Court in which the same may be tried or heard and also in the appellant Court including High Court subject to payment of fees separately for court by me/us.

To sign, file, verify and present pleadings, appeals cross-objections or petition for executions review, revision, withdrawal, compromise or other petitions or affidavits or other documents as may be deemed necessary proper for the prosecution of the said in all its stages subjects to payment of fees for each stage.

To file and take back documents, to admit and /or deny the document of opposite party.

To withdraw or compromise the said case or subject to arbitration any differences of disputes that may arise touching or in any manner relating to the said case. To take execution proceedings.

The deposit, draw and receive money, cheques, cash and grant receipts hereof and to do all other acts and things which may be necessary to be done for the progress and in the course of the prosecution of the said case.

To appoint and instruct any other Legal Practitioner authorizing him to exercise the power and authority hereby conferred upon the Advocate whenever he may think fit do so and to sign the power of attorney on our behalf.

And I/We the undersigned do hereby agree to ratify and confirm all acts done by the Advocate or his substitute in the matter as my/our own acts, as if done by me/ us to all intends and purpose.

And I/We the undersigned do hereby agree to ratify and all acts done by Advocate or his substitute in the matter as my/our own acts, as if done by me/us to all intents and purposes.

And I/We undertake that I/We or my/our duly authorise agent would appear in Court on all hearings and will inform the Advocate for appearance when the case is called.

And I/We undersigned do hereby agree not to hold the advocate of his substitute responsible for the result of the said case. The adjournment costs whenever ordered by the Court shall be of the Advocate, which he shall receive and retain for himself.

And I/We the undersigned do hereby agree that in the event of the whole or part of the fee agreed by me/us to be paid to the advocate remaining unpaid he shall be entitled to withdraw from the prosecution of the said until the same is paid up. The fee settled is only for the above case and above Court. I/We hereby agree that once the fees is paid, I/We will not be entitled for the refund of the same in any case whatsoever and if the case prolongs for more than three years the original fee shall be paid again by me/us.

IN WITNESS WHEREOF I/We do hereunto set my/our hand to these presents the contents of which have been understood by me/us on this 30 day of April, 2026.

Accepted subject to the terms of the fees.

संजीव कुo भारती

VmD

ADVOCATES **CLIENT**

Anisha

D/6313/2019

CamScanner