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**BEFORE THE HON'BLE NATIONAL GREEN
TRIBUNAL, EASTERN ZONE BENCH,**

KOLKATA.

APPEAL NO. 16 OF 2026/EZ

Harihara Sahoo and Another ... Applicants

Vs

State of Odisha and Others ... Respondents

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Place: Cuttack.


MUKESH KUMAR PALAI

Date: -20.06.2026 ADVOCATE EN. NO- O-939/2022

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SYNOPSIS

The present Appeal under Section 16 of the National Green Tribunal Act, 2010 challenges the Amendment Environmental Clearance dated 22.05.2026 issued by SEIAA, Odisha in favour of Respondent No.12 for Rajnagar River Sand Quarry, whereby mining operations have been permitted to continue on the strength of an Original Environmental Clearance granted to Rajnagar as an independent sand source.

Subsequent to the grant of the Original Environmental Clearance dated 23.06.2023, the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata, by Judgment dated 16.07.2024 in Appeal No.18 of 2023/EZ, quashed the earlier District Survey Report of Balasore District. Pursuant thereto, SEIAA, Odisha approved a fresh District Survey Report dated 25.03.2025, which categorically identified Rajnagar Sand Source and Shikharpur Sand Source as forming part of a mining cluster.



Despite the approved DSR recognising the project as a cluster, SEIAA, Odisha proceeded to issue Amendment Environmental Clearances dated 12.06.2025 and 22.05.2026 without undertaking mandatory cluster appraisal, cumulative environmental impact assessment or obtaining prior Cluster Environmental Clearance as required under the EIA Notification, 2006, Sustainable Sand Mining Management Guidelines, 2016 and Enforcement & Monitoring Guidelines for Sand Mining, 2020.

The Appellants and villagers brought the said illegality to the notice of SEIAA, Odisha and other authorities through representations dated 19.02.2026. Information subsequently obtained under the Right to Information Act, 2005 through Letter No.7205/SEIAA dated 19.03.2026 further revealed that no Cluster Environmental Clearance had been granted, nor was any application for such Cluster Environmental Clearance available with SEIAA, Odisha.

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The Original Environmental Clearance dated 23.06.2023 is already under challenge before this Hon'ble Tribunal in Appeal No.19 of 2023/EZ and Appeal No.22 of 2023/EZ. During the pendency of the said proceedings, the impugned Amendment Environmental Clearance has been issued in an apparent attempt to continue and validate mining operations contrary to the approved DSR and the mandatory environmental safeguards governing cluster mining projects.

The impugned Amendment Environmental Clearance is therefore ex facie illegal, arbitrary and contrary to the EIA Notification, 2006, SSMG-2016 and EMGSM-2020, and is liable to be quashed and set aside in the interest of environmental protection, sustainable river management and the rule of law.

LIST OF DATES

23.06.2023 SEIAA, Odisha granted Original Environmental Clearance (EC) in

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favour of Respondent No.12 for
Rajnagar River Sand Quarry over
an area of 13.55 Acres (5.48
Hectares), treating the project as an
independent sand source.

19.07.2023 The Original Environmental
Clearance dated 23.06.2023 was
challenged before this Hon'ble
Tribunal in Appeal No.19 of
2023/EZ and Appeal No.22 of
2023/EZ, which are presently
pending adjudication.

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16.07.2024 The Hon'ble National Green
Tribunal, Eastern Zone Bench,
Kolkata, in Appeal No.18 of
2023/EZ, quashed the Balasore
District Survey Report dated
26.04.2023 and directed
compliance with the legal
requirements including

replenishment study before
permitting sand mining.

25.03.2025 SEIAA, Odisha approved the fresh
District Survey Report (DSR) of
Balasore District bearing EC
Identification No.
EC25C0107OR5447584N, wherein
Rajnagar and Shikharpur Sand
Sources were specifically identified
as forming part of a mining cluster.

12.06.2025 SEIAA, Odisha issued Amendment
Environmental Clearance bearing
EC Identification No.
EC25B0107OR5329391A in
respect of Rajnagar Sand Source
despite the approved DSR
identifying the project as part of a
cluster.

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19.02.2026 The Appellants and villagers of Rajnagar submitted representations before the Member Secretary, SEIAA, Odisha and the District Collector, Balasore seeking immediate intervention against continuation of sand mining activities without mandatory Cluster Environmental Clearance.

19.02.2026 The Appellants also filed an application under the Right to Information Act, 2005 before SEIAA, Odisha seeking information regarding Cluster Environmental Clearance and related records pertaining to Rajnagar and Shikharpur Sand Sources.

19.03.2026 The Public Information Officer, SEIAA, Odisha, vide Letter No.7205/SEIAA, furnished

M. P. Singh

information revealing that no specific information regarding any application for Cluster Environmental Clearance was available with the Authority.

22.05.2026 SEIAA, Odisha issued the impugned Amendment Environmental Clearance extending/continuing the Environmental Clearance in favour of Respondent No.12 without mandatory cluster appraisal and Cluster Environmental Clearance.

20.06.2026 Hence, the present Appeal is being preferred before this Hon'ble Tribunal under Section 16 of the National Green Tribunal Act, 2010 challenging the Amendment Environmental Clearance dated 22.05.2026.

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

(Under Section 16 of the National Green Tribunal Act,
2010)

APPEAL NO. _____ OF 2026/EZ

IN THE MATTER OF:

1. Mr. Harihara Sahoo, aged about 62 years, S/o-
Late Kartik Chandra Sahoo, At-Rajnagar, Po-
Shikharpur, Ps- Jaleswar, Dist- Balasore, Pin-
756086, Odisha
2. Mr. Saroj Pradhan, aged about 40 years, S/o-
Sarbeswar Pradhan, At-Rajnagar, Po-
Shikharpur, Ps- Jaleswar, Dist- Balasore, Pin-
756086, Odisha;

..... **APPELLANTS**

VERSUS

1. State of Odisha represented by Chief Secretary,
Government of Odisha, Lokaseva Bhawan,
(Secretariat), Sachivalaya Marg, Bhubaneswar,
Odisha, Pin- 751001, csori@nic.in

2. The Member Secretary, State Environment Impact Assessment Authority (SEIAA), Odisha, 5RF-2/1, Acharya Vihar, Unit - IX, Bhubaneswar, Odisha 751022, seiaaodisha@gmail.com
3. The Member Secretary, Odisha State Pollution Control Board A/118, Unit-VII Nilakantha Nagar, Bhubaneswar, PIN-751012, Odisha, paribesh1@ospcboard.org
4. Union of India, represented through its Secretary, Ministry of Environment, Forest & Climate Change, Jor Bagh Road, Aliganj, New Delhi-110003, Email- secy-moef@nic.in
5. Directorate of Minor Minerals represented by Director, Department of Steel and Mines, Secretariate Building, Bhubaneswar, Khurda, Odisha-751001, dirmms-rev@gov.in
6. District Collector -cum- District Magistrate Balasore At/Po/Dist-Balasore, Odisha, 756001, dm-balasore@nic.in
7. State Expert Appraisal Committee (SEAC) Odisha, represent through its Member

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Secretary, Paribesh Bhawan, A/118,
Nilakantha Nagar, Unit- VIII, Bhubaneswar-
751012, Odisha Email- ms-seac-or@gov.in

8. The Sub-Collector Balasore -cum- Chairman
Sub Divisional Committee Balasore District,
At/Po/Dist- Balasore, Pin- 756001, Odisha,
Email- subcol.bala-od@nic.in

9. Deputy Directorate of Mines represented by
Deputy Director, Bhadrak Circle Bhadrak, Plot
no- 1472/4591, Motel Chhak, Bhadrak-
756100, ddm-bhadrak@gov.in

10. The Tahasildar Jaleswar, AT/PO/PS- Jaleswar,
Dist- Balasore, Odisha, PIN-756032, tah.jale-od@nic.in

11. Mining Officer, Balasore, Department of Steel
and Mines, Kuruda, Odisha 756056,
miningofficerbalasore@gmail.com

12. Smt. Laxmi Priya Prusty, (Project Proponent –
cum- Lessee of M/s. Rajnagar River Sand
Quarry under Jaleswar Tahasil, Balasore
District), W/o- Ratikanta Rout, AT-

Balaramprasad, PO- Patla, PS- Matang, Dist-
Dhenkanal, PIN- 759121, Odisha.

... RESPONDENTS

To

The Hon'ble Chairman and his Lordship's
companion members of this Hon'ble Tribunal.

*The humble appeal of
the appellant named above*

MOST RESPECTFULLY SHOWETH:

- 
- I.** That the addresses of the Appellants, as
stated in the cause title above, are correct
and sufficient for the purpose of service of
notices and all communications in the
present Appeal.
- II.** That the addresses of the Respondents, as
stated in the cause title above, are correct
and sufficient for the purpose of service of
notices and all communications in the
present Appeal.

FACTS OF THE CASE

1. That the present Appeal under Section 16 of the National Green Tribunal Act, 2010 has been filed challenging the legality and validity of the Amendment Environmental Clearance dated 22.05.2026 issued by Respondent No.2, namely SEIAA, Odisha, in favour of Respondent No.12 for Rajnagar River Sand Quarry admeasuring 13.55 Acres (5.48 Hectares) under Khata No.377 and Plot No.1295/1300 situated at Village Rajnagar, Tahasil Jaleswar, District Balasore, Odisha.
2. That SEIAA, Odisha had originally granted Environmental Clearance in favour of Respondent No.12 for the Rajnagar Sand Source vide EC Identification No. EC23B001OR110281 dated 23.06.2023, treating the said project as an independent sand mining source. Thereafter, SEIAA, Odisha issued an Amendment Environmental Clearance

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bearing EC Identification No.
EC25B0107OR5329391A dated
12.06.2025 and subsequently issued the
impugned Amendment Environmental
Clearance bearing EC Identification No.
EC26B0107OR5920547A dated
22.05.2026, thereby extending and
continuing the validity of the said
Environmental Clearance. Copies of the
Original Environmental Clearance dated
23.06.2023, the Amendment
Environmental Clearance dated
12.06.2025 and the impugned
Amendment Environmental Clearance
dated 22.05.2026 are annexed herewith
and collectively marked as **Annexure-1**
series.

3. That the Original Environmental
Clearance dated 23.06.2023 was granted
in favour of Respondent No.12 treating
the Rajnagar Sand Source as an
independent sand mining project on the

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basis of the District Survey Report then prevailing. However, the subsequent approval of the District Survey Report dated 25.03.2025 fundamentally altered the factual and regulatory position by identifying Rajnagar Sand Source as part of a mining cluster.

4. That the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata, vide Judgment dated 16.07.2024 in Appeal No.18 of 2023/EZ, quashed the Balasore District Survey Report dated 26.04.2023 and held that, in the absence of a valid replenishment study, the said DSR lacked legal sanctity and could not form the basis for permitting sand mining in the Subarnarekha River stretch. The Hon'ble Tribunal further held that a fresh DSR could be approved only upon due compliance with the statutory requirements, including a proper replenishment study.

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5. That pursuant to the aforesaid Judgment of the Hon'ble Tribunal, SEIAA, Odisha approved a fresh District Survey Report (DSR) for Balasore District on 25.03.2025 bearing EC Identification No. EC25C0107OR5447584N. The approved DSR specifically categorised Rajnagar Sand Source and Shikharpur Sand Source as forming part of a mining cluster, thereby fundamentally altering the factual and regulatory basis on which the Original Environmental Clearance dated 23.06.2023 had been granted. A copy of the approved DSR dated 25.03.2025 is annexed herewith and marked as **Annexure-2.**

6. That the approved DSR dated 25.03.2025 specifically identifies and categorises the Rajnagar Sand Source and Shikharpur Sand Source as forming part of a mining cluster. Consequently, any grant, continuation, extension, renewal or

amendment of Environmental Clearance in respect of the said sand sources was required to be preceded by mandatory cluster appraisal and environmental assessment in accordance with the Sustainable Sand Mining Management Guidelines, 2016 (SSMG-2016) and Enforcement and Monitoring Guidelines for Sand Mining, 2020 (EMGSM-2020). Relevant extracts of the said legal provisions are annexed herewith and marked as **Annexure-3 & Annexure-4** respectively.

7. That despite the approved DSR specifically recognising Rajnagar Sand Source as part of a mining cluster, SEIAA, Odisha proceeded to issue the Amendment Environmental Clearance dated 12.06.2025 and thereafter the impugned Amendment Environmental Clearance dated 22.05.2026 without undertaking mandatory cluster appraisal, cumulative

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environmental impact assessment or obtaining prior Cluster Environmental Clearance as required under SSMG-2016 and EMGSM-2020. The continuation of individual Environmental Clearance in the face of an approved cluster-based DSR constitutes a clear departure from the governing regulatory framework and renders the impugned action ex facie illegal.

8. That Condition No.7.A(v) of the Original Environmental Clearance dated 23.06.2023 stipulated that the validity of the Environmental Clearance would remain effective for a period of two years from the date of its issuance. Condition No.7.12 further provided that any extension beyond the said period could only be considered upon submission of an approved District Survey Report and Annual Replenishment Study Report in accordance with law.

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9. That the approval of the District Survey Report dated 25.03.2025 fundamentally altered the legal and factual framework governing the Rajnagar Sand Source by categorising it as part of a mining cluster with Shikharpur Sand Source. In such circumstances, the Original Environmental Clearance dated 23.06.2023, granted to Rajnagar as an independent sand source, could not have been extended, amended or permitted to continue without prior Cluster Environmental Clearance and compliance with the mandatory requirements governing cluster mining projects.

10. That the Original Environmental Clearance dated 23.06.2023 is presently under challenge before this Hon'ble Tribunal in Appeal No.19 of 2023/EZ and Appeal No.22 of 2023/EZ, both of which are pending adjudication. During the pendency of the said proceedings, SEIAA,

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Odisha could not have substantially altered, extended, validated or regularised the Original Environmental Clearance by issuing the impugned amendment order, which has the effect of prejudicing the issues pending consideration before this Hon'ble Tribunal.

11. That the Appellants, along with other villagers of Rajnagar, submitted a detailed representation dated 19.02.2026 before the Member Secretary, SEIAA, Odisha, seeking immediate intervention against the continuation of sand mining activities at Rajnagar and Shikharpur Sand Sources without obtaining the mandatory Cluster Environmental Clearance, despite the approved District Survey Report dated 25.03.2025 recognising the said sand sources as forming part of a mining cluster. Copies of the said representations together with the postal receipts are

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annexed herewith and collectively marked as Annexure-5.

12. That in the said representation, the villagers specifically brought to the notice of SEIAA that:

(a) mining activities were continuing without obtaining mandatory Cluster Environmental Clearance;

(b) heavy machinery including excavators and dumpers were being deployed for extraction of sand;

(c) permanent boundary pillars had not been installed resulting in excavation beyond sanctioned limits;

(d) village roads and public infrastructure including Biju Setu bridge were being damaged due to movement of heavy vehicles;

(e) riverbanks of the Subarnarekha River were being destabilised causing ecological imbalance and threat to nearby habitations; and

M. Pal

(f) extraction of sand had reportedly exceeded the approved quantities in violation of Environmental Clearance conditions and applicable mining laws.

13. That the Appellants and villagers also addressed similar representations dated 19.02.2026 to the District Collector, Balasore and other competent authorities through Speed Post, specifically bringing to their notice the continuation of mining activities without mandatory Cluster Environmental Clearance and seeking immediate preventive and remedial action. Despite being duly informed of the alleged violations, the concerned authorities failed to initiate any action in accordance with law. Copies of the said representations together with the postal receipts are annexed herewith and collectively marked as **Annexure-6.**

14. That thereafter, the Appellants sought information under the Right to

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Information Act, 2005 by filing an RTI application dated 19.02.2026 before SEIAA, Odisha seeking information and clarification regarding the existence and status of Cluster Environmental Clearance in respect of Rajnagar and Shikharpur Sand Sources, along with other connected records relating to compliance with the applicable environmental requirements.

15. That vide Letter No.7205/SEIAA dated 19.03.2026, the Public Information Officer, SEIAA, Odisha furnished information which revealed that:

(i) Rajnagar Sand Source had been granted Original EC dated 23.06.2023 and Amendment EC dated 12.06.2025;

(ii) Shikharpur Sand Source had been granted individual Environmental Clearance;

(iii) no specific information regarding any application for Cluster Environmental Clearance was available in the office;

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(iv) no show cause notice or violation proceedings had been initiated against the project proponents; and

(v) the explanation furnished by SEIAA for continuing individual Environmental Clearances was merely that the individual ECs had been granted prior to approval of the DSR. A copy of the RTI reply dated 19.03.2026 along with the questions and answers supplied by the Public Information Officer is annexed herewith and marked as **Annexure-7.**

16. That the RTI reply dated 19.03.2026 unequivocally establishes that, despite the approved DSR recognising Rajnagar and Shikharpur Sand Sources as a mining cluster, no Cluster Environmental Clearance has been granted, nor has any application seeking such Cluster Environmental Clearance been found to be available with SEIAA, Odisha.

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17. That the impugned Amendment Environmental Clearance dated 22.05.2026 seeks to continue and validate mining operations on the strength of an Original Environmental Clearance granted to an independent sand source, even though the governing DSR recognises the project as part of a mining cluster requiring prior cluster appraisal and environmental assessment. The impugned action is therefore contrary to the approved DSR and the applicable environmental regulatory framework.

18. That the impugned Amendment Environmental Clearance has been issued without any independent or scientific assessment of the cumulative environmental impacts likely to arise from the cluster mining activities, particularly with respect to river morphology, replenishment potential, bank stability, groundwater regime, aquatic ecology,

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flood management and the overall ecological integrity of the Subarnarekha River ecosystem.

19. That cluster appraisal constitutes a mandatory environmental safeguard intended to evaluate the cumulative impacts of mining activities undertaken in contiguous or proximate leases. Dispensing with such appraisal defeats the very object of the environmental impact assessment regime and vitiates the decision-making process, thereby rendering the impugned Amendment Environmental Clearance arbitrary, illegal and liable to be set aside.

20. That the impugned Amendment Environmental Clearance dated 22.05.2026 neither records any reasons for dispensing with cluster appraisal nor discloses any material demonstrating compliance with the mandatory provisions contained in the SSMG-2016 and

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EMGSM-2020. The decision-making process is therefore arbitrary, non-speaking, contrary to the precautionary principle and violative of the principles of transparency and environmental governance.

21. That the impugned Amendment Environmental Clearance amounts to an impermissible attempt to perpetuate and regularise a mining activity which, in view of the changed factual and legal circumstances arising from the approved DSR dated 25.03.2025, required fresh environmental appraisal and prior Cluster Environmental Clearance. Such exercise is beyond the jurisdiction of SEIAA, Odisha and contrary to settled principles of environmental law.

22. That unless the impugned Amendment Environmental Clearance dated 22.05.2026 is set aside by this Hon'ble Tribunal, irreparable environmental

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damage is likely to be caused to the Subarnarekha River ecosystem and surrounding areas through continuation of mining operations without mandatory Cluster Environmental Clearance and cumulative environmental impact assessment.

23. That the present Appeal is therefore being preferred in the interest of environmental protection, sustainable river management, enforcement of statutory environmental safeguards and to uphold the rule of law governing the grant of Environmental Clearances for sand mining projects.

24. That the Appeal has been filed within the period of limitation prescribed under Section 16 of the National Green Tribunal Act, 2010 from the date of communication/knowledge of the impugned Amendment Environmental Clearance dated 22.05.2026 and is

Appeal

therefore maintainable before this Hon'ble
Tribunal.

GROUNDS

The impugned Amendment
Environmental Clearance dated
22.05.2026 is liable to be quashed and
set aside, inter alia, on the following
grounds, each of which is without
prejudice to the others:

- I. The impugned Amendment
Environmental Clearance dated
22.05.2026 has been issued in
complete disregard of the approved
District Survey Report (DSR) of
Balasore District dated 25.03.2025,
which specifically identifies Rajnagar
Sand Source and Shikharpur Sand
Source as forming part of a mining
cluster, thereby attracting the
mandatory requirement of cluster

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appraisal and prior Cluster Environmental Clearance.

- II.** Once the approved DSR dated 25.03.2025 recognised Rajnagar Sand Source as part of a mining cluster, the very foundation upon which the Original Environmental Clearance dated 23.06.2023 had been granted as an independent sand source ceased to exist and the said Environmental Clearance could not have been amended, extended or continued without obtaining prior Cluster Environmental Clearance.
- III.** The Respondent Authorities failed to undertake mandatory cluster appraisal and cumulative environmental impact assessment as required under the EIA Notification, 2006, Sustainable Sand Mining Management Guidelines, 2016 (SSMG-2016) and Enforcement and Monitoring Guidelines for Sand

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Mining, 2020 (EMGSM-2020) before issuing the impugned Amendment Environmental Clearance.

IV. The impugned Amendment Environmental Clearance has been granted without conducting any assessment of cumulative environmental impacts arising from cluster mining activities, including impacts on river morphology, replenishment, bank erosion, groundwater regime, aquatic ecology, flood management and the overall health of the Subarnarekha River ecosystem.

V. The requirement of cluster appraisal is a substantive environmental safeguard intended to assess cumulative environmental impacts of multiple proximate mining leases and cannot be dispensed with by way of amendment

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or extension of an existing Environmental Clearance.

VI. Condition No.7.A(v) of the Original Environmental Clearance dated 23.06.2023 stipulated that the validity of the Environmental Clearance would remain effective only for two years from the date of issue, while Condition No.7.12 provided that any extension could be considered only upon compliance with the prescribed legal requirements, including approved studies and reports.

VII. Respondent No.2 failed to verify whether the mandatory legal prerequisites for extension and continuation of the Environmental Clearance had been fulfilled before issuing the impugned Amendment Environmental Clearance.

VIII. The Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata, by

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Judgment dated 16.07.2024 passed in Appeal No.18 of 2023/EZ, quashed the earlier District Survey Report of Balasore District and held that no sand mining could be permitted without compliance with the legal requirements, including a valid replenishment study. The impugned action is contrary to the spirit and effect of the said judgment.

IX. Despite the approved DSR identifying Rajnagar and Shikharpur Sand Sources as a mining cluster, SEIAA proceeded to issue Amendment Environmental Clearances treating the project as an individual sand source, thereby acting contrary to its own approved DSR.

X. The Original Environmental Clearance dated 23.06.2023 is presently under challenge before this Hon'ble Tribunal in Appeal No.19 of 2023/EZ and Appeal No.22 of 2023/EZ and, during

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the pendency of the said proceedings, SEIAA could not have substantially altered, extended, validated or regularised the original Environmental Clearance through the impugned amendment order.

XI. The grant of the impugned Amendment Environmental Clearance during the pendency of the aforesaid appeals has the effect of prejudicing the adjudication of issues already pending consideration before this Hon'ble Tribunal.

XII. The Appellants and villagers had specifically brought the illegality to the notice of SEIAA, Odisha and the District Collector, Balasore by representations dated 19.02.2026 seeking immediate intervention against mining activities being carried out without mandatory Cluster Environmental Clearance, yet no

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action whatsoever was taken by the authorities.

XIII. The Public Information Officer, SEIAA, Odisha, vide Letter No.7205/SEIAA dated 19.03.2026, admitted that no specific information regarding any application for Cluster Environmental Clearance was available in the office, thereby establishing that no Cluster Environmental Clearance exists for the Rajnagar-Shikharpur cluster.

XIV. The RTI reply further discloses that no show cause notice, revocation proceedings or violation proceedings had been initiated against the project proponents despite the admitted absence of Cluster Environmental Clearance and continuation of mining activities.

XV. The justification furnished by SEIAA in the RTI reply, namely that the

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individual Environmental Clearances had been granted prior to approval of the DSR, is contrary to law since continuation or extension of such Environmental Clearances after approval of the DSR required mandatory compliance with the cluster appraisal provisions.

XVI. The impugned Amendment Environmental Clearance is arbitrary, irrational and non-speaking inasmuch as it neither records reasons for dispensing with cluster appraisal nor discloses any material demonstrating compliance with the EIA Notification, 2006, SSMG-2016 and EMGSM-2020.

XVII. The decision-making process adopted by Respondent No.2 suffers from non-application of mind, failure to consider relevant materials and consideration of irrelevant factors, thereby rendering

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the impugned order legally unsustainable.

XVIII. The impugned Amendment Environmental Clearance defeats the object and purpose of the environmental impact assessment regime by permitting continuation of a cluster mining project under the guise of amendment of an earlier Environmental Clearance.

XIX. The impugned action amounts to a colourable exercise of power and an indirect attempt to validate and continue a mining operation which, in law, requires fresh environmental appraisal and prior Cluster Environmental Clearance.

XX. The impugned Amendment Environmental Clearance violates the precautionary principle, the principle of sustainable development and the principle of inter-generational equity,

M. K. Singh

all of which form part of the environmental jurisprudence consistently recognised and applied by the Hon'ble Supreme Court of India and this Hon'ble Tribunal.

XXI. The failure to undertake cumulative environmental assessment before permitting continuation of mining activities exposes the Subarnarekha River ecosystem and nearby habitations to irreparable environmental degradation and ecological imbalance.

XXII. The impugned Amendment Environmental Clearance has been issued in violation of the statutory environmental framework and is therefore liable to be quashed and set aside by this Hon'ble Tribunal in exercise of its appellate jurisdiction under Section 16 of the National Green Tribunal Act, 2010.

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XXIII. The Appellants crave leave of this Hon'ble Tribunal to urge such other and further grounds at the time of hearing as may be deemed necessary and proper in the interest of justice.

XXIV. The impugned Amendment Environmental Clearance permits continuation of unscientific river bed mining without compliance with mandatory environmental safeguards, which is contrary to the constitutional mandate under Articles 48A and 51A(g) of the Constitution of India and violative of the right to life and a wholesome environment guaranteed under Article 21 of the Constitution of India.

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LIMITATION

That the present Appeal is directed against the Amendment Environmental Clearance dated 22.05.2026 issued by SEIAA, Odisha, which gives rise to a fresh and independent cause of

action distinct from the Original Environmental Clearance dated 23.06.2023 presently under challenge before this Hon'ble Tribunal in Appeal No.19 of 2023/EZ and Appeal No.22 of 2023/EZ. The present Appeal has been filed within the statutory period of 30 days prescribed under Section 16 of the National Green Tribunal Act, 2010 and is therefore within limitation and maintainable.

INTERIM PRAYER

Pending disposal of the present Appeal, this Hon'ble Tribunal may graciously be pleased to stay the operation and implementation of the impugned Amendment Environmental Clearance bearing EC Identification No. EC26B0107OR5920547A dated 22.05.2026 issued in favour of Respondent No.12 in respect of Rajnagar River Sand Quarry and consequently restrain the Respondents from carrying out or permitting any sand mining activities pursuant thereto, and pass such further order(s) as this

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Hon'ble Tribunal may deem fit and proper in the interest of justice and environmental protection.

PRAYER

In view of the facts and circumstances stated hereinabove, it is most respectfully prayed that this Hon'ble Tribunal may graciously be pleased to:

- A.** Admit the present Appeal;
- B.** Call for the records pertaining to the impugned Amendment Environmental Clearance bearing EC Identification No. EC26B0107OR5920547A dated 22.05.2026 issued by Respondent No.2 in favour of Respondent No.12 in respect of Rajnagar River Sand Quarry;
- C.** Quash and set aside the Amendment Environmental Clearance bearing EC Identification No. EC26B0107OR5920547A dated 22.05.2026 issued by SEIAA, Odisha in favour of Respondent No.12;
- D.** Declare that continuation, extension or amendment of the Environmental Clearance in respect of Rajnagar Sand Source without mandatory Cluster Environmental Clearance and cluster appraisal is illegal and contrary to the EIA

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Notification, 2006, SSMG-2016 and EMGSM-2020;

- E. Direct the Respondents to stop all mining activities at Rajnagar Sand Source until obtaining valid Cluster Environmental Clearance in accordance with law;
- F. Pass any such further order(s) as this Hon'ble Tribunal may deem fit in the interest of justice and environmental protection.

And for this act of kindness, the Appellants shall as in duty bound ever pray.

Place: - Cuttack. **APPELLANT THROUGH**

Date: - 20.06.2026


ADVOCATE

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BEFORE HON'BLE NATIONAL GREEN TRIBUNAL, EASTERN
ZONE BENCH, KOLKATA.

APPEAL NO. _____ OF 2026/EZ

IN THE MATTER OF:

Harihara Sahoo and Another ... Applicants

Vs

State of Odisha and Others ... Respondents

AFFIDAVIT

I, Harihara Sahoo, aged about 62 years, Son of Late Kartik Chandra Sahoo, Resident of At- Rajnagar, Po- Shikharapur, P.S.- Jaleswar, District- Balasore, Odisha, Pin-756086, do hereby solemnly affirm and state as follows:

1. That I am the Appellant No. 1 in the present Appeal and am duly authorized by Appellant No. 2 to swear this affidavit on behalf of both the Appellants.
2. That I am well acquainted with the facts and circumstances of the case and, as such, competent and authorized to swear this affidavit.
3. That I have read and understood the contents of the accompanying Memorandum of Appeal and the same are true and correct to my knowledge and belief.

That the facts stated in the accompanying Appeal are based on records and information available with me, which I believe to be true and correct.

Harihara Sahoo
DEPONENT

VERIFICATION

Verified on dt. 16.06.2026 at Jaleswar that the contents of the above affidavit are true and correct. No part of it is false and nothing material has been concealed there from.

Identified By

[Signature]

Advocate

Solemnly sworn before me
by Harihara Sahoo
being identity Mr. G. S.
Adv. Jaleswar
on dt. 16.06.26 at 17.05PM

Nitya Gopal Das
Notary Jaleswar

Harihara Sahoo
DEPONENT

**BEFORE HON'BLE NATIONAL GREEN TRIBUNAL, EASTERN
ZONE BENCH, KOLKATA.**

APPEAL NO. _____ OF 2026/EZ

IN THE MATTER OF:

Harihara Sahoo & Another

...Appellants

Versus

State of Odisha & Others

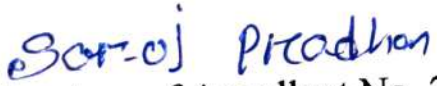
...Respondents

AUTHORISATION

I, Saroj Pradhan, aged about 40 years, Son of Sri Sarbeswar Pradhan, Resident of At- Rajnagar, P.O.- Shikharpur, P.S.- Jaleswar, District- Balasore, Odisha, PIN-756086, Appellant No. 2 in the above-mentioned Appeal, do hereby authorize Sri Harihara Sahoo, aged about 62 years, Son of Late Kartik Chandra Sahoo, Resident of At/PO- Rajnagar, P.S.- Jaleswar, District- Balasore, Odisha, PIN-756086, Appellant No. 1, to represent me and act on my behalf in connection with the present Appeal before the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata.

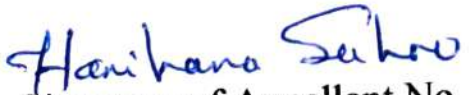
I further authorize him to sign, verify, affirm affidavits, applications, petitions, rejoinders and other pleadings, and to take all necessary steps required for the proper conduct and prosecution of the present Appeal on my behalf.

I hereby undertake to ratify and confirm all acts done by the said authorized Appellant in connection with the aforesaid proceedings.


Signature of Appellant No. 2

(Saroj Pradhan)

Accepted

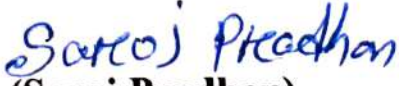

Signature of Appellant No. 1

(Harihara Sahoo)

Thanking you

Date- 14.06.2026

Place-Cuttack


(Saroj Pradhan)



File No.: 569731/890-MINB2/02-2026

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA),
ODISHA)



Dated 22/05/2026



To,

SMT. LAXMI PRIYA PRUSTY
W/o-Ratikanta Rout
AT- RAJNAGAR, TAHASIL- JALESWAR, DIST- BALESWAR ,756032
rajnagarsand5@gmail.com

Subject: Amendment in Environmental Clearance (EC) letter dated 23/06/2023 granted to the project of Rajnagar Sand Bed (River-Subarnrekha) under the provision of the EIA Notification 2006 - regarding.

Sir/Madam,

This is in reference to your application submitted to SEIAA, Odisha vide proposal number SIA/OR/MIN/569731/2026 dated 19/02/2026 for grant of an amendment in respect of replenishment study report of sand in prior Environmental Clearance (EC) Identification No.EC23B001OR110281 dated 23.06.2023 granted to the project of Rajnagar Sand Bed (River-Subarnrekha) over an area of 13.55 Ac/ 5.48 ha.is located in village Rajnagar under Jaleswar Tahasil in Balasore District of Odisha in favour of Smt. Laxmipriya Prusty, the successful bidder/lessee under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC26B0107OR5920547A
(ii) File No.	569731/890-MINB2/02-2026
(iii) Clearance Type	Amendment in EC
(iv) Category	B1
(v) Schedule No./ Project Activity	1(a) Mining of minerals Proposal for Amendment of EC for Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha.
(vii) Name of Project	
(viii) Location of Project (District, State)	BALESHWAR, ODISHA
(ix) Issuing Authority	SEIAA, Odisha
(x) EC Date	19/02/2026
(xi) Applicability of General Conditions	NO

(xii) Status of implementation of the project

3. In view of the particulars given in the Para-1 above, the project proposal interalia including Form-4 (Part A, B & C) were submitted to the SEIAA, Odisha for an appraisal by the State Level Expert Appraisal Committee (SEAC) under the provision of EIA notification 2006 and its subsequent amendments thereto.

4. The above-mentioned proposal has been considered by SEAC in its meeting held on 17.03.2026. The minutes of the meeting and all the project documents are available on Parivesh portal which can be accessed from the Parivesh portal by scanning the QR Code above.

5. The brief about the reasons for an amendment requested along with the brief on the salient features of the project as submitted by the project proponent in Form- 4 (Part A, B & C) and as presented before SEAC and the details of the amendment of EC are annexed as **Annexure- 2**.

6. The proposal was placed in the SEAC meeting held on 17.03.2026 under the provisions of EIA Notification 2006 and its subsequent amendments and after detailed deliberations in the matter and the SEAC recommend the proposal for grant of EC for **11,612 cum/annum** of sand extraction as per Replenishment Study Report .

7. The SEIAA, Odisha has examined the proposal in **291st meeting held on 14.05.2026** in accordance with the extant provisions of the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the SEAC and hereby accords amendment in Environment Clearance letter no./Identification No.EC23B001OR110281 dated 23.06.2023 for the instant proposal of Rajnagar Sand Bed (River-Subarnrekha) over an area of 13.55 Ac/ 5.48 ha.is located in village Rajnagar under Jaleswar Tahasil in Balasore District of Odisha in favour of Smt. Laxmipriya Prusty, the successful bidder/lessee is allowed for extraction quantity of sand limited to **11,612 cum** with average depth of 1.0 **meter** for one year valid from the date of issue of this letter and the method of mining shall be as per the approved Mining Plan under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of EC conditions, general instructions issued vide EC letter dated 26.06.2023 and following additional specific conditions as mentioned in Annexure-1. The other stipulated terms and conditions of the original EC letter initially granted remain the same.

Stipulations		
Sl.	Descriptions	Stipulation
(i)	Lease Area:	13.55 acres or 5.48 Ha
(ii)	No Mining Zone:	1. The PP shall maintain safety and stability of Riverbanks i.e. 3 meter or 10% of river width whichever is more for protection of river bank and 2. 7.5-meter safety zone from all sides of lease boundary. 3. 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 50 meters as no mining zone from the embankment as stipulated in the sustainable sand mining guideline, 2016. The Mining Officer shall ensure the compliance of the condition during mining operation
(iii)	Maximum Depth of Mining:	1.0 meter as per Annual Rate of Replenishment Study (ARRS) report & Approved Mining Plan
(iv)	Method of Mining:	The method of mining shall be as per approved Mining Plan.
(v)	Permitted Quantity:	11,612 cum with average depth of 1.0 meter for one year valid from the date of issue of this letter. Further extension of EC will be considered after submission of ARSS report prepared through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines and the conclusion of ARSS report shall be duly authenticated with sign and date by the Mining Officer. The PP is also required to submit the copy of lease agreement
(vi)	Validity Period of EC:	The EC is for one year from the date of issue of this letter.
(vii)	ARRS report	The Annual Rate of Replenishment Study (ARRS) is to be conducted through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines in subsequent years.

8. No Working Zone: - The lessee shall ensure that no sand mining is carried out in the areas as specified below: -

- During the rainy season;
- Within the water channel or stream flow area throughout the year;
- Mining shall not be undertaken in a mining lease located in 250 meter from up-stream of nearest bridge and 500 meter down stream of nearest bridge, 200 meter upstream and downstream of water supply/irrigation scheme, 100 meter from the edge of National Highway and railway line, 50 meters from a reservoir, canal or building, 25 meters 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.
- The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non-monsoon period.
- No stream shall be diverted for the purpose of sand mining and no natural water course shall be obstructed.
- Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purposes.
- The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
- Mining shall be carried out under strict adherence to provisions of OMMC Rules, 2016, Enforcement &

Monitoring Guidelines for Sand Mining (EMGSM), 2020. Sand Policy of Govt. Of Odisha dated 02.09.2021 are made there-under as applicable

9. Transport Safeguards:

- No transportation of the minerals shall be allowed on any road passing through villages/habitations without prior explicit permission.
- Transportation of minerals through existing rural roads can be allowed only by the concerned Govt. Department/ Gram Panchayat/BDO after required strengthening such that the carrying capacity of the road is increased to handle the mineral carrying truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project.
- Project proponents shall ensure that the transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density.
- Vehicles hired for transportation of minor minerals from the site should be in good condition and should have pollution check certificates and should conform to applicable air and noise emission standards and should be operated only during non-peak hours. Speed of vehicle be regulated and in no case >30 Kms / hr be allowed.
- The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar/ Mining Officer may collect an appropriate additional road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of mineral transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of mineral carrying trucks.
- Water spraying should be made on the village road to control particulate matter (dust particles) pollution in surrounding air during transportation from the quarry. Garland drain shall be constructed on the hill slope to arrest downward flow of particulate matter with rainwater.

10. Other Environmental Conditions: -The Project Proponent shall follow all the provisions of Sand Policy of Govt. Of Odisha dated 02.09.2021 for this sand mining project.

- The Tahasildar/ Mining Officer shall take adequate measures to prevent unauthorized mining;
- The project proponent should carry out river bed sand mining manually by engaging local laborers to check over exploitation of sand at the source;
- The lessee shall ensure safety of human life and livestock from accidents in case the village / any habitation is very near the mining lease area.
- At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.

11. Half-yearly Compliance Report: -As per the MoEF & CC, Govt. of India Office Memorandum (OM) dated **14.06.2024** and in accordance with EIA Notification 2006 and as amended, all the Project Proponents (PP) are **required to upload** their Half Yearly compliances in PARIVESH 2.0 on the environmental conditions stipulated in the Environmental Clearance (EC) letter in a timely manner on or

before 1st June and 1st December of each calendar year. No hard copy and soft copy required to submit to SEIAA, Odisha, failing which EC is liable to be revoked.

12. Concomitant Monitoring: - The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar/mining officer, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non-compliance and also ensure that the project proponent submits half yearly compliance reports.

13. Independent Monitoring: -The concerned Regional Office of the MoEF & CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF & CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.

14. Revocation of EC: - The SEIAA, Odisha may revoke or suspend the EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.

15. Change in Ownership of Lease: - This EC shall not be transferred without the permission of SEIAA, Odisha. The Tahasildar/ Mining Officer shall inform the SEIAA of any change in ownership of the mining lease. No mining is allowed without transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

16. The SEIAA, Odisha reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

17. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

18. The PP is under obligation to implement commitments made in the Environment Management Plan (EMP) which forms part of this EC.

19. The EC is valid **for one year** from the date of issue of this letter.

20. General Instructions:

1. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of SEIAA website where it is displayed.
2. 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 must display the same for 30 days from the date of receipt.

3. The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.
4. An action plan for implementing EMP and environmental conditions along with a responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in a separate account and not to be diverted for any other purpose. Six monthly progress of implementation of the action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.
5. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
6. The Regional Office of MoEF & CC, Bhubaneswar, SPCB, Odisha and the lease granting Authority shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
7. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010
21. This issues with the approval of the Competent Authority

Copy To

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.
2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
3. The Director of Mines, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Integrated Regional Office (IRO), Ministry of Environment & Forests, A-31, Chandrasekharapur, Bhubaneswar for information.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi-110032 for information.
6. Chairman/Member/Member Secretary, SEIAA for information.
7. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.

8. Collector & DM, Balasore, Sub-Collector, Balasore, Deputy Director of Mines, Bhadrak, DFO, Balasore, RO, SPCB, Balasore, Tahasildar, Jaleswar /Mining Officer, Balasore for Information and necessary action .
9. Guard file for record/Website/Parivesh Portal

Annexure 1

Additional EC Conditions

1. The maximum extraction quantity of sand limited to **11,612 cum** with average depth of mining is **1.0 meter** from the date of issue of this letter and the method of mining shall be as per the approved Mining Plan. Further extension of EC will be considered after submission of ARSS report prepared through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines and the conclusion of ARSS report shall be duly authenticated with sign and date by the Mining Officer. The PP is also required to submit the copy of lease agreement.
2. The PP shall maintain 50 meters as no mining zone from the embankment. The Mining Officer shall ensure that no sand shall be extracted from the river embankment within 50 meters distance during mining operation.
3. The EC is valid **for one year** from the date of issue of this letter.
4. The Annual Rate of Replenishment Study (ARRS) is to be conducted through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines in subsequent years.
5. The PP shall implement the EMP with a budgetary allocation as proposed in the EMP report during EC application.
6. The PP shall plant **250 nos. of tree species** like Banyan (*Ficus benghalensis*), Peepal (*Ficus religiosa*), Neem (*Azadirachta indica*), Jamun(*Syzygium cumini*), Mango (*Mangifera indica*), Karanj(*Pongamia pinnata*), Arjun(*Terminalia Arjuna*), Jackfruit (*Artocarpus heterophyllus*), Siris (*Albizia lebbeck*), etc.. as part of tree plantation campaign "**Ek Ped Maa Ke Naam**" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>).The PP shall submit the status of plantation during every six-months (06) compliance of EC conditions with geo-coordinating photographs.
7. The compliance of EC conditions of said quarry shall be monitored by DEIAA, concerned lease granting Authority either Mining Officer or Tahasildar, RO, SPCB, Odisha and Integrated Regional Office of MoEFCC, Bhubaneswar as per MoEF & CC, Govt. of India S.O. 141(E) in EIA Notification dated 15.01.2016.
8. As per the MoEF & CC, Govt. of India Office Memorandum (OM) dated **14.06.2024** and in accordance with EIA Notification 2006 and as amended, all the Project Proponents (PP) are **required to upload** their Half Yearly compliances in PARIVESH 2.0 on the environmental conditions stipulated in the Environmental Clearance (EC) letter in a timely manner on or before 1st June and 1st December of each calendar year. No hard copy and soft copy required to submit to SEIAA, Odisha.

Annexure-2

1. Proposal in brief:

- (i) This is a proposal for amendment of EC in respect of replenishment study report of Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha.
- (ii) The project proponent has obtained EC from SEIAA, Odisha vide EC Identification no./letter no. EC23B001OR110281 dated 23.06.2023 in favour of Smt. Laxmipriya Prusty (successful bidder)
- (iii) During EC application the PP has submitted required documents along with mining plan dated 18.04.2018 where it is mentioned that mineable reserve of the proposed sand was 139563 cum with depth of sand deposition was 1.0 meter and proposed for annual extraction-40,002 cum.
- (iv) The SEIAA also granted EC for 1st year production **11612 cum/annum** in 1st year and **2900 cum/annum** in 2nd year subject to submission of ARRS report after one year of quarry operation.
- (v) The Modified mining plan was approved vide letter no. 7389 dated **29.05.2023** for **manual method** of mining with annual extraction of **sand 11,612 cum/annum** with depth of mining 1.0 meter.
- (vi) Amendment EC has been obtained from SEIAA Odisha vide EC Identification no. EC25B0107OR5329391A on dt. **12.06.2025** SEIAA has permitted for **11612 cum per annum** for one year as per approved modified mining plan from the date of issue of amendment of EC letter with average depth of 1.25 meter followed by submission of ARRS by **31.12.2026**.
- (vii) The PP has submitted the replenishment study was done by the M/s. Areal Construction & Geo-India Services., the (ORSAC Empanelment Agencies) with mentioned that pre-monsoon survey on 26.06.2025 with RL = 6.03 m, post-monsoon survey on 18.11.2025 with RL = 7.53 m and quantity of sand replenished is **37046 cum** with average depth **1.5 meter** and proposed production **11,612 cum**.
- (viii) The lease agreement was made on **13.07.2023** for 5 years lease period.
- (ix) Any deficiencies/omission have been noticed in the above documents-**Nil**.

2. Deliberation in SEAC Meeting- The proposal was placed in the SEAC meeting held on 17.03.2026 and the SEAC observed the following: As per Replenishment Study Report, the Common safe workable area is calculated to be 24,682.7m² and the average deposit of sand is 1.5m which is on higher side. Hence, SEAC decided that the project proponent shall be recommended as per previous approved quantity for **11,612cum/annum** for this year. For next year, subsequent quantity of sand shall be considered, after the Project Proponent submits fresh Replenishment Study Report of this year i.e., 2026.



File No.: 528650/533-MIN/03-2025

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA),
ODISHA)



Dated 12/06/2025



To,

SMT. LAXMI PRIYA PRUSTY
W/o- Ratikanta Rout
At-Balaramprasad (Patala), Ps-Motanga, Dist-Dhenkanal, Odisha
rajnagarsand5@gmail.com

Subject: Amendment in Environmental Clearance (EC) Identification No.EC23B001OR110281 dated 23.06.2023 granted to the project of Rajnagar Sand Bed under the provision of the EIA Notification 2006 -regarding.

Sir/Madam,

This is in reference to your application submitted to SEIAA, Odisha vide proposal number SIA/OR/MIN/528650/2025 dated 10/03/2025 for grant of an amendment in regard to allowing extraction quantity of sand as per Annual Rate of Replenishment Study (ARRS) report of prior Environmental Clearance (EC) granted to the project of Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha if favour of Smt. Laxmi Priya Prusty, the successful bidder/lessee under the provision of the EIA Notification 2006-and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25B0107OR5329391A
(ii) File No.	528650/533-MIN/03-2025
(iii) Clearance Type	Amendment in EC
(iv) Category	B1
(v) Schedule No./ Project Activity	1(a) Mining of minerals Proposal for Amendment of EC for Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha.
(vii) Name of Project	BALESHWAR, ODISHA
(viii) Location of Project (District, State)	SEIAA, Odisha
(ix) Issuing Authority	10/03/2025
(x) EC Date	NO
(xii) Applicability of General Conditions	
(xiii) Status of implementation of the project	

3. In view of the particulars given in the Para-1 above, the project proposal interalia including Form-4 (Part A, B & C) were submitted to the SEAC for an appraisal by the State Level Expert Appraisal Committee (SEAC) under the provision of EIA notification 2006 and its subsequent amendments thereto.

4. The above-mentioned proposal has been considered by SEAC in its meeting held on 15.04.2025. The minutes of the meeting and all the project documents are available on Parivesh portal which can be accessed from the Parivesh portal by scanning the QR Code above.

5. The brief about the reasons for an amendment requested along with the brief on the salient features of the project as submitted by the project proponent in Form- 4 (Part A, B & C) and as presented before SEAC and the details of the amendment of EC are annexed as Annexure- 2.

6. The proposal was placed in the SEAC meeting held on 15.04.2025 under the provisions of EIA Notification 2006 and its subsequent amendments and after detailed deliberations in the matter and the SEAC recommend the proposal for Sand mining may be allowed for 16087.2 cum as per replenished quantity subject to approval of revised Mining plan.

7. The SEIAA, Odisha has examined the proposal in 204th meeting held on 04.06.2025 in accordance with the extant provisions of the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the SEAC and hereby accords amendment in Environment Clearance letter no./Identification No. EC23B001OR110281 dated 23.06.2023 for the instant proposal of Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha to Smt. Laxmipriya Prusty, the successful bidder/lessee is allowed for extraction quantity of sand **11612 cum per annum for one year** from the date of issue of amendment of EC letter with average depth of **1.25 meter** subject to modified Mining Plan (approved by the competent authority) as per ARRS report under the provisions of EIA Notification, 2006 and as amended thereof subject to compliance of EC conditions, general instructions issued vide EC letter dated 23/06/2023 and following additional specific conditions as mentioned in Annexure-1. The other stipulated terms and conditions of the original EC letter initially granted remain the same.

Stipulations

Sl.	Descriptions	Stipulation
(i)	Lease Area:	13.55 Acres or 5.48 Ha.
		1. The PP shall maintain safety and stability of Riverbanks i.e. 3 meter or 10% of river width whichever is more for protection of river bank and
		2. 7.5-meter safety zone from all sides of lease boundary.
(ii)	No Mining Zone:	3. 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.
		4. The PP shall maintain 50 meter as no mining zone from the embankment as stipulated in the sustainable sand mining guideline'2016. The Mining Officer shall ensure the compliance of the condition during mining operation
(iii)	Maximum Depth of Mining:	1.25 meter as per Annual Rate of Replenishment Study (ARRS) report.
(iv)	Method of Mining:	The method of mining shall be as per approved Mining Plan
(v)	Permitted Quantity:	11612 cum per annum for one year as per approved modified mining plan from the date of issue of amendment of EC letter with average depth of 1.25 meter .
(vi)	Validity Period of EC:	The EC is valid for 5 years from date of lease execution or for the balance lease period whichever is less.
(vii)	ARRS report	The Annual Rate of Replenishment Study (ARRS) is to be conducted through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines and the PP shall submit the report latest by 31st December, 2026 .

8. No Working Zone: - The lessee shall ensure that no sand mining is carried out in the areas as specified below: -

- During the rainy season;
- Within the water channel or stream flow area throughout the year;
- 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 meter from the edge of National Highway and railway line, 50 meter from a reservoir, canal or building, 25 meter from the edge of State Highway and 10 meter from the edge of other roads except on special exemption by the Sub-Divisional level Joint Inspection Committee.
- The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non-monsoon period.
- No stream shall be diverted for the purpose of sand mining and no natural water course shall be obstructed.
- Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purposes.
- The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.
- Mining shall be carried out under strict adherence to provisions of OMMC Rules, 2016, Enforcement & Monitoring Guidelines for Sand Mining (EMGSM), 2020. Sand Policy of Govt. Of Odisha dated 02.09.2021 are made there-under as applicable

9. Transport Safeguards:

- No transportation of the minerals shall be allowed on any road passing through villages/habitations without prior explicit permission.
- Transportation of minerals through existing rural roads can be allowed only by the concerned Govt. Department/ Gram Panchayat/BDO after required strengthening such that the carrying capacity of the road is increased to handle the mineral carrying truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project.
- Project proponents shall ensure that the transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density.
- Vehicles hired for transportation of minor minerals from the site should be in good condition and should have pollution check certificates and should conform to applicable air and noise emission standards and should be operated only during non-peak hours. Speed of vehicle be regulated and in no case >30 Kms / hr be allowed.
- The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar/ Mining Officer may collect an appropriate additional road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of mineral transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of mineral carrying trucks.
- Water spraying should be made on the village road to control particulate matter (dust particles) pollution in surrounding air during transportation from the quarry. Garland drain shall be constructed on the hill slope to arrest downward flow of particulate matter with rainwater.

10. Other Environmental Conditions: -The Project Proponent shall follow all the provisions of Sand Policy of Govt. Of Odisha dated 02.09.2021 for this sand mining project.

- The Tahasildar/ Mining Officer shall take adequate measures to prevent unauthorized mining;
- The project proponent should carry out river bed sand mining manually by engaging local laborers to check over exploitation of sand at the source;
- The lessee shall ensure safety of human life and livestock from accidents in case the village / any habitation is very near the mining lease area.
- At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.

11. Half-yearly Compliance Report: -It shall be mandatory for the project management to submit half yearly compliance reports on the status of implementation of the above stipulated environment. The project authority is mandatory to upload the compliance report of EC conditions including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions. No hard copy and soft copy required to submit to SEIAA, Odisha, failing which EC is liable to be revoked.

12. Concomitant Monitoring: - The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar/mining officer, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non-compliance and also ensure that the project proponent submits half yearly compliance reports.

13. Independent Monitoring: -The concerned Regional Office of the MoEF & CC/ SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF & CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.

14. Revocation of EC: - The SEIAA, Odisha may revoke or suspend the EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.

15. Change in Ownership of Lease: - This EC shall not be transferred without the permission of SEIAA, Odisha. The Tahasildar/ Mining Officer shall inform the SEIAA of any change in ownership of the mining lease. No mining is allowed without transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.

16. The SEIAA, Odisha reserves the right to alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

17. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

18. The PP is under obligation to implement commitments made in the Environment Management Plan (EMP) which forms part of this EC.

19. The EC is valid for 5 years from date of lease execution or for the balance lease period whichever is less.

20. General Instructions:

1. The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of SEIAA website where it is displayed.
2. 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 must display the same for 30 days from the date of receipt.
3. The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.
4. Action plan for implementing EMP and environmental conditions along with a responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in a separate account and not to be diverted for any other purpose. Six monthly progress of implementation of the

action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

5. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
6. The Regional Office of MoEF & CC, Bhubaneswar, SPCB, Odisha and the lease granting Authority shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
7. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010
21. This issues with the approval of the Competent Authority

Copy To

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.
2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
3. The Director of Mines, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Integrated Regional Office (IRO), Ministry of Environment & Forests, A-31, Chandrasekharapur, Bhubaneswar for information.
5. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi-110032 for information.
6. Chairman/Member/Member Secretary, SEIAA for information.
7. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
8. Collector & DM, Balasore, Sub-Collector, Balasore, Deputy Director of Mines, Balasore, DFO, Balasore, RO, SPCB, Balasore, Tahasildar, Jaleswar /Mining Officer, Balasore for Information and necessary action.
9. Guard file for record/Website/Parivesh Portal

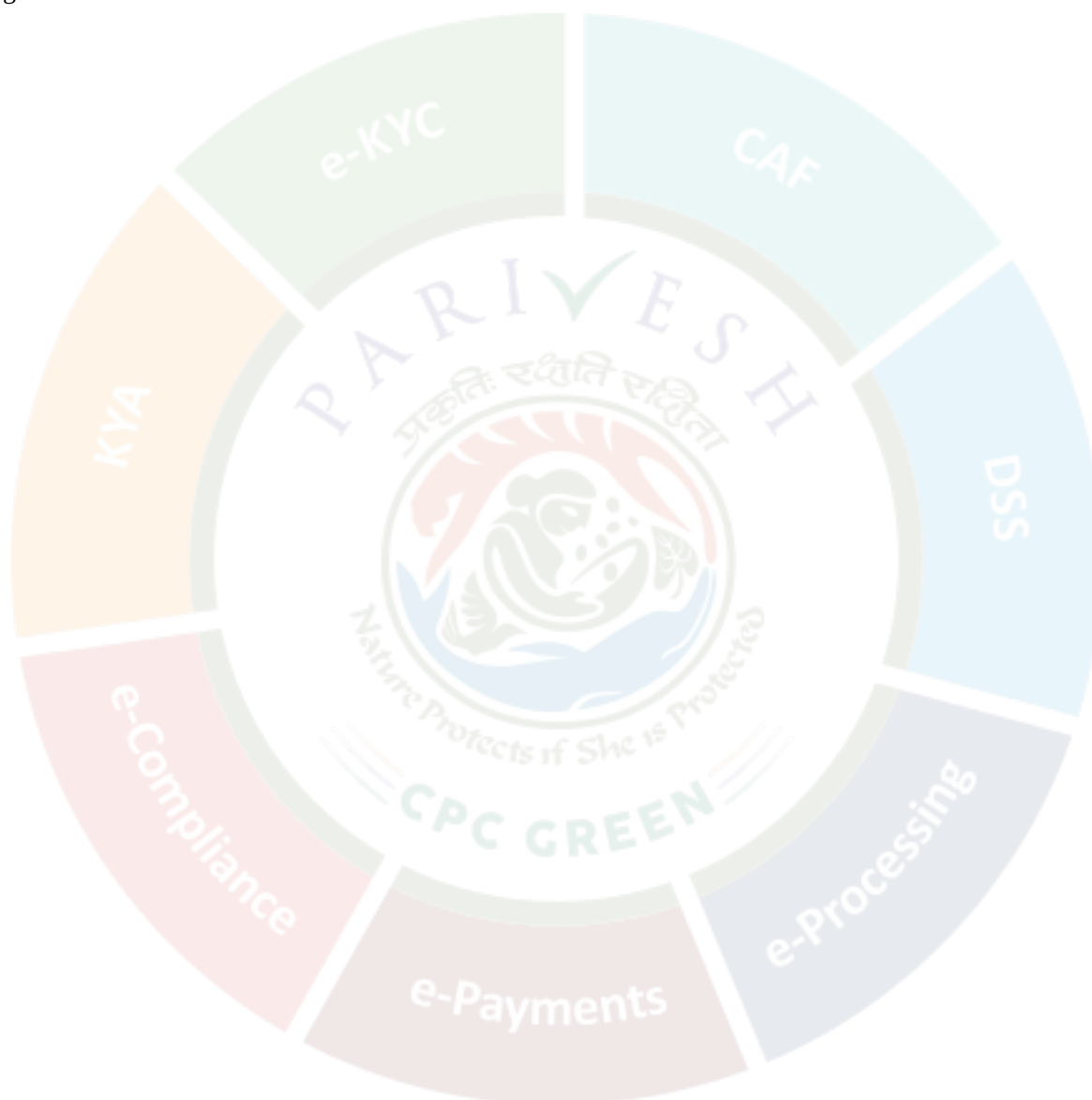
Annexure 1

Additional EC Conditions

1. The replenished quantity of sand **11612 cum/annum** Jaleswar for **one year from** the date of issue of amendment of EC letter with average depth of mining **1.25 meter** modified Mining Plan (approved) and the method of mining shall be as per the approved Mining Plan.
2. The PP shall maintain **50 meter as no mining zone from the river embankment**. The Mining Officer shall ensure that no sand shall be extracted from the river embankment within 50 meter distance during mining operation
3. The EC is valid for 5 years from date of lease execution or for the balance lease period whichever is less.
4. The Annual Rate of Replenishment Study (ARRS) is to be conducted through ORSAC empanel agency or NABET Consultant as per the prescribed guidelines and the PP shall submit the ARSS report within one year period by **31st December, 2026**.
5. The PP shall implement the EMP with a budgetary allocation as proposed in the EMP report during EC application.
6. The PP shall plant **500 nos. of tree species** like Banyan (Ficus benghalensis), Peepal (Ficus religiosa), Neem (Azadirachta indica), Jamun(Syzygium cumini), Mango (Mangifera indica), Karanj(Pongamia pinnata), Arjun(

Terminalia Arjuna), Jackfruit (Artocarpus heterophyllus), Siris (Albizia lebbeck), etc.. as part of tree plantation campaign "**Ek Ped Maa Ke Naam**" and the details of the same shall be uploaded in the MeriLiFE Portal (<https://merilife.nic.in>). The PP shall submit the status of plantation during every six-months (06) compliance of EC conditions with geo-coordinating photographs.

7. The compliance of EC conditions of said quarry shall be monitored by DEIAA, concerned lease granting Authority either Mining Officer or Tahasildar, RO, SPCB, Odisha and Integrated Regional Office of MoEFCC, Bhubaneswar as per MoEF & CC, Govt. of India S.O. 141(E) in EIA Notification dated 15.01.2016.
8. The PP is required to upload/submit the six (06) monthly compliance on the environmental condition stipulated in the EC letter in a timely manner on or before 1st June and 1st December of each calendar year in Parivesh Portal 2.0 only failing which the EC is liable to be revoked.



Annexure-2**1. Proposal in brief:**

The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under.

- (i) This is a proposal for amendment of EC of Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha.
- (ii) The project proponent has obtained EC from SEIAA, Odisha vide EC Identification no./letter no. EC23B001OR110281 dated 23.06.2023 in favour of Smt. Laxmipriya Prusty (successful bidder) for Rajnagar Sand Bed is located in village Rajnagar over an area of 13.55 Ac/ 5.48 ha. under Jaleswar Tahasil in Balasore District of Odisha.
- (iii) During EC application the PP has submitted required documents along with mining plan where it is mentioned that mineable reserve of the proposed sand was 139563 cum with depth of sand deposition was 1.0 meter and proposed for annual extraction-40,002 cum.
- (iv) The SEIAA also granted EC for 1st year production 11612 cum/annum in 1st year and 2900 cum/annum in 2nd year subject to submission of ARRS report after one year of quarry operation.
- (v) The Project Proponent (PP) has submitted that 3819 cum have been lifted from quarry up to a depth of 1.0 m in the 2024-25 financial year.
- (vi) The Modified mining plan was approved vide letter no. 7389 dated 29.05.2023 for **manual method** of mining with annual extraction of **sand 11,612 cum/annum** with depth of mining 1.0 meter.
- (vii) The PP has submitted the replenishment study was done by the M/s. Areal Construction & Geo-India Services., the (ORSAC Empanelment Agencies) with mentioned that pre-monsoon survey on 26.06.2024 with RL = 18.80 m, post-monsoon survey on 18.10.2024 with RL = 20.05 m and quantity of sand replenished is **16087 cum** with average depth **1.25 meter** and proposed production **11612 cum**.
- (viii) The KML file is verified and observed that nearest river bridge is located 1.85 Km away from the proposed sand bed lease boundary.
- (ix) The lease agreement was made on 13.07.2023 for 5 years lease period.
- (x) Any deficiencies/omission have been noticed in the above documents-**Nil**.

2. **Deliberation in SEAC Meeting-** The proposal was placed in the SEAC meeting held on 15.04.2025 and the SEAC decided to recommend the proposal for grant of EC as per the Replenishment Study Report maximum up to **16087.2 cum** can be allowed subject to modification of Mining Plan & approved DSR.


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statutory body constituted by Ministry of Environment, Forest & Climate Change under Environment (Protection) Act, 1986

ENVIRONMENTAL CLEARANCE FOR SAND MINING

Subject: Application of Smt. Laxmipriya Prusty for mining of Sand from Rajnagar River Sand Quarry Over an area 13.55 acres or 5.48 Ha bearing Khata No.- 377, Plot No - 1295/1300 in Village - Rajnagar, Tahasil - Jaleswar, District – Balasore, Odisha.

The Project proponent Smt. Laxmipriya Prusty, (lessee/successful bidder) has submitted an application for EC to SEIAA, Odisha through the Parivesh portal of MOEF&CC, GOI vide online application no. SIA/OR/MIN/54634/2020 dated 05.08.2022 for mining of Sand from Rajnagar River Sand Quarry Over an area of 13.55 acres or 5.48 Ha bearing Khata No.- 377, Plot No - 1295/1300 in Village - Rajnagar, Tahasil - Jaleswar, District – Balasore, Odisha.

2. Proposal in brief:

Proposal No.	SIA/OR/MIN/54634/2020
File No.	54634/771-MINB1/08-2022
Project Type	New proposal for EC
Category	B1
Project/Activity including Schedule No.	1(a) Mining of minerals
Name of the Project	Proposal for grant of EC for mining of Sand from Rajnagar River Sand Quarry Over an area of 13.55 acres or 5.48 Ha bearing Khata No.- 377, Plot No - 1295/1300 in Village - Rajnagar, Tahasil - Jaleswar, District – Balasore, Odisha.
Name of the company/Organization	Smt. Laxmipriya Prusty W/o-Sri Ratikanta Rout At-Balaramprasad, Patla, Ps-Matang, Dist-Dhenkanal
Location of Project	Village - Rajnagar, Tahasil - Jaleswar, District – Balasore, Odisha.
ToR Date	14.10.2020
Name of the Consultant	M/s. Green Circle, Inc.


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3. **Project details:** The highlights of the project, as ascertained from the application and as revealed from the proceedings/discussions held during the meetings of SEAC/SEIAA, are given as under:
- (i) This is a proposal for mining of river sand from Rajnagar River Sand Quarry Over an area 13.55 acres or 5.48 Ha bearing Khata No.- 377, Plot No - 1295/1300 in Village - Rajnagar, Tahasil - Jaleswar, District - Balasore, Odisha.
 - (ii) The mining area is a part of Survey of India Toposheet No. 73O/1(F45P1, bounded by Latitude: 21°48'30.9" N to 21°48'20.9"N & Longitude: E87°12'52.2" to 87°12'43.2"E.
 - (iii) The proposed quarry is not coming within wildlife sanctuary/National Park and any eco-sensitive zone.
 - (iv) The mining lease is an identified sairat source in the DSR. The Rajnagar River Sand Quarry sairat source will be leased out under the OMMC Ru289471les, 2016 by Tahasildar, Jaleswar to the successful bidder (lessee) on the basis of public auction for a lease period of 5 years.
 - (v) The mining plan of the mining project has been approved by - Directorate of Geology & Mining, Bhubaneswar vide letter No.1061 dated 18.04.2018 for a period of 5 years.
 - (vi) As per the approved mining plan submitted, it is observed that the mineable reserve in the lease area is 139563 cum of sand, total production in 5 years period-200010 cum and annual extraction of sand-40,002 cum/annum with 1.0 meter depth of mining from River- Subarnarekha.
 - (vii) No study of the annual rate of replenishment of sand has been done for the sairat source which is a pre requisite as per the guidelines of sustainable sand mining management issued by the MoEF & CC, Govt. of India, and as per orders dated 13.09.2018 of the Hon'ble NGT.
 - (viii) The project proponent has also not furnished the width of the river, nor the alignment of the extraction path for sand transportation. As reported by the tahasildar, a river bridge is 1.80 km, village-0.22 km away from the mining lease area.
 - (ix) The cluster certificate has been furnished by the Tahasildar certifying that there is no other mines located within 500 meters from the periphery of the proposed mine lease area. As reported by the Tahasildar, this sairat source is not a part of any cluster.



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- (x) ToR was issued for this project vide letter no. 9237/SEIAA dated 14.10.2020 for EIA studies.
 - (xi) The PP has submitted replenishment study report done by RQP Sri Apurba Ranjan Ray with help of Areal Construction & Geo-India Services (ORSAC empanel agency). The RQP has mentioned that Pre-monsoon reserve is 15950 cum and post-monsoon reserve 19353 cum and quantity of sand replenished 3403 cum.
 - (xii) Public hearing was conducted on date 11.05.2022 at 10:00AM, in the locality of the sand quarry, near Shikharpur Gram Panchayat Office, under Jaleswar Block under Balasore district.
 - (xiii) Issues raised during public hearing for this project – Operation of the sand quarry as per the Environmental Rules and Regulation, Dust suppression, safety and protection of road during transportation, mode of transportation, cost of Sand, timing of mining and restriction of transportation of sand during night time.
 - (xiv) Budget provision for Environmental management Plan (EMP) is Rs 145000 and Recurring cost - Rs 75000/annum.
 - (xv) The CER budget allotted – Rs. 20,000/- per annum.
4. This proposal conforms to the item no. 1(a) in the schedule of EIA Notification, 2006 as amended time to time, and the minor mineral extraction project falls under Category B1 as the mining lease area is more than 5 ha.
5. The proposal was considered by the State Level Expert Appraisal Committee (SEAC) in its meeting held on 12.04 2023. The SEAC have duly recommended for grant of EC to with following view:
- a) Environmental Clearance may be granted for the proposal valid upto lease period for extraction of **11,612cum/ annum** of sand as per the replenishment study report with stipulated conditions and following specific conditions as below:
 - (i) Amended EIA Notification dated 25th July, 2018, Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India shall be adhered to in execution of Mining.
 - (ii) Extraction should be limited to annual replenished quantity in workable area only subject to exclusion of safety zone as per Guidelines for sustainable sand mining, 2016 and Enforcement and Monitoring Guidelines for Sand Mining, January 2020 of MoEF&CC, Govt. of India.
 - (iii) Regular replenishment study to be conducted and report to be submitted.
 - (iv) Provision of Bio-toilet shall be made at the site.

h



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- (v) Avenue plantation and plantation on both sides of the haulage road in consultation with/ on the advice of concerned Forest Department, Government of Odisha & W.R. Department Government of Odisha as well.
- (vi) Stone patching with plantation in between along the stretch of the bank associated with sand mining and necessary ramp construction shall be made.
6. The matter was further examined in the State Environment Impact Assessment Authority (SEIAA), Odisha in its 122nd meeting held on 08.06.2023, 09.06.2023 & 12.06.2023 in accordance with the EIA Notification, 2006 and further amendments thereto as well as the Judgement dated 2nd February, 2022 of Hon'ble National Green Tribunal in OA No.33/2020/EZ (Laxmidhar Palai Vrs. District Collector, Balasore).
7. **Environmental Clearance (EC) is granted under the provisions of EIA Notification No. S.O. 1533 (E) dated the 14th September, 2006 of the Government of India in the erstwhile Ministry of Environment and Forests, as amended from time to time for mining of Sand from Rajnagar River Sand Quarry Over an area of 13.55 acres or 5.48 Ha bearing Khata No.- 377, Plot No - 1295/1300 in Village-Rajnagar, Tahasil - Jaleswar, District-Balasore, Odisha with the following stipulations, environmental conditions and safeguards.**

A: Stipulations:

Sl.	Descriptions	Stipulation
(i)	Lease Area:	13.55 Acres or 5.48 Hectares
(ii)	No Mining Zone:	1/4 th of river width for protection of river bank and 7.5-meter safety zone from all side of lease boundary.
(iii)	Maximum Depth of Mining:	1.0 meter as per the approved mining plan
(iv)	Permitted Quantity:	1 st year: 11612 cum/per year 2 nd year: 2900 cum/per year
(v)	Validity Period of EC:	Two years from date of issue

B: ENVIRONMENTAL CONDITIONS AND SAFEGUARDS WHICH NEED TO BE COMPLIED WITH BY THE TAHASILDAR BEFORE LEASE AGREEMENT:

- 7.1 **Boundary Demarcation:** - The boundary of the lease area shall be demarcated on ground at the project cost, by erecting 1.20 meter (4 feet approx.) high reinforced concrete pillars above ground, each inscribed with its serial number, distance from pillar to pillar and GPS co-ordinates by any empanelled agency of ORSAC.



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- 7.2 **Digital Map:** -A digital map (in KML format as well as PDF version) showing GPS coordinates of all boundary pillars duly countersigned by the Tahasildar shall be submitted to SEIAA, Odisha through email at seiaaodisha@gmail.com.
- 7.3 **Intimation of EC:** - The copies of the EC shall be sent to the Sarpanch (s) of the concerned Gram Panchayat (s), Urban Local Bodies and relevant other Offices of the Government with a request to display the same for 30 days from the date of receipt.
- 7.4 **Tree Plantation:** - Compensatory Tree Planting (CTP) shall be carried out with minimum @100 trees per Ha. of lease area as per the approved cost norm for avenue plantations of the State Forest Department. The Project Proponent (lease holder) shall deposit Rs.3,00,000/- with the respective District Environment Society for raising 600 plants of native species within 2 years in a suitable location adjoining to quarry.
- 7.5 **State EMF Fund:** - An amount equal to five percent (5%) of the royalty payable shall be collected from the lessee by the Tahasildar and deposited to the State Environment Management Fund, which will be utilized as per provisions of Rule 49(3) of the OMMC Rule, 2016 preferably, in and around the areas where mining activities are undertaken.
- 7.6 **Condition by Collector:** - Any other condition(s) the Collector & Chairman, District Environment Impact Assessment Authority (DEIAA), may impose in the interest of protection and safeguarding the local environment.
- 7.7 **Compliance report for Transfer of EC:** - Any transfer of EC to a PP/Lessee shall be considered by SEIAA, Odisha only after receipt of the full compliance report through Tahasildar concerned of the above environmental conditions and safeguards.
- C: ENVIRONMENTAL CONDITIONS AND SAFEGUARDS WHICH NEED TO BE COMPLIED ON FIELD AFTER THE LEASE AGREEMENT**
- 7.8 **Maximum permissible depth:** This Environmental Clearance is given with the condition that maximum depth of digging of sand shall be 1.0 m as per mining plan. Any flouting of this restriction shall make this EC liable to cancellation.
- 7.9 **Maximum permissible quantity:** Maximum quantity of material is permitted to remove from the quarry area in 1st year is 11,612 cum and in 2nd year is 2900 cum. Any flouting of this quantitative restriction shall make this EC liable to cancellation.
- 7.10 **Annual Replenishment Rate Study of Sand:** -The Project Proponent shall carry out by engaging appropriate consultant, annual replenishment rate study of sand as per prescribed drone method by collecting pre monsoon & post monsoon data from the field to know the quantum of volume of sand deposited/replenished & extracted in the mining lease area. The detailed comparison of both pre-monsoon and post-monsoon elevation data shall be included in the study report. The detailed methodology for finding the rate of replenishment study of sand is laid down in the Enforcement & Monitoring Guidelines for Sand Mining, 2020 issued by the MoEF & CC, Govt. of India. The finding of the study shall be submitted to SEIAA to assess the actual rate of replenishment of mined out sand in the lease area.

[Signature]



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- 7.11 **District Survey Report:** The District Survey Report (DSR) has been prepared by the competent District Authority as per the MoEF & CC, Govt. of India Notification S.O.3611(E) dated 25.07.2018, Sustainable Sand Mining Guidelines-2016, Enforcement & Monitoring Guidelines for Sand Mining-2020 and also as per the Hon'ble Supreme Court order vide its order dated 10.11.2021 in Civil Appeal Nos. 3661-3662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others) submitted to competent authority for approval. The SEIAA, Odisha approved the DSR on 26.04.2023 with condition that the district administration shall include the replenishment data in the DSR within 1 year from grant of EC.
- 7.12 **EC Extension:** - Any further extension of EC beyond two years shall be considered only with submission of duly approved District Survey Report and Annual Replenishment Rate Study report of sand.
- 7.13 **Any change in mining plan requires fresh EC:** - Any change in the calendar plan, change in production quantity or method of mining shall not be made without prior approval of the SEIAA. Mining activity shall adhere to the working parameters of approved mining plan prepared for this project. The detailed production of sand from the lease area of each year shall be submitted in tabular form during submission of compliance report.
- 7.14 **Environmental Management Plan:** EMP shall be implemented by PP to ensure compliance with the environmental conditions specified above. The year wise funds earmarked for environmental protection measures shall be kept in separate account and shall be spent according to the plan proposed in EMP. The PP will implement the EMP with a budgetary allocation of Rs 145000 and Recurring cost - Rs 75000/annum. The CER budget allotted - Rs. 20,000/- per annum. Year wise progress of implementation of EMP shall be reported to the SEIAA, Odisha and OSPCB along with the compliance report. The Tahasildar shall ensure the compliance of this condition along with all lease holders of his jurisdiction.
- 7.15 **No Working Zone:** - The lessee shall ensure that no sand mining is carried out in the areas as specified below: -
- a) During the rainy season;
 - b) Within the water channel or stream flow area throughout the year;
 - c) 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 meter from the edge of National Highway and railway line, 50 meter from a reservoir, canal or building, 25 meter from the edge of State Highway and 10 meter from the edge of other roads except on special exemption by the Sub-Divisional level Joint Inspection Committee.


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- d) The mining or any ancillary activity shall not in any way disturb the flow pattern of the river water during the non-monsoon period.
- e) No stream shall be diverted for the purpose of sand mining and no natural water course shall be obstructed.
- f) Sand mining operations shall not affect the existing sources for irrigation / drinking water / industrial purpose.
- g) The natural sand dunes, if any, near or surrounding the lease area shall not be disturbed.

7.16

Transport Safeguards:

- a) No transportation of the minerals shall be allowed on any road passing through villages/habitations without prior explicit permission.
- b) Transportation of minerals through existing rural roads can be allowed only by the concerned Govt. Department/ Gram Panchayat/BDO after required strengthening such that the carrying capacity of road is increased to handle the mineral carrying truck traffic. The project proponent shall bear the cost towards the widening and strengthening of existing public roads in case the same is proposed to be used for the project.
- c) Project proponent shall ensure that the transport of minerals will be as per IRC Guidelines with respect to complying with traffic congestion and traffic density.
- d) Vehicles hired for transportation of minor mineral from the site should be in good condition and should have pollution check certificate and should conform to applicable air and noise emission standards and should be operated only during non-peak hours. Speed of vehicle be regulated and in no case >30 Kms / hr be allowed.
- e) The vehicles shall not be overloaded and shall be covered with Tarpaulin. The Tahasildar may collect an appropriate additional road maintenance levy from the lessee as part of the lease conditions on the basis of quantum of mineral transported, and utilize the proceeds of the levy for proper maintenance of the extraction paths and roads to prevent their degradation on account of plying of mineral carrying trucks.
- f) Water spraying should be made on the village road to control particulate matter (dust particles) pollution in surrounding air during transportation from the quarry. Garland drain shall be constructed on the hill slope to arrest downward flow of particulate matter with rainwater.

7.17 **Other Environmental Conditions:** -The Project Proponent shall follow all the provisions of Sand Policy of Govt. Of Odisha dated 02.09.2021 for this sand mining project.

- a) The Tahasildar shall take adequate measures to prevent unauthorized mining;
- b) The project proponent should carry out river bed sand mining manually by engaging local laborers to check over exploitation of sand at the source;
- c) The lessee shall ensure safety of human life and livestock from accidents in case village / any habitation is very nearby the mining lease area.


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 (Protection) Act, 1986

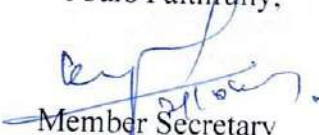
- d) At the end of mine closure, the proponent shall immediately remove all the sheds put up in the quarry and all the equipment in the area before closure of the quarry.
- 7.18 **Common Forum for EMP:-** All the individual quarry lessee holders coming under the Tahasil may create a common forum in coordination with the Tahasildar and contribute funds to it for grading, compaction and maintenance of haulage road, provision of water spray on the village road to control particulate matter (dust particles) pollution in surrounding air during transportation from the quarry, and provision of thick, multilayer and a continuous green belt around the lease area excluding the entry and exit gate for prevention of environmental pollution and noise during mining activity.
- 7.19 **Half-yearly Compliance Report: -** It shall be mandatory for the project management to submit half yearly compliance reports on the status of implementation of the above stipulated environmental safeguards to the SEIAA, Odisha / Regional Office of the MoEF & CC, Bhubaneswar in soft copies on 1st day of June and December of each calendar year. The proponent shall also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions, failing which EC is liable to be revoked.
- 7.20 **Concomitant Monitoring: -** The conditions stipulated in the environmental clearance will be closely monitored on the ground by the lease granting authority, i.e. the Tahasildar, who shall ensure compliance of the stipulated conditions and take corrective measures promptly in case of any non-compliance and also ensure that the project proponent submits quarterly compliance reports.
- 7.21 **Independent Monitoring: -** The concerned Regional Office of the MoEF & CC/SPCB, Odisha shall periodically monitor compliance of the stipulated conditions as applicable for this project. The project authorities should extend full cooperation to the MoEF & CC officer(s)/SPCB officer(s) by furnishing the requisite data / information / monitoring reports.
- 7.22 **Revocation of EC: -** The SEIAA, Odisha may revoke or suspend the EC, if implementation of any of the above conditions is not satisfactory. The SEIAA, Odisha reserves the right to alter /modify the above conditions or stipulate any further condition in the interest of environment protection.
- 7.23 **Change in Ownership of Lease: -** This EC shall not be transferred without the permission of SEIAA, Odisha. The Tahasildar shall inform the SEIAA of any change in ownership of the mining lease. No mining is allowed without transfer of EC as per provisions of the para 11 of EIA Notification, 2006, as amended from time to time.
8. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also


STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, ODISHA

5RF-2/1, Unit-IX, Bhubaneswar-751022, Tel: 0674-3510075, Email: seiaaodisha@gmail.com
 statutory body constituted by Ministry of Environment, Forest & Climate Change under Environment
 (Protection) Act, 1986

- any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.
9. This Environmental Clearance (EC) is subject to orders/judgment of Hon'ble Supreme Court of India, Hon'ble High Court and Hon'ble NGT as may be applicable.
 10. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010.

Yours Faithfully,


 Member Secretary

Copy to

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.
2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
3. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
4. Deputy D.G.Forest., Integrated Regional Office (IRO), Ministry of Environment & Forests, A-31, Chandrasekharapur, Bhubaneswar for information.
5. Director of Mines, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
6. Collector & DM, Cuttack / DFO, Balasore / Sub Collector, Balasore and Tahasildar, Jaleswar for Information and necessary action with specific reference to para in respect of year wise permitted quantity.
7. Guard file for record/Website/Parivesh Portal.


 Member Secretary



File No.: 526197/242-MINB2/02-2025

Government of India

Ministry of Environment, Forest and Climate Change

(Issued by the State Environment Impact Assessment Authority(SEIAA),
ODISHA)



Dated 25/03/2025



To,

The Deputy Director of Mines, Bhadrak Circle, Bhadrak
Plot no- 1472/4591, Near Salandi Hospital, Motel Chhak, BALESHWAR, ODISHA, 756100
ddm-bhadrak@gov.in

Subject: Proposal of Deputy Director of Mines, Bhadrak Circle, Bhadrak for approval of District Survey Report (DSR) of Sand Sources of Balasore District located in District-Balasore, State-Odisha for the period 2025-2030-regarding

Sir/Madam,

This is in reference to your application submitted to SEIAA, Odisha vide proposal number SIA/OR/MIN/526197/2025 dated 27/02/2025 for approval of District Survey Report (DSR) of Sand Sources of Balasore District for the period 2025-2030 located in District-Balasore, State-Odisha in terms of the provision of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 and subsequent amendment thereto, i.e. the Sustainable Sand Mining Management Guideline (SSMMG)-2016 and Enforcement and Monitoring Guidelines for Sand Mining (EMGSM)-2020 and in pursuance of MoEF & CC, GoI Notification dated 15.01.2016 & 25.07.2018 and as per order of Hon'ble Supreme Court dated 10.11.2021 in Civil Appeal No. 36613662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others)-reg.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25C0107OR5447584N
(ii) File No.	526197/242-MINB2/02-2025
(iii) Clearance Type	Mining EC Under 5 Ha
(iv) Category	B
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	District Survey Report(DSR) of River Sand minor mineral of Balasore District.
(ix) Location of Project (District, State)	BALESHWAR, ODISHA
(x) Issuing Authority	SEIAA, Odisha
(xii) Applicability of General Conditions	No

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-2, forwarding letter, proceeding copy, copy of 30 days public notice period, copy of paper clipping and online advertisement for Public notice and final District Survey Report (DSR) copy of sand sources were submitted to the SEIAA for an appraisal by the State Level Expert Appraisal Committee (SEAC) under the provision of EIA notification 2006 and its subsequent amendments.
4. The above-mentioned proposal has been considered by SEAC in the meeting held on 06.03.2025. The minutes of the meeting and all the documents along with modified revised DSR copy are available on the PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.
5. Details of the DSR and the brief on the salient features as submitted by the project proponent in Form-2 and as presented during SEAC are annexed as Annexure-2.
6. The SEAC, in its meeting held on 06.03.2025, based on information submitted & clarifications provided by the project proponent and after detailed deliberations on all technical aspects and compliance thereto furnished by the Project Proponent, the SEAC, Odisha recommended that the SEIAA, Odisha may consider for approval of the DSR of Balasore District for implementation, subject to insertion/correction of the above as observed by the SEAC on the following points as mentioned below.
 1. In item no 3, in the table given some leases are marked as non-working. Reasons for non-working may please be mentioned against each case. Some columns are left blank against existing leases which may please be filled up or detailed reasons for nil information may be given. In some cases, it is mentioned that DOCS are not available. Correct and full information may please be provided.
 2. In item 6, as against total 50 no of leases data for 21 leases is provided. This data shall be provided for all sources and river wise.
 3. Information for items a, b and c after item 11 is not given. Also, details of the drainage system with description of main rivers are not given.
 4. Annual deposition details not furnished.
 5. In Annexure I(b) three desiltation locations are given. Details of desiltation proposed may be given.
 6. In Annexure II (and some other Annexures like IV and V) some columns are left blank or marked as NA. Complete information may be provided or justification for not providing information shall be given.
 7. Absence of contiguous clusters may please be rechecked and confirmed.
 8. Route map is not given.
 9. In forwarding letter reference of NGT order dated 16.7.2024 in OA no 18/2023/EZ filed by Sh Haripada Manna vs State of Odisha is mentioned. Details of the case, directions of Hon'ble court along with a copy of order may please be furnished.
 10. As per sub divisional committee reports field visits have been conducted by the committee of Nilgiri Sub Division from 20.11.2024 to 22.11.2024 and for Balasore sub division from 7.11.2024 to 12.11.2024. Copy of the reports of field visits may be appended with the draft DSR.
 11. As per the procedure laid out for preparation of DSR in the notification dated 25.7.2018 of MoEFCC the main objective of preparation of DSR is to ensure the following-“Identification of areas of aggregations or depositions 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.” Details as per above objective are not given.
 12. Further, there are provisions mentioned for DSR preparation in “Enforcement & Monitoring Guidelines for Sand Mining” issued by MoEFCC in 2020 (to be supplemented with “Sustainable Sand Mining Management Guidelines, 2016”) which need to be followed and details of information is to be furnished in the DSR. Detailed information as per guidelines should be provided in the document.

13. Annexure-A of Proceedings of Sub-collector-BLS where the list of minerals in respect of Balasore subdivision is given, the status of mineral-mining and lessee details are not mentioned.
14. In DSR, under heading 3 (Table), The list of mining leases in the district Name & Address of Lessee, Lease details are not there for the quarries which are in non-working status.
15. In Annexure V of DSR, Sl. No. of quarries viz. A1, A2, B1, B2...C1, C2....D1, D2,.E1, E2,..., F1 etc. are mentioned as lease numbers which should be rectified.
16. In Annexure-VII, no. of tippers/day is not given for all quarries.

The PP has submitted the additional document sought by SEAC.

7. The SEIAA, Odisha has examined the DSR proposal in its 192nd Meeting of SEIAA held on 20.03.2025 in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 and subsequent amendment thereto, Sustainable Sand Mining Management Guideline (SSMMG)-2016, Enforcement and Monitoring Guidelines for Sand Mining (EMGSM)-2020 and in pursuance of MoEF & CC, GoI Notification dated 15.01.2016 & 25.07.2018 and as per order of Hon'ble Supreme Court dated 10.11.2021 in Civil Appeal No. 36613662 of 2020 (State of Bihar Vrs. Pawan Kumar and Others) and based on the recommendations of the SEAC, clarification submitted by Project Proponent (PP) to the query raised by SEAC. Accordingly, the PP/competent Authority have submitted their reply and modified revised DSR. After detailed deliberation in the matter, the authority hereby approved the DSR for sand for Balasore District. Further, the PP is advised to file separate applications for each type of remaining minor minerals after duly incorporating the compliance to the observation/objection raised by SEAC and SEIAA respectively in the respective DSRs.
8. The SEIAA, Odisha reserves the right to stipulate additional conditions, if found necessary.
9. The Validity of DSR is upto 5 years i.e. from 2025-2030 from the date of issue of this approval letter.
10. This issue with an approval of the Competent Authority.

Copy To

1. Additional Chief Secretary, Forest, Environment & Climate Change Dept., Government of Odisha for information.
2. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
3. The Director of Mines, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Integrated Regional Office (IRO), Ministry of Environment & Forests, A/3, Chandrasekharapur, Bhubaneswar for information.
5. Additional Chief Secretary, Revenue and DM Department, Govt. of Odisha Bhubaneswar for information
6. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi-110032 for information.
7. Chairman/Member/Member Secretary, SEIAA for information.
8. Member Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for information.
9. Collector & DM, Balasore, Sub-Collector, Balasore, Deputy Director of Mines, Balasore, DFO, Balasore, RO, SPCB, Balasore, Tahasildar, All Tahasildar of Balasore District/Mining Officer, Balasore for Information and necessary action.
10. The Director, Minor Mineral, Steel & Mines Dept, Govt. of Odisha Bhubaneswar for information.
11. Guard file for record/Website/Parivesh Portal

1. Proposal in brief:

The highlights of the proposal as ascertained from the application and as revealed from proceedings/discussion held during the meeting of SEAC/SEIAA, are given as under.

- i) This is a proposal for approval of District Survey Report (DSR) of Balasore for mining of sand located in Balasore District for a period of 5 years i.e. from 2025-2030.
- ii) The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF&CC) vide their Notification No. S.O. 141 (E), dated 15th January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation. District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Reports has been introduced.
- iii) The MoEF&CC in compliance of the Hon'ble Supreme Court's and NGT'S order has prepared "Sustainable Sand Mining Guidelines (SSMG), 2016" in consultation with State governments, detailing the provisions on Environmental Clearance (EC) for cluster, creation of District Environment Impact Assessment Authority, preparation of District survey report and proper monitoring of minor mineral.
- iv) Subsequently, Ministry of Environment, Forest and Climate Change has published Notification No. 3611 (E), dt. 25th July, 2018 regarding inclusion of the "Minerals Other than Sand" and format for preparation of the DSR has been specified. The notification stated about the objective of DSR i.e. "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".
- v) Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020 has been published modifying Sustainable sand Mining Guidelines, 2016 by MoEF&CC for effective enforcement of regulatory provisions and their monitoring. The EMGSM 2020 directed the states to carry out river audits, put detailed survey reports of all mining areas online and in the public domain, conduct replenishment studies of river beds, constantly monitor mining with drones, aerial surveys, ground surveys and set up dedicated task forces at district levels. The guidelines also push for online sales and purchase of sand and other river bed materials to make the process transparent. They propose night surveillance of mining activity through night- vision drones.
- vi) The Hon'ble NGT in O. A. No. 360/2015- NGT Bar Association Vrs. Virender Singh (State of Gujarat) & O. A. No. 173/2018 - Sudarshan Das Vrs. State of West Bengal & Ors issued the following directions to the States:
 - As the DEIAA is not functioning as a consequence of the decision of the Tribunal in Satendra Pandey (supra) case, the DSR shall be prepared through consultants accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India in terms of O.M. of MoEF&CC, Govt. of India dated 16.03.2010.
 - 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.
 - The SEAC after appraisal of the report shall forward it to the SEIAA for consideration and approval if it meets all scientific/technical requirements.

- While preparing the DSR, the MoEF&CC, Govt. of India 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.”
- vii) The order of the Hon’ble NGT clearly specifies that DSR to be prepared by the MoEF&CC, Govt. of India Accredited Agency/Consultant and sent to the SEIAA by the technical appraisal by the SEAC.
- viii) The SEAC observed that requirement of preparation of DSR by MoEF & CC, Govt of India Accredited Agency/Consultant as per order of Hon’ble NGT has been withdrawn by the Hon’ble Supreme Court of India in civil appeal nos. 3661 – 3662 of 2020.
- ix) The SEAC has examined and evaluated the Draft DSRs of Balasore and observed the following points as follows:
1. In item no 3, in the table given some leases are marked as non-working. **Reasons for non-working** may please be mentioned against each case. Some columns are left blank against existing leases which may please be filled up or detailed reasons for nil information may be given. In some cases, it is mentioned DOCS not available. Correct and full information may please be provided.
 2. In item 6, as against total 50 no of leases data for 21 leases is provided. This data shall be provided for all sources and river wise.
 3. Information for items a, b and c after item 11 is not given. Also details of drainage system with description of main rivers not given.
 4. Annual deposition details not furnished.
 5. In Annexure I(b) three desiltation locations are given. Details of desiltation proposed may be given.
 6. In Annexure II (and some other Annexures like IV and V) some columns are left blank or marked as NA. Complete information may be provided or justification for not providing information shall be given.
 7. Absence of contiguous cluster may please be rechecked and confirmed.
 8. Route map is not given.
 9. In forwarding letter reference of NGT order dated 16.7.24 in OA no 18/2023/EZ filed by Sh Haripada Manna vs State of Odisha is mentioned. Details of the case, directions of Hon’ble court along with copy of order may please be furnished.
 10. As per sub divisional committee reports field visits have been conducted by the committee of Nilgiri Sub Division from 20.11.24 to 22.11.24 and for Balasore sub division from 7.11.24 to 12.11.24. Copy of the reports of field visits may be appended with the draft DSR.
 11. As per the procedure laid out for preparation of DSR in the notification dated 25.7.18 of MoEFCC the main objective of preparation of DSR is to ensure the following- “Identification of areas of aggradations or depositions 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.” Details as per above objective are not given.
 12. Further, there are provisions mentioned for DSR preparation in “Enforcement & Monitoring Guidelines for Sand Mining” issued by MoEFCC in 2020 (to be supplemented with “Sustainable Sand Mining Management Guidelines, 2016”) which need to be followed and details of information is to be furnished in the DSR. Detailed information as per guidelines should be provided in the document.
 13. In Annexure-A of Proceedings of Sub-collector-BLS where the list of minerals in respect of Balasore subdivision is given, the status of mineral-mining and lessee details are not mentioned.

14. In DSR, under heading 3 (Table), The list of mining leases in the district Name & Address of Lessee, Lease details are not there for the quarries which are in non-working status.
15. In Annexure V of DSR, Sl. No. of quarries viz. A1, A2, B1, B2...C1, C2....D1, D2,,E1, E2,..., F1 etc. are mentioned as lease numbers which should be rectified.
16. In Annexure-VII, no. of tippers/day is not given for all quarries.

2. **Whether SEAC recommended the proposal** – Yes, the proposal was placed in the SEAC meeting held on 06.03.2025 and the after detailed discussion, the SEAC, Odisha recommended that the SEIAA, Odisha may consider for approval of the DSR of Balasore for implementation, subject to insertion/correction of the above as observed by the SEAC.
3. The SEIAA, Odisha has raised clarification to project proponent as per the SEAC observation on the following points and the PP has clarified the points and accordingly, modified the DSR data as follows:

Sl. No.	Raised ADS	Compliance to the ADS
01	In item no 3, in the table given some leases are marked as non-working. Reasons for non-working may page 32 of 46 please be mentioned against each case. Some columns are left blank against existing leases which may please be filled up or detailed reasons for nil information may be given. In some cases, it is mentioned DOCS not available. Correct and full information may please be provided.	The table in item No. 3 has been updated and all required data has been duly incorporated. Please refer to item No. 3 in the updated DSR copy for details.
02	In item no. 6, as against total 50 no of leases data for 21 leases is provided. This data shall be provided for all sources and river wise.	In item no. 6, data for a total of 50 leases has been provided, categorized river-wise.
03	Information for items a, b and c after item 11 is not given. Also details of drainage system with description of main rivers not given.	The information for items (a), (b) and (c) after item no. 11 has been updated. Additionally, details of the drainage system, including the name of the main river stream, along with its length, width, area for mineral concession and mineral potential are provided in the table under Item No. 11.
04	Annual deposition details not furnished.	The replenished volume is considered the annual deposition. Annual deposition data is provided only for operational or settled sources; however, it could not be furnished for non-operational sources. Please refer to the table in Item No. 6.
05	In Annexure I(b) three desiltation locations are given. Details of desiltation proposed may be given.	Three desiltation locations are listed in Annexure I(b); however, the desiltation process has not yet been proposed in Balasore district.
06	In Annexure II (and some other Annexures like IV and V) some columns are left blank or marked as NA. Complete information may be provided or justification for not providing information shall be given.	In Annexure II, all previously blank spaces have been filled in accordance with office records.
07	Absence of contiguous cluster may please be rechecked and confirmed	The data for contiguous clusters has been provided.
08	Route map is not given.	The route map has been submitted in tabular format in Annexure IV, detailing the length of the transportation route, the number of

		vehicles and the names of the villages, Map attached as Annexure-I.
09	In forwarding letter reference of NGT order dated 16.07.2024 in OA no 18/2023/EZ filed by Shri Haripada Manna -Vrs- State of Odisha is mentioned. Details of the case, directions of Hon'ble Court along with copy of order may please be furnished.	A copy of the NGT ORDER (oa No. 18/2023/EZ) is annexed herewith. Annexure-II
10	As per sub divisional committee reports field visits have been conducted by the committee of Nilgiri Sub Division from 20.11.2024 to 22.11.2024 and for Balasore sub division from 07.11.2024 to 12.11.2024. Copy of the reports of field visits may be appended with the draft DSR.	The Sub-Divisional Committee's field visit reports have been annexed herewith. Annexure-III
11	As per the procedure laid out for preparation of DSR in the notification dated 25.07.2018 of MoEF & CC the main objective of preparation of DSR is to ensure the following- "Identification of areas of aggradations or depositions 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". Details as per above objective are not given.	The DSR has been prepared in accordance with the MOEF&CC notification dated 25.07.2018, the Enforcement & Monitoring Guidelines for Sand mining 2020, the Sustainable Sand Mining Guidelines 2016 and other relevant government orders.
12	Further, there are provisions mentioned for DSR preparation in "Enforcement & Monitoring Guidelines for Sand Mining" issued by MoEF&CC in 2020 (to be supplemented with "Sustainable Sand Mining Management Guidelines, 2016") which need to be followed and details of information is to be furnished in the DSR. Detailed information as per guidelines should be provided in the document.	The DSR has been prepared in accordance with the MoEF&CC notification dated 25.07.2018, the Enforcement & Monitoring Guidelines for Sand Mining 2020, the Sustainable Sand Mining Guidelines 2016, and other relevant government orders.
13	In Annexure A of Proceedings of Sub-Collector BLS where the list of minerals in respect of Balasore subdivision is given, the status of mineral-mining and lessee details are not mentioned.	The table in Item No.3 provides details on the status of mineral mining along with information about the lessees.
14	In DSR, under heading 3 (Table), The list of mining leases in the district Name & Address of Lessee, Lease details are not there for the quarries which are in non-working status.	The table under Item No.3 has been completed as per the given instructions.
15	In Annexure V of DSR, Sl. No. of quarries viz. A1, A2..., B1, B2....C1, C2...D1, D2,E1, E2,...., F1 etc. are mentioned as lease numbers which should be rectified.	The lease numbers shall be assigned sequentially as serial numbers, such as A1, A2,, B1, B2....., and so on.
16	In Annexure-VII, no. of tippers / day is not given for all quarries.	In Annexure VII, the number of tippers per day is provided for all quarries.

The Lists of Sand Sources of Balasore included in DSR are as follows:

SL. NO	TAHASIL	Name of River/ Stream	Name of the Mineral	AREA	Replenished volume /Mineable Resource in Cum	Remarks
1	Basta	SUBARNAREKHA	AMBAKURUCHI SAND SOURCE	7.40 acre/2.99Ha	8173.94	Replenishment study report has been done
2	Basta	SUBARNAREKHA	DEVOG SAND SOURCE	12.35 acre/5.00 Ha	12888.3	Replenishment study report has been done

3	Basta	SUBARNAREKHA	DHITPURA SAND SOURCE	12.35 acre./5.00 Ha	7653.92	Replenishment study report has been done
4	Basta	SUBARNAREKHA	KADARAYAN SAND SOURCE	12.350 acre./5.00Ha	18790.5	Replenishment study report has been done
5	Basta	SUBARNAREKHA	BENAPURA -II SAND SOURCE	14.52 acre/5.876Ha	Not predictable presently	Currently submerged under water
6	Basta	SUBARNAREKHA	BENAPURA-I SAND SOURCE	12.45acre/5.014Ha	33671	Mineable resource as per the drone survey
7	Basta	SUBARNAREKHA	GOPINATHPUR SAND SOURCE	12.355acre/5.00Ha	30000	Newly proposed Source
8	Jaleswar	SUBARNAREKHA	SIKHARPUR SAND SOURCE	10.63Ac/ 4.3 Ha	9132.45	Replenishment study report has been done
9	Jaleswar	SUBARNAREKHA	RAJNAGAR SAND SOURCE	13.55 acre./5.48 Ha	41825.856	Replenishment study report has been done
10	Jaleswar	SUBARNAREKHA	GOBARDHANPUR SAND SOURCE	12.00 acre/4.85Ha	61411	Mineable resource as per the drone survey
11	Jaleswar	SUBARNAREKHA	SEKH SARAI SAND SOURCE(KA)	14.00 acre/5.66Ha	38901.85	Replenishment study report has been done
12	Jaleswar	SUBARNAREKHA	CHALANTI SAND SOURCE	14.00 acre/5.66Ha	40216	Mineable resource as per the drone survey
13	Jaleswar	SUBARNAREKHA	BALIKBAD SAND SOURCE	14.85 acre/6.009Ha	11656.8	Mineable resource as per the drone survey
14	Jaleswar	SUBARNAREKHA	BALIAPAL SAND SOURCE	12.00 acre/4.856 Ha	Not predictable presently	Currently submerged under water
15	Jaleswar	SUBARNAREKHA	SEKH SARAI SAND SOURCE(Kha)	15.00 acre/6.07 Ha	4131.9	Mineable resource as per the drone survey
16	Jaleswar	SUBARNAREKHA	RIVER BLOCK -KHA SAND SOURCE	13.00 acre/5.26 Ha	37939.5	Mineable resource as per the drone survey
17	Jaleswar	SUBARNAREKHA	PRAHARAJPUR (KA) SAND SOURCE	13.00 acre/5.26 Ha	48644	Mineable resource as per the drone survey
18	Jaleswar	SUBARNAREKHA	MANKIDIA SAND SOURCE (GA)	35 acre/14.16Ha	153552	Mineable resource as per the drone survey
19	Jaleswar	SUBARNAREKHA	CHORMARA (CHANDI BASTI) SAND SOURCE	10.00 acre/4.046 Ha	Not predictable presently	Currently submerged under water
20	Jaleswar	SUBARNAREKHA	MANKIDIA SAND SOURCE (KHA)	40 acre/16.187Ha	49609.2	Mineable resource as per the drone survey
21	Jaleswar	SUBARNAREKHA	MAKRAMPUR SAND SOURCE	15.00 acre/6.07 Ha	101374	Mineable resource as per the drone survey
22	Jaleswar	SUBARNAREKHA	GOBARGHATA SAND SOURCE	17.50 acre/7.08Ha	51512	Mineable resource as per the drone survey
23	Jaleswar	SUBARNAREKHA	PRAHARAJPUR SAND SOURCE (KHA)	15 acre/6.07Ha	17075	Mineable resource as per the drone survey
24	Jaleswar	SUBARNAREKHA	MANKIDIA-KA SAND SOURCE	20.00 acre/8.09 Ha	25023.1	Replenishment study report has been done
25	Jaleswar	SUBARNAREKHA	RIVER BLOCK-KA SAND SOURCE	14.00 acre / 5.665 Ha	49102.5	Mineable resource as per the drone survey
26	Jaleswar	SUBARNAREKHA	BILASHPUR SAND SOURCE	80.20 acre/32.456 Ha	161719.5	Mineable resource as per the drone survey
27	Jaleswar	SUBARNAREKHA	MALIPAL SAND SOURCE	12.355acre/5.00Ha	30000	Newly proposed Source
28	Jaleswar	SUBARNAREKHA	RAYANRAMCHANDRAPUR SAND BED	20.38Ac/8.247Ha	30000	Newly proposed Source
29	Baliapal	SUBARNAREKHA	PALABEGUNIA SAND BED	8.88 acre/3.60 Ha	40262	Replenishment study report has been done
30	Baliapal	SUBARNAREKHA	BADHAPAL SAND BED	8.36acre/3.38Ha	20103	Replenishment study report has been done
31	Balasore	BUDHABALANGA	KASABA - DAHAPADA SAND SOURCE	101.35 acre/41.015Ha	54633	Mineable resource as per the drone survey
32	Remuna	BUDHABALANGA	SAHUPADA & DUMUDA SAND SOURCE	12.35 acre/5.00Ha	1654.11	Replenishment study report has been done
33	Remuna	BUDHABALANGA	AMBULKUDA SAND SOURCE	12.300 acre/4.997Ha	15407.02	Replenishment study report has been done
34	Remuna	BUDHABALANGA	MAKANDA SAND SAIRAT SOURCE	12.22 acre/4.945Ha	14836	Mineable resource as per the drone survey
35	Remuna	BUDHABALANGA	GAMBHARIA RUDRAGOPALPUR SAMIL NAHARPATANA	94.99 acre/38.44Ha	Not predictable presently	Currently submerged under water

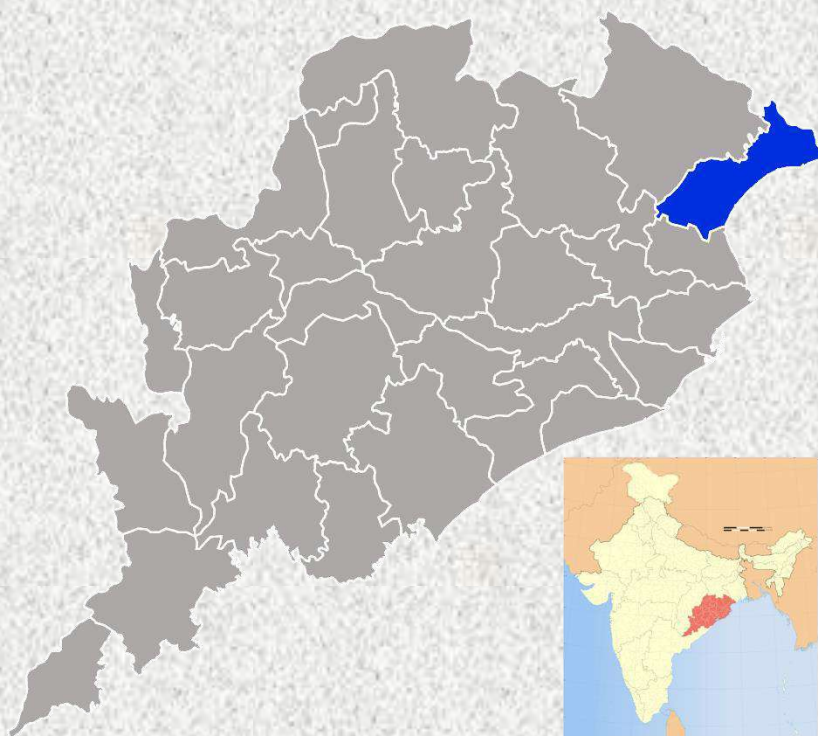
36	Remuna	BUDHABALANGA	KATHASANGADA SAND SOURCE-2	2.60 acre/1.052Ha	2981.977	Replenishment study report has been done
37	Remuna	BUDHABALANGA	KATHASANGADA SAND SOURCE-1	9.75 acre/3.945Ha	5485.333	Replenishment study report has been done
38	Basta	JALAKA RIVER	MATHANI & PUNSITA SAND BED	3.08 acre. /1.246Ha	132	Mineable resource as per the drone survey
39	Remuna	SUNAI	PURUKHI SAND SOURCE	12.300 acre/4.997Ha	3443.37	Replenishment study report has been done
40	Remuna	SUNAI	Hatiagand Mukundapur Patripal sand sairat	12.35 acre/4.99Ha	19.8	Mineable resource as per the drone survey
41	Remuna	SUNAI	Udambar sand sairat source	8.20 acre/3.318Ha	7964	Mineable resource as per the drone survey
42	Remuna	SUNAI	BAITABANKA SAND SOURCE	12.20 acre/4.937Ha	6541	Mineable resource as per the drone survey
43	Niligiri	SUNAI	PUNDAL-1 SAND BED	12.350 acre/5.00Ha	5894.28	Replenishment study report has been done
44	Niligiri	SUNAI	PUNDAL-2 SAND BED	3.40Ac/1.37H a	Not predictable presently	Currently submerged under water
45	Niligiri	SUNAI	DUMAGANDIRA-LAICHHANPUR SAND BED	12.350 acre/5.00Ha	787.02	Replenishment study report has been done
46	Niligiri	SUNAI	BAINCHANARANPUR-I SAND BED	12.35 acre/4.99Ha	5409.92	Replenishment study report has been done
47	Niligiri	SUNAI	BALIPAL SAND BED	12.300 acre. /4.97Ha	12407.64	Replenishment study report has been done
48	Niligiri	SUNAI	PRATAPPUR SAND BED	12.250 acre/4.95Ha.	4054.43	Replenishment study report has been done
49	Niligiri	SUNAI	BAINCHANARANPUR-3 SAND BED	8.70Ac/3.520 Ha	47961	Mineable resource as per the drone survey
50	Niligiri	SUNAI	AJODHYA SAND BED	12.35 acre. /5.00Ha	8923	Mineable resource as per the drone survey





DISTRICT SURVEY REPORT (DSR) OF BALASORE DISTRICT, ODISHA FOR RIVER SAND MINING

As per Notification No. S.O. 141(E), 15th January, 2016 & S.O. 3611(E), 25th July, 2018, New Delhi, MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE (MoEF & CC)



**COLLECTORATE, BALASORE
FEBRUARY-2025**

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0. PREFACE

Odisha is one of the Major Mineral rich State in India. Balasore is a unique District in Odisha lies on the Northern most part of the State with rich and varied mineral resource. It is a paradise for Geoscientists of India and abroad. It has preserved many important rock groups from the earliest of crust formation to the geologically recent times. The landmass constituting the Balasore District, explorers to many Entrepreneurs on account of its diverse geological setting and rich and varied mineral resources.

The Erstwhile Ministry of Environment and Forests(MoEF), (the Government of India, made Environmental Clearance (EC) for mining of minerals mandatory through its Notification of 27th January, 1994 under the provisions of Environment Protection Act, 1986. Keeping in view the experience gained in environmental clearance process over a period of one decade, the Ministry came out with Environmental Impact Notification, SO 1533 (E), dated 14th September 2006. The Ministry of Environment, Forests & Climate Change (MoEF&CC), Government of India had amended the said vide notification S.O. 141(E) Dated 15th January, 2016. Now again Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India amended the notification S.O. 141(E) Dated 15th January, 2016 vide S.O. 3611(E) Dated 25th July, 2018. It has been made mandatory to obtain environmental clearance for different kinds of development projects as listed in Appendix-X of the Notification. In compliance to the notification issued by the Ministry of Environment and Forest and Climate Change Notification no. S.O.3611 (E) NEW DELHI dated 25-07-2018 the preparation of district survey report of sand mining has been prepared in accordance with Clause II of Appendix X of the notification. Every effort has been made to cover river sand mining locations, future potential areas and overview of sand mining activities in the district with all its relevant features pertaining to geology and mineral wealth. This report will act as a compendium of available mineral resources, geological set up, environmental and ecological set up of the district and based on data of various departments like Revenue, Water Resources, Forest, Geology and Mining in the district as well as statistical data uploaded by various state Government departments for preparation for district survey report. The main purpose of preparation of District Survey Report is to identify the mineral resources and developing the mining activities along with other relevant data of the District.

The Main objective of the preparation of District Survey Report is to ensure the following:-

1. Identification of Mineral Resources in the District.
2. Identification of areas of minor minerals having the potentiality where mining can be allowed.
3. Identification of area and proximity to infrastructure and installations where mining should be prohibited.

01. INTRODUCTION

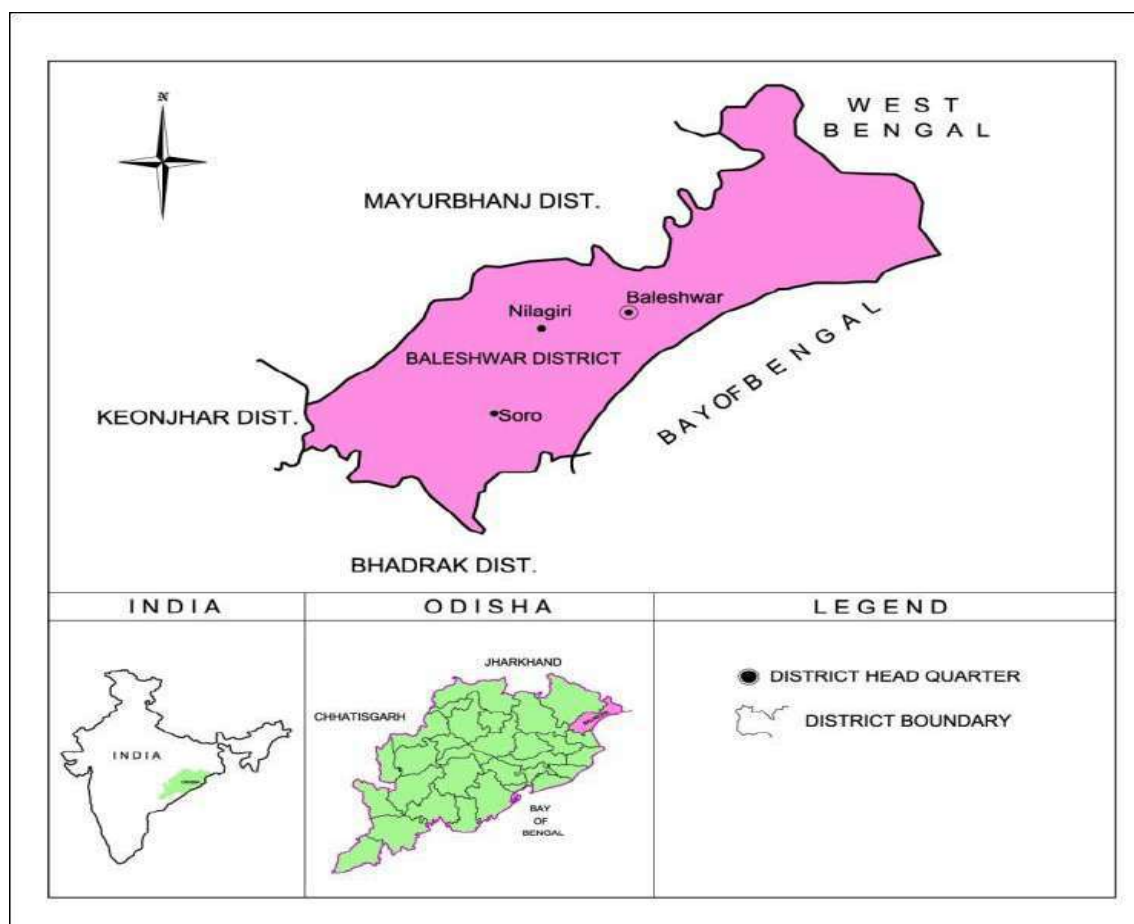
Balasore is one of the coastal Districts of Odisha. It lies on the northern most part of the state. It was a part of the ancient Kalinga which later became a territory of Toshali or Utkal, till the death of Mukunda Dev. Balasore as a separate District was created in October 1828. originally it was in Bengal presidency.

Balasore also gets its name from the Persian word Bala-e-Shore, meaning 'Town in the sea'. Historical legend ascribes the naming of this District as per Lord Baneshwar (Lord Shiva) of the town, which subsequently changed to Balasore during the Mughul rule. There are many historical monuments in the Balasore District. Some of the major monuments in Balasore District includes the rich sculptural remains found in Ayodhya. The ruin of the old Buddhist monastery and temple is there in Kupali in Balasore District. Some of the ruined forts at the Jayachandi forests in Raibania are also there in the District. The major religious monument found in the District is the Lord Chandaneswar Shrine.

There are beautiful sea beaches and many temples attract local and national tourists. Chandipur, Talasari sea beach, Chawmukh sea beach, Kashaphal sea beach are the famous sea beaches of the District. Temples like Panchalingeswar, Khirochora Gopinath, Langaleswar, Laxmannath, Chandaneswar, Maninageswar are the point of attractions.

Balasore is the District Head Quarter, spreading over an area of 3634 sq.km lies between 20° 48' North to 21° 59' North latitudes and 86°16' to 87°29' East longitudes. The District is surrounded by Medinipur District of West Bengal on its Northern side, Bay of Bengal on its East, Bhadrak District on its South and Mayurbhanj & Keonjhar Districts lies on its Western side. It is best known for Chandipur Beach. The Indian Ballistic Missile Defense Program's Integrated Test Range is located at a distance of 18 km towards South of Balasore. It is the largest city of North Odisha. This District consists of two Sub-Divisions namely Balasore and Nilgiri. There are 12 Tahasils for 12 Blocks of this District. Balasore is the main town as well as the Centre of Economic Growth in the district. The primary occupation of people in the District is cultivation. This District is mainly known for cultivation of paddy. Industries, Agriculture, Fishing and Tourism are the four major Revenue

sources of Balasore District. Birla Tyres, Balasore Alloys Limited, Emami Paper Mills Limited and Polar Pharma India Limited are some of the Large-Scale Industries functioning in this District. Balasore occupies a unique position being endowed with lush green vegetation, different fauna & flora and rich Cultural Heritage. The District has a rich mineral base of river sand, and Road Metal which are mainly used in construction purpose in the District. The huge deposits of granite stones at Nilgiri, Khaira, Soro region provides tremendous scope for development of few more Industries based on these resources. Except these, no major mineral in large quantity which can be explored for commercial purpose found in the District. The location of the District has been presented in a map below.



02. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT.

Balasore District has transitional landform features between coastal plain and hilly region. Most of the mineralized area coming under Eco-Sensitive Zone (Kuldiha Wildlife Sanctuary). Thus mining activities are confined only to the areas outside of Eco-Sensitive Zone. The mining activity in the District is restricted only to Minor Mineral i.e. of sand, road metal, decorative stone and brick clays. These are being given to various user agencies as lease agreement governed and regulated by Revenue Department under the legal provision stated under Odisha Minor Mineral Concession Rules, 2016. There is no lease of Major Mineral in the District. At present Leases of stone, sand and bricks making units are operational in the District. Stone chips, ordinary sand constitute the principal mining activity of Soro, Khaira, Jaleswar, Nilgiri area etc. of Balasore District. Huge granite stone deposits as road metal are available in Khaira, Nilgiri, Soro area and major sand sources having good potential are available in Jaleswar, Remuna and Nilagiri area of the District. These sources have been providing tremendous scope for development of few more Industries based on these Resources.

03. THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA & PERIOD OF VALIDITY.

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Sl.No	Name of River/ Stream	Name of the Mineral	Name of the Lessee	Address & Contact No. of lessee	Mining lease Grant Order No. & date	Area of Mining lease (In AC/HC)	Period of Mining lease (Initial)		Date of commencement of mining operation	Status (Working Non Working/T emp. working for dispatch etc.)	Obtained Environmental clearance (Y/N) if Y letter No. with date of grant of E.C	Location of the mining lease Land Schedule and (Latitude & Longitude)
							From	To				
1	2	3	4	5	6	7	8	9	10	11	13	14
A. Name of the Tahsil:-Basta												
A1	SUBARN AREKHA	AMBAKURU CHI SAND SOURCE	PANKAJ KUMAR JENA	AT:- SEKHBAD,P.O.:- JALESWAR, P.S.:- JALESWAR, DIST. BALASORE	Letter no- 1537/19-06-2020	7.40 acre/2.99Ha	14-Dec-20	13-Dec-25	14-Dec-20	Working	YES SIA/OR/MIN/ 296213/2023 & 02-May-2023	MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E
A2	SUBARN AREKHA	DEVOG SAND SOURCE	NIRANJAN PRADHAN	AT:- DATUNDA, P.O.:- DEBHOG, P.S.:- BALIAPAL, DIST. BALASORE	Letter no- 1633/26-06-2020	12.35 acre/5.00 Ha	23-Nov-20	22-Nov-25	23-Nov-20	Working	YES SIS/OR/MIN/ 296213/2023 & 02-May-2023	MOUZA DEVOG KHATA NO :392, PLOT: 1178, KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E
A3	SUBARN AREKHA	DHITPURA SAND SOURCE	SAWMYADI P CHAKRABARTY	AT:- KHAGADAPAL, P.O.:- BADASIMULIA, P.S.:- BALIAPAL, DIST. BALASORE	Docs Not Available	12.35 acre/5.00 Ha	29-Jan-21	28-Jan-26	29-Jan-21	Working	YES SIA/OR/MIN/ 296242/2023 & 28-Dec-2023	MOUZA DHITPURA, KHATA NO :97, PLOT: 214, KISSAM :NADI, LAT-21° 45' 1.2672" TO 21° 45' 7.3476", LONG-87° 11' 1.0104" TO 87° 11' 13.9092"
A4	SUBARN AREKHA	KADARAYAN SAND SOURCE	BHABESH KUMAR GHOSH	AT- DHARASTOCK, PO/PS- JALESWAR	Letter no- 1536/19-06-2020	12.350 acre/5.00Ha	02-Dec-20	01-Dec-25	02-Dec-20	Working	YES SIA/OR/MIN/ 296240/2023 20-12-2023	MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, KISSAM :NADI, LAT-21° 44' 51.2088" TO 21° 45' 0.9036", LONG-87° 12' 28.692" TO 87° 12' 42.7392"
A5	JALAKA RIVER	MATHANI & PUNSIITA SAND BED	AMULYA BEHERA	AT-WARD NO 12,MAHAPUR, PO- KABARPUR,DIST -JAJPUR	Letter no- 2621/20-11-2021	3.08 acre/1.246Ha				Non-Working	YES SIA/OR/MIN/ 234397/2021 & 30-04-2022	MOUZA MATHANI & PUNSIITA, KHATA NO :143,227, PLOT: 37,25, KISSAM :NADI, Lat- 21°40'06.81564" To 21°40'30.30024", long-87°03'52.22988" to 87°04'02.00100"
A6	SUBARN AREKHA	BENAPURA -II SAND SOURCE				14.52 acre/5.876Ha				Non-Working		MOUZA BENAPUR, KHATA NO:152, PLOT: 285, KISSAM: NADI, LAT- 21°45'27.43"N TO 21°45'41.99"N, LONG- 87°10'02.41"E TO 87°10'18.28"E

A7	SUBARN AREKHA	BENAPURA- I SAND SOURCE				12.45acre/5. 014Ha					Non- Working		MOUZA-BENAPUR, KHATA-150, PLOT- 142, KISSAM-NAYANJARI, LAT- 21°46'11.20"N TO 21°46'21.84"N, LONG- 87° 9'43.89"E TO 87° 9'50.32"E
NEW SOURCE													
A8	SUBARN AREKHA	GOPINATH PUR SAND SOURCE				12.355acre/ 5.0 Ha							Mouza-Gopinathpur, Khata- 153, Plot- 340, Area- 5Ha Out Of 22.743Ha.LAT-21.742, LONG-87.214
B. Name of the Tahasil:-Remuna													
B1	SUNAI	PURUKHI SAND SOURCE	RAGHUNAT H DAS	AT-KALYANI PS- NILGIRI DIST- BALASORE	Letter no- 6387/08-12- 2021	12.300 acre/4.997H a	20-Dec- 23	19-Dec- 28	20-Dec- 23	Working	YES SIA/OR/MIN/ 300142/2023 & 28-07-2023	MOUZA PURUKHI, KHATA NO:420, PLOT: 1340,,KISSAM:NADI, LAT- 21°34'15.39374" TO 21°34'20.42400", LONG- 86°47'37.53031" TO 86°48'02.61174"	
B2	BUDHAB ALANG A	SAHUPADA & DUMUDA SAND SOURCE	MADHUSUD AN JENA	At- Gobindapur, Po- Sahupada, PS- Sadar, Dist.- Balasore, odisha, Pin- 756003	Letter no- 2678/22-06- 2020	12.35 acre/5.00Ha	21-Feb-24	13-Dec- 25	21-Feb- 24	Non- Working	YES SIA/OR/MIN/ 468301/2024 & 17-Jun- 2024	MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, KISSAM:NADI, LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125"	
B3	BUDHAB ALANG A	AMBULKUD A SAND SOURCE	BIMBADHA RA SAMAL	AT- DALOGOHIRA, POST- UDAMBER, P.S- REMUNA, DIST- BALASORE	Letter no- 5990/22-11- 2021	12.300 acre/4.997H a	30-Dec- 23	29-Dec- 28	30-Dec- 23	Working	YES SIA/OR/MIN/ 300111/2023 & 28-07-2023	AMBULAKUDA, KHATA NO:133, PLOT: 531, , KISSAM: NADI, LAT- 21°35'04.80187" TO 21°35'20.10514", LONG- 86°54'11.23380" TO 86°54'17.05015"	
B4	SUNAI	Hatiagand Mukundap ur Patripal sand sairat				12.35 acre/4.99Ha				Non- Working	YES SIA/OR/MIN/ 249820/2022 & 31-03-2022	HATIAGAND, MUKUNDAPUR, PATRIPAL, KHATA NO:313,197,69, PLOT: 223,1121,3,1, KISSAM: NADI,LAT- 21°32'57.31" TO 21°33'01.57"N, LONG- 86°51'36.86" TO 86°51'57.69"E	
B5	SUNAI	Udambar sand sairat source				8.20 acre/3.318H a				Non- Working	YES AEIAA- 1788/08-2021 & 28-09-2021	UDAMBER, KHATA NO: 211, PLOT: 1, KISSAM: NADI, Lat- 21°33'16.98"N to 21°33'22.35"N Long- 86°53'38.45"E to 86°53'59.66"E	
B6	BUDHAB ALANG A	Makanda sand sairat source	Sri Pradeep Kumar Dash OR MINING OFFICER BALASORE	Plot no-VIP- 113, Nayapalli,Dist- Khurda,Bhub aneswar,75101 5	Letter no- 5989/22-11- 2021	12.22 acre/4.945H a				Non- Working	YES SEIAA- 1794/08-2021 & 07-10-2021	MAKANDA, KHATA NO:337 PLOT: 691,692, KISSAM: NADI, LAT- 21°34'50.99"N TO 21°34'56.53"N , LONG- 86°53'41.84"E TO 86°53'59.73" E	

B7	BUDHAB ALANG A	GAMBHARI A RUDRAGO PALPUR SAMIL NAHARPAT ANA				94.99 acre/38.44H a					Non- Working		MOUZA- GAMBHARIA, RUDRAGOPALPUR SAMIL NAHARPATANA, KHATA NO 430.236 PLOT: 574.722.1.510 , KISSAM: NADI, LAT-21°32'13.69" TO 21°33'01.68"N, LONG-86°54'55.86" TO 86°55'28.60"E
B8	SUNAI	BAITABANK A SAND SOURCE	UPENDRA KUMAR SINGH	AI- DEULASAH,CH URCHGALI,PO- BARIPADA,PS- BARIPADA,DIST -MAYURBHANJ	Letter no- 6388/08-12- 2021	12.20 acre/4.937H a					Non- Working	YES SIA/OR/MIN/ 300132/2023 & 28-07-2023	Mouza: GHUNGIA, KHATA NO 261.261 PLOT: 338,440 , KISSAM: NADI, LAT- 21°33'47.00568" TO 21°34'18.76462" , LONG- 86°49'16.80718" TO 86°49'24.26577"
B9	BUDHAB ALANG A	KATHASAN GADA SAND SOURCE-2				2.60 acre/1.052H a					Non- Working	YES SEIAA- 1703/05-2021 & 28-09-2021	Mouza: KATHASANGADA, HALADIA, KHATA NO- 286 PLOT: 106, KISSAM: NADI, LAT-21°33'33.48457" TO 21°33'54.32476", LONG- 86°54'26.44185" TO 86°54'41.16691"
B10	BUDHAB ALANG A	KATHASAN GADA SAND SOURCE-1	SAUMYA RANJAN BEHERA JADAV	AI- AKATPUR,PO- SUNHAT,DIST- BALASORE	Letter no- 6957/24-12- 2021	9.75 acre/3.945H a					Non- Working	YES SIA/OR/MIN/ 301023/2023 & 12-07-2023	Mouza: KATHASANDASA, HALADIA, KHATA NO 286,458 PLOT: 123,145,1952 , KISSAM: NADI, LAT- 21°33'20.86635" TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215"

C. Name of the Tahasil:-Nilgiri

C1	SUNAI	PUNDAL-1 SAND BED	PADMALO CHAN JENA	S/O-ANANTA CH. JENA AT- BHASKARGANJ A, BALASORE	Letter no- 2572/18-06- 2020	12.350 acre/5.00Ha	10-Feb-21	09-Feb- 26	10-Feb- 21	Working	YES SIA/OR/MIN/ 464921/2024 & 04-05-2024	MOUZA: PUNDAL, KHATA NO 556, PLOT:1347/1 , KISSAM: NADI, LAT- 21°34'39.68857" TO 21°34'48.23321" , LONG-86°46'25.68699" TO 86°46'35.36899"
C2	SUNAI	PUNDAL-2 SAND BED	BIKRAMAN ANDA MOHANTY	AT-POSTAL COLONY,PO- AZIMABAD ,BALASORE	Letter no- 2573/18-06- 2020	3.40Ac/1.37 Ha	09-02- 2021	08-02- 2026	09-02- 2021	Non- Working	YES SEIAA- 857/11- 2020&02.02.2 021	MOUZA: PUNDAL, KHATA NO 556, PLOT:1347, KISSAM: NADI, LAT- 21°34'37.42724" TO 21°34'43.40860" , LONG-86°46'47.40109" TO 86°46'51.95754"
C3	SUNAI	DUMAGAN DIRA- LAICHHAN PUR SAND BED	ASHOK KUMAR NAYAK	S/O- NITYANANDA NAYAK AT/PO- PUNDAL, NILGIRI, BALASORE	Letter no- 2571/18-06- 2020	12.350 acre/5.00Ha	09-Dec- 20	08-Dec- 25	09-Dec- 20	Working	YES SIA/OR/MIN/ 296273/2023 & 02-May- 2023	MOUZA: DUMAGANDIRA, LAICHHANPUR KHATA NO 157,155 PLOT:385.36, KISSAM: NADI, LAT-21°34'20.43545" TO 21°34'27.16324" , LONG- 86°48'50.32691" TO 86°49'04.33634"
C4	SUNAI	BAINCHAN ARANPUR-I SAND BED	HARA PRASAD SENAPATI	S/O- JADUMANI SENAPATI AT- BAPUJINAGAR, BHUBANESWAR	Letter no- 5057/08-12- 2021	12.35 acre/4.99Ha	20-Jan-22	19-Jan- 27	20-Jan- 22	Working	YES SIA/OR/MIN/- 300312/2023 & 30-01-2024	MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:383 ,384, KISSAM: NADI, LAT- 21°34'57.92"N TO 21°35'12.08"N , LONG- 86°42'49.85"E TO 86°43'1.58"E

C5	SUNAI	BALIPAL SAND BED				12.300 acre./4.97Ha				Non-Working		MOUZA: BALIPAL KHATA NO 156,156 PLOT:7,495, KISSAM: NADI, LAT-21°34'28.68"N TO 21°34'39.30"N, LONG- 86°43'46.09" TO 86°44'32.40"
C6	SUNAI	PRATAPPUR SAND BED	KAMALAKANTA PATRA	S/O-PRANAKRUSHNA PATRA AT/PO-KAHALIA, PS-NILGIRI DIST.-BALASORE	Letter no-1191/08-03-2021	12.250 acre./4.95Ha	31-Mar-21	30-Mar-26	31-Mar-21	Working	YES SIA/OR/MIN/296290/2023 & 02-05-2023	MOUZA: AJODHYA (PRATAPPUR) KHATA NO -814, PLOT:388, KISSAM: NADI, LAT- 21°34'25.72"N TO 21°34'21.81"N, LONG- 86°44'54.48"E TO 86°45'13.09"E
C7	SUNAI	BAINCHANARANPUR-3 SAND BED				8.70Ac/3.520 Ha				Non-Working	SIA/ORMIN/265332/2022 & APPLY Dt.-03.04.2022	MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:516, KISSAM: NADI, LAT-21°35'09.76013" TO 21°35'14.08427", LONG-86°42'21.71445" TO 86°45'40.57543"
C8	SUNAI	AJODHYA SAND BED	M/S BRIJ GOPAL CONSTRUCTION COMPANY (P) LIMITED	AT-DAHISADA, PO/PS-SORO, BALASORE	Letter no-517/04-03-2022	12.35 acre./5.00Ha	30/03/2022	29/03/2027	30/03/2022	Non-Working	YES SIA/OR/MIN/268247/2022 & 04-05-2022	MOUZA: AJODHYA KHATA NO 814 PLOT:1412, KISSAM: NADI, LAT-21°34'18.95" TO 21°34'29.13N, LONG-86°44'54.43" TO 86°45'13.45E
D. Name of the Tahasil:-Jaleswar												
D1	SUBARN AREKHA	SIKHARPUR SAND SOURCE	The Orissa Chrome Export & Mining Company Limited A/R Manas Ranjan Mahapatra	At-jagannathpur, Po-Janhia (Manatij), PS-Soro, Dist.- Balasore, odisha. Pin-756045	Letter no-506/15-03-2024	10.63Ac/ 4.3 Ha	12-Jun-24	11-Jun-29	12-Jun-24	Working	YES EC24C01070 R5683073T / SIA/OR/MIN/468179/2024 & 09-Apr-2024	MOUZA: SHIKHARPUR KHATA NO 496 PLOT:1910,1900, KISSAM: NADI, LAT-21°47'50.52" TO 21°48'02.51", LONG-87°12'14.01" TO 87°12'28.86"
D2	SUBARN AREKHA	RAJNAGAR SAND SOURCE	LAXMIPRIYA PRUSTY	AT/PO-BALARAMPRASAD PS-MOTUNGA DIST-DHENKANAL, STATE-ODISHA	Letter no-2207/05-07-2019	13.55 acre./5.48 Ha	13-07-2023	12-07-2028	13-07-2023	Working	YES SIA/OR/MIN/54634/2020 & 16-12-2020 OR EC23B001OR 110281 & 23/06/2023	MOUZA:RAJNAGAR KHATA NO 377, PLOT:1295/1300, KISSAM: NADI, LAT-21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256"
D3	SUBARN AREKHA	GOBARDHANPUR SAND SOURCE				12.00 acre/ 4.85Ha				Non-Working	YES SEIAA-1791/08-2021 & 07-10-2021	MOUZA: GABARDHANPUR KHATA NO 358, PLOT:1094, KISSAM: NADI, LAT-21°43'09.49505" TO 21°43'21.91435", LONG-87°12'00.91831" TO 87°12'12.02473"

D4	SUBARN AREKHA	SEKH SARAI SAND SOURCE(KA)				14.00 acre/ 5.66Ha				Non-Working	YES SIA/OR/MIN/ 65761/2021 & 07-09-2021	MOUZA:SEKHSARAI KHATA NO 142, PLOT-2, KISSAM: NADI, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132"
D5	SUBARN AREKHA	CHALANTI SAND SOURCE				14.00 acre/ 5.66Ha				Non-Working	YES SEIAA- 63714/1823- NCM/04-2017 & 19.08.2021	MOUZA: CHALANTI KHATA NO 384, PLOT:738, KISSAM: NADI, LAT- 21°45'24.27" TO 21°45'34.89"N, LONG- 87°10'16.33" TO 87°10'25.38"E
D6	SUBARN AREKHA	BALIKBAD SAND SOURCE				14.85 acre/ 6.009Ha				Non-Working		MOUZA:BALIKBAD KHATA NO 399, PLOT:49 , KISSAM: NADI, LAT- 21°42'45.21"N TO 21°42'55.11"N ,LONG- 87°13'27.55"E TO 87°13'41.23"E
D7	SUBARN AREKHA	BALIAPAL SAND SOURCE				12.00 acre/ 4.856 Ha				Non-Working	Docs Not Available	MOUZA: BALIAPAL KHATA NO 578, PLOT:2949, KISSAM: NADI, LAT- 21°42'17.17632" TO 21°42'24.80328" ,LONG- 87°13'40.01052" TO 87°13'52.23684"
D8	SUBARN AREKHA	SEKH SARAI SAND SOURCE(Kha)				15.00 acre/ 6.07 Ha				Non-Working	Docs Not Available	MOUZA: SEKHSARAI KHATA NO 142, PLOT:2, KISSAM: NADI, LAT- 21°46'54.81" TO 21°47'09.19", LONG- 87°09'49.47" TO 87°10'01.89"
D9	SUBARN AREKHA	RIVER BLOCK - KHA SAND SOURCE				13.00 acre/ 5.26 Ha				Non-Working	YES SIA/OR/MIN/ 220819/2021 & SIA/OR/MIN/ 221007/2021 & 08-09-2021	MOUZA: RIVER BLOCK -KHA KHATA NO 175, PLOT:1 , KISSAM: NADI, LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74"
D10	SUBARN AREKHA	PRAHARAJ PUR (KA) SAND SOURCE				13.00 acre/ 5.26 Ha				Non-Working		MOUZA: PRAHARAJ PUR KHATA NO 466, PLOT:1923 , KISSAM: NADI, LAT- 21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852"
D11	SUBARN AREKHA	MANKIDIA SAND SOURCE (GA)				35 acre/ 14.16Ha				Non-Working		MOUZA: MANKIDIA KHATA NO 618, PLOT:1677 , KISSAM: NADI, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG-87° 14' 30.9768"TO 87° 14' 49.2"
D12	SUBARN AREKHA	CHORMARA (CHANDI BASTI) SAND SOURCE	KANHNU CHARAN PRAMANIK	AT/PO-BADASIMULIA, PS-BALIAPAL,BALASORE	Letter no-4868/13-12-2021	10.00 acre/ 4.046 Ha				Non-Working	YES SIA/OR/MIN/ 300038/2023 & 28-07-2023	MOUZA: CHORMARA KHATA NO 692, PLOT:182, KISSAM: NADI, LAT- 21°42'53.30760" TO 21°42'58.49621", LONG-87°12'28.06579" TO 87°12'42.90563"

D13	SUBARN AREKHA	MANKIDIA SAND SOURCE (KHA)				40 acre/ 16.187Ha				Non-Working	NA	MOUZA: MANKIDIA KHATA NO 618, PLOT:1677, KISSAM: NADI, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG-87° 14' 17.8152" TO 87° 14' 37.5504"
D14	SUBARN AREKHA	MAKRAMPUR SAND SOURCE				15.00 acre/ 6.07 Ha				Non-Working		MOUZA: MAKRAMPUR KHATA NO 1, PLOT:6, KISSAM: NADI, LAT-21° 51' 23.2164" TO 21° 51' 34.254" , LONG-87° 14' 39.6816" TO 87° 14' 54.0564"
D15	SUBARN AREKHA	GOBARGHATA SAND SOURCE				17.50 acre/ 7.08Ha				Non-Working		MOUZA: GOBARGHATA KHATA NO 1414, PLOT: 3236, KISSAM: NADI, LAT-21° 51' 16.4844" TO 21° 51' 29.7" , LONG-87° 14' 7.2348" TO 87° 14' 15.036"
D16	SUBARN AREKHA	PRAHARAJPUR SAND SOURCE (KHA)				15 acre/ 6.07Ha				Non-Working	NA	MOUZA: PRAHARAJPUR KHATA NO 466, PLOT:1923, KISSAM: NADI, LAT-21° 52' 28.8264" TO 21° 52' 40.68876" , LONG-87° 14' 55.914" TO 87° 15' 4.9392"
D17	SUBARN AREKHA	MANKIDIA-KA SAND SOURCE				20.00 acre/ 8.09 Ha				Non-Working	YES SIA/OR/MIN/ 456207/2023 & 03/04/2024	MOUZA: MAKIDIA KHATA NO 818, PLOT:1 , KISSAM: NADI, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG-87° 14' 9.2508" TO 87° 14' 24.0684"
D18	SUBARN AREKHA	RIVER BLOCK-KA SAND SOURCE				14.00 acre / 5.665 Ha				Non-Working	YES LETTER NUMBER SEIAA/2681 & 08.09.2021	MOUZA:RIVER BLOCK KHATA NO 175, PLOT:01 , KISSAM: NADI, LAT-21°48'44.15" TO 21°48'50.19" , LONG-87°12.53.30" TO 87°13'07.21"
D19	SUBARN AREKHA	BILASHPUR SAND SOURCE				80.20 acre/ 32.456 Ha				Non-Working	NA	MOUZA:BILASHPUR KHATA NO 53, PLOT:120 , KISSAM: NADI, LAT-21° 57' 13.5036" TO 21° 57' 47.9844" , LONG-87° 13' 31.2816" TO 87° 13' 45.2748"
NEW SOURCE												
D20	SUBARN AREKHA	MALIPAL SAND BED				12.355acre/ 5.0 Ha				Non-Working		Mouza-Malipal, Khata- 501, Plot-2277, Area- 5Ha Out Of 38.82 Ha, LAT-21°51'09.54151" TO 21°51'20.80386", LONG-87°13'09.81079" TO 87°13'23.17459"
D21	SUBARN AREKHA	Rayanramchandrapur Sand Bed				20.38Ac/8.24 7Ha				Non-Working		Mouza-Raynramchandrapur, Khata-1070, Plot-2824, LAT-21°45'02.84" TO 21°45'13.87", LONG-87°12'53.56" TO 87°13'06.85"

E. Name of the Tahasil:-Ballapal												
E1	SUBARN AREKHA	PALABEGU NIA SAND BED	SAWMYADI P CHAKRABA RTY	AT:- KHAGADAPAL, P.O.:- BADASIMULIA, P.S.:- BALIAPAL, DIST. BALASORE	Letter no- 4258/26-11- 2021	8.88 acre/ 3.60 Ha				Non- Working	YES SIA/OR/MIN/ 300088/2023 & 28-07-2023	MOUZA: PALABEGUNIA KHATA NO 470, PLOT: 270,377,378,786,793,799 , KISSAM: NADI, LAT- 21°41'16.80572" TO 21°41'16.80572" ,LONG- 87°17'50.50770" TO 87°18'01.77824"
E2	SUBARN AREKHA	BADHAPAL SAND BED				8.36acre/ 3.38Ha				Non- Working	YES SIA/OR/MIN/ 300359/2023 & 28-07-2023	MOUZA:BEDHAPAL KHATA NO 717,718, PLOT: 973,973/2548,989,955,956,969,990,119 3,1194,1198,1199,1200,1201,1205,1498 , KISSAM: NADI, LAT-21°41'26.91"N, LONG- 87°17'50.07"E
F. Name of the Tahasil:-Balasore												
F1	BUDHAB ALANG A	KASABA - DAHAPAD A SAND SOURCE				101.35 acre/ 41.015Ha				Non- Working		MOUZA: KASABA-DAHAPADA KHATA NO 653,143, PLOT:209,210,1429,1483,124,837 , KISSAM: NADI, PATCH-1: LAT- 21°31'55.99"N TO 21°32'45.13"N ,LONG- 86°55'30.53"E TO 86°56'28.19"E

NB: in the above table omitted Columns are,

Column-12 Use (Captive/ Non-Captive) - All Non-Captive

Column- 15 Method of Mining (Opencast/Underground) - All Open cast

04. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS.

Sl. No.	Name of the Tahasil	Name of Source	Revenue Collected for last three years (in Rs)		
			2021-22	2022-23	2023-24
A1	BASTA	Ambakuruchi Sand Source	30,66,572.33	NA	1,75,331.48
A2		Devog Sand Source	43,96,771.61	NA	8,17,711.68
A3		Dhitpura Sand Source	79,82,451.00	NA	2,49,246.00
A4		Kadarayan Sand Source	44,07,612.50	NA	NA
A5		Mathani & Punsita	NA	NA	NA
A6		Benapura -li Sand Source	77,60,445		
A7		Benapura-I Sand Source	NA	NA	NA
B1	REMUNA	Purukhi Sand Source			8,79,530.00
B2		Sahupada & Dumuda Sand Source	NA	NA	NA
B3		Ambulkuda Sand Source			5,33,935.00
B4		Hatiagand Mukundapur Patripal Sand Sairat	NA	NA	NA
B5		Udambar Sand Sairat Source	NA	NA	NA
B6		Makanda Sand Sairat Source	NA	NA	NA
B7		Gambharia Rudragopalpur Samil Naharpatana	NA	NA	NA
B8		Baitabanka Sand Source	NA	NA	NA
B9		Kathasangada Sand Source-2	12,60,760		
B10		Kathasangada Sand Source-1	NA	NA	NA
C1	NILGIRI	Pundal-1 Sand Bed	48,76,722.00		5,08,878.00
C2		Pundal-2 Sand Bed	22,37,550	NA	NA
C3		Dumagandira-Laichhanpur Sand Bed	26,88,133.70		2,16,810.90
C4		Bainchanaranpur-I Sand Bed	NA	4459500	14,87,700.00
C5		Balipal Sand Bed	NA		
C6		Pratappur Sand Bed	31,77,648.00	NA	9,66,769.20
C7		Bainchanaranpur-3 Sand Bed	NA	NA	NA
C8		Ajodhya Sand Bed		5,98,136	
D1	JALESWAR	Sikharpur Sand Source	NA	NA	NA
D2		Rajnagar Sand Source			9,16,781.50
D3		Gobardhanpur Sand Source	NA	NA	NA
D4		Sekh Sarai Sand Source(Ka)	NA	NA	NA
D5		Chalanti Sand Source	16,48,126	31,64,400	
D6		Balikbad Sand Source			
D7		Baliapal Sand Source	NA	NA	NA
D8		Sekh Sarai Sand Source(Kha)			
D9		River Block -Kha			
D10		Praharajpur (Ka)	NA	NA	NA
D11		Mankidia Sand Source (Ga)	NA	NA	NA
D12		Chormara (Chandi Basti)	NA	NA	NA
D13		Mankidia Sand Source (Kha)	NA	NA	NA
D14		Makrampur Sand Source	NA	NA	NA
D15		Gobarghata Sand Source	NA	NA	NA
D16		Praharajpur Sand Source (Kha)	NA	NA	NA
D17		Mankidia-Ka	NA	NA	NA
D18		River Block-Ka			
D19		Bilashpur Sand Source	NA	NA	NA
E1	BALIAPAL	Badhapal Sand Bed	NA	NA	NA
E2		Palabegunia Sand Bed	NA	NA	NA
F1	BALASORE	Kasaba - Dahapada Sand Source	2119256	2119256	

05. DETAIL OF PRODUCTION OF SAND IN LAST THREE YEARS.

Sl. No.	Name of the Tahasil	Name of Source & Location	Production for last three years(in Cum)		
			2021-22 MGQ	2022-23 MGQ	2023-24 MGQ
1	BASTA	Ambakuruchi Sand Source	15,000.00	NA	784
2		Devog Sand Source	26,667.99	NA	5,160.00
3		Dhitpura Sand Source	18,000.00	NA	500
4		Kadarayan Sand Source	17,500.00	NA	NA
5		Mathani & Punsita	NA	NA	NA
6		Benapura -li Sand Source	1,44,450		
7		Benapura-I Sand Source	NA	NA	NA
8	REMUNA	Purukhi Sand Source			1,875.00
9		Sahupada & Dumuda Sand Source	NA	NA	NA
10		Ambulkuda Sand Source			1,500.00
11		Hatiagand Mukundapur Patripal Sand Sairat	NA	NA	NA
12		Udambar Sand Sairat Source	NA	NA	NA
13		Makanda Sand Sairat Source	NA	NA	NA
14		Gambharia Rudragopalpur Samil Naharpatana	NA	NA	NA
15		Baitabanka Sand Source	NA	NA	NA
16		Kathasangada Sand Source-2	2,000		
17		Kathasangada Sand Source-1	NA	NA	NA
18	NILGIRI	Pundal-1 Sand Bed	20,833.00		2,167.00
19		Pundal-2 Sand Bed	10,000	10,000	10,000
20		Dumagandira-Laichhanpur Sand Bed	13,333.00		1,081.00
21		Bainchanaranpur-I Sand Bed	NA	6,000.00	2,000.00
22		Balipal Sand Bed	NA		
23		Pratappur Sand Bed	15,600.00	NA	4,740.00
24		Bainchanaranpur-3 Sand Bed	NA	NA	NA
25		Ajodhya Sand Bed		1,000	
26	JALESWAR	Sikharpur Sand Source	NA	NA	NA
27		Rajnagar Sand Source			2,175.00
28		Gobardhanpur Sand Source	NA	NA	NA
29		Sekh Sarai Sand Source(Ka)	NA	NA	NA
30		Chalanti Sand Source	15,000	15,000	
31		Balikbad Sand Source	2,520		
32		Baliapal Sand Source	NA	NA	NA
33		Sekh Sarai Sand Source(Kha)			
34		River Block -Kha	20,000	20,000	
35		Praharajpur (Ka)	NA	NA	NA
36		Mankidia Sand Source (Ga)	NA	NA	NA
37		Chormara (Chandi Basti)	NA	NA	NA
38		Mankidia Sand Source (Kha)	NA	NA	NA
39		Makrampur Sand Source	NA	NA	NA
40		Gobarghata Sand Source	NA	NA	NA
41		Praharajpur Sand Source (Kha)	NA	NA	NA
42		Mankidia-Ka	NA	NA	NA
43		River Block-Ka	20,000	20,000	
44		Bilashpur Sand Source	NA	NA	NA
45	BALIAPAL	Palabegunia Sand Bed	NA	NA	NA
46		Badhapal Sand Bed	NA	NA	NA
47	BALASORE	Kasaba - Dahapada Sand Source	37400	37712	

06. PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT.

Balasore District is enriched with several rivers, which play a vital role in the region's agriculture, culture, and economy. The major rivers flowing through Balasore are:

a. Subarnarekha River:

The deposition of sediments in the Subarnarekha River within Balasore District is a complex process influenced by natural forces, seasonal variations, and human activities. Here's an outline of how sediment deposition occurs in this river:

- **Upstream Erosion:** The Subarnarekha River originates in the Chota Nagpur Plateau in Jharkhand, where erosion of rocky terrain and soil releases sediments, including silt, sand, clay, and organic matter, into the river. Rainfall and natural wear from the flow of water loosen and carry these materials downstream.
- **Human Activities:** Mining activities in Jharkhand and West Bengal contribute to sedimentation by releasing waste materials into the river. Additionally, deforestation and agricultural runoff from these areas add sediments, especially during the rainy season.
- **Monsoon Season:** Heavy rainfall during the monsoon increases the river's flow rate, enhancing its capacity to carry larger amounts of sediments downstream. However, when the river reaches flatter terrain in Balasore District, the flow slows, and the river can no longer hold as much sediment, leading to deposition.
- **Dry Season:** During the dry season, water levels and flow rates decrease, which further encourages sediment deposition along the riverbanks and in shallow areas.
- **Meanders and Floodplains:** As the Subarnarekha meanders through Balasore, sediments are deposited along the inner curves of bends (meanders) where the water flow slows. Floodplains, which are areas adjacent to the river that flood periodically, also accumulate large amounts of sediment during high-flow events.

- **Delta Formation:** Near its mouth at the Bay of Bengal, the river's flow rate slows dramatically, resulting in the deposition of finer sediments like silt and clay. This creates a delta, gradually extending the land into the sea.
 - **Tidal Influence:** In the coastal areas of Balasore, tidal actions from the Bay of Bengal push back the river's flow, especially during high tides. This backflow causes the suspended sediments to settle, leading to deposition near the river mouth.
 - **Backflow During Cyclones:** Storm surges and cyclones also influence sediment deposition, as they increase backflow, which deposits additional sediments in the coastal and delta areas.
- b. Budhabalanga River:** The Budhabalanga River, flowing through Balasore District, undergoes a natural process of sediment deposition influenced by the river's journey from the hills, seasonal changes, and human activities. Here's an outline of how sediment deposition occurs in the Budhabalanga River:
- **Upstream Erosion:** The steep gradient and rocky terrain lead to significant erosion, causing sediments such as sand, silt, gravel, and clay to enter the river. These materials are carried downstream as the river flows towards Balasore.
 - **Runoff from Slopes:** As the river descends from the hills, rainwater runoff adds more sediment. This runoff picks up soil particles, minerals, and organic matter, increasing the river's sediment load.
 - **Monsoon Season:** During the monsoon, heavy rains increase the river's flow rate and its sediment-carrying capacity. Fast-flowing water picks up more sediment from the hills and surrounding areas, transporting it downstream toward Balasore. As the river flow slows in the flatter areas, these sediments begin to settle and deposit.
 - **Dry Season:** When the water levels drop in the dry season, the river's flow weakens, causing finer sediments like silt and clay to settle on the riverbed and banks. The lower flow rate encourages deposition, especially in bends, shallow areas, and floodplains.

- **Meanders and Floodplains:** As the Budhabalanga meanders through the district, sediments accumulate on the inner curves of bends where water flow is slower. Floodplains, which are periodically flooded areas along the river, receive deposits of finer sediments during floods, enriching the soil with nutrients.
 - **Sandbar and Island Formation:** Slower flow in the river's lower course sometimes leads to sandbars or small islands forming in the middle of the river, creating natural obstacles that further slow the flow and promote additional sediment deposition.
 - **Tidal Influence:** As Budhabalanga approaches the Bay of Bengal, tidal movements influence the river flow. During high tide, seawater pushes back into the river, causing suspended sediments to settle in the river mouth area. This backflow promotes the formation of silt and clay deposits near the estuary, creating a delta-like effect.
 - **Cyclones and Storm Surges:** Cyclonic storms and high tides associated with them can intensify backflow, depositing additional sediments along the riverbanks and in coastal areas, sometimes reshaping the river mouth and nearby floodplains.
- c. **Jalaka River:** The Jalaka River, a tributary of the Budhabalanga River, experiences sediment deposition processes influenced by seasonal changes, local geography, and human activities. Here's an outline of how sediment deposition occurs in the Jalaka River within Balasore District:
- **Local Erosion and Runoff:** The Jalaka River originates in the foothills and plains of Odisha, and receives sediment mainly through local soil erosion and agricultural runoff. The river collects fine sediments such as clay, silt, and sand from its surrounding banks, especially during heavy rains.
 - **Agricultural Runoff:** Agricultural activities along the Jalaka's banks contribute significantly to sediment load. During rainfall, soil from fields, along with fertilizers and organic matter, is washed into the river, adding to the sediment volume, especially during the monsoon season.

- **Monsoon Season:** During the monsoon, heavy rains increase water flow in the Jalaka, allowing it to carry more sediment downstream. However, the river's capacity to transport sediment decreases as it flows through flatter regions in Balasore, leading to a significant buildup of sediment.
 - **Frequent Flooding:** The Jalaka is known for flooding during the monsoon, which causes overflow into nearby agricultural lands. When the floodwaters recede, they leave behind layers of fine sediment (silt and clay) on the floodplains, enriching the soil in these areas.
 - **Tidal Influence from Budhabalanga:** Though less significant than in larger rivers, minor tidal influence from the nearby Budhabalanga River (which the Jalaka joins) can cause some sediment deposition near the confluence. Backflow during high tides causes sediment to settle at the mouth of the Jalaka, especially fine particles like silt and clay.
 - **Floodplain Deposition:** During high-flow events, the Jalaka frequently spills over into the surrounding floodplains. When the water recedes, sediments are left behind on these plains, creating nutrient-rich soils that support agriculture.
- d. **Sono River:** The deposition of sediments in the Sono River, a smaller river in Balasore District, is influenced by local factors such as erosion, seasonal variations, and human activity in the surrounding area. Here is an outline of how sediment deposition occurs in the Sono River:
- **Local Erosion:** The Sono River collects sediments from erosion along its banks and from the surrounding areas. This erosion, especially in the hilly or undulating areas upstream, contributes silt, sand, and clay into the river system.
 - **Runoff from Agricultural Lands:** Agricultural lands near the river contribute to the sediment load through runoff, particularly during the rainy season. Soil, fertilizers, and organic material are washed into the river, increasing the sediment content.
 - **Monsoon Season:** During the monsoon, heavy rainfall increases the river's flow and sediment-carrying capacity. The fast-flowing water erodes soil and rocks from the riverbanks and transports this sediment downstream. However, as the

river moves through flatter areas in Balasore, its flow slows, causing sediments to settle.

- **Decreased Gradient and Flow Rate:** As the Sono River approaches the plains of Balasore, the gradient becomes gentler and the flow slows. The reduced speed causes heavier particles, such as sand and gravel, to settle along the riverbed.
 - **Formation of Floodplains:** During periods of high water, the Sono River floods its banks, spilling water and suspended sediments onto adjacent land. When the floodwaters recede, they leave behind nutrient-rich sediments, especially silt, on the floodplains.
 - **Tidal Backflow:** Although the Sono River is smaller and less affected by tides than larger rivers, minor tidal effects from nearby rivers or the Bay of Bengal can still influence sedimentation near its mouth. High tides can push back against the river's flow, causing fine sediments to settle in the lower course
- e. **Panchupada River:** The Panchupada River in Balasore District experiences sediment deposition driven by natural processes, seasonal rainfall, and local human activities. Here's an outline of how sediment deposition occurs in the Panchupada River:
- **Local Erosion:** The Panchupada River collects sediment primarily from soil erosion along its banks and the surrounding catchment areas. Rainfall and natural erosion loosen materials like sand, silt, and clay, which are carried downstream.
 - **Agricultural Runoff:** Farming activities near the river contribute to sedimentation through soil erosion. During the rainy season, agricultural runoff adds loose soil particles, organic matter, and sometimes fertilizers into the river, especially during heavy rains.
 - **Decreased Gradient:** As the Panchupada River moves through flatter terrain in Balasore District, the flow rate decreases, allowing heavier particles such as sand to settle on the riverbed. This reduction in velocity makes it more difficult for the river to carry larger sediment particles.

- **Floodplain Deposition:** During periods of heavy rainfall and high water levels, the Panchupada River overflows its banks, spilling sediment-rich water onto the surrounding floodplains. When floodwaters recede, they leave behind layers of fine sediments, enriching the floodplain soils.
- **Soil Erosion from Agriculture:** Farming along the Panchupada River's banks, without soil conservation practices, leads to increased soil erosion during the rainy season, adding to the sediment load.
- **Tidal Backflow:** Although the Panchupada River is not a major river, it may experience minor tidal influences from larger rivers nearby or the Bay of Bengal. High tides can push back into the river's lower course, causing finer sediments like silt and clay to settle near the river mouth

SL NO.	SOURCE NAME	REPLENISHMENT VOLUME-2024-25
1	AMBAKURUCHI SAND BED	8173.94m ³
2	DEVOG SAND BED	12888.3m ³
3	KADARAYAN SAND BED	18790.5m ³
4	DHITPURA SAND BED	7653.92m ³
5	AMBULAKUDA SAND BED	15407.02m ³
6	PURUKHI SAND BED	3443.37m ³
7	KATHASANGADA-I SAND BED	5485.333m ³
8	KATHASANGADA-II SAND BED	2981.977m ³
9	SAHUPADA & DUMUDA SAND BED	1654.11m ³
10	BAINCHANARANPUR-I SAND BED	5409.92 m ³
11	BALIPAL SAND BED	12407.64m ³
12	PUNDAL-I SAND BED	5894.28m ³
13	PUNDAL-II SAND BED	NIL
14	DUMAGANDIRA-LAICHHANPUR SAND BED	787.02m ³
15	PRATAPPUR SAND BED	4054.43m ³
16	MANKIDIA SAND BED 'KA'	25023.1m ³
17	SEKHSARAI 'KA' SAND BED	38901.85m ³
18	SIKHARPUR SAND BED	9132.45m ³
19	BEDHAPAL SAND QUARRY	24711m ³
20	PALBEGUNIA SAND QUARRY	63000m ³
21	RAYAN RAMACHANDRAPUR SAND QUARRY	57094 m ³
22	RAJNAGAR SAND BED	41825.856 m ³

07. GENERAL PROFILE OF THE DISTRICT.

a) Geographical Location:- Topographically, Balasore district is situated at approximately 20° 48' North to 21° 59' North latitudes and 86°16' to 87°29' East longitudes. It shares boundaries with Mayurbhanj district to the west, Bhadrak to the south, and is bordered by the Bay of Bengal to the east. Two major rivers, the Subarnarekha and Budhabalanga, flow through the region, providing essential water resources that support the district's agricultural activities. The climate in Balasore is tropical, characterized by hot summers, a humid monsoon season, and mild winters, creating a diverse environment for both agriculture and biodiversity.

b) Area & Population :-

Balasore district covers an Geographical area of approximately **3,806 square kilometers** from which **332.21 square kilometers** falling under Forest area. As of the 2011 census, it had a population of around **2.3 million** people. The district has a relatively high population density, reflecting its role as an important agricultural and industrial region within Odisha. Additionally, Balasore has a literacy rate higher than the national average, with a balanced rural and urban population distribution.

c) Climate:-

It's climate is generally hot with high humidity. May is the hottest month and December is the coolest one. Monsoon generally arrives in the district from 14th of June every year. The average rainfall of the District is 1568.4 mm. The rainfall during June to December constitutes at least 75 Percent of the total rainfall that this District experiences and it has an average of 62 rainy days in the year.

d) Administrative units:

Balasore Town is the Administrative Headquarter of Balasore District. It is located at a distance of 194 km from Bhubaneswar, the State capital of Odisha. It is the 2nd largest district in area among the costal districts of Odisha. It has 2952 villages covering 12 Blocks, 12 Tahasils and 2 Sub-Divisions.

Description	Number
No. of Sub-Divisions:	02
No. of Tehsils:	12
No. of Municipalities:	01
No. of N.A.Cs:	03
No. of Blocks:	12
No. of Police Station:	23
No. of Grampanchayat:	289
No. of Inhabited Villages:	2587
No. of Uninhabited Villages:	365
No. of Villages:	2952

The population of the District is 23,17,419 according to the 2011 Census. The District accounts for 5.53% of the State's territory and about 5.50% of State's population. The density of population of the District is 532 per square km as against 610 per square km of the State. As per 2011 Census, the population of Scheduled Caste is 1,84,682 (7.30%), and Scheduled Tribe is 14,79,576 (58.7%). The literacy percentage of the District covers 79.18 against 84.67 of the State.

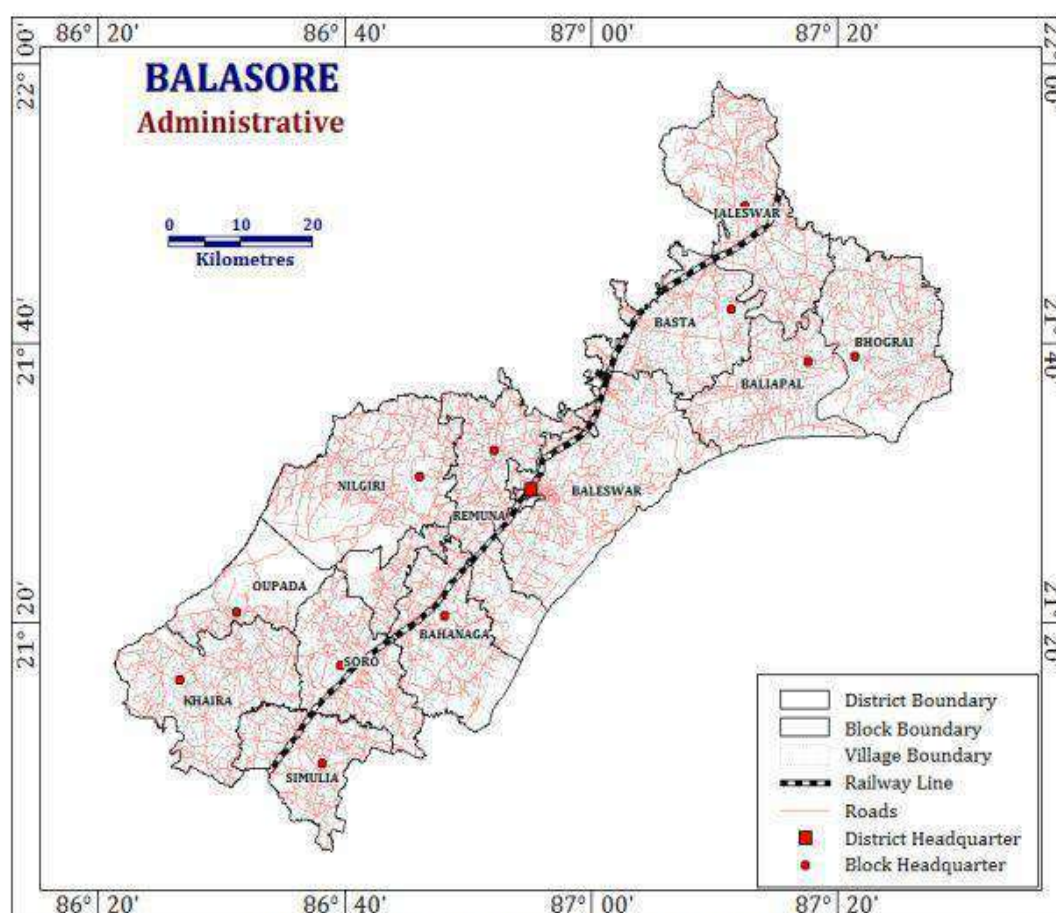
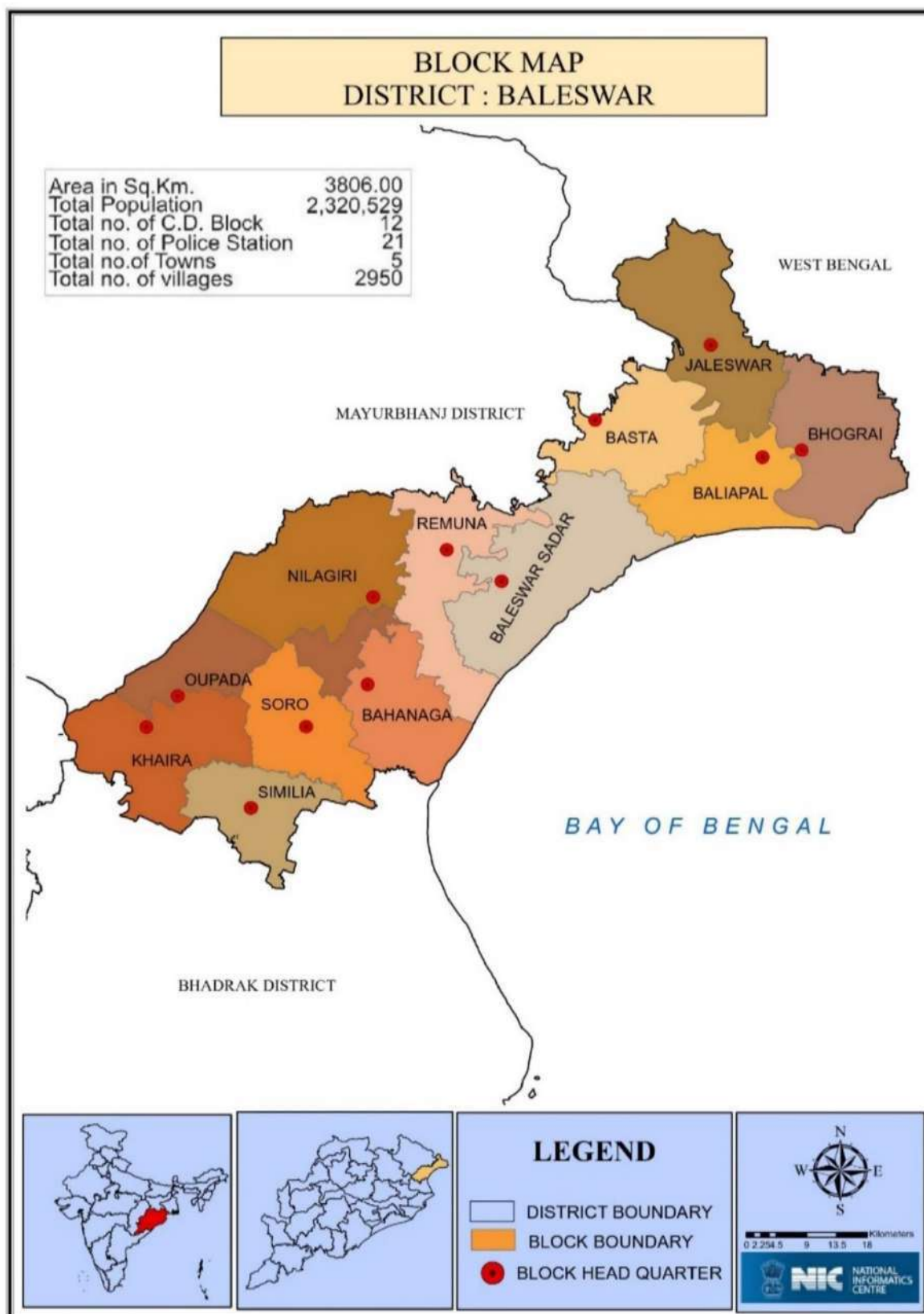


Fig 1.4b : Administrative Map of Balasore District, Odisha



e) **Connectivity facilities:-**

Road Network

The District is well served by a network of good roads and has been called the motorists paradise. The chief roads NH-16 and NH-60 pass through the District. Balasore Town is about 60 Kms from Baripada, 122 Kms from Kharagpur, 199 Kms from Jamshedpur, 177 Kms from Cuttack, 199 Kms from Bhubaneswar and 361 Kms from Rourkela. It is also connected with other cities such as Sambalpur, Puri, Bolangir, Bhadrak, Jhargram, Angul, Ranchi and Kolkata via road.

Rail Network

Balasore District is well connected by Rail link to different places. Balasore Railway Station is a busy station on the Howrah-Chennai main line of the South Eastern Railway. The distance to Kolkata is approximately 232 km, while the distance to Bhubaneswar is about 206 km; the city of Balasore is well connected to many places in India like Baripada, Bhubaneswar, Kolkata, Jamshedpur and Cuttack

Air Network

At present, Balasore has no connection by Airway. The site selection for Aerodrome is presently under process. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is situated 200 Kms far from Balasore. Netaji Subhas Chandra Bose International Airport in Kolkata is 232 kms far from Balasore.

Other:- The district's coastal location also offers proximity to Dhamra and Paradip ports, facilitating trade for local industries. Communication infrastructure is well-developed, with extensive mobile network coverage from major telecom providers offering 4G & 5G services, along with high-speed internet and fiber-optic options in urban areas. Postal services are comprehensive, with numerous post offices across the district, ensuring mail and courier access even in remote locations. Public transport facilities like bus terminals in key towns, along with local transport options such as auto-rickshaws and limited app-based cab services, make commuting convenient.

With its strategic location, Balasore's robust transportation and communication facilities support economic growth, daily commutes, and tourism in the district.



f) Industry & Mining:-

Balasore district has a diverse industrial and mining landscape, contributing significantly to Odisha's economy. The district's industrial sector includes small and medium-scale industries like rice mills, cashew processing units, and fish processing plants, which support the agricultural backbone of the region. Additionally, Balasore is home to Balasore Alloys, a significant industrial player in the production of ferroalloys, particularly in manufacturing high-carbon ferrochrome, which is essential for steel production.

The district's strategic location and proximity to the Bay of Bengal also support a growing marine and seafood processing industry, which exports

products both domestically and internationally. Balasore has developed an industrial belt, particularly in areas around Balasore town, and hosts several industrial estates that cater to manufacturing, logistics, and engineering services.

In terms of mining, Balasore has limited mineral resources compared to some other districts in Odisha. However, sand and stone quarries are present in certain areas, providing raw materials for construction and local infrastructure projects. Additionally, the district's rivers, such as the Subarnarekha, contribute to small-scale sand mining activities, though this is often regulated due to environmental concerns.

The presence of the Integrated Test Range (ITR) at Chandipur also adds strategic value to Balasore's industrial landscape, supporting defense research and testing activities that indirectly contribute to the local economy by attracting auxiliary industries and services. Balasore's industrial and mining activities collectively bolster the local economy, providing employment and promoting economic growth in the region.

g) Tourist Places:-

Balasore district is home to a variety of tourist attractions, including scenic beaches, historic temples, and nature spots that attract visitors year-round. Here are some popular tourist places in Balasore:

- **Chandipur Beach**

Known for its unique phenomenon where the sea recedes up to 5 km during low tide, Chandipur Beach is a major tourist attraction. Visitors can walk on the seabed, observe marine life, and enjoy beautiful sunsets. The calm environment and distinct tidal behavior make it one of Odisha's most unusual beaches.

- **Khirachora Gopinath Temple, Remuna**

This 13th-century temple dedicated to Lord Krishna (Gopinath) is a revered pilgrimage site. Known for its spiritual atmosphere, the temple offers visitors "khira" (a type of sweetened condensed milk) as prasad, which adds to its cultural significance.

- **Panchalingeshwar Temple**

Located on a hilltop amidst lush greenery, Panchalingeshwar Temple is dedicated to Lord Shiva. The temple has five Shiva lingams submerged in a small stream, which visitors touch by feeling under the water. The scenic location, along with the serene atmosphere, makes it a popular destination for nature lovers and devotees alike.

- **Talsari Beach**

Situated near the Odisha-West Bengal border, Talsari Beach is a tranquil spot known for its palm-lined shores and scenic beauty. The beach is ideal for those seeking peace and solitude and offers breathtaking sunrise and sunset views.

- **Devkund Waterfall**

Located within the Simlipal Biosphere, Devkund Waterfall is a hidden gem surrounded by dense forests. The trek to the waterfall takes visitors through lush greenery and diverse wildlife, making it an ideal destination for nature enthusiasts and trekkers.

- **Nilgiri**

The town of Nilgiri houses the historic Nilgiri Palace, which belonged to the Nilgiri royal family. Nearby, the Jagannath Temple in Nilgiri is another popular religious site. The area is known for its scenic beauty, temples, and heritage structures.

- **Kuldiha Wildlife Sanctuary**

This sanctuary is a haven for wildlife enthusiasts, offering sightings of animals like elephants, leopards, and various bird species. Kuldiha is part of the larger Simlipal Biosphere, and it features rich biodiversity, making it a popular destination for safaris and nature walks.

- **Bichitrapur Mangrove Forest**

Located near the coast, this mangrove forest offers boat rides through dense mangrove trees and a chance to explore a unique ecosystem. It's an excellent spot for bird-watching, with migratory and native birds commonly seen in the area.

- **Chandaneswar Temple**

Close to Talsari Beach, Chandaneswar Temple is an ancient temple dedicated to Lord Shiva. It is particularly popular during the annual Maha Vishuva Sankranti festival, attracting thousands of devotees from Odisha and neighboring West Bengal.

- **Kasaphal Beach**

Another relatively unexplored beach, Kasaphal Beach is known for its serene environment and is an ideal spot for a quiet, undisturbed day by the sea. This beach is popular with locals and a growing number of tourists looking to avoid the crowds.

- **Integrated Test Range (ITR), Chandipur**

Although entry is restricted for security reasons, the ITR at Chandipur is one of India's key missile testing sites. Visitors often visit Chandipur Beach nearby, from where glimpses of missile launches are sometimes visible, making it an interesting stop for those curious about India's defence technology.

h) Health:-

Balasore district has a range of healthcare facilities providing medical services to its urban and rural population. The primary healthcare provider is the **District Headquarters Hospital (DHH) in Balasore town**, a government-run facility that offers a range of healthcare services, including emergency care, maternity and child care, surgery, and specialist consultations. The DHH is equipped with diagnostic tools like X-ray and ultrasound machines, as well as an intensive care unit (ICU) and emergency facilities, catering to both local residents and patients from nearby regions.

In addition to the DHH, Balasore has a network of **Community Health Centers (CHCs)**, **Primary Health Centers (PHCs)**, and **Sub-Centers** spread across its rural areas. These centers offer basic healthcare services, immunization, maternal and child health services, and support for disease control programs. The government also provides mobile health units to serve remote villages, ensuring healthcare access in rural parts of the district.

Balasore district is also home to several private hospitals, nursing homes, and clinics that complement public healthcare services. These private facilities offer specialized services, including gynecology, pediatrics, orthopedics, and dental care, making healthcare more accessible for residents. For emergency cases, the **108 ambulance service** operates across the district, providing timely medical assistance and transport to hospitals. Additionally, Balasore has a growing number of diagnostic centers and pharmacies that offer essential healthcare support, with modern diagnostics, pathology labs, and 24-hour medical stores.

The district also emphasizes public health programs, including regular health camps, awareness campaigns, and preventive healthcare initiatives run by the Odisha Health Department, which focus on issues like tuberculosis, malaria, maternal health, and nutrition. These combined efforts contribute to a steadily improving healthcare landscape in Balasore, offering a range of services to meet the needs of its population.

i) Economy

Balasore District is one of the economically strong District in Odisha, which is privileged in both agriculture and industry. In spite of being an agrarian economy, agriculture is the main stay of the people of Balasore. The District lies in the coastal part of Odisha and is blessed with hot and humid climate with alluvium soil and intersected by the perennial rivres, which collectively provides conducive infrastructure for the growth of agriculture in this region. In the recent years, the utilization of the wasteland for ensuring the economic development of Balasore District has been taken into consideration and it is being used for the production of coconut and betel. The local economy of Balasore District largely depends on the cultivation of paddy and wheat. Industries, Agriculture, Fishing and Tourism are the four major revenue sources of Balasore District. Birla Tyres, Balasore Alloys Limited, Emami Paper Mills Limited and Polar Pharma India Limited are some of the large-scale industries functioning in this district.

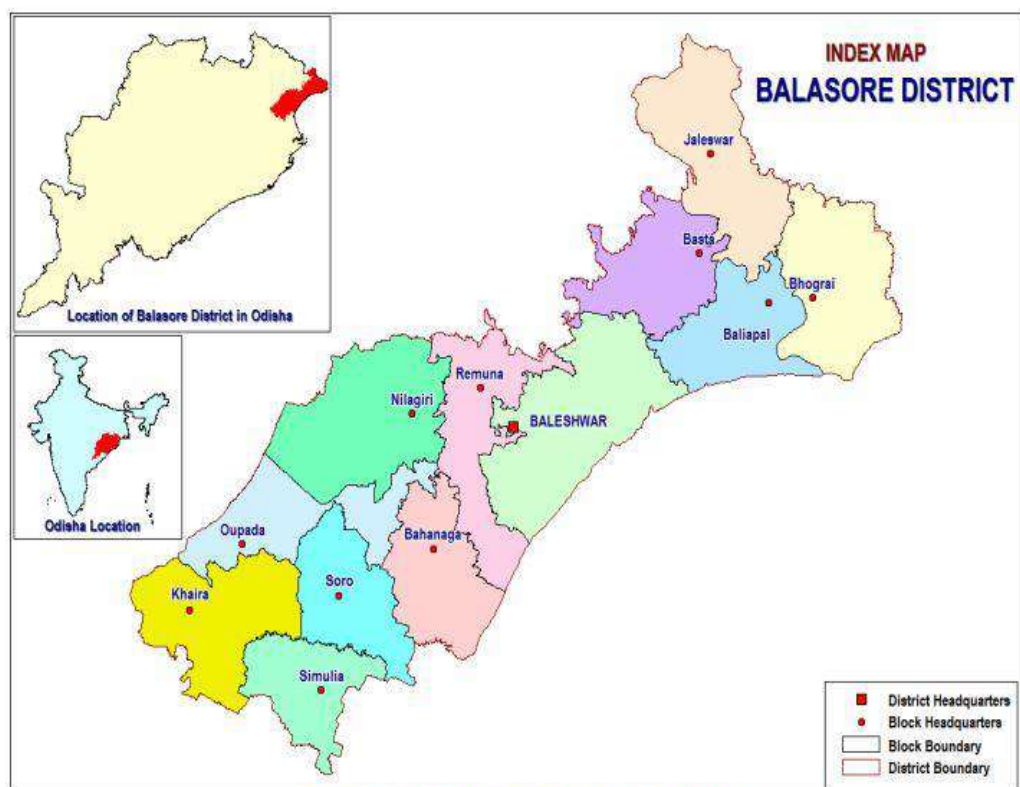


Figure 1.4a : Index Map of Balasore District, Odisha



8. LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.

Forest:

The forest of Balasore District is full of varieties of medicinal plant. Kendu leaves, Bamboo, Sal, Teak, other timber species and a wide range of carnivorous & herbivorous wild animals live in the forest. The District has one Wildlife Sanctuary known as Kuldiha Wildlife Sanctuary, which even hosts elephants. The area of the sanctuary is 26886 hectares. In the Sanctuary, the principal animals that are found are Elephant, Bear, Nilgai, Sambhar, Peacock, Wild Boar and Deer, together with variety of snakes and birds.

District-wise Forest Cover Area in Odisha (Area in Km²)

District	Geographical Area (GA)	2019 Assessment				% of GA	Change wrt 2017 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Anugul	6,375	371.01	1,380.00	1,031.62	2,782.63	43.65	27.63	84.18
Balangir	6,575	70.00	224.00	841.26	1,135.26	36.64	4.26	143.16
Baleshwar [†]	3,806	23.00	133.38	226.18	382.56	5.82	2.56	46.59
Bargarh	5,837	175.01	374.14	501.31	1,050.46	27.60	19.46	40.57
Baudh	3,098	262.91	562.04	465.99	1,290.94	51.53	1.94	57.39
Bhadrak	2,505	0.00	8.70	69.30	78.00	1.34	3.00	0.00
Cuttack	3,932	53.00	226.00	525.38	804.38	20.46	8.38	67.80
Debagarh	2,940	191.00	667.41	618.75	1,477.16	50.23	5.16	14.08
Dhenkanal	4,452	173.99	420.38	851.24	1,445.61	32.47	28.61	83.88
Gajapati [†]	4,325	84.16	1,490.09	947.12	2,521.37	58.30	1.37	262.88
Ganjam	8,206	164.39	1,074.32	866.69	2,105.40	25.66	2.40	655.00
Jagatsinghapur	1,668	0.00	4.64	131.64	136.28	8.17	0.28	0.00
Jajapur	2,899	6.00	71.99	228.09	306.08	10.56	3.08	49.78
Jharsuguda	2,114	3.00	173.82	155.82	332.64	15.74	10.64	29.21
Kalahandi [†]	7,920	361.64	734.19	1,323.97	2,419.80	30.55	1.80	371.69
Kandhamal [†]	8,021	660.95	2,593.23	2,143.53	5,397.71	65.01	5.71	385.51
Kendrapara	2,644	83.40	88.54	139.36	311.30	3.88	6.30	1.99
Kendujhar [†]	8,303	288.78	1,420.07	1,513.31	3,222.16	121.87	10.16	53.24
Khordha	2,813	21.00	186.00	260.09	467.09	16.60	10.09	90.47
Koraput [†]	8,807	94.48	740.41	1,263.38	2,098.27	23.83	9.27	947.86
Malkangiri [†]	5,791	158.00	712.76	1,465.41	2,336.17	40.34	-5.83	45.90
Mayurbhanj [†]	10,418	1,334.95	1,717.24	1,041.98	4,094.17	39.30	14.17	37.57

District	Geographical Area (GA)	2019 Assessment				% of GA	Change wrt 2017 assessment	Scrub
		Very Dense Forest	Mod. Dense Forest	Open Forest	Total			
Nabarangapur ^T	5,291	172.63	447.04	527.08	1,146.75	29.48	43.75	48.62
Nayagarh	3,890	189.00	965.00	559.75	1,713.75	44.49	3.75	171.36
Nuapada	3,852	86.01	481.69	706.76	1,274.46	24.09	1.46	108.82
Puri	3,479	0.00	59.73	165.36	225.09	6.47	11.09	10.79
Rayagada ^T	7,073	419.54	853.42	1,873.55	3,146.51	44.49	20.51	359.91
Sambalpur ^T	6,624	498.99	1,696.32	1,096.98	3,292.29	49.70	12.29	40.55
Subarnapur	2,337	2.00	187.00	161.85	350.85	15.01	0.85	29.22
Sundargarh ^T	9,712	1,020.87	1,858.38	1,394.12	4,273.37	44.00	9.37	88.89
Grand Total	1,55,707	6,969.71	21,551.93	23,096.87	51,618.51	33.15	273.51	4,326.91

(Source: India State of forest report 2017-Odisha)

The major portion of the District is covered by forest (5.82 % of TGA) and has scattered settlement pattern. The forest is full of variety of medicinal plants, kendu leaves, bamboo, Sal, teak and other timber species. The District has considerably flat land, which provides suitable site for agricultural use. The hilly areas are mostly under forest with patches of cultivation on scarp areas. Major crops grown in the District are rice and pulses. Only 12.50 percent area of agricultural use are net irrigated and major source of irrigations are wells and tube wells.

Agriculture Land:

The primary objective of Agriculture Department is to increase the production as well as productivity of major crops like Paddy, Groundnut, Mustard, Mung, Biri & vegetables which is widely cultivated in this District in both Kharif & Rabi season. Another key objective is to bring all round development among farming community of the District. The Chief District Agriculture officer is the head of office so far as agriculture is concerned. Under him there are 5 District Agriculture Officers & the block under them. As it has already been pointed out that agriculture is the main livelihood of the people in Balasore District, it is therefore designated as the food bowl of Odisha. Rice is the principal crop grown in this District, followed by other cereals, pulses, oilseeds, vegetables,

spices and sugarcane. The agricultural statistics for the District is shown in tables below:

Crop Coverage Area of Balasore District, Odisha

Crop	Khariff		Rabi		Annual	TOTAL	
	Area (ha)	(%of Cropped Area)	Area (ha)	% of Cropped Area	Area (ha)	Gross Cropped Area (ha)	% of Gross Cropped Area
Rice	206.1	91.62	33.47	34.38	-	239.61	72.03
Cereals	0.31	0.14	0.79	0.82	-	1.10	0.33
Pulses	0.48	0.21	21.64	22.55	-	22.12	6.65
Oilseeds	0.13	0.06	14.38	20.20	-	19.51	5.87
Vegetables	13.04	5.80	16.14	16.82	-	29.18	8.77
Fibres	2.20	0.98	-	-	-	2.20	0.66
Spices	2.69	1.19	4.25	4.25	-	6.77	2.04
Sugarcane	-	-	0.46	0.48	-	0.46	0.14
Tobacco	-	-	-	-	-	-	-
Fruits	-	-	-	-	11.68	11.68	3.51
TOTAL	224.99	100	95.96	100	11.68	332.63	100

Horticulture Land:

The primary objective of Horticulture Department is to increase of production as well as productivity of major fruits like Mango, Guava, Citrus etc., which is widely covered in the District. Another key objective is the all-round development of the farming community of the District. The horticulture statistics for the District is shown in subsequent tables below:

Horticulture crop	Total Area (hectares)
Mango	4.39
Citrus	0.80
Papaya	0.06
Pineapple	0.04
Guava	0.32
Sapota	0.07

Mining:

Balasore District has transitional landform features between coastal plain and hilly region. Most of the mineralized area coming under Eco-Sensitive Zone (Kuldiha Wildlife Sanctuary). Thus mining activities are confined only to the areas outside of Eco-Sensitive Zone. The mining activity in the District is restricted only to Minor Mineral i.e. of sand, road metal, decorative stone and brick clays. These are being given to various user agencies as lease agreement governed and regulated by Revenue Department under the legal provision stated under Odisha Minor Mineral Concession Rules, 2016. There is no lease of Major Mineral in the District. At present Leases of stone, sand and bricks making units are operational in the District. Stone chips, ordinary sand constitute the principal mining activity of Soro, Khaira, Jaleswar, Nilgiri area etc. of Balasore District. Huge granite stone deposits as road metal are available in Khaira, Nilgiri, Soro area and major sand sources having good potential are available in Jaleswar, Remuna and Nilagiri area of the District. These sources have been providing tremendous scope for development of few more Industries based on these Resources.

9. PHYSIOGRAPHY OF THE DISTRICT.

The physiography of Balasore district, Odisha is characterized by a varied topography, including a mountain range, plains, and small hill ranges:

- **Nilgiri Mountain:** The central part of the district is dominated by the Nilgiri Mountain, which is made up of highlands, plateaus, and valleys.
- **Tertiary Plain:** The eastern part of the district is made up of the Tertiary Plain.
- **Alluvial Plain:** Another physiographic unit in the district is the Alluvial Plain.
- **Small hill ranges:** There are some small hill ranges in the southwest of the district. One of these is Tiger Hill, which has an open area at the top.
- **Subarnarekha River:** The main river in the district is the Subarnarekha, which empties into the Bay of Bengal.

The district's soil is mostly alluvial laterite, but the central region is mostly clay, clay loam, and sandy loam, which is fertile for farming. The major rock types in the district include Nilgiri Granite Gneiss, Quartzite, Orthoquartzite, Arkose, Shale, Phyllite, Gabbro, and Px-granite. The district's major mineral resource is vanadiferous/magnetite.

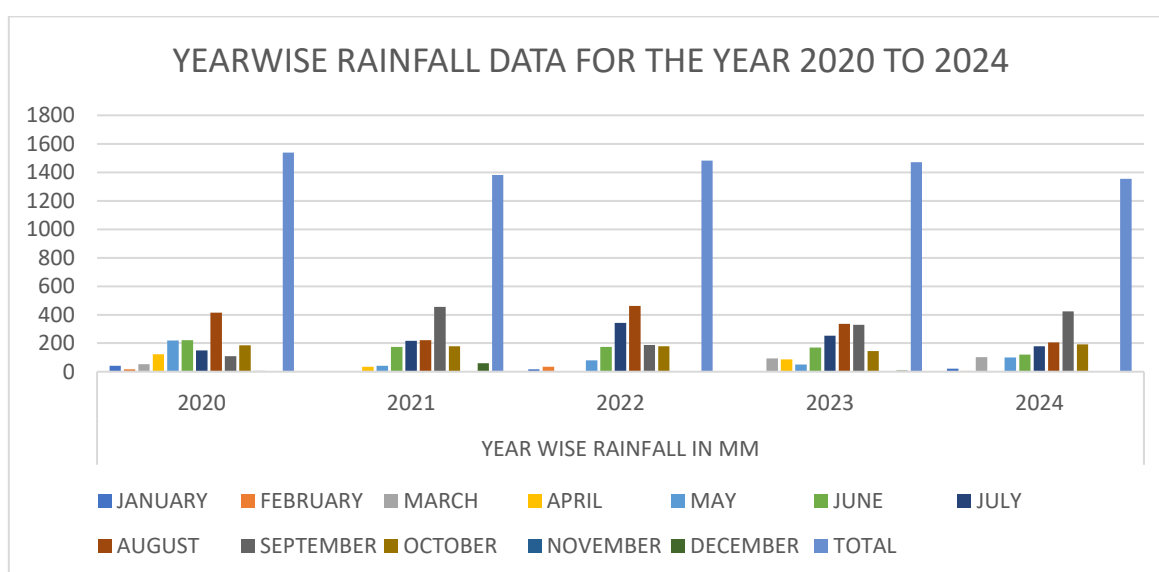
Balasore is a coastal district located in the northeast of Odisha. It's bordered by the Bay of Bengal to the east, Bhadrak district to the south, and Mayurbhanj and Keonjhar districts to the west.

10. RAINFALL: MONTH-WISE.

The district is generally hot with high humidity during April and May and cold during December and January. The monsoon generally breaks during the month of July and continues till end of October. The temperature goes as high as up to 45°C in the summer and up to 7° -8° C during peak winter.

The rainfall statistics of the district for last four years is given below:

YEARWISE RAINFALL DATA FOR THE YEAR 2020 TO 2024					
MONTH	YEAR WISE RAINFALL IN MM				
	2020	2021	2022	2023	2024
JANUARY	41.71	0	17.67	0	20.5
FEBRUARY	16.48	0	35.92	0.25	6.33
MARCH	52	0	0	92.43	102.09
APRIL	123.25	34.75	3.37	87.1	2.58
MAY	218.73	41.38	80.53	50.84	100.1
JUNE	221.9	175.22	173.32	169.75	121.07
JULY	149.18	216.24	342.52	251.9	178.4
AUGUST	414.25	220.58	462.68	335.5	205.68
SEPTEMBER	109.43	456.05	187.33	328.82	424.15
OCTOBER	185.24	177.94	179.43	145.92	192.35
NOVEMBER	6	0.92	0	0.75	
DECEMBER	0	58.46	0	8.59	
TOTAL	1538.17	1381.54	1482.77	1471.85	1353.25



11. GEOLOGY AND MINERAL WEALTH.

Geology of the Balasore district:

The geology of Balasore district in Odisha is shaped by its position on the coastal plains of eastern India, with features like alluvial deposits, coastal sands, and occasional lateritic formations. Below is a detailed look at Balasore's geological makeup:

□ **Alluvial Deposits**

- Balasore's landscape is primarily formed by Quaternary alluvial deposits, supplied by rivers such as the Subarnarekha, Budhabalanga, and Jalaka, which carry sediments from the Chotanagpur Plateau and surrounding areas.
- These alluvial soils, rich in silt, clay, and sand, are highly fertile and support extensive agricultural activities. The deposits are deep, providing ideal conditions for crop cultivation across the district.

□ **Coastal Sands and Marine Deposits**

- A prominent feature along Balasore's Bay of Bengal coastline is the presence of coastal sands and marine deposits. These formations result from marine and wind-driven (aeolian) processes that have shaped the district's beaches and coastal dunes.
- Composed mainly of silicate minerals, the coastal sands display layering and patterns from tidal action. These unique formations are especially notable at Chandipur beach, where tidal variations expose large stretches of sand during low tide.

□ **Lateritic Deposits**

- Patches of laterite are found, particularly in the upland areas of the district. Laterite forms from the intense weathering and leaching of rocks in tropical and subtropical climates, resulting in a high concentration of iron and aluminum oxides.
- These lateritic soils, though less fertile than alluvial soils, are commonly used as a building material due to their strength and durability when cut and dried.

□ **Subsurface Rock Formations**

- While recent alluvial layers cover most of Balasore, deeper drilling and subsurface studies have revealed ancient rock formations, including gneiss and schist, especially toward the west near the Chotanagpur Plateau.
- The presence of crystalline bedrock at greater depths points to an ancient geological foundation beneath the district, overlain by younger sedimentary deposits.

□ **Riverine and Deltaic Formations**

- The district's river systems contribute to the formation of deltaic deposits, where sediment accumulates as rivers approach the coast. These deltaic regions, enriched by periodic flood deposits, consist of silt and clay layers that renew the soil's fertility.
- This dynamic riverine activity helps shape Balasore's landscape and supports the district's wetlands and agricultural zones within the floodplain areas.

Summary

Balasore's geology is dominated by recent alluvial and coastal deposits, with lateritic soil patches and deeper crystalline rock formations. This geological diversity supports Balasore's agricultural economy and influences the distinct coastal and riverine landscapes that define the district.

Stratigraphy:

Holocene: Sand dune, newer alluvium Older alluvium

Laterite Quaternary: Recent to sub Recent Laterites and lateritic gravels

~~~~~ Unconformity ~~~~~

Tertiary: Mio Pliocene Brown, yellowish and grey sand, gravel and clays, gritty sandstones.

Miocene: Grey Clays, sand, Lime stones with molluscan shells

~~~~~ Unconformity ~~~~~

Archaean to Proterozoic: Associated intrusives, Nilgiri granites, Quartzite and phyllite, amphibolites, unclassified gneisses.

Mineral Resources: -

Minerals like soft stones, limestone, stone chips are available in the District, which are mainly used in industrial units in the District. The huge deposits of granite stones at Nilgiri, Khaira, Soro area which provides tremendous scope for development of few more industries based on these resources. Except these, no minerals in large quantity which can be explored for commercial purpose found in the District.

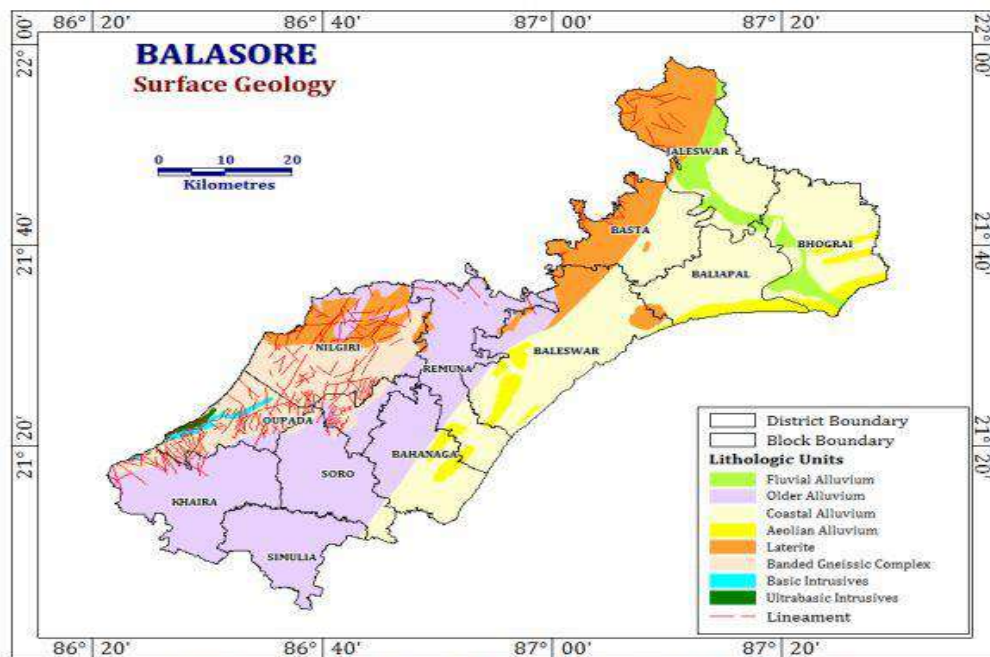
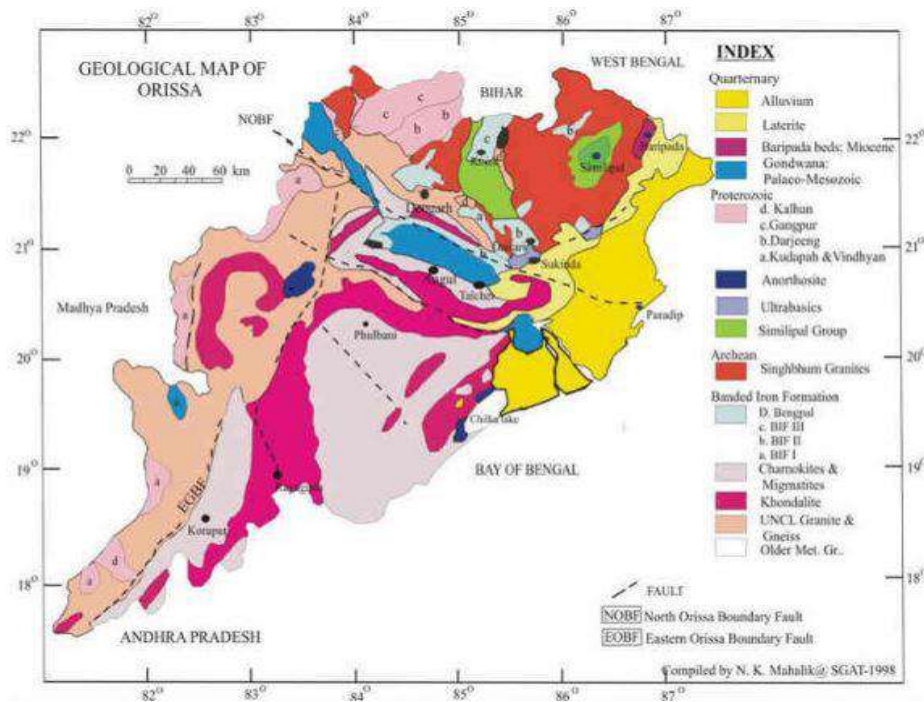


Figure - 4.1 : Lithological Map of Balasore District, Odisha

Mineral wealth of the Balasore district:

Balasore district in Odisha is not known for extensive mineral resources compared to other parts of the state; however, it does have some valuable mineral deposits and natural resources that contribute to the local economy. Here's an overview of the mineral wealth of Balasore:

Sand and Silica Resources:- Balasore has abundant coastal sand deposits, which are rich in silica. Silica sand is an important industrial material used in glass-making, construction, ceramics, and foundry industries.

Some parts of the district have silica-rich sands suitable for processing, and their proximity to the coastline makes extraction and transportation relatively convenient.

Laterite:- Laterite deposits are found in upland areas of Balasore. Laterite is a source of iron and aluminum oxides, though in limited quantities. These deposits are often used locally in construction for bricks and other building materials due to their strength and durability.

The lateritic soils also hold potential for small-scale mining of iron, though this is not widely commercialized in Balasore.

Clay Deposits:- The alluvial and riverine plains of Balasore have clay-rich soils, which are utilized locally in pottery, brick-making, and other small-scale industries. The clay deposits contribute to the local handicraft industry and construction materials sector.

Minor Minerals:- In addition to sand and clay, Balasore has minor minerals like gravel and pebbles, often extracted from riverbeds for use in construction, particularly in road building and concrete production.

Groundwater Resources:-

While not a mineral in the conventional sense, groundwater is a crucial natural resource for Balasore. The district's alluvial soils and riverine deposits create favorable conditions for groundwater storage, which supports irrigation and drinking water supplies.

Salient Features of Important Rivers & Streams:

| Sl. 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 Km) | Average width of area recommended for mineral concession(in Km) | Area recommended for mineral concession(in Sq. M) | Mineable mineral potential (in Cum) (60% of total mineral potential) |
|---------|-----------------------------|-------------------------------------|---|--------------------|---|--|---|---|--|
| A1 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | AMBAKURUCHI SAND SOURCE | 0.28 | 0.1 | 29947 | 11099.4 |
| A2 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | DEVOG SAND SOURCE | 0.37 | 0.14 | 50000 | 74512.8 |
| A3 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | DHITPURA SAND SOURCE | 0.31 | 0.14 | 50000 | 75000 |
| A4 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | KADARAYAN SAND SOURCE | 0.31 | 0.18 | 50000 | 56419.2 |
| A5 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | MATHANI & PUNSIITA | 0.61 | 0.02 | 12464 | 7476 |
| A6 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | BENAPURA -II SAND SOURCE | 0.35 | 0.15 | 58760 | 727.8 |
| A7 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | BENAPURA-I SAND SOURCE | 0.26 | 0.04 | 50400 | 30,240 |
| A8 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | GOPINATHPUR SAND SOURCE | 0.26 | 0.19 | 50000 | 30000 |
| B1 | SUNAI | 40 | UDALA MAYURBHANJ DISTRICT | 160 | PURUKHI SAND SOURCE | 0.62 | 0.08 | 49776 | 31262.4 |
| B2 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | SAHUPADA & DUMUDA SAND SOURCE | 0.548 | 0.091 | 49979 | 31092.6 |
| B3 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | AMBULKUDA SAND SOURCE | 0.36 | 0.11 | 49776 | 25229.4 |
| B4 | SUNAI | 40 | UDALA MAYURBHANJ DISTRICT | 160 | Hatiagand Mukundapur Patripal sand sairat | 0.21 | 0.07 | 49979 | 363 |
| B5 | SUNAI | 40 | UDALA MAYURBHANJ DISTRICT | 160 | Udambar sand sairat source | 0.46 | 0.072 | 33184 | 22559.4 |
| B6 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | Makanda sand sairat source | 0.64 | 0.078 | 49453 | 19506 |
| B7 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | GAMBHARIA RUDRAGOPALPUR SAMIL NAHARPATANA | 0.32 | 0.11 | 384411 | 2,30,647 |
| B8 | SUNAI | 40 | UDALA MAYURBHANJ DISTRICT | 160 | BAITABANKA SAND SOURCE | 0.451 | 0.109 | 49372 | 21297.6 |
| B9 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | KATHASANGADA SAND SOURCE-2 | 0.45 | 0.023 | 10522 | 12624 |

| | | | | | | | | | |
|-----|--------------|--------|--|-----|----------------------------------|-------|-------|--------|----------|
| B10 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE
MAYURBHANJ DISTRICT | 776 | KATHASANGADA SAND SOURCE-1 | 0.44 | 0.086 | 39457 | 16725 |
| C1 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | PUNDAL-1 SAND BED | 0.25 | 0.198 | 49979 | 26302.8 |
| C2 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | PUNDAL-2 SAND BED | 0.35 | 0.14 | 49979 | 11373 |
| C3 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | DUMAGANDIRA-LAICHHANPUR SAND BED | 0.398 | 0.125 | 49979 | 14263.2 |
| C4 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | BAINCHANARANPUR-I SAND BED | 0.57 | 0.13 | 49979 | 38381.4 |
| C5 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | BALIPAL SAND BED | 0.52 | 0.06 | 49776 | 29,866 |
| C6 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | PRATAPPUR SAND BED | 0.61 | 0.09 | 49574 | 13112.4 |
| C7 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | BAINCHANARANPUR-3 SAND BED | 0.39 | 0.09 | 35200 | 36665.1 |
| C8 | SUNAI | 40 | UDALA MAYURBHANJ
DISTRICT | 160 | AJODHYA SAND BED | 452 | 110 | 49979 | 22768.2 |
| D1 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | SIKHARPUR SAND SOURCE | 0.55 | 0.12 | 42978 | 27624 |
| D2 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | RAJNAGAR SAND SOURCE | 0.28 | 0.19 | 54835 | 16273.2 |
| D3 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | GOBARDHANPUR SAND SOURCE | 0.19 | 0.3 | 48562 | 58272 |
| D4 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | SEKH SARAI SAND SOURCE(KA) | 0.28 | 0.18 | 56656 | 25492.2 |
| D5 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | CHALANTI SAND SOURCE | 0.3 | 0.18 | 56656 | 30193.2 |
| D6 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | BALIKBAD SAND SOURCE | 0.28 | 0.19 | 60096 | 19234.8 |
| D7 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | BALIAPAL SAND SOURCE | 0.29 | 0.16 | 48562 | 29,137 |
| D8 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | SEKH SARAI SAND SOURCE(Kha) | 0.36 | 0.12 | 60703 | 11914.2 |
| D9 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | RIVER BLOCK -KHA | 0.32 | 0.16 | 52609 | 26049 |
| D10 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | PRAHARAJPUR (KA) | 0.38 | 0.12 | 52609 | 40056 |
| D11 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | MANKIDIA SAND SOURCE (GA) | 0.29 | 0.17 | 141640 | 103126.8 |
| D12 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI
DISTRICT OF JHARKHAND | 718 | CHORMARA (CHANDI BASTI) | 0.38 | 0.12 | 40469 | 48552 |

| | | | | | | | | | |
|-----|--------------|--------|---|-----|-------------------------------|-------|-------|--------|----------|
| D13 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | MANKIDIA SAND SOURCE (KHA) | 0.39 | 0.22 | 161874 | 58078.8 |
| D14 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | MAKRAMPUR SAND SOURCE | 0.33 | 0.17 | 60703 | 69838.8 |
| D15 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | GOBARGHATA SAND SOURCE | 0.23 | 0.305 | 70820 | 15988.8 |
| D16 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | PRAHARAJPUR SAND SOURCE (KHA) | 0.66 | 0.17 | 60703 | 11882.4 |
| D17 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | MANKIDIA-KA | 0.51 | 0.13 | 80938 | 121395 |
| D18 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | RIVER BLOCK-KA | 0.34 | 0.18 | 56656 | 40516.8 |
| D19 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | BILASHPUR SAND SOURCE | 0.78 | 0.35 | 324558 | 114698.7 |
| D20 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | MALIPAL SAND BED | 0.26 | 0.19 | 50000 | 30000 |
| D21 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | Rayanramchandrapur Sand Bed | 0.33 | 0.15 | 82470 | 30000 |
| E1 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | PALABEGUNIA SAND BED | 0.62 | 0.058 | 35936 | 59940 |
| E2 | SUBARNAREKHA | 79 | NAGRI VILLAGE IN RANCHI DISTRICT OF JHARKHAND | 718 | BADHAPAL SAND BED | 0.226 | 0.15 | 33832 | 43200 |
| F1 | BUDHABALANGA | 198.75 | SIMILIPAL IN THE MAYURBHANJ DISTRICT | 776 | KASABA - DAHAPADA SAND SOURCE | 3.698 | 0.103 | 410149 | 64550.4 |

Mineral Potential:

| Boulder(MT) | Bajari(MT) | Total Mineable Mineral Potential(cum) | Annual Deposition |
|-------------|------------|---------------------------------------|-------------------|
| NA | NA | 1985527.512 | - |

| SI No. | River or Stream | 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 mt.) | Area recommended for mineral concession(in sq. m) | Mineable mineral potential (in CuM) (60% of total mineral potential) |
|--------|-----------------|---|--|--|---|--|
| A1 | SUBARNAREKHA | AMBAKURUCHI SAND SOURCE | 0.28 | 0.1 | 29946.7 | 11099.4 |
| A2 | SUBARNAREKHA | DEVOG SAND SOURCE | 0.37 | 0.14 | 50000.0 | 74512.8 |
| A3 | SUBARNAREKHA | DHITPURA SAND SOURCE | 0.31 | 0.14 | 50000.0 | 75000 |
| A4 | SUBARNAREKHA | KADARAYAN SAND SOURCE | 0.31 | 0.18 | 50000.0 | 56419.2 |
| A5 | SUBARNAREKHA | MATHANI & PUNSITA | 0.61 | 0.02 | 12464.3 | 7476 |
| A6 | SUBARNAREKHA | BENAPURA -II SAND SOURCE | 0.35 | 0.15 | 58760.4 | 727.8 |
| A7 | SUBARNAREKHA | BENAPURA-I SAND SOURCE | 0.26 | 0.04 | 50400.0 | 30,240 |
| A8 | SUBARNAREKHA | GOPINATHPUR SAND SOURCE | 0.26 | 0.19 | 50000.0 | 30000 |
| B1 | SUNAI | PURUKHI SAND SOURCE | 0.62 | 0.08 | 49776.3 | 31262.4 |
| B2 | BUDHABALANGA | SAHUPADA & DUMUDA SAND SOURCE | 0.548 | 0.091 | 49978.7 | 31092.6 |
| B3 | BUDHABALANGA | AMBULKUDA SAND SOURCE | 0.36 | 0.11 | 49776.3 | 25229.4 |
| B4 | SUNAI | Hatiagand Mukundapur Patripal sand sairat | 0.21 | 0.07 | 49978.7 | 363 |
| B5 | SUNAI | Udambar sand sairat source | 0.46 | 0.072 | 33184.2 | 22559.4 |
| B6 | BUDHABALANGA | Makanda sand sairat source | 0.64 | 0.078 | 49452.6 | 19506 |
| B7 | BUDHABALANGA | GAMBHARIA RUDRAGOPALPUR SAMIL NAHARPATANA | 0.32 | 0.11 | 384410.9 | 2,30,647 |
| B8 | SUNAI | BAITABANKA SAND SOURCE | 0.451 | 0.109 | 49371.7 | 21297.6 |
| B9 | BUDHABALANGA | KATHASANGADA SAND SOURCE-2 | 0.45 | 0.023 | 10521.8 | 12624 |
| B10 | BUDHABALANGA | KATHASANGADA SAND SOURCE-1 | 0.44 | 0.086 | 39456.9 | 16725 |
| C1 | SUNAI | PUNDAL-1 SAND BED | 0.25 | 0.198 | 49978.7 | 26302.8 |
| C2 | SUNAI | PUNDAL-2 SAND BED | 0.35 | 0.14 | 49978.7 | 11373 |
| C3 | SUNAI | DUMAGANDIRA-LAICHHANPUR SAND BED | 0.398 | 0.125 | 49978.7 | 14263.2 |
| C4 | SUNAI | BAINCHANARANPUR-I SAND BED | 0.57 | 0.13 | 49978.7 | 38381.4 |
| C5 | SUNAI | BALIPAL SAND BED | 0.52 | 0.06 | 49776.3 | 29,866 |
| C6 | SUNAI | PRATAPPUR SAND BED | 0.61 | 0.09 | 49574.0 | 13112.4 |

| | | | | | | |
|-----|--------------|-------------------------------|-------|-------|----------|----------|
| C7 | SUNAI | BAINCHANARANPUR-3 SAND BED | 0.39 | 0.09 | 35200.0 | 36665.1 |
| C8 | SUNAI | AJODHYA SAND BED | 452 | 110 | 49978.7 | 22768.2 |
| D1 | SUBARNAREKHA | SIKHARPUR SAND SOURCE | 0.55 | 0.12 | 42977.6 | 27624 |
| D2 | SUBARNAREKHA | RAJNAGAR SAND SOURCE | 0.28 | 0.19 | 54834.9 | 16273.2 |
| D3 | SUBARNAREKHA | GOBARDHANPUR SAND SOURCE | 0.19 | 0.3 | 48562.3 | 58272 |
| D4 | SUBARNAREKHA | SEKH SARAI SAND SOURCE(KA) | 0.28 | 0.18 | 56656.0 | 25492.2 |
| D5 | SUBARNAREKHA | CHALANTI SAND SOURCE | 0.3 | 0.18 | 56656.0 | 30193.2 |
| D6 | SUBARNAREKHA | BALIKBAD SAND SOURCE | 0.28 | 0.19 | 60095.8 | 19234.8 |
| D7 | SUBARNAREKHA | BALIAPAL SAND SOURCE | 0.29 | 0.16 | 48562.3 | 29,137 |
| D8 | SUBARNAREKHA | SEKH SARAI SAND SOURCE(Kha) | 0.36 | 0.12 | 60702.8 | 11914.2 |
| D9 | SUBARNAREKHA | RIVER BLOCK -KHA | 0.32 | 0.16 | 52609.1 | 26049 |
| D10 | SUBARNAREKHA | PRAHARAJPUR (KA) | 0.38 | 0.12 | 52609.1 | 40056 |
| D11 | SUBARNAREKHA | MANKIDIA SAND SOURCE (GA) | 0.29 | 0.17 | 141640.0 | 103126.8 |
| D12 | SUBARNAREKHA | CHORMARA (CHANDI BASTI) | 0.38 | 0.12 | 40468.6 | 48552 |
| D13 | SUBARNAREKHA | MANKIDIA SAND SOURCE (KHA) | 0.39 | 0.22 | 161874.0 | 58078.8 |
| D14 | SUBARNAREKHA | MAKRAMPUR SAND SOURCE | 0.33 | 0.17 | 60702.8 | 69838.8 |
| D15 | SUBARNAREKHA | GOBARGHATA SAND SOURCE | 0.23 | 0.305 | 70820.0 | 15988.8 |
| D16 | SUBARNAREKHA | PRAHARAJPUR SAND SOURCE (KHA) | 0.66 | 0.17 | 60702.8 | 11882.4 |
| D17 | SUBARNAREKHA | MANKIDIA-KA | 0.51 | 0.13 | 80900.0 | 121395 |
| D18 | SUBARNAREKHA | RIVER BLOCK-KA | 0.34 | 0.18 | 56656.0 | 40516.8 |
| D19 | SUBARNAREKHA | BILASHPUR SAND SOURCE | 0.78 | 0.35 | 324557.9 | 114698.7 |
| D20 | SUBARNAREKHA | MALIPAL SAND BED | 0.26 | 0.19 | 50000.0 | 30000 |
| D21 | SUBARNAREKHA | Rayanramchandrapur Sand Bed | 0.33 | 0.15 | 82470.0 | 30000 |
| E1 | SUBARNAREKHA | PALABEGUNIA SAND BED | 0.62 | 0.058 | 36000.0 | 59940 |
| E2 | SUBARNAREKHA | BADHAPAL SAND BED | 0.226 | 0.15 | 33831.7 | 43200 |
| F1 | BUDHABALANGA | KASABA - DAHAPADA SAND SOURCE | 3.698 | 0.103 | 410148.9 | 64550.4 |

Details of Sand/M-Sand Sources**a) Rivers:**

| River Name/M-sand Plant | Total Sterch of River (in K.M) | Type of River (Perennial/Non-perennial) |
|-------------------------|--------------------------------|---|
| Budhabalanga | 300 K.M | Perennial |
| Subarnarekha | 1075K.M | Perennial |
| Jalaka | 330 K.M | Perennial |
| Sona | 255 K.M | Perennial |
| Kansabansa | 721 K.M | Perennial |

b) De-Siltation Location: (Lakes/Ponds/Dams etc.)

| name of Reservoir/
Dams | Maintain/ Controlled by
State Govt./PSU etc. | Location | District | Tahasil | Village | Size (Ha.) |
|----------------------------|---|-----------|----------|----------|-----------|------------|
| RISSIA DAM | Govt. | Kuldiha | Balasore | Nilagiri | Kuldiha | 97.9 |
| KHUMKUT DAM | Govt. | Gudi Sahi | Balasore | Oupada | Gudi Sahi | 8.1 |
| SINDHU DAM | Govt. | Sindhua | Balasore | Oupada | Sindhua | 11.9 |

c) Patta Lands/Khatedari Land:

| Owner | Sy. No. | Area (Ha.) | District | Tahasil | Village | Agricultural Land (Yes/No.) |
|--------------------------------------|---------|------------|----------|---------|---------|-----------------------------|
| | | | | | | |
| Not applicable for Balasore District | | | | | | |

d) M-Sand Plants:

| Plant name | Owner | District | Tahasil | Village | Geo-location | Quantity
Tonnes/Annum |
|--------------------------------------|-------|----------|---------|---------|--------------|--------------------------|
| Not applicable for Balasore District | | | | | | |

List of Potential Mining Leases (existing & proposed)

Rivers:

| Lease No. | River Details | Lease Details | Area (in Ac/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 cum /Annum considering digging depth max as 3 meters | Mineral to be mined (Sand/ Bajri/ RBM etc.) | Existing/ Proposed |
|-----------|------------------|---|---------------------|---------------------------------|-----------------------------------|---|--|---|--------------------|
| A1 | Subamarekha | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E | 7.40 acre/2.99Ha | PA/WC- 56.65/BR-7.61 | 56.65 | YES | 784 | sand | Existing |
| A2 | Subamarekha | Devog Sand Source, MOUZA DEVOG KHATA NO :392, PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E | 12.35 acre/5.00 Ha | PA/WC- 57.38/BR-6.6 | 57.38 | YES | 5,160.00 | sand | Existing |
| A3 | Subamarekha | Dhitpura Sand Source, MOUZA DHITPURA, KHATA NO :97, PLOT: 214, (AREA 12.350 AC),KISSAM :NADI, LAT-21° 45' 1.2672" TO 21° 45' 7.3476", LONG-87° 11' 1.0104" TO 87° 11' 13.9092" | 12.35 acre./5.00 Ha | PA/WC- 55.62/BR-0.56 | 55.62 | | 500 | sand | Existing |
| A4 | Subamarekha | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT-21° 44' 51.2088" TO 21° 45' 0.9036", LONG-87° 12' 28.692" TO 87° 12' 42.7392" | 12.350 acre./5.00Ha | PA/WC- 58.28/BR-5.09 | 58.28 | | NA | sand | Existing |
| A5 | Subamarekha | Mathani Punsita Sand Source, MOUZA MATHANI & PUNSI, KHATA NO :143,227, PLOT: 37,25, (AREA 3.08 AC),KISSAM :NADI,Lat- 21°40'06.81564" To 21°40'30.30024", long- 87°03'52.22988" to 87°04'02.00100" | 3.08 acre./1.246Ha | PA/WC- 22.21/BR-0.19 | 22.21 | | NA | sand | Existing |
| A6 | Subamarekha | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI, LAT- 21°45'27.43"N TO 21°45'41.99"N, LONG- 87°10'02.41"E TO 87°10'18.28"E | 14.52 acre/5.876Ha | PA/WC- 56.02/BR-0.15 | 56.02 | YES | | sand | Existing |
| A7 | Subamarekha | Benapura-I Sand Source, MOUZA-BENAPUR, KHATA-150, PLOT- 142, KISSAM-NAYANJARI, LAT- 21°46'11.20"N TO 21°46'21.84"N, LONG- 87° 9'43.89"E TO 87° 9'50.32"E | 5.00 Ha | PA/WC- 56.25/BR-2.56 | 56.25 | | NA | sand | Existing |
| A8 | SUBARNAREKHA | GOPINATHPUR SAND SOURCE, Mouza-Gopinathpur, Khata-153, Plot- 340, Area- 5Ha Out Of 22.743Ha | 12.355acre/ 5.0 Ha | PA/WC- 32.57/BR-6.1 | 32.57 | | | sand | PROPOSED |
| B1 | SONO | Purukhi Sand Quarry, Mouza. Purukhi, Khata No. 420, Plot No. 1340 Area Ac 12.30 dec, LAT- 21°34'15.39374" TO 21°34'20.42400", LONG- 86°47'37.53031" TO 86°48'02.61174" | 12.300 acre/4.997Ha | PA/WC- 13.4/BR-2.11 | 13.4 | | 1,875.00 | sand | Existing |
| B2 | Budhabalang
a | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | 12.35 acre/5.00Ha | PA/WC- 21.89/BR-1.5 | 21.89 | | NA | sand | Existing |

| | | | | | | | | | |
|-----|------------------|---|------------------------|-------------------------|-------|-----|----------|------|----------|
| B3 | Budhabalang
a | Ambulakuda Sand Source, Mouza- Ambulakuda Khata No. 133, Plot No. 531 Area Ac 12.30 dec, LAT- 21°35'04.80187" TO 21°35'20.10514", LONG- 86°54'11.23380" TO 86°54'17.05015" LONG- 21°35'7.54"N, LAT- 86°54'15.15"E | 12.300
acre/4.997Ha | PA/WC-
22.21/BR-3 | 22.27 | | 1,500.00 | sand | Existing |
| B4 | SONO | Hatigand Sand Quarry, Mouza-Hatiaganda Khata No-313 Plot No 223, 1121 Kisam Nadi, Mukundapur Khata No-197 PlotNo-3 Kisam Nadi,Patripal Khata No-69 Plot No-1 Kisam Nadi,LAT- 21°32'57.31" TO 21°33'01.57"N, LONG-86°51'36.86" TO 86°51'57.69"E | 12.35
acre/4.99Ha | PA/WC-
16.03/BR-0.44 | 16.03 | | NA | sand | Existing |
| B5 | SONO | Udambar Sand Quarry, Mouza. Udambar Khata No. 211, Plot No. 1 ,Lat- 21°33'16.98"N to 21°33'22.35"N Long- 86°53'38.45"E to 86°53'59.66"E | 8.20
acre/3.318Ha | PA/WC-
19.68/BR-2.71 | 19.68 | | NA | sand | Existing |
| B6 | Budhabalang
a | Makanda Sand Quarry, Mouza- Makanda Khata No. 337, Plot No. 691 Area Ac 8.40 dec & Plot No. 692 , LAT- 21°34'50.99"N TO 21°34'56.53"N , LONG- 86°53'41.84"E TO 86°53'59.73" E | 12.22
acre/4.945Ha | PA/WC-
22.27/BR-2.4 | 22.27 | | NA | sand | Existing |
| B7 | Budhabalang
a | Gambharia Sand Quarry,Mouza-Gambharia Khata No-430 Plot No-574, 722 Kisam Nadi, Rudragopalpur Samil Naharpatna Khata No 236 Plot No-1 &510 Kisam Nadi, LAT-21°32'13.69" TO 21°33'01.68"N, LONG-86°54'55.86" TO 86°55'28.60"E | 94.99
acre/38.44Ha | PA/WC- 20.7/BR-
0.42 | 20.7 | | NA | sand | Existing |
| B8 | SONO | Boitabanka Sand Quarry, Mouza-. Ghungi Khata No. 261, Plot No. 338 Area Ac 5.00 dec , Plot No. 440 Area Ac 7.20 dec, LAT- 21°33'47.00568" TO 21°34'18.76462" , LONG- 86°49'16.80718" TO 86°49'24.26577" | 12.20
acre/4.937Ha | PA/WC-
15.11/BR-0.19 | 15.11 | | NA | sand | Existing |
| B9 | Budhabalang
a | Kathasangada-II Sand Quarry , Mouza-. Kathasangada, Khata No. 286, Plot No. 106 Area Ac 2.60 dec, LAT-21°33'33.48457" TO 21°33'54.32476" , LONG-86°54'26.44185" TO 86°54'41.16691" | 2.60
acre/1.052Ha | PA/WC-
21.06/BR-1.29 | 21.06 | YES | | sand | Existing |
| B10 | Budhabalang
a | Kathasangada-I Sand Quarry, Mouza- Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT- 21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | 9.75
acre/3.945Ha | PA/WC-
21.02/BR-0.89 | 21.02 | YES | NA | sand | Existing |
| C1 | Sono | Pundal-1 Sand bed , MOUZA: PUNDAL, KHATA NO 556, PLOT:1347/1 (AREA 12.350 acre), KISSAM: NADI, LAT- 21°34'39.68857" TO 21°34'48.23321" , LONG-86°46'25.68699" TO 86°46'35.36899" | 12.350
acre/5.00Ha | PA/WC-
12.94/BR-1.04 | 12.94 | | 2,167.00 | sand | Existing |
| C2 | Sono | Pundal-2 Sand bed, MOUZA: PUNDAL, KHATA NO 556, PLOT:1347(AREA 3.40 acre), KISSAM: NADI, LAT-21°34'37.42724" TO21°34'43.40860" , LONG-86°46'47.40109" TO 86°46'51.95754" | 3.40Ac/1.37Ha | PA/WC-
12.98/BR-1.63 | 12.98 | | 10,000 | sand | Existing |

| | | | | | | | | | |
|----|-------------|--|---------------------|-----------------------|-------|-----|----------|------|----------|
| C3 | Sono | Dumagandira Sand bed, MOUZA: DUMAGANDIRA, LAICHANPUR KHATA NO 157, 155 PLOT: 385, 36 (AREA 12.350 acre), KISSAM: NADI, LAT-21°34'20.43545" TO 21°34'27.16324" , LONG-86°48'50.32691" TO 86°49'04.33634" | 12.350 acre/5.00Ha | PA/WC- 15.4/BR- 1.41 | 15.4 | | 1,081.00 | sand | Existing |
| C4 | Sono | Bainchanaranpur-1 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT: 383, 384 (AREA 12.35 acre), KISSAM: NADI, LAT- 21°34'57.92"N TO 21°35'12.08"N , LONG- 86°42'49.85"E TO 86°43'1.58"E | 12.35 acre/4.99Ha | PA/WC-12.71/BR- 0..34 | 12.71 | | 2,000.00 | sand | Existing |
| C5 | Sono | Balipal Sand bed, MOUZA: BALIPAL KHATA NO 156, 156 PLOT: 7, 495 (AREA 12.350 acre AC), KISSAM: NADI, LAT- 21°34'28.68"N TO 21°34'39.30"N, LONG- 86°43'46.09" TO 86°44'32.40" | 12.300 acre./4.97Ha | PA/WC- 12.5/BR- 0.22 | 12.5 | | | sand | Existing |
| C6 | Sono | Pratappur Sand bed, MOUZA: AJODHYA (PRATAPPUR) KHATA NO 814, PLOT: 388 (AREA 12.25 AC), KISSAM: NADI, LAT- 21°34'25.72"N TO 21°34'21.81"N , LONG- 86°44'54.48"E TO 86°45'13.09"E | 12.250 acre/4.95Ha. | PA/WC- 12.37/BR-1.34 | 12.37 | | 4,740.00 | sand | Existing |
| C7 | Sono | Bainchanaranpur-3 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT: 516 (AREA 8.700 AC), KISSAM: NADI, LAT- 21°35'09.76013" TO 21°35'14.08427", LONG-86°42'21.71445" TO 86°45'40.57543" | 8.70Ac/3.520Ha | PA/WC- 12.61/BR-1.19 | 12.61 | | NA | sand | Existing |
| C8 | Sono | Ajodhya Sand bed, MOUZA: AJODHYA KHATA NO 814 PLOT: 1412 (AREA 12.35 AC), KISSAM: NADI, LAT- 21°34'07.02873" TO 21°34'23.13721", LONG-86°45'34.38217" TO 86°45'13.45E | 12.35 acre./5.00Ha | PA/WC- 11.36/BR-2.66 | 11.36 | | | sand | Existing |
| D1 | Subamarekha | Sikharpur Sand Source Mouza-Sikharpur, Khata No- 496 Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'50.52" TO 21°48'02.51", LONG- 87°12'14.01" TO 87°12'28.86" | 10.62Ac/ 4.3 Ha | PA/WC- 61.23/BR-0.89 | 61.23 | YES | NA | sand | Existing |
| D2 | Subamarekha | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | 13.55 acre./5.48 Ha | PA/WC- 62.13/BR-1.86 | 62.13 | YES | 2,175.00 | sand | Existing |
| D3 | Subamarekha | Gobardhanpur Sand Sairat Source Mouza-Gobardhanpur, Khata No- 358 Plot No- 1094, Area Ac. 12.00 dec out of Ac. 88.25 dec, LAT-21°43'09.49505" TO 21°43'21.91435", LONG- 87°12'00.91831" TO 87°12'12.02473" | 12.00 acre/ 4.85Ha | PA/WC- 55.81/BR-9.04 | 55.81 | | NA | sand | Existing |
| D4 | Subamarekha | Sekhsarai Ka Sand Source, Mouza-Sekhsarai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | 14.00 acre/ 5.66Ha | PA/WC- 56.80/BR-1.46 | 56.8 | YES | NA | sand | Existing |
| D5 | Subamarekha | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | 14.00 acre/ 5.66Ha | PA/WC- 55.75/BR-1.11 | 55.75 | | | sand | Existing |
| D6 | Subamarekha | Balikbad Sand Source , Mouza-Balikbadk, Khata No- 399 , Plot No- 49 Kissam Nadi, LAT- 21°42'45.21"N TO 21°42'55.11"N , LONG- 87°13'27.55"E TO 87°13'41.23"E | 14.85 acre/ 6.009Ha | PA/WC- 57.71/BR-11.83 | 57.71 | | | sand | Existing |

| | | | | | | | | | |
|-----|-------------|--|-----------------------|-----------------------|-------|-----|----|------|----------|
| D7 | Subamarekha | BALIAPAL SAND SOURCE , Mouza-Baliapal, Khata No- 578
Plot No- 2949, Area Ac. 03.00 dec out of Ac. 33.28 dec , LAT- 21°42'17.17632" TO 21°42'24.80328" ,LONG- 87°13'40.01052" TO 87°13'52.23684" | 12.00 acre/ 4.856 Ha | PA/WC- 57.48/BR-12.98 | 57.48 | | NA | sand | Existing |
| D8 | Subamarekha | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142
Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19",
LONG- 87°09'49.47" TO 87°10'01.89" | 15.00 acre/ 6.07 Ha | PA/WC- 57.33/BR-1.98 | 57.33 | YES | | sand | Existing |
| D9 | Subamarekha | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | 13.00 acre/ 5.26 Ha | PA/WC- 63.26/BR-2.82 | 63.26 | YES | | sand | Existing |
| D10 | Subamarekha | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT-21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | 13.00 acre/ 5.26 Ha | PA/WC-70.79/BR- 5.83 | 70.79 | YES | NA | sand | Existing |
| D11 | Subamarekha | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768"TO 87° 14' 49.2" | 35 acre/ 14.16Ha | PA/WC- 74.91/BR-14.20 | 74.91 | YES | NA | sand | Existing |
| D12 | Subamarekha | Chandibasti Sand Source,Mouza-Chormara, Khata No- 692
Plot No- 182, Area Ac. 10.00 dec out of Ac. 47.50 dec,LAT- 21°42'53.30760" TO 21°42'58.49621", LONG-87°12'28.06579" TO 87°12'42.90563" | 10.00 acre/ 4.046 Ha | PA/WC- 56.33/BR-10.09 | 56.33 | | NA | sand | Existing |
| D13 | Subamarekha | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152"TO 87° 14' 37.5504" | 40 acre/ 16.187Ha | PA/WC- 74.84/BR-14.79 | 74.84 | YES | NA | sand | Existing |
| D14 | Subamarekha | Makrampur Sand Source , Mouza-Makrampur, Khata No- 01 , Plot No- 06 Kissam Nadi, LAT-21° 51' 23.2164" TO 21° 51' 34.254", LONG-87° 14' 39.6816" TO 87° 14' 54.0564" | 15.00 acre/ 6.07 Ha | PA/WC- 68.62/BR-3.97 | 68.62 | | NA | sand | Existing |
| D15 | Subamarekha | Gobarghata Sand Source Mouza-Gobarghata, Khata No- 1414 , Plot No- 3236 Kissam Nadi,LAT-21° 51' 16.4844" TO 21° 51' 29.7" , LONG-87° 14' 7.2348"TO 87° 14' 15.036" | 17.50 acre/ 7.08Ha | PA/WC- 67.75/BR-3.04 | 67.75 | | NA | sand | Existing |
| D16 | Subamarekha | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | 15 acre/ 6.07Ha | PA/WC- 71.14/BR-6.30 | 71.14 | YES | NA | sand | Existing |
| D17 | Subamarekha | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | 20.00 acre/ 8.09 Ha | PA/WC- 74.97/BR-13.59 | 74.97 | YES | NA | sand | Existing |
| D18 | Subamarekha | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12.53.30" TO 87°13'07.21" | 14.00 acre / 5.665 Ha | PA/WC- 63.09/BR-3.27 | 63.09 | YES | | sand | Existing |
| D19 | Subamarekha | Bilaspur Sand Source Mouza-Bilaspur, Khata No- 53, Plot No- 120, LAT-21° 57' 13.5036" TO 21° 57' 47.9844", LONG- 87° 13' 31.2816" TO 87° 13' 45.2748" | 80.20 acre/ 32.456 Ha | PA/WC- 75.82/BR-11.27 | 75.82 | | NA | sand | Existing |

| | | | | | | | | | |
|-----|------------------|--|--------------------------|-------------------------|-------|--|----|------|----------|
| D20 | SUBARNAREK
HA | Malipal SAND BED, Mouza-Malipal, Khata- 501, Plot- 2277, Area- 5Ha Out Of 38.82 Ha, LAT-21°51'09.54151" TO 21°51'20.80386", LONG-87°13'09.81079" TO 87°13'23.17459" | 12.355acre/ 5.0
Ha | PA/WC-
30.61/BR-1.6 | 30.61 | | | sand | PROPOSED |
| D21 | SUBARNAREK
HA | Rayanramchandrapur Sand Bed, Mouza-Ray
anramchandrapur, Khata-1070, Plot-2824, LAT-21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56" TO 87°13'06.85" | 20.38Ac/8.247Ha | PA/WC-
58.28/BR-5.09 | 58.28 | | | sand | PROPOSED |
| E1 | Subamarekha | Palbegunia Sand Source, MOUZA: PALABEGUNIA KHATA NO 470, PLOT: 270,377,378,786,793,799 (AREA 8.88 AC), KISSAM: NADI, LAT- 21°41'14.17022" TO 21°41'43.02172" ,LONG- 87°14'21.68610" TO 87°14'33.05551" | 8.88 acre/ 3.60
Ha | PA/WC-
58.49/BR-4 | 58.49 | | NA | sand | Existing |
| E2 | Subamarekha | Badhapal Sand Source, MOUZA: BEDHAPAL KHATA NO 717,718, PLOT: 973,973/2548,989,955,956,969,990,1193,1194,1198,1199,1200,1201,1205,1498 (AREA 8.36 AC), KISSAM: NADI, LAT- 21°41'16.80572" TO 21°41'16.80572" ,LONG- 87°17'50.50770" TO 87°18'01.77824" | 8.36acre/ 3.38Ha | PA/WC-
63.06/BR-1 | 63.06 | | NA | sand | Existing |
| F1 | Budhabalang
a | Kasaba Dahapada Sand Source, MOUZA: KASABA-DAHAPADA KHATA NO 653,143, PLOT:209,210,1429,1483,124,837 (AREA 101.35 AC), KISSAM: NADI, LAT- 21°31'55.99"N TO 21°32'45.13"N ,LONG- 86°55'30.53"E TO 86°56'28.19"E | 101.35 acre/
41.015Ha | PA/WC-
22.37/BR-1.1 | 22.37 | | | sand | Existing |

Patta Lands/Khatedari Land: (existing & proposed)

| Owner | Sy. No | Area | District | Tehsil | Village | Total Reserve (MT) | Total Mineral to be mined (MT) | Existing /Proposed |
|-------|--------|------|----------|--------|---------|--------------------|--------------------------------|--------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

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 |
|------------------------|--|----------|----------|--------|---------|------------|------------------|--------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

M-Sand Plants:(existing & proposed)

| Plant Name | Owner | District | Tehsil | Village | Geo- location | Quantity Tonnes/Annum | Existing/Proposed |
|------------|-------|----------|--------|---------|---------------|-----------------------|-------------------|
| NA | NA | NA | NA | NA | NA | NA | NA |

Cluster & Contiguous Cluster details

Clusters:

| River Name | Cluster No. | Lease No | Location (Riverbed / Patta Land) | Village | Area (in Ha) | Total Excavation (Cum) | Total Mineral Excavation (Cum) |
|--------------|-------------|----------|---|-------------------------|--------------|------------------------|--------------------------------|
| Subarnarekha | 1 | A1 | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E | MOUZA- AMBAKURUCHI | 2.99Ha | 18499 | 14029 |
| | | A2 | Devog Sand Source, MOUZA DEVOG KHATA NO :392, PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E | MOUZA-DEVOG | 5Ha | 124188 | 99657 |
| Subarnarekha | 2 | A6 | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI, LAT- 21°45'26.53"N TO 21°45'39.04"N, LONG- 87°10'03.41"E TO 87°10'16.94"E | MOUZA -BENAPUR | 5.876Ha | 1213 | 0 |
| | | D5 | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | Mouza-Chalanti | 5.66Ha | 50322 | 40216 |
| Budhabalanga | 3 | B2 | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | MOUZA SAHUPADA & DUMUDA | 5.00Ha | 51821 | 44177 |
| | | B10 | Kathasangada-I Sand Quarry, Mouza- Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT- 21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | Mouza-. Kathasangada | 5.26 Ha | 27875 | 24074 |
| Subarnarekha | 4 | D1 | Sikharpur Sand SourceMouza-Sikharpur, Khata No- 496Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'55.63"N, LONG- 87°12'23.38"E | Mouza-Sikharpur | 4.3 Ha | 46040 | 35666 |
| | | D2 | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | Mouza-Rajnagar | 5.48 Ha | 27122 | 19353 |
| Subarnarekha | 5 | D4 | Sekhsarai Ka Sand Source, Mouza-Sekhsarai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | Mouza-Sekhsarai | 5.66Ha | 42487 | 37874 |
| | | D8 | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142 Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19", LONG- 87°09'49.47" TO 87°10'01.89" | Mouza-Sekhsarai | 6.07 Ha | 19857 | 6886.5 |

| | | | | | | | |
|--------------|---|-----|---|---------------------------|----------|----------|----------|
| Subarnarekha | 6 | D9 | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | Mouza-River Block | 5.26 Ha | 23763 | 20000 |
| | | D18 | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12'53.30" TO 87°13'07.21" | Mouza-River Block | 5.665 Ha | 23525 | 20000 |
| Subarnarekha | 7 | D10 | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT- 21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | Mouza-Praharajpur | 5.26 Ha | 66760 | 48644 |
| | | D16 | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | Mouza-Praharajpur | 6.07Ha | 19804 | 17075 |
| Subarnarekha | 8 | D11 | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768"TO 87° 14' 49.2" | Mouza-Mankidia | 14.16Ha | 171878 | 153552 |
| | | D13 | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152"TO 87° 14' 37.5504" | Mouza-Mankidia | 16.187Ha | 96798 | 82682 |
| | | D17 | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | Mouza-Mankidia | 8.09 Ha | 2,02,325 | 1,78,528 |
| | 9 | A4 | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT-21°44'43.87" TO 21°44'54.93"N, LONG-87°12'33.33" TO 87°12'43.87"E | MOUZA KADRAYAN | 5.00Ha | 94032 | 84510 |
| | | D21 | Rayanramchandrapur Sand Bed, Mouza- Rayanramchandrapur,Khata-1070, Plot-2824, LAT-21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56"TO87°13'06.85" | Mouza- Rayanramchandrapur | 8.247Ha | 50000 | 30000 |

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) |
|------------|------------------------|------------|---------------------------------|---------------------------------|---------------------------|---------|----------------------|---------------------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

Annexure-IV

Transportation Routes for individual leases and leases in Cluster

| Lease No. | | Transportati
on Route
No. | Number
of
tippers/
day of
lease | Number
of
tippers/
day of
all the
lease on
route | Lengt
h 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 |
|-----------|--|---------------------------------|---|--|---------------------------------|--|--|---|--------------------------------|
| A1 | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E | NH-16 | 1 | 4 | 10.2 | Black Topped | Black Topped | Govt | MOUZA AMBAKURUCHI, NH-16 |
| A2 | Devog Sand Source, MOUZA DEVOG KHATA NO :392, PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E | NH-16 | 2 | | 8.9 | Black Topped | Black Topped | Govt | MOUZA DEVOG, NH-16 |
| A3 | Dhitpura Sand Source, MOUZA DHITPURA, KHATA NO :97, PLOT: 214, (AREA 12.350 AC),KISSAM :NADI, LAT-21° 45' 1.2672" TO 21° 45' 7.3476", LONG-87° 11' 1.0104" TO 87° 11' 13.9092" | NH-16 | 1 | | 0.71 | Black Topped | Black Topped | Govt | MOUZA DHITPURA, NH-16 |
| A4 | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT- 21° 44' 51.2088" TO 21° 45' 0.9036", LONG-87° 12' 28.692" TO 87° 12' 42.7392" | NH-16 | | | 7.3 | Black Topped | Black Topped | Govt | MOUZA KADRAYAN, NH-16 |
| A5 | Mathani Punsita Sand Source, MOUZA MATHANI & PUNSITA, KHATA NO :143,227, PLOT: 37,25, (AREA 3.08 AC),KISSAM :NADI,Lat- 21°40'06.81564" To 21°40'30.30024", long-87°03'52.22988" to 87°04'02.00100" | NH-16 | | | 3.5 | Black Topped | Black Topped | Govt | MOUZA MATHANI & PUNSITA, NH-16 |
| A6 | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI, LAT- 21°45'27.43"N TO 21°45'41.99"N, LONG- 87°10'02.41"E TO 87°10'18.28"E | NH-16 | | | 2.8 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-16 |
| A7 | Benapura-I Sand Source, MOUZA-BENAPUR, KHATA-150, PLOT-142, KISSAM-NAYANJARI, LAT- 21°46'11.20"N TO 21°46'21.84"N, LONG- 87° 9'43.89"E TO 87° 9'50.32"E | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-16 |
| A8 | GOPINATHPUR SAND SOURCE, Mouza-Gopinathpur, Khata- 153, Plot- 340, Area- 5Ha Out Of 22.743Ha | NH- 16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Gopinathpur |
| B1 | Purukhi Sand Quarry, Mouza. Purukhi, Khata No. 420, Plot No. 1340 Area Ac 12.30 dec, LAT- 21°34'15.39374" TO 21°34'20.42400", LONG- 86°47'37.53031" TO 86°48'02.61174" | SH-NH16 | 1 | 1 | 15.15 | Black Topped | Black Topped | Govt | Mouza. Purukhi,NH-16 |

| | | | | | | | | | |
|-----|---|----------|---|---|------|--------------|--------------|------|-----------------------------|
| B2 | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | NH-18 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sahupada, NH-18 |
| B3 | Ambulakuda Sand Source, Mouza- Ambulakuda Khata No. 133, Plot No. 531 Area Ac 12.30 dec, LAT- 21°35'04.80187" TO 21°35'20.10514", LONG- 86°54'11.23380" TO 86°54'17.05015" LONG- 21°35'7.54"N, LAT- 86°54'15.15"E | NH-18 | 1 | 1 | 5.2 | Black Topped | Black Topped | Govt | Mouza- Ambulakuda, NH-18 |
| B4 | Hatigand Sand Quarry, Mouza-Hatiaganda Khata No-313 Plot No 223, 1121 Kisam Nadi, Mukundapur Khata No-197 PlotNo-3 Kisam Nadi,Patripal Khata No-69 Plot No-1 Kisam Nadi,LAT-21°32'57.31" TO 21°33'01.57"N, LONG-86°51'36.86" TO 86°51'57.69"E | NH-16 | | | 10.2 | Black Topped | Black Topped | Govt | Mouza-Hatiaganda, NH-16 |
| B5 | Udambar Sand Quarry, Mouza. Udambar Khata No. 211, Plot No. 1 ,Lat- 21°33'16.98"N to 21°33'22.35"N Long- 86°53'38.45"E to 86°53'59.66"E | NH-16 | | | 3.68 | Black Topped | Black Topped | Govt | Mouza. Udambar, NH-16 |
| B6 | Makanda Sand Quarry, Mouza- Makanda Khata No. 337, Plot No. 691 Area Ac 8.40 dec & Plot No. 692 , LAT- 21°34'50.99"N TO 21°34'56.53"N , LONG- 86°53'41.84"E TO 86°53'59.73" E | NH-18 | | | 4.1 | Black Topped | Black Topped | Govt | Mouza- Makanda, NH-18 |
| B7 | Gambharia Sand Quarry,Mouza-Gambharia Khata No-430 Plot No-574, 722 Kisam Nadi, Rudragopalpur Samil Naharpatna Khata No 236 Plot No-1 &510 Kisam Nadi, LAT-21°32'13.69" TO 21°33'01.68"N, LONG- 86°54'55.86" TO 86°55'28.60"E | NH-16 | | | 1.2 | Black Topped | Black Topped | Govt | Mouza- Gambharia,NH-16 |
| B8 | Boitabanka Sand Quarry, Mouza-. Ghungi Khata No. 261, Plot No. 338 Area Ac 5.00 dec , Plot No. 440 Area Ac 7.20 dec, LAT- 21°33'47.00568" TO 21°34'18.76462" , LONG- 86°49'16.80718" TO 86°49'24.26577" | SN-NH 16 | | | 12.5 | Black Topped | Black Topped | Govt | Mouza-. Ghungi , NH-16 |
| B9 | Kathasangada-II Sand Quarry , Mouza-. Kathasangada, Khata No. 286, Plot No. 106 Area Ac 2.60 dec, LAT-21°33'33.48457" TO 21°33'54.32476", LONG-86°54'26.44185" TO 86°54'41.16691" | NH-16 | | | 1.97 | Black Topped | Black Topped | Govt | Mouza-. Kathasangada, NH-16 |
| B10 | Kathasangada-I Sand Quarry, Mouza-Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT-21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | NH-16 | | | 1.53 | Black Topped | Black Topped | Govt | Mouza-Kathasangada, NH-16 |
| C1 | Pundal-1 Sand bed , MOUZA: PUNDAL, KHATA NO 556, PLOT:1347/1 (AREA 12.350 acre), KISSAM: NADI, LAT- | SH-NH 16 | 1 | 4 | 19.7 | Black Topped | Black Topped | Govt | MOUZA: PUNDAL, NH-16 |

| | | | | | | | | | |
|----|--|----------|---|---|-------|--------------|--------------|------|------------------------------------|
| | 21°34'39.68857" TO 21°34'48.23321" , LONG- 86°46'25.68699" TO 86°46'35.36899" | | | | | | | | |
| C2 | Pundal-2 Sand bed, MOUZA: PUNDAL, KHATA NO 556, PLOT:1347(AREA 3.40 acre), KISSAM: NADI, LAT- 21°34'37.42724" TO 21°34'43.40860" , LONG- 86°46'47.40109" TO 86°46'51.95754" | SH-NH16 | 1 | | 18.38 | Black Topped | Black Topped | Govt | MOUZA: PUNDAL,NH-16 |
| C3 | Dumagandira Sand bed, MOUZA: DUMAGANDIRA,LAICHHANPUR KHATA NO 157,155 PLOT:385,36 (AREA 12.350 acre), KISSAM: NADI, LAT- 21°34'20.43545" TO 21°34'27.16324" , LONG- 86°48'50.32691" TO 86°49'04.33634" | SH-NH16 | 1 | | 19.8 | Black Topped | Black Topped | Govt | MOUZA: DUMAGANDIRA,NH-16 |
| C4 | Bainchanaranpur-1 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:383 ,384(AREA 12.35acre), KISSAM: NADI, LAT- 21°34'57.92"N TO 21°35'12.08"N , LONG- 86°42'49.85"E TO 86°43'1.58"E | SH-NH16 | 1 | | 22.87 | Black Topped | Black Topped | Govt | MOUZA: BAINCHANARANPUR, NH-16 |
| C5 | Balipal Sand bed, MOUZA: BALIPAL KHATA NO 156,156 PLOT:7,495(AREA 12.350 acre AC), KISSAM: NADI,LAT- 21°34'28.68"N TO 21°34'39.30"N, LONG- 86°43'46.09" TO 86°44'32.40" | SH-NH16 | | | 21.68 | Black Topped | Black Topped | Govt | MOUZA: BALIPAL, NH-16 |
| C6 | Pratappur Sand bed, MOUZA: AJODHYA (PRATAPPUR) KHATA NO 814, PLOT:388(AREA 12.25 AC), KISSAM: NADI,LAT- 21°34'25.72"N TO 21°34'21.81"N , LONG- 86°44'54.48"E TO 86°45'13.09"E | SH-NH16 | 1 | 1 | 18.81 | Black Topped | Black Topped | Govt | MOUZA: AJODHYA (PRATAPPUR) , NH-16 |
| C7 | Bainchanaranpur-3 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:516 (AREA 8.700 AC), KISSAM: NADI, LAT- 21°35'09.76013" TO 21°35'14.08427", LONG-86°42'21.71445" TO 86°45'40.57543" | SH-NH16 | | | 22.94 | Black Topped | Black Topped | Govt | MOUZA: BAINCHANARANPUR, NH-16 |
| C8 | Ajodhya Sand bed, MOUZA: AJODHYA KHATA NO 814 PLOT:1412 (AREA 12.35 AC), KISSAM: NADI, LAT- 21°34'07.02873" TO 21°34'23.13721", LONG- 86°45'34.38217" TO 86°45'13.45E | SH-NH-16 | | | 19.26 | Black Topped | Black Topped | Govt | MOUZA: AJODHYA,NH-16 |
| D1 | Sikharpur Sand Source Mouza-Sikharpur, Khata No- 496 Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'50.52" TO 21°48'02.51", LONG- 87°12'14.01" TO 87°12'28.86" | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sikharpur,NH-16 |
| D2 | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | NH-16 | 1 | 1 | 3.9 | Black Topped | Black Topped | Govt | Mouza-Rajnagar,NH-16 |
| D3 | Gobardhanpur Sand Sairat Source Mouza- Gobardhanpur, Khata No- 358 Plot No- 1094, Area Ac. 12.00 dec out of Ac. 88.25 dec, LAT- 21°43'09.49505" TO 21°43'21.91435", LONG- 87°12'00.91831" TO 87°12'12.02473" | NH-16 | | | 8.8 | Black Topped | Black Topped | Govt | Mouza- Gobardhanpur, NH-16 |

| | | | | | | | | | |
|-----|--|-------|--|--|------|--------------|--------------|------|--------------------------|
| D4 | Sekhsarai Ka Sand Source, Mouza-Sekhsarai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | NH-16 | | | 4.9 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| D5 | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | NH-16 | | | 1.3 | Black Topped | Black Topped | Govt | Mouza-Chalanti, NH-16 |
| D6 | Balikbad Sand Source , Mouza-Balikbadk, Khata No- 399 , Plot No- 49 Kissam Nadi, LAT- 21°42'45.21"N TO 21°42'55.11"N ,LONG- 87°13'27.55"E TO 87°13'41.23"E | NH-16 | | | 9.9 | Black Topped | Black Topped | Govt | Mouza-Balikbadk, NH-16 |
| D7 | BALIAPAL SAND SOURCE , Mouza-Baliapal, Khata No-578 Plot No- 2949, Area Ac. 03.00 dec out of Ac. 33.28 dec , LAT- 21°42'17.17632" TO 21°42'24.80328" ,LONG- 87°13'40.01052" TO 87°13'52.23684" | NH-16 | | | 15.3 | Black Topped | Black Topped | Govt | Mouza-Baliapal, NH-16 |
| D8 | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142 Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19", LONG- 87°09'49.47" TO 87°10'01.89" | NH-16 | | | 5.2 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| D9 | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | NH-16 | | | 5.7 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| D10 | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT-21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| D11 | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768" TO 87° 14' 49.2" | NH-16 | | | 8.7 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D12 | Chandibasti Sand Source, Mouza-Chormara, Khata No- 692 Plot No- 182, Area Ac. 10.00 dec out of Ac. 47.50 dec, LAT-21°42'53.30760" TO 21°42'58.49621", LONG-87°12'28.06579" TO 87°12'42.90563" | NH-16 | | | 11.2 | Black Topped | Black Topped | Govt | Mouza-Chormara, NH-16 |
| D13 | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152" TO 87° 14' 37.5504" | NH-16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D14 | Makrampur Sand Source , Mouza-Makrampur, Khata No- 01 , Plot No- 06 Kissam Nadi, LAT-21° 51' 23.2164" TO 21° 51' 34.254", LONG-87° 14' 39.6816" TO 87° 14' 54.0564" | NH-16 | | | 2.9 | Black Topped | Black Topped | Govt | Mouza-Makrampur, NH-16 |

| | | | | | | | | | |
|-----|---|-------|--|--|------|--------------|--------------|------|-------------------------------|
| D15 | Gobarghata Sand Source Mouza-Gobarghata, Khata No- 1414 , Plot No- 3236 Kissam Nadi,LAT-21° 51' 16.4844" TO 21° 51' 29.7" , LONG-87° 14' 7.2348"TO 87° 14' 15.036" | NH-16 | | | 4.5 | Black Topped | Black Topped | Govt | Mouza-Gobarghata, NH-16 |
| D16 | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| D17 | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | NH-16 | | | 8.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D18 | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12.53.30" TO 87°13'07.21" | NH-16 | | | 5.1 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| D19 | Bilaspur Sand Source Mouza-Bilaspur, Khata No- 53 , Plot No- 120, LAT-21° 57' 13.5036" TO 21° 57' 47.9844", LONG- 87° 13' 31.2816" TO 87° 13' 45.2748" | NH-16 | | | 4.2 | Black Topped | Black Topped | Govt | Mouza-Bilaspur |
| D20 | Malipal SAND BED, Mouza-Malipal, Khata- 501, Plot- 2277, Area- 5Ha Out Of 38.82 Ha,LAT-21°51'09.54151" TO 21°51'20.80386", LONG-87°13'09.81079"TO 87°13'23.17459" | NH-16 | | | 3.69 | Black Topped | Black Topped | Govt | Mouza-Malipal |
| D21 | Rayanramchandrapur Sand Bed, Mouza-Rayanramchandrapur,Khata-1070, Plot-2824, LAT- 21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56"TO87°13'06.85" | NH-16 | | | 4.18 | Black Topped | Black Topped | Govt | Mouza-Rayanramchandrapur |
| E1 | Palbegunia Sand Source, MOUZA: PALABEGUNIA KHATA NO 470, PLOT: 270,377,378,786,793,799 (AREA 8.88 AC), KISSAM: NADI, LAT- 21°41'14.17022" TO 21°41'43.02172" ,LONG- 87°14'21.68610" TO 87°14'33.05551" | NH-16 | | | 16.1 | Black Topped | Black Topped | Govt | MOUZA:PALABEGUNIA, NH-16 |
| E2 | Badhapal Sand Source, MOUZA: BEDHAPAL KHATA NO 717,718, PLOT: 973,973/2548,989,955,956,969,990,1193,1194,1198,1199, 1200,1201,1205,1498 (AREA 8.36 AC), KISSAM: NADI, LAT- 21°41'16.80572" TO 21°41'16.80572" ,LONG- 87°17'50.50770" TO 87°18'01.77824" | NH-16 | | | 10.3 | Black Topped | Black Topped | Govt | MOUZA:BEDHAPAL, NH-16 |
| F1 | Kasaba Dahapada Sand Source, MOUZA: KASABA-DAHAPADA KHATA NO 653,143, PLOT:209,210,1429,1483,124,837 (AREA 101.35 AC), KISSAM: NADI, LAT- 21°31'55.99"N TO 21°32'45.13"N ,LONG- 86°55'30.53"E TO 86°56'28.19"E | NH-16 | | | 1.6 | Black Topped | Black Topped | Govt | MOUZA: KASABA-DAHAPADA, NH-16 |

| Cluster No. | Transportation Route No. | Number of tippers/day of cluster | Number of tippers/day of all the cluster 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 |
|-------------|--------------------------|----------------------------------|---|-----------------------|-------------------------------------|--|--|---------------------------------|
| 1 | NH-16 | 1 | 2 | 10.2 | Black Topped | Black Topped | Govt | MOUZA AMBAKURUCHI, NH-16 |
| | NH-16 | 2 | | 8.9 | Black Topped | Black Topped | Govt | MOUZA DEVOG, NH-16 |
| 2 | NH-16 | | | 2.8 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-16 |
| | NH-16 | | | 9.9 | Black Topped | Black Topped | Govt | Mouza-Chalanti, NH-16 |
| 3 | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sahupada, NH-18 |
| | NH-16 | | | 1.53 | Black Topped | Black Topped | Govt | Mouza-. Kathasangada, NH-16 |
| 4 | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sikharapur, NH-16 |
| | NH-16 | 1 | 1 | 3.9 | Black Topped | Black Topped | Govt | Mouza-Rajnagar, NH-16 |
| 5 | NH-16 | | | 4.9 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| | NH-16 | | | 5.2 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| 6 | NH-16 | | | 5.7 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| | NH-16 | | | 5.1 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| 7 | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| 8 | NH-16 | | | 8.7 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| | NH-16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| | NH-16 | | | 8.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| 9 | NH-16 | | | 7.3 | Black Topped | Black Topped | Govt | MOUZA KADRAYAN, NH-16 |
| | NH-16 | | | 4.18 | Black Topped | Black Topped | Govt | Mouza-Rayanramchandrapur, NH-16 |

Final List of Potential Mining Leases (existing & proposed)

Rivers:

| Lease No. | River Details | Lease Details | Area (in Ac/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 cum /Annum considering digging depth max as 3 meters | Mineral to be mined (Sand/ Bajri/ RBM etc.) | Existing/ Proposed |
|-----------|------------------|---|---------------------|---------------------------------|-----------------------------------|---|--|---|--------------------|
| A1 | Subamarekha | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E | 7.40 acre/2.99Ha | PA/WC- 56.65/BR-7.61 | 56.65 | YES | 784 | sand | Existing |
| A2 | Subamarekha | Devog Sand Source, MOUZA DEVOG KHATA NO :392, PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E | 12.35 acre/5.00 Ha | PA/WC- 57.38/BR-6.6 | 57.38 | YES | 5,160.00 | sand | Existing |
| A3 | Subamarekha | Dhitpura Sand Source, MOUZA DHITPURA, KHATA NO :97, PLOT: 214, (AREA 12.350 AC),KISSAM :NADI, LAT-21° 45' 1.2672" TO 21° 45' 7.3476", LONG-87° 11' 1.0104" TO 87° 11' 13.9092" | 12.35 acre./5.00 Ha | PA/WC- 55.62/BR-0.56 | 55.62 | | 500 | sand | Existing |
| A4 | Subamarekha | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT-21° 44' 51.2088" TO 21° 45' 0.9036", LONG-87° 12' 28.692" TO 87° 12' 42.7392" | 12.350 acre./5.00Ha | PA/WC- 58.28/BR-5.09 | 58.28 | | NA | sand | Existing |
| A5 | Subamarekha | Mathani Punsita Sand Source, MOUZA MATHANI & PUNSI, KHATA NO :143,227, PLOT: 37,25, (AREA 3.08 AC),KISSAM :NADI,Lat- 21°40'06.81564" To 21°40'30.30024", long- 87°03'52.22988" to 87°04'02.00100" | 3.08 acre./1.246Ha | PA/WC- 22.21/BR-0.19 | 22.21 | | NA | sand | Existing |
| A6 | Subamarekha | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI, LAT- 21°45'27.43"N TO 21°45'41.99"N, LONG- 87°10'02.41"E TO 87°10'18.28"E | 14.52 acre/5.876Ha | PA/WC- 56.02/BR-0.15 | 56.02 | YES | | sand | Existing |
| A7 | Subamarekha | Benapura-I Sand Source, MOUZA-BENAPUR, KHATA-150, PLOT- 142, KISSAM-NAYANJARI, LAT- 21°46'11.20"N TO 21°46'21.84"N, LONG- 87° 9'43.89"E TO 87° 9'50.32"E | 5.00 Ha | PA/WC- 56.25/BR-2.56 | 56.25 | | NA | sand | Existing |
| A8 | SUBARNAREKHA | GOPINATHPUR SAND SOURCE, Mouza-Gopinathpur, Khata-153, Plot- 340, Area- 5Ha Out Of 22.743Ha | 12.355acre/ 5.0 Ha | PA/WC- 32.57/BR-6.1 | 32.57 | | | sand | PROPOSED |
| B1 | SONO | Purukhi Sand Quarry, Mouza. Purukhi, Khata No. 420, Plot No. 1340 Area Ac 12.30 dec, LAT- 21°34'15.39374" TO 21°34'20.42400", LONG- 86°47'37.53031" TO 86°48'02.61174" | 12.300 acre/4.997Ha | PA/WC- 13.4/BR-2.11 | 13.4 | | 1,875.00 | sand | Existing |
| B2 | Budhabalang
a | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | 12.35 acre/5.00Ha | PA/WC- 21.89/BR-1.5 | 21.89 | | NA | sand | Existing |

| | | | | | | | | | |
|-----|------------------|---|------------------------|-------------------------|-------|-----|----------|------|----------|
| B3 | Budhabalang
a | Ambulakuda Sand Source, Mouza- Ambulakuda Khata No. 133, Plot No. 531 Area Ac 12.30 dec, LAT- 21°35'04.80187" TO 21°35'20.10514", LONG- 86°54'11.23380" TO 86°54'17.05015" LONG- 21°35'7.54"N, LAT- 86°54'15.15"E | 12.300
acre/4.997Ha | PA/WC-
22.21/BR-3 | 22.27 | | 1,500.00 | sand | Existing |
| B4 | SONO | Hatigand Sand Quarry, Mouza-Hatiaganda Khata No-313 Plot No 223, 1121 Kisam Nadi, Mukundapur Khata No-197 PlotNo-3 Kisam Nadi,Patripal Khata No-69 Plot No-1 Kisam Nadi,LAT- 21°32'57.31" TO 21°33'01.57"N, LONG-86°51'36.86" TO 86°51'57.69"E | 12.35
acre/4.99Ha | PA/WC-
16.03/BR-0.44 | 16.03 | | NA | sand | Existing |
| B5 | SONO | Udambar Sand Quarry, Mouza. Udambar Khata No. 211, Plot No. 1 ,Lat- 21°33'16.98"N to 21°33'22.35"N Long- 86°53'38.45"E to 86°53'59.66"E | 8.20
acre/3.318Ha | PA/WC-
19.68/BR-2.71 | 19.68 | | NA | sand | Existing |
| B6 | Budhabalang
a | Makanda Sand Quarry, Mouza- Makanda Khata No. 337, Plot No. 691 Area Ac 8.40 dec & Plot No. 692 , LAT- 21°34'50.99"N TO 21°34'56.53"N , LONG- 86°53'41.84"E TO 86°53'59.73" E | 12.22
acre/4.945Ha | PA/WC-
22.27/BR-2.4 | 22.27 | | NA | sand | Existing |
| B7 | Budhabalang
a | Gambharia Sand Quarry,Mouza-Gambharia Khata No-430 Plot No-574, 722 Kisam Nadi, Rudragopalpur Samil Naharpatna Khata No 236 Plot No-1 &510 Kisam Nadi, LAT-21°32'13.69" TO 21°33'01.68"N, LONG-86°54'55.86" TO 86°55'28.60"E | 94.99
acre/38.44Ha | PA/WC- 20.7/BR-
0.42 | 20.7 | | NA | sand | Existing |
| B8 | SONO | Boitabanka Sand Quarry, Mouza-. Ghungi Khata No. 261, Plot No. 338 Area Ac 5.00 dec , Plot No. 440 Area Ac 7.20 dec, LAT- 21°33'47.00568" TO 21°34'18.76462" , LONG- 86°49'16.80718" TO 86°49'24.26577" | 12.20
acre/4.937Ha | PA/WC-
15.11/BR-0.19 | 15.11 | | NA | sand | Existing |
| B9 | Budhabalang
a | Kathasangada-II Sand Quarry , Mouza-. Kathasangada, Khata No. 286, Plot No. 106 Area Ac 2.60 dec, LAT-21°33'33.48457" TO 21°33'54.32476" , LONG-86°54'26.44185" TO 86°54'41.16691" | 2.60
acre/1.052Ha | PA/WC-
21.06/BR-1.29 | 21.06 | YES | | sand | Existing |
| B10 | Budhabalang
a | Kathasangada-I Sand Quarry, Mouza- Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT- 21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | 9.75
acre/3.945Ha | PA/WC-
21.02/BR-0.89 | 21.02 | YES | NA | sand | Existing |
| C1 | Sono | Pundal-1 Sand bed , MOUZA: PUNDAL, KHATA NO 556, PLOT:1347/1 (AREA 12.350 acre), KISSAM: NADI, LAT- 21°34'39.68857" TO 21°34'48.23321" , LONG-86°46'25.68699" TO 86°46'35.36899" | 12.350
acre/5.00Ha | PA/WC-
12.94/BR-1.04 | 12.94 | | 2,167.00 | sand | Existing |
| C2 | Sono | Pundal-2 Sand bed, MOUZA: PUNDAL, KHATA NO 556, PLOT:1347(AREA 3.40 acre), KISSAM: NADI, LAT-21°34'37.42724" TO21°34'43.40860" , LONG-86°46'47.40109" TO 86°46'51.95754" | 3.40Ac/1.37Ha | PA/WC-
12.98/BR-1.63 | 12.98 | | 10,000 | sand | Existing |

| | | | | | | | | | |
|----|-------------|--|---------------------|-----------------------|-------|-----|----------|------|----------|
| C3 | Sono | Dumagandira Sand bed, MOUZA: DUMAGANDIRA, LAICHANPUR KHATA NO 157, 155 PLOT: 385, 36 (AREA 12.350 acre), KISSAM: NADI, LAT-21°34'20.43545" TO 21°34'27.16324" , LONG-86°48'50.32691" TO 86°49'04.33634" | 12.350 acre/5.00Ha | PA/WC- 15.4/BR- 1.41 | 15.4 | | 1,081.00 | sand | Existing |
| C4 | Sono | Bainchanaranpur-1 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT: 383, 384 (AREA 12.35 acre), KISSAM: NADI, LAT- 21°34'57.92"N TO 21°35'12.08"N , LONG- 86°42'49.85"E TO 86°43'1.58"E | 12.35 acre/4.99Ha | PA/WC-12.71/BR- 0.34 | 12.71 | | 2,000.00 | sand | Existing |
| C5 | Sono | Balipal Sand bed, MOUZA: BALIPAL KHATA NO 156, 156 PLOT: 7, 495 (AREA 12.350 acre AC), KISSAM: NADI, LAT- 21°34'28.68"N TO 21°34'39.30"N, LONG- 86°43'46.09" TO 86°44'32.40" | 12.300 acre./4.97Ha | PA/WC- 12.5/BR- 0.22 | 12.5 | | | sand | Existing |
| C6 | Sono | Pratappur Sand bed, MOUZA: AJODHYA (PRATAPPUR) KHATA NO 814, PLOT: 388 (AREA 12.25 AC), KISSAM: NADI, LAT- 21°34'25.72"N TO 21°34'21.81"N , LONG- 86°44'54.48"E TO 86°45'13.09"E | 12.250 acre/4.95Ha. | PA/WC- 12.37/BR-1.34 | 12.37 | | 4,740.00 | sand | Existing |
| C7 | Sono | Bainchanaranpur-3 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT: 516 (AREA 8.700 AC), KISSAM: NADI, LAT- 21°35'09.76013" TO 21°35'14.08427", LONG-86°42'21.71445" TO 86°45'40.57543" | 8.70Ac/3.520Ha | PA/WC- 12.61/BR-1.19 | 12.61 | | NA | sand | Existing |
| C8 | Sono | Ajodhya Sand bed, MOUZA: AJODHYA KHATA NO 814 PLOT: 1412 (AREA 12.35 AC), KISSAM: NADI, LAT- 21°34'07.02873" TO 21°34'23.13721", LONG-86°45'34.38217" TO 86°45'13.45E | 12.35 acre./5.00Ha | PA/WC- 11.36/BR-2.66 | 11.36 | | | sand | Existing |
| D1 | Subamarekha | Sikharpur Sand Source Mouza-Sikharpur, Khata No- 496 Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'50.52" TO 21°48'02.51", LONG- 87°12'14.01" TO 87°12'28.86" | 10.62Ac/ 4.3 Ha | PA/WC- 61.23/BR-0.89 | 61.23 | YES | NA | sand | Existing |
| D2 | Subamarekha | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | 13.55 acre./5.48 Ha | PA/WC- 62.13/BR-1.86 | 62.13 | YES | 2,175.00 | sand | Existing |
| D3 | Subamarekha | Gobardhanpur Sand Sairat Source Mouza-Gobardhanpur, Khata No- 358 Plot No- 1094, Area Ac. 12.00 dec out of Ac. 88.25 dec, LAT-21°43'09.49505" TO 21°43'21.91435", LONG- 87°12'00.91831" TO 87°12'12.02473" | 12.00 acre/ 4.85Ha | PA/WC- 55.81/BR-9.04 | 55.81 | | NA | sand | Existing |
| D4 | Subamarekha | Sekharsai Ka Sand Source, Mouza-Sekharsai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | 14.00 acre/ 5.66Ha | PA/WC- 56.80/BR-1.46 | 56.8 | YES | NA | sand | Existing |
| D5 | Subamarekha | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | 14.00 acre/ 5.66Ha | PA/WC- 55.75/BR-1.11 | 55.75 | | | sand | Existing |
| D6 | Subamarekha | Balikbad Sand Source , Mouza-Balikbadk, Khata No- 399 , Plot No- 49 Kissam Nadi, LAT- 21°42'45.21"N TO 21°42'55.11"N , LONG- 87°13'27.55"E TO 87°13'41.23"E | 14.85 acre/ 6.009Ha | PA/WC- 57.71/BR-11.83 | 57.71 | | | sand | Existing |

| | | | | | | | | | |
|-----|-------------|--|-----------------------|-----------------------|-------|-----|----|------|----------|
| D7 | Subamarekha | BALIAPAL SAND SOURCE , Mouza-Baliapal, Khata No- 578
Plot No- 2949, Area Ac. 03.00 dec out of Ac. 33.28 dec , LAT- 21°42'17.17632" TO 21°42'24.80328" ,LONG- 87°13'40.01052" TO 87°13'52.23684" | 12.00 acre/ 4.856 Ha | PA/WC- 57.48/BR-12.98 | 57.48 | | NA | sand | Existing |
| D8 | Subamarekha | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142
Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19",
LONG- 87°09'49.47" TO 87°10'01.89" | 15.00 acre/ 6.07 Ha | PA/WC- 57.33/BR-1.98 | 57.33 | YES | | sand | Existing |
| D9 | Subamarekha | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | 13.00 acre/ 5.26 Ha | PA/WC- 63.26/BR-2.82 | 63.26 | YES | | sand | Existing |
| D10 | Subamarekha | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT-21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | 13.00 acre/ 5.26 Ha | PA/WC-70.79/BR- 5.83 | 70.79 | YES | NA | sand | Existing |
| D11 | Subamarekha | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768"TO 87° 14' 49.2" | 35 acre/ 14.16Ha | PA/WC- 74.91/BR-14.20 | 74.91 | YES | NA | sand | Existing |
| D12 | Subamarekha | Chandibasti Sand Source,Mouza-Chormara, Khata No- 692
Plot No- 182, Area Ac. 10.00 dec out of Ac. 47.50 dec,LAT- 21°42'53.30760" TO 21°42'58.49621", LONG-87°12'28.06579" TO 87°12'42.90563" | 10.00 acre/ 4.046 Ha | PA/WC- 56.33/BR-10.09 | 56.33 | | NA | sand | Existing |
| D13 | Subamarekha | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152"TO 87° 14' 37.5504" | 40 acre/ 16.187Ha | PA/WC- 74.84/BR-14.79 | 74.84 | YES | NA | sand | Existing |
| D14 | Subamarekha | Makrampur Sand Source , Mouza-Makrampur, Khata No- 01 , Plot No- 06 Kissam Nadi, LAT-21° 51' 23.2164" TO 21° 51' 34.254", LONG-87° 14' 39.6816" TO 87° 14' 54.0564" | 15.00 acre/ 6.07 Ha | PA/WC- 68.62/BR-3.97 | 68.62 | | NA | sand | Existing |
| D15 | Subamarekha | Gobarghata Sand Source Mouza-Gobarghata, Khata No- 1414 , Plot No- 3236 Kissam Nadi,LAT-21° 51' 16.4844" TO 21° 51' 29.7" , LONG-87° 14' 7.2348"TO 87° 14' 15.036" | 17.50 acre/ 7.08Ha | PA/WC- 67.75/BR-3.04 | 67.75 | | NA | sand | Existing |
| D16 | Subamarekha | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | 15 acre/ 6.07Ha | PA/WC- 71.14/BR-6.30 | 71.14 | YES | NA | sand | Existing |
| D17 | Subamarekha | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | 20.00 acre/ 8.09 Ha | PA/WC- 74.97/BR-13.59 | 74.97 | YES | NA | sand | Existing |
| D18 | Subamarekha | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12.53.30" TO 87°13'07.21" | 14.00 acre / 5.665 Ha | PA/WC- 63.09/BR-3.27 | 63.09 | YES | | sand | Existing |
| D19 | Subamarekha | Bilaspur Sand Source Mouza-Bilaspur, Khata No- 53, Plot No- 120, LAT-21° 57' 13.5036" TO 21° 57' 47.9844", LONG- 87° 13' 31.2816" TO 87° 13' 45.2748" | 80.20 acre/ 32.456 Ha | PA/WC- 75.82/BR-11.27 | 75.82 | | NA | sand | Existing |

| | | | | | | | | | |
|-----|------------------|--|--------------------------|-------------------------|-------|--|----|------|----------|
| D20 | SUBARNAREK
HA | Malipal SAND BED, Mouza-Malipal, Khata- 501, Plot- 2277, Area- 5Ha Out Of 38.82 Ha, LAT-21°51'09.54151" TO 21°51'20.80386", LONG-87°13'09.81079" TO 87°13'23.17459" | 12.355acre/ 5.0
Ha | PA/WC-
30.61/BR-1.6 | 30.61 | | | sand | PROPOSED |
| D21 | SUBARNAREK
HA | Rayanramchandrapur Sand Bed, Mouza-Ray
anramchandrapur, Khata-1070, Plot-2824, LAT-21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56" TO 87°13'06.85" | 20.38Ac/8.247Ha | PA/WC-
58.28/BR-5.09 | 58.28 | | | sand | PROPOSED |
| E1 | Subamarekha | Palbegunia Sand Source, MOUZA: PALABEGUNIA KHATA NO 470, PLOT: 270,377,378,786,793,799 (AREA 8.88 AC), KISSAM: NADI, LAT- 21°41'14.17022" TO 21°41'43.02172" ,LONG- 87°14'21.68610" TO 87°14'33.05551" | 8.88 acre/ 3.60
Ha | PA/WC-
58.49/BR-4 | 58.49 | | NA | sand | Existing |
| E2 | Subamarekha | Badhapal Sand Source, MOUZA: BEDHAPAL KHATA NO 717,718, PLOT: 973,973/2548,989,955,956,969,990,1193,1194,1198,1199,1200,1201,1205,1498 (AREA 8.36 AC), KISSAM: NADI, LAT- 21°41'16.80572" TO 21°41'16.80572" ,LONG- 87°17'50.50770" TO 87°18'01.77824" | 8.36acre/ 3.38Ha | PA/WC-
63.06/BR-1 | 63.06 | | NA | sand | Existing |
| F1 | Budhabalang
a | Kasaba Dahapada Sand Source, MOUZA: KASABA-DAHAPADA KHATA NO 653,143, PLOT:209,210,1429,1483,124,837 (AREA 101.35 AC), KISSAM: NADI, LAT- 21°31'55.99"N TO 21°32'45.13"N ,LONG- 86°55'30.53"E TO 86°56'28.19"E | 101.35 acre/
41.015Ha | PA/WC-
22.37/BR-1.1 | 22.37 | | | sand | Existing |

Patta Lands/Khatedari Land: (existing & proposed)

| Owner | Sy. No | Area | District | Tehsil | Village | Total Reserve (MT) | Total Mineral to be mined (MT) | Existing /Proposed |
|-------|--------|------|----------|--------|---------|--------------------|--------------------------------|--------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

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 |
|------------------------|--|----------|----------|--------|---------|------------|------------------|--------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

M-Sand Plants:(existing & proposed)

| Plant Name | Owner | District | Tehsil | Village | Geo- location | Quantity Tonnes/Annum | Existing/Proposed |
|------------|-------|----------|--------|---------|---------------|-----------------------|-------------------|
| NA | NA | NA | NA | NA | NA | NA | NA |

Final Cluster & Contiguous Cluster details

Clusters:

| River Name | Cluster No. | Lease No | Location (Riverbed / Patta Land) | Village | Area (in Ha) | Total Excavation (Cum) | Total Mineral Excavation (Cum) |
|--------------|-------------|----------|---|-------------------------|--------------|------------------------|--------------------------------|
| Subarnarekha | 1 | A1 | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM :NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG- 87°12'10.23"E TO 87°12'19.81"E | MOUZA- AMBAKURUCHI | 2.99Ha | 18499 | 14029 |
| | | A2 | Devog Sand Source, MOUZA DEVOG KHATA NO :392, PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat- 21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to 87°12'44.08"E | MOUZA-DEVOG | 5Ha | 124188 | 99657 |
| Subarnarekha | 2 | A6 | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI, LAT- 21°45'26.53"N TO 21°45'39.04"N, LONG- 87°10'03.41"E TO 87°10'16.94"E | MOUZA -BENAPUR | 5.876Ha | 1213 | 0 |
| | | D5 | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | Mouza-Chalanti | 5.66Ha | 50322 | 40216 |
| Budhabalanga | 3 | B2 | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | MOUZA SAHUPADA & DUMUDA | 5.00Ha | 51821 | 44177 |
| | | B10 | Kathasangada-I Sand Quarry, Mouza- Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT- 21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | Mouza-. Kathasangada | 5.26 Ha | 27875 | 24074 |
| Subarnarekha | 4 | D1 | Sikharpur Sand SourceMouza-Sikharpur, Khata No- 496Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'55.63"N, LONG- 87°12'23.38"E | Mouza-Sikharpur | 4.3 Ha | 46040 | 35666 |
| | | D2 | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | Mouza-Rajnagar | 5.48 Ha | 27122 | 19353 |
| Subarnarekha | 5 | D4 | Sekhsarai Ka Sand Source, Mouza-Sekhsarai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | Mouza-Sekhsarai | 5.66Ha | 42487 | 37874 |
| | | D8 | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142 Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19", LONG- 87°09'49.47" TO 87°10'01.89" | Mouza-Sekhsarai | 6.07 Ha | 19857 | 6886.5 |

| | | | | | | | |
|--------------|---|-----|---|---------------------------|----------|----------|----------|
| Subarnarekha | 6 | D9 | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | Mouza-River Block | 5.26 Ha | 23763 | 20000 |
| | | D18 | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12'53.30" TO 87°13'07.21" | Mouza-River Block | 5.665 Ha | 23525 | 20000 |
| Subarnarekha | 7 | D10 | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT- 21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | Mouza-Praharajpur | 5.26 Ha | 66760 | 48644 |
| | | D16 | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | Mouza-Praharajpur | 6.07Ha | 19804 | 17075 |
| Subarnarekha | 8 | D11 | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768"TO 87° 14' 49.2" | Mouza-Mankidia | 14.16Ha | 171878 | 153552 |
| | | D13 | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152"TO 87° 14' 37.5504" | Mouza-Mankidia | 16.187Ha | 96798 | 82682 |
| | | D17 | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | Mouza-Mankidia | 8.09 Ha | 2,02,325 | 1,78,528 |
| | 9 | A4 | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT-21°44'43.87" TO 21°44'54.93"N, LONG-87°12'33.33" TO 87°12'43.87"E | MOUZA KADRAYAN | 5.00Ha | 94032 | 84510 |
| | | D21 | Rayanramchandrapur Sand Bed, Mouza- Rayanramchandrapur,Khata-1070, Plot-2824, LAT-21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56"TO87°13'06.85" | Mouza- Rayanramchandrapur | 8.247Ha | 50000 | 30000 |

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) |
|------------|------------------------|------------|---------------------------------|---------------------------------|---------------------------|---------|----------------------|---------------------------------|
| NA | NA | NA | NA | NA | NA | NA | NA | NA |

Final Transportation Routes for individual leases and leases in Cluster

| Lease No. | | Transportati
on Route
No. | Number
of
tippers/
day of
lease | Number
of
tippers/
day of
all the
lease on
route | Lengt
h 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 |
|-----------|--|---------------------------------|---|--|---------------------------------|--|--|---|-----------------------------------|
| A1 | Ambakuruchi Sand Source, MOUZA AMBAKURUCHI
KHATA NO :304, PLOT: 1450, (AREA 7.400 AC),KISSAM
:NADI, LAT- 21°43'47.42"N TO 21°43'56.13"N, LONG-
87°12'10.23"E TO 87°12'19.81"E | NH-16 | 1 | 4 | 10.2 | Black Topped | Black Topped | Govt | MOUZA
AMBAKURUCHI, NH-16 |
| A2 | Devog Sand Source, MOUZA DEVOG KHATA NO :392,
PLOT: 1178, (AREA 12.350 AC),KISSAM :NADI,Lat-
21°44'2.69"N To 21°44'13.65", long- 87°12'32.57"E to
87°12'44.08"E | NH-16 | 2 | | 8.9 | Black Topped | Black Topped | Govt | MOUZA DEVOG, NH-16 |
| A3 | Dhitpura Sand Source, MOUZA DHITPURA, KHATA NO
:97, PLOT: 214, (AREA 12.350 AC),KISSAM :NADI, LAT-21°
45' 1.2672" TO 21° 45' 7.3476", LONG-87° 11' 1.0104" TO
87° 11' 13.9092" | NH-16 | 1 | | 0.71 | Black Topped | Black Topped | Govt | MOUZA DHITPURA,
NH-16 |
| A4 | Kadarayan Sand Source, MOUZA KADRAYAN, KHATA
NO :257, PLOT: 1, (AREA 12.350 AC),KISSAM :NADI,LAT-
21° 44' 51.2088" TO 21° 45' 0.9036", LONG-87° 12' 28.692"
TO 87° 12' 42.7392" | NH-16 | | | 7.3 | Black Topped | Black Topped | Govt | MOUZA KADRAYAN,
NH-16 |
| A5 | Mathani Punsita Sand Source, MOUZA MATHANI &
PUNSITA, KHATA NO :143,227, PLOT: 37,25, (AREA 3.08
AC),KISSAM :NADI,Lat- 21°40'06.81564" To
21°40'30.30024", long-87°03'52.22988" to
87°04'02.00100" | NH-16 | | | 3.5 | Black Topped | Black Topped | Govt | MOUZA MATHANI &
PUNSITA, NH-16 |
| A6 | Benapura-II Sand Quarry, MOUZA BENAPUR, KHATA
NO:152, PLOT: 285, (AREA 14.52 AC), KISSAM: NADI,
LAT- 21°45'27.43"N TO 21°45'41.99"N, LONG-
87°10'02.41"E TO 87°10'18.28"E | NH-16 | | | 2.8 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-
16 |
| A7 | Benapura-I Sand Source, MOUZA-BENAPUR, KHATA-
150, PLOT-142, KISSAM-NAYANJARI, LAT- 21°46'11.20"N
TO 21°46'21.84"N, LONG- 87° 9'43.89"E TO 87° 9'50.32"E | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-
16 |
| A8 | GOPINATHPUR SAND SOURCE, Mouza-Gopinathpur,
Khata- 153, Plot- 340, Area- 5Ha Out Of 22.743Ha | NH- 16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Gopinathpur |
| B1 | Purukhi Sand Quarry, Mouza. Purukhi, Khata No. 420,
Plot No. 1340 Area Ac 12.30 dec, LAT- 21°34'15.39374"
TO 21°34'20.42400", LONG- 86°47'37.53031" TO
86°48'02.61174" | SH-NH16 | 1 | 1 | 15.15 | Black Topped | Black Topped | Govt | Mouza. Purukhi,NH-16 |

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|-----|--|----------|---|---|------|--------------|--------------|------|-----------------------------|
| B2 | Sahupada & Dumuda Sand Quarry, MOUZA SAHUPADA & DUMUDA, KHATA NO:223,281, PLOT: 237,238,239,240,15, (AREA 12.35 acers KISSAM:NADI,LAT- 21°33'54.51315" TO 21°34'01.79173", LONG- 86°54'59.78918" TO 86°55'21.55125" | NH-18 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sahupada, NH-18 |
| B3 | Ambulakuda Sand Source, Mouza- Ambulakuda Khata No. 133, Plot No. 531 Area Ac 12.30 dec, LAT- 21°35'04.80187" TO 21°35'20.10514", LONG- 86°54'11.23380" TO 86°54'17.05015" LONG- 21°35'7.54"N, LAT- 86°54'15.15"E | NH-18 | 1 | 1 | 5.2 | Black Topped | Black Topped | Govt | Mouza- Ambulakuda, NH-18 |
| B4 | Hatigand Sand Quarry, Mouza-Hatiaganda Khata No-313 Plot No 223, 1121 Kisam Nadi, Mukundapur Khata No-197 PlotNo-3 Kisam Nadi,Patripal Khata No-69 Plot No-1 Kisam Nadi,LAT-21°32'57.31" TO 21°33'01.57"N, LONG-86°51'36.86" TO 86°51'57.69"E | NH-16 | | | 10.2 | Black Topped | Black Topped | Govt | Mouza-Hatiaganda, NH-16 |
| B5 | Udambar Sand Quarry, Mouza. Udambar Khata No. 211, Plot No. 1 ,Lat- 21°33'16.98"N to 21°33'22.35"N Long- 86°53'38.45"E to 86°53'59.66"E | NH-16 | | | 3.68 | Black Topped | Black Topped | Govt | Mouza. Udambar, NH-16 |
| B6 | Makanda Sand Quarry, Mouza- Makanda Khata No. 337, Plot No. 691 Area Ac 8.40 dec & Plot No. 692 , LAT- 21°34'50.99"N TO 21°34'56.53"N , LONG- 86°53'41.84"E TO 86°53'59.73" E | NH-18 | | | 4.1 | Black Topped | Black Topped | Govt | Mouza- Makanda, NH-18 |
| B7 | Gambharia Sand Quarry,Mouza-Gambharia Khata No-430 Plot No-574, 722 Kisam Nadi, Rudragopalpur Samil Naharpatna Khata No 236 Plot No-1 &510 Kisam Nadi, LAT-21°32'13.69" TO 21°33'01.68"N, LONG- 86°54'55.86" TO 86°55'28.60"E | NH-16 | | | 1.2 | Black Topped | Black Topped | Govt | Mouza- Gambharia,NH-16 |
| B8 | Boitabanka Sand Quarry, Mouza-. Ghungi Khata No. 261, Plot No. 338 Area Ac 5.00 dec , Plot No. 440 Area Ac 7.20 dec, LAT- 21°33'47.00568" TO 21°34'18.76462" , LONG- 86°49'16.80718" TO 86°49'24.26577" | SN-NH 16 | | | 12.5 | Black Topped | Black Topped | Govt | Mouza-. Ghungi , NH-16 |
| B9 | Kathasangada-II Sand Quarry , Mouza-. Kathasangada, Khata No. 286, Plot No. 106 Area Ac 2.60 dec, LAT-21°33'33.48457" TO 21°33'54.32476", LONG-86°54'26.44185" TO 86°54'41.16691" | NH-16 | | | 1.97 | Black Topped | Black Topped | Govt | Mouza-. Kathasangada, NH-16 |
| B10 | Kathasangada-I Sand Quarry, Mouza- Kathasangada, Khata No. 286, Plot No. 123 Area Ac 0.30 dec, Plot No. 145, Area Ac. 1.52 dec & Mz. Haladia, Khata No. 458, Plot No. 1456 area Ac 6.00 dec, Plot No. 1952 area Ac 7.93, LAT-21°33'20.86635"TO 21°33'30.79120" , LONG-86°54'45.40461" TO 86°54'51.62215" | NH-16 | | | 1.53 | Black Topped | Black Topped | Govt | Mouza- Kathasangada, NH-16 |
| C1 | Pundal-1 Sand bed , MOUZA: PUNDAL, KHATA NO 556, PLOT:1347/1 (AREA 12.350 acre), KISSAM: NADI, LAT- | SH-NH 16 | 1 | 4 | 19.7 | Black Topped | Black Topped | Govt | MOUZA: PUNDAL, NH-16 |

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|----|--|----------|---|---|-------|--------------|--------------|------|------------------------------------|
| | 21°34'39.68857" TO 21°34'48.23321" , LONG- 86°46'25.68699" TO 86°46'35.36899" | | | | | | | | |
| C2 | Pundal-2 Sand bed, MOUZA: PUNDAL, KHATA NO 556, PLOT:1347 (AREA 3.40 acre), KISSAM: NADI, LAT- 21°34'37.42724" TO 21°34'43.40860" , LONG- 86°46'47.40109" TO 86°46'51.95754" | SH-NH16 | 1 | | 18.38 | Black Topped | Black Topped | Govt | MOUZA: PUNDAL,NH-16 |
| C3 | Dumagandira Sand bed, MOUZA: DUMAGANDIRA, LAICHHANPUR KHATA NO 157,155 PLOT:385,36 (AREA 12.350 acre), KISSAM: NADI, LAT- 21°34'20.43545" TO 21°34'27.16324" , LONG- 86°48'50.32691" TO 86°49'04.33634" | SH-NH16 | 1 | | 19.8 | Black Topped | Black Topped | Govt | MOUZA: DUMAGANDIRA,NH-16 |
| C4 | Bainchanaranpur-1 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:383 ,384 (AREA 12.35acre), KISSAM: NADI, LAT- 21°34'57.92"N TO 21°35'12.08"N , LONG- 86°42'49.85"E TO 86°43'1.58"E | SH-NH16 | 1 | | 22.87 | Black Topped | Black Topped | Govt | MOUZA: BAINCHANARANPUR, NH-16 |
| C5 | Balipal Sand bed, MOUZA: BALIPAL KHATA NO 156,156 PLOT:7,495 (AREA 12.350 acre AC), KISSAM: NADI, LAT- 21°34'28.68"N TO 21°34'39.30"N, LONG- 86°43'46.09" TO 86°44'32.40" | SH-NH16 | | | 21.68 | Black Topped | Black Topped | Govt | MOUZA: BALIPAL, NH-16 |
| C6 | Pratappur Sand bed, MOUZA: AJODHYA (PRATAPPUR) KHATA NO 814, PLOT:388 (AREA 12.25 AC), KISSAM: NADI, LAT- 21°34'25.72"N TO 21°34'21.81"N , LONG- 86°44'54.48"E TO 86°45'13.09"E | SH-NH16 | 1 | 1 | 18.81 | Black Topped | Black Topped | Govt | MOUZA: AJODHYA (PRATAPPUR) , NH-16 |
| C7 | Bainchanaranpur-3 Sand bed, MOUZA: BAINCHANARANPUR KHATA NO 266 PLOT:516 (AREA 8.700 AC), KISSAM: NADI, LAT- 21°35'09.76013" TO 21°35'14.08427", LONG- 86°42'21.71445" TO 86°45'40.57543" | SH-NH16 | | | 22.94 | Black Topped | Black Topped | Govt | MOUZA: BAINCHANARANPUR, NH-16 |
| C8 | Ajodhya Sand bed, MOUZA: AJODHYA KHATA NO 814 PLOT:1412 (AREA 12.35 AC), KISSAM: NADI, LAT- 21°34'07.02873" TO 21°34'23.13721", LONG- 86°45'34.38217" TO 86°45'13.45E | SH-NH-16 | | | 19.26 | Black Topped | Black Topped | Govt | MOUZA: AJODHYA, NH-16 |
| D1 | Sikharpur Sand Source Mouza-Sikharpur, Khata No- 496 Plot No- 1910, 1900 Kissam- Nadi, LAT- 21°47'50.52" TO 21°48'02.51", LONG- 87°12'14.01" TO 87°12'28.86" | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sikharpur, NH-16 |
| D2 | Rajnagar Sand Bed, Mouza-Rajnagar, Khata No- 377 Plot No- 1295/1300, LAT- 21° 48' 17.3844" TO 21° 48' 28.5048", LONG- 87° 12' 37.5192" TO 87° 12' 44.6256" | NH-16 | 1 | 1 | 3.9 | Black Topped | Black Topped | Govt | Mouza-Rajnagar, NH-16 |
| D3 | Gobardhanpur Sand Sairat Source Mouza- Gobardhanpur, Khata No- 358 Plot No- 1094, Area Ac. 12.00 dec out of Ac. 88.25 dec, LAT- 21°43'09.49505" TO 21°43'21.91435", LONG- 87°12'00.91831" TO 87°12'12.02473" | NH-16 | | | 8.8 | Black Topped | Black Topped | Govt | Mouza- Gobardhanpur, NH-16 |

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|-----|--|-------|--|--|------|--------------|--------------|------|--------------------------|
| D4 | Sekhsarai Ka Sand Source, Mouza-Sekhsarai, Khata No-142 Plot No-02 Kissam Nadi, LAT-21° 47' 5.2872" TO 21° 47' 14.892" , LONG- 87° 10' 1.3008" TO 87° 10' 15.132" | NH-16 | | | 4.9 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| D5 | Chalanti Sand Source Mouza-Chalanti, Khata No-384 Plot No-738 kissam Nadi, LAT-21°45'24.50" TO 21°45'33.29"N, LONG- 87°10'15.19" TO 87°10'25.31"E | NH-16 | | | 1.3 | Black Topped | Black Topped | Govt | Mouza-Chalanti, NH-16 |
| D6 | Balikbad Sand Source , Mouza-Balikbadk, Khata No- 399 , Plot No- 49 Kissam Nadi, LAT- 21°42'45.21"N TO 21°42'55.11"N ,LONG- 87°13'27.55"E TO 87°13'41.23"E | NH-16 | | | 9.9 | Black Topped | Black Topped | Govt | Mouza-Balikbadk, NH-16 |
| D7 | BALIAPAL SAND SOURCE , Mouza-Baliapal, Khata No-578 Plot No- 2949, Area Ac. 03.00 dec out of Ac. 33.28 dec , LAT- 21°42'17.17632" TO 21°42'24.80328" ,LONG- 87°13'40.01052" TO 87°13'52.23684" | NH-16 | | | 15.3 | Black Topped | Black Topped | Govt | Mouza-Baliapal, NH-16 |
| D8 | Sekhsarai Kha Sand Source ,Mouza-Sekhsarai, Khata No- 142 Plot No- 2 Kissam Nadi, LAT- 21°46'54.81" TO 21°47'09.19", LONG- 87°09'49.47" TO 87°10'01.89" | NH-16 | | | 5.2 | Black Topped | Black Topped | Govt | Mouza-Sekhsarai, NH-16 |
| D9 | River Block Kha Sand Source Mouza-River Block, Khata No- 175 ,Plot No- 1 Kissam -Nadi,LAT- 21°48'51.80" TO 21°49'03.49" , LONG- 87°12'48.95" TO 87°12'58.74" | NH-16 | | | 5.7 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| D10 | Praharajpur Ka Sand Source, Mouza-Praharajpur, Khata No- 466,Plot No- 1923 Kissam Nadi, LAT-21° 52' 9.9768" TO 21° 52' 27.5268" , LONG-87° 14' 59.9244" TO 87° 15' 4.8852" | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| D11 | Mankidia Sand Source "Ga" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 43.77" TO 21° 56' 2.5224", LONG- 87° 14' 30.9768" TO 87° 14' 49.2" | NH-16 | | | 8.7 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D12 | Chandibasti Sand Source, Mouza-Chormara, Khata No- 692 Plot No- 182, Area Ac. 10.00 dec out of Ac. 47.50 dec, LAT-21°42'53.30760" TO 21°42'58.49621", LONG-87°12'28.06579" TO 87°12'42.90563" | NH-16 | | | 11.2 | Black Topped | Black Topped | Govt | Mouza-Chormara, NH-16 |
| D13 | Mankidia Sand Source "Kha" Mouza-Mankidia, Khata No- 618 ,Plot No- 1677, LAT-21° 55' 57.324" TO 21° 56' 22.0776" , LONG- 87° 14' 17.8152" TO 87° 14' 37.5504" | NH-16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D14 | Makrampur Sand Source , Mouza-Makrampur, Khata No- 01 , Plot No- 06 Kissam Nadi, LAT-21° 51' 23.2164" TO 21° 51' 34.254", LONG-87° 14' 39.6816" TO 87° 14' 54.0564" | NH-16 | | | 2.9 | Black Topped | Black Topped | Govt | Mouza-Makrampur, NH-16 |

| | | | | | | | | | |
|-----|---|-------|--|--|------|--------------|--------------|------|-------------------------------|
| D15 | Gobarghata Sand Source Mouza-Gobarghata, Khata No- 1414 , Plot No- 3236 Kissam Nadi,LAT-21° 51' 16.4844" TO 21° 51' 29.7" , LONG-87° 14' 7.2348"TO 87° 14' 15.036" | NH-16 | | | 4.5 | Black Topped | Black Topped | Govt | Mouza-Gobarghata, NH-16 |
| D16 | Praharajpur Kha Sand Source, Mouza-Praharajpur, Khata No- 466, Plot No- 1923,LAT- 21° 52' 28.8264" TO 21° 52' 40.68876" , LONG- 87° 14' 55.914" TO 87° 15' 4.9392" | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| D17 | Mankidia Sand Source "Ka", Mouza-Mankidia, Khata No-818 , Plot No-01, LAT-21° 56' 16.224" TO 21° 56' 22.0776" , LONG- 87° 14' 9.2508" TO 87° 14' 24.0684" | NH-16 | | | 8.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| D18 | River Block Ka sand source Mouza-River Block, Khata No- 175,Plot No- 01, Kissam Nadi, LAT- 21°48'44.15" TO 21°48'50.19" , LONG- 87°12.53.30" TO 87°13'07.21" | NH-16 | | | 5.1 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| D19 | Bilaspur Sand Source Mouza-Bilaspur, Khata No- 53 , Plot No- 120, LAT-21° 57' 13.5036" TO 21° 57' 47.9844", LONG- 87° 13' 31.2816" TO 87° 13' 45.2748" | NH-16 | | | 4.2 | Black Topped | Black Topped | Govt | Mouza-Bilaspur |
| D20 | Malipal SAND BED, Mouza-Malipal, Khata- 501, Plot- 2277, Area- 5Ha Out Of 38.82 Ha,LAT-21°51'09.54151" TO 21°51'20.80386", LONG-87°13'09.81079"TO 87°13'23.17459" | NH-16 | | | 3.69 | Black Topped | Black Topped | Govt | Mouza-Malipal |
| D21 | Rayanramchandrapur Sand Bed, Mouza-Rayanramchandrapur,Khata-1070, Plot-2824, LAT- 21°45'02.84" TO 21°45'13.87" , LONG- 87°12'53.56"TO87°13'06.85" | NH-16 | | | 4.18 | Black Topped | Black Topped | Govt | Mouza-Rayanramchandrapur |
| E1 | Palbegunia Sand Source, MOUZA: PALABEGUNIA KHATA NO 470, PLOT: 270,377,378,786,793,799 (AREA 8.88 AC), KISSAM: NADI, LAT- 21°41'14.17022" TO 21°41'43.02172" ,LONG- 87°14'21.68610" TO 87°14'33.05551" | NH-16 | | | 16.1 | Black Topped | Black Topped | Govt | MOUZA:PALABEGUNIA, NH-16 |
| E2 | Badhapal Sand Source, MOUZA: BEDHAPAL KHATA NO 717,718, PLOT: 973,973/2548,989,955,956,969,990,1193,1194,1198,1199, 1200,1201,1205,1498 (AREA 8.36 AC), KISSAM: NADI, LAT- 21°41'16.80572" TO 21°41'16.80572" ,LONG- 87°17'50.50770" TO 87°18'01.77824" | NH-16 | | | 10.3 | Black Topped | Black Topped | Govt | MOUZA:BEDHAPAL, NH-16 |
| F1 | Kasaba Dahapada Sand Source, MOUZA: KASABA-DAHAPADA KHATA NO 653,143, PLOT:209,210,1429,1483,124,837 (AREA 101.35 AC), KISSAM: NADI, LAT- 21°31'55.99"N TO 21°32'45.13"N ,LONG- 86°55'30.53"E TO 86°56'28.19"E | NH-16 | | | 1.6 | Black Topped | Black Topped | Govt | MOUZA: KASABA-DAHAPADA, NH-16 |

| Cluster No. | Transportation Route No. | Number of tippers/day of cluster | Number of tippers/day of all the cluster 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 |
|-------------|--------------------------|----------------------------------|---|-----------------------|-------------------------------------|--|--|-----------------------------|
| 1 | NH-16 | 1 | 2 | 10.2 | Black Topped | Black Topped | Govt | MOUZA AMBAKURUCHI, NH-16 |
| | NH-16 | 2 | | 8.9 | Black Topped | Black Topped | Govt | MOUZA DEVOG, NH-16 |
| 2 | NH-16 | | | 2.8 | Black Topped | Black Topped | Govt | MOUZA BENAPUR, NH-16 |
| | NH-16 | | | 9.9 | Black Topped | Black Topped | Govt | Mouza-Chalanti, NH-16 |
| 3 | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sahupada, NH-18 |
| | NH-16 | | | 1.53 | Black Topped | Black Topped | Govt | Mouza-. Kathasangada, NH-16 |
| 4 | NH-16 | | | 3.2 | Black Topped | Black Topped | Govt | Mouza-Sikharapur, NH-16 |
| | NH-16 | 1 | 1 | 3.9 | Black Topped | Black Topped | Govt | Mouza-Rajnagar, NH-16 |
| 5 | NH-16 | | | 4.9 | Black Topped | Black Topped | Govt | Mouza-Sekharsai, NH-16 |
| | NH-16 | | | 5.2 | Black Topped | Black Topped | Govt | Mouza-Sekharsai, NH-16 |
| 6 | NH-16 | | | 5.7 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| | NH-16 | | | 5.1 | Black Topped | Black Topped | Govt | Mouza-River Block, NH-16 |
| 7 | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| | NH-16 | | | 1.5 | Black Topped | Black Topped | Govt | Mouza-Praharajpur, NH-16 |
| 8 | NH-16 | | | 8.7 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |

| | | | | | | | | |
|---|-------|--|--|------|--------------|--------------|------|---------------------------------|
| | NH-16 | | | 9.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| | NH-16 | | | 8.1 | Black Topped | Black Topped | Govt | Mouza-Mankidia, NH-16 |
| 9 | NH-16 | | | 7.3 | Black Topped | Black Topped | Govt | MOUZA KADRAYAN, NH-16 |
| | NH-16 | | | 4.18 | Black Topped | Black Topped | Govt | Mouza-Rayaniamchandrapur, NH-16 |


S.D.O, Irrigation Division,
Balasore


S.D.O, Irrigation Division,
Nilgiri


Geologist, O/o the Joint Director
of Geology, Keonjhar


Mining Officer,
Balasore


Deputy Director of Mines,
Bhadrak Circle, Bhadrak


Superintending Engineer, Irrigation Division,
Balasore


Regional Officer,
SPCB, Balasore

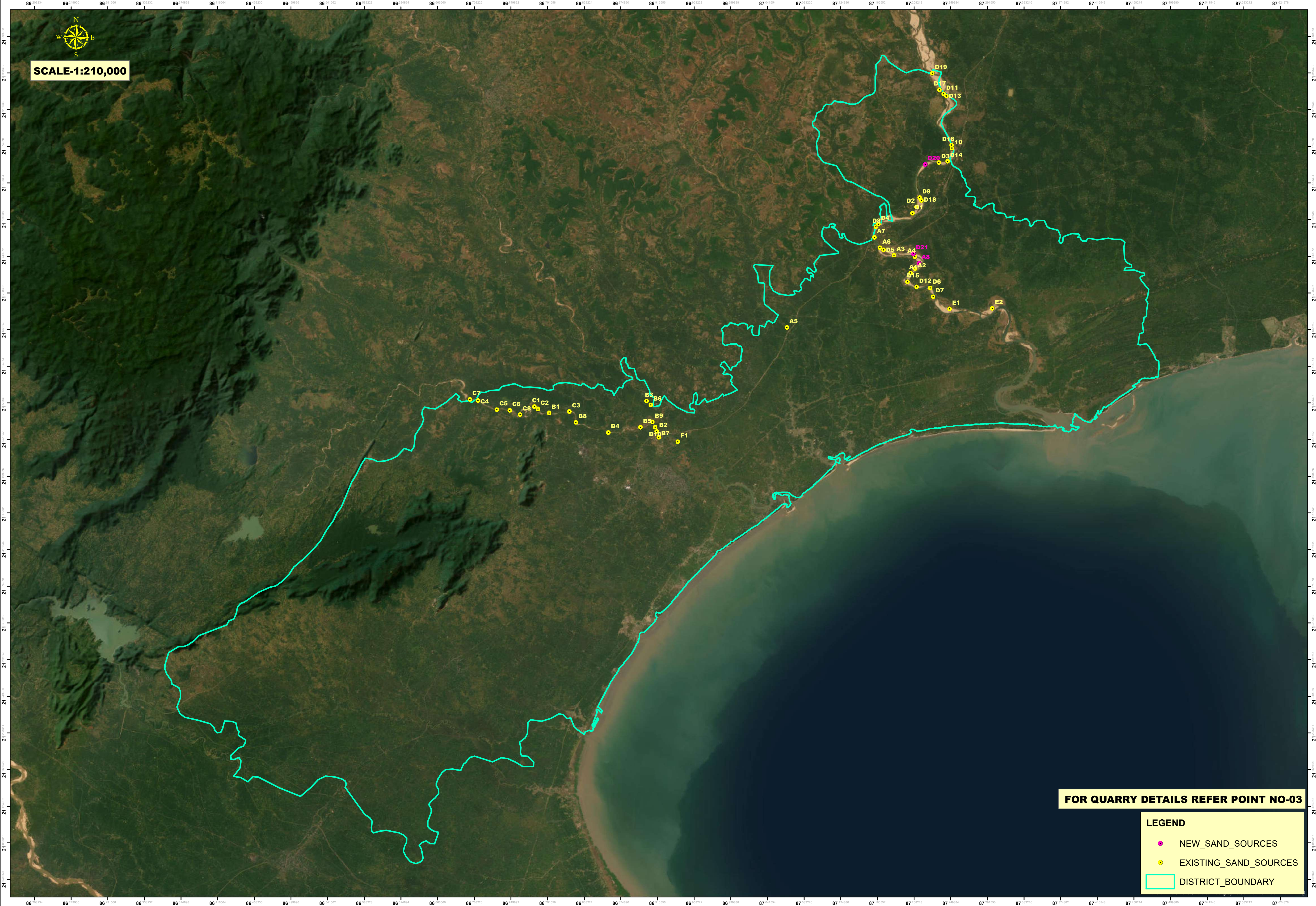

Sub-Collector, Nilgiri-cum-Chairman,
Sub-Divisional Committee, Nilgiri


Divisional Forest Officer, (W.L.)
Balasore


Sub-Collector, Balasore-cum-Chairman,
Sub-Divisional Committee, Balasore


Collector & District Magistrate,
Balasore

MINING LEASES (SAND) MARKED ON THE DISTRICT SATELLITE-MAP OF BALASORE





THE ISSUES AND MANAGEMENT OF MINING IN CLUSTER

In I.A. No. 12-13 of 2011 in SLP Nos. 729-731 / 2011, 21833 / 2009, 12498-499 / 2010, SLP (C) CC ... 16157 / 2011 & CC 18235 / 2011 (Deepak Kumar and Ors. Vs. State of Haryana and Ors. etc.) Hon'ble Supreme Court in its order dated 27.02.2012 on the subject of cluster has quoted the submission of affidavit dated 23.11.2011 of MOEFCC. It says that "The Ministry is of the opinion that where the mining area is homogeneous, physically proximate and on identifiable piece of land of 5 ha. or more, it should not be broken into smaller sizes to circumvent the EIA Notification, 2006 as the EIA Notification, 2006 is not applicable to the mining projects having lease area of less than 5 ha. The Report of Committee on Minor Minerals, under the Chairmanship of Secretary (E&F) with representatives of various state governments as members including the State of Haryana and Rajasthan recommended a minimum lease size of 5 ha for minor minerals for undertaking scientific mining for the purpose of integrating and addressing environmental concerns. Only in cases of isolated discontinued mineral deposits in less than 5 ha, such mining leases may be considered keeping in view the mineral conservation".

The order further quotes that "Cluster of Mine Approach for Small Sized Mines: Considering the nature of occurrence of minor mineral, economic condition of the lessee and the likely difficulties to be faced by Regulatory Authorities in monitoring the environmental impacts and implementation of necessary mitigation measures, it may be desirable to adopt cluster approach in case of smaller mine leases being operated presently. Further these clusters need be provided with processing / crusher zones for forward integration and minimizing excessive pressure on road infrastructure. The respective State Governments / Mine Owners Association may facilitate implementation of Environment Management Plans in such cluster of mines." The order has further quoted the letter dated 1.06.2010 written by the then Minister of Environment, Forest and Climate Change which says on the subject that "A cluster approach to mines should be taken in case of smaller mines leases operating currently". The Hon'ble Court has ordered that "The State of Haryana and various other States have not so far implemented the above recommendations of the MoEF or the Guideliness issued by the Ministry of Mines before issuing auction notices granting short term permits by way of auction of minor mineral boulders gravel, sand etc., in the river beds and elsewhere of less than 5 hectares. We therefore, direct to all the States, Union Territories, MoEF and the Ministry of Mines to give effect to the recommendations made by MoEF in its report of March 2010 and the model Guideliness framed by the Ministry of Mines, within a period of six months from today and submit their compliance reports."

"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."



The Ministry vide O.M. No. L-11011/47/2011-IA.II (M) dated 18th May 2012 said that "In order to ensure compliance of the above referred order of the Hon'ble Supreme Court dated 27.02.2012, it has now been decided that all mining projects of minor minerals including their renewal, irrespective of the size of the lease would henceforth require prior environment clearance. Mining projects with lease area up to less than 50 ha including projects of minor mineral 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 SEIAAs notified by MoEF and following the procedure prescribed under EIA Notification, 2006."

On the issue of cluster, the Notifications No. S.O. 2731 (E) dated 09.09.2013 and Notification No. S.O. No. 2601 (E) of 07.10.2014 were issued.

The above Notifications in Schedule at Item No. 1 (a) in Conditions mentions that "General Conditions shall apply except for projects 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 meters from the periphery of such projects or activity equals or exceeds 5 ha. The Office Memorandum No. J-13012/12/2013-IA-II (1) dated 24.12.2013 is about Guideliness for consideration of proposals for grant of environment clearance under Environment Impact Assessment Notification 2006 and its amendments - regarding categorization of Category 'B' projects/ activities into Category 'B1' & 'B2'.

The above O.M. besides categorizing the Category B into Category B1 & B2 also has directions on mining of brick earth / ordinary earth and river sand mining. These provisions are as follows:

"Mining of minor minerals:

As of now, mining projects of minor minerals with less than 50 hectare of mining lease areas are categorized as Category 'B' as per Notification S.O. 2731 (E) dated 9th September 2013. Also vide O.M. No. L-11011/47/2011-IA-II (M) dated 24.06.2013, Guideliness has been issued regarding categorization of mining projects of brick earth and ordinary earth having lease areas less than 5 hectare as Category 'B2' subject to stipulations stated therein.

In the above backdrop, the projects of mining of minor minerals, categorized as Category 'B' are hereby categorized as 'B2' as per the following:

- (i) 'Brick Earth' / 'Ordinary Earth' mining projects having lease area less than 5 ha will be considered for granting EC as per the aforesaid Guideliness issued by MOEF on 24.06.2013.
- (ii) 'Brick Earth' / 'Ordinary Earth' mining projects with mining lease area more than equal to 5 ha but less than equal to 25 ha and all other minor , mineral mining projects with mining lease area < 25 ha, except for river sand mining projects will be appraised as Category 'B2' projects.



These projects will be appraised based on the following documents:

- (a) Form-1 as per the Appendix-I under the EIA Notification 2006
- (b) Pre-feasibility report of the project
- (c) Mining plan approved by the authorized agency of the concerned State Government.

Provided in case the mining lease area is likely to result into a cluster situation, i.e. if the periphery of one lease area is less than 500 meter from the periphery of another lease area and the total lease area equals or exceeds 25 ha, the activity shall become Category 'B1' Project under the EIA

Notification, 2006. In such a case, mining operations in any of the mine lease areas in the cluster will be allowed only if the environmental clearance has been obtained in respect of the cluster.

About river sand mining it says that:

- (iii) No river sand mining project, with mine lease area less than 5 ha, may be considered for granting EC. The river sand mining projects with lease area more than equal to 5 ha but less than 25 ha will be categorized as 'B2'. In addition to the requirement of documents, as brought out above under sub-para (ii) above for appraisal, such projects will be considered subject to the following stipulations:
 - (a) The mining activity shall be done manually. The depth of mining shall be restricted to 3 m / water level, whichever is less.
 - (b) For carrying out mining in proximity to any bridge and / or embankment, appropriate safety zone shall be worked out on case to case basis to the satisfaction of SEAC / SEIAA, taking into account the structural parameters, locational aspects, flow rate etc., and no mining shall be carried out in the safety zone so worked out. No in-stream mining shall be allowed.
 - (c) The mining plan approved by the authorized agency of the State Government shall inter-alia include study to show that the annual replenishment of sand in the mining lease area is sufficient to sustain mining operations at levels prescribed in the mining plan and that the transport infrastructure is adequate to transport the mines material. In case of transportation by road the transport vehicles will be covered with the tarpaulin to minimize dust/ sand particle emissions.
 - (d) EC will be valid for mine lease period subject to a ceiling of 5 years.

Provided, in case the mining lease area is likely to result into a cluster situation i.e. if the periphery of one lease area is less than 1 km from the periphery of another lease area and total lease area equals to or exceeds 25 ha., the activity shall become Category 'B1' Projects under EIA Notification, 2006. In such a case, mining operation in any of the mine lease area in the cluster will be allowed only if the environment clearance has been obtained in respect of the cluster.



The NGT order dated 13.01.2015 in O.A. No. 123 of 2014 and M.A. No. 419 of 2014 has following directions on the issue of cluster: "In light of the judgment of the Supreme Court and what has emerged from the various cases that are subject matter of this Judgment, we direct the Ministry of Environment and Forest to formulate a uniform cluster policy in consultation with the States for permitting minor mineral mining activity including its regulatory regime, in accordance with law.

Notification S.O. 1559 (E) dated 25th June 2014 provides that "Any project or activity specified in Category 'B' will be appraised at the Central Level as Category 'A', if located in whole or in part within 5 km. from the boundary of: (i) Protected Areas; (ii) CEPI; (iii) ESA; (iv) I n t e r - s t a t e boundaries or international boundaries".

The NGT vide its order dated 13.01.2015 has quashed the Notification dated 9th September 2013, but similar provision on clusters exists in Notification dated 7th October 2014.

The EIA Notification 2006, as amended makes it clear that projects in respect of non-coal mine leases, where the area is more than equal to 50 hectares would require prior Environmental Clearance from MoEFCC, while the projects of area less than 50 hectares would be appraised for prior Environmental Clearance at the level of SEIAA.

The EIA Notification of 2006 in Clause 7 specifies the stages through which projects for grant of Environmental Clearance are required to be passed and processed. The stages include Screening, Scoping, Public Consultation and Appraisal, upon which, the Expert Appraisal Committee makes recommendation to the MoEF/SEIAA. Under 'Screening', this Clause 7 also provides for a further bifurcation of projects falling under category 'B' into 'B 1' and 'B 2'. The relevant part of Clause 7, dealing with this aspect, reads as under: "Stage (1) - Screening (Only for Category 'B' projects and activities): 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 up on 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 Guideliness from time to time."

The Ministry on 24th December, 2013, issued Office Memorandum for consideration of proposals for grant of Environmental Clearance regarding categorisation of Category 'B' projects into Category 'B1' and 'B2'. Mining of minor minerals had been separately dealt with in this Office Memorandum. 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.



The EIA Notification, 2006 does not provide for issuance of Environment Clearance to Cluster of mines. It provides for EC to individual lease holders / project proponents. This position has also been upheld by the Hon'ble Supreme Court in its judgment of Vivek Bansal Vs. State of Haryana that EC should be applied for and granted to the individual lease holder.

There has been rising concerns about adverse impact of mining on small leases (less than 5 hectare) in case the numbers of such leases are large and they are located in close proximity to each other. This leads to the definition of Cluster. To avoid the rigors of environment impact assessment studies, environment management plan and the environment clearance there has been a tendency to break the leases into size which does not attract the provisions of environment impact assessment studies, environment management plan, public consultation and the environment clearance. In Deepak Kumar's case Hon'ble Supreme Court also encountered this situation and in its order dated 27.02.2012 mandated that no mining lease or renewal be done without environment clearance irrespective of size.

It is seen that the categorization of mines into 'B1' and 'B2' category in which Category 'B2' leases are being exempted from the requirement of Environment Impact Assessment, Environment Management Plan, and Public Consultation for grant of EC, in many cases now the mining leases are being given for 25 hectares or less. This defeats the purpose and intent of Hon'ble Supreme Court Judgment which orders environment clearance for all mining leases irrespective of size. The environment clearance without Environment Impact Assessment, Environment Management Plan, and Public Consultation does not serve the purpose of environment clearance which is to ensure environmentally sustainable and socially responsible mining. So if a cluster or individual lease size exceeds 5 hectare, the EIA/ EMP should be completed in the process of grant of prior environment clearance.

The EIA Notification, 2006 and subsequent amendments to that or any O.M. issued by the Ministry do not provide for procedures and Competent Authority for environment clearance for cluster. In a cluster there will mostly be situation where there are a number of different lease holders and as per the settled law the lease holder has to do the working of mine and the lease holder is the one who can apply for and get the environment clearance. The conditions stipulated in the environment clearance have to be complied by the EC holder and any violation of that empowers the authority to cancel the environment clearance or prosecute the EC holder if necessitated by the circumstances.

For cluster there is no mechanism about who will apply for EC, EC will be issued in whose name, and who will be responsible for compliance of EC conditions.

The intent of cluster assessment is to have a holistic knowledge of the impact on environment by different mines operating in close proximity of each other. There are also requirement of mitigative measures which need implementation in concerted manner by different EC holders of that cluster. To ensure that it is important that there should be an integrated Environment Impact Assessment /



Environment Management Plan for the cluster to be presented before the authority appraising the projects and considering the proposals for grant of EC. This integrated EIA/ EMP can be prepared by either the lease holder, group of lease holders, State or the State Agencies. This EIA/ EMP need to be prepared by the accredited consultants / Registered Qualified Persons of the State Governments. The application for EC and grant of EC should be done in the name of individual lease holders in the background of the integrated EIA/EMP report. The Competent Authority (SEIAA/ SEAC / EAC) will entertain individual lease holder's application for grant of EC to individual mining lease projects in that cluster in the name of lease holders. The conditions related to mitigative measures necessitated by the integrated EIA/EMP may run across more than one lease holder or EC holders, that should figure in each EC accordingly and its compliance be ensured by the individual EC holders.

The Hon'ble Supreme Court, NGT, SEAC/EAC and the Project Proponents have raised issue of cluster in mine lease allotment and environment clearance for the same, so following conditions need to be ensured for cluster of mines:

1. To address the concern of adverse impact of minor mineral mining on environment it is proposed that all mining activity including river sand mining (above 5 hectare individual or cluster) will need to prepare Environment Impact Assessment Report and Environment Management Plan before grant of environment clearance. These reports (EIA /EMP) can be prepared by the State or State nominated Agency / the Project Proponent (s).
2. As can be seen from the data provided by the States 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.
3. The EIA Notification, 2006 does not provide for cluster EC, it provides for issuance of EC to individual project proponents and the same has also been upheld in the judgment of Hon'ble Supreme Court in Vijay Bansal vs. State of Haryana case. So EC will have to be applied for and issued to the individual project proponent.
4. 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.
5. 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.
6. 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.
 7. 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.
 8. The details of cluster Environment Impact Assessment or Environment Management Plan shall be reflected in each environmental clearance in that cluster and District Expert Appraisal Committee (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.
 9. As the sand is mostly mined from rivers and majority of the rivers which are important source of sand also form boundary between States, so because of General Conditions most of the sand mining projects become Category 'A' project. So the General Conditions will not apply in case of river sand and gravel mining projects on account of being in 5 kilometer of inter-state boundary.
 10. The Committee headed by the District Magistrate or District Collector will be empowered to appraise and grant EC for mining leases up to 5 ha in case of individual lease and up to 25ha in case of cluster for sand mining.
 11. In case the mining leases are in cluster (if periphery of one lease is within 500 meters), following are the categorization of projects:-
 - Category 'B2'Project: Cluster area of mine leases up to 5 ha and to be dealt at DEIAA/ DEAC level
 - Category 'B2'Project: Cluster area of Mine leases > 5 ha and < 25 ha with no individual lease > 5 ha and to be dealt at DEIAA/DEAC level
 - Category 'B1'Project: Cluster of mine leases of area > 25 hectares with individual lease size < 50ha and to be dealt at SEIAA/SEAC level
 - Category 'A' Project: Cluster of any size with any of the individual lease >50ha and to be dealt at MoEFCC/EAC level



The schematic presentation of requirements on Environmental Clearance of Sand Mining including cluster situation is detailed as below:-

| Area of Lease (Hectare) | Category of Project | Requirement of EIA / EMP | Requirement of Public Hearing | Requirement 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 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 | |
|---|------------|-----|-----|-----|---|-------------------|-------------|--|



Enforcement & Monitoring Guidelines for Sand Mining



Ministry of Environment, Forest and Climate change

January, 2020

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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, SEIAs, DEIAs 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 GUIDELINES

- 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 & ENFORCEMENT

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/Lol. 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 $\frac{3}{4}$ th part of the river, width needs to be identified on a map. Out of the $\frac{3}{4}$ th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining $\frac{1}{4}$ th 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**.

The Member Secretary,

State Environment Impact Assessment Authority, Odisha

Bhubaneswar, Odisha.

Sub: - Fresh Application Seeking Immediate Intervention Against Illegal Sand Mining Without Mandatory Cluster Environmental Clearance at Shikharpur and Rajnagar Sand Sources, Jaleswar Tahasil, Baleshwar District.

Respected Sir/Madam,

We, the undersigned residents of Village Rajnagar under Jaleswar Tahasil, Baleshwar District, most respectfully submit this fresh application seeking urgent intervention of your esteemed Authority in connection with ongoing illegal sand mining activities at Shikharpur and Rajnagar sand sources under Jaleswar Tahasil, Baleshwar District.

1. Background of the Matter

It is submitted that the District Survey Report (DSR) of Balasore District was approved by State Environment Impact Assessment Authority (SEIAA), Odisha on 25.03.2025. As per the approved DSR, the Shikharpur and Rajnagar sand sources have been categorized and treated as a cluster.

Under the Enforcement & Monitoring Guidelines for Sand Mining (EMGSM), 2020 and the EIA Notification, 2006 (as amended), mining leases forming part of a cluster mandatorily require prior Cluster Environmental Clearance (Cluster EC) before commencement or continuation of mining operations.

2. Illegal Continuation of Mining Without Cluster EC

Despite the clear legal requirement, the concerned lessees have not obtained the mandatory Cluster EC. However, mining activities are continuing on a large scale using heavy machinery including excavators and dumpers.

Such continuation of mining without valid Cluster EC is illegal and contrary to environmental safeguards prescribed under law.

3. Serious Violations and Ground Reality

We respectfully submit the following grave irregularities:

- No permanent boundary pillars have been installed at the lease area, resulting in excavation beyond sanctioned limits.
- Multiple heavy machines are being deployed for excessive extraction beyond approved Mining Plan quantities.
- Sand transportation is being carried out through narrow village roads not designed for heavy vehicles, causing severe damage to public infrastructure including Biju Setu bridge and Panchayat link roads.
- Riverbanks of the Subarnarekha River are being destabilized, causing *ecological imbalance and threat to nearby habitations*.
- Extraction has reportedly exceeded approved quantities by a substantial margin in violation of OMMC Rules and EC conditions.

4. Judicial and Legal Context

It is further submitted that earlier individual ECs were based on the old DSR of Balasore District, which was quashed by the Hon'ble National Green Tribunal (Eastern Zone), Kolkata in Appeal No. 18 of 2018 vide order dated 24.07.2025, observing that the earlier DSR was only an interim report and not a final DSR.

In view of the above, continuation of mining without obtaining mandatory Cluster EC is legally unsustainable and amounts to deliberate violation of environmental norms.

In these circumstances, we humbly request your good office to:

- i. Immediately direct stoppage of all mining operations at Shikharpur and Rajnagar sand sources until valid Cluster Environmental Clearance is granted.
- ii. Order a joint inspection through SEIAA/SEAC along with Mining, Revenue, Forest, and Pollution Control authorities.
- iii. Assess excess extraction and impose Environmental Compensation for environmental damage.
- iv. Direct installation of permanent boundary pillars and GPS-based monitoring prior to any future permission.
- v. Initiate appropriate proceedings for violation of EC conditions and provisions of the Environment (Protection) Act, 1986.

We submit this application in the interest of environmental protection, preservation of the Subarnarekha River ecosystem, and safeguarding public property and village infrastructure.

We trust that your esteemed Authority will take immediate and strict action in accordance with law.

Yours faithfully,

The villagers of Rajnagar

Jaleswar Tahasil, Baleshwar District

Date- 19.02.2026

Jaleswar, Baleshwar.

Hanikana Sahoo

Saroj Pradhan

21/02/2026

Aban Kumar

Ranendra Kumar

29/02/2026

[P.T.O.]

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Susit Kumar Pradhan

Narayan Manik

Biswajit Behena

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Satya Narayan Behena

Jaya Krishna Behena

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Pradip Kumar Manik

କନିଷ୍ଠା ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ

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Gayamanyu Samal

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Tushar Ku Sahoo

Shibashankar Manik

Jalouwar H.O (756082) Counter No.3

SP-B 808712/252IN IVR.69/90042/252

19-02-2026 14:45:38, 20gms (Phy.),

To: MEMBER SECRETARY, STATE ENVIRONMENT BHOJANESS

Ardaya Vihar, ODISHA - 751022

From: HATHAPA SAKHO-756086

OR-55.00 (Base:47.00)



(CGST:4SGST:4)

Track@ www.indiapost.gov.in Dial-1800666666

To

The Collector -cum- District Magistrate

Baleshwar District, Odisha.

Sub: - Urgent Petition Regarding Illegal Sand Mining and Non-Compliance of Cluster Environmental Clearance at Shikharpur and Rajnagar Sand Sources under Jaleswar Tahasil, Baleshwar District.

Respected Sir,

We, the undersigned villagers of Rajnagar under Jaleswar Tahasil, most respectfully submit this petition seeking your immediate intervention in a matter of grave environmental concern and blatant legal violations occurring at the Shikharpur and Rajnagar sand sources under Jaleswar Tahasil.

It is submitted that the District Survey Report (DSR) of River Sand Minor Minerals of Baleshwar District was duly approved by State Environment Impact Assessment Authority (SEIAA), Odisha on 25.03.2025. As per the approved DSR, the Shikharpur and Rajnagar sand sources have been categorized as a cluster. In terms of the Enforcement & Monitoring Guidelines for Sand Mining (EMGSM), 2020, and settled environmental jurisprudence, **no individual Environmental Clearance (EC) can operate where leases form part of a cluster**; rather, a mandatory Cluster Environmental Clearance is required prior to commencement or continuation of mining operations.

However, despite this clear legal mandate, the lessees concerned have not obtained the requisite Cluster EC and are continuing large-scale sand extraction in complete disregard of statutory provisions and environmental safeguards.

We respectfully bring to your kind notice the following serious irregularities:

1. Absence of Boundary Demarcation:

No permanent boundary pillars have been erected at the mining sites, resulting in indiscriminate excavation beyond the sanctioned lease area.

2. Excessive and Mechanized Extraction:

Multiple excavators, dumpers, and tractors are being deployed for large-scale extraction far exceeding permissible limits under the approved Mining Plans.

3. Damage to Village Infrastructure:

[P.T.O]

Sand is being transported through narrow village roads designed for vehicles below 10-ton capacity. Due to heavy vehicle movement, newly constructed public infrastructure, including the Biju Setu bridge and the Rajpur–Shikharpur Gram Panchayat link road, has suffered substantial damage.

4.Excess Extraction:

It is reliably reported that both lessees have extracted sand in excess of the approved quantity allegedly more than 200 times the sanctioned limit contrary to the OMMC Rules, 2016 & 2022 and EC conditions.

5.Judicial Findings:

Mining activities are continuing the earlier individual ECs were based on the old DSR of Balasore District, which was quashed by the Hon'ble National Green Tribunal (Eastern Zone), Kolkata in Appeal No. 18 of 2018 vide order dated 24.07.2025, observing that the earlier DSR was only an interim report and not a final DSR. Continuation of mining in absence of Cluster EC, proper demarcation, and approved transportation routes amounts to wilful violation of judicial directions.

Such actions are in clear contravention of:

OMMC Rules, 2016 & 2022

Enforcement & Monitoring Guidelines for Sand Mining (EMGSM), 2020

Environment (Protection) Act, 1986

The ongoing illegal mining is causing irreversible damage to the Subarnarekha River ecosystem, destabilizing riverbanks, affecting riparian habitats, and endangering public infrastructure and the livelihood of local residents.

In view of the above facts and circumstances, we humbly pray that your good office may kindly:

- Immediately suspend all mining operations at Shikharpur and Rajnagar sand sources until valid Cluster Environmental Clearance is obtained.
- Order an urgent joint inspection by Revenue, Mining, Forest, and Pollution Control authorities.
- Assess the quantity of excess extraction and initiate recovery of compensation for environmental damage.
- Direct installation of permanent boundary pillars and implement GPS-based monitoring of extraction and transportation.

[P.T.O.]

- Initiate appropriate legal and departmental proceedings against responsible lessees and any officials found negligent or complicit.

We repose full faith in your esteemed office and sincerely hope for prompt and strict action to safeguard public property, village infrastructure, and the fragile river ecosystem.

Yours faithfully,

The villagers of Rajnagar

Jaleswar Tahasil, Baleshwar District

Date- 19.02.2026

Jaleswar, Baleshwar.

Copy to.....

1. The Mining Officer, Baleshwar, Department of Steel & Mines, Government of Odisha.
2. The Deputy Director of Mines, Bhadrak Circle, Odisha.
3. The Member Secretary, State Pollution Control Board, Bhubaneswar.
4. The Directorate of Minor Minerals, Bhubaneswar, Odisha.
5. The Regional Officer, State Pollution Control Board, Baleshwar.
6. The Superintending Engineer Rural Works Division, Chalanti, Jaleswar.
7. The Executive Engineer Public Works Department, (R&B) Jaleswar.

Hariharu Sahu

Saroj Pradhan

ଅନୁମୋଦିତ/

Aban Kumar

Banendra Kumar

ଅନୁମୋଦିତ

ଅନୁମୋଦିତ

Satish Kumar Pradhan

Narayan Manik

Biswajit Behera

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Satyam Narayan Behera

Jaya Kall Sharma

S.P. Khan

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Pancha Mani Manik

ଅନୁମୋଦିତ

[P.T.O.]

Track@ www.indiapost.gov.in Dial-18002666666



India Post

Jaleswar H.O (756032) Counter No.3
 SP-D E085/125/47IN IVR:69/985/125/47
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 Balasore H.O, ODISHA - 756001
 From:HARTHAPA SAKHO-756086
 (Base:47.00)

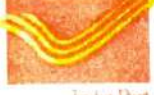
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India Post

Jaleswar H.O (756032) Counter No.3
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 To: MINING OFFICER, BALESWAR
 Kuzula S.O, ODISHA - 756056
 From:HARTHAPA SAKHO-756086
 (Base:47.00)

Track@ www.indiapost.gov.in Dial-18002666666



India Post

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 SP-D E085/125/20IN IVR:69/985/125/20
 19-02-2026 12:14:42,25gms (Phy.),
 To: EXECUTIVE ENGINEER, PUBLIC WORK, JALESWAR
 Jaleswar H.O, ODISHA - 756032
 From:HARTHAPA SAKHO-756086
 (Base:19.00)

Track@ www.indiapost.gov.in Dial-18002666666



India Post

Booking Ref.ID: 2636000514022634057
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 Total CGST: 31 Total SGST: 31

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 Track @ www.indiapost.gov.in

भारतीय डाक



India Post

Jaleswar H.O (756032) Counter No.3
 SP-D E085/125/16IN IVR:69/985/125/16
 19-02-2026 12:09:10,25gms (Phy.),
 To: DEPUTY DIRECTOR OF MINES, BHADRAK CIRCLE
 Bhadrak H.O, ODISHA - 756100
 From:HARTHAPA SAKHO-756086
 (Base:47.00)

Track@ www.indiapost.gov.in Dial-18002666666



India Post

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 SP-D E085/125/81IN IVR:69/985/125/81
 19-02-2026 12:10:03,25gms (Phy.),
 To: MEMBERS SECRETARY, STATE POLLUTION, BHUBANE
 Nayapalli S., ODISHA - 751012
 From:HARTHAPA SAKHO-756086
 (Base:47.00)

Track@ www.indiapost.gov.in Dial-18002666666



India Post

Jaleswar H.O (756032) Counter No.3
 SP-D E085/125/78IN IVR:69/985/125/78
 19-02-2026 12:11:00,25gms (Phy.),
 To: SUPDT OF ENGINEER, RURAL WORKS DWN , CHALAN
 Jaleswar H.O, ODISHA - 756086
 From:HARTHAPA SAKHO-756086
 (Base:47.00)

Track@ www.indiapost.gov.in Dial-18002666666



India Post

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 19-02-2026 12:11:48,25gms (Phy.),
 To: DIRECTOR OF MINOR MINERALS, BHUBANESWAR
 A G S.O, ODISHA - 751001
 From:HARTHAPA SAKHO-756086
 (Base:47.00)



STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, ODISHA
SRF-2/1, Unit-IX, Bhubaneswar-751022, Tel: 0674-3510075, Email: seiaaodisha@gmail.com
(A statutory body constituted by Ministry of Environment, Forest & Climate Change under
Environment (Protection) Act, 1986)

File No. SEIAA-30 / 12-2022

Letter No. 7205/SEIAA

Dated 19.03.2026

To

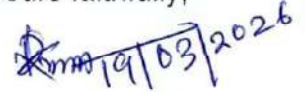
Sri Harihara Sahoo
S/o- Late Kartik Chandra Sahoo,
At- Rajnagar, Po-Shikharapur,
PS-Jaleswar, Dist-Balasore
Pin -756086

Sub: RTI application of Sri Harihara Sahoo, received by SEIAA on dated 23.02.2026 under RTI Act, 2005.

Sir,

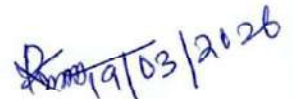
In inviting a reference to the above subject, I am directed to say that a copy of Right to Application (RTI) of Sri Harihara Sahoo has been received by this Office on dated 23.02.2026. This is to inform you that the specific information sought against Serial No.5(c) in regard to environmental clearance of Shikharapur & Rajnagar Sand Sources under Jaleswar Tahasil, Balasore District is enclosed as Annexure-I.

Yours faithfully,


ES & PIO

Copy forwarded to

1. The Registrar, State Information Commission, Odisha, Block No. B-1, Toshali Bhawan, Satyanagar, Bhubaneswar for information.


ES & PIO

Annexure-1

1. Please provide a certified copy of the Environmental clearance (EC), if any, granted to Shikharpur Sand source after approval of District Survey Report (DSR) dated 25.03.2025.

Ans: The EC granted vide letter no.2534/SEIAA dated 04.09.2021 and further amendment of EC was issued vide EC Identification No. EC25C0107OR5622013A dated 28.10.2025. The same is available in the public domain i.e. Parivesh portal 2.0 (Online proposal no. SIA/OR/MIN/551213/2025)

2. Kindly provide a certified copy of the Environmental clearance (EC), if any, granted to Rajnagar Sand Source after approval of District Survey Report (DSR) dated 25.03.2025.

Ans: The EC granted vide EC Identification No. EC23B001OR110281 dated 23.06.2023 and further amendment of EC was issued vide EC Identification No. EC25B0107OR5329391A dated 12.06.2025. The same is available in the public domain i.e. Parivesh Portal 2.0.

3. As per approved DSR dated 25.03.2025, Shikharpur and Rajnagar sand sources have been treated as a cluster. Please clarify whether cluster Environmental Clearance (Cluster EC) has been granted for this cluster, If Yes, provide certified copy of:

- (a) Cluster EC order
- (b) EIA/EMP report
- (c) Public hearing proceedings
- (d) Minutes of SEIAA meeting approving the cluster EC

Ans: EC was issued to Shikharpur sand sources as an individual source under B2-category. Similarly, EC was issued to Rajnagar sand sources as an individual source under B1-category. The details EIA and EMP and Public Hearing proceeding of Rajnagar sand bed is available in the public domain i.e. Parivesh Portal 2.0.

4. Please provide file noting and correspondence between SEIAA and District Administration / Mining Department regarding Cluster EC requirement for Shikharpur & Rajnagar sand sources.

Ans: Regarding the information on cluster certificate is available in the public domain i.e. Parivesh Portal 2.0, the applicant may go through the Parivesh site and download the required documents.

5. Provide certified copy of any application received for Cluster EC for these sand sources and its present status.

Ans: The specific information is not available in this office.

6. Provide copy of compliance reports submitted by the project proponents for the above sand sources during 2025-2026.

Ans: The compliance reports of EC conditions of Shikharpur & Rajnagar sand sources are uploaded in Amendment of EC applications.

7. Provide details of any show cause notice, revocation proceedings, or violation proceedings initiated by SEIAA against the project proponents for non-compliance of EMGSM 2020 or EC conditions.

Ans: The specific information is not available in this office as no Show Cause notice issued.

8. Provide certified copy of the minutes of SEIAA meetings wherein the DSR of Balasore District dated 25.03.2025 was considered and approved.

Ans: The approved DSR of Balasore District is available in the Parivesh 2.0 portal.

9. Provide clarification whether individual EC can remain valid after approval of cluster-based DSR as per EMGSM 2020. If Yes, provide legal basis and official circular relied upon.

Ans: Individual EC approved earlier and DSR of Balasore District approved later on.

10. Provide details of any inspection or verification conducted by SEIAA or SEAC regarding these sand sources after 25.03.2025.

Ans: The specific information is not available in this office

FORM OF VAKALATNAMA
BEFORE THE NATIONAL GREEN TRIBUNAL
EASTERN ZONE BENCH, KOLKATA.

APPEAL NO. _____ OF 2026/EZ.

Between

Harihara Sahoo & Another

.... APPELLANTS

Vs.

State of Odisha & Ors.

... RESPONDENTS

Know all men by these presents that by these Vakalatnama We, 1. Harihara Sahoo, aged about 62 years, S/o- Late Kartik Chandra Sahoo, At- Rajnagar, Po- Shikharpur, Ps-Jaleswar, Dist- Balasore Pin-756086, State Odisha, & 2. Saroj Pradhan, aged about 40 years, S/o- Sarbeswar Pradhan, At- Rajnagar, Po- Shikharpur, Ps-Jaleswar, Dist- Balasore Pin-756086, State Odisha. Appellants of the aforesaid Appeal Case do hereby appoint **SRI MUKESH KUMAR PALAI**, Advocate, En. No- O- 939/2022, MOB- 8144148783 & 8480077076, Email- mukeshpalaiadv@gmail.com,

Advocate (s) to Appeal Matter for us, in the above case and to conduct and prosecute or defend the same and all proceedings that may be taken in respect of any application connected with the same, or any decree or order passed therein including all applications for return of documents or receipt of any money that may be payable to me /us in the said case and also in applications for review, appeals under Orissa High Court Order and in applications for leave to appeal to Supreme Court. I / we authorize my /our Advocate (s) to admit any compromise lawfully in the said case.

Dated the 14 / 06 / 2026.

Received from the Executant(s)

Satisfied and accepted as I hold

No brief for the other side

M. Palai
 Advocate

Advocate

Accepted as above

Accepted as above

Harihara Sahoo
Saroj Pradhan

Signature of the Executant (s)