

**BEFORE THE HON'BLE NATIONAL GREEN
TRIBUNAL, WESTERN ZONE, PUNE
(MAHARASHTRA)**

**ORIGINAL APPLICATION NO.: 162 OF 2024
(AMENDED AS PER ORDER DT. 28.08.2024 IN IA No.
240/2024 (WZ))**

(Under Sections 14 and 15 read with Sections 18 (1) of
the National Green Tribunal Act,2010)

IN THE MATTER OF:

PRAMOD DHANRAJ KHURSANGE ...APPLICANT

VERSUS

STATE OF MAHARASHTRA & ORS. ... RESPONDENTS

REJOINDER AFFIDAVIT ON BEHALF OF THE APPLICANT

FOR INDEX
[SEE INSIDE]

**ADVOCATE FOR THE APPLICANT:
SHUBHENDU ANAND & AYUSH ANAND**

INDEX

S. NO.	PARTICULARS	P. NOS.
1.	Rejoinder on behalf of the Applicant to the Affidavits of the State Respondents along with an Accompanying Affidavit.	4-27
2.	<u>ANNEXURE A-16 (Colly)</u> A copy of the relevant excerpts of the DSRs [publicly available and produced by the State Respondents] showing the anomalies	28-45
3.	<u>ANNEXURE A-17</u> A True Copy of the District Survey Report dated 19.05.2023.	46-260
4.	<u>ANNEXURE A-18</u> A True Copy of the Draft District Survey Report dated 01.11.2023 as available on 27.04.2025.	262-446
5.	<u>ANNEXURE A-19 (Colly)</u> Excerpts of the revised Classification from CPCB of 2016 as well as 2025	447-475
6.	<u>ANNEXURE A-20</u> A True Copy of the Judgment in Mohan Prakash Pandey v. Ministry of Environment, Forest and Climate Change (OA No. 801/2023) and Subhash Bhai v. State of Gujarat and Others (O.A No.34 of 2022) passed by this Hon'ble Tribunal	476-503

7.	<u>ANNEXURE A-21 (Colly)</u> Letters dt. 19.04.2025 along with translation issued by under-secretary of Minister, Revenue, Maharashtra State	504-522
8.	<u>ANNEXURE A-22 (COLLY.)</u> <u>New Reports</u>	523-528
9.	<u>Proof of Service</u>	529

Date: 30.04.2025

Place: New Delhi



**SHUBHENDU ANAND & AYUSH ANAND
(COUNSELS FOR THE APPLICANT)**

Advocates for the Applicant

34 Babar Lane, 1A-LGF

Bengali Market, New Delhi-01

Phone: 7827709253; 9958854192

Email: a.shubhendu@gmail.com

ayush.aor@gmail.com

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**REJOINDER AFFIDAVIT ON BEHALF OF THE APPLICANT
TO THE AFFIDAVITS OF THE STATE RESPONDENTS**

MOST RESPECTFULLY SHOWETH THAT:

1. The present application has been filed before this Hon'ble Tribunal under Sections 14 and 15 read with Sections 18(1) of the National Green Tribunal Act,2010 (hereinafter referred as **NGT Act**) against the illegal sand mining and stockpiling of illegal sand stockyards in the Nagpur District of Maharashtra in furtherance of the Sand Depot Tender/Work Order dated 02.02.2024 floated by the State of Maharashtra.

2. The Applicants herein are aggrieved by the continuous illegal mining with the help of heavy earth moving machines during rainy season i.e. between 10th June to 30th September by the Project Proponents, specifically due to the tender floated for allotment of the stockyard/depot by the Government of Maharashtra on 25.04.2023 in violation of the sand mining guidelines, EIA Notification, 2006 and the Orders of the Hon'ble Supreme Court and this Hon'ble Tribunal.
3. The Impugned Tenders floated on 25.04.2023 and Sand Depot Tender/Work Order dated 02.02.2024 allotted to private respondents herein (Respondents 5 to 12) are blatantly illegal and in violation of numerous environmental laws and guidelines related to environmental protection.
4. That this Hon'ble Tribunal vide Order Dt. 13.09.2024 issued notice to the R13 SEIAA in the first instance in the present matter and sought clarification regarding noncompliance of the directions issued under Sustainable Sand Mining Guidelines (**SSMG of 2016 (Annex A1, Pg. 54)**), Enforcement and Monitoring Guidelines for Sand Mining (**EMGSM, 2020 (Annex A/2, Page. 155)**) and the Judgment dated 22.02.2022 of the NGT Special Bench in ***Prabhat Mohan Pandey v. MP SEIAA and Others (Appeal Nos 25017, 29-65 and 67-71/2021)*** and

further violation of EIA Notification, 2006 with regard to preparation of a District Survey Report and its approval as per law for sand mining in District Nagpur, State of Maharashtra.

5. That on 10.01.2025, this Hon'ble Tribunal noted that the Comprehensive Policy dated 16.02.2024 of the Government of Maharashtra at page 647 to 649 records the requirement of obtaining permission from the Environment Department. Further, this Hon'ble Tribunal in Appeal Nos.25/2021 to 27/2021(CZ) read-with Appeal Nos.29/2021 to 65/2021(CZ) and Appeal Nos.67/2021 to 72/2021(CZ) in the case of **Prabhat Mohan Pandey v. MP SEIAA and Others**, has clearly stipulated the requirement of obtaining the approval from SEIAA for finalizing the DSR. Accordingly, on 10.01.2025 this Hon'ble Tribunal directed SEIAA to present the final DSR as well as the Minutes of the Meeting of SEIAA with respect to the grant of Environmental Clearances. Further, notices were also directed to be issued to the MPCB as well as the Respondent Nos. 5 to 12 (Private Respondents) to respond to why no Consent to Operate and Consent to Establish have been granted to the private Respondents.
6. That thereafter, on 24.02.2025, this Hon'ble Tribunal noted that the Tender dated 02.02.2024 to private Respondent at Page 480 records that rainy season is

declared from June 10th to September 30th and accordingly no sand is allowed to be excavated. Thus, private Respondents cannot be allowed to continue sand mining till the next date of hearing. This Hon'ble Tribunal also enquired from the District Magistrate regarding the liability of the Mining Officer or the Project proponents where there is a violation of the terms and conditions of the Environmental Clearance.

7. That on 04.04.2025, this Hon'ble Tribunal noted the submissions of the counsel for the District Magistrate, Nagpur, and his objections to the admission of the instant Application as well as on the absence of a final DSR. However, this Hon'ble Tribunal concluded that the bar on mining will continue till the next date of hearing, till the matter is disposed on merits after receiving the rejoinder of the Applicant.
8. That in view of the liberty granted by this Hon'ble Tribunal on 04.02.2025, the present comprehensive Rejoinder is being filed to the Affidavit of SEIAA dated 07.01.2025, Compilation dated 23.02.2025 of SEIAA, Additional Report dated 03.04.2024 of SEIAA, Affidavit dated 01.04.2025 and Affidavit dated 24.04.2025 of the Maharashtra Pollution Control Board and Affidavit dated 11.03.2025 of the District Magistrate.

9. That the submissions in the abovementioned Affidavits of the State Respondents are under the below mentioned heads –
- A. The DSR has been prepared and finalized in accordance with the law and there is no irregularity;
 - B. The DSR is not required to be finalized by the State Environment Impact Assessment Authority;
 - C. The mining is being undertaken in accordance with the law and no mining takes place during the rainy season; and
 - D. The consent to establish and operate are not required for undertaking manual mining and stockyards.

The same is being responded to hereinbelow along with some new developments as follows:

10. That the present Rejoinder seeks to respond/clarify to the abovementioned submissions of the State Respondents in the Affidavit, which in the opinion of the Appellant herein, are being made without due consideration of the facts and position of law as laid down in the statutes as well as the Orders of the Hon'ble Supreme Court and this Hon'ble Tribunal.

A. Response to - The DSR has been prepared and finalized in accordance with the law and there is no irregularity

11. That pursuant to the Order of this Hon'ble Tribunal, Respondent No.13 SEIAA, on 07.01.2025 had filed its Reply Affidavit along with copies of 22 Environmental Clearances dated 02.02.2024 granted to the Project Proponents. Further, vide the same Reply, the 274th SEIAA Minutes of Meeting dated 08.01.2024 has also been annexed, wherein it is apparent that the DSR has not even been discussed, let alone approved, despite the same being a statutory mandate and only EC granted was evaluated revalidated and the validity of the EC was extended **till 30.09.2024.**

12. It is further submitted that due to such facts this Hon'ble Tribunal vide Order dt. 24.02.2025 directed that *"...Therefore, in no circumstances, without further authorization of a permission, these respondents can be allowed to do mining activities on the sand block in question. Therefore, we direct the District Collector, Nagpur- Respondent No.1 to ensure that no sand mining is allowed to be done at the sand block in question till the next date of hearing."* And further directed answering Respondents to clarify on what

basis mining was allowed. It is further submitted that most specifically the EC was extended only up to **30.09.2024** as per Para 5 of the Reply dt. 07.01.2025 by R13 [Ref. **Annexure 2 of Report by SEIAA R13 filed on 07.01.2025**]. Therefore, any mining after this period is without any authority.

13. As regards the DSR, it is reiterated that there was never a finally approved DSR based on which the ECs were granted. This is brought out from the fact that in the latest Affidavit of SEIAA as well as the DM, the same Draft DSR is now preceded by a Letter which seems to be an afterthought, has been pasted which claims that the Draft DSR is in fact the Final DSR. The fact that there is no Letter number and no official seal clearly shows that the said Letter is a fudged document.

14. This is further buttressed by the fact that the Final DSR dated 19.05.2023 was also downloaded by the Applicant which was uploaded temporarily on the website of the District Collector's office of Nagpur, a copy of which has been appended as **Annexure A-17**. The same clearly gives the file number along with the letterhead which is now mysteriously missing. What is more surprising is that the ECs note that the DSR was finally approved on 01.11.2023 which is still uploaded on the website of the District

Collector's office as draft DSR. The above averments make it clear that there is a huge discrepancy in the dates relating to DSR, wherein three dates namely, 19.05.2023, 01.11.2023 and 05.12.2023 are variously pasted on different DSRs clearly showing that there is something more than meets the eye.

A copy of the relevant excerpts of the DSRs [publicly available and produced by the State Respondents] showing the anomalies have been appended herewith as **Annexure A-16 from Page No. 28 to 45.**

15. Therefore, this Hon'ble Tribunal may call for record for the entire communication vide letter/file no. खनि -३/कक्ष-२१/कावि-२०३/२०२३ and any communication related with preparation of DSR 2023-2024 and also to see if the same has been really approved by SEIAA in consultation with Department of Geology or not.

A True Copy of the District Survey Report dated 19.05.2023 is annexed here with as **Annexure A-17 from Page No. 46 to 260 .**

A True Copy of the Draft District Survey Report dated 01.11.2023 as available on 27.04.2025 is annexed here with as **Annexure A-18 from Page No. 261 to 446.**

16. In Para 8 Pg. 7 of the Reply Affidavit of R1 & R3 it has been stated that the mining operation was handed back to project proponents on **29.11.2024 [Exhibit R-16]** whereas the ECs have expired as per SEIAA **on 30.09.2024** itself. Therefore, such handing back of sand mines without valid EC on the basis of their record itself reeks of complete non application of mind and disregard for the above stated Sand Mining Guidelines. Therefore, for environmental damages heavy fines should be imposed on the perpetrators for illegal mining.

B. Response to -The DSR is not required to be finalized by the State Environment Impact Assessment Authority

17. In the said Reply in Para 10, R13 has admitted that there is no direction or necessity in Maharashtra for SEIAA to approve the DSR. It is most respectfully submitted that the same averment is in direct contravention of established law as per the Hon'ble Supreme Court Judgment in ***Deepak Kumar Vs. State of Haryana (2012) 4 SCC 629*** and this Hon'ble Tribunal in Satendra Pandey Vs. MoEF &CC dt. 13.09.2018 [**A-12 @Pg. 995 at Para 22@Pg. 1009**] and as per Appendix X of the EIA Notification dt 15.01.2016 [**A-13 @Pg. 1018**].

18. It is further submitted that R13-SEIAA is in wrong perception that the appropriate authority is Department of Geology and Mines, Govt. of Maharashtra. It is rather only an assisting unit as per EIA notification for supporting and assessing the Annual Replenishment Studies for the preparation of the DSR, which has also been never even consulted for assessing Annual Replenishment studies, as an expert body and no evidence of any communication with respect to that has been annexed herewith by any answering Respondents. Therefore, the present OA has been filed against this disregard to the law.
19. Admittedly, in the present case the onus of preparing and finalizing the DSR in Nagpur District is completely shifted upon District Mining Officer and District Collector, who has prepared the same arbitrarily without following the mandatory directions in this regard for the sand mining in the district.
20. The concerned district authority has nowhere taken assistance and no proof of any survey and official communication with the Department of Geology and Mines, Govt. of Maharashtra has been annexed with their Reply by R1 & R3. Contrary to that in their reply to Affidavit dt. 11.03.2025, which has been received by the Applicant on 03.04.2025, it has been pleaded in Para 3 that they have given

presentation of the final DSR to the member of SEAC committee, therefore it is as good as approved by SEIAA. Which is completely contrary to the stand taken by R13 and guidelines and law of the land in this regard.

21. Interestingly in the present matter as there was no supervising authority in preparation and approval of DSR, Ld. Authority in the District, R1 & R3 has on its discretion prepared and manipulated with the DSR as it when pleases for their convenience and even changed the uploaded file on the District Website (<https://nagpur.gov.in/>) and now trying to mislead this Hon'ble Tribunal when they are caught for noncompliance of the direction in preparation of DSR and for sand mining to continue with the illegal mining to give unjust favor to private parties.

22. The conduct of R1 and R3 in the present matter is under serious doubt and requires scrutiny about the manner in which they are helping and supporting the illegality in sand mining in the district. Interestingly Reply Affidavit filed by the R4 -Maharashtra Pollution Control Board vide 01.04.2025 and 24.04.2025 has given clean chit on the point of Consent Orders as admittedly the stock yards are being maintained without CTO by stating that the same is exempted as the operation involves only manual stocking. This is not only a false statement on facts as admittedly

mining and stocking is being done by heavy machinery and EC was obtained for this purpose, but the law on consent is clear from the revised classification from CPCB as it existed, where under Item 59 it is clear that such stockyards require consent. Even under the new classification dated 12.02.2025, from the Item No 7.1 it is clear about requirement of consent for stock yard. Further, the evidence annexed with OA as **A-7 Pg. 798-816** and news reports vide **Annexure A-22** clearly depicts that trucks and machines are being used for this purpose, which has been evaded by R4 in its reply. Further the excerpts of the revised Classification from CPCB of 2016 as well as 2025 are also annexed collectively as **Annexure A-19 (Colly) from Page No. 447 to 475.**

23. That this Hon'ble Tribunal (Principal Bench) in the case of Mohan Prakash Pandey v. Ministry of Environment, Forest and Climate Change (OA No. 801/2023) and as well as this Hon'ble Bench in Subhash Bhai v. State of Gujarat and Others (O.A No.34 of 2022) has clearly held that DSR has to be approved by SEIAA before it attains finality. The copy of the relevant Judgments is marked and annexed as **ANNEXURE A-20 from Page No. 476 to 503.**

C. The mining is being undertaken in

**accordance with the law and no mining takes
place during the rainy season**

24. It is further submitted that the issue with regard to illegal mining and stocking of Sand in the district of Nagpur is even raised by Shri Ashish Jaiswal, the Minister of State, Finance, Planning, Agriculture, Relief and Rehabilitation, Law and Justice, Labour Government of Maharashtra before the Hon. Chandrashekhar Bawankule, Minister, Revenue, Maharashtra State, and guardian minister for the Nagpur District. The same has been brought to notice of the Divisional Commissioner of Nagpur vide letter dt. 19.04.2025 issued by the Under Secretary of the Guardian Minister of Nagpur District.

A copy of the said letters dt. 19.04.2025 along with translation issued by under-secretary of Minister, Revenue, Maharashtra State are appended collectively as **Annexure (Colly) A-21 from Page No. 504 to 522.**

25. It is most respectfully submitted that despite the ban by this Hon'ble Tribunal from 24.02.2025 the authorities in the district in complete disregard continuing with sand mining operation and illegally stocking sand minerals without adhering to the law, which is creating huge menace for the people living in the area.

26. The contents of the letter issued by the minister of the State is self-explanatory and reproduced here for clear understanding of the ground situation:

“Subject: Regarding conducting a thorough inquiry into irregularities at sand stockyards, depots, and stocks in Nagpur district and taking appropriate action.

Respected Sir/Humble Request

In Nagpur district, there is frequent violation of rules regarding sand mining. Despite the guidelines, instructions, and orders issued by the government regarding the sand policy, these are being flouted. Illegal extraction and transportation of sand are ongoing by showing existing stock and remaining stock at various sand yards. Even when the auction period for sand yards has expired, stock is shown as existing, and after a long period of expiry, permission is granted to sell this stock again by acting contrary to the government's policy. Sand is extracted and sold from the stock, and then the stock is left as is. At the aforementioned locations, the orders given by the Hon'ble High Court on September 26, 2023, regarding CCTV cameras, as per the government's decision, have not been implemented. The terms and conditions laid down in the sand policy of April 19, 2023, regarding the excavation, transportation, storage, production, and management of sand, have been violated. However, no action has been taken by the District Mining Officer, Nagpur, on behalf of the administration. Action has not

been taken according to the preventive measures that were mentioned. Excavation is not being carried out at any sand yard according to the mining plan, and there is a violation of environmental permits. However, no action has been taken on this either.

The sand policy of February 16, 2024, regarding the excavation of sand, its transportation up to the storage point, and the management of the storage, has also been completely violated in terms of its conditions. However, no action has been taken on the directives issued by the government regarding preventive measures. No inquiry or action has been initiated by the office of the District Mining Officer, Nagpur, regarding the irregularities that have occurred at the sand yards and storage points, and it has been deliberately ignored. Common citizens are being made to wait for hours to obtain sand. If an inquiry is conducted in this matter, many issues will come to light.

If we examine the sand yard in Parshivani Taluka as an example, we will notice several things. No inspection was conducted regarding the GPS system and CCTV, despite the government's directives, and the sand mafia received full cooperation and protection.

Illegal sand yards and depots have been distributed un-authorizedly in the Kanhan and PENCH river areas of Parshivani Taluka, which is inconsistent with the minor

mineral excavation, extraction, and storage policy of the Maharashtra Government. The District Mining Officer, Nagpur, Parshivani Taluka, has un-authorizedly distributed a total of 7 depots between November 2024 and February 2025, which is inconsistent with the State Government's Sand Policy. The information regarding this is as follows.

- 1. M/s. Manswi Traders, Wadhoda Gat (Group) No. 127/1, the name of the sand yard is Saholi-A, Saholi-B, Wadhoda Gat (Group) No. 134, 138, 127/7 respectively has a sand depot at Mouza-Saholi. This allocation was done by the Additional Collector, Nagpur's order No. Khani/Karm 2/Kavi 393/2024 dated 21.11.2024.*

There is no old sand stock at Wadhoda. New sand yard no. 126 has been created in the Pench river bed with the help of tractors and dozers, and sand has been stored there. Based on false reports, the old sand stock has been shown. There is no new sand stock at Wadhoda. The Saholi A or B sand yard is not currently operational, and there is no sand stock. There are many complaints from customers against M/s. Manswi Traders. Some complaints are pending in the Consumer Court, Nagpur. The District Mining Officer, Nagpur, and the concerned authorities under the sand policy are facilitating black marketing of sand. Regarding this, the Tahsildar, Parshivani,

submitted a report to the District Mining Department, Nagpur, on 07.01.2025. In reality, illegal excavation and sale of sand have taken place here. All activities carried out in the name of the depot are illegal. An inquiry should be conducted and action taken in this matter.

- 2. M/s. Nissar Sons has been granted permission for the sand yard (riverbed sand extraction site) and depot in Gut (Group) No. 144 at Pardi, covering Pardi, Palora, and Nayakund sand yards, by the Additional Collector, Nagpur, on 25.11.2024. Additionally, a sub-depot has been given at Pardi, which is against the rules, in the name of the depot, sand from the Pench and Kanhan rivers has been illegally extracted, and a stock of sand has been shown as per the above. In this work, Talathi, Palora has also provided false information. The sand stock that was actually shown did not exist. However, illegal extraction and sale were carried out in the area under this name.*
- 3. Ramdoot Multiservices Pvt. Ltd. has been granted permission for a depot in Mauza-Junikamathi Gat (Group) No. 41 and a sub-depot in Mauza-Nilaj. The sand yard of the Kanhan River at Old Kamthi, Singardeep, which has expired, has been shown. This order is from the Additional District Collector,*

Nagpur, dated 25.11.2024. Irregularities have occurred in this depot as well, similar to the above. In the name of this sand block, an incorrect stock has been shown again, and unlimited extraction has been carried out. A thorough investigation is necessary regarding this illegal excavation and irregularities.

- 4. Permission for the depot has been granted in the name of the Executive Engineer, DDC Cell, Nagpur Municipal Corporation at Mouza-Pimpal by the order of the Collector, Nagpur on 03.02.2025. There is no need to give a separate depot to Nagpur Municipal Corporation at this place. Sand can be made available for necessary work by using the stock rack at the depot. The District Mining Officer, Nagpur has made his allocation in this manner. Non-government persons are extracting sand at the government yard.*
- 5. M/s. M. Z. Enterprises, by the name of Mirza Baig, has been granted permission for the Doreli sand depot, group no. 79, Doreli sand yard (Pench river) by the District Collector, Nagpur, on 31.01.2024. A special permission to lift 763 brass of sand was given until 30.04.2025. However, there is no sand at the mentioned location. An unauthorized sand depot has been created with the help of agricultural land. The case of illegal*

sand extraction from this yard is pending in court. There was no sand at the location before the depot was created. An artificial sand stock has been created by diverting the riverbed of the PENCH river. The false sand stock has been certified by the revenue officer, Patwari, Doreli. None of the rules laid down by the government for the depot have been followed at this location. Sand transportation has been continuously going on for the last 4 months but there has been no reduction in the size of the stock. The stock is replenished at night with the help of tractors. There are no CCTV cameras here either.

6. *Mirza Beg was ordered by the District Mining Officer, Nagpur to allocate depots at Palora during the period from 26.02.2025 to 17.05.2025. Similar irregularities have occurred at Palora as well. A total of 7 depots have been allocated in Parshivani Taluka by violating Government Rules. The entire depot allocation has been done by unauthorized violation of the sand policy. The District Mining Officer, Nagpur, and the concerned Talathi are responsible for this entire matter.*

The period given for extracting sand by auction was too long. The entire sand yard is operated by a person named Tabrej Siddiqui. Offences of sand theft and illegal transportation

are registered against Tabrej Siddiqui. This person has been involved in the sand business for many years and works in collusion with officials and some political leaders and is known as the sand mafia. A report should be sought from the police regarding the said person. It is requested that a high-level special investigation committee be formed to investigate this entire matter concerning the Parshevani Taluka and most of the sand yards in the Nagpur district or the individuals involved, and action should be taken against the guilty officials by fixing responsibility.”

D. The consent to establish and operate are not required for undertaking manual mining

27. That Further, Maharashtra PCB has stated that due to manual sand mining, excavation, there is no requirement of Consent as per the CPCB revised classification of industrial sectors. At the outset it is pertinent to highlight that the amount of sand as visible from the photographs as well as the presence of machines at Page(s) 799-800 of the Application makes it clear that mechanical mining is ongoing in clear violation of the CPCB Directions as well as the conditions of Environmental Clearance. The presence of JCBs in the newspaper reports clearly highlights that mechanized mining is ongoing in the

name of manual excavation. Further as stated earlier, the law on consent is clear from the revised classification from CPCB as it existed in 2016, where under Item 59, it is clear that such stockyards require consent. Even under the new classification dated 12.02.2025, under Item No 7.1, it is clear about requirement of consent for stock yard. Such understanding of the regulatory body about the law itself speaks volumes about how such illegality is being perpetrated by their offices totally in connivance with private parties and a high-level inquiry must be set up to examine these illegalities and concerned persons and officers should be proceeded against in accordance with law.

28. Therefore, it is most respectfully prayed that as an interim measure this Hon'ble Tribunal may be pleased to:

- a. *Direct any appropriate high level authority to conduct a thorough inquiry into irregularities at sand stockyards, depots, and stocks in Nagpur district and taking appropriate action*
- b. *Direct R1 & R2 to produce all records corresponding to communication with respect to preparation of DSR 23-24 and including Letter No.*

खनि-३/कक्ष-२१/कावि-२०३/२०२३.

29. That, moreover, the issue of widespread illegal mining in District Nagpur has come to the fore on

numerous occasions from 2024 to 2025 as evidenced though recent News Reports. These news reports brought into public notice that for illegal mining even an illegal bridge has been created which was recently dismantled and Material Worth ₹100 Crore Seized by Nagpur Rural Police; 192 persons Killed by Trucks in City in 2024. The news reports further clearly depict how heavy machines and earthmovers are being used for mining purposes in the district.

A true copy of the News Reports has been appended herewith as **Annexure A-22 (Colly.)** from **Page No. 523 to 528.**

30. That it is most respectfully submitted and prayed that liberty may be reserved for the Applicant to further plead additional facts and grounds in the present matter as and when necessary.

31. That an Affidavit in support of the present Rejoinder is filed along with.

Applicant



Through

**SHUBHENDU ANAND & AYUSH ANAND
(COUNSELS FOR THE APPLICANT)**

Phone: 7827709253; 9958854192

Email: a.shubhendu@gmail.com

ayush.aor@gmail.com

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ORIGINAL APPLICATION NO.: 162 OF 2024 (WZ)
(AMENDED AS PER ORDER DT. 28.08.2024 IN IA No. 240/2024 (WZ))

IN THE MATTER OF:

Pramod Dhanraj KhursangeAPPLICANT

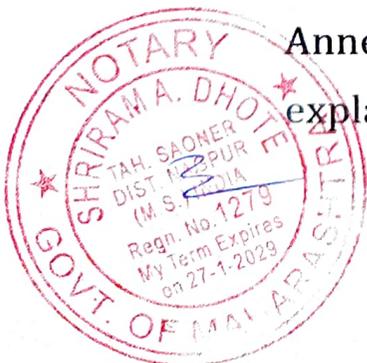
VERSUS

State of Maharashtra & ORS. RESPONDENTS

AFFIDAVIT

I, Pramod Dhanraj Khursange aged about 49 yrs
s/o Dhanraj Khursange r/o Ward No. 2 Bhendala,
Waki, Nagpur, Maharashtra- 441113 do hereby
solemnly affirm and declare as under:

4. That I am the Applicant in the present petition and am familiar with the facts and circumstances of the present case. I state that I am fully competent to swear this Affidavit.
5. That the contents of the present Rejoinder Affidavit from Para No.1 to 31 [Page No. 4 to 25] along with Annexure A-16 to A-22 has been read over and explained to me. I have understood the same and



state that the averments made therein are true and correct to the best of my knowledge and belief.

6. That the Annexures annexed to this Rejoinder are true copies of their respective originals.

[Signature]
DEPONENT

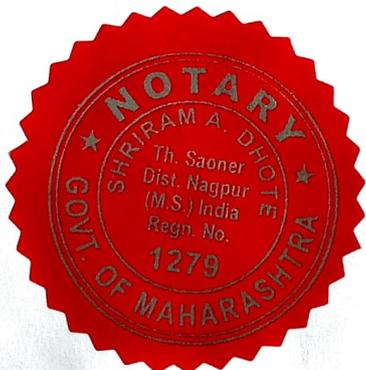
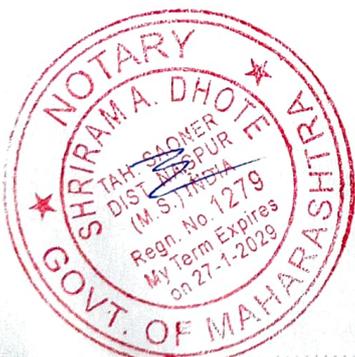
VERIFICATION:



Verified at Nagpur on this the 27th April, 2025 that the contents of the above affidavit are true and correct to the best of my knowledge and belief and the same has been explained to me in my vernacular language.

NOTARIAL REG.
ENTRY NO. 1151
DATE 27/04/2025

[Signature]
DEPONENT



SWORN / SOLEMNLY AFFIRMED
BY Poamod Dhanraj
Khuro sange
WHO IS PERSONALLY KNOWN
TO ME / IDENTIFIED BY Adv
Subhendra Anand
BEFORE ME THIS THE 27th
DAY OF April 2025 AT
TAH. SAONER

Thote
SHRIRAM A. DHOTE
NOTARY
TH. SAONER DIST. NAGPUR
(M.S.) INDIA



ANNEXURE A 16

DISTRICT SURVERY REPORT

*Riverbed Sand Mining and other
Minor Minerals*

(As per Ministry of Environment, Forest and Climate Change, G.O.I. New Delhi; Notification No. S.O. 3611 (E) 25th July, 2018 and As per Enforcement and Monitoring Guidelines for Sand Mining, 2020, MoEF & CC-New Delhi)

**District Collector,
Nagpur
2023-2024**

FOR PART-A**INDEX**

Chapter	Description	Page No
1	Introduction	1-6
2	Overview of Mining Activity in the District	7—8
3	List of mining leases in the District with location, area and period of validity	9-20
4	Drainage of Royalty Or Revenue received	21-22
5	Details of Production of Sand or Bajri or minor mineral	23-24
6	Process of deposition of sediments in the rivers of the District	25-30
7	General Profile of the District	31-32
8	Replenishment study of sand ghat	33-44
9	Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining	45-48
10	Physiography of the district	49-50
11	Rainfall of the district & climatic condition	51-52
12	Geology and Mineral wealth	53-60
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	61-66

Annexure I	69-70
Annexure II	71-72
Annexure III	73-74
Annexure IV	75-78
Annexure V	79-82
Annexure VI	83-84
Annexure VII	85-88
Sand Ghat Site Specific Enforcement & Monitoring Plan	89-92
Photographs of sand spots	93-112

FOR PART-B

INDEX

Chapter	Description	Page No
1	Introduction	115-116
2	Overview of Mining Activity in the District	117-118
3	General Profile of the District	119-120
4	Geology of the District	121-126
5	Drainage and Irrigation Pattern	127-128
6	Land Utilization Pattern in the district	129-130
7	Surface Water and Ground Water Scenario of the district	131-134
8	Rainfall of the District and climate condition	135-136
9	Details of Mining leases of the District	137-156
10	Details of Royalty or Revenue received	157-158
11	Production of Minor Mineral in last 5 years	159-160
12	Mineral Map of the District	161-162
13	List of letter of intent (LOI) holders in the district.	163-168
14	Total minerals reserve available in the district	169-170
15	Quality/ Grade of mineral	171-172
16	Use of the Mineral	173-174
17	Demand and Supply of the mineral	175-176
18	Mining lease mark on the map	177-178
19	Details of the area of where there is a cluster of mining lease	179-192
20	Details of Eco-Sensitive Area	193-194
21	Impact on the Environment Due to mining activity	195-196
22	Remedial Measures to mitigate the Impact of mining on the Environment	197-198
23	Reclamation	199-200
24	Risk Assessment & Disaster Management Plan	201-204
25	Occupational Health issues in the district	205-206
26	Plantation and Green belt development in respect of lease already granted in the District	207-208



महसूल व वन विभाग

जिल्हाधिकारी कार्यालय, सिव्हील लाईन्स, नागपूर

Email ID : dmonagpur1@gmail.com

क्रमांक: खनि-3/कक्ष-21/कावि- 203 /2023
दिनांक: 19/05/2023

CERTIFICATE

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District Collector**Nagpur**

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SR No	Amendment Details	Amendment Date	Page No	Signature District Mining Officer
1	Amendment in DSR	05/07/2024	163-168	
2.				
3.				
4.				
5.				

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**District Collector,
Nagpur
2023-2024**

**FOR PART-A
INDEX**

Chapter	Description	Page No.
1	Introduction	1-5
2	Overview of Mining Activity in the District	6-7
3	List of mining leases in the District with location, area and period of validity	8-28
4	Drainage of Royalty Or Revenue received	29
5	Details of Production of Sand or Bajri or minor mineral	30-31
6	Process of deposition of sediments in the rivers of the District	32-36
7	General Profile of the District	37-38
8	Replenishment study of sand ghat	39-51.I
9	Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining	52-55
10	Physiography of the district	56-57
11	Rainfall of the district & climatic condition	58
12	Geology and Mineral wealth	59-65
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	66-71

Annexure 1	73
Annexure 11	74
Annexure 111	75
Annexure 1V	76-77
Annexure V	78-80
Annexure VI	81
Annexure V11	82-83
Photographs of sand spots	88-95

FOR PART-B

Chapter No	Description	Page No.
1	Introduction	97
2	Overview of Mining Activity in the district	98
3	General Profile of the District	99-100
4	Geology of the District	101-105
5	Drainage and Irrigation Pattern	106-107
6	Land Utilization Pattern in the district	108
7	Surface Water and Ground Water Scenario of the district	109-112
8	Rainfall of the District and climate condition	113
9	Details of Mining leases of the District	114-122
10	Details of Royalty or Revenue received	123
11	Production of Minor Mineral in last 5 years	124
12	Mineral Map of the District	125
13	List of letter of intent (LOI) holders in the district	126-130
14	Total minerals reserve available in the district	131
15	Quality/ Grade of mineral	132
16	Use of the Mineral	133
17	Demand and Supply of the mineral	134
18	Mining lease mark on the map	135
19	Details of the area of where there is a cluster of mining lease	136-149
20	Details of Eco-Sensitive Area	150
21	Impact on the Environment Due to mining activity	151-153
22	Remedial Measures to mitigate the Impact of mining on the Environment	154-155
23	Reclamation	156
24	Risk Assessment & Disaster Management Plan	157-159
25	Occupational Health issues in the district	160
26	Plantation and Green belt development in respect of lease already granted in the District	161

CERTIFICATE

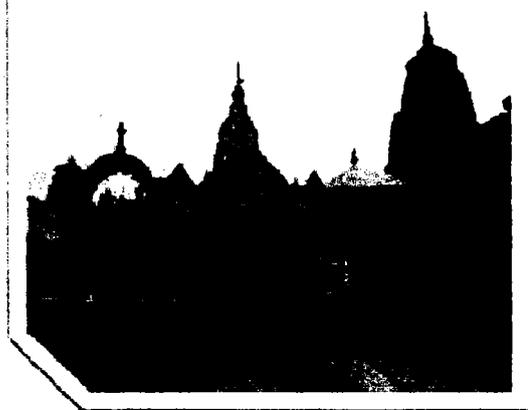
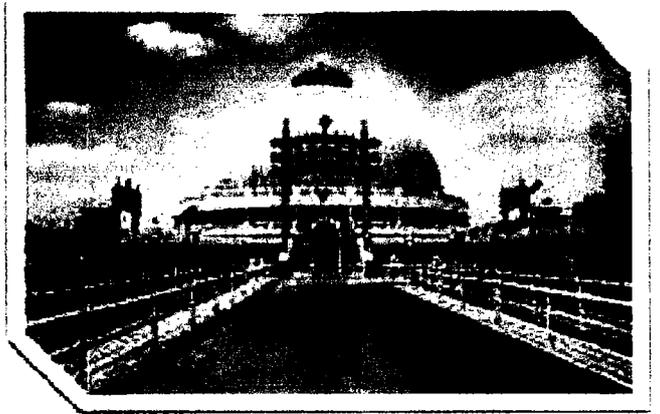
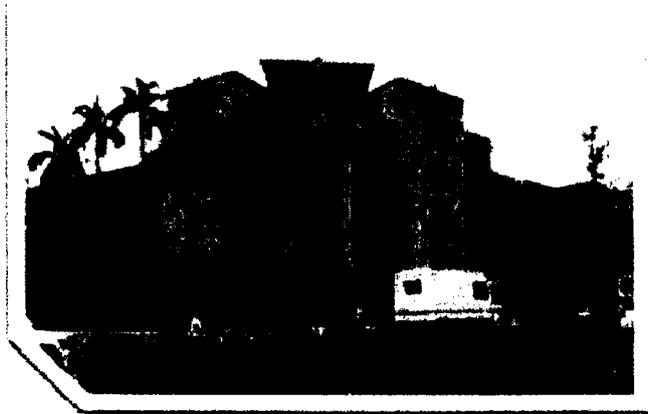
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District Collector,
Nagpur
2023-2024

**FOR PART-A
INDEX**

Chapter	Description	Page No.
1	Introduction	1-5
2	Overview of Mining Activity in the District	6-7
3	List of mining leases in the District with location, area and period of validity	8-28
4	Drainage of Royalty Or Revenue received	29
5	Details of Production of Sand or Bajri or minor mineral	30-31
6	Process of deposition of sediments in the rivers of the District	32-36
7	General Profile of the District	37-38
8	Replenishment study of sand ghat	39-51.I
9	Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining	52-55
10	Physiography of the district	56-57
11	Rainfall of the district & climatic condition	58
12	Geology and Mineral wealth	59-65
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	66-71

Annexure 1	73
Annexure 11	74
Annexure 111	75
Annexure 1V	76-77
Annexure V	78-80
Annexure VI	81
Annexure VI1	82-83
Photographs of sand spots	88-95

FOR PART-B

Chapter No	Description	Page No.
1	Introduction	97
2	Overview of Mining Activity in the district	98
3	General Profile of the District	99-100
4	Geology of the District	101-105
5	Drainage and Irrigation Pattern	106-107
6	Land Utilization Pattern in the district	108
7	Surface Water and Ground Water Scenario of the district	109-112
8	Rainfall of the District and climate condition	113
9	Details of Mining leases of the District	114-122
10	Details of Royalty or Revenue received	123
11	Production of Minor Mineral in last 5 years	124
12	Mineral Map of the District	125
13	List of letter of intent (LOI) holders in the district	126-130
14	Total minerals reserve available in the district	131
15	Quality/ Grade of mineral	132
16	Use of the Mineral	133
17	Demand and Supply of the mineral	134
18	Mining lease mark on the map	135
19	Details of the area of where there is a cluster of mining lease	136-149
20	Details of Eco-Sensitive Area	150
21	Impact on the Environment Due to mining activity	151-153
22	Remedial Measures to mitigate the Impact of mining on the Environment	154-155
23	Reclamation	156
24	Risk Assessment & Disaster Management Plan	157-159
25	Occupational Health issues in the district	160
26	Plantation and Green belt development in respect of lease already granted in the District	161

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District Collector

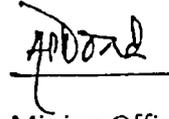
Nagpur

Exhibit- R-8

Date:05.12.2023

Subject : Regarding Final Publication of amended " Final District Survey Report".

To whom so ever it may concern, this is to inform that amendment in " District Survey Report" in with inclusion of data was published as " Draft" on district website of Nagpur, Maharashtra on for suggestions, comments, objections etc. from public at large with wide publicity in Daily Lokmat Daily 02.11.2023 & 03.11.2023 for 30 days as per Enforcement and Monitoring Guidelines 2020 issued by Ministry of Environment, Forest and Climate Change, Government of India, New Delhi. As no suggestions, comments, objections are received within the stipulated period of Draft Publication. Draft District Survey Report is considered as amended "Final District Survey Report" and subsequently published on district website.



District Mining Officer, Nagpur

Copy of "Final District Survey Report" to:

D.I.O. Nagpur for Publication on district website as amended "Final District Survey Report"

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Nagpur
2023-2024**

**FOR PART-A
INDEX**

Chapter	Description	Page No.
1	Introduction	1-5
2	Overview of Mining Activity in the District	6-7
3	List of mining leases in the District with location, area and period of validity	8-28
4	Drainage of Royalty Or Revenue received	29
5	Details of Production of Sand or Bajri or minor mineral	30-31
6	Process of deposition of sediments in the rivers of the District	32-36
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10	Physiography of the district	56-57
11	Rainfall of the district & climatic condition	58
12	Geology and Mineral wealth	59-65
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	66-71

Annexture 1	73
Annexture 11	74
Annexture 111	75
Annexture 1V	76-77
Annexture V	78-80
Annexture V1	81
Annexture V11	82-83
Photographs of sand spots	88-95

FOR PART-B

Chapter No	Description	Page No.
1	Introduction	97
2	Overview of Mining Activity in the district	98
3	General Profile of the District	99-100
4	Geology of the District	101-105
5	Drainage and Irrigation Pattern	106-107
6	Land Utilization Pattern in the district	108
7	Surface Water and Ground Water Scenario of the district	109-112
8	Rainfall of the District and climate condition	113
9	Details of Mining leases of the District	114-122
10	Details of Royalty or Revenue received	123
11	Production of Minor Mineral in last 5 years	124
12	Mineral Map of the District	125
13	List of letter of intent (LOI) holders in the district	126-130
14	Total minerals reserve available in the district	131
15	Quality/ Grade of mineral	132
16	Use of the Mineral	133
17	Demand and Supply of the mineral	134
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20	Details of Eco-Sensitive Area	150
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22	Remedial Measures to mitigate the Impact of mining on the Environment	154-155
23	Reclamation	156
24	Risk Assessment & Disaster Management Plan	157-159
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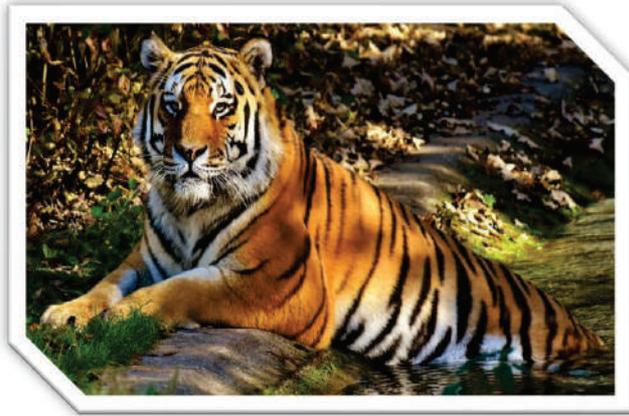
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FOR PART-A

INDEX

Chapter	Description	Page No
1	Introduction	1-6
2	Overview of Mining Activity in the District	7—8
3	List of mining leases in the District with location, area and period of validity	9-20
4	Drainage of Royalty Or Revenue received	21-22
5	Details of Production of Sand or Bajri or minor mineral	23-24
6	Process of deposition of sediments in the rivers of the District	25-30
7	General Profile of the District	31-32
8	Replenishment study of sand ghat	33-44
9	Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining	45-48
10	Physiography of the district	49-50
11	Rainfall of the district & climatic condition	51-52
12	Geology and Mineral wealth	53-60
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	61-66

Annexure I	69-70
Annexure II	71-72
Annexure III	73-74
Annexure IV	75-78
Annexure V	79-82
Annexure VI	83-84
Annexure VII	85-88
Sand Ghat Site Specific Enforcement & Monitoring Plan	89-92
Photographs of sand spots	93-112

FOR PART-B

INDEX

Chapter	Description	Page No
1	Introduction	115-116
2	Overview of Mining Activity in the District	117-118
3	General Profile of the District	119-120
4	Geology of the District	121-126
5	Drainage and Irrigation Pattern	127-128
6	Land Utilization Pattern in the district	129-130
7	Surface Water and Ground Water Scenario of the district	131-134
8	Rainfall of the District and climate condition	135-136
9	Details of Mining leases of the District	137-156
10	Details of Royalty or Revenue received	157-158
11	Production of Minor Mineral in last 5 years	159-160
12	Mineral Map of the District	161-162
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14	Total minerals reserve available in the district	169-170
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Chapter 1

INTRODUCTION

1.1 District Nagpur

Nagpur District is a District in the Vidarbha region of Maharashtra state in central India. The city of Nagpur is the district headquarters. The district is part of Nagpur Division. In 1853, after the death of Raghoji III, the princely state of Nagpur was annexed by the British and the territory occupied by the present district became part of Nagpur Province. In 1861, it was merged with the Central Provinces and Nagpur district became a part of one of its divisions, Nagpur division. In 1903, it became part of the Central Provinces and Berar. In 1950, Nagpur district became part of the newly formed Madhya Pradesh state and Nagpur became its capital. In 1956, after the reorganisation of states, Nagpur district was incorporated in Bombay state. On 1 May 1960, it became a district of Maharashtra state.

Nagpur district is bounded by Bhandara District on the east, Chandrapur District on the southeast, Wardha District on the southwest, Amravati District on the northwest and Chhindwara District of Madhya Pradesh state on the north. Nagpur city is the winter capital of the state of Maharashtra, with a population of 2,405,421. It has also recently been ranked as the cleanest city and the second greenest city of India. In addition to being the seat of annual winter session of Maharashtra state assembly "Vidhan Sabha", Nagpur is also a major commercial and political centre of the Vidarbha region of Maharashtra.

1.2 History

The city was founded by the Gonds but later became part of the Maratha Empire under the Bhonsles. The British East India Company took over Nagpur in the 19th century and made it the capital of the Central Provinces and Berar. After the first reorganization of states, the city lost its capital status but according to the "Nagpur Pact" between political leaders it was made the second capital of Maharashtra.



Figure 1. The Zero Mile Stone, landmark denoting geographical centre of India

Nagpur is also called "Tiger Capital of India" as it connects many Tiger Reserves in India to the world. It is among the important cities for IT sector in Maharashtra after Pune, Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India.

Princely states are shown in yellow. The Nag River, a tributary of the Kanhan River, flows in a serpentine path and is therefore named "Nag", the Marathi word for snake. And hence, the river and city is named as Nagpur, While others says that the river flows through the old city of Nagpur and hence the city is named after this river. "Pur" is a common suffix given to cities, villages and towns across India, and is often simply translated "city" The seal of Nagpur Municipal Corporation depicts a cobra in the water of a river.

Human existence around present day Nagpur city can be traced back 3000 years to 8th century BC. Mehir burial sites at Drugdhamna (near Mhada colony) indicate megalithic culture existed around Nagpur and is still followed in present times. The first reference to the name Nagpur is found in a 10th century copper-plate inscription discovered at Devali in the neighbouring Wardha district. The inscription is a record of grant of a village situated in the visaya (district) of Nagpura - Nandivardhana during time of Rastrakuta king Krsna III in the Saka year 862 (940 CE). Towards the end of third century King Vakataka dynasty. Vindhyasakti is known to have ruled the Nagpur region. In the 4th century Vakataka Dynasty ruled over the Nagpur region and surrounding areas and had good relations with the Gupta Empire. The Vakataka king Prithvisena I moved his capital to Nagardhan (ancient name Nandivardhana), located at 28 kilometres (17 mi) from Nagpur. After the Vakatakas, the region came under the rule of the Hindu kingdoms of the Badami Chalukyas, the Rashtrakutas, and finally the Yadavas. In AD 1296 Allauddin Khilji invaded the Yadava Kingdom after capturing Deogiri, after which the Tughlaq Dynasty came to power in 1317.

In the 17th century, the Mughal Empire conquered the region. However, regional administration was carried out by the Gond kingdom of Deogarh- Nagpur in the Chhindwara district of the modern-day state of Madhya Pradesh.

Recent history ascribes the founding of Nagpur to Bakht Buland, a prince of the kingdom of Deogarh-Nagpur. The next Rajs of Deogarh was Chand Sultan, who resided principally in the country below the hills, fixing his capital at Nagpur which he made a walled town. On Chand Sultan's death in 1739, Wali Shah, an illegitimate son of Bakht Buland, usurped the throne and Chand Sultan's widow invoked the aid of the Maratha leader Raghuji Bhonsle of Berar in the interest of her sons Akbar Shah and Burhan Shah The usurper was put to death and the rightful heirs placed on the throne. After 1743, a series of Maratha ralers came to power, starting with Raghoji Bhonsle, who conquered the territories of Deogarh, Chanda and Chhattisgarh by 1751.

In 1803 Raghoji II joined the Peshwa against the British in the Second Anglo-Maratha War, but the British prevailed. After Raghoji II's death in 1816, his son Parsaji was deposed

and murdered by Mudhoji II. Despite the fact that he had entered into a treaty with the British in the same year, Mudhoji joined the Peshwa in the Third Anglo-Maratha War in 1817 against the British, but suffered a defeat at Sitabuldi in present-day Nagpur city. The fierce battle was a turning point as it laid the foundations of the downfall of the Bhonsles and paved the way for the British acquisition of Nagpur city. Mudhoji was deposed after a temporary restoration to the throne, after which the British placed Raghoji III the grandchild of Raghoji II, on the throne. During the rule of Raghoji III (which lasted till 1840), the region was administered by a British resident. In 1853, the British took control of Nagpur after Raghoji III died without leaving an heir.

From 1853 to 1861, the Nagpur Province (which consisted of the present Nagpur region, Chhindwara, and Chhatisgarh) became part of the Central Provinces and Berar and came under the administration of a commissioner under the British central government, with Nagpur as its capital. Berar was added in 1903. Tata group started the country's first textile mill at Nagpur, formally known as Central India Spinning and Weaving Company Ltd. The company was popularly known as "Empress Mills" as it was inaugurated on 1 January 1877, the day queen Victoria was proclaimed Empress of India.

The Non-cooperation movement was launched in the Nagpur session of 1920. After Indian Independence in 1947, Central Provinces and Berar became a province of India, and in 1950 became the Indian state of Madhya Pradesh, again with Nagpur as its capital. However, when the Indian states were reorganised along the linguistic lines in 1956, Nagpur and Berar regions were transferred to Bombay state, which in 1960 was split between the states of Maharashtra and Gujarat.

At a formal public ceremony on 14 October 1956 in Nagpur B. R. Ambedkar along with his supporters converted to Buddhism starting Dalit Buddhist movement which is still active. Nagpur is a city with great capabilities to grow and prosper in the coming days. It is very important for State and Central Governments to contribute to the growth, development, prosperity of Nagpur. Nagpur completed 300 years of establishment in the year 2002. A big celebration was organized to mark the event.

1.3 Location and Geographical data:

Nagpur is located in central India in the eastern part of Maharashtra state between 20°35" north to 21 44" north latitudes and 78 15 east to 79°40 east longitudes. Nagpur is bordered by Amravati and Wardha in the west, Bhandara in the east and Chandrapur in the south. In the north, it shares its boundary with the state of Madhya Pradesh.

It falls in parts of the Survey of India Toposheet Nos. 55 K/7, 55 K/8, 55 K/11, 55 K/12, 55 K/15, 55 K/16, 55 L/13, 55 O/2, 55 O/3, 55 O/4, 55 O/6, 55 O/7, 55 O/8, 55 O/10, 55 O/11, 55 O/12, 55 P/1, 55 P/2, 55 P/5, 55 P/6, 55 P/9. The general elevation of the District ranges between 150 to 600 m AMSL. The terraced landscape of the Deccan lava on the west appear as several flat topped hills well furrowed by streams.

The upland ridges in the north are an extension of the ranges of the Satpura hills and the eastern and south eastern part exhibit an apparently featureless tract with scattered isolated hillocks

1.4 Administrative set up

The Nagpur District is divided into 7 sub divisions, i.e Nagpur (City) Nagpur (Rural), Umred, Ramtek, Mouda, Saoner, and Katol, which are further divided into 14 Tehsils, given in Table 1.1 and tehsil map is illustrated in Fig 1.3. The Nagpur is the district's headquarter.

Sr No.	Subdivision	Tehsil
1	Nagpur(City)	Nagpur City
2	Nagpur(Rural)	Nagpur (Rural),Hingna
3	Umred	Umred,Bhiwapur,Kuhi
4	Ramtek	Ramtek,Parseoni
5	Mouda	Mouda, Kamptee
6	Saoner	Saoner, Kalmeshwar,
7	Katol	Katol, Narkhed

Table- 1.1 Administrative Units of the Dsistrict

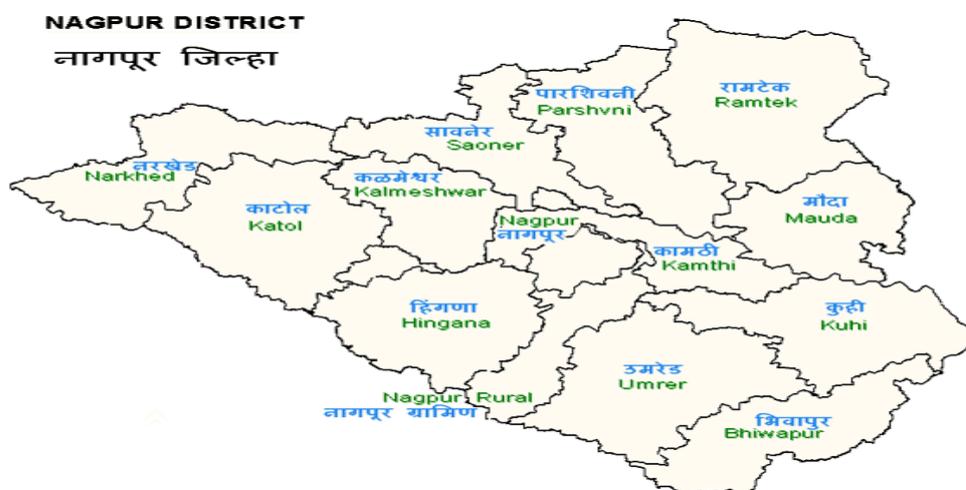


Fig 1.3 Tehsil Map of the District

1.5 Demography:

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171. and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932.. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76% and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census

1.6 Basin/ Sub Basin:

The district falls in the Godavari Basin which is further divided into Kanhan sub basin. and Pench Sub basin which is drained in the south. Important Rivers of the district are Kanhan, Pench, Nag, Kolar, Pur, Wainganga and Wardha.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is moderately rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee apart from the high grade coal found in Umred tahsil.

Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	No of Mines
1	Manganese Ore	39
2	Coal	14
3	Dolomite	15
6	Sand (Stowing)	02
7	Stone Quarry	151

Table 2: Mineral production in Nagpur district

The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned. As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 16-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 17-18. The details of royalty collected from minor mineral from 2015-2016 to 2020-21 are given in the Chapter 5. The quantity of minor mineral consumption is a thermometer to assess the quantity of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river

borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope. The 8 local residents used to lift gravel etc. from the river beds to meet out their bonafide requirement. However after coming into being the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, and Revised sand Mining Policy dated 03/09/2019 for sand mining projects as the mining was allowed in accordance to the rules.

Main Objectives of Sustainable Sand Mining:

- To ensure that sand and gravel mining is done in environmentally sustainable and socially responsible manner.
- To ensure availability of adequate quantity of aggregate in sustainable manner.
- To improve the effectiveness of monitoring of mining and transportation of mined out material.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Avoid aggradations at the downstream reach especially those with hydraulic structures such as jetties, water intakes etc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and in stream habitats.
- Avoid pollution of river water leading to water quality deterioration.
- To prevent depletion of ground water reserves due to excessive draining out of groundwater.

CHAPTER 3
THE LIST OF SAND MINING LEASES IN THE DISTRICT
WITH LOCATION, AREA AND PERIOD OF VALIDITY

Details of the Sand mining leases in the district are as follows.

Table No.1 List of Sand Ghats Proposed / auctioned in the year 2016-2017

Sand Ghat Name	Taluka	Survey No.	Area in Hector	Available Brass	Upset Price
Waregaon 2	Kamptee	204 ,3 part	3.00 hec	10601	5820000
Khairi Panjab Nalla 2	Mauda	1 adjoining and 4 part	2.25 hec	3975	1590000
Saholi B	Parseoni	136/2,141/2,1116/2,115/2,113/2,112/2,110/2	4.16 hec	14700	13304000
Walni	Saoner	8 part,9,10 Adjoining	3.60 hec	6360	8733000
Kodamendi	Mauda	115,116 Adjoining	0.30 hec	530	262000
Khedikhurd	Narkhed	15,16,18,19,20/1,20/2,3,4,5/1,5/2,6/1,6/2,7,8 part	2.00 hec	7067	2827000
Bawangaoon D	Saoner	208,204 Adjacent 203 some part	3.60 hec	12721	7544000
Palora A	Parseoni	150part	2.47 hec	4373	2440134
Mahalgaon	Mauda	260part	4.50 hec	7950	4389000
Naygaon Thakre	Narkhed	103part	1.87hec	3313	1326000
Thadipauni	Narkhed	80	0.80 hec	2845	1138000
Moregaon	Mauda	22,23adjoining	1.82 hec.	3216	1293000
Saholi A	Parseoni	15,16,17,18,19,20,21	4.80 hec.	8481	8828721
Wagoda	Saoner	127/1 Adjoining Some Part	4.68 hec	24837	11996271
Pardi	Parseoni	135,138 part	4.00 hec	7067	7258000
Ramdondri A	Saoner	144, 143 part	5.00 hec	8834	12130000
Umri Ja Nalla	Saoner	89,91,94part	3.71 hec	6555	2622000
Karajghat	Saoner	15 Adjacent	4.00 hec	14134	8382000

Wadna	Mauda	53,54part 55 part 52	3.02 hec	10689	4319000
Sihora	Parseoni	169, 142 part	2hec	3534	2736000
Bhamewada B	Kamptee	old 115 new 124Adjacent	1.35 hec	2385	
Indora A	Mauda	159 and 165/2 Adjacent	0.39 hec	689	277000
Bawangaoan A	Saoner	254,253,251, 252	3.5 hec	12367	5500500
Wakodi B	Mauda	44 part	2 hec	7067	9703000
Mohadi	Mauda	89,90part	0.36 hec	636	257000
Gowari	Mauda	63/2, 69 and 79 some part	0.36 hec	636	257000
Nandapur	Saoner	220,221,237, 238	3.85 hec	13604	8067172
Itgaon	Parseoni	420 some part 421 and 422	2.24 hec	3958	4674398
Khairi Panjab Nalla 1	Saoner	5,6,14 part	0.75 hec	1325	530000
Chichghat	Kuhi	46 Adjoining	3 hec	5300	2120000
Sirsoli	Mauda	10,11part	2.34 hec	4134	1435532

Table No.2 List of sand ghat proposed in 2017-2018

Sr. No.	Name of Sand Ghat	Tehsil	Name of River / Nalas	Gut number on the river bank near the sand Ghat	Area (Hector)	Available Sand (Brass)	Upset price
1	2	3	4	5	6	7	8
1	Rohna	Saoner	Kanhan River	168	2.80	4947	7267150
2	Dahegaon RA	Saoner	Kolar River	243	1.25	2208	3243560
3	Esapur -A	Saoner	Kanhan River	92, 91,93,94,115 adjacent part	3.60	12720	18685680
4	Randongri-A	Saoner	Kanhan River	30,31,32,and 33 Excluding the adjacent part	3.15	11130	23539950
5	Kairi Panjab Nalah -A	Saoner	Kairi Panjab Nalah	17,18 adjacent part	0.40	706	955800
6	Khapapeth	Saoner	Kanhan River	The northern part of 284 up to 500 meters	4.0	14134	10982120
7	Gosevadi-A	Saoner	Kanhan River	2572,85,286	4.80	8480	12457120
8	Kochhi	Saoner	Kanhan River	2632,64,267	4.50	7950	4603050

9	Vaki-A	Saoner	Kanhan River	180,181,182Part	4.05	7155	9823820
10	Temburdoh-A	Saoner	Kanhan River	260,274,279 adjacent part	3.20	11308	6705650
11	Temburdoh-B	Saoner	Kanhan River	2502,40,239	3.20	11308	6705650
12	Pardi-B	Parshivani	Kanhan River	144,142 / 5 to 142/9 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
13	Pardi-C	Parshivani	Kanhan River	146, 148, 153, 157 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
14	Pipla	Parshivani	Pench River	353/1,353/2,354	1.89	3339	1863170
15	Bakhari	Parshivani	Pench River	188,189,190 (excluding 100 meters distance of municipal supply well and bridge)	1.93	3418	1907250
16	Palora-B	Parshivani	Pench River	43/1,43/2,45/1	1.75	3092	1725340
17	Sonegaon (Raja)-No.2B	Kamptee	Kanhan River	341 Part,342,345	3.75	13250	13223500
18	Neri Ghat No.2A	Kamptee	Kanhan River	217,219,220,221, 223and 224 Part	5	8833	8815340
19	Neri Ghat No.2B	Kamptee	Kanhan River	224 Part 230,227,229	5	8833	8815340
20	Ungaon Ghat No.2A	Kamptee	Kanhan River	206, 208, 211, 212 Part	4.5	7950	7934100
21	Ungaon Ghat No.2B	Kamptee	Kanhan River	212 Part, 217,218,219	4.5	7950	7934100
						157545	167523470

- In the year 2018-2019 auctions of sand ghat were not carried out due to PIL67/2017 in High Court, Nagpur

Table No.3 List of Sand ghat proposed for the year 2018-2019

Sr No	Name of Sand Ghat	Tahsil	Name of River/Nallas	Nearest Sr No.	Depth	Length in Meter	Width in Meter	Area in Hectore	Quantity in Brases
1	Temburdoh-A	Saoner	Kanhan	260,274,279Adjoinin g	0.5	400	80	3.2	5654
2	Temburdoh-B	Saoner	Kanhan	239Part,240,250Part	1	400	80	3.2	11307

3	Walni	Saoner	Kanhan	9,8,10Part and 276 survey no. of river	0.3	400	80	3.2	339 2
4	Ramdo ngri A	Saoner	Kanhan	31,32,30	0.9	450	70	3.15	100 18
5	Ramdo ngri B	Saoner	Kanhan	143,144 part	0.5	400	100	4	707 6
6	Ramdo ngri k	Saoner	Kanhan	140,135 part	0.5	400	70	2.8	494 7
7	Badega on	Saoner	Kanhan	431,433,435,436,437 Adjoining	0.75	500	90	4.5	119 26
8	Khapa peth	Saoner	Kanhan	The northern part of 284 adjoins up to 500 m	0.60	500	80	4.00	848 1
9	Khairi Panjab	Saoner	Khairi Panjab	18 Some part of 19 adjacent	0.40	200	20	0.40	565
10	Wakod i	Saoner	Kanhan	44 Adjoining	0.40	500	90	4.50	636 0
11	Gosew adi A	Saoner	Kanhan	285,286,287 Adjoining	0.60	480	100	4.80	101 77
12	Gosew adi B	Saoner	Kanhan	254,253 Adjoining	0.50	320	75	2.40	424 0
13	Nanda pur	Saoner	Kanhan	220 Adjoining	0.40	475	80	3.80	537 1
14	Esapur A	Saoner	Kanhan	91 some part 93,94,115 in adjacent river basin Survey.No.92	0.40	450	80	3.60	508 8
15	Esapur B	Saoner	Kanhan	85,87 in the adjacent river basin,Survey.No.92	0.85	300	80	2.40	720 8
16	Rohana	Saoner	Kanhan	129,132 degrees in the adjacent river basin, Surevy no.168	0.75	350	80	2.10	742 0
17	Dahega on Rangar i B	Saoner	Kanhan	211,212,214 Nearby and river basin Surevy.No.244	0.40	300	40	1.20	169 6
18	Waki A	Saoner	Kanhan	180,181,182 Adjoining	0.40	450	90	4.05	572 4
19	Waki B	Saoner	Kanhan	189, 190, 191 Adjoining	0.50	350	80	2.80	494 7
20	Raiwad i	Saoner	Kanhan	185,183,180,179 ₹ 188 Adjoining (Survey no..171 and 190 Excluding)	0.60	450	75	3.37	715 5
21	Ungao n	Kampt ee	Kanhan	222,219,218,217,212 ,211 Adjoining	0.40	650	74	4.81	679 9
22	Warega on A	Kampt ee	Kolar	204 and 3 Adjacent	1.00	350	50	1.75	618 4
23	Warega on B	Kampt ee	Kolar	10/1, 10/2, 13/1, 13/2, Adjoining	0.60	550	58	3.19	676 3
24	Bina	Kampt ee	Kanhan	56,57,53/37/1 ,58 Adjoining	0.40	830	60	4.98	703 9
25	Sonega on Raja	Kampt ee	Kanhan	338,339, 337Adjoining	1.00	752	65	4.88	172 72
26	Chikna	Kampt ee	Kanhan	7 some part 8, 9, 10, 11 and 12 some part	1.00	450	40	1.8	636 0

27	Neri	Kamptee	Kanhan	217 some part 219, 220, 221, 223 and 224/1 some part	1.00	565	86	4.85	17170
28	Bhamewada	Kamptee	Kanhan	128 some part, 144 some part, 135/2, 136/2, 129 Adjacent	0.80	600	30	1.8	5088
29	Nayakund	Parseoni	Pench River	33 and 26 Adjoining	0.40	200	100	2.00	2827
30	Pardi K	Parseoni	Kanhan	153 Adjoining	0.50	250	100	2.50	4417
31	Wagoda	Parseoni	Pench River	127/1 Adjoining	0.50	334	120	4.00	7081
32	Ghatrohana	Parseoni	Pench River	54 Some part 148 Adjoining	0.40	300	100	3.00	4240
33	Yesamba	Parseoni	Pench River	207 Adjoining	0.80	304.5	36	1.09	3099
34	Sihora	Parseoni	Kanhan	170/1, 170/2 Some part 170/3, 170/4 Adjacent	0.50	200	90	1.80	3180
35	Palora A	Parseoni	Pench River	150 Adjoining	0.40	200	50	1.00	1413
36	Pimpla	Parseoni	Pench River	353 Adjacent 354 Adjoining	0.50	215	90	1.93	3419
37	Chichghat	Kuhi	Kanhan	45 Adjoining	0.80	200	100	2.00	5654
38	Khedikhurd A	Narkhed	Wardha	3,4,5,6,7,8,15,16 Adjacent	0.40	750	25	1.87	2650
39	Khedikhurd B	Narkhed	Wardha	155,157,168,169 Adjoining	0.40	1150	25	2.87	4064
40	चिकना घाट	Mauda	Kanhan	532 some part 541,542 Adjacent	0.50	550	90	4.95	8746
41	Mohkhedi A	Mauda	Kanhan	117,118 Adjoining	0.90	490	100	4.9	15583
42	Mohkhedi B	Mauda	Kanhan	132,133,135,136 Adjoining	0.50	490	100	4.9	8657
43	Mahalgaoon A	Mauda	Sur	Some parts of Survey No. 6 & 260 and Survey No. 23,24,25,26,261 in front of Mauja Pipalgaon	0.50	380	60	2.28	4028
44	Mahalgaoon B	Mauda	Sur	385,386,387,389 Adjoining	0.50	275	70	1.92	3401
45	Sirsoli	Mauda	Sur	188 Adjoining	0.40	170	75	1.27	1802
46	Kirnapur	Mauda	Kanhan	109, 110, 111, 107, 105, 104,103 Adjacent	1.00	620	80	4.96	17527
47	Wakeshwar	Mauda	Sur	16 Adjacent 17 Adjacent	0.40	150	30	0.45	636
48	Belda	Ramket	Kundiya Nalla	180 Adjoining	0.40	300	25	2.27	1060

Table No.4 List of Sand ghat proposed for the year 2019-2020

- In the year 2019-2020 Sand ghats were not auctioned because of PIL 11/208

Table No.4 List of Sand ghat propped for the year 2020-2021

List of in the district 26 Sand Ghats were finalized for the auction in 2020-2021. The details of there are as follows:

SR No.	Name of Sand Ghat	Taluka	Name of River	Adjacent Survey number to Sand ghat	Length (Meter)	Width (Meter)	Area (Hector)	Extractable depth (Meter)	Available Quantity (Brass)
1.	Raiwadi-A	Savner	Kanhan	179, 180, 183, 184, 186	450	75	3.37	0.40	4770
2.	Temburdoh	Savner	Kanhan	1(Part), 279, near gavthan	425	75	3.18	0.80	9011
3.	Wakodi	Savner	Kanhan	44 (Part)	500	70	3.35	0.80	9894
4.	Ramdongari-B	Savner	Kanhan	143 (Part), 144 (Part)	400	100	4.00	0.30	4240
5.	Khapapeth	Savner	Kanhan	284 North part 500 m	500	75	3.75	0.40	5300
6.	Karajghat	Savner	Kanhan	15 (Part)	470	75	3.52	0.80	9965
7.	Isapur-A	Savner	Kanhan	90 (Part) 93, 94, 115, 116	475	80	3.80	0.60	8057
8.	Rohana	Savner	Kanhan	168, 3 (Part) 7 B(Part)	350	60	2.10	0.60	4452
9.	Bawangaon-A	Savner	Kanhan	252, 253	243	80	1.94	0.50	3435
10.	Ghatrohana	Parshivani	Pench	53 (Part), 52, 46, 45 (Part)	500	60	3.00	0.80	8481
11.	Paradi	Parshivani	Kanhan	153, 157	740	90	6.66	0.50	11767
12.	Sinagdeep	Parshivani	Kanhan	80, 81, 82	550	80	4.40	0.50	7774
13.	Palora	Parshivani	Pench	43 (Part)	250	80	2.00	0.50	3534
14.	Pipla	Parshivani	Pench	354 (Part), 353 (Part)	215	90	1.93	0.50	3419
15.	Sihora	Parshivani	Kanhan	170/1, 170/2 (Part)	500	90	4.50	0.50	7951

16.	Waghoda	Parshivan i	Pench	127/1 (Part)	33 4	120	4.00	1.00	14163
17.	Yesamba	Parshivan i	Pench	207 (Part)	21 0	75	1.57	2.00	11131
18.	Garanda	Parshivan i	Pench	104 (Part)	40 0	80	3.20	1.50	16961
19.	Bina	Kamptee	Kanhan	57/1, 57/2, 56,53/A1	50 0	100	5.00	0.50	8834
20.	Sonegaon Raja	Kamptee	Kanhan	338, 339, 337(Part)	75 2	65	4.88	0.50	8636
21.	Ungaon	Kamptee	Kanhan	212, 217, 218, 219, 222, 211 (Part)	65 0	74	4.81	0.50	8498
22.	Chikna-A	Kamptee	Kanha n	8, 9/1, 9/2, 10/1, 10/2, 11, 12 (Part)	45 0	50	2.25	1.00	7951
23.	Chichghat	Kuhi	Kanha n	45 part	45 0	90	4.05	0.80	11449
24.	Chiknaghat	Mouda	Kanha n	543/1,542,5 41,543/2	54 0	90	4.86	1.50	25760
25.	Mohkhedi	Mouda	Kanha n	117, 118, 119	75 0	100	7.5	1.00	26502
26.	Kirnapur	Mouda	Kanhan	109,110,1 11 ,107,106,1 0 5,113,115, 1 16,118,11 9, 4,5	85 0	80	6.8	0.8	19223

Table No.5 List of Sand Ghats proposed for the year 2021-2022

Sr No.	Name of Sand Ghat	Taluka	Name Of River	Adjacent Survey Number of Sand Ghat	Length (Meter)	Wid th (Meter)	Area (Hect or)	De pth	Brass
1	Gosewadi A	Saoner	Kanhan	285,286,287 part	420	100	4.20	0.50	7420
2	Bawangao n B	Saoner	Kanhan	203,204,208	450	60	2.70	0.60	5724
3	JuniKampt ee(Gadega on)	Parseoni	Kanhan	241/2,230	200	100	2.00	0.80	5653
4	Pardi k	Parseoni	Kanhan	153	450	100	4.50	0.80	12720
5	Saholi A	Parseoni	Kanhan	15,16,17,18,19	500	50	2.50	0.80	7067

6	Saholi B	Parseoni	Kanhan	115/2,112/2, 136/2,141/2	600	60	3.60	1.0 0	12720
7	Kirnapur	Mauda	Kanhan	103,104,105, 107,109,110, 111,113,115, 116,117,118, 119,4,5	620	80	4.95	0.8 0	14021
8	Mohkhedi	Mauda	Kanhan	117,118,119	490	100	4.9	0.7 0	12120
9	Neeri Ghat	Kampthe	Kanhan	217/2/3,219,2 20,221/1/2,22 3,224/1 Part	565	86	4.85	1.5 0	25754
10	Chichghat	Kuhi	Kanhan	43 area2.08 ha	300	100	3.00	0.5 0	5300
11	Wakodi	Saoner	Kanhan	44part	500	70	3.50	0. 40	4946
12	Raywadi A	Saoner	Kanhan	179,180,183 ,184,186,18 5 &188 part	450	75	3.37	0. 40	4770
13	Rohana	Saoner	Kanhan	168,3part 7B part	350	60	2.10	0. 50	3710
14	Esapur A	Saoner	Kanhan	90part, 93,94,115,1 16	475	80	3.8	0. 45	6042
15	Karajgha t	Saoner	Kanhan	15part	470	75	3.52	0. 40	4982
16	Bawanga on A	Saoner	Kanhan	252,253	243	80	1.94	0. 40	2747
17	Ramago ngri B	Saoner	Kanhan	144part, 143 Part	400	100	4.0	0. 30	4240
18	Ghatroha na	Parseoni	Pench	Part53,52,4 6,45 Part	500	60	3.00	0. 40	4240
19	Sihora	Parseoni	Kanhan	170/1,170/2 part	500	90	4.50	0. 30	4770
20	Old Waghod a	Parseoni	Pench	127/1 part	334	120	4.0	0. 90	12746
21	Yesamba	Parseoni	Pench	207 part	210	75	1.57	0. 90	5008
22	Garanda	Parseoni	Pench	104 part	400	80	3.20	0. 70	7915
23	Pipla	Parseoni	Pench	354 part,353 part	215	90	1.93	0. 40	2734

24	Palora B	Parseoni	Pench	43 part	250	80	2.00	0.40	2826
25	Singardi p	Parseoni	Kanhan	80,81,82	550	80	4.40	0.30	4664
26	Chiknag hat	Mauda	Kanhan	543/1,542,541,543/2	540	90	4.86	0.60	10303
27	Chikna A	Kampthe	Kanhan	8,9/1,9/2,10/1,10/2,11,12 part	450	50	2.25	0.50	3975
28	Ungaon	Kampthe	Kanhan	212,217,218,219,222,211 part	650	74	4.81	0.30	5098

Feasible Sand Ghat List 2022-2023

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Mineable Depth (m)	Brass	Upset Price
						x					
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	0.90	11162	6697200
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	0.80	14021	8412600
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	0.80	13851	8310600
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	0.50	4028	2416800
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	0.50	3401	2040600
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	0.50	1987	1192200
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	0.60	5088	3052800
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	0.50	1855	1113000
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	0.80	4388	2632800

10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	0.90	3361	2016600
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	0.80	5653	3391800
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	0.70	7420	4452000
13	Parseoni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	200	X	60	1.20	1.0	4240	2544000
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	1.0	8745	5247000
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	0.90	6153	3691800
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	1.0	17385	10431000
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	0.60	2289	1373400
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	0.60	3434	2060400
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	0.90	14310	8586000
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	0.50	2826	1695600
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	1.0	17314	10388400
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	1.0	16996	10197600
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	x	86	4.85	1.0	17169	10301400
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	0.80	7067	4240200
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	1.20	8480	5088000
26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	0.50	3180	1908000

27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	0.80	13568	8140800
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	0.80	9894	5936400
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	0.80	10176	6105600
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	1.0	7420	4452000
31	Saoner	Ramdongri- A	Kanhan	30 part, 31, 32	450	x	70	3.15	0.80	8904	5342400
32	Saoner	Ramdongri- B	Kanhan	143 part, 144 part	400	x	100	4.00	0.80	11307	6784200
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	0.60	7473	4483800
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	0.60	7950	4770000
35	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	x	80	3.60	0.50	6360	3816000
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	0.80	6360	3816000
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	0.80	5088	3052800
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	0.50	2782	1669200
39	Saoner	Bawangaon- B	Kanhan	203, 204, 208	450	x	60	2.70	0.60	5724	3434400
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	0.50	5300	3180000
Total										314109	188465400

CHAPTER 4

DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected from Minor mineral are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2022-2023	13913	6180.29 (Till September)
2	2021-2022	20978.00	15991.85
3	2020-2021	20700.00	18398.80
4	2019-2020	13800.00	13984.28
5	2018-2019	13500.00	15067.87
6	2017-2018	12000.00	13513.07

Table-4.1: Details of royalty collected

CHAPTER 5
DETAILS OF PRODUCTION OF SAND OR BAJRI OR
MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	1184555.58	1030048.33
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

Table 5.1: Details of production of minor mineral

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2021-2022	1	7420	7420	
2	2020-2021	20	174673	172373	
3	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
4	2018-2019	11	79742	79742	
5	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
6	2016-2017	31	213883	213883	

Table 5.2 : Details of Production of Sand

i) Demand Supply Analysis:

In the year 2021-2022 total nearly 276215 brass of sand was proposed from auction from sand ghats out of which only one sand ghat having 7420 brass quantity is auctioned. Along with the several other uses of sand, continuous stream of developing infrastructure also triggers the rapid and generous demand of sand. To fulfill this ever-increasing demand and consumption

needs to increase the quantity of extraction of sand. So, for the upcoming season proposed quantity of sand 314109 Brass.

Also, it will ensure that all the policies and rules regarding sustainable sand mining will be followed rigorously.

RBI Index based methodology for Demand:

(Source- Sand Mining Framework-2018)

Demand of sand in the District for has been estimated based on the following factor:

Conversion factor- Normative cement to sand mixture ratio of 1:2.5

In this method, per capita cement consumption is used to calculate demand of sand. Once cement consumption of the District is known, the same is multiplied by the factor of 2.5 to derive the sand consumption.

1. Per capita cement consumption of India 195 Kg (Source: BEE's website:<https://beeindia.gov.in/>)
2. Total Population of District* 195 = Total cement Consumption

$$46,53,570 * 195 = 90,74,46,150 \text{ kg}$$

$$= 907446.15 \text{ Metric Tonnes}$$

3. Sand Demand of the District: Total cement Consumption * 2.5 = 907446.15251
=22, 68,615 Metric tonnes of sand

From above calculation it seems that total demand of the district is very high as compared to supply or production of sand in Proposed Sand Ghat Mining 2022-2023, as total sand excavation will be 314109 brass (14,76,312.3 Metric tonnes) from 40 sand spots. This huge gap will be fulfilled by procuring of sand from other district or suppliers.

CHAPTER 6

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Deposition is the geological process in which sediments, soil and rocks are added to a landform or land mass. Wind, ice, and water, as well as sediment flowing via gravity, transport previously eroded sediment, which, at the loss of enough kinetic energy in the fluid, is deposited, building up layers of sediment.

Deposition occurs when the forces responsible for sediment transportation are no longer sufficient to overcome the forces of gravity and friction, creating a resistance to motion, this is known as the null-point hypothesis. Deposition can also refer to the buildup of sediment from organically derived matter or chemical processes. For example, chalk is made up partly of the microscopic calcium carbonate skeletons of marine plankton, the deposition of which has induced chemical processes (diagenesis) to deposit further calcium carbonate. Similarly, the formation of coal begins with deposition of organic material, mainly from plants, in anaerobic conditions.

Sediment in rivers gets deposited as the river slows down. Larger, heavier particles like pebbles and sand are deposited first, whilst the lighter silt and clay only settle if the water is almost still. The flow of water is strongest on the outside of river bends, eroding the bank, but is slowest on the inside of the bends, allowing deposition of sand and gravel. When a river “bursts its banks” after heavy rain, flood water spreads out across the floodplain and, because this water hardly moves, finer silt and clay are deposited – often making good farmland.

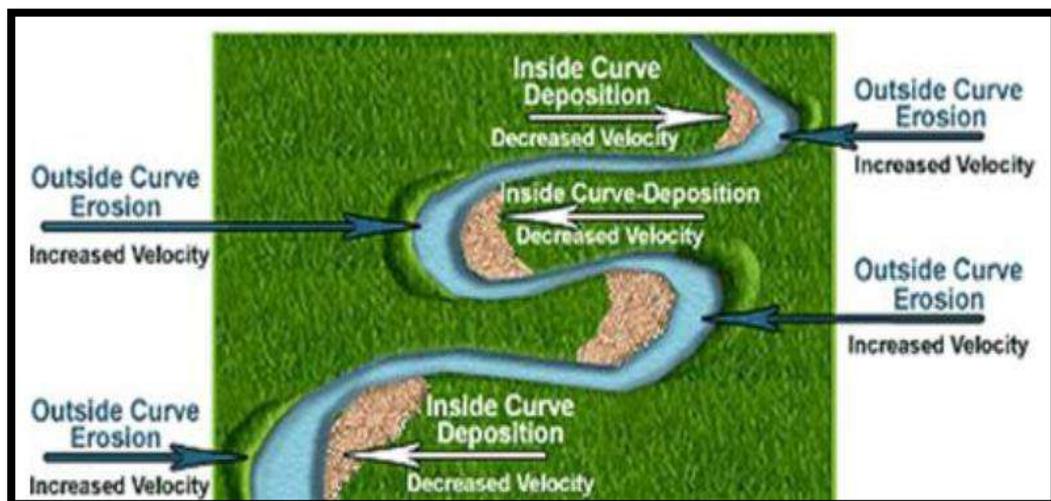


Fig 1: Erosional and Depositional Sites in River (Mendering)

The term load is technically defined as the total weight of solid detritus transported in unit time. The transporting capacity of a stream rises very rapidly as the discharge and the velocity increases. Experiments show that with debris of mixed shapes and sizes, the maximum load that can be carried is proportional to something between the third and fourth power of the velocity. But the fragments of a given shape, the largest size that can be moved (not the actual mass of mixed debris) is proportional to the sixth power of the velocity, provided of course that the depth of water is also adequate for the purpose. As the velocity of a river is checked, the bed load s first to come to rest with continued slackening of the flow, the larger ingredients of the suspended load are dropped, followed succevely by finer and finer particles. When the stream begins to flow more vigourously, the finer materials are the first to move again. A river begins to sort out its load or burden as soon as it receives it. The proportion of fine to coarse amongst the deposited materials tend on average to increase downstream, but there may be interruptions of this tendency because of addition of coarse debris from tributaries or from landslides and steepening of thebanks.

Sediment Transportation

Sediment transport is the movement of organic and inorganic particles by water. In general, greater the flow more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material. Another name for sediment transport is sediment load. The total load includes all particles moving as bed load, suspended load, and wash load.

Bed load

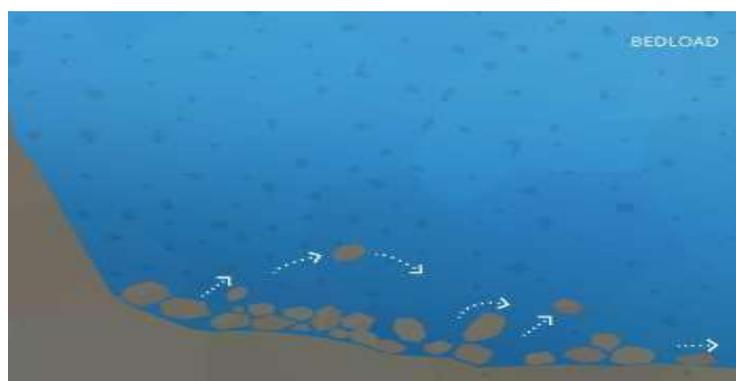


Fig 2: Bed load particles travel with water flow by sliding or bouncing along the bottom.

Bed load is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterways. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bed load occurs

when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bed load transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bed load. In situations where the flow rate is strong enough, some of the smaller bed load particles can be pushed up into the water column and become suspended.

Suspended Load

While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows.

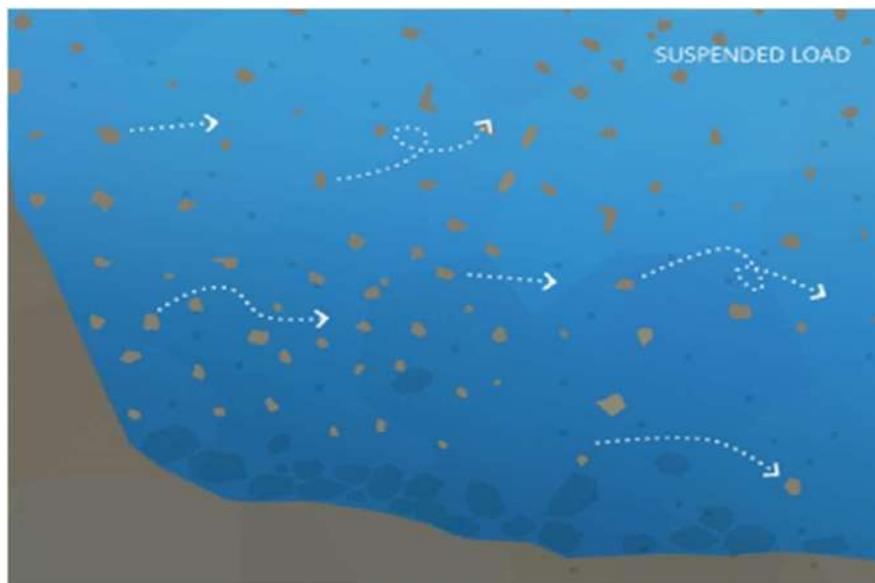


Fig 3: If the water flow is strong enough to pick up sediment particles, they will become part of the suspended load.

Wash Load



Fig 4: The wash load is the portion of sediment that will remain suspended even when there is no water flow.

The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow-moving rivers is typically due the wash load. When the flow rate increases (increasing the suspended load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location.

What is Sediment Deposition?

Sediment is necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low.

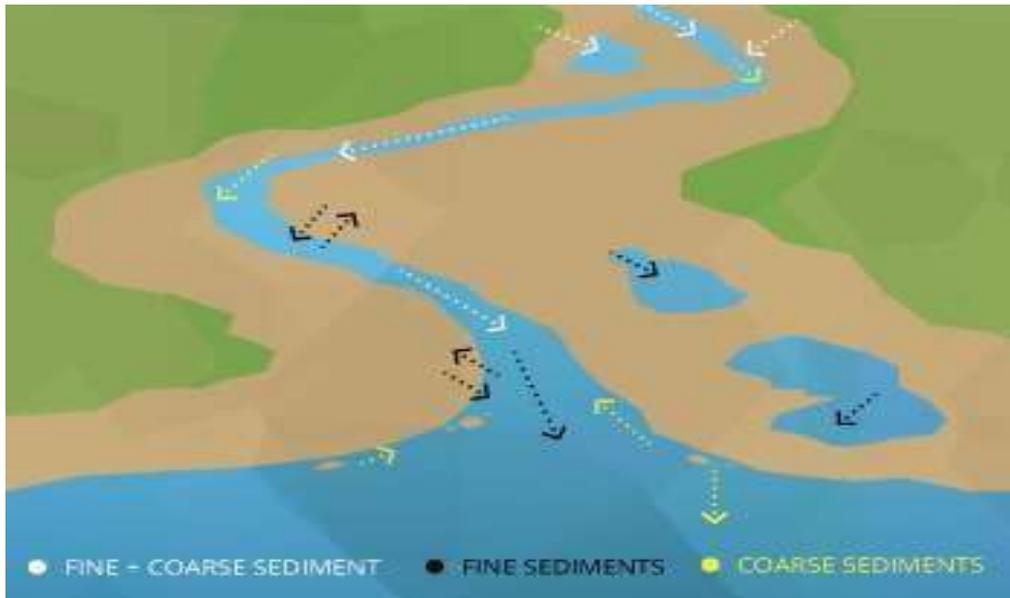


Fig 4: When the flow rate changes, some sediment can settle out of the water, adding to point bars, channel bars and beaches

Sediment transportation and Deposition is depending upon various factors like Slope of the Area, Annual Rainfall, Lithology, and flow intensity of River, Geomorphology, Soil, Geology and Land use.

CHAPTER- 7

GENERAL PROFILE OF THE DISTRICT

7.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India

Table 7.1: Brief Description of Nagpur District

Sr. No.	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

7.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

7.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

7.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

7.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city. An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region.

(Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 8

REPLENISHMENT STUDY OF SAND GHAT

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course where annual deposition is one meters, but it is noticed that during flood season whole of the pit so excavated is completely filled up and as such the excavated area is replenished with new harvest of minerals.

The data below represents thickness of sand in respective Sand Ghats which is allowed to be excavated after the Survey carried out by taluka level technical committee who estimated the depth and area of each Sand Ghat as per Sand Mining Policy existing during the surveys. This data shows the trend of replenishing sand each year in the respective Sand Ghats well as of the River in Nagpur district.

Methodology adopted for the sand replenishment study

1. **Field data collection** followed by cross section survey over the sections of fixed intervals. Along the river showing river bed material (RBM) with present elevations.
2. **Remote sensing**- used for identification of watershed area relevant to the mine lease. The data used from the latest satellite imagery.
3. **Estimation of catchment yield and bed load transport.** The catchment yield has been computed using the Strange's runoff method (Strange's Monsoon runoff curves) for the runoff coefficient. The iso-pluvial maps of IMD have been used for estimation of catchment yield and peak flood discharge for the study area by various methods like Dickens, Jarvis, and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport comprises of use of analytical models namely the Einstein, Meyer Peter and Ackers & White's equation for calculation of bed load transport.

Study area:

Proposed leases are located all over the entire district. There are two major Rivers in the District namely Kanhan and Pench.

Kanhan River: Kanhan River: The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh.

Pench River: The Pench River is a left bank tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and Nagpur district of Maharashtra.

Rainfall Data for the study area:

The district falls in assured rainfall zone and receives 80% of the total rainfall during June to October. The average rainfall of the district is 1086.26 mm over rainy days.

Year	Rainfall	Year	Rainfall
1998	1154.3	2011	943.5
1999	1385	2012	1030.5
2000	1384.5	2013	1433.4
2001	1455.8	2014	797.3
2002	870.1	2015	1100.9
2003	1075.8	2016	823.6
2004	699.2	2017	821.5
2005	1333.5	2018	902.6
2006	1002	2019	1129.1
2007	1150.2	2020	1106.9
2008	849.6	2021	1410.2
2009	947.8		
2010	1263		
Average Rainfall in mm			1086.26

Table: Rainfall of the District (Source: maharain.maharashtra.gov.in)

Strange's monsoon rainfall-runoff curves:

The dependability has been calculated on the basis of last 22 years rainfall, as indicated in Table-2 where water availability has been considered for arriving at 50% dependability (Table-3 and 4) respectively.

S. N.	Rainfall (Mm)	S. N.	Rainfall (Mm)
1	1455.8	12	1030.5
2	1433.4	13	1002.3
3	1385.	14	947.8
4	1384.5	15	943.5
5	1333.5	16	902.6
6	1263	17	870.1
7	1154.3	18	849.6
8	1150.2	19	823.6

9	1129.1	20	821.5
10	1100.9	21	797.3
11	1075.8	22	699.2

Table: Rainfall data (arranged in descending order) of each year's rainfall as mentioned.

	Rainfall dependability percentage
	p= 50%
m=	$N * P/100$
	N=22, p=50
m=	11

Table: Calculation of order number (m)

Where, m-Order number

N- The available rainfall data of the past N years is first of all arranged in the descending order of magnitude

p=Dependability percentage

The rainfall value tabulated above in Table, the Order No. 11 has the values of 1075.8 mm
So, $P_{50\%} = 107.58 \text{ cm}$

Average value of Strange's Run off percentage is calculated from Strange's monsoon rainfall runoff curves (Figure-7.1) considering the catchment area as good and the Runoff % for the area is

Runoff % at 50% dependability of rainfall = 40%

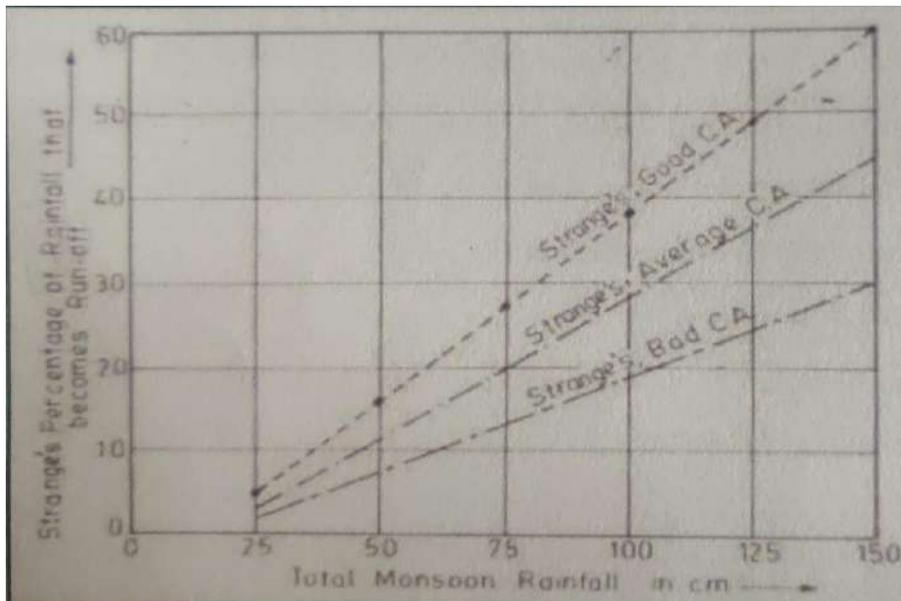


Figure- Strange's monsoon rainfall- runoff curves

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

There are nearly 28 locations of Proposed sand sand ghats over Kanhan and Pench river where sand deposition are allowed from replenishment and other safety point of view in the district.

The factor which affects the “Computation of Sediment” is:

- a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :
- Structural Plain
 - Structural Hill
 - Structural Ridge
 - Denudation Ridge & Valley
 - Plain & Plateau of Gangetic plain
 - Highly Dissected pediment
 - Un dissected pediment
- b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)
- c) Drainage System/Pattern of the area (Drainage Density =Km/Sq. Km of River
- d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Basin/River

There are many sediment transport equations which are suitable for use in the prediction of the replenishment rate of rivers/ watershed. Some of the famous sediment transport equations are:-

1. Dendy – Bolton Equation
2. Yang Equations
3. Engelund-Hansen Equation
4. Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977) – it includes only one type of sediment yield (sheet and rill Erosion). Dendy - Bolton

formula is often used to calculate the sedimentation yield. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. Dendy and Bolton equation calculates all types of sediment yield i.e. sheet and rill Erosion, gully Erosion, channel Bed and bank erosion and mass movement etc.

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral (sand) naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance.

Rivers under Study

Kanhan River:-

The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur.

Kanhan was surprisingly not mentioned in the 2001 list of notified rivers in Maharashtra which has led to unrestricted exploitation in the form of sand mining along the river bed. This failure to recognise its presence has been viewed as a deliberate attempt at unregulated economic gains. The catchment area has also seen large scale coal mining in recent years. Efforts are currently underway to notify the river to prevent further environmental damage. This has been undermined by plans for construction of a barrage. The river was perennial until a few decades ago, but now goes dry by February every year.

he Kanhan rises on the slopes of the hills at the southern edge of the Satpura range to the north of Damua and west of Junnardeo, a town in Madhya Pradesh, India. The source lacks clear documentation and is not celebrated or considered holy, unlike most other rivers of a similar size.

The Kanhan is Wainganga's longest tributary, at 275 km. It rises in the southern spurs of the Satpura Range in the north-western region of Chhindwara District. Flowing south from its origin, Damua is the first town it encounters. Here it intersects the town and allows for its flow to be controlled by means of a dam. It then runs along a south & southeastern direction, meandering through the countryside of Chhindwara District where it has been productively harnessed for growing Tur dal and cotton. The river comes to lie about 5 km to the south of Deogarh fort where it humbly receives an insignificant tributary. Upon reaching the town of Ramakona it is crossed by a rail bridge as well as another road bridge which supports NH-26 B. Nearly at the end of its course in Madhya Pradesh at Razadi Bargaon, it is joined by Jam River, and for a short distance provides a natural boundary with adjoining state Maharashtra.

Within Maharashtra the river is at its widest at Kamptee where it receives the Pench River- a left bank tributary and its largest one. Another tributary connecting it at its right bank is Kolar River - the spill off from Kolar Dam. The river now comes to be at the northeast of Nagpur from which it receives the metropolitan city's effluent waste by way of the Nag River. A little further from Kamptee, it flows along the town Kanhan - its etymology derived from the river. Situated alongside the town is a large coal mine, one of the many coal mines situated along its river basin. From here the river flows south-east and ends its course by joining the Wainganga at the village of Ambora in Nagpur District.

Along its 275 km run through the Indian States of Madhya Pradesh & Maharashtra, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur. The catchment area of the sub-catchment is about 7968 km².

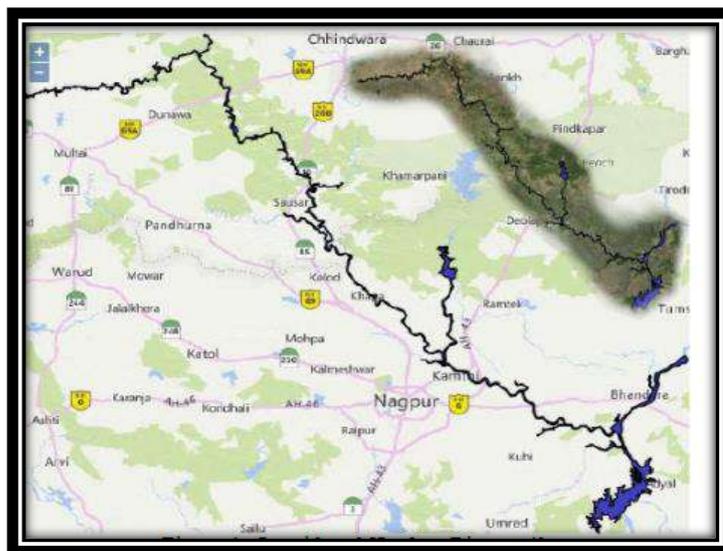


Fig: Kanhan River Path

Pench River:

The **Pench River** is an Indian tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and flows across Pench National Park, which is a reserve for the Tiger Project of India.

The two big dams of the Pench River supply water to the city of Nagpur and to the big thermal power plant located there.

The catchment area of the sub-catchment is about 4847 km². The climate of the sub-catchment area is usually pleasant most of the year, except in summer. The sub-catchment lies in the medium rainfall zone. Most of the rainfall is received during the South-West monsoon from June to October.

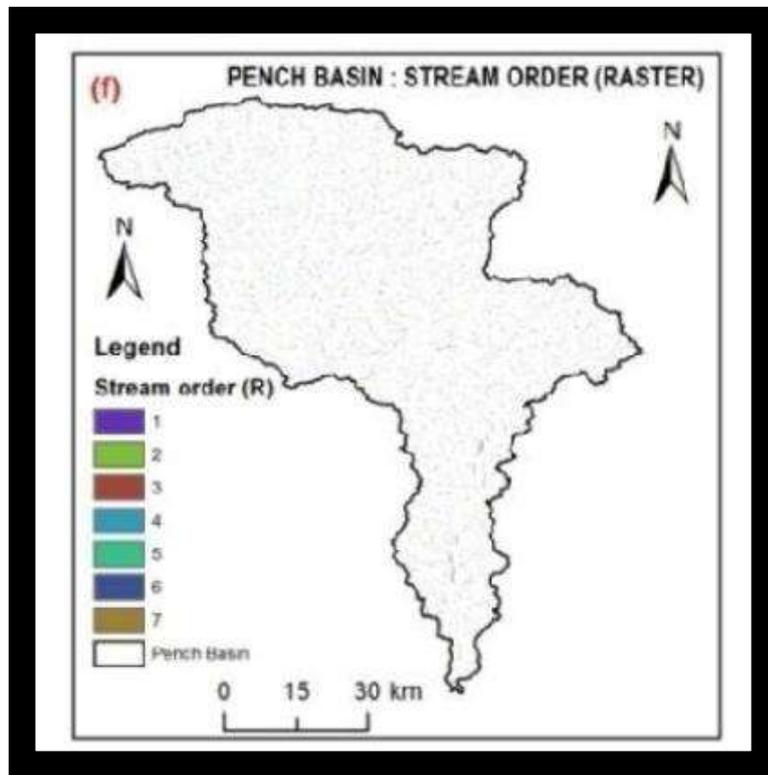


Fig: Pench River Stream order

Dendy Bolton Equation for Estimation of Sediment Yield

Dendy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation's development.

However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values.

The equations express the general relationships between sediment yield, runoff, and drainage area. Many variables influence sediment yield from a drainage basin. They include climate, drainage area, soils, geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decreases as drainage area increases.

As drainage area increases, average land slopes usually decrease; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tend to decrease sediment yield per unit area. In arid regions, sparse precipitation and low run-off are the limiting factors. As precipitation increases, density of vegetation also increases, resulting in less erosion. In areas with adequate and evenly distributed precipitation, vegetation thus becomes the limiting factor.

The accuracy of the sedimentation surveys varied, ranging from reconnaissance type measurements of sediment deposits to detailed surveys consisting of closely spaced cross-sections or contours. Runoff data are translated to inches per year per unit area and sediment deposition data to tons per year per square mile of net drainage area. Net drainage area is defined as the sediment-contributing area and normally excluded areas above upstream reservoirs or other structures that were effective sediment traps. Actual sediment yields undoubtedly were slightly higher because most reservoirs do not trap inflowing sediment.

As per **Dendy & Bolton study**, “Sediment Yield” can be related to

- i. Catchment Area and
- ii. Mean Annual Run-off

Sediment Yield versus Drainage Area:

Dendy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi². The smaller watersheds—those of drainage area less than 1 mi², were excluded because of their large variability of

sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi², Dendy and Bolton found that the annual sediment Yield per unit area was inversely related to the 0.16 power of the drainage area:

In which S= sediment yield in tons per square mile per year;

SR = Reference sediment yield

Corresponding to a 1mi² drainage area, equal to 1645 tons per year;

A = drainage area in square miles; and

AR = reference drainage area (1 mi²)

Sediments Yield versus Mean Annual Runoff

Dendy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Sediment yield increased sharply to about 1,860 tons per square mile per year as run-off increased from 0 to about 2 inches. As runoff increased from 2 to about 50 inches, sediment yield decreased exponentially. Because sediment yield must approach zero as runoff approaches zero, a curve through the plotted points must begin at the origin. The abrupt change in slope of a curve through the data points at Q equals 2 inches precluded the development of a continuous function that would adequately define this relationship. Thus, there are two equations derived for when Q was less than 2 inches and when Q was greater than 2 inches.

This led to the following equations.

For Q <2in.:

For Q >2in.:

In which QR = reference mean annual runoff QR = 2 in.

Combined Effect of Drainage area and Run off on Sediment Yield

Dendy- Bolton determined the combined influence of runoff and drainage area on sediment yield to compute the sediment yield. They developed two equations i.e. for run off less than 2 inch and for run off more than 2 inch, which are given below:-

For run off less than 2 inches:

$$(Q < 2 \text{ in}) S=1280*(Q)^{0.46} *[1.43-0.26 \text{ Log}(A)]$$

For run off more than 2 inches:

$$(Q > 2 \text{ in}): S = 1965 * (e^{-0.055Q}) * [1.43 - 0.26 \text{ Log } (A)]$$

Where: S = Sediment yield (tons/sq miles/yr)

Q = Mean Annual runoff (inches)

A = Net drainage area in sq mile

Calculation of Sediment Yield

- Average Annual Rainfall of Nagpur district (1998 to 2021) :

1086.26 mm (42.76 inch)

- Catchment area of Kanhan River:

7968 km² (i.e. 3076.44 mi²)

- Catchment area of Pench river :

4847 km². (i.e. 1871.42 mi²).

With above inputs, the calculation of the sediment yield by the Dendy -Bolton formula is illustrated below:

Sr. No.	Sediments Yield	
1	Here: Q (In) = Mean Annual run off = 1086.26 mm (42.76 in) (= Run-off Coefficient * Average Annual Rainfall) = 0.27*42.76 = 11.54 inches A (mi ²) = Catchment area Kanhan River = 7968 km ² (i.e., 3076.44 mi ²) Pench River = 4847 km ² . (i.e., 1871.42 mi ²).	For Q<2 S = 1280 Q ^{0.46} [1.43 - 0.26 log(A)] For Q>2 S = 1965 e ^{-0.055Q} [1.43 - 0.26 log(A)]
2	Sediment Yield for Kanhan River = Sediments Yield S = Layer/Year For Q>2 S = 1965 e ^{-0.055Q} [1.43 - 0.26 log (7968)] S= 273106.78 M. tons/yr or 34.28 M. tons/km ² /yr	<p>273106.78 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves</p>

3	Sediment Yield for Pench River = Sediments Yield $S = \text{Layer/Year}$ For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(4847)]$ $S = 183960.35 \text{ M. tons/yr or } 39.95 \text{ M. tons/km}^2/\text{yr}$	183960.35 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves
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(Source: sediment yield by the Dendy-Bolton formula)

Conclusion:

From the above calculations, annual replenishment rate for Kanhan river is estimated at **273106.78 M. tons/yr** and that for Pench River is estimated at **183960.35 M. tons/yr** for the year **2022-2023**.

Dendy – Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100-fold from computed yields. The equations express the general relationships between sediment yield runoff and drainage area. They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dendy & Bolton have derived the equation from average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density.

Factors which have direct bearing on sediments yield & limitations of Dendy -Bolton equation: Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dendy - Bolton has categorically stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. **Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.**

References:

1. Ponce, V. M., 1989. Engineering Hydrology, Principles and Practices, Prentice Hall, pages 547-548.
2. Online sediment yield by the Dendy-Bolton formula

CHAPTER 9
LAND UTILIZATION PATTERN IN THE DISTRICT:
FOREST, AGRICULTURE, HORTICULTURE, MINING

Forest:

During the year 2011-2012 an estimated 2523 Sq. KMs. of area was under forest which is 25.51% of the total area. Most of the land under forest can be found on the banks of Pench River, at the foot hills of Satpuda in Ramtek tahsil forest has been divided in 3 categories namely reserved, protected and unclassified. Area under these categories is given below.

Sr.No	Category	Area in Sq.Kms.
1	Reserved Forest	1387
2	Protected Forest	832
3	Unclassified Forest	304
	Total	2523

Table –A: Forest Category in the District

Sr.No	Forest Produce	Production	Value for Sale in '000'
A) Major forest products:			
1	Timber wood (m3)	1.613	17820
2	Fuel wood (m3)	6.969	6774
B) Minor forest products:			
3	Bamboo (Nos.)	13702	127.85
4	Tendu Leave (S.B.)	38408	31405.74
5	Gum (Quintal)	12	65.70
6	Others	10	14.40

Table B: The Major and Minor forest products of the district

Agriculture:

Nagpur district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The district has total geographical area of 9892 Sq.Km. Out of these 644 th.hq. is cultivable area. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. The area and production of principal crops are given in Table –C

Sr. No.	Crop	Area in '00' ha.	Production in '00'tonnes	Productivity in kg/ha.
		2009-2010	2011-2012	2008-2009
1	Paddy	646	1466	1419
2	Soyabean	2779	1411	823
3	Wheat	636	1073	1191
4	Ground Nut	43	23	670
5	Jowar	259	60	305
6	Cotton	7454	213	250
7	Tur	294	466	532
8	Gram	394	611	734

Horticulture:

As a cash crop, concept of growing different variety flowers in the district is on constant increase. Indication of society towards flower decoration on different occasion has enhanced. Total area under floriculture was 22742 hectares and the total production of Rose, Shewanti, Zendu, Nishigandha, Gladioli, Gaillardia, White Lilly, Goldenrod, Dezi, Mogra and Ostre are 1365.53 M.T. Camomile, Rose, Mogra, Lilly and Marigold can be developed in Nagpur dist. for the industrial use. It may used to manufacture perfumes, Rose water and Gulkand. The important cut flowers like Rose, Lilly, Chrysanthemum, Gladidus, Carnation, Tuberose and Orchids can be developed in Nagpur for Exports.

Land Use pattern:

The total area of the district is 986 thousand hectares of which forest cover 159 thousand hectares, 121 thousands hectares are not used for the Agriculture and area under cultivation is 644 thousands Hectares. The land utilization pattern of the district is given in Table -D

Sr.No	Classification	Area in '000' hectare
1	Total geographical area	986
2	Forest land	159
3	Barren land	128
4	Land to non-agriculture use	121
5	Cultivable area	644

Table D: Land Utilisation

Mineral Resources:

Nagpur district is moderately rich in minerals. Deposits of coal, manganese Ore, Dolomite, Limestone, Iron Ore, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan (Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	Production (MT)	Value (Rs. Lakh)	No of Mines
1	Manganese Ore	644590	28169.7616	37
2	Coal	16638820	17010814.54	15
3	Dolomite	43207	60.66	7
4	White Clay	200	0.12	02
5	Quartz	80	0.05	02
6	Sand (Stowing)	34562.814	518.422	04

Table -E: Mineral production in Nagpur district 2006-2007

Sr.No	Mineral	Deposits in Million Tonnes
1	Coal	1183.395
2	Lime stones	31.000
3	Manganese ore	9.389
4	Dolomite	28.740
5	Clay	3.555
6	Copper ore	1.300
7	Tungsten ore	19.980
8	Zinc ore	8.270
9	Chromites	0.056
10	Granite (Million Cubic mt.)	4.880

Table E: Mineral deposits in Nagpur

Fisheries:

Out of the total geographical area of the district an area of 15037 hectares can be used for fish farming apart from the 650 Kms long area under river water. During the 2010-2011 the fish production in the district was around 11200M.T. valued at approximately over Rs. 5600 lacs. Maharashtra Govt. has undertaken various developmental schemes/project for fish farming.

Sericulture:

Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world. India has also the distribution of producing all the three commercially known varieties of silk viz. Mulberry, Tassar, Iri and Murga. Maharashtra state stands third in the country in Mulberry and Tassar cultivation according to latest estimates. The present area under Sericulture in Nagpur district is about 141.00 acres which is mostly concentrated in Nagpur, Kalmeshwar, Katol, Narkhed and Ramtek of Nagpur district.

CHAPTER 10

PHYSIOGRAPHY OF THE DISTRICT

Nagpur district is situated in the eastern part of Maharashtra and renowned for its citrus orchards and manganese deposits. Nagpur District lies in the southern fringes of Satpura range. It is hilly in the northeast and west where the elevation varies from 350m to 583m msl. The Southern and eastern parts have vast pediplain with gentle slopes towards east. The average elevation of the pediplain surface is about 300m msl. Pench and Kanhan are the main tributaries of Wainganga River flowing from northwest to southeast in the northern part.

The western and south western parts of the district are drained by Wardha and its tributaries like Bor, Wenna Jam and Kar rivers. The Wainganga and its tributaries viz Kanhan, Kolar, Pench, Sur and Nag drain the eastern and east central parts of the district. The area contained within the district is underlain by the Archaean rocks to the north and east and younger sedimentaries like Lametas and Gondwanas, being embedded by flows (Deccan basalt) to the west and south. The district is well known for the minerals of economic importance like coal, manganese ore, dolomites, white clay, copper, tungsten ore etc. The principal soil of the district is known as morand' (light deep, black and grey in colour) covers about two-third of the cultivated area. Kali (medium- deep, black) is found in small pockets of Wardha and other river valleys. Khardi (shallow, grayish) is sandy soil. found in the eastern part and bardi (red gravelly, with boulders) is found in the trap hill region of the western part of the district.

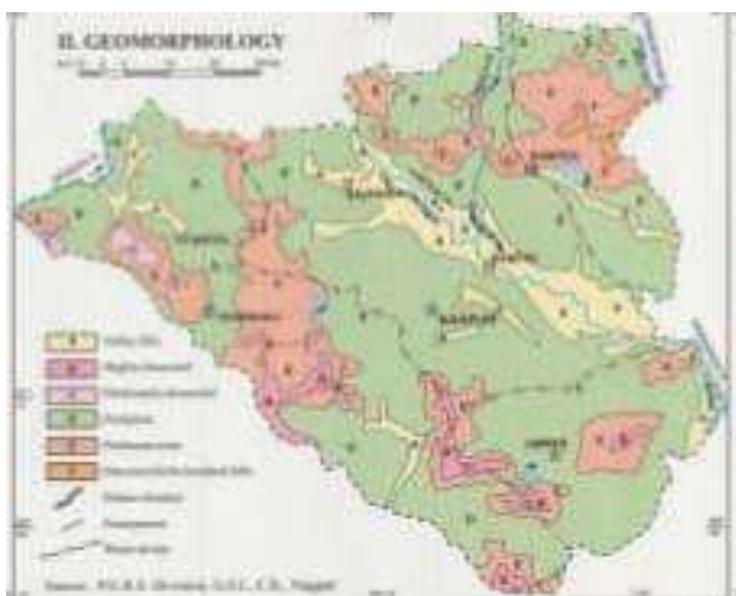


Fig: Image Showing Physiography of the district

CHAPTER 11

RAINFALL OF THE DISTRICT & CLIMATIC CONDITION

Climate and Rainfal: The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, Le. June to September The mean minimum temperature is 12°C and mean maximum temperature is more than 45°C The normal annual rainfall (1901-1992) over the district ranges from about 1000 mm to 1200 mm. It is the minimum in the Narkhed (869.9mm) and increases in the eastern direction and reaches a maximum around Umred (1164.9 mm) Rainfall data from 14 rain gauge stations for the periods 2010-2021 are given in Chapter 8. The average annual rainfall for the last 10 years ranges from 479.2 in Hingni to 1856.3 in Umrer. It is also observed that all stations hang recoded average annual rainfall within the range of district normal annual rainfall except at Hingni, Katol, Narkhed and Kamleshwar where it is less than normal.(Source: www.agri.mah.nic.in)

CHAPTER 12

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganiferous rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganese rocks of the region, *Sitaparite Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitic gneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks:

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southernly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Supergroup:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults,

which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki-Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide). Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south-south-west and their estimated thickness is about 1,500 km.

Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggera-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula andPhysa*.

Deccan Basalt (Traps) and Intertrappeans:

The western part of the district is covered by layers of doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are

generally dark grey in colour having a specific gravity of 2.9.

Geological succession of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows (Traps)with Associated Intertrappean sediments	Lower Eocene to pper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthi stage Barakar stage Talchir stage	Permian Corboniferous
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

1) Disrtict wise details of rivers and others Stream:

Sr. No.	Name of river	Area drained in sq. km	% area drained in district
1	Kanhan	1488	46 %
2	Pench	557	17 %
3	Wardha	223	07 %
4	Kolar	996	30 %

2) Sailent features of important rivers and streams

Sr. No	Name of the river or stream	Total length in the district in km	Place of origin	Altitude at origin
1	Kanhan	113	Damua, Satpura range, MP	-
2	Pench	56	Junnarde, Chindawara District, MP	1048m
3	Wardha	60	Khairwani near Multai, Betul. District, MP	785m
4	Kolar	54	N-E corner of Katol Taluka, MH	600m

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Kanhan River (29)	12.845	2045	926600.00	555960.00
Pench River (7)	2.332	455	155500.00	93300.00
Kolar River (1)	0.450	35	15700.00	9420.00
Sur River (3)	0.905	175	53250.00	31950.00

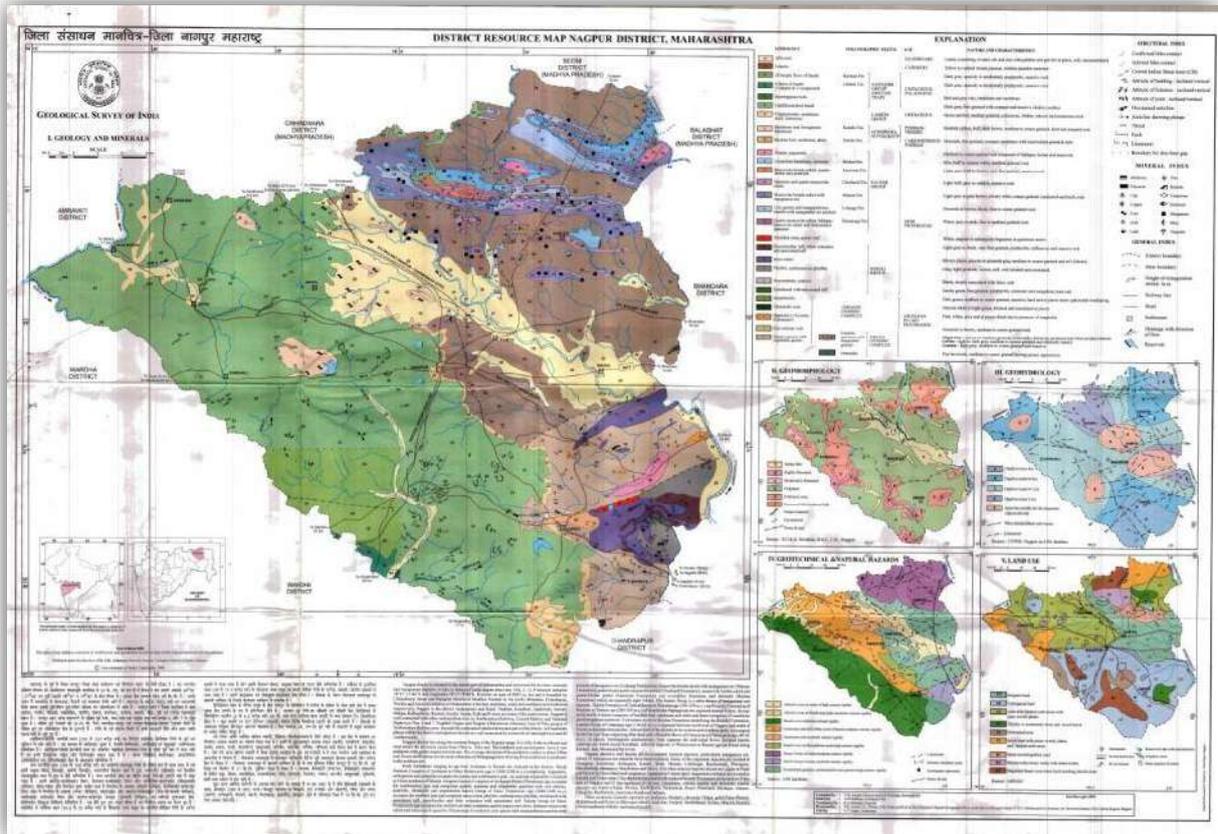
Mineral potential

Sr. No.	Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
2018	7063875	3803625	205992	11073492

Methodology adopted for calculation of mineral potential

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

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.



.Fig: Geological map of Nagpur District

**RECOMMENDATION OF ENFORCEMENT & MONITORING GUIDELINES FOR
SAND MINING BY MOEF&CC-2020**

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. (Source: EM guidelines, MoEF&CC, New Delhi 2020).

The need for replenishment study for river bed sand is also required in order to "nullify the adverse impacts arising due to excessive sand extraction". No riverbed mining will be allowed during the monsoon. In cases where rivers become district boundaries or state boundaries, the districts or states sharing the boundary shall constitute the combined task force for monitoring of mined materials. Mining activity and participate in the preparation of District Survey Reports (DSR) by providing appropriate inputs. The guidelines say the detailed survey

needs to be carried out for quantification of minerals and the demand and supply of the riverbed material through market survey, including the future demand for the next five years.

OBJECTIVE OF GUIDELINES

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand & Gravel Mining in the Country since its identification to its final end-use by the consumers and the general public.
3. Use of IT-enabled services & latest technologies for surveillance
4. Reduction in demand & supply gaps.
5. Setting up the procedure for replenishment study of Sand
6. Post Environmental Clearance Monitoring.
7. Procedure for Environmental Audit
8. To control the instance of illegal mining.

Salient Features of the Guidelines

District Survey Report:

The guidelines provide the procedure to be followed for identifying areas where mining can be allowed or prohibited. It provides guidelines for preparing a district survey report, which includes: Preparing a report before granting a mining lease, and Defining mining and no mining zones based on certain environmental and social factors.

Preventing Illegal Mining:

The guidelines suggest that sites can be monitored remotely. Drones can also be used for quantity estimation and land use monitoring. Further, the guidelines propose night surveillance of mining activity through night-vision drones. The environmental damages incurred due to illegal mining will be assessed by a committee constituted by the District Administration;

Environmental Clearance:

Environmental Clearance for mining is given by regulatory after considering the potential environmental impact. However, it has been observed that often the Letter of Intent (LoI) is granted for a location which is not feasible for environment-friendly mining. The guidelines provide that LoIs should be granted for those locations which have the least possibility of an impact on the environment nearby habitation.

The guidelines also encourage for online sale and purchase of sand and other riverbed materialsto make the process transparent.

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 andproximity 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.

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/c-auction/grant of the mining lease/Letter of Intent (Lol) by Mining department or department dealing the mining activity in respective states.
- b) The first step is to develop t entory 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.
- 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.

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 part of the river, width needs to be identified on a map. Out of the central part area, where there is a deposition/aggradation of the material needs to be identified. The remaining 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 NABI. Accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

g) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc, and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area.

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 therequirement of State Government. It is suggested the mining lease area should be so selected asto cover the entire deposition area. Dividing a large area of deposition/aggradation into smallermining leases should be avoided as it leads to loss of mineral and indirectly promote illegalmining.

k) Cluster situation shall be examined. A cluster 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 whenone 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 possibilityof 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.

ANNEXURES

ANNEXURE NO- 1

Compliance of Enforcement and Monitoring Guidelines for Sand Mining-2020**Details of Sand/M-Sand Sources****a) Rivers**

River Name/M- Sand	Total Stretch of River(in Km)	Type of River (Perennial or Non- Perennial)
Kanhan River	12.84	Non- Perennial
Pench River	2.32	Non- Perennial
Kolar River	0.45	Non- Perennial
Sur River	0.90	Non- Perennial

b) De-siltation (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Cpntrolled By State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil						

c) Patta Lands/Khatedari Land

Owner	Sy. No.	Area (ha)	District	Tehsil	Village	Agriculture Land (Yes/No)
Nil						

d) M sand

Plant Name	Owner	District	Tehsil	Village	Geo-Location	Quantity Tonnes/Annum
Nil						

ANNEXURE NO- II

List of Potential Mining Leases (Proposed Sand Ghat) 2022-2023

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest (In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing/Proposed
Mauda									
1	Kanhan	Mouda (Chikna Ghat)	3.51	23	Approx 500 m	No	11162	Sand	Proposed
2	Kanhan	Kirnapur	4.95	27	Approx 500 m	No	14021	Sand	Proposed
3	Kanhan	Mohkhedi	4.9	34	Approx 500 m	No	13851	Sand	Proposed
4	Sur	Mahalgaon -A	2.28	16.4	Approx 500 m	No	4028	Sand	Proposed
5	Sur	Mahalgaon -B	1.92	17	Approx 500 m	No	3401	Sand	Proposed
6	Sur	Sirsoli	1.27	15	Approx 500 m	No	1987	Sand	Proposed
7	Kanhan	Wadna	3.0	18	Approx 500 m	No	5088	Sand	Proposed
8	Kanhan	Dahadi	1.05	18	Approx 500 m	No	1855	Sand	Proposed
Parseoni									
9	Pench	Garanda	1.55	11.38	Approx 500 m	No	4388	Sand	Proposed
10	Pench	Yesamba	1.05	12.05	Approx 500 m	No	3361	Sand	Proposed
11	Kanhan	Juni Kamptee (Gadeghat)	2	20	Approx 500 m	No	5653	Sand	Proposed
12	Pench	Ghat Rohana	2.78	15.87	Approx 500 m	No	7420	Sand	Proposed
13	Pench	Palora	1.2	5.65	Approx 500 m	No	4240	Sand	Proposed
14	Kanhan	Singardip	2.47	22.06	Approx 500 m	No	8745	Sand	Proposed
15	Pench	Pipla	1.93	9.42	Approx 500 m	No	6153	Sand	Proposed
16	Pench	Waghoda	4.92	12.18	Approx 500 m	No	17385	Sand	Proposed
17	Kanhan	Saholi-B	1.1	15.23	Approx 500 m	No	2289	Sand	Proposed
18	Pench	Nayakund	1.62	6.78	Approx 500 m	No	3434	Sand	Proposed
19	Kanhan	Pardi K	4.5	9.9	Approx 500 m	No	14310	Sand	Proposed

20	Kanhan	Saholi-A	1.6	14.23	Approx 500 m	No	2826	Sand	Proposed
Kamptee									
21	Kanhan	Bina	5	17.69	Approx 500 m	No	17314	Sand	Proposed
22	Kanhan	Ungaon	4.81	21.77	Approx 500 m	No	16996	Sand	Proposed
23	Kanhan	Neri	4.85	21.19	Approx 500 m	No	17169	Sand	Proposed
24	Kanhan	Chikna-A	2.5	34.56	Approx 500 m	No	7067	Sand	Proposed
25	Kanhan	Chikna-B	2	25	Approx 500 m	No	8480	Sand	Proposed
26	Kanhan	Bhamewada	1.8	27.69	Approx 500 m	No	3180	Sand	Proposed
Saoner									
27	Kanhan	Gosewadi - A	4.8	6.44	Approx 500 m	No	13568	Sand	Proposed
28	Kanhan	Wakodi	3.5	5.47	Approx 500 m	No	9894	Sand	Proposed
29	Kanhan	Isapur-A	3.6	8.5	Approx 500 m	No	10176	Sand	Proposed
30	Kanhan	Rohana	2.1	10	Approx 500 m	No	7420	Sand	Proposed
31	Kanhan	Ramdongri- A	3.15	7.05	Approx 500 m	No	8904	Sand	Proposed
32	Kanhan	Ramdongri- B	4	7	Approx 500 m	No	11307	Sand	Proposed
33	Kanhan	Karajghat	3.52	4.51	Approx 500 m	No	7473	Sand	Proposed
34	Kanhan	Khapapeth	3.75	4.5	Approx 500 m	No	7950	Sand	Proposed
35	Kanhan	Kocchi	3.6	5	Approx 500 m	No	6360	Sand	Proposed
36	Kanhan	Raiwadi	2.25	0.43	Approx 500 m	No	6360	Sand	Proposed
37	Kanhan	Tembhurdoh	1.8	1.41	Approx 500 m	No	5088	Sand	Proposed
38	Kolar	Kawadas	1.57	15.69	Approx 500 m	No	2782	Sand	Proposed
39	Kanhan	Bawangaon- B	2.7	15.5	Approx 500 m	No	5724	Sand	Proposed
Kuhi									
40	Kanhan	Chichghat	3	18.65	Approx 500m	No	5300	Sand	Proposed

Annexure 3**Cluster & Contiguous details**

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta /Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Kanhan	1	1	Chikna A	Hikna (Borgaon)	2.50	7067	7067
Kanhan		2	Chikna B		2.00	8480	8480
					4.50		

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Annexure IV

Transportation Routes for individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Yesamba	1	9	9	500	Kuchha Road	Unpaved
Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved

Singardip	1	7	7	429	Black Topped/ Paved road already exists	Unpaved
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved
Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewad a	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved

Ramdongri -A	1	4	4	830	Black Topped/ Paved road already exists	Unpaved
Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhur doh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

Annexure V

Final List of Potential Mining Leases (Existing & Proposed)

Details of Sand Ghats (River bed) eligible in 2022-2023:

List of Sand Ghat in the district were finalized for the auction in 2022-2023. The details of there are as follows:

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Mineable Depth (m)	Brass	Upset Price
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	0.90	11162	6697200
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	0.80	14021	8412600
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	0.80	13851	8310600
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	0.50	4028	2416800
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	0.50	3401	2040600
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	0.50	1987	1192200
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	0.60	5088	3052800
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	0.50	1855	1113000
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	0.80	4388	2632800

10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	0.90	3361	2016600
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	0.80	5653	3391800
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	0.70	7420	4452000
13	Parseoni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	200	X	60	1.20	1.0	4240	2544000
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	1.0	8745	5247000
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	0.90	6153	3691800
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	1.0	17385	10431000
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	0.60	2289	1373400
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	0.60	3434	2060400
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	0.90	14310	8586000
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	0.50	2826	1695600
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	1.0	17314	10388400
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	1.0	16996	10197600
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220,	565	x	86	4.85	1.0	17169	10301400

				221, 223, 224 Part							
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	0.80	7067	4240200
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	1.20	8480	5088000
26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	0.50	3180	1908000
27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	0.80	13568	8140800
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	0.80	9894	5936400
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	0.80	10176	6105600
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	1.0	7420	4452000
31	Saoner	Ramdongri- A	Kanhan	30 part, 31, 32	450	x	70	3.15	0.80	8904	5342400
32	Saoner	Ramdongri- B	Kanhan	143 part, 144 part	400	x	100	4.00	0.80	11307	6784200
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	0.60	7473	4483800
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	0.60	7950	4770000
35	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	x	80	3.60	0.50	6360	3816000
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	0.80	6360	3816000
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	0.80	5088	3052800
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	0.50	2782	1669200

39	Saoner	Bawangaon-B	Kanhan	203, 204, 208	450	x	60	2.70	0.60	5724	3434400
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	0.50	5300	३९८००००
Total										314109	188465400

b) Patta Lands/Khatedari Land:						
Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

c) De-Siltation Location: (Lakes/Ponds/Dams etc.)						
Name of Reservoir / Dams	Maintain/Controlled by State Govt. / PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

d) M-Sand Plants:						
Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
Nil	Nil	Nil	Nil	Nil	Nil	Nil

ANNEXURE VI – FINAL CLUSTER & CONTIGUOUS CLUSTER DETAILS**Cluster:**

River Name	Cluster No	Lease No	Location(Riverbed/patta /Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Kanha n	1	1	Chikna A	Hikna (Borgaon)	2.50	7067	7067
Kanha n		2	Chikna B		2.00	8480	8480
					4.50		

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

ANNEXURE VII – FINAL TRANSPORTATION ROUTE FOR INDIVIDUAL LEASES & LEASES IN CLUSTER

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Yesamba	1	9	9	500	Kuchha Road	Unpaved
Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved
Singardip	1	7	7	429	Black Topped/	Unpaved

					Paved road already exists	
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved
Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewad a	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved
Ramdongri -A	1	4	4	830	Black Topped/	Unpaved

					Paved road already exists	
Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhurdoh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

SAND GHAT SITE SPECIFIC ENFORCEMENT & MONITORING PLAN AS PER GUIDELINES STIPULATED IN ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING ISSUED BY MOEF&CC IN JANUARY 2020

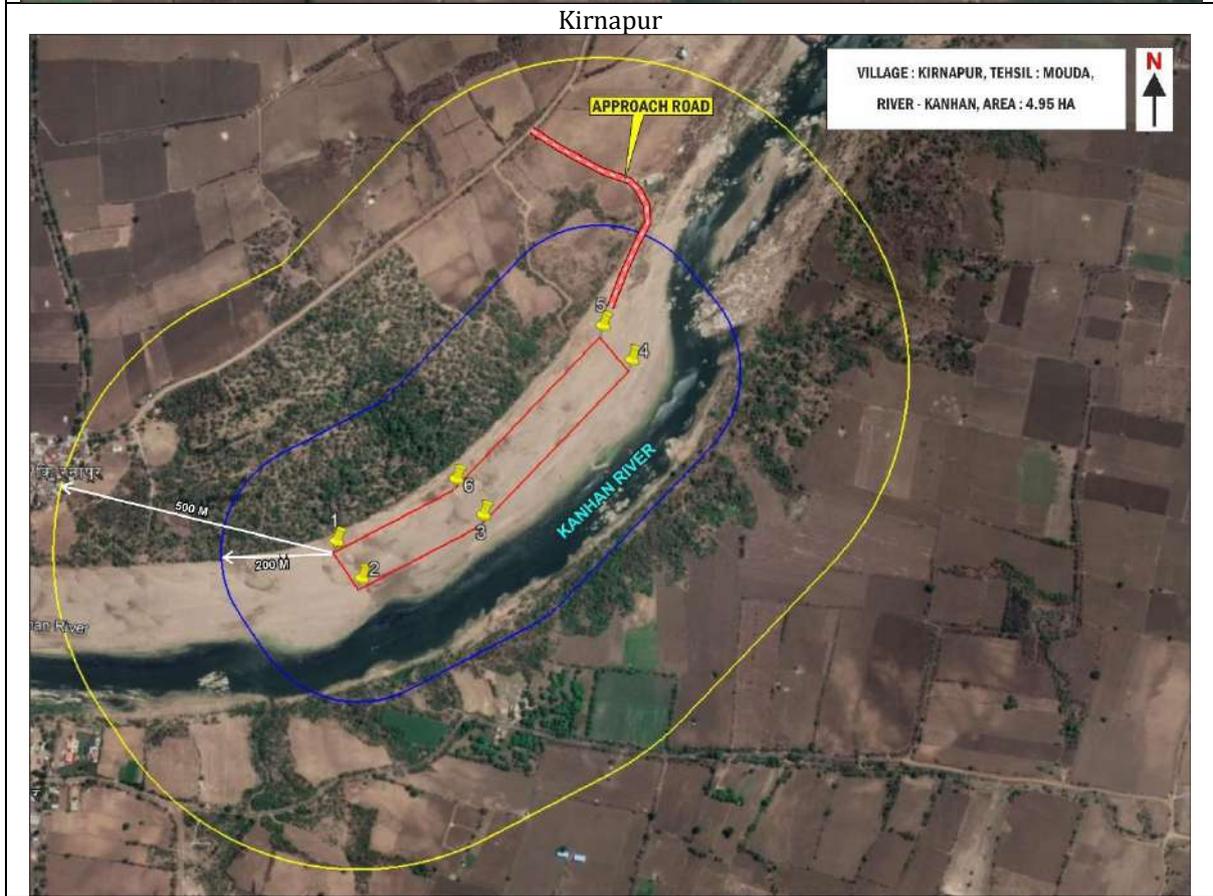
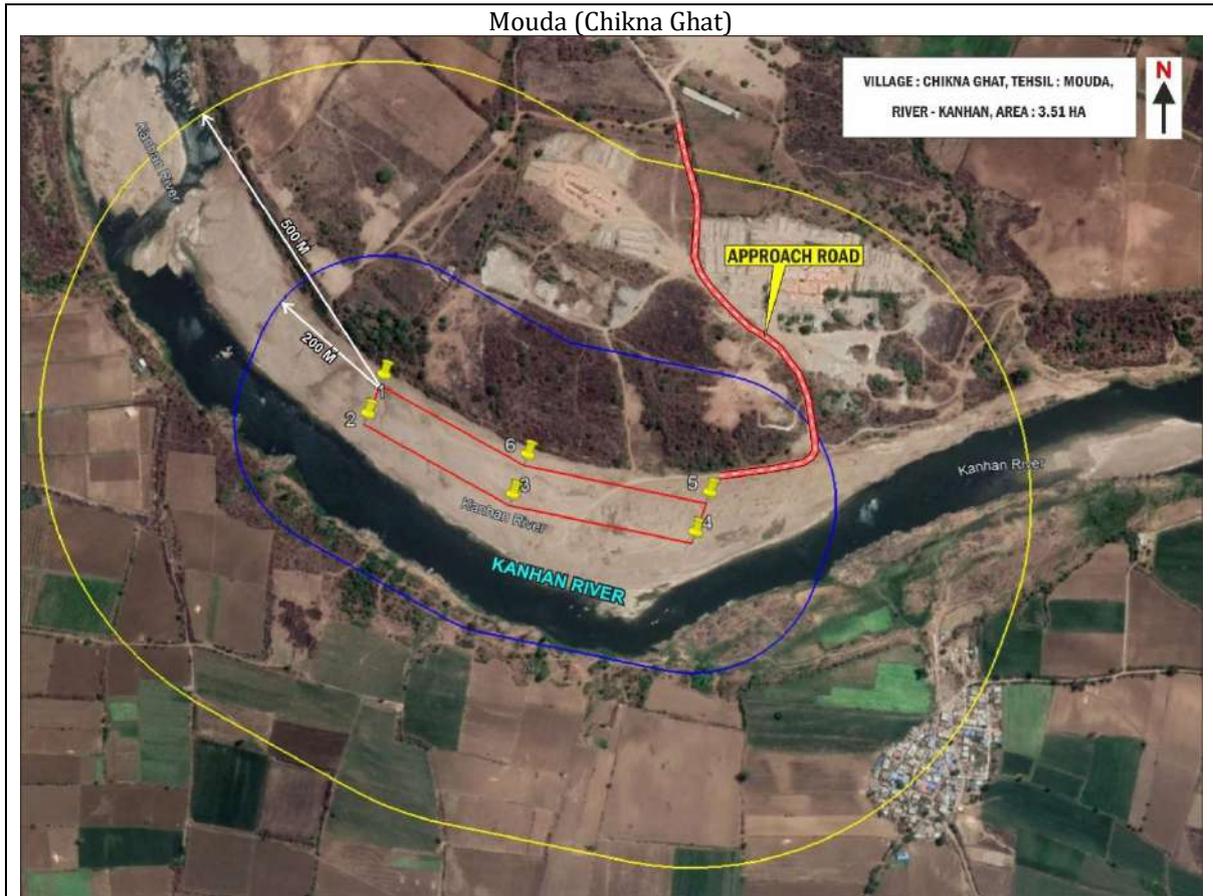
Sr. No.	Condition as per E & M guideline	Compliance
1	Three-member committee for environmental audit	District Magistrate formed a committee for monitoring of compliances as per EM guidelines after grant of prior Environmental Clearance.
2	LOI should be preferably granted to those locations which have least possibility of an impact on the environment and nearby habitation	Environmental feasibility will be checked before issuance of LOI.
3	Identification of sand Ghats its quantification and feasibility considering various environmental parameters like proximity of protected area, wetlands, creeks, forest etc. and other factors such as places of archaeological importance, habitation, prohibited area etc.	All sand ghat locations are physically surveyed by technical committee as per Government of Maharashtra revised sand policy dated 28.01.2022 and ensured that all the parameters regarding sustainable sand mining is followed.
4	Mining plan and its initial level of mining leases at shorter interval say 10m x 10 m	Mining plans by DGM, Nagpur. It is ensured that Mining plan and its initial level of mining leases at shorter interval 10m x 10 m showing in surface plan
5	Responsibility of mine owner to obtain all statutory clearances	It will be ensured by District administration before commencement of mining.
6	Emphasis of district survey report and its format of reporting	Draft DSR will be published in accordance with format given in notification dated 25 July 2018.
7	Regular replenishment study to ascertain rate of depositing, plan and section needs to be prepared.	It is ensured that regular replenishment study to ascertain rate of depositing, plan and section to be prepared.
8	Movement of transportation of mineral from mining area to end user needs to monitor.	It will be ensured by using IT enabled services as per guidelines.
Preparation of District Survey Report		
9	Preparation of District Survey Report	DSR is prepared as per format S.O. 3611(E) dated 25.07.2018 and EM guidelines 2020 issued by MoEF&CC, New Delhi
10	Publication of District Survey Report	Draft DSR published on district portal for public Inventory of river bed materials in the district comments.

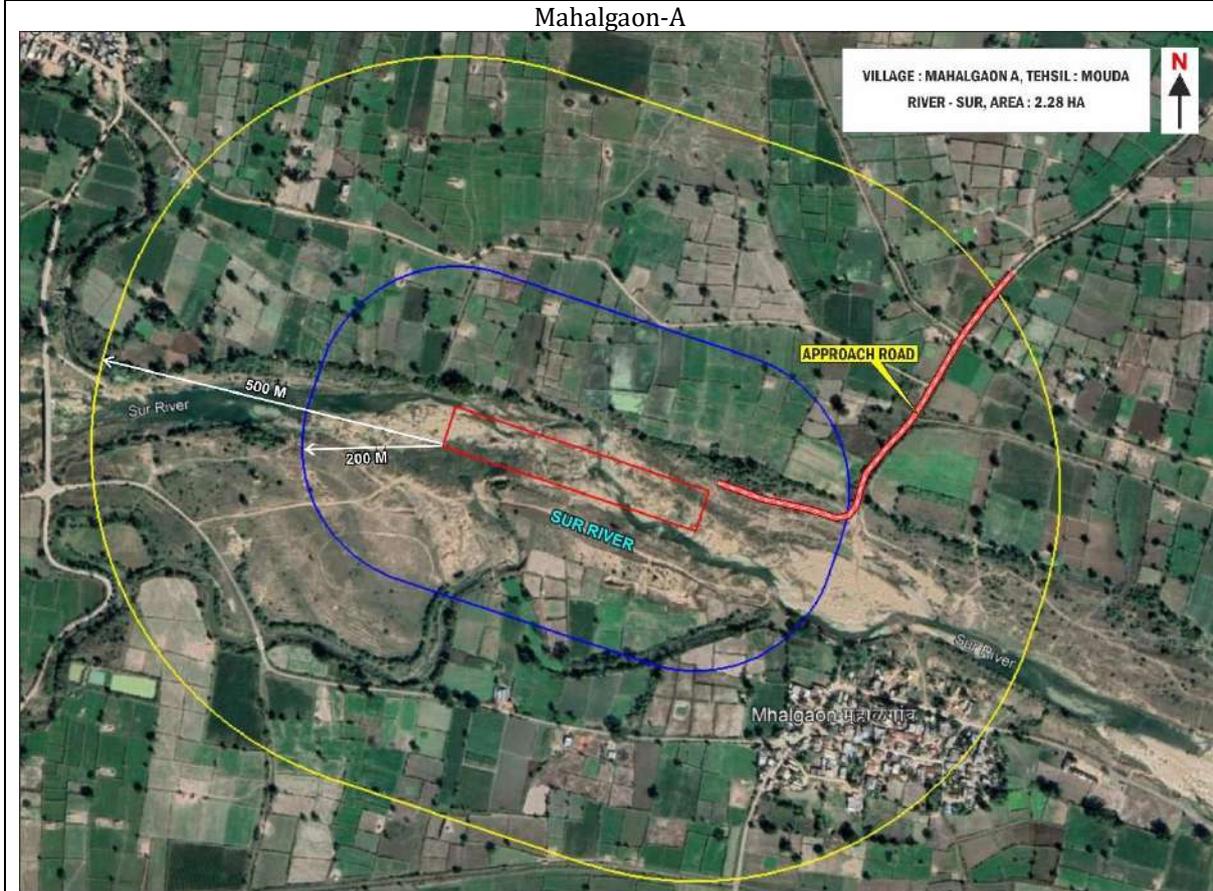
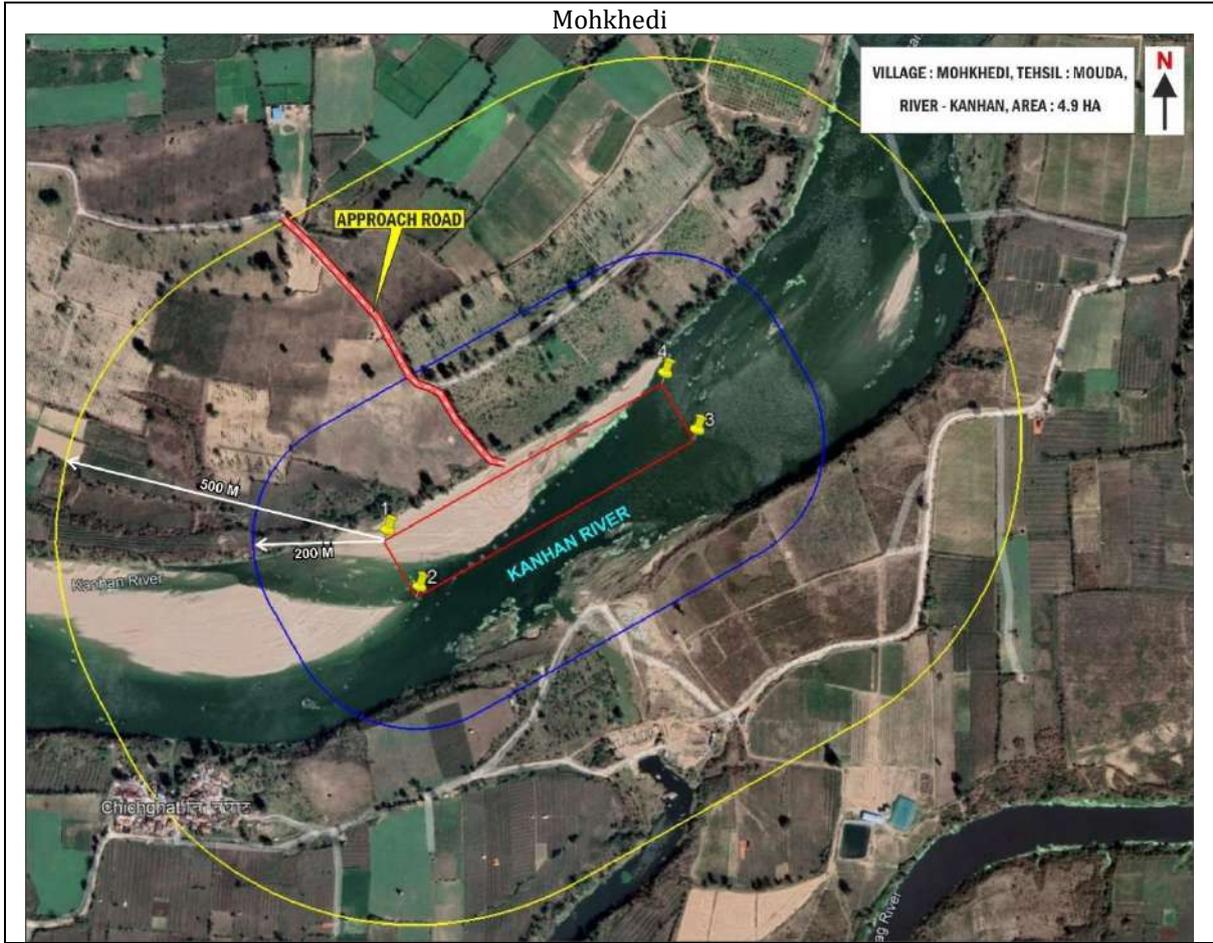
11	Development of inventory of river bed material and other sources in the district.	Attached as Annexure I to V as per EM guidelines 2020
12	District Survey Report is prepared in such a way that it is not only identifies the mineral bearing area but also defines mining and no mining zones Considering environmental and social factors.	All the parameters are covered in final DSR.
13	Identification of sources of Sand and M-sand, De silting Locations, river type perennial or non perennial, village, tehsil, agriculture/nonagricultural land, M-sand plant etc.	Attached as Annexure-1, II and V
14	Defining the sources of Sand for identification of the potential area, entire river stretch needs to be recorded and area of aggradations/deposition needs to be ascertaining by comparing the level difference between outside river bed OGL and Water Level.	Areas of deposition are identified and levels are recorded for actual replenishment.
15	Boundary Pillars needs to be erected after identification of an area of aggradation and deposition outside bank of river at safe location for future survey.	Geographical co-ordinates of leases are marked on google Earth for future reference and to
16	Identifying mining and no mining zone shall Follow sensitively.	It is ensured that the mining activity and no mining zone shall be followed sensitively by mine owner
17	Demand and Supply for river bed material through market survey	Demand and supply is mentioned in the report on the basis of actual demand of various departments in the District and RBI's index. Based method which is given in Chapter 4.
18	Cluster situation shall be examined.	As per the sand mining is concerne there is no cluster situation in the District.
19	Mining outside river bed area on Patta/Khatedari land be granted when there is possibility of replenishment of material For govt. projects mining could be allowed on Patta/Kahtedari land but mining should be done by Govt. agencies and material shall not be used for sale.	There is no sand mining outside the River bed.
20	State Govt. should define transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely	It is ensured that transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely
21	List of recommended sites in the format Annexure-II, Details of Cluster in Annexure-III and transportation route in Annexure IV needs to be provided	Attached as Annexure- II, III and IV
22	Public Consultation	Public consultation has been conducted on 26 th December 2022
23	Grant of Letter of Intent for leases falling in potential zone	After getting all the statutory clearance of sand ghats it will be auctioned as per sand

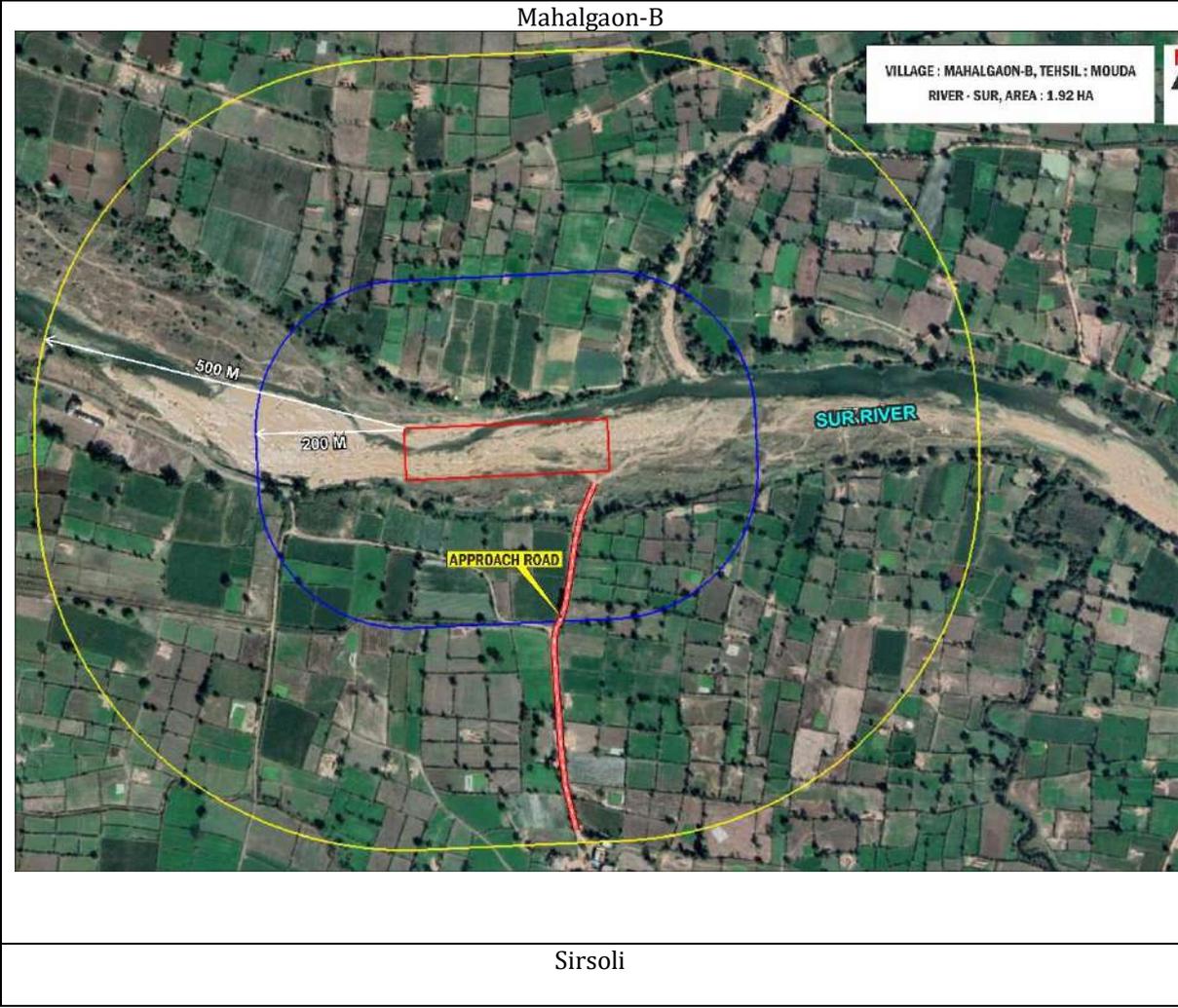
		mining policy of State Govt. dated 30.09.2019
24	The mining plan should include the original ground level recorded at an interval not more than 10 m x 10m along and across the length of river	Surface plan is prepared keeping OGL, at an interval of 10 mx 10 m across length of river.
25	In addition to this outside mine lease and bank of river up to meter needs to be recorded	Details are given in Annexure-VII
26	Time period of monsoon should be defined in the DSR/MP.	Time period of monsoon is defined as 10th June to 30th September of every year during which scooping of sand is not allowed.
27	Details of replenishment needs to be included in the mining plan	Preparation of mining plan is done on the basis of established thickness.
28	Parts of river reach that experience deposition or aggradations shall be identified Leaseholder/Environmental clearance holder may be allowed to extract the sand and gravel deposit in these locations to aggradations problems	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
29	Distance of sites for sand and gravel mining shall be depending on replenishment rate of river. Sediment rating curve shall be developed and checked against extracted volume of sand and gravel	All the parameters are covered in the replenishment study.
30	Sand and gravel may be extracted across the I entire active channel during dry season	It will be ensured before commencement of Mining
31	Abandoned stream channels on the terrace and inactive flood plains are preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form inactive channel.	All sand ghat are exposed during non-monsoon period and their deltas and flood plains. The stream should not to diverted to form inactive channel.
32	Layers of sand and gravel which could be removed from river bed shall depend on width of river and replenishment rate of the river.	It is ensured by the technical committee, and Mineable depth is decided after physical survey and there is no possibility of adverse impacts on River morphology
33	Sand ghat shall not be allowed to be extracted where erosion may occur such as concave bank	it is ensured by Technical committee, All the sand ghat locations are Depositional or Aggradation areas and Sand ghat will not be allowed to be extracted where erosion may occur such as concave bank
34	Segment of braided river system should be used preferably falling within lateral migration area of river regime that enhances feasibility of sediment Replenishment.	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
35	Sand and gravel shall not be extracted from the bridge subjected to 250m on the upstream and 500 meter on downstream side	All sand ghat locations are at suitable distance form bridges as per Guidelines.

36	Mining depth should be restricted to 3 meters and distance from bank should be 1/4th of river width and should not be less than 7.5 meters	Mining depth is decided after physical survey conducted by technical committee and ensures that all the parameters is followed mentioned in the sand mining guidelines.
37	Demarcation of mining areas with pillars and dereferencing should be done prior to start of mining	All the sand ghat locations are demarcated and georeferenced.
38	A buffer distance of 50m after every block of 1000m over which mining is undertaken or at such distance as may be the directed prescribed by the regulatory authority shall be maintained	All the parameters are followed.
39	Obtaining Environmental Clearance and other statutory clearance	No mining will be done before grant of prior Environmental Clearance.
40	Baseline data before commencement of Mining Operations	It will be ensured that collection of baseline data before commencement of mining Operation.
41	Generic Structure of Replenishment Study	Replenishment study conducted scientifically and included in DSR
42	Particle size distribution and bulk density of deposited material to be assessed	It is followed

Location map of Proposed Nagpur District Sand Ghat





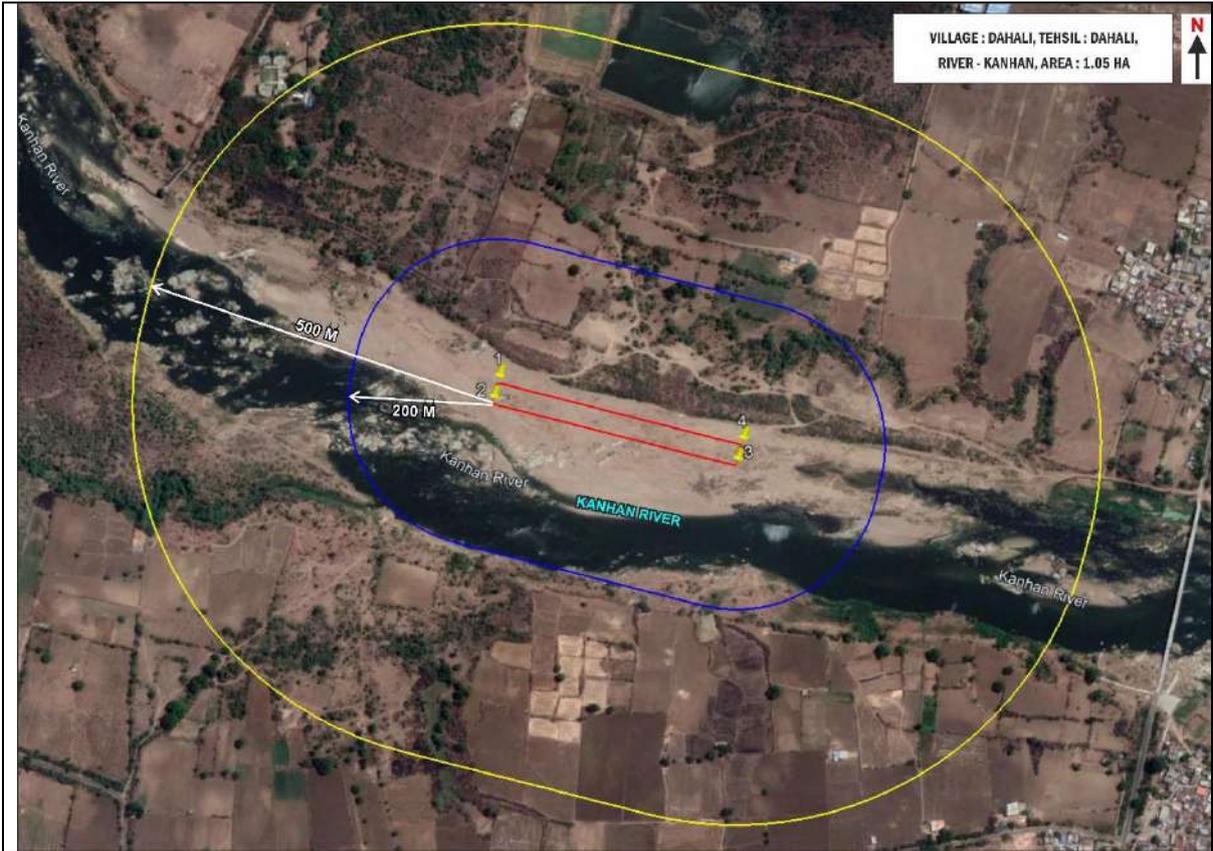




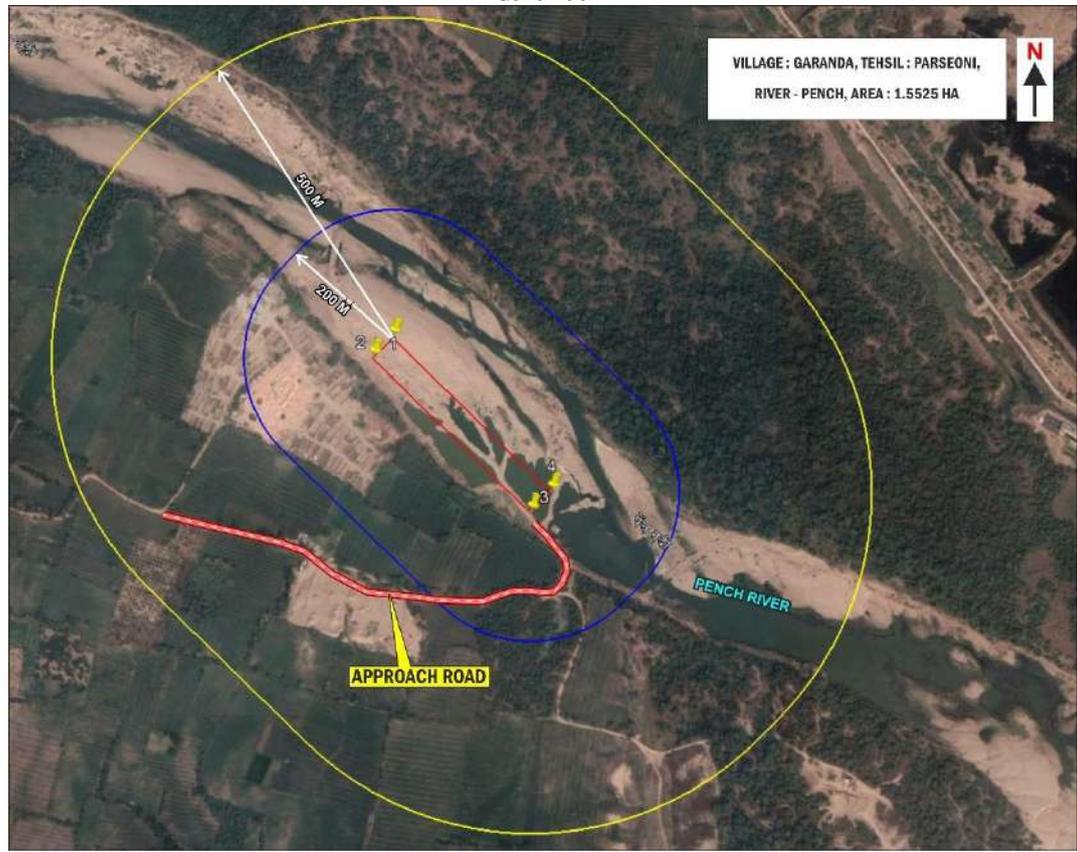
Vadhna



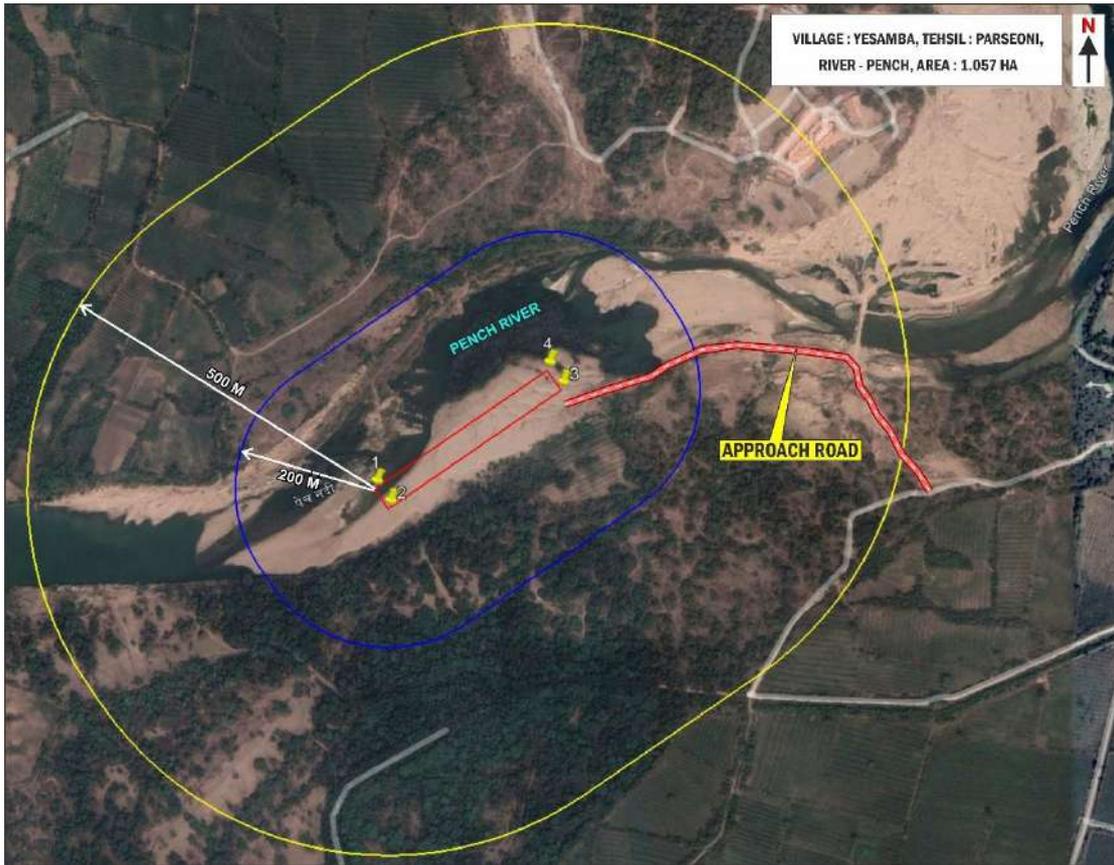
Dahadi



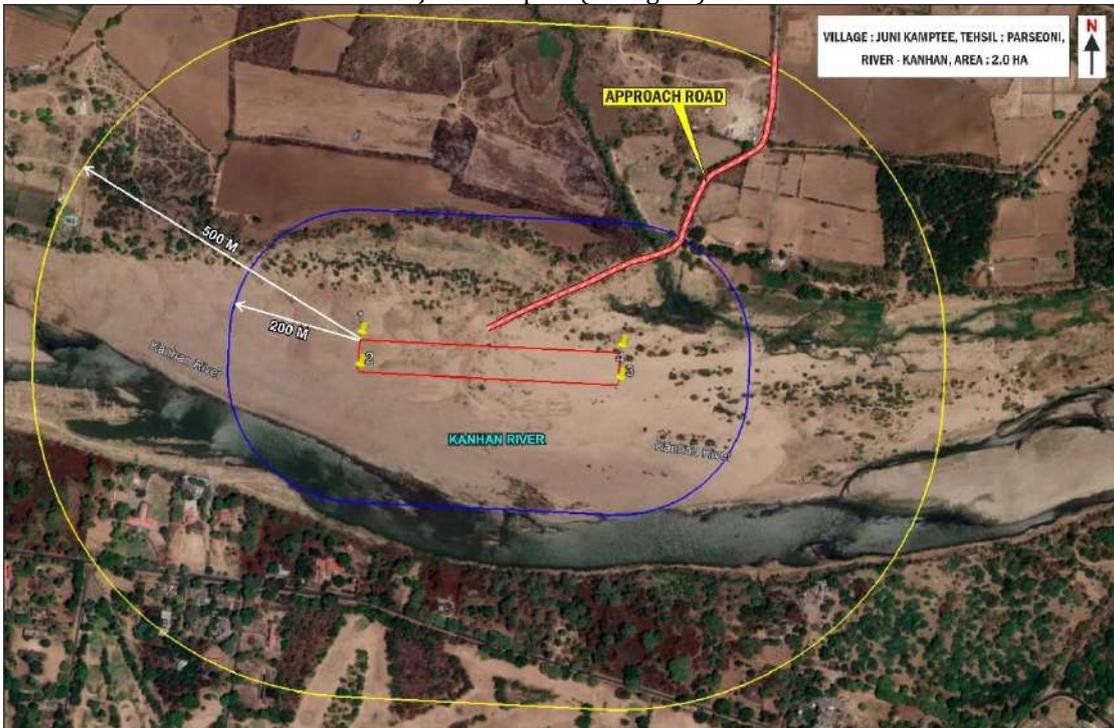
Garanda



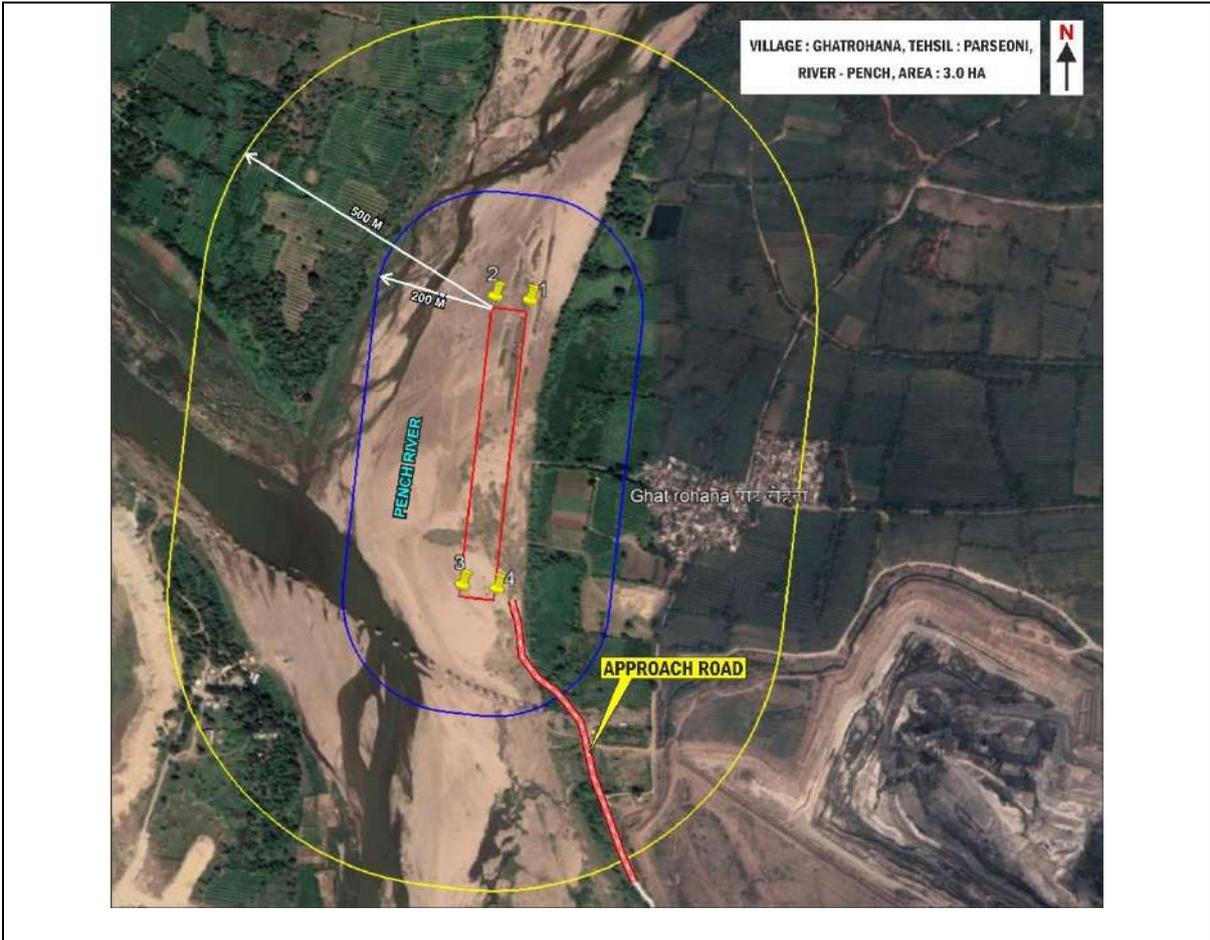
Yesamba



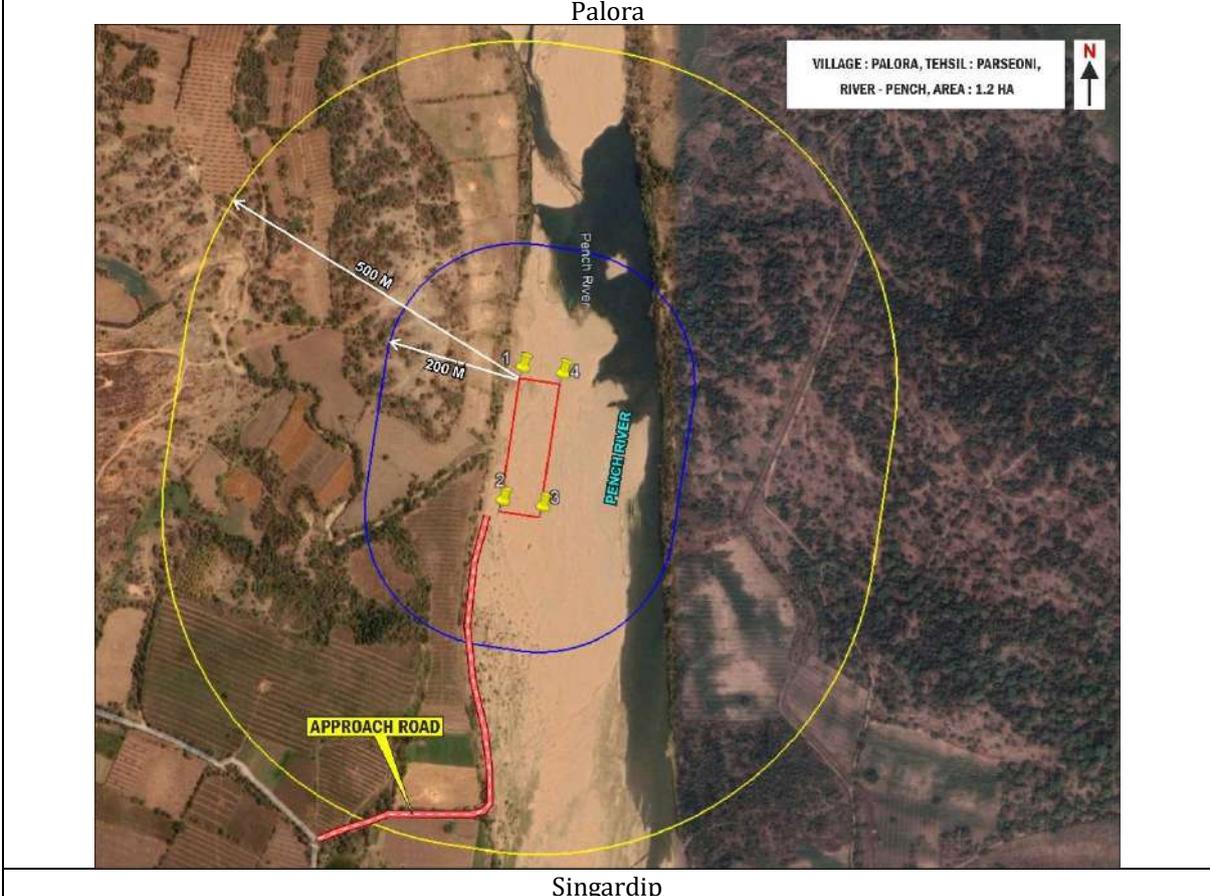
Juni Kamptee (Gadeghat)



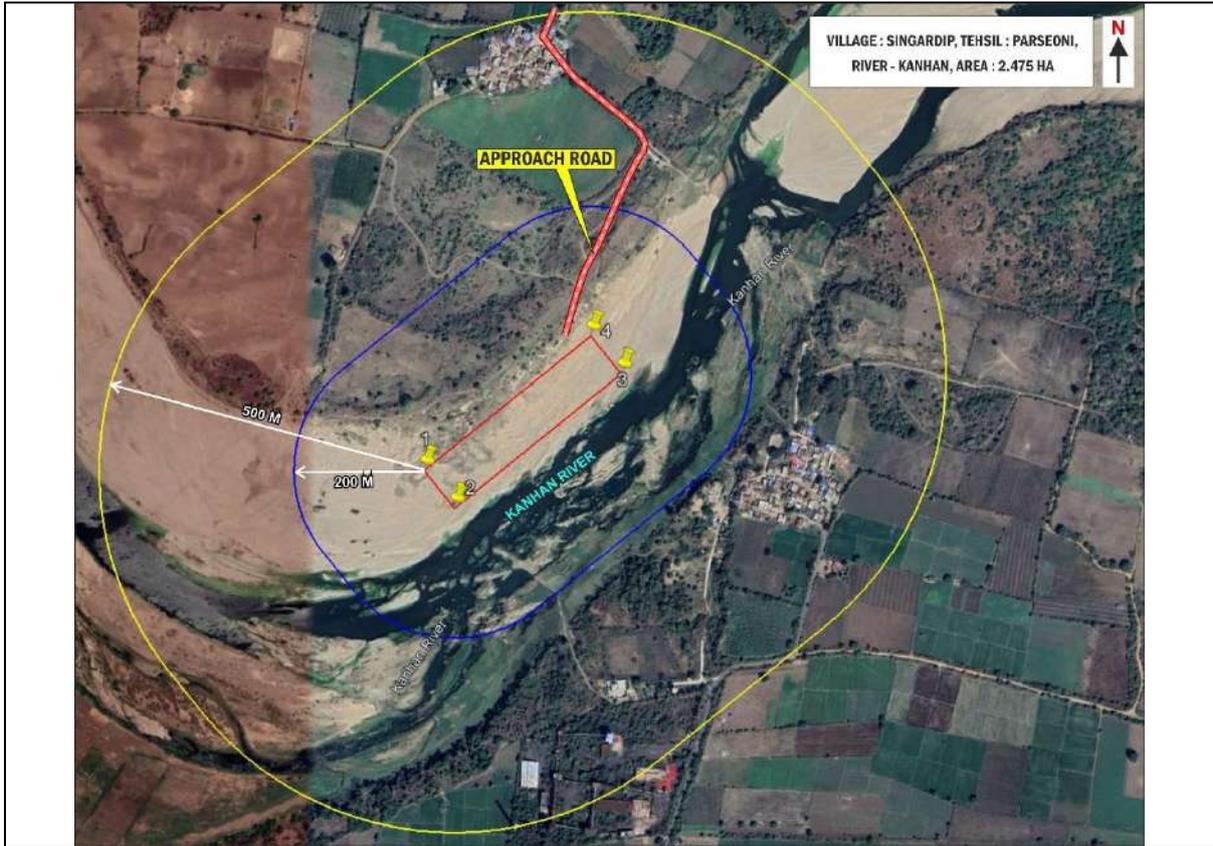
Ghat Rohana



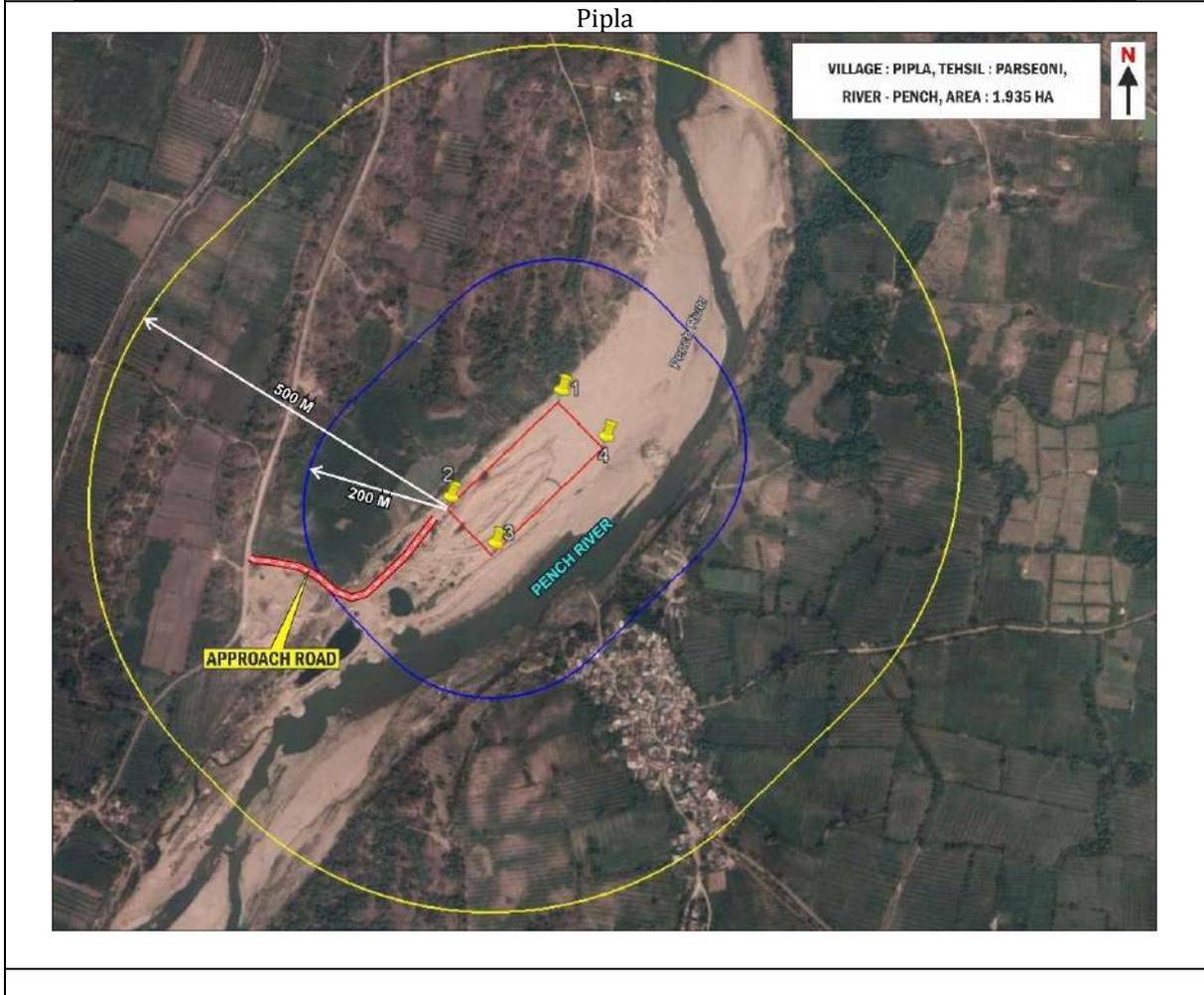
Palora



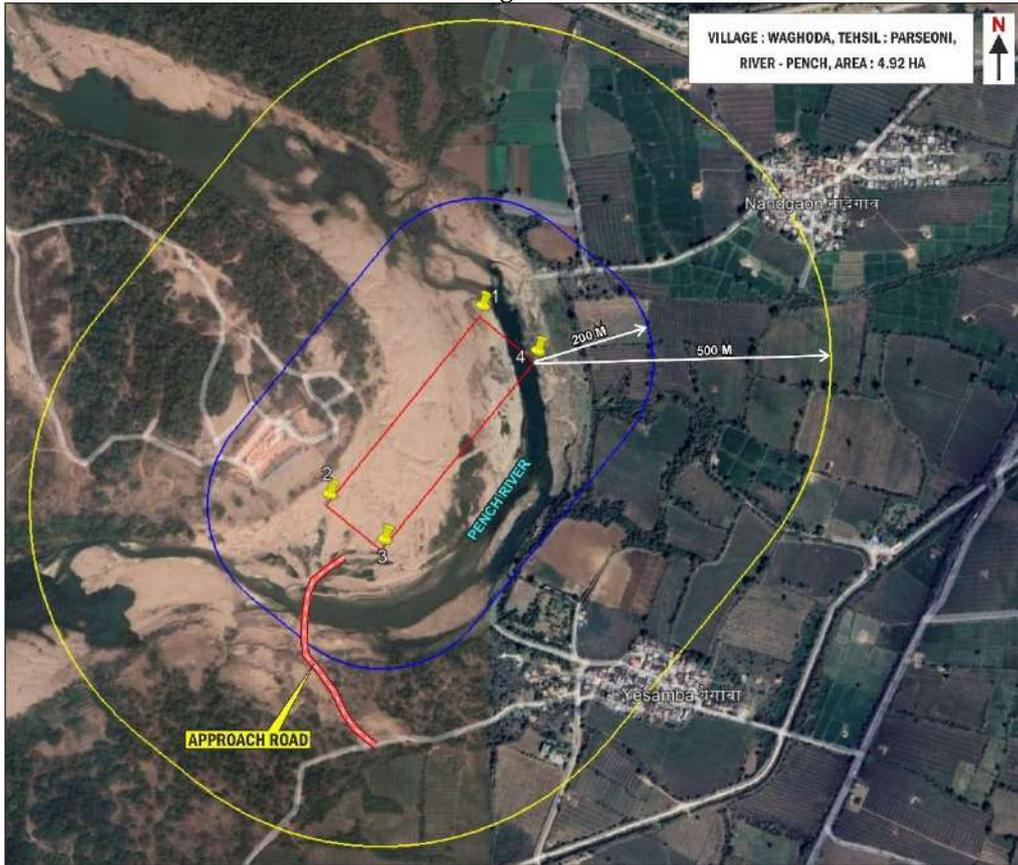
Singardip



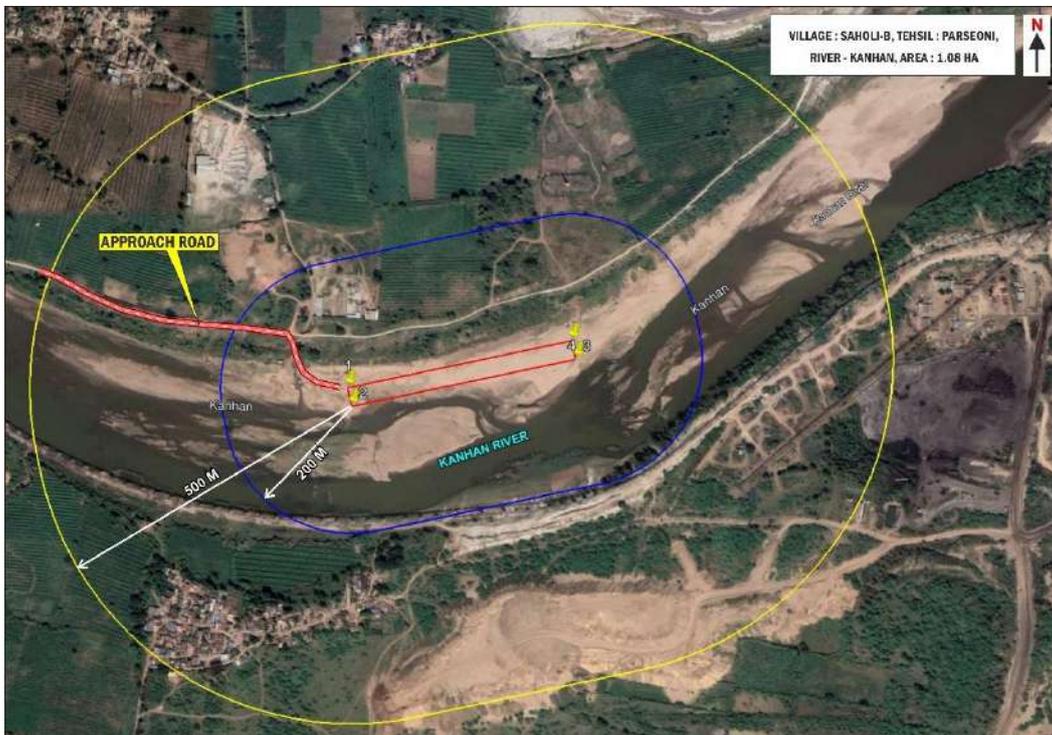
Pipla

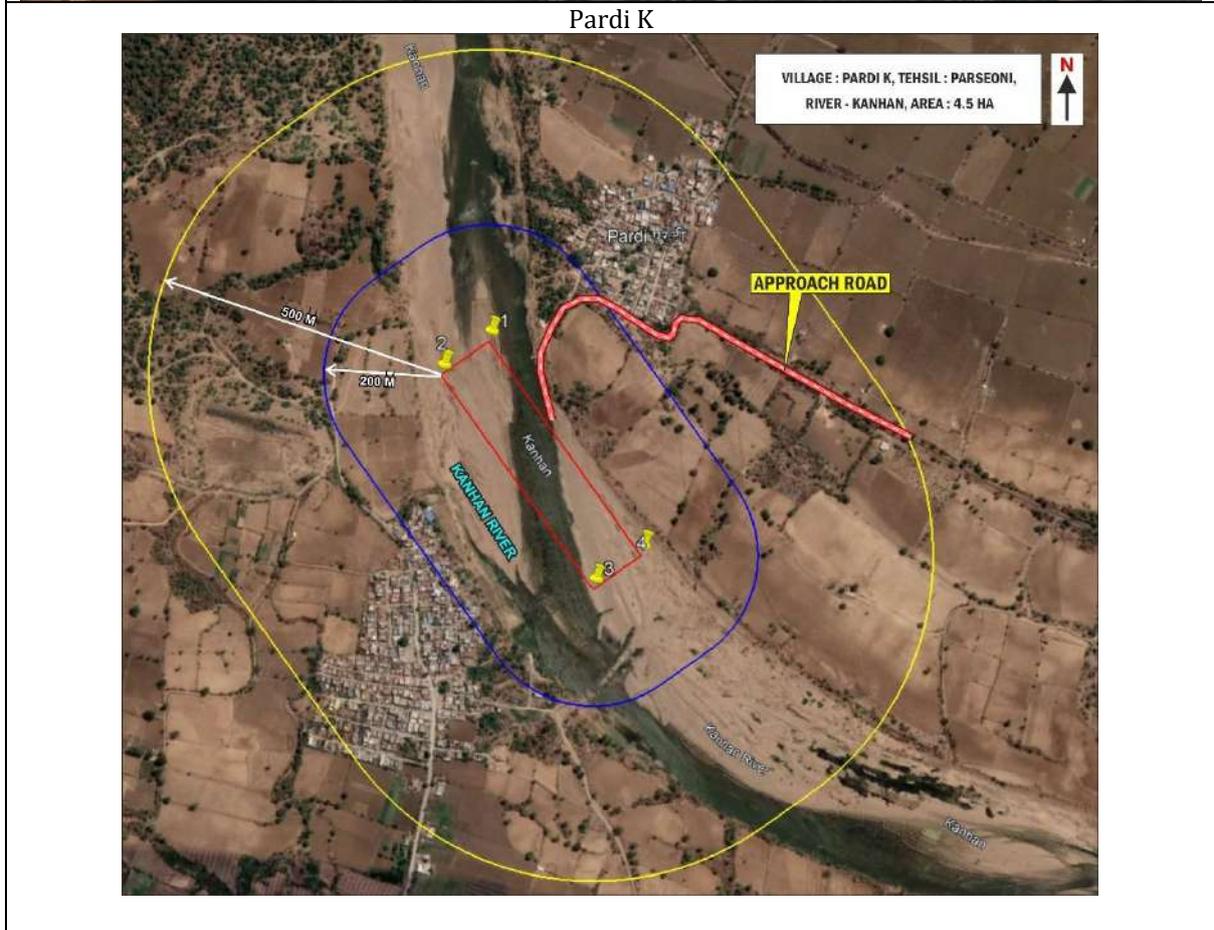
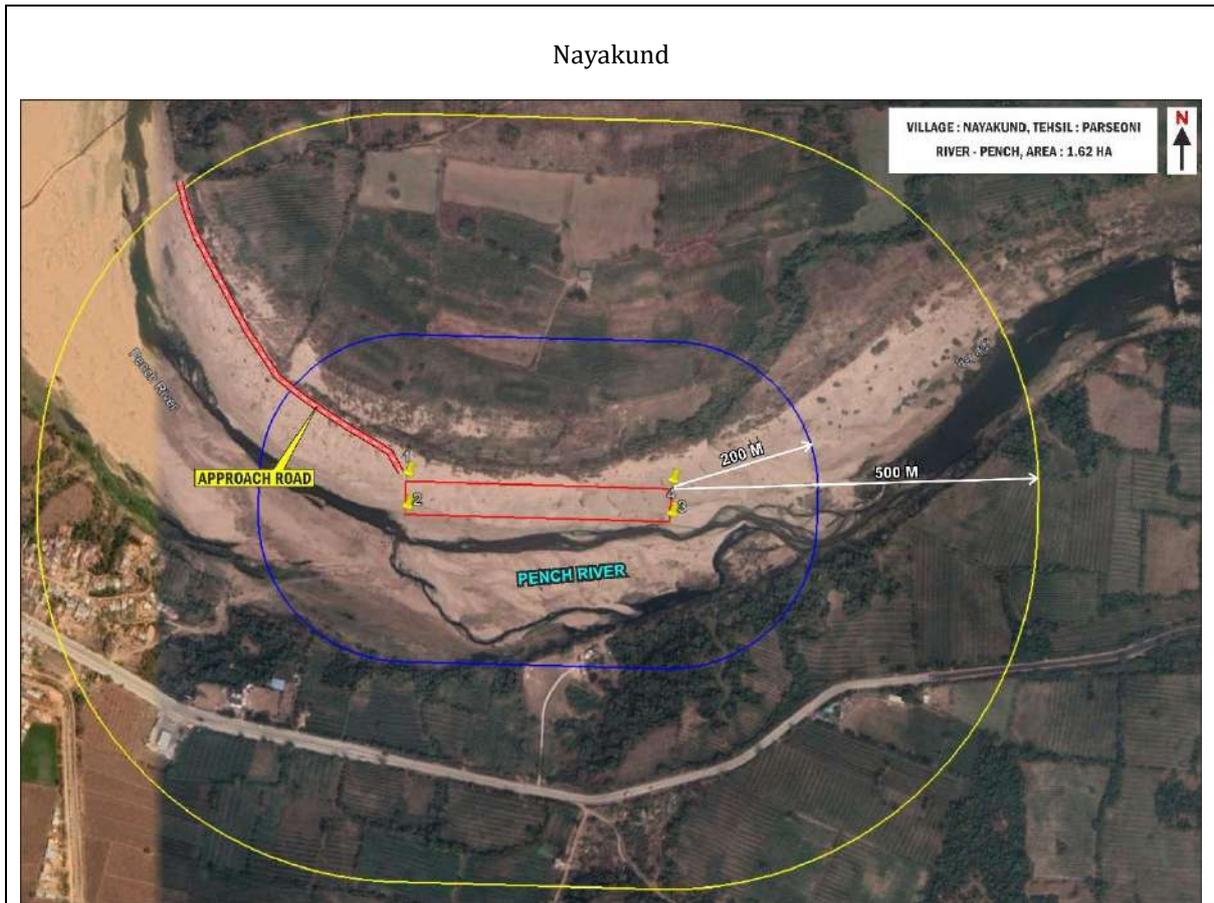


Waghoda

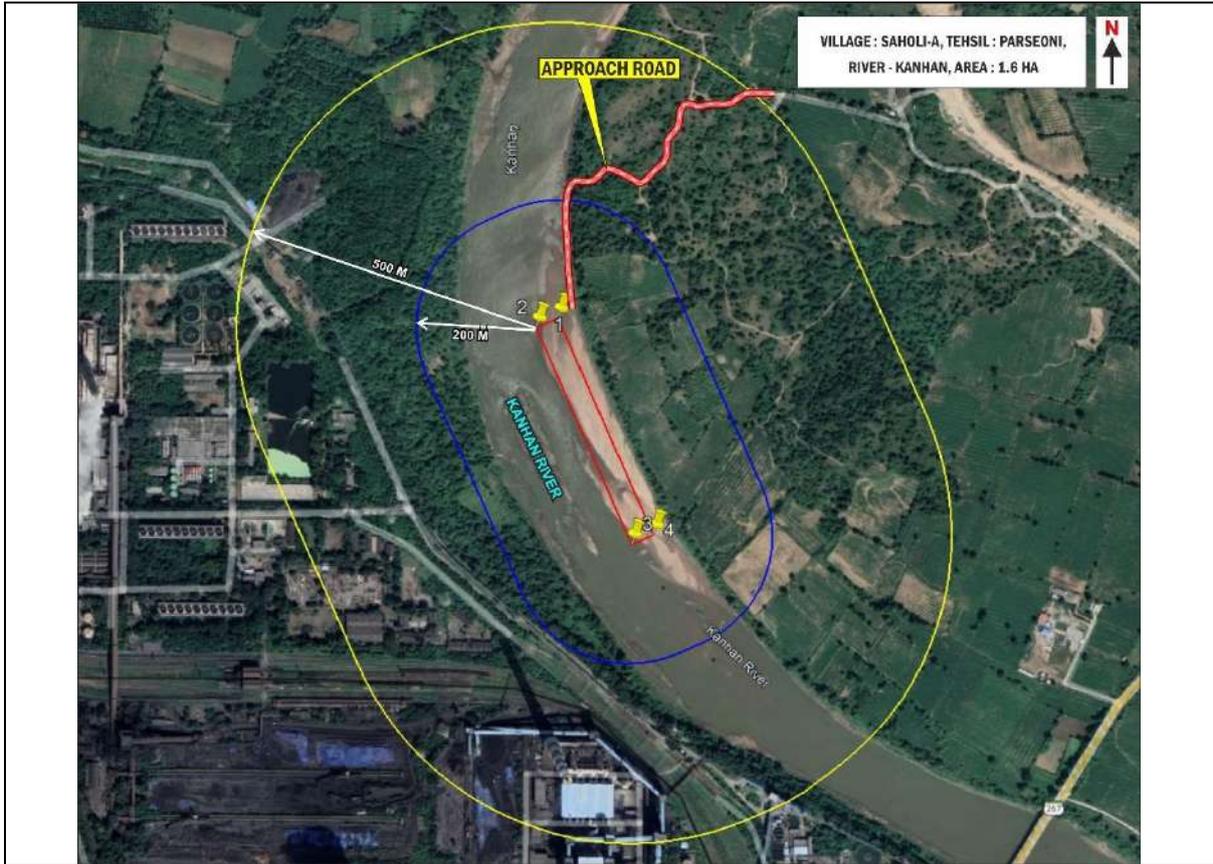


Saholi-B

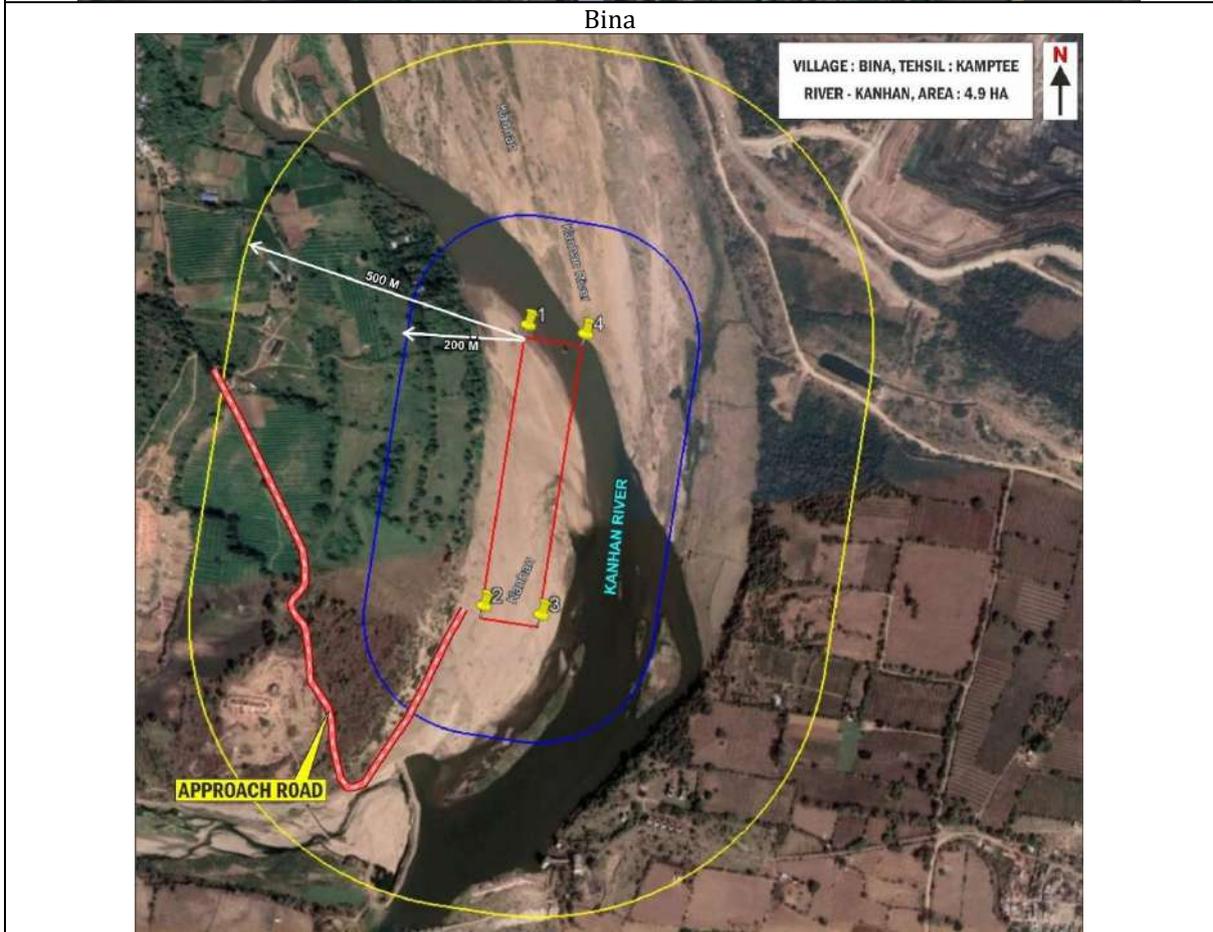




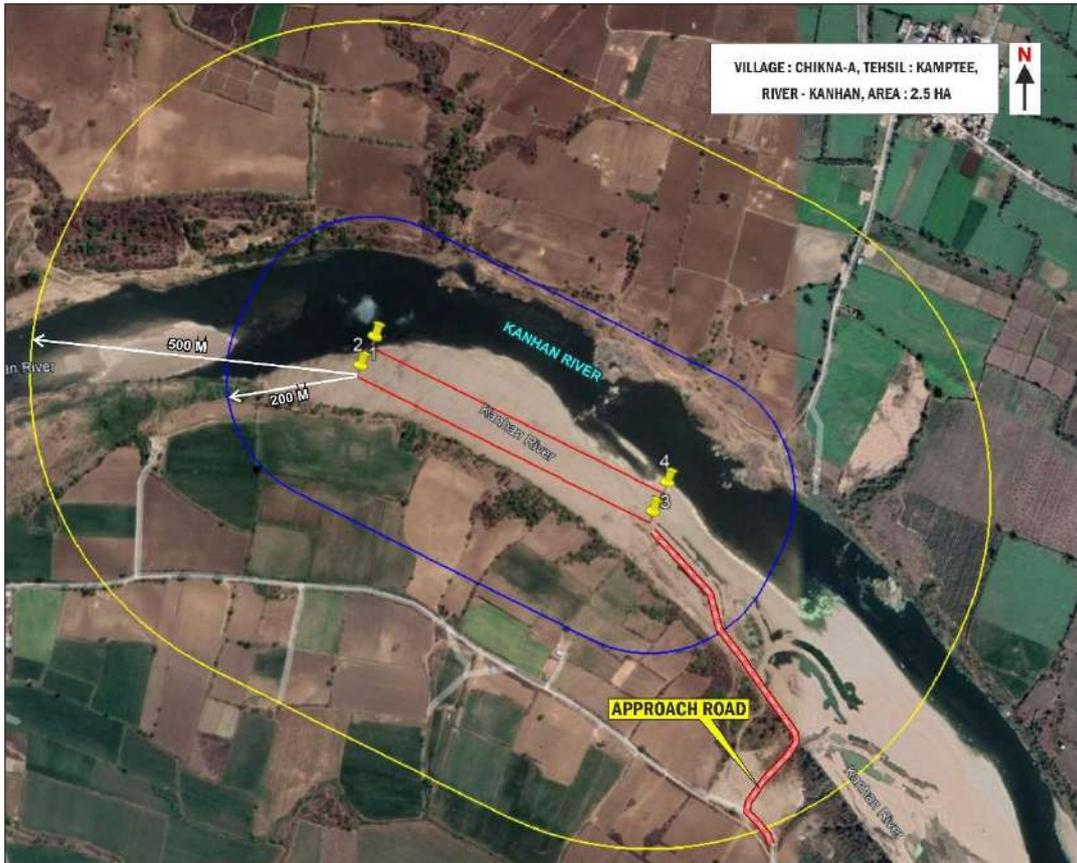
Saholi-A



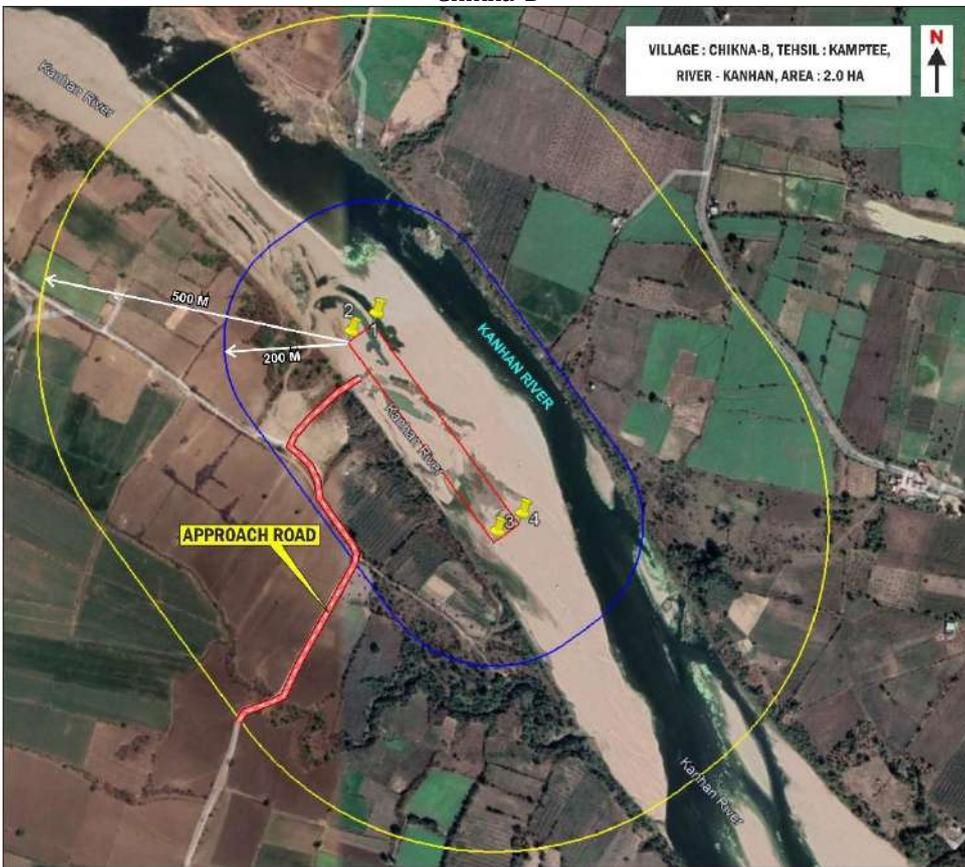
Bina

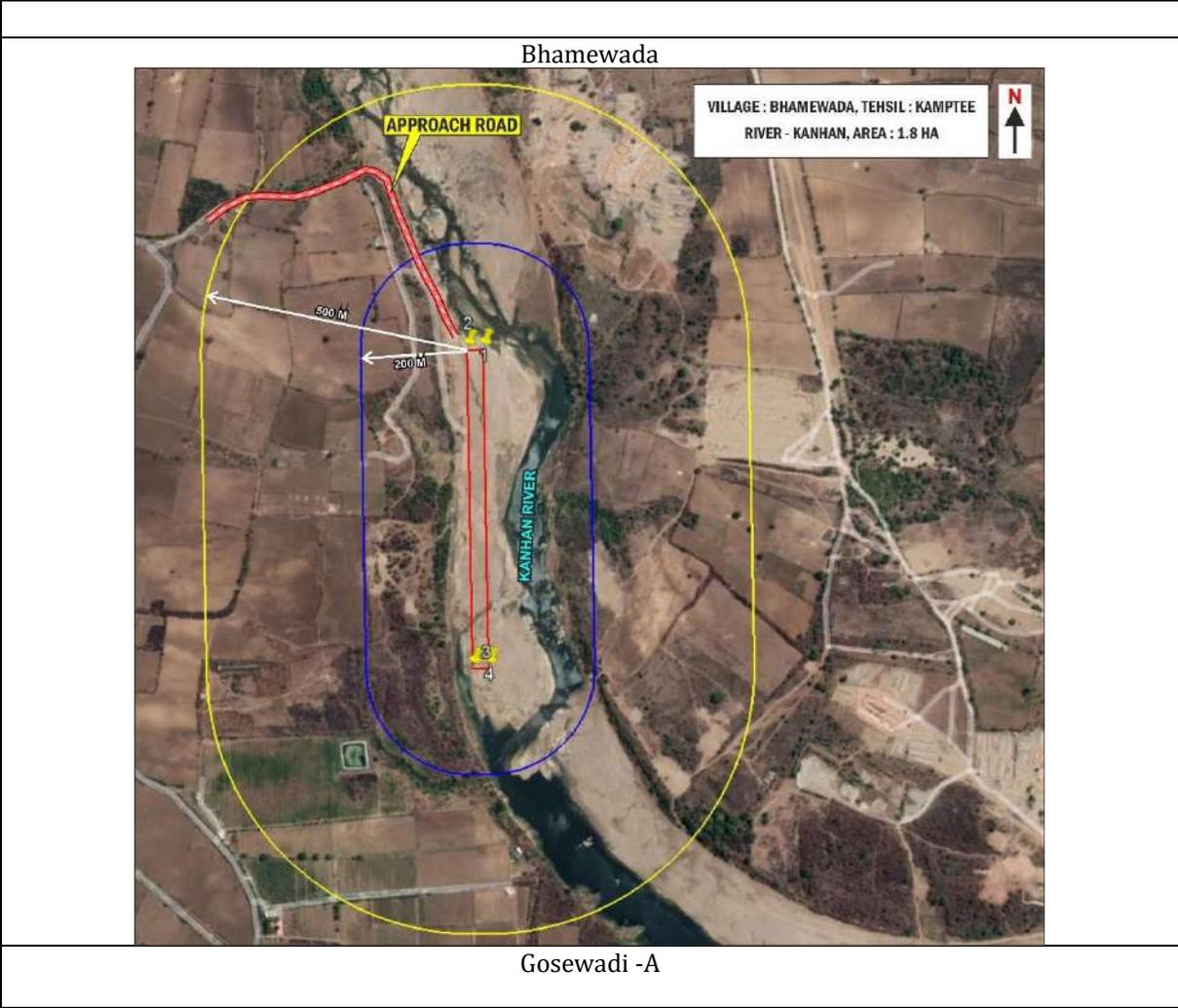


Chikna-A



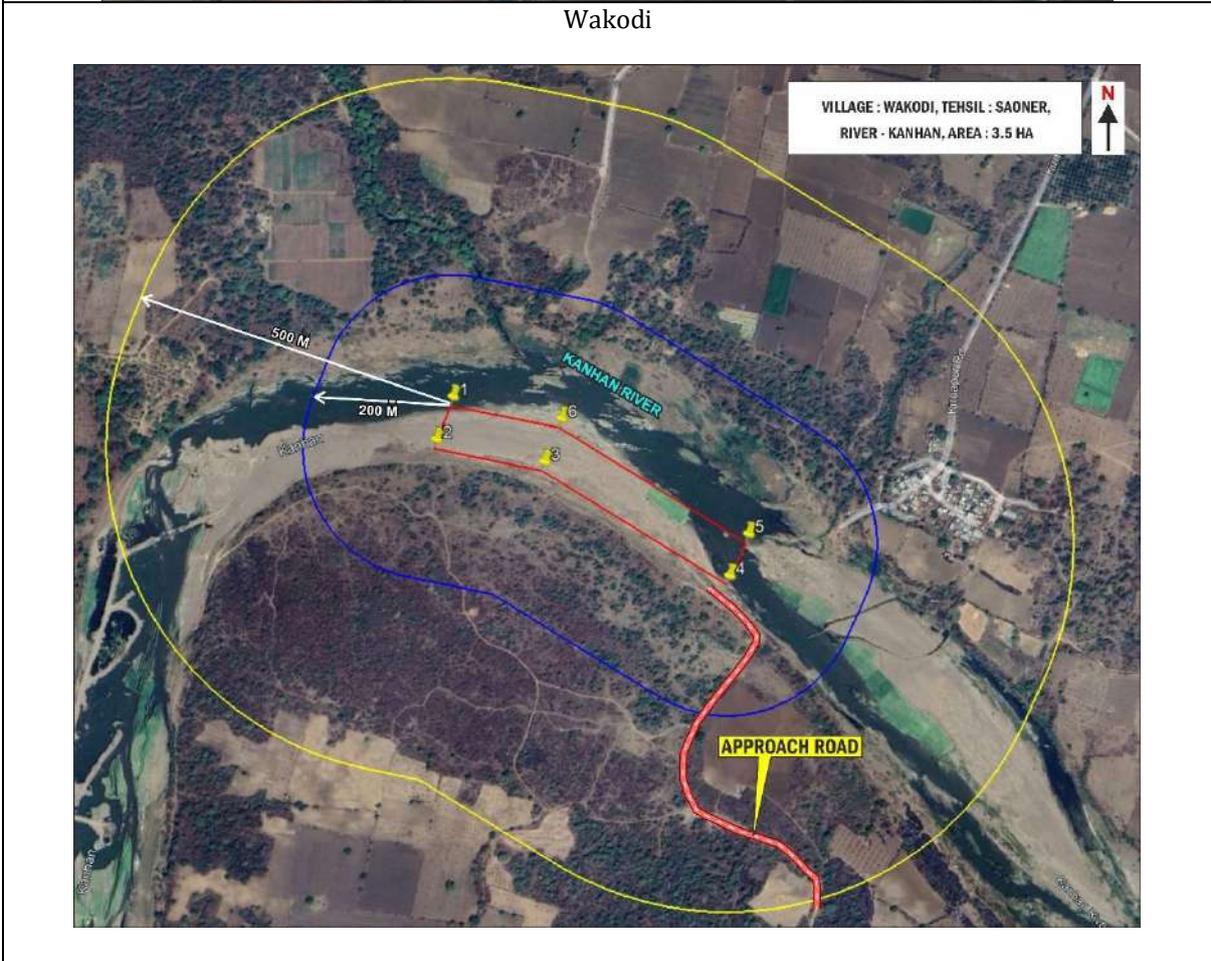
Chikna-B







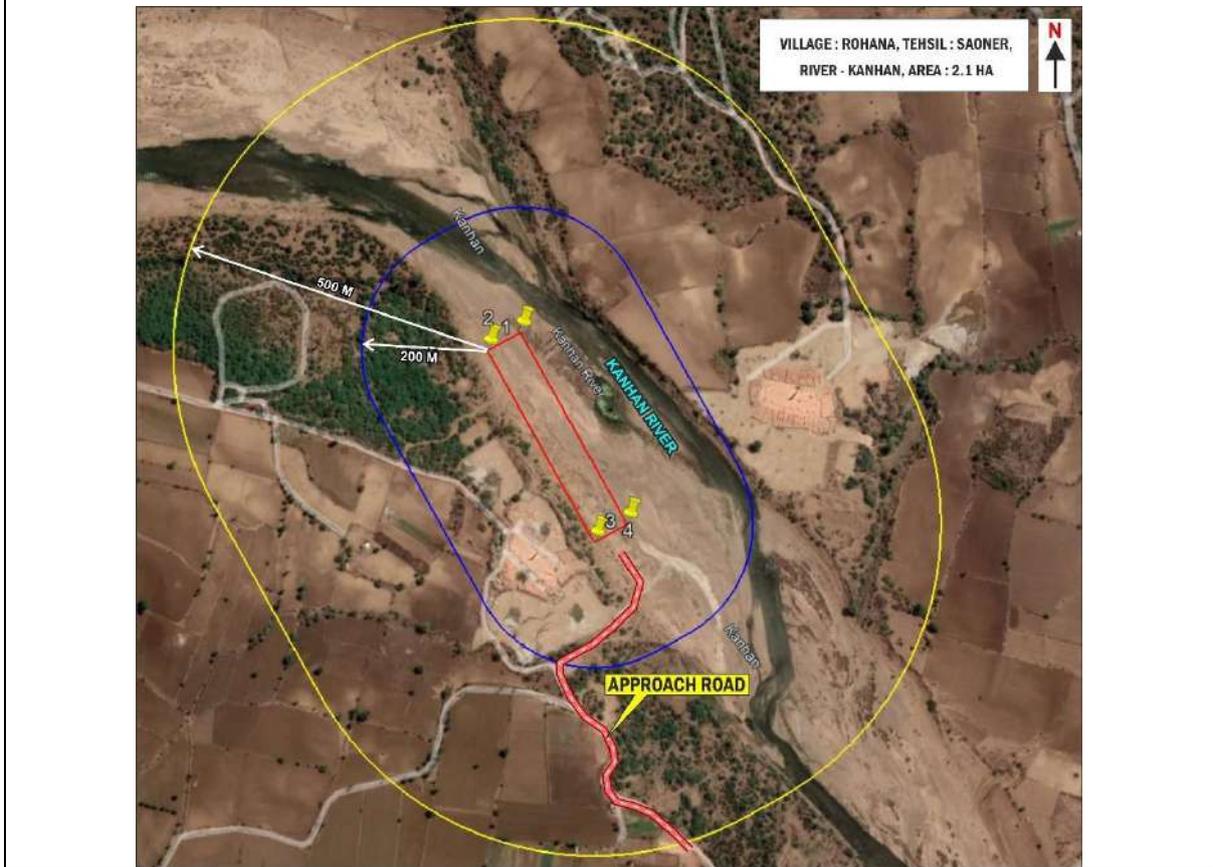
Wakodi



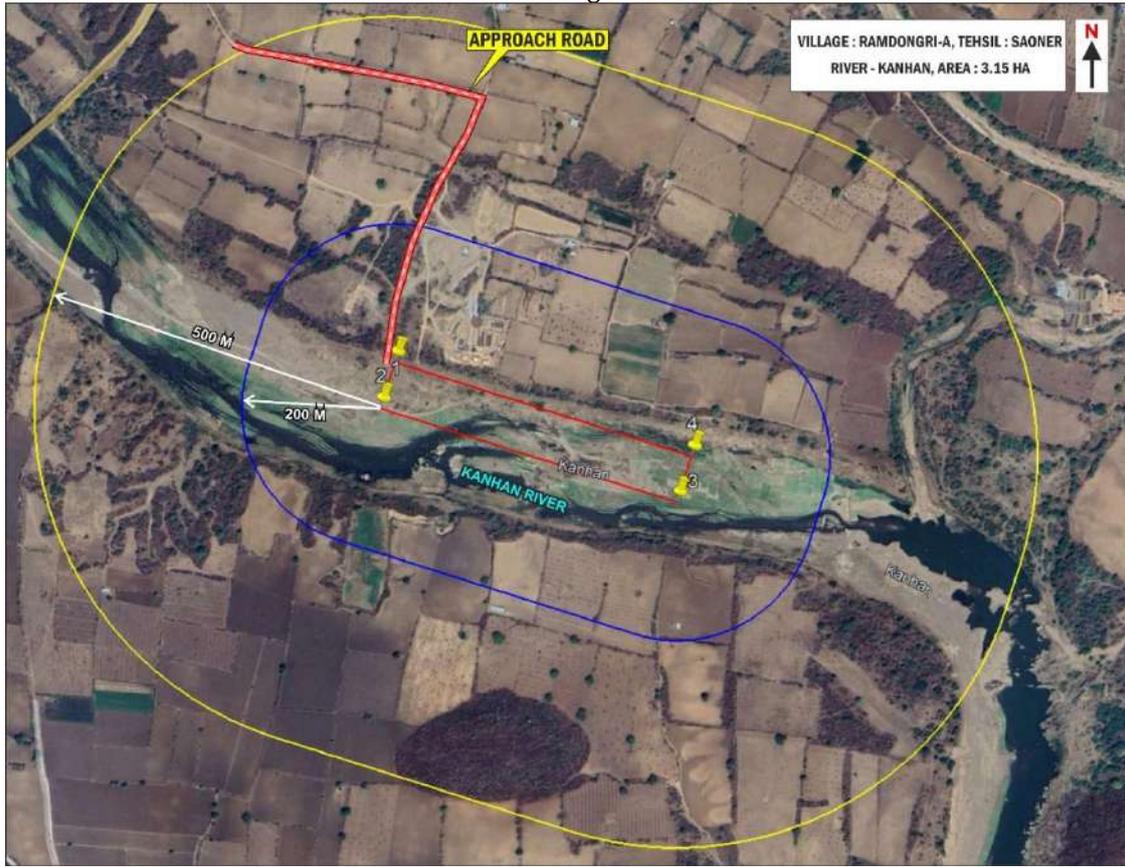
Isapur-A



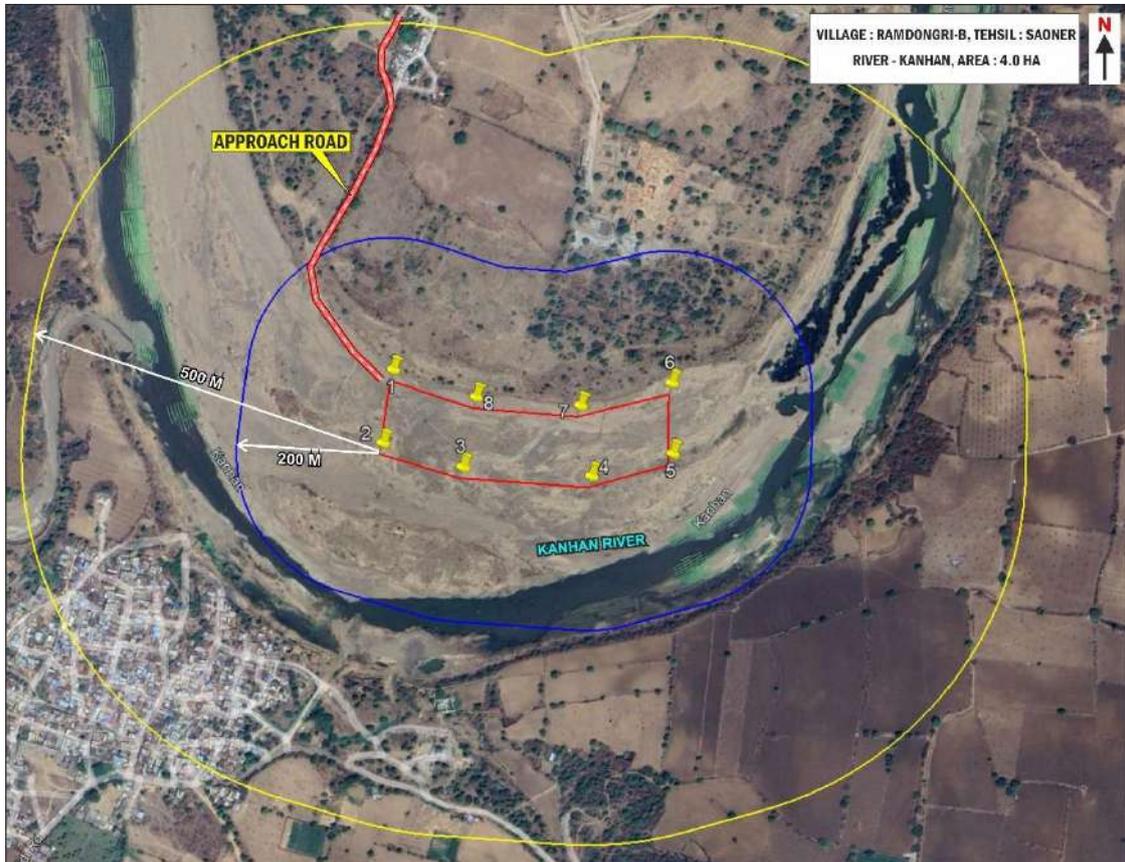
Rohana



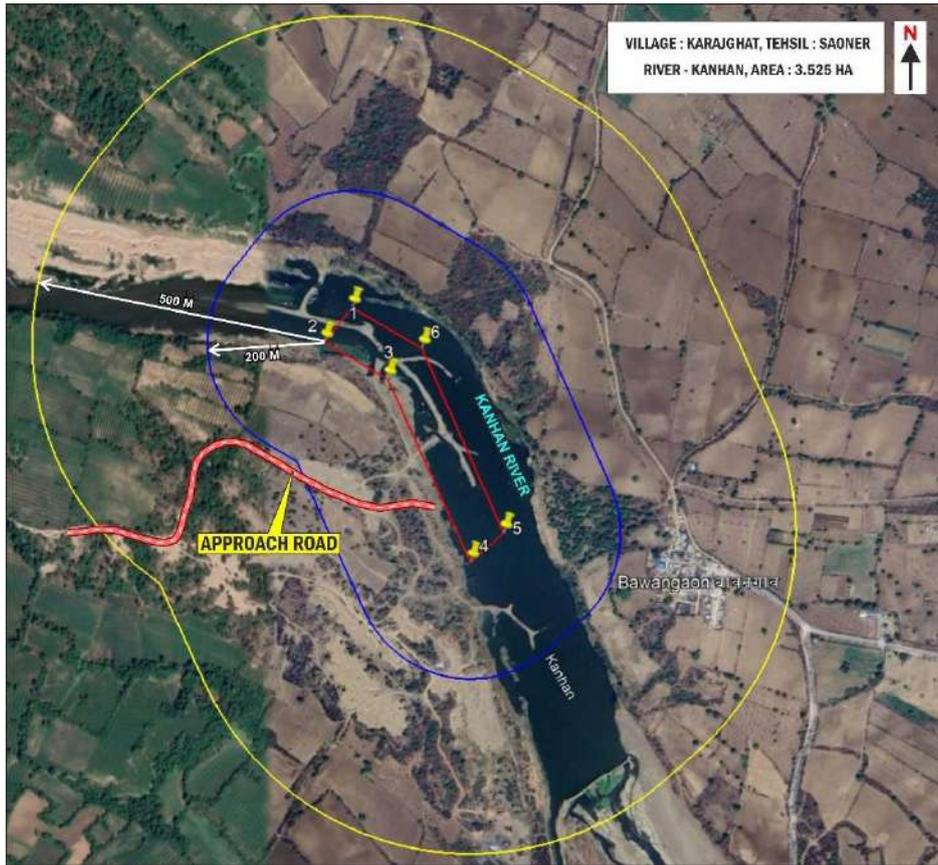
Ramdongri-A



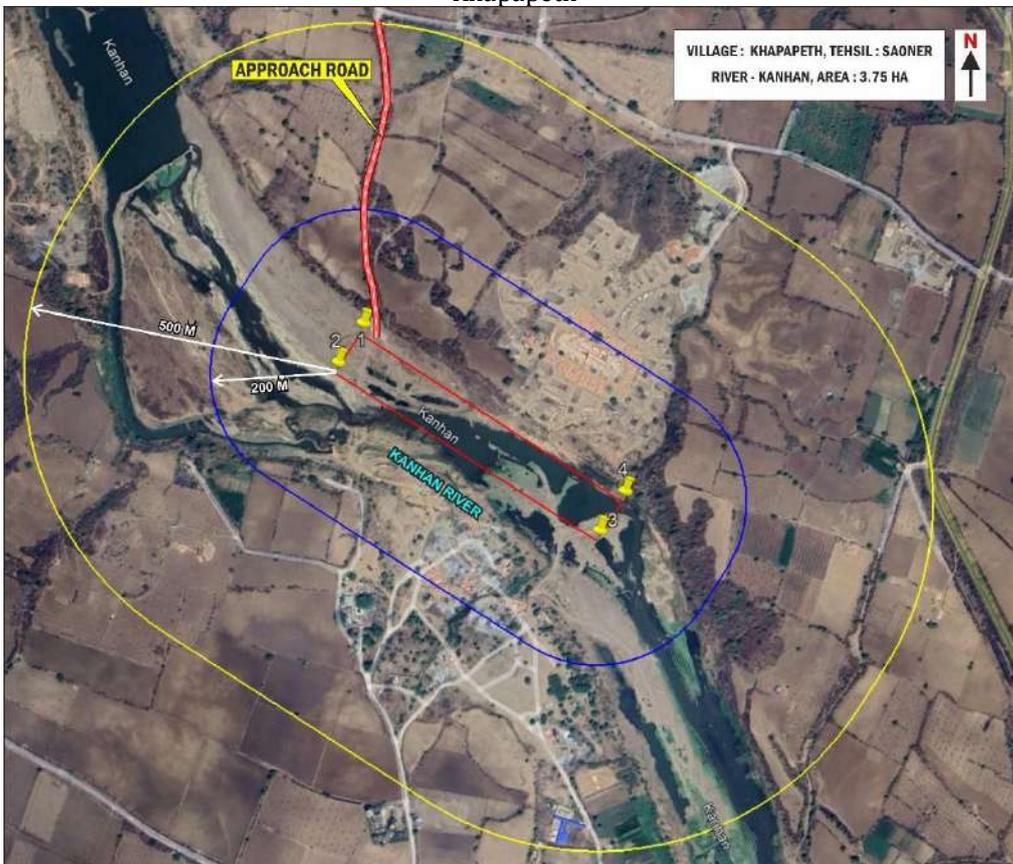
Ramdongri-B

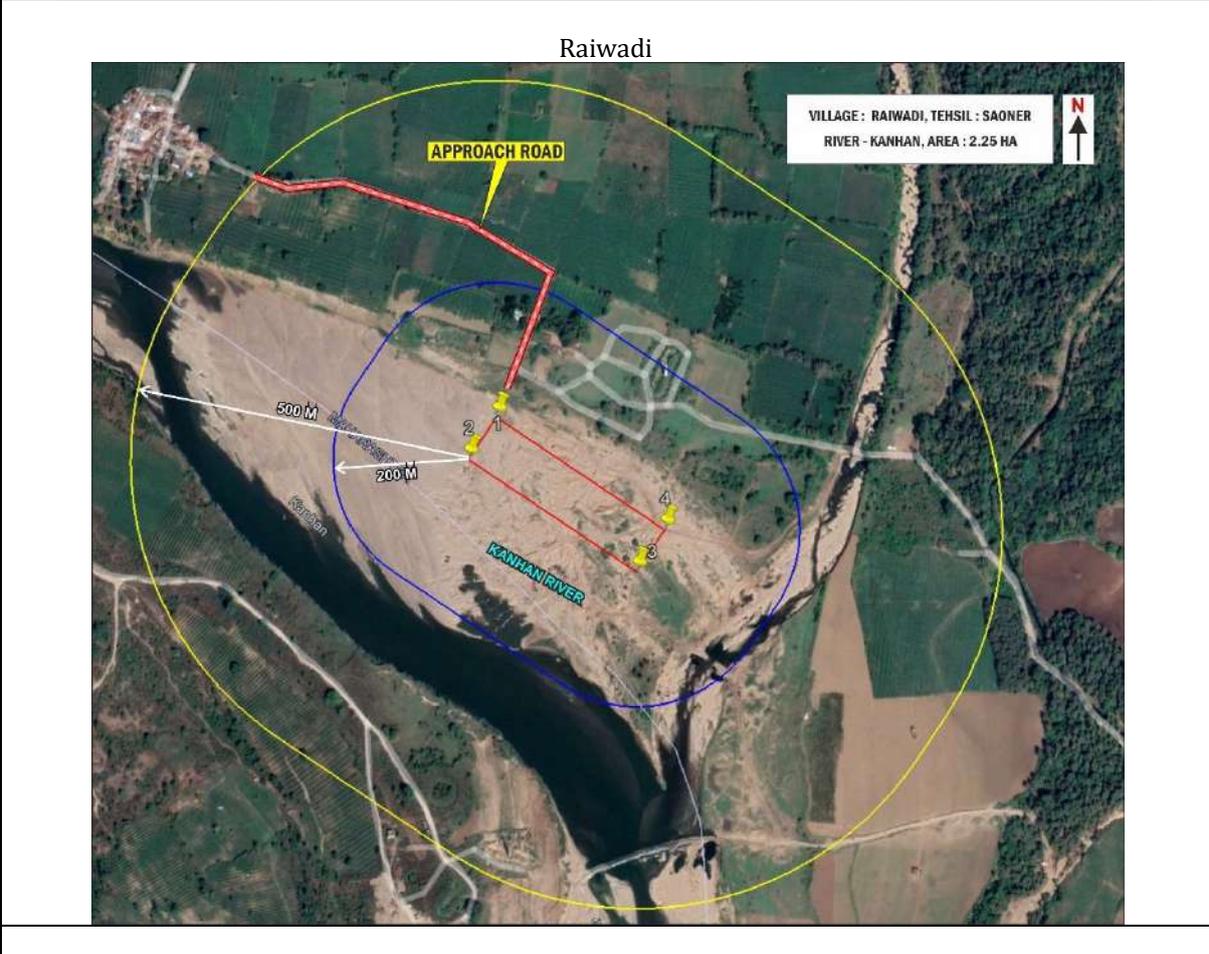
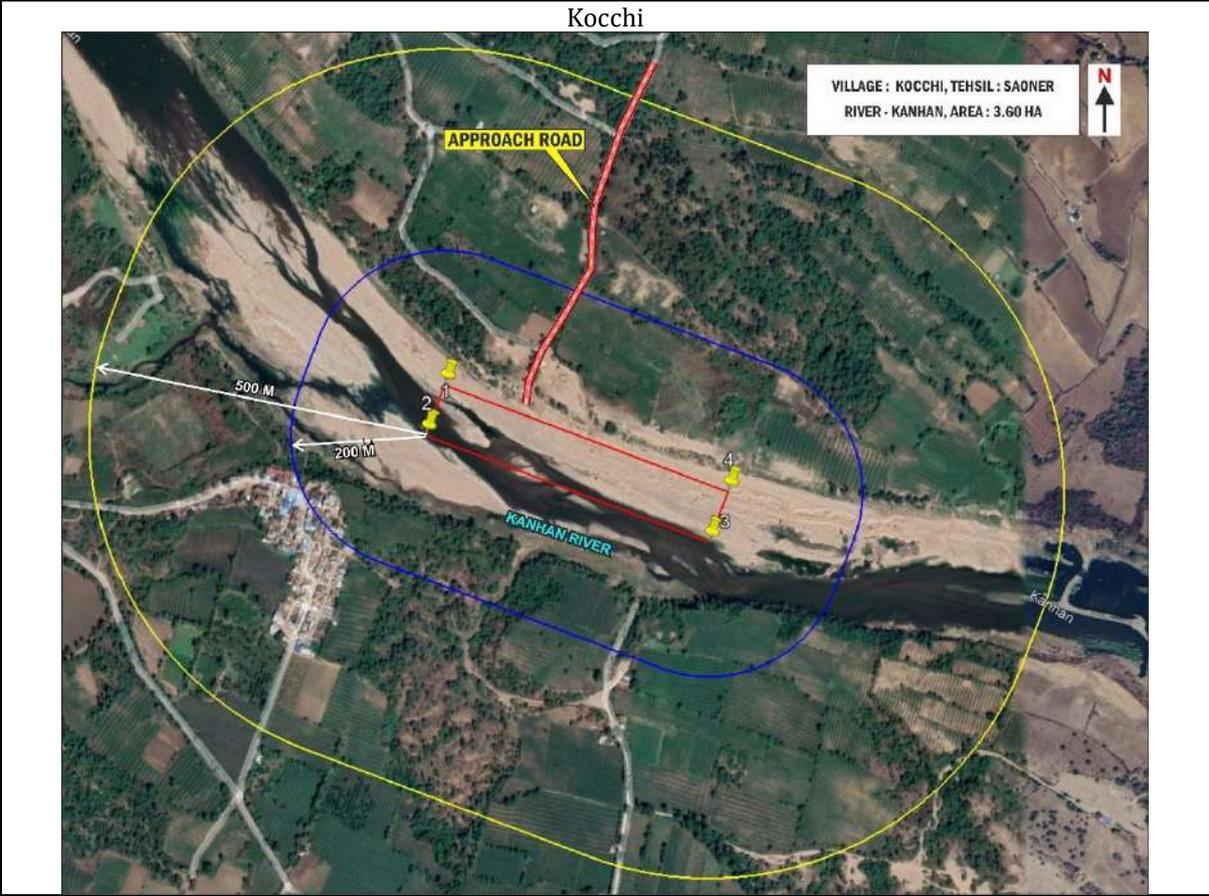


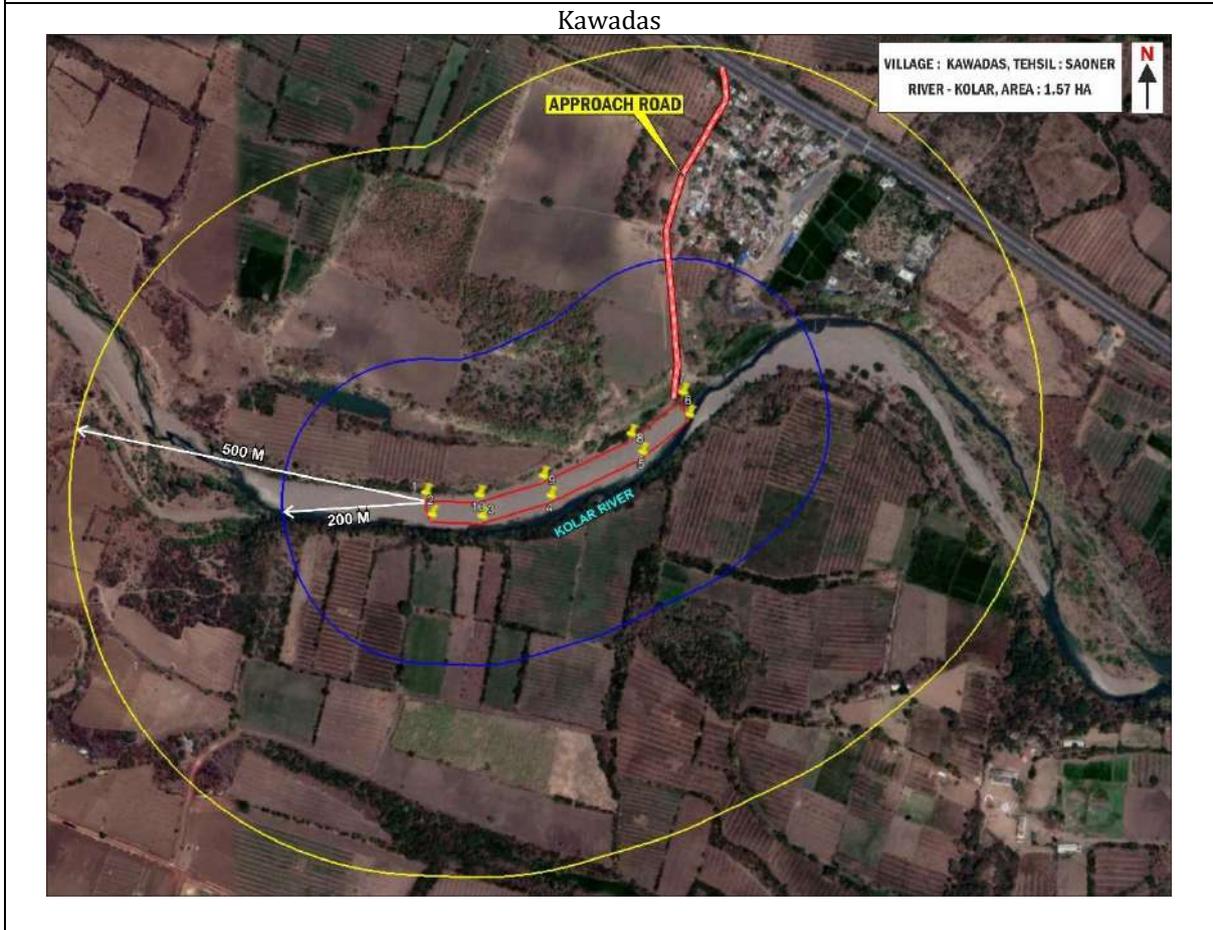
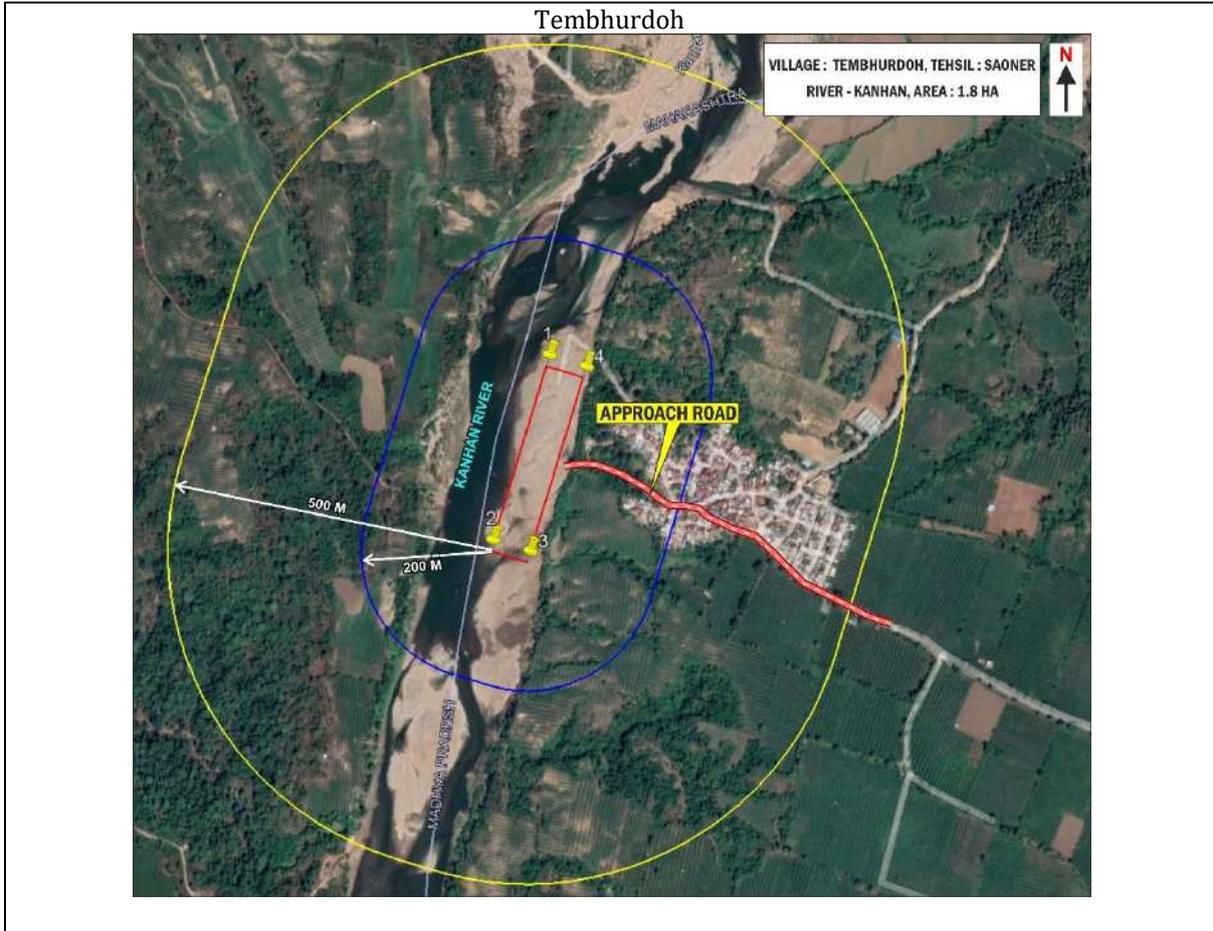
Karajghat

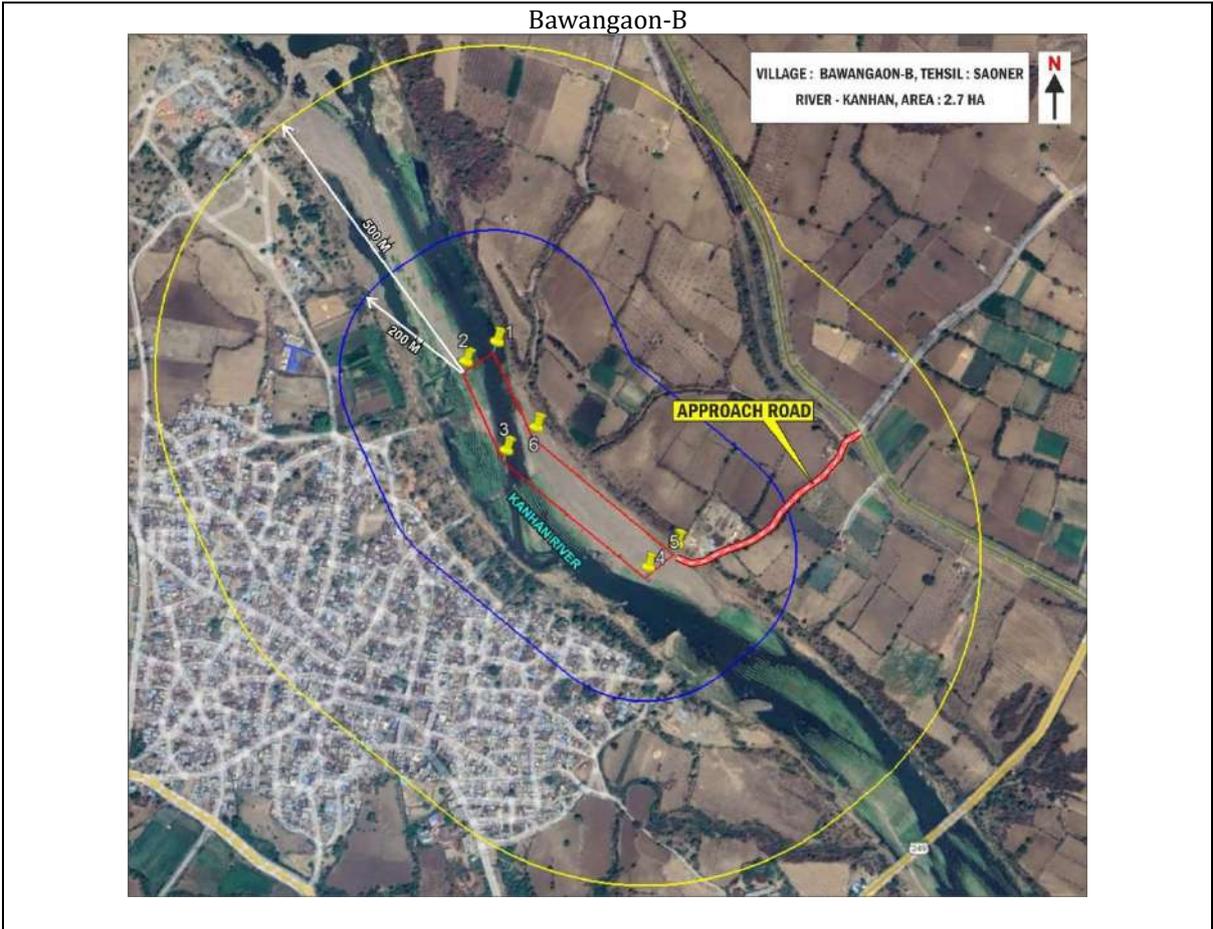


Khapapeth









PART-B**FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER
BED MINING****Prepared under:**

- a) Appendix-X of MoEF&CC, Gol Notification S.O. 141(E) dated
15.1.2016 b) MoEF&CC, Gol Notification S.O. 3611(E) dated
25.07.2018**

CHAPTER 1

INTRODUCTION

Hon'ble Supreme Court of India dated 27th February, 2012 in LA. No.12-13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., prior environmental clearance has made mandatory for mining of minor minerals irrespective of the area of mining lease. Accordingly, Ministry of Environment Forest & Climate Change (MoEF& CC) had issued Office Memorandum No. LIIIOII/47/2011-1A II(M) dated 18th May 2013. As per this O.M. all mining projects of minor minerals would henceforth require prior Environmental Clearance irrespective of the lease area. The stone quarry and sand quarrying projects need environmental clearance as per the MoEF guidelines and such pg. 47 projects are treated as Category 'B' even if the lease area is less than 5 Ha. Subsequently, various amendments were made as regards to obtain environmental clearance of the minor minerals.

The Hon'ble National Green Tribunal, vide its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals. As per the latest amendment S.O. 141 (E) & S.O.190(E) dated 15th January 2016 & 20th January in exercise of the powers conferred by sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) and in pursuance of notification of Ministry of Environment and Forest number S.O. 1533 (E), dated the 14th September, 2006 the Central Government had constituted the District Level Environment Impact Assessment Authority (DEIAA), for grant of Environmental Clearance. for Category B² Projects for mining of minor minerals, for all the districts in the country. But later on Hon. NGT, vide its order dated 13th Sept 2018, stated that for 0-5 Ha areas also recommendation of grant EC by SEIAA instead of DEAC/DEIAA.

The MoEF&CC in its Notification dated 15th January 2016 has prescribed Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals. A detailed procedure and format for preparation of District Survey Report is provided in the said Notification. Further the procedure for preparation of DSR and format is amended vide MoEF&CC Notification S.O. 3611(E) dated 25.07.2018. The DSR is defined at "Appendix -X (See Paragraph 7(iii)(a))" of the notification S.O.141(E)dated 15.01.2016 and S.O. 3611(E) dated 25.07.2018.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is very rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore, Granites etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee. Apart from this the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saciner and Parshivani tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district.

Sr.No	Mineral	No of Mines
1	Manganese Ore	39
2	Coal	14
3	Dolomite	15
4	White Clay	02
5	Stone Quarries (leases)	151

Table 2: Mineral production in Nagpur district

As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 2016-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 2017-18.

The quantity of minor mineral consumption is a thermometer to assess the rate of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of -dressed or undressed stone is met through the broken rock material from the hill slope.

CHAPTER 3

GENERAL PROFILE OF THE DISTRICT

3.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India.

Table 3.1: Brief Description of Nagpur District

Sr. No	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

3.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

3.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

3.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

3.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city.

An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonagaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region. (Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 4

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganese rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite**Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiegneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks.

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deolapar from west to east all of them having a low southerly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Super group:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana

system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide).

Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards

south- south-west and their estimated thickness is about 1,500 km. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggera-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula andPhysa*.

Deccan basalts (Traps) and Intertrappeans:

The western part of the district is covered by layers of doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and

augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are generally dark grey in colour having a specific gravity of 2.9.

Geological Succsesion of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows(Traps)with AssociatedIntertrappeansediments	Lower Eocene to upper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthistage Barakar stage Talchir stage	Permian Corboniferous
Streaky GranitiegneissesSausar and Sakoli series of metasediments	Archaean

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

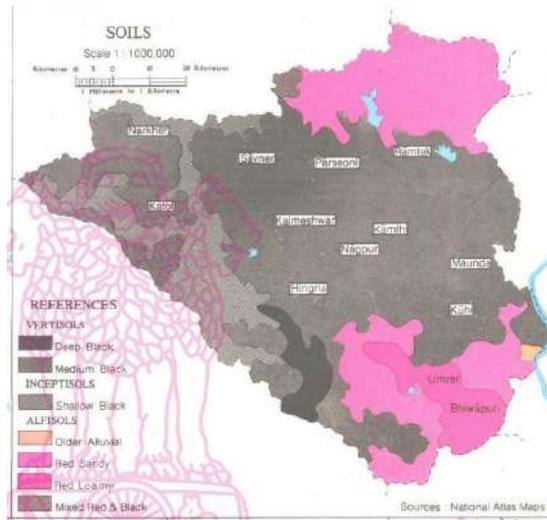


Fig: Type of Soil in Nagpur District

CHAPTER 5

DRAINAGE AND IRRIGATION PATTERN

5.1 Basin/Sub basin

The district falls in the Godavari Basin which is further divided Kanhan sub basin and Pench Sub basin which is drained in the south. Important Rivers of the district are kanhan, Pench, Nag, Kolar, Sur and Wardha

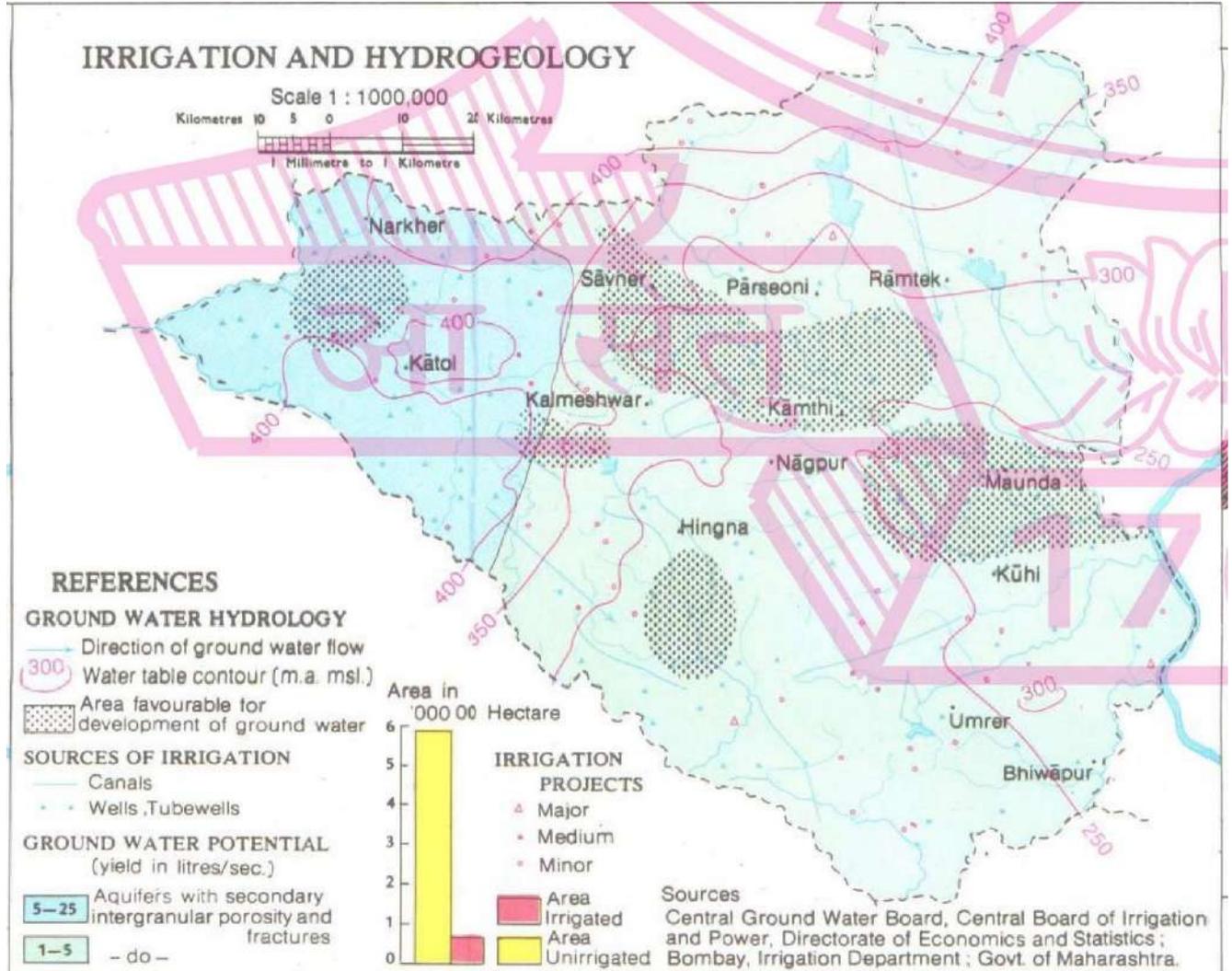


Fig: Irrigation and Hydrogeological Map of Nagpur District

5.2 Irrigation pattern:

Table 5.1: Irrigation pattern of the District

Irrigation	Area(*000 ha)		
Not irrigated area	134		
Gross irrigated area	228.9		
Rainfed Area	499		
Sources of Irrigation	Number	Area(*000 ha)	Percentage of total irrigated area
Canals		86.92	63.5
Tanks	216		2.6
Open wells	55277	56.16	27.1
Bore wells	5661	-	
Lift Irrigation schemes	3	-	
Micro Irrigation		-	
Drip	3433(Sets)	3.1	
Sprinkler	5353(Sets)	4.8	
Other sources (Please specify)	730	7.9	6.6
Total Irrigated Area			
Pump Sets	39189		
No. of Tractors	9951		

Source: Agriculture contingency plan of Nagpur

CHAPTER 6

LAND UTILIZATION PATTERN IN THE DISTRICT

Land Use pattern

The total area of the district is 986 thousands hectares of which forest cover 155 thousands hectares and area under cultivation or 643 thousands hectares. The land utilization pattern of the district is given in Table 6.1

Table 6. Land utilization

Sr. No.	Description	Area (Area in HaR)
1	Forest	1541
2	Barren & uncultivated	338
3	Land under non-agriculture	994
4	Cultivable waste land	345
5	Permanent Pasture	551
6	Misc. trees & groves	78
7	Current Fallow	208
8	Other fallow	217
9	Net area Shown	5592
10	Area shown more than once	1030
11	Gross cropped area	6622
12	Gro graphical area	9864
13	Cropping intensity	118
14	Cultivable area	6440

(Source: <http://krishi.maharashtra.gov.in/1074/Land-Utilization-Statistics>)

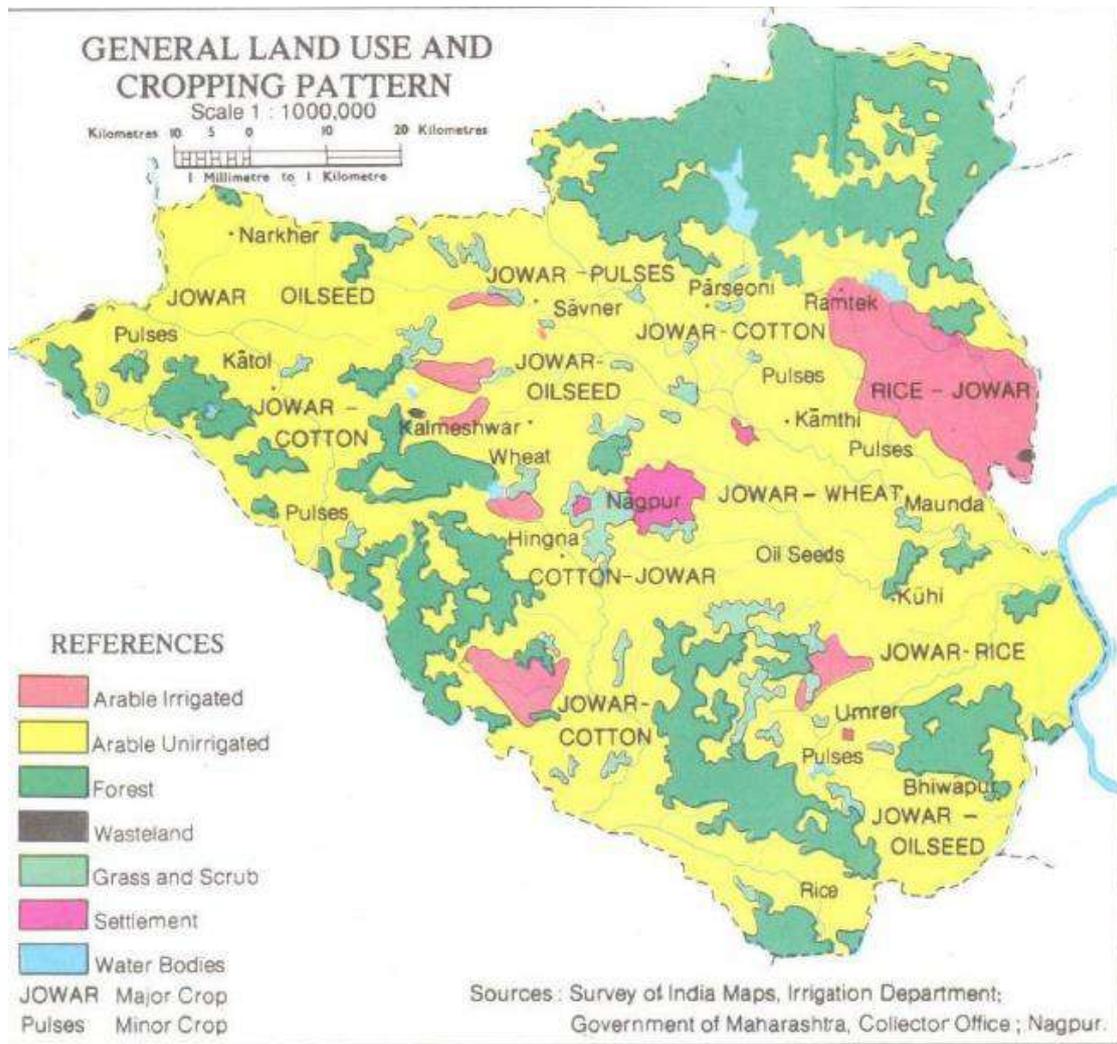


Fig: Land Use Map of Nagpur District

depicted in Fig 7.2. Shallow water level within 10 m bgl are seen in almost entire district. Water levels in the range of 10-20 m bgl are observed parts of Kamleshwar, Hingna, Narkhed, Paraseoni, talukas, as isolated patches.

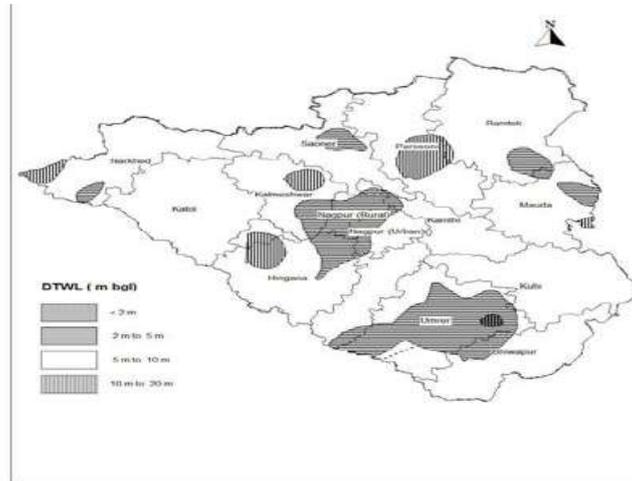


Fig 7.2: Depth to Water Level (Pre-monsoon-May)

Depth of water level-Post-monsoon

The depth to water levels during Nov. 2021 ranges between 0.60 m bel (Umrer) and 10.60 m (Manegaontek) Spatial variation in post-monsoon depth to waterlevels is shown in Fig 7.3. in the district the water levels are shallow within 10 m bgl Water levels of 2-5 m bgl is the most dominant range occupying major part of Ramtek, Mouda, Kuhl and Bhivapur talukas. Water level of less than 2 m bgl are observed in isolated patched i.e. part of Narkhed, Nagpur, Umrer and Mouda talukas.

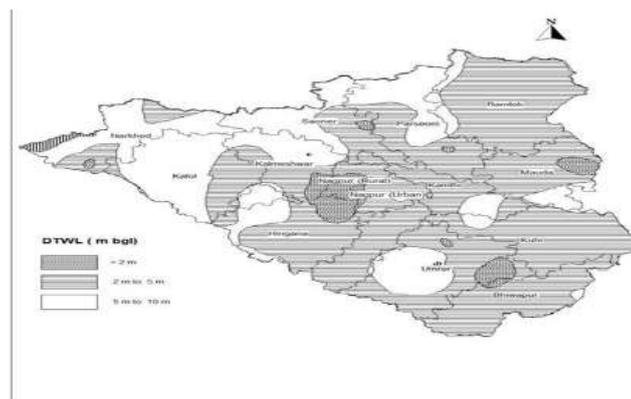


Fig. 7.3: Depth to Water Level (Post-monsoon-Nov. 2021)

Ground Water Resources

Central Ground Water Board and Groundwater Survey and Development Agency (GSDA) have jointly estimated the ground water resources of Nagpur district based on GEC-97 methodology. Taluka wise ground water resources are shown in Fig. 7.4. As per the estimation the net annual ground water availability comes to be 1058.12 MCM The total gross draft for all uses is estimated at 407.80 MCM with irrigation sector being the major consumer having a

draft of 343.59 MCM The allocation for domestic and industrial water requirements are worked at 126.80 MCM. The net ground water availability for future irrigation is estimated at 588.05 MCM. Stage of ground water development varies from 12.0% (Mouda) to 75% (Narkhed). The overall stage of ground water development for the district is 38.54% All the talukas have been categorised as "Safe".

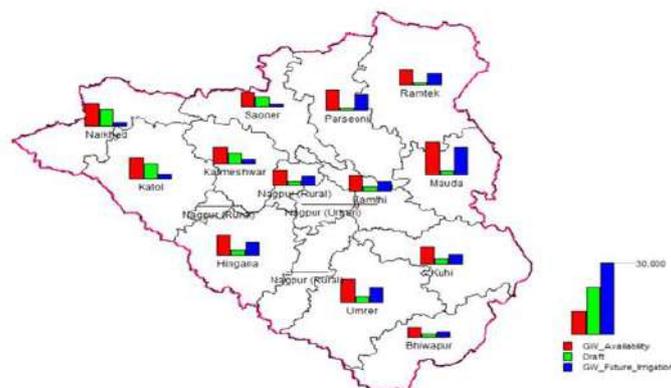


Fig: Ground Water Resources of the District

Ground Water Management Strategy

Ground water has special significance for agricultural development in the State of Maharashtra. The ground water development in some parts of the State has reached a critical stage resulting in decline of ground water levels. There is thus a need to adopt an integrated approach of development of ground water

Ground Water Development

The basalt is the main formation of the district and occupies an area of about 4300 sq. km. It is observed that the vesicular and weathered basalts are more productive than the massive and jointed basalts. Though the Archaeans are highly weathered, they form moderate potential aquifers. Alluvium is the most potential aquifer occurring in the district. In general, the Gondwana formation gives moderate to high yield while the Lameta is poor yielding aquifer in the district. Dug wells are most common ground water extraction structure in the district and are used for both domestic and irrigation purposes. The formation wise yield of dug wells is given in Table below.

Table No. 7.1: Formation-wise yield of Dugwells.

Sr. No	Rock Formation	Depth range (m bgl)	Yeild range (m ³ /day)		Remarks
			Winter	Summer	
1	Archaen	4.97-26.00	20-300	5-120	Weathered and fractured formation from good aquifers
2	Gondwana	8.00-19.65	40-200	20-80	Kamathi is the best aquifer
3	Lameta	5.85-17.15	-	-	Poor aquifer and cannot sustain pumping
4	Deccan Trap				
a	Massive	5.1-13.00	20-90	10-20	Poor aquifer

	Basalt				Limited pumping
b	Vesicular Basalt	5.7-13-15	20-288	20.240	During Summer yield is Mostly between 20-60 M ³ /day
c	Weathered Basalt	4.00-17.25	30-384	10-128	Summer yield is between 20 to 80 M ³ /day
d	Jointed Basalt	5.20-11.75	35-240	6-190	Summer yield is around 40 M ³ /day
5	Alluvium	8.10-16.30	110-300	40-300	Restricted along the Rivers and their tributaries

(Source: CGWB, Groundwater broacher of Nagpur District)

CHAPTERS 8

RAINFALL OF THE DISTRICT AND CLIMATIC

CONDITION

Climatic Condition:

The Nagpur lies on 150-600 above sea level. Nagpur has tropical savannah climate with dry condition prevailing for most of the year. In winter there is much less rainfall than in summer. The Koppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 °F) The highest recorded temperature in the city was 47.9 °C on 29 May, 2013, while the lowest was 3.5 °C on December 2021.

Rainfall of the District

Table 8.1: Rainfall of the District

Month	Normal Rain	Actual Rain	Rain Days
January	12.7	0.29	0
February	12.1	8.98	2
March	14.5	17.0	3
April	7.2	2.94	0
May	11.5	40.40	4
June	166.3	260.38	18
July	304.4	309.61	19
August	281.3	165.20	12
September	168.4	345.26	26
October	53.6	337.78	5
November	15.8	5.46	1
December	12.5	16.92	1
Total	1060.3	1146.28	91

Source: maharain.maharashtra.gov.in

Chapter 9
DETAILS OF MINING LEASES OF THE DISTRICT

List of mine holder in Nagpur District:

Sr. No.	Name of the Lease Holder	Mouza	Tahsil	Survey No.	Area in HR	Date of Order	EC Date	Validity Period (Yrs)	From Date	To Date	Land Govt/ Pvt
1	S K mehta through Ashish Mehta	Sayki	Umred	153/5	2.02	03/11/2018	07/08/2018	5	03/11/2018	11/2/2023	
2	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	Umred	142	4.80	12/10/2018	12/11/2018	5	12/10/2018	12/9/2023	
3	Sanjay Raghunath Tidke	Haladgaon	Umred	30, 57/2	3.97	30/10/2018	07/08/2018	5	30/10/2018	10/29/2023	
4	Murli Govindram Wadhvani	Pachgaon	Umred	427	1.21	12/11/2018	10/25/2018	5	12/11/2018	12/10/2023	
5	Dilip Madhukar Sambare	Haladgaon	Umred	60	3.90	12/21/2018	8/7/2018	5	12/21/2018	12/20/2023	
6	Tushar Chandrakant Wekhande	Undri	Umred	71, 69	1.26	3/20/2019	10/25/2018	5	3/20/2019	3/19/2024	
7	Nagsen Zinger Lokhande	Surgaon	Umred	192	1.00	4/23/2019	8/7/2018	EC 22/04/2023	4/23/2019	4/22/2023	

8	Sunil Gangadhar Kimmattar	Surgaon	Umred	354/1	5.50	5/3/2013		10	5/28/2013	5/27/2023	Govt
9	Sukhdyal Lalchand Arora	Surgaon	Umred	354/1	5 Acre	2/2/2013	6/16/2020	EC 29/11/2022	2/2/2013	2/11/2023	Govt
10	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	Umred	368	2.00	5/29/2013		10	6/25/2013	6/24/2023	Govt
11	Nitin Krushnao Vaidya	Surgaon	Umred	354	2.50 Acre	2/11/2013	11/30/2012	10	2/15/2013	2/14/2023	Govt
12	Priya Pradip Kolhe	Pachgaon	Umred	510, 511	1.60	11/29/2017	10/3/2016	5	11/29/2017	11/28/2022	
13	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	Umred	37/1	1.74	2/25/2022		5	2/25/2022	10/2/2023	
14	AEC Metals through Sanjay Vijaywargiya	Sayki	Umred	125/2	1.90	3/20/2019	10/25/2018	5	3/20/2019	3/19/2024	
15	Karan Shyamkumar Jaiswal	Pachgaon	Umred	429	2.06	5/9/2019	10/25/2018	5	5/9/2019	5/8/2024	
16	M/s DC Gurubakshani	Pachgaon	Umred	494/1, 494/2	2.50	6/1/2017	3/17/2017	5	6/1/2017	5/31/2022	
17	Abdul Quadir Mo. Ismail	Surgaon	Umred	195	8 Acre	7/1/2014		10	9/17/2014	9/16/2024	Govt

18	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	Umred	66, 67, 68, 71, 72	3.92	12/2/2016	10/3/2016	5	12/2/2016	12/1/2021	
19	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	umred	18/1	1.20	3/20/2017	11/10/2016	5	3/20/2017	3/19/2022	
20	Nitin Kedar kambede	Salaimenda	umred	57	2.02	4/22/2022		1	4/22/2022	15-01*2023	
21	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	Umred	146, 148	3.00	3/20/2019	9/6/2017	5	3/20/2019	3/19/2024	
22	Murli Govindram Wadhvani	Pachgaoan	Umred	426	2.30	11/27/2018	10/15/2018	5	11/27/2018	11/26/2023	
23	Black Rock Crusher through Ramandip Bindra	Haladgaoan	Umred	210, 211, 212	4.95	5/2/2018	10/3/2016	5	5/2/2018	5/1/2023	
24	M/s Siddheswar Infra through Shyam Jaiswal	Pachgaoan	Umred	479/2, 479/3	2.04	1/17/2018	8/7/2018	5	1/17/2018	11/16/2023	
25	Vishal Ajay Jaiswani	Haladgaoan	Umred	81, 83	4.54	11/3/2018	8/7/2018	5	11/3/2018	11/2/2023	

26	Sureshk umar Bhagwa ndas Kunjwan i	Surgaon	Umred	368	3 Acre	8/8/2 014		10	10/10/2 014	10/9/20 24	Govt
27	M/s Ashokw an Enterpri ses through Kalpana Bhende	Surgaon	Umred	368	5.50 Acre	7/8/2 014		10	9/17/20 14	9/16/20 24	Govt
28	Manoj Trilokch and Arora	Salaimen dha	Umred	27	1.47	3/8/2 021	1/5/202 1	5	1/5/202 1	12/17/2 024	
29	S K Mehta & Co. through Arvind Sureshk umar Mehta	Pachgao n	Umred	147/1, 147/2, 149	4.90	11/1/ 2018	10/25/2 018	5	11/1/20 18	10/30/2 023	
30	Vinod Ramkara n Mittal	Surgaon	Umred	368	2.02	6/29/ 2015	5/15/20 14	10	7/24/20 15	7/23/20 25	Govt
31	Santosh kumar Tekchan d Gangwa ni	Pachgao n	Umred	505	2.13	11/29 /2016	10/3/20 16	5	12/2/20 16	12/1/20 21	
32	Pawank umar Satyanar ayan Bihani	Salaimen dha	Umred	30	1.57	12/5/ 2017	12/19/2 014	5	12/5/20 17	12/4/20 22	
33	M/s AEC Minerals through Shailabh Radhesh yam Vijaywar giya	Sayki	Umred	124/1, 124/2	3.40	3/20/ 2017	3/14/20 17	5	3/20/20 17	3/19/20 22	

34	Pramod Ramkarnadas Mittal	Surgaon	Umred	341	5 Acre	8/28/2015	5/7/2013	10	9/10/2015	9/9/2025	Govt
35	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	Umred	78/1	1.20	3/20/2017	1/10/2016	5	3/20/2017	3/19/2022	
36	Devendra Suryabhaji Shirbhathe	Salaimendha	Umred	37/2	1.00	12/31/2016	10/3/2016	5	1/11/2017	1/10/2022	
37	M/s Luky Metal thru Mahesh M. pinjani	undri	umred	72	1.07	2/25/2021	1/5/2021	05-01-2021 to 17-12-2024	2/25/2021	12/17/2024	
38	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	Umred	512/2, 513	1.88	11/14/2018	10/25/2018	5	11/14/2018	11/13/2023	
39	Khushal Bapurao Bhojar	Pachgaon	Umred	450/3	1.50	12/6/2016	10/3/2016	5	12/6/2016	12/5/2021	
40	Vinod Gulab Rao Pillare	Salaimendha	Umred	16/1	1.01	10/6/2017	9/6/2017	5	10/7/2017	10/6/2022	
41	Sundar D Khatri	Surgaon	Umred	368	1.15	23.04.2015		10	6/29/2015	6/28/2025	Govt
42	Anand Eknath Lokhande	Surgaon	Umred	354/1, 353	1.10	10/10/2014	5/7/2013	10	1/31/2015	1/30/2025	Govt

43	Harinara yan Shyamsu ndar Gupta	Pachgao n	Umred	351	3.25 Acre	12/1/ 2016	10/3/20 16	5	12/13/2 016	12/12/2 021	
44	Shri Agrawal Minerals through Sushilku mar Agrawal	Bhiwapu r (Ooty)	Umred	64	2.36	5/2/2 019	10/25/2 018	5	5/2/201 9	5/1/202 4	
45	M/s Siddhes hwar Infrastru cture through Shyam L Jaiswal	Pachgao n	Umred	480/1, 480/4	4.25	11/22 /2016	8/31/20 16	5	11/22/2 016	11/21/2 021	
46	Tekchan d Gurumal Gangwa ni	Pachgao n	Umred	540, 546/4, 535, 536/1	3.00	3/15/ 2017	11/10/2 016	5	3/15/20 17	3/14/20 22	
47	Ashwin Sureshk umar Mehta	Paradgao n	Umred	153	4.11	11/1/ 2018	10/25/2 018	5	11/1/20 18	10/30/2 023	
48	Sachin Laxmika nt Pitale	Surgaon	Umred	359	1.75	11/14 /2018	8/7/201 8	5	11/14/2 018	11/13/2 023	
49	Rajesh Shardan and Jaiswal	Khapri (Raja)	Umred	76/1	0.21	11/1/ 2018	10/25/2 018	5	11/1/20 18	10/31/2 023	Govt
50	Sitaram Parasra m Kamble	Khapri (Raja)	Umred	76/1	0.80	8/6/2 018	7/13/20 18	5	8/6/201 8	8/5/202 3	Govt
51	M/s B R Aakre	Khapri (Raja)	Umred	79	1.37	1/30/ 2018	1/9/201 8	5	1/30/20 18	1/29/20 23	Govt
52	Nitin Krushnar ao Vaidya	Surgaon	Umred	354	5 Acre	2/11/ 2013		10	2/15/20 13	2/14/20 23	

53	Vyankat eshwara Basalt Corporat on TRANSFE R to Anil Jayram Panchbu dhe	Pachgao n	Umred	523/2, 523/3	1.60	20/04 /2017 , 22/06 /2019	5/7/201 3	5	20/04/2 017, 22/06/2 019	4/19/20 22	
54	N D Enterpri ses through Nikunj D Shah	Surgaon	Umred	368	2.00	11/16 /2011		10	9/29/20 11	9/28/20 21	Govt
55	S N Enterpri ses through Suresh Kungwa ni	Surgaon	Umred	368	4.00	11/30 /2011		10	9/29/20 11	9/28/20 21	Govt
56	Harchar ansingh Ranjeets ingh Bhatiya	Surgaon	Umred	368	7 Acre	8/4/2 014		10	10/10/2 014	10/9/20 24	Govt
57	Sweta Stone Through Shashika nt Awaghat e	Salaimen dha	Umred	29/2-1	1.00	11/29 /2017	9/6/201 7	5	11/29/2 017	11/28/2 022	
58	Bhagwa njibhai Dhanjibh ai Patel TRANSFE R to Shyamlal G Wadhwa ni, Mayur M Wadhwa ni	Pachgao n	Umred	521/2	2.66	14/11 /2018 , 22/02 /2019	10/3/20 16	5	14/11/2 018, 22/02/2 019	11/13/2 023	

59	Amol Prabhakar Pillare	Salaimendha	Umred	18/2	1.20	12/7/2017	9/6/2017	5	12/7/2017	12/6/2022	
60	Pawanpura Bildcon PVT. LTD Through Shri Yogesh Taori	Salaimendha	Umred	10,11	4.90	2/25/2022		5	2/25/2022	5/13/2023	
61	Rahul Maniram Yadav	Haladgaon	Umred	77/1	2.91	12/1/2018	10/25/2018	5	12/1/2018	11/30/2023	
62	Shri Purushottam Bhimji Patel	Pachgaon	Umred	516, 517	1.96	5/19/2020	3/12/2020	5	5/19/2020	12/17/2024	
63	Shri Purushottam Bhimji Patel	Pachgaon	Umred	480/2	1.38	11/17/2018	10/25/2018	5	11/17/2018	11/16/2023	
64	Shri Altaf Ahmad	Surgaon	Umred	354/1	4 Acre	3/4/2013	11/30/2021	10	3/30/2019	3/29/2023	Govt
65	Shri Altaf Ahmad	Surgaon	Umred	354/1	3 Acre	3/4/2013	11/30/2021	10	5/29/2013	5/28/2023	Govt
66	Omraj Dattuji Jichkar	Uti	Umred	162-1, 162-2	2.68	3/16/2022		3	3/16/2022	8/6/2025	
67	Smt Meena Ajay jaiswani	Mohapa	Umred	43	2.72	3/22/2022		5	3/22/2022	3/21/2027	
68	Smt Meena Ajay jaiswani	Mohapa	Umred	43	2.72	3/22/2022		5	3/22/2022	3/21/2027	
69	Shri Lokesh Damodhar Zode	Dhurkhe da	Umred	200/1	2.50	8/10/2022		5	8/10/2022	8/9/2027	

70	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	Nagpur Rural	229/2	1.77	11/23/2016	10/3/2016	5	11/23/2016	11/22/2021	
71	Akash Ghanshyam Gangwani	Khadgaoan	Nagpur Rural	234	2.02	7/30/2020	1/16/2016	5	7/30/2020	7/29/2025	
72	Tulsabai Ganesh Hiranwar	Lawa	Nagpur Rural	236	1.91	1/2/2017	12/19/2014	5	1/21/2017	1/20/2022	
73	Murli Govindram Wadhvani	Khadgaoan	Nagpur Rural	152	2.71	1/10/2022		5	1/10/2022	1/10/2027	
74	Santosh kumar Yaduka	Navegaoan	Nagpur Rural	21/1	2.02	7/4/2017	1/30/2017	5	8/1/2017	7/31/2022	
75	Zoeb Sadikbhai Wali & Others	Pitesur	Nagpur Rural	43	3.77	8/20/2020	12/31/2019	5	8/20/2020	5/5/2023	
76	Vijay Kumar Onkarmal Yadukar	Navegaoan	Nagpur Rural	45/1	1.78	6/5/2017	1/30/2017	5	6/5/2017	6/4/2022	
77	Radha Stone Industries through Pawan S Bihani	Salai Godhani	Nagpur Rural	206/1, 206/2	1.21	2/22/2022		5	2/22/2022	10/7/2023	
78	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaoan	Nagpur Rural	171/2	1.00	4/20/2017	11/10/2016	5	4/20/2017	4/19/2022	
79	Mohini Vijay Naik	Khadgaoan	Nagpur Rural	225	1.56	12/14/2017	12/19/2014	5	12/14/2017	12/13/2022	

80	Shri Ram Govindram Wadhvani	Khadgaoan	Nagpur Rural	171/3	2.44	1/6/2022		5	1/6/2022	12/8/2027	
81	Prakash Wamanrao Atkar	Mahurzari	Nagpur Rural	148, 149, 150, 163	3.00	11/16/2018	10/25/2018	5	11/16/2018	11/15/2023	
82	Smt. Sultana Habib Baig	Mahurzari	Nagpur Rural	148, 149, 150, 163	1.01	7/6/2021	4/30/2021	5	7/6/2021	5/11/2023	
83	Ghanshyam Gurumal Gangwani	Khadgaoan	Nagpur Rural	239	1.83	7/30/2020	10/25/2018	5	7/30/2020	7/29/2025	
84	Nayan Jamnadas Makdiya	Navegaoan	Nagpur Rural	30/7, 30/9	2.00	11/19/2016	10/3/2016	5	11/19/2016	11/18/2021	
85	Rajesh Ladharam madhwani	Navegaoan	Nagpur Rural	37	2.30	3/31/2022		5	3/31/2022	3/30/2027	
86	Aditi Stone Industries Through Dilip Rajaram Warjurkar	Navegaoan	Nagpur Rural	41	2.12	8/30/2021	7/6/2020	5	8/30/2021	12/17/2024	
87	Shri Kulind Sitaram Mankar	Khadgaoan	Nagpur Rural	158	1.01	9/21/2021	1/5/2021	5	9/2/2021	12/17/2024	
88	Shailesh Shankar patil	Mahurzari	Nagpur Rural	245	2.00	8/18/2021		18-08-21 to 17-12-24	8/18/2021	12/17/2024	
89	Paras Stone Industries Sunil Mishra	Singardip (Rithi)	Hingna	24/1	4.73	10/22/2021	1/16/2021	5	10/22/2021	1/15/2023	

90	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	Hingna	109/1	4.90	11/28/2017	11/14/2017	5	11/28/2017	11/27/2022	
91	Harish Dashrath Fulsunge	Singardip (Rithi)	Hingna	96	1.43	3/9/2018		5	3/9/2018	3/8/2023	
92	Shri Anil Balkisan Hiranwar	Panjari	Hingna	61/2	1.18	9/27/2017	3/25/2017	5	9/27/2017	9/26/2022	
93	Shri Mihir Varun Hiranwar	Panjari	Hingna	61/4	1.18	9/29/2022		5	9/29/2022	9/28/2027	
94	Rajesh Ramkisan Nikhare	Singardip (Rithi)	Hingna	137/1	1.62	11/22/2017	6/6/2017	5	11/22/2017	11/21/2022	
95	Niti Prashant Agrawal TRANSFER TO Kamalnan Concret through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	7/16/2019	10/25/2018	5	7/16/2019	7/15/2024	
96	Quality Minerals through Mo. Samir Rangunwala	Mhasala	Hingna	109/1	4.90	11/28/2017	11/14/2017	5	11/28/2017	11/27/2022	
97	Altaf Ahmad Majid Ahmad	Sawangi Aasola	Hingna	67	2.81	1/29/2015		10	1/29/2015	2/23/2025	Govt
98	Ashish Anand Durugkar	Kohla	Hingna	6/1	1.47	3/20/2019	10/25/2018	5	3/20/2019	3/19/2024	

99	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	Hingna	68	2.00	5/15/2015		10	8/28/2015	8/27/2025	Govt
100	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	Hingna	86/1	2.83	2/16/2017	9/15/2016	5	3/20/2017	3/19/2022	
101	Kailash Pandurang Thakre	Panjari	Hingna	68	2.00	5/15/2015		10	8/28/2015	8/27/2025	Govt
102	Nandkishor Burade	Mohgao n Zilpi	Hingna	28/2	1.80	1/9/2017		5	2/1/2017	1/31/2022	
103	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	Hingna	161/2, 162	1.61	12/20/2017	11/14/2017	5	12/20/2017	12/19/2022	
104	Mayuresh Mukund Hardas	Haladgao n	Hingna	146	5 Acre	9/26/2013		10	10/5/2013	10/4/2023	Govt
105	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	1.20	7/31/2020	12/19/2014	5	7/31/2020	12/21/2023	
106	Radheshyam Durugkar	Haladgao n	Hingna	146	10 Acre	10/5/2013		10	10/18/2013	10/17/2023	Govt

107	Pramod Shriram Dehankar, President, Cargo MIHAN Prakaalgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	Hingna	186	4.00	10/9/2013		10	9/17/2014	9/16/2024	Govt
108	Pramod Shriram Dehankar, President, Cargo MIHAN Prakaalgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	Hingna	186	4.00	10/9/2013		10	9/17/2014	9/16/2024	Govt
109	Pramod Shriram Dehankar, President, Cargo MIHAN Prakaalgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	Hingna	186	4.00	10/9/2013		10	9/17/2014	9/16/2024	Govt

110	Sunil Borikar, President, MIHAN Prakaalparast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	Hingna	186	4.00	7/8/2014		10	7/8/2014	7/7/2024	Govt
111	Sunil Borikar, President, MIHAN Prakaalparast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	Hingna	186	4.00	7/8/2014		10	7/8/2014	7/7/2024	Govt
112	Sunil Borikar, President, MIHAN Prakaalparast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	Hingna	186	4.00	7/8/2014		10	7/8/2014	7/7/2024	Govt

113	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardip (Rithi)	Hingna	136	2.07	10/26/2017	9/6/2017	5	10/26/2017	10/25/2022	Govt
114	Ashish Anand Durugkar	Haladgaon	Hingna	146	5 Acre	7/23/2014	5/7/2013	10	8/19/2014	8/18/2024	Govt
115	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	Hingna	146	10 Acre	8/4/2014	5/7/2013	10	9/17/2014	9/16/2024	Govt
116	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	Hingna	186	4.00	10/9/2013	5/13/2013	10	10/10/2014	10/9/2024	Govt
117	President, Cargo Prakarprast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	Hingna	186	4.00	10/9/2013	5/13/2013	10	10/10/2014	10/9/2024	Govt
118	President, Cargo Prakarprast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	Hingna	186	4.00	10/9/2013	5/13/2013	10	10/10/2014	10/9/2024	Govt

119	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	Hingna	194/3, 194/5	2.83	31/01/2019, 30/07/2019	8/7/2018	5	31/01/2019, 30/07/2019	1/30/2024	
120	Rushi Ramesh Agrawal	Metaumri	Hingna	101	3 Acre	2/24/2015	12/19/2014	10	3/16/2015	3/15/2025	Govt
121	Mahesh Arvind Sabne	Haladgaon	Hingna	146	5 Acre	9/26/2013	5/7/2013	10	9/26/2013	9/25/2023	Govt
122	Prashant Anand Rao Durugkar	Kohala	Hingna	7	1.92	3/22/2022		5	3/22/2022	3/21/2027	
123	Anil Subhash kumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	3.36	7/30/2020	3/27/2020	5	11/23/2020	10/22/2025	
124	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardip (Rithi)	Hingna	148	2.22	1/11/2017	10/3/2016	5	1/25/2017	1/24/2022	
125	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	11/6/2018	10/25/2018	5	11/6/2018	11/5/2023	

126	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardip (Rithi)	Hingna	92	3.00	5/3/2018	4/6/2018	5	5/3/2018	5/2/2023	
127	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	Hingna	55/2, 55/3	1.21	1/29/2021	12/23/2020	05/05/2023	1/29/2021	5/5/2023	
128	Kamal R. Agrawal	Mhasala	Hingna	125,126	1.97	2/15/2021	1/5/2021	17/12/2024	1/5/2021	12/17/2024	
129	Ashok Hiran Umathe	Chhatrapur	Saoner	218	3 Acre	9/27/2017	5/7/2013	5	9/27/2017	9/26/2022	
130	Tushar Madan Umathe	Chhatrapur	Saoner	85/1	1.87	6/15/2021	12/23/2020	5	4/26/2021	4/25/2026	
131	Umesh Nagorao Nimje	Chhatrapur	Saoner	197	1.07	1/1/2018		5	1/1/2018	12/31/2022	
132	Sudhakar Bapurao Bandhekar	Chhatrapur	Saoner	213	2.00	2/25/2022			2/25/2022	2/3/2023	
133	Sudhakar Bapurao Bandhekar	Chhatrapur	Saoner	212	2.80	2/25/2022			2/25/2022	2/3/2023	
134	M/s D D Associates through Nilesh Ravindra Damle	Chhatrapur	Saoner	74/3	1.89	7/21/2020	6/10/2020	5	7/21/2020	7/20/2025	

135	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	Saoner	204,207	3.14	6/5/2020	12/31/2019	5	6/5/2020	5/5/2023	
136	ketankumar arunkumar singh	Chhatrapur	Saoner	72/1,72/2	3.72	7/27/2021	5/5/2023	05-05-2023	7/27/2021	5/5/2023	
137	Pravin Sukhdev Bhaisswar	Borgaon (Jangli)	Saoner	100,101	4.30	17/05/2019	10/25/2018	5	17/05/2019	5/16/2024	
138	Ankit Constructino Shri Kishor Kanhere	Khapri (Uma)	Kalmeshwar	84/2	3.58	12/2/2021	4/29/2021	5	12/2/2021	12/17/2024	
139	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	Kalmeshwar	347 Old, 94 New	2.20	7/3/2017	12/19/2014	5	7/3/2017	7/2/2022	Govt
140	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	Kalmeshwar	93/1	0.84	9/15/2014	5/13/2013	10	12/1/2014	11/30/2024	
141	Swala Traders Trough Nikunj Damaji Shah	Khapri (Uma)	Kalmeshwar	95	2.00	3/22/2022		1	3/22/2022	5/11/2023	
142	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	Kalmeshwar	87/1	7.38 Acre	11/16/2016	10/3/2016	5	11/16/2016	11/15/2021	

143	Sureshkumar R Jagyasi	Khapri (Uma)	Kalmeshwar	91	1.16	4/1/2017	12/19/2014	5	4/1/2017	3/31/2022	
144	Ram Govindram Wadhvani	Khapri (Uma)	Kalmeshwar	55/6	1.21	5/2/2018		5	5/2/2018	5/1/2023	
145	Vijay Ramchandra Kukreja	Khapri (Uma)	Kalmeshwar	90	1.75	3/18/2019	10/25/2018	5	3/18/2019	3/17/2024	
146	Shri Dnyanashwar Shankarrao Nimbalkar	Junewani (Panaya)	Kalmeshwar	45	2.83	8/30/2022		5	8/30/2022	3/29/2027	
147	M/s Om Saibaba Construction Through Ajay G Batra	Kawadasi (Barad)	Bhiwapur	113	4.00	7/11/2020	3/31/2020	5	7/11/2020	7/10/2025	
148	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	Bhiwapur	43/1, 42/2, 42/3	4.49	7/11/2020	3/31/2020	5	7/11/2020	7/10/2025	
149	Moh. Sajid Shafik Ahamad Ansari	Kaudasi (Barad)	Bhiwapur	115, 116	3.24	8/10/2022		5	8/10/2022	8/9/2027	
150	Shri Ajay Gopaldas Jaswani	Chargaoan (Ghotadi)	Bhiwapur	27, 29/2, 29/3	1.75	8/10/2022		5	8/10/2022	8/9/2027	
151	Shri Shrawan Vitthal Lamsonghe	Chargaoan (Ghotadi)	Bhiwapur	105/3	2.00	8/10/2022		5	8/10/2022	8/9/2027	

Chapter 10
DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected in lakhs are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2022-2023	13913	6180.29 (Till September)
2	2021-2022	20978.00	15991.85
3	2020-2021	20700.00	18398.80
4	2019-2020	13800.00	13984.28
5	2018-2019	13500.00	15067.87
6	2017-2018	12000.00	13513.07

Table10.1: Details of royalty collected

Chapter 11
DETAILS OF PRODUCTION OF SAND OR BAJRI OR
MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Table 11.1: Details of production of minor mineral:

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	1184555.58	1030048.33
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

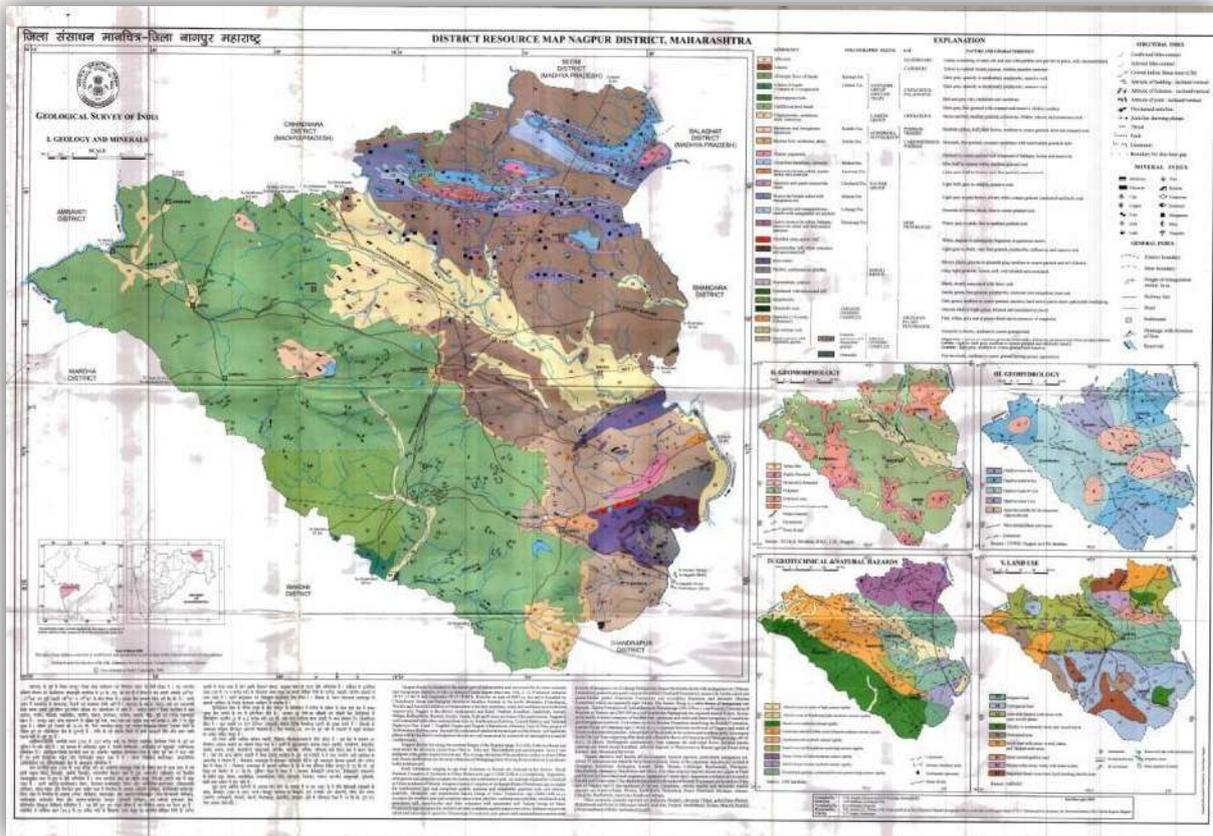
Table 1.1: Details of production of minor mineral

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2021-2022	1	7420	7420	
2	2020-2021	20	174673	172373	
3	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
4	2018-2019	11	79742	79742	
5	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
6	2016-2017	31	213883	213883	

Table 5.2 : Details of Production of Sand

Chapter 12

MINERAL MAP OF THE DISTRICT



Source: Geological Survey of India

Chapter 13
LIST OF LETTER OF INTENT (LOI) HOLDERS IN NAGPUR
DISTRICT

Sr.No	Name	Village Name	Taluka	Survey No.	Hector	LOI issue Date
1	Nandkishor Ramteke	Singardeep Rithi	Hingna	25	1.41	21/7/2018
2	Jyoti Ramteke	Singardeep Rithi	Hingna	26	1.41	21/7/2018
3	Neeti Agrawal	Singardeep Rithi	Hingna	138/1,2,3	4.69	27/8/2018
4	Shyam Wahane	Singardeep Rithi	Hingna	94	1.43	16/3/2019
5	Rrushiraj Infra C/o Tarun Hiranwar	Savangi	Hingna	190	1.14	8/11/2019
6	Kahid Johar Ibrahim Gondiwala	Kohla	Hingna	6/2	3.23	11/5/2020
7	Rahul Yadao	Haldgaon	Umred	77/1	2.91	3/9/2018
8	Rahul Patel	Uti	Umred	97/1	2.60	3/9/2018
9	Rambhau Musle	Uti	Umred	95/2, 95/3	3.25	11/2/2019
10	Subhash Grovar	Sukli Pai.	Umred	89/2, 89/3	3.25	11/2/2019
11	Chirag Jain	Pardgaon	Umred	150/2, 150/3	1.70	11/2/2019
12	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	158/2, 158/3 158/6	4.93	2/7/2019
13	Pawanputra Concrete C/o Amit Taori	Sayki	Umred	147/1,2,3,4	4.82	8/7/2019
14	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	131/1,2,3,4,5	4.91	8/7/2019
15	Purshottam Patel	Umred	Umred	516, 517	1.96	13/9/2019
16	Manish Mishra	Sayki	Umred	163/1	2.33	20/9/2019
17	Mayank Mishra	Sayki	Umred	163/2	2.32	21/9/2019
18	Vinod Choukase	Masalkund	Umred	20/1	3.63	30/9/2019
19	Yogesh Taori	Kawdsi (Barad)	Umred	28/1, 28/2, 28/3	4.98	9/10/2019

20	P.L.Agraval C/o Paras Agraval	Sayki	Umred	140/4, 141, 142	5.00	9/10/2019
21	Tekchand Gangwani	Pachgaon	Umred	546/6, 546/7	3.83	13/12/2019
22	Vandna stone crusher C/o Gaorav Jichkar	Uti	Umred	144	1.29	6/1/2020
23	Vandna stone crusher C/o Omraj Jichkar	Uti	Umred	145	1.70	6/1/2020
24	Jash Techno Treders	Bhivapur	Umred	67	3.07	26/2/2020
25	Rahul Patel	Uti	Umred	97/1, 97/2	3.00	24/6/2020
26	Shoiab Shadikbhai Vali	Pitesur	Nagpur Gramin	43	3.77	11/2/2019
27	Pankaj Khadse	Salaigodhani	Nagpur Gramin	184/1	2.73	28/2/2019
28	Amir Siyab Vali	Pitesur	Nagpur Gramin	54	1.74	16/3/2019
29	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	206/1/1	1.22	29/11/2019
30	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	184/2	1.21	6/1/2020
31	Kulind Mankar	Khadgaon	Nagpur Gramin	158	1.01	11/5/2020
32	Sarla Hiranwar	Mahurjhari	Nagpur Gramin	238/2	2.02	17/6/2020
33	Raja Patel	Borgaon Jan.	Saoner	133/2	1.80	4/8/2018
34	Dric Infra. C/o Nilima Dahake	Borgaon Jan.	Saoner	120/2	1.30	24/12/2019
35	Om Saibaba C/o Ajay Batra	Kavdsi (Barad)	Bhivapur	113	4.00	9/10/2019
36	B.V.M.Crusher LTD	Chargaon	Bhivapur	35/1	4.28	6/3/2020
37	Bediwale Enterprises Pvt. Ltd.	Kavdsi (Barad)	Bhivapur	107/2 अ	1.62	29/7/2020
38	Shyam Vadhwani	Khapri (Uma)	Kalmeshwar	83/2	0.89	11/11/2019
39	Harish Kevalramani	Khapri (Uma)	Kalmeshwar	55/7	0.81	10/2/2020
40	Sandeep Surajbhan Gupta	Pachgaon	Umred	570/2	1.74	10/13/2020
41	Dilip Madhukar Sambare	Haladgaon	Umred	62, 63, 208	3.63	10/13/2020
42	Block Rock C/o Ramandeep Bindra	Haladgaon	Umred	86/1, 88, 89/1, 89/3 91/1, 91/2, 91/3, 210/211/212-1, 210/211/212-2	16.40	10/13/2020

43	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	102 (P) 104, 105, 106/2, 107, 108,111, 112/1, 112/2 ,113	14.80	12/9/2020
44	Sandesh Ajay Jaiswani and Vishal	Haladgaon	Umred	59/1 ,59/2, 59/3, 59/5,	19.12	12/9/2020
45	Yogesh Ghanshyam Taori	Masalkund	Umred	29	8.27	15/10/2020
46	Partha Shyam Jaiswal and Karan Shyam	Masalkund	Umred	35, 36, 41	12.77	1/25/2021
47	Pawanputra Buildcon Earlier Anil Sadashiv	Salaimendha	Umred	8, 9	9.98	1/25/2021
48	Irshan Majid Shete	Metaumri	Hingna	86/2	4.00	2/8/2021
49	Tushar Madanrao Umathe	Chatrapur	Saoner	85/1	1.87	2/8/2021
50	Prashant Aanandrao Durugkar	Kohla	Hingna	7	1.92	2/25/2021
51	Mesars. Paras Stone Industries Pro. Sunil	Singardeep Rithi	Hingna	24/1	4.73	2/24/2021
52	Habib Rhib Beg	Mahurjhari	Nagpur Gramin	162/3	1.41	3/12/2021
53	Nitin Kedar Kamble	Salaimendha	Umred	57	2.02	5/27/2021
54	Praful Prakash Dewalkar	Uti	Umred	131, 132, 133, 134, 135/1, 137, 138, 139	7.12	5/28/2021
55	P.L.Agrawal	Sayki	Umred	138, 140/3, 140/4, 141, 142	4.00	5/28/2021
56	Dhyaneshwar Shankar Nimbalkar	Junevani	Saoner	45	2.83	6/11/2021
57	Mihir Tarun Hiranwar	Panjari	Saoner	61/4	1.18	7/2/2021
58	Omprakash Dwarkadas	Pachgaon	Umred	495/1	2.02	7/7/2021
59	Rohit Sonbaji Musle	Chatrapur	Umred	208, 209, 211	2.31	7/7/2021
60	Ram Govindrao Wadhvani	Kadgaon	Saoner	171/3	2.44	8/11/2021
61	Murli Govindram Wadhvani	Kadgaon	Nagpur Gramin	152	2.71	8/11/2021
62	Mayank Ramprakash Mishra	Sayki	Umred	163/1, 163/2	4.65	8/31/2021
63	Rajesh Ldharam Madhwani	Navegaon	Nagpur Gramin	37	2.30	8/30/2021

64	Bestone Minerals & Precast Solutions	Masalkund	Umred	37 & 38	6.58	25/01/2022
65	Khemraj Mate & Dhanraj Mate	Chargaon (Gotadi)	Bhiwapur	35/1	3.47 out of 4.28	07/20/2022
66	Amol Prabhakar Pillare	Salaimendha	Umred	18/2	1.20	29/07/2022
67	Shahid Habib Baig and three others	Mahurzhari	Nagpur Rural	256 257	2.00 ha out of 5.01	29/08/2022
68	Vinit Sanjar Agrawal	Metmangrud (Ri)	Umred	105,104,103, 102,101,100,	3.84 out of 7.19	01/09/2022
69	Ashok Pandit Shirsagar	Tandurwani	Kamptee	74/1	1.36	28/07/2022
70	Preeti Vinit Agrawal	Mohpa	Umred	45 A	1.80	08/09/2022
71	Mihir Tarun Hiranwar	Panjara	Hingana	61/1	1.18	02/06/2022
72	Basil Paul Gorge	Durkheda	Umred	208	2.00 ha out of 3.64 ha	17/08/2022
73	M/s jagrutshwar Metals Pvt Ltd	Singardip (Rithi)	Hingana	137/3	1.21 ha	17/08/2022
74	Vishal Ajay Jaiswani ,Sandesh Ajay Jaiswani and Ajay Jaiswani	Godhani	Umred	72/1, 72/2, 72/3, 72/4 and 72/5	4.00 out of 8.51	17/08/2022
75	Meena Ajay Jaiswani	Metmangrul	Umred	92/2 and 94	2.65 out of 2.90	17/08/2022
76	Amol Prabhakar Pilare	Paradgaon	Umred	154, 155	4.47 Ha	24/11/2023
77	Maniram Leelaram Yadav	Haladgaon	Umred	114	7.50 Ha out of 10.10 Ha	22/11/2023
78	Sanjay Raghunath Tidke & Kavita	Haladgaon	Umred	31/1, 37/2	3.51 Ha	22/11/2023
79	Sanjay Raghunath Tidke & Kavita	Haladgaon	Umred	44/2, 44/4	3.63 Ha	17/11/2023
80	Mayur Rambhau Musale	Uti	Umred	96	4.92 Ha	24/11/2023
81	Ashwin Sureshkumar Mehta & Arvind Sureshkumar Mehta	Paradgaon	Umred	149, 147/1, 147/2	4.00 Ha out of 5.16 Ha	17/11/2023
82	Tejindar Singh Mahendar Singh	Masalkund	Umred	24	1.30 Ha	23/11/2023
83	Ajay Gopaldas Jeswani & Rajkumar Shevakram Gurubakshani	Haladgaon	Umred	209/1, 209/2	3.15 Ha	10/11/2023
84	Vishal Ajay Jeswani & Sandesh Ajay Jeswani & Kanak Sandesh Jeswani	Haladgaon	Umred	81(P), 82/2(P), 83(P), 89/2 & 89/4 (P)	4.25 Ha out of 11.23 Ha	17/11/2023

85	Vishal Ajay Jeswani & Sandesh Ajay Jeswani & Kanak Sandesh Jeswani	Haladgaon	Umred	81(P), 82/1(P), 82/2(P), 89/2 & 89/4 (P)	4.90 Ha out of 11.44 Ha	21/12/2023
86	Dilip Madhukar Sambhare	Haladgaon	Umred	61	2.85 Ha out of 3.27 Ha	10/11/2023
87	Rahul Maniram Yadav	Parsodi	Umred	126	3.70 Ha out of 4.55 Ha	21/12/2023
88	Rahul Maniram Yadav	Parsodi	Umred	130/1, 130/2	2.48 Ha	21/12/2023
89	Pratibha Kishor Kanhere	Masalkund	Umred	23	1.76 Ha	21/12/2023
90	Rajesh Nandalal Mirani	Tembhri	Nagpur (Gramin)	68(P)	2.25 Ha out of 6.63 Ha	15/12/2023
91	Murlidhar Govindram Wadhvani & Mayur Murlidhar Wadhvani & Shyamlaal Govindram Wadhvani	Sukli	Umred	90(P) & 91(P)	3.00 Ha out of 5.80 Ha	24/11/2023
92	Vivek Pawan Jeswani & Jaya Pawan Jeswani & Chetna Pawan Jeswani	Bhiwapur	Umred	118/1, 118/2	4.82 Ha	23/11/2023
93	Jaya Pawan Jeswani	Bhiwapur	Umred	124	2.84 Ha	16/11/2023
94	M/s jagrutshwar Metals Pvt Ltd	Singardip	Hingna	135/1, 135/2, 135/3	4.00 Ha out of 5.51 Ha	15/12/2023
95	Lokesh Damodhar Zode	Dhurkheda	Umred	249/2	2.21 Ha	04/07/2024
96	Lokesh Damodhar Zode, Vikesh Damodhar Zode	Kawadsi (B)	Bhiwapur	28/1, 28/2, 28/3	1.96 Ha out of 6.94 Ha	04/07/2024
97	Vijay Ramchand Kukreja	Gonkhairi	Kalmeshwar	485, 486	3.25 Ha	04/07/2024
98	Sanket Shah, Rajan Shah	Sukli	Umred	93/1, 93/2	4.90 Ha out of 5.06 Ha	02/07/2024
99	K.S. Metals & Industries Pvt Ltd	Alagondi	Nagpur (R)	128/1	2.81 Ha	/07/2024
100	Murlidhar Wadhvani, Ram Wadhvani, Shyamlal Wadhvani	Sukli	Umred	133	2.25 Ha out of 2.67 Ha	21/06/2024
101	Murlidhar Wadhvani, Ram Wadhvani, Shyamlal Wadhvani	Sukli	Umred	131, 132	2.65 Ha out of 2.88 Ha	21/06/2024

Chapter 14
TOTAL MINERAL RESERVE AVAILABEL IN THE
DISTRICT

Minerals	Quantity
Basalt	155.22 Mill. Tonnes
Murrum	31.04 Mill. Tonnes
Soil	15.22 Mill Tonnes
Sand (For year 2022-2023)	2.62 Mill. Tonnes

CHAPTER 15

QUALITY GRADE OF MINERAL

The minor mineral depots in the District are quite good in respect of quality and quantity. The method of mining should be adopted Opencast Mining Method for digging, excavation and removal of stone with the help of traditional drilling and blasting methods.

Basalt stone is used as boulders of different sizes for dam construction, embankment work etc. After crushing into different sizes, it can be used in construction and road projects. Fine grained compact basalt and Medium grained sandstone type of aggregate is available in the district so that the quality of stone available in Nagpur district is building grade stone confirming IS standards IS:7779 (Part II/Sec 3) of 1979 and also in terms of strength it is confirming IS standards IS: 1121 (Part 2 to 4) 1974

CHAPTER 16

USE OF THE MINERAL

Basalt:

Basalt is used for a wide variety of purposes. It is most commonly crushed for use as an aggregate in construction projects. Crushed basalt is used for the road base, concrete aggregate, asphalt pavement aggregate, railroad ballast, filter stone in drain fields, and many other purposes. Basalt is also cut into dimension stone. Thin slabs of basalt are cut and sometimes polished for use as floor tiles, building veneer, monuments, and other stone objects.

Moorum:

Moorum is also a type of soil, mostly used for construction purposes. Generally, it is deep brown or red in color. Moorum is used in plinth filling, road pavements, backfilling in trenches, footing pits etc. It is a suitable type of soil in the construction field, since it does not contain any organic matters and can be compacted easily forming a hard surface.

Ordinary Sand/ River Sand

Sand is a very useful material in all types of construction activities. It is mainly used as one of the important items in concrete mix and used for plastering work.

CHAPTER 17
DEMAND AND SUPPLY OF THE MINERAL:

Basalts are the ultrabasic igneous rocks which are an important component in construction of any kind. These are used as building stone, in railway ballast and most important is used in concrete as important raw material where they are available in abundance. Along with the increasing need of developing infrastructure there is an increase in demands of basalt. As it has high compressive strength, high shear strength, it proves to be a compact, stable and sound rock which makes it difficult for anything to replace. The rock might be omnipresent all over the Maharashtra but a compact, un-weathered rock is present in very limited quantities.

Table: Demand and Supply

Sr.No.	Year	Production(Brass)	Dispatched Quantity (Brass)
1	2021-2022	3051987.55	2749538.333
2	2020-2021	5105667.00	4599700.00
3	2019-2020	3880637.7	3496070.00
4	2018-2019	4181333.925	3766967.5
5	2017-2018	3749876.925	3378267.5

HAPTER 19
DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER
OF MINING LEASE

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pachgaon									
1	Priya Pradip Kolhe	Pachgaon	510, 511	1.60	5	29-11-2017	28-11-2022	23-05-2018	
2	Karan Shyamkumar Jaiswal	Pachgaon	429	2.06	5	09-05-2019	08-05-2024	17-06-2019	
3	M/s D C Gurubakshani	Pachgaon	494/1, 494/2	2.50	5	01-06-2017	31-05-2022	13-07-2017	
4	Murli Govindram Wadhvani	Pachgaon	426	2.30	5	27-11-2018	26-11-2023	15-03-2019	
5	M/s Siddheshwar Infra through Shyam Jaiswal	Pachgaon	479/2, 479/3	2.04	5	17-01-2018	16-11-2023	06-02-2019	
6	S K Mehta & Co. through Arvind Sureshkumar Mehta	Pachgaon	147/1, 147/2, 149	5.16	5	01-11-2018	30-10-2023	19-11-2018	
7	Santoshkumar Tekchand Gangwani	Pachgaon	505	2.13	5	02-12-2016	01-12-2021	08-12-2016	
8	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	512/2, 513	1.88	5	14-11-2018	13-11-2023	26-11-2018	
9	Khushal Bapurao Bhoyar	Pachgaon	450/3	1.50	5	06-12-2016	05-12-2021	21-12-2016	
10	Harinarayan Shyamsundar Gupta	Pachgaon	351	3.08	5	13-12-2016	12-12-2021	17-02-2016	
11	M/s Siddheshwar Infrastructure through Shyam L Jaiswal	Pachgaon	480/1, 480/4	4.25	5	22-11-2016	21-11-2021	08-12-2016	

12	Tekchand Gurumal Gangwani	Pachgaon	540, 546/4, 535, 536/1	4.55	5	15-03-2017	14-03-2022	27-03-2017	
13	Vyankateshwara Basalt Corporaton TRANSFER to Anil Jayram Panchbudhe	Pachgaon	523/2, 523/3	1.60	5	20/04/2017, 22/06/2019	19-04-2022	09-10-2020	
14	Bhagwanjibhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhvani, Mayur M Wadhvani	Pachgaon	521/2	2.66	5	14/11/2018, 22/02/2019	13-11-2023	29-12-2018	
15	Shri Purushottam Bhimji Patel	Pachgaon	516, 517	1.96	5	19-05-2020	17-12-2024	24-06-2020	
16	Karan Shyamkumar Jaiswal	Pachgaon	480/2	1.38	5	17-11-2018	16-11-2023	26-03-2019	
17	Murli Govindram Wadhvani	Pachgaon	427	1.21	5	11-12-2018	10-12-2023	15-03-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sayaki									
1	S K mehta through Ashish Mehta	Sayki	153/5	2.02	5	03/11/2018	02-11-2023		
2	AEC Metals through Sanjay Vijaywargiya	Sayki	125/2	1.90	5	20-03-2019	19-03-2024	18-09-2019	
3	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	146, 148	4.82	5	20-03-2019	19-03-2024	04-10-2019	
4	M/s AEC Minerals through Shailabh Radheshyam Vijaywargiya	Sayki	124/1, 124/2	3.40	5	20-03-2017	19-03-2022	27-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Sanjay Raghunath Tidke	Haladgaon	30, 57/2	3.97	5	30/10/2018	29-10-2023	10-12-2018	
2	Dilip Madhukar Sambare	Haladgaon	60	3.90	5	21-12-2018	20-12-2023	16-01-2019	
3	Black Rock Crusher through Ramandip Bindra	Haladgaon	210, 211, 212	5.68	5	02-05-2018	01-05-2023	05-06-2018	
4	Vishal Ajay Jaiswani	Haladgaon	81, 83	7.04	5	03-11-2018	02-11-2023	17-12-2018	
5	Rahul Maniram Yadav	Haladgaon	77/1	2.91	5	01-12-2018	30-11-2023	30-01-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Mayuresh Mukund Hardas	Haladgaon	146	5 Acre	10	05-10-2013	04-10-2023	19-11-2007	Govt
2	Radheshyam Durugkar	Haladgaon	146	10 Acre	10	18-10-2013	17-10-2023	08-10-2013	Govt
3	Ashish Anand Durugkar	Haladgaon	146	5 Acre	10	19-08-2014	18-08-2024	25-07-2014	Govt
4	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	146	10 Acre	10	17-09-2014	16-09-2024		Govt
5	Mahesh Arvind Sabne	Haladgaon	146	49.85	10	26-09-2013	25-09-2023	26-09-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Undri									
1	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	142	14.89	5	10-12-2018	09-12-2023	10-12-2018	
2	Tushar Chandrakant Wekhande	Undri	71, 69	1.26	5	20-03-2019	19-03-2024	03-06-2019	

3	M/s Luky Metal thru Mahesh M. pinjani	undri	72	1.07	05-01-2021 to 17-12-2024	25-02-2021	17-12-2024	07-07-2021	
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Surgaon									
1	Nagsen Zinger Lokhande	Surgaon	192	1.00	EC 22/04/2023	23-04-2019	22-04-2023	03-05-2019	
2	Sunil Gangadhar Kimmatkar	Surgaon	354/1	29.91	10	28-05-2013	27-05-2023	06-05-2013	Govt
3	Sukhdyal Lalchand Arora	Surgaon	354/1	29.91	EC 29/11/2022	02-02-2013	11-02-2023	05-02-2013	Govt
4	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	368	86.77	10	25-06-2013	24-06-2023	29-05-2013	Govt
5	Nitin Krushnarao Vaidya	Surgaon	354	29.91	10	15-02-2013	14-02-2023		Govt
6	Abdul Quadir Mo. Ismail	Surgaon	195	12.55	10	17-09-2014	16-09-2024	15-07-2014	Govt
7	Sureshkumar Bhagwandas Kunjwani	Surgaon	368	86.77	10	10-10-2014	09-10-2024	11-08-2014	Govt
8	M/s Ashokwan Enterprises through Kalpana Bhende	Surgaon	368	86.77	10	17-09-2014	16-09-2024	20-08-2014	Govt
9	Vinod Ramkaran Mittal	Surgaon	368	86.77	10	24-07-2015	23-07-2025		Govt
10	Pramod Ramkarandas Mittal	Surgaon	341	23.74	10	10-09-2015	09-09-2025	28-08-2015	Govt
11	Sundar D Khatri	Surgaon	368	86.77	10	29-06-2015	28-06-2025	30-04-2015	Govt
12	Anand Eknath Lokhande	Surgaon	354/1, 353	30.27	10	31-01-2015	30-01-2025	17-11-2014	Govt
12	Sachin Laxmikant Pitale	Surgaon	359	1.75	5	14-11-2018	13-11-2023	20-12-2018	
13	Nitin Krushnarao Vaidya	Surgaon	354		10	15-02-2013	14-02-2023		
14	N D Enterprises through Nikunj D Shah	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
15	S N Enterprises through Suresh Kungwani	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
16	Harcharansingh Ranjeetsingh Bhatiya	Surgaon	368	86.77	10	10-10-2014	09-10-2024	19-08-2014	Govt

17	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	30-03-2019	29-03-2023	08-03-2013	Govt
18	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	29-05-2013	28-05-2023	08-03-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salaimendha									
1	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	37/1	2.06	5	08-11-2016	07-11-2021	08-11-2016	
2	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	66, 67, 68, 71, 72	3.92	5	02-12-2016	01-12-2021	19-01-2017	
3	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	18/1	1.20	5	20-03-2017	19-03-2022	31-03-2017	
4	Manoj Trilokchand Arora	Salaimendha	27	1.47	5	05-01-2021	17-12-2024	06-04-2021	
5	Pawankumar Satyanarayan Bihani	Salaimendha	30	1.57	5	05-12-2017	04-12-2022	14-12-2017	
6	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	78/1	1.20	5	20-03-2017	19-03-2022		
7	Devendra Suryabhanji Shirbhate	Salaimendha	37/2	2.00	5	11-01-2017	10-01-2022	11-01-2017	
8	Vinod Gulabrao Pillare	Salaimendha	16/1	1.01	5	07-10-2017	06-10-2022	23-10-2017	
9	Sweta Stone Through Shashikant Awaghate	Salaimendha	29/2-1	1.00	5	29-11-2017	28-11-2022	16-01-2018	
10	Amol Prabhakar Pillare	Salaimendha	18/2	1.20	5	07-12-2017	06-12-2022	06-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi (D)									

1	Pramod Shiram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
2	Pramod Shiram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
3	Pramod Shiram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
4	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
5	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
6	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
7	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt
8	President, Cargo Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt

9	President, Cargo Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	186	4.00	10	10-10-2014	09-10-2024		Govt
10	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	194/3, 194/5	2.83	5	31/01/2019, 30/07/2019	30-01-2024	27-11-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khadgaon									
1	Akash Ghanshyam Gangwani	Khadgaon	234	2.02	5	30-07-2020	29-07-2025	22-02-2016	
2	Murli Govindram Wadhvani	Khadgaon	152	2.71	5	09-12-2016	08-12-2021	29-12-2016	
3	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaon	171/2	1.78	5	20-04-2017	19-04-2022	04-05-2017	
4	Mohini Vijay Naik	Khadgaon	225	1.56	5	14-12-2017	13-12-2022	06-06-2018	
5	Shri Ram Govindram Wadhvani	Khadgaon	171/3	2.44	5	09-12-2016	08-12-2021	29-12-2016	
6	Ghanshyam Gurumal Gangwani	Khadgaon	239	1.83	5	30-07-2020	29-07-2025		

Sr. No.	Name of the Lease Holder	Village	Tahsil	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Singardip (Rithi)										

1	Harish Dashrath Fulsunge	Singardi p (Rithi)	Hingna	96	1.43	5	09-03-2018	08-03-2023	23-05-2018	
2	Rajesh Ramkisan Nikhare	Singardi p (Rithi)	Hingna	137/1	1.62	5	22-11-2017	21-11-2022	15-12-2017	
3	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardi p (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	5	16-07-2019	15-07-2024	29-08-2019	
4	Mukesh Shyamlal Lulla	Singardi p (Rithi)	Hingna	97	2.72	5	31-07-2020	21-12-2023	27-10-2020	
5	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardi p (Rithi)	Hingna	136	2.07	5	26-10-2017	25-10-2022	30-11-2017	Govt
6	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardi p (Rithi)	Hingna	86, 87, 88, 89, 90	6.51	5	23-11-2020	22-10-2025	23-11-2020	
7	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardi p (Rithi)	Hingna	148	2.22	5	25-01-2017	24-01-2022	25-01-2017	
8	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardi p (Rithi)	Hingna	64	3.97	5	06-11-2018	05-11-2023	14-12-2018	
9	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardi p (Rithi)	Hingna	92	9.80	5	03-05-2018	02-05-2023	21-05-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khapri (Raja)									
1	Rajesh Shardanand Jaiswal	Khapri (Raja)	76/1	1.45	5	01-11-2018	31-10-2023	26-11-2018	Govt

2	Sitaram Parasram Kamble	Khapri (Raja)	76/1	2.02	5	06-08- 2018	05- 08- 2023	05-12-2018	Govt
3	M/s B R Aakre	Khapri (Raja)	79	3.94	5	30-01- 2018	29- 01- 2023	03-12-2018	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mahurzari									
1	Prakash Wamanrao Atkar	Mahurzari	148, 149, 150, 163	7.82	5	16-11- 2018	15- 11- 2023		
2	Smt. Sultana Habib Baig	Mahurzari	148, 149, 150, 163	1.01	5	06-07- 2021	11- 05- 2023	30-07-2021	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Bhiwapur (Ooty)									
1	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	64	2.36	5	02-05- 2019	01- 05- 2024	10-06-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Paradgaon									
1	Ashwin Sureshkumar Mehta	Paradgaon	153	4.62	5	01-11- 2018	30- 10- 2023	19-11-2018	

Sr. No.	Name of the Lease Holder	Mouza	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Lawa									
1	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	229/2	1.77	5	23-11- 2016	22-11- 2021	09-12-2016	
2	Tulsabai Ganesh Hiranwar	Lawa	236	1.91	5	21-01- 2017	20-01- 2022	21-01-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Santoshkumar Yaduka	Navegaon	21/1	2.02	5	01-08-2017	31-07-2022	09-08-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pitesur									
1	Zoeb Sadikbhai Wali & Others	Pitesur	43	3.77	5	20-08-2020	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khapri (Uma)									
1	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	93/1	0.84	10	01-12-2014	30-11-2024	29-09-2014	
2	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	87/1	3.00	5	16-11-2016	15-11-2021		
3	Sureshkumar R Jagyasi	Khapri (Uma)	91	3.19	5	01-04-2017	31-03-2022	20-04-2017	
4	Ram Govindram Wadhvani	Khapri (Uma)	55/6	1.21	5	02-05-2018	01-05-2023	01-06-2018	
5	Vijay Ramchandra Kukreja	Khapri (Uma)	90	1.75	5	18-03-2019	17-03-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Chhatrapur									
1	Ashok Hiranman Umathe	Chhatrapur	218	2.47	5	27-09-2017	26-09-2022		
2	Tushar Madan Umathe	Chhatrapur	85/1	1.87	5	26-04-2021	25-04-2026	30-06-2021	
3	Umesh Nagorao Nimje	Chhatrapur	197	1.07	5	01-01-2018	31-12-2022		

4	Sudhakar Bapurao Bandhekar	Chhatrapur	213	2.00	5	17-03-2016	16-09-2021		
5	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	74/3	1.89	5	21-07-2020	20-07-2025		
6	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	204, 207	3.14	5	05-06-2020	05-05-2023	25-06-2020	
7	ketankumar arunkumar singh	Chhatrapur	72/1,72/2	3.72	05-05-2023	27-07-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Panjari									
1	Shri Anil Balkisan Hiranwar	Panjari	61/2	1.18	5	27-09-2017	26-09-2022	02-11-2017	
2	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
3	Kailash Pandurang Thakre	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
4	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	55/2, 55/3	2.96	05/05/2023	29-01-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mhasala									
1	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
2	Quality Minerals through Mo. Samir Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
3	Kamal R. Agrawal	Mhasala	125,126	1.97	17/12/2024	05-01-2021	17-12-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kawadasi (Barad)									
1	M/s Om Saibaba Constructon Through Ajay G Batra	Kawadasi (Barad)	113	5.47	5	11-07-2020	10-07-2025	20-08-2020	
2	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	43/1, 42/2, 42/3	4.49	5	11-07-2020	10-07-2025	24-08-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salai Godhani									
1	Arvind Janrao Gajbhiye	Salai Godhani	186/2, 186/3	2.59	5	16-12-2016	15-12-2021		
2	Radha Stone Industries through Pawan S Bihani	Salai Godhani	206/1, 206/2	1.21	5	06-12-2016	05-12-2021	13-12-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Vijay Kumar Onkarmal Yadukar	Navegaon	45/1	1.78	5	05-06-2017	04-06-2022	09-08-2017	
2	Nayan Jamnadas Makdiya	Navegaon	30/7, 30/9	2.00	5	19-11-2016	18-11-2021	12-09-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi Aasola									
1	Altaf Ahmad Majid Ahmad	Sawangi Aasola	67	2.81	10	29-01-2015	23-02-2025	22-02-2025	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kohla									

1	Ashish Anand Durugkar	Kohla	6/1	1.47	5	20-03-2019	19-03-2024	06-05-2019	
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khairi Khurd									
1	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	86/1	2.83	5	20-03-2017	19-03-2022	21-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mohgaon Zilpi									
1	Nandkishor Burade	Mohgaon Zilpi	28/2	1.80	5	01-02-2017	31-01-2022	01-02-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Mandav Ghorad									
1	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	161/2, 162	2.01	5	20-12-2017	19-12-2022	15-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Metaumri									
1	Rushi Ramesh Agrawal	Metaumri	101	3 Acre	10	16-03-2015	15-03-2025	24-02-2015	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Borgaon (Jangli)									
1	Pravin Sukhdev Bhaiswar	Borgaon (Jangli)	100, 101	4.30	5	17/05/2019	16-05-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Nimji									

1	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	347 Old, 94 New	2.20	5	03-07-2017	02-07-2022	15-01-2018	Govt
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CHAPTER 20
DETAILS OF ECO-SENSITIVE AREA

In Nagpur District there are following Eco sensitive zones

- 1) Umred Karandala Wildlife Sanctuary
- 2) Pench National Park and Mansinghdeo Wildlife Sanctuary
- 3) Bor Wildlife Sanctuary.

CHAPTER 21

IMPACT ON THE ENVIRONMENT DUE TO MINING

ACTIVITY:

The baseline environment quality to represent the background / existing environmental scenario of various environmental components such as air, noise, land ecological and socio-economic status of the study area. All the mine owners in the district assured to follow stipulated conditions of EC for sustainable and environment friendly mining.

1. Impact on Air Environment

The baseline status for air environment includes reconnaissance, identification and selection of specific significant air pollution due to the project activity and measuring their existing levels. The data required to assess the ambient status was collected, analysed and evaluated through a well-designed to assess the ambient air quality monitoring (AAQM) network.

Sources:

- Fugitive dust emission during mining activities inside the Quarry area like site preparation, drilling, blasting, excavation, loading of material transport and dumping of the stone
- Some amount of SO₂, NO_x and CO will be generated due to plying of mine machinery like Excavator, compressors, Jack Hammer, etc and transporting vehicles.

2. Impact on Water Environment:

Since the mining activity is related to excavation of stone, well above ground water table of the area, water contamination is not likely to be there. As basalt is a nontoxic material so any contact of water with material does not produce any toxic pollutant. If there is a need of dewatering for the mine then NOC will be opted from competent authority.

3. Impact on Noise Environment:

The main objective of noise monitoring in the study area is to establish the baseline noise levels and assess the impact of the total noise expected to be generated during the project operations in the project site.

Sources:

The main sources of noise pollution are identified as

- Mining activities inside the Quarry area like Drilling, Blasting, loading.
- Noise generated due to transporting vehicles.

4. Impacts due to Ground Vibration and Fly Rocks.

- The major source of ground vibration from the mine is blasting, however controlled blasting activity is being carried out. The major impact of the ground vibrations is on the domestic houses located in the villages surrounding the mine lease area. The kuchha houses are more prone to cracks and damage due to the vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements
- Another impact due to blasting activities is fly rocks. These may effect on the houses nearby the mining lease area and may cause injury to humans and animals.

5. Impact on Flora and Fauna

In the District most of the mine leases proposed on barren or scantily vegetated area so minimal impact is observed on existing flora, however in some cases trees needs to be cut down for mining activities and prior approval for it will take from competent authority. All existing and proposed mine leases is will be away from forest area and wild life sanctuaries, so minimal impact is observed on wild life.

6. Impact on Land Environment:

The topography of the mine lease area altered due to on-going/ proposed mining activities it will be altered further due to the proposed mining operations as per the approved mining plan. Due to mining operations, mine pits and dumps are being developed within the mine lease area.

7. Impact on Socioeconomics:

Critically analyzing the existing environmental status of the socio-economic profile and visualizing the scenario with the project, the impacts of the project would be varied and may generate positive impacts of the mining in the region that are stated below:

- . The mining operations will provide direct & indirect employment village people.
 - . The villages and their inhabitants & domestic animals will not be disturbed due to mining as quarry is far from their settlements.
 - . Local work force will be given first preference for employment.
 - . Mining activities will benefit the local people due to provision of more infrastructural facilities (developments of approach routes within the village area).
- Currently there are 40 existing mining leases in the District and as per area of the mine leases 10-20 people are engaged by direct employment i.e. 400-800 people employed.

CHAPTER 22
REMEDIAL MEASURES TO MITIGATE THE IMPACT OF
MINING ON THE ENVIRONMENT

Particulars	Details				
Air Quality Management	<p>Adoption scientific mining methods to reduce dust emission from point and line source:</p> <p>Scientific methods of mining and pollution control systems are being will be adopted in the mine to control dust emissions from point and line sources, as follows:</p> <p>Point Source: These includes drilling, blasting, loading, unloading, manual sizing and grading activities</p> <ul style="list-style-type: none"> • Use of wet drilling/ drills with dust arrestors to control dust generation during drilling activities • Blasting to be avoided during high winds and overcast conditions. • Controlled blasting by using delay detonators is already adopted. • Avoiding secondary blasting by use of rock breakers. • Water sprinkling on blasted material before loading • Reducing dropping height of excavator bucket while loading material into dumpers/tippers. • Reducing dropping height for trucks during unloading. • Provision of mobile tanker for water sprinkling arrangement <p>Line Source: These includes Haul roads & approach roads</p> <ul style="list-style-type: none"> • Development of plantation along approach road. • Periodic maintenance of tippers dumpers used for Mineral transport • Periodic maintenance of haul roads • Regular water sprinkling on haul roads. 				
	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Monitoring</th> <th style="width: 50%;"></th> </tr> </thead> <tbody> <tr> <td></td> <td> <ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken </td> </tr> </tbody> </table>	Monitoring			<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken
Monitoring					
	<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken 				
Noise Management	<p>Standard specified mining equipment is being /will be used and the equipment will be in good working conditions, properly lubricated and maintained to keep Noise within permissible limits.</p> <p>Drilling is being will be carried out with sharp drill bits which help in reducing noise and same will be continued</p> <p>Controlled blasting with proper spacing and optimum charge/delay will be Maintained.</p> <p>Tall trees with heavy foliage are being /will be planted along the boundary of mining lease area which will act as a natural barrier to propagating noise. Regular noise monitoring is being /will be carried at project site to check compliance with prevailing rules.</p> <p>Personal Protective Equipment's (PPEs) like ear plugs/car muffs are provided.</p>				

Particulars	Details
Vibration	<ul style="list-style-type: none"> • Blasting will be carried out by person with blaster's certificate issued by DGMS or by outside agency necessary. • Safety tools and implements that are required will be kept adequately near blasting site at the time of charging. • Portable blasting shelter will be provided near the blasting site

	<ul style="list-style-type: none"> • Blasting will be preferably done during 12.30PM to 2.00 PM depending on seasonal variation of break hours or the end of the day in order to ensure that no person or animals are within the blasting zone. • Misfires will be handled carefully as per stipulated procedures. • Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
Greenbelt Development	Plantation will be carried out at the approach road and vicinity area to control Dust, Air & Noise Pollution and improve aesthetic environment.
Water Environment	<ul style="list-style-type: none"> • Construction of garland drains and settling tanks to divert surface runoff of the mining area to the natural drainage. • Construction of checks dams/ gully plugs at strategic places to arrest silt wash off from broken up area. • Retaining wall and garland drain and adequate treatment system like settling ponds shall be provided around the OB dump for proper surface runoff management • The mined out pits shall be converted in to the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure. • Periodic analysis of mine pit water and ground water quality in nearby villages are to be undertaken. • Domestic effluent if any from mine shall be discharged to soak pit via septic tank constructed as per BIS specification. • Water conservation measures shall be taken by rain water harvesting and recycling and reuse of treated mine water after getting NOC from competent authority.

CHAPTER 23

RECLAMATION

As per the Government order and rule the applicant has to submit Mine Plan with Mine Closure Plan for their respective leases Reclamation of the mined out pit by way of back filling will not be possible because of the existence of the mineral up to deeper depth. The quarry depth will not be blocked and the quarry owner may exploit the same and precede further deep after taking clearances according to acts and rules applicable hence the detailed Quarry Closure Plan will be submitted further. Top soil would be utilized for intensive plantation and green belt development along the quarry area.

As generation waste is much less as in the case minor mineral mining, then following action taken place:

1. Plantation on the broken up surface if the depth of quarry is not much below the surrounding surface level.
2. Converted water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level.
3. It is preferred to encircle the abundant either wire fencing or retaining wall with plantation from the safety point of view.

CHAPTER 24

RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Hazard analysis involves the identification and quantification of various hazards (unsafe conditions) that will exist in the mines. On the other hand, risk analysis deals with the identification and quantification of risks, mining equipment and personnel are exposed to, due to accidents resulting from the hazards present in the mine. Risk analysis follows an extensive hazard analysis. It involves the identification and assessment of risks the neighboring populations are exposed to as a result of hazards present.

In the sections below, the identification of various hazards, probable risks, maximum credible accident analysis, and consequence analysis are addressed which gives a broad identification of risks involved. Based on the risk estimation disaster management plan has to be prepared.

The mining will be carried out under the management control and direction of a qualified Mine Manager holding a first class manager's certificate of competency. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert.

Mining is among the most hazardous activities all around the world, being always accompanied with different accidents, injuries, loss of lives, and land damages. Dimension stone quarrying constitutes a big portion of mining activities. In risk assessment the words Hazards and Risks are often used and it is necessary to be clear what Hazards and Risks are:

- A hazard is anything that has the potential to cause harm
- The risk is how likely it is that a hazard may cause actual harm.

Having defined the work to be undertaken, risk assessment will give a clearer picture of what could go wrong and how serious an accident could be. It will depend upon following a set model which will enable the risk to be assessed.

Hazard identification at Stone quarry site

Hazard identification and risk assessment is a continual process. At mining operation following could be the main hazard:

- ❖ Drilling operation
- ❖ Blasting operation
- ❖ Health Hazard
- ❖ Accident at site/crusher
- ❖ Transportation
- ❖ Natural hazards

It is performed to identify whatever could cause injury, damage, ill-health, financial loss and loss of reputation to the organization. Hazard identification is an analysis to determine whether a risk agent under plausible conditions would cause harm to population or the environment.

Mitigation measures

A) Drilling:

1. Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
2. Deep wetting of drilling zones shall be done by water sprinkling before starting drilling.
3. During the drilling operations the efforts shall be made to reduce dust generation by taking appropriate measures

B) Blasting:

1. Proper blasting geometry shall be designed.
2. Blast site shall be wetted before and after blasting operations are completed.
3. Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation.
4. Blasting shall be conducted only during favorable weather conditions and only during the day time and permissible hours.
5. The blasting operations shall be given publicity the local area through Announcement and other available media so that local people become aware of the blasting activities being undertaken in the area.
6. The vibrations should be monitored periodically in consultation with the local Mining authorities.
7. The storage of the explosives and its transfer to and from the quarry area shall be strictly in accordance with the conditions listed in the permission granted by Explosives Department

C) Heavy Earth moving Machinery (HEMM):

1. The operator/ transporter shall carry out regular maintenance of the machinery and vehicles.
2. The speed limit shall be adhered to
3. Operator's cabin of the HEMMs should preferably be air conditioned at least air tight.
4. The smoke emission should conform to the standards notified in Motor Vehicle Act.
5. The trucks carrying the mined products shall be covered with tarpaulin so that there are no fugitive emissions during transportation.
6. The transportation should not through the busy roads in the city/towns/villages if by pass roads are available.

D) Haul Roads:

1. All the haul and roads shall be mettled and well maintained.
2. Unmettled haul roads shall be free of ruts and pot holes.
3. All haul roads and surface roads shall be regularly sprayed with water.
4. Plantation alongside haul roads (avenue plantation) shall be carried out done.

E) Overburden:

1. Non-operative dumps shall be subjected to technical and biological reclamation.
2. Plantation over and around over burden stability of slopes, prevention of dust by wind action and soil erosion during the run off. Wetting of surface of O. B. dump shall be regularly practiced.

Occupational Health & Safety Measures to Control Dust Inhalation

All the necessary precautions would be adopted to prevent dust generation at site and to be dispersed in the outside environment. However, for the safety of workers at site, engaged at strategic locations/dust generation points like loading and unloading points, dust masks would be provided Dust masks would prevent inhalation of RPM thereby reducing the risk of

lung diseases and other respiratory disorders. Regular health monitoring of workers will be carried out.

Health and Safety Monitoring Plan

All the potential occupational hazardous work places would be monitored regularly. The health of employees working in these areas would be monitored once in two years for early detection of any ailment due to exposure to plant operation.

Personal Protective Equipment (PPE):

The following PPE will be provided to the persons working in the quarry area:

- ❖ Steel-Shoed Industrial Safety Shoes
- ❖ Safety Helmet
- ❖ Earmuffs and Earplugs by workers, who are working in areas.
- ❖ Safety Goggles & Safety Belts

Disaster Management Plan

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation and restoration of production. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel training should be given.

The objective of the Disaster Management Plan is to make use of the combined resources of the mine and the outside services to achieve the following:

- ❖ Effect the rescue and medical treatment of casualties;
- ❖ Safeguard other people;
- ❖ Minimize damage to property and the environment,
- ❖ Initially contain and ultimately bring the incident under control;
- ❖ Secure the safe rehabilitation of affected area
- ❖ Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.
- ❖ Emergency escape route will be designated.

CHAPTER 25
OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT

As all the precautions are taken during mining operations, no health issues are found till date (2016-20).

CHAPTER 26
PLANTATION AND GREENBELT DEVELOPMENT IN
RESPECT OF LEASES ALREADY GRANTED IN THE
DISTRICT

Plantation and greenbelt development is as per approved mining scheme for respective leases previously granted in the District and all proposed lease holder are adhere to comply with the stipulated conditions mentioned in the EC. As per the Approved Environmental Clearance General Condition Point No.10 Green belt development is carried out by lease holder in mine lease area along 7.5m barrier.

DRAFT DISTRICT SURVERY REPORT

*Riverbed Sand Mining and other
Minor Minerals*

ANNEXURE A 18

(As per Ministry of Environment, Forest and Climate Change, G.O.I. New Delhi; Notification No. S.O. 3611 (E) 25th July, 2018 and As per Enforcement and Monitoring Guidelines for Sand Mining, 2020, MoEF & CC-New Delhi)

**District Collector,
Nagpur
2023-2024**

**FOR PART-A
INDEX**

Chapter	Description	Page No.
1	Introduction	1-5
2	Overview of Mining Activity in the District	6-7
3	List of mining leases in the District with location, area and period of validity	8-28
4	Drainage of Royalty Or Revenue received	29
5	Details of Production of Sand or Bajri or minor mineral	30-31
6	Process of deposition of sediments in the rivers of the District	32-36
7	General Profile of the District	37-38
8	Replenishment study of sand ghat	39-51.I
9	Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining	52-55
10	Physiography of the district	56-57
11	Rainfall of the district & climatic condition	58
12	Geology and Mineral wealth	59-65
	Recommendation of enforcement & monitoring guidelines for sand mining by MoEF&CC-2020.	66-71

Annexure 1	73
Annexure 11	74
Annexure 111	75
Annexure 1V	76-77
Annexure V	78-80
Annexure VI	81
Annexure V11	82-83
Photographs of sand spots	88-95

FOR PART-B

Chapter No	Description	Page No.
1	Introduction	97
2	Overview of Mining Activity in the district	98
3	General Profile of the District	99-100
4	Geology of the District	101-105
5	Drainage and Irrigation Pattern	106-107
6	Land Utilization Pattern in the district	108
7	Surface Water and Ground Water Scenario of the district	109-112
8	Rainfall of the District and climate condition	113
9	Details of Mining leases of the District	114-122
10	Details of Royalty or Revenue received	123
11	Production of Minor Mineral in last 5 years	124
12	Mineral Map of the District	125
13	List of letter of intent (LOI) holders in the district	126-130
14	Total minerals reserve available in the district	131
15	Quality/ Grade of mineral	132
16	Use of the Mineral	133
17	Demand and Supply of the mineral	134
18	Mining lease mark on the map	135
19	Details of the area of where there is a cluster of mining lease	136-149
20	Details of Eco-Sensitive Area	150
21	Impact on the Environment Due to mining activity	151-153
22	Remedial Measures to mitigate the Impact of mining on the Environment	154-155
23	Reclamation	156
24	Risk Assessment & Disaster Management Plan	157-159
25	Occupational Health issues in the district	160
26	Plantation and Green belt development in respect of lease already granted in the District	161

CERTIFICATE

This is to certify that the District Survey Report is prepared in compliance to the notification issued by the Ministry of Environment and Forest and Climate Change, dated 25/07/2018 and Enforcement and Monitoring Guidelines for Sand Mining, 2020.

Every effort have been made to incorporate all accepts of the notifications. The sand mining location and other mining activity areas and overview of mining activity in the district with all its relevant features to geology and mineral wealth in replenishable and non-replenishable areas of rivers, stream and other sand sources.

This report will be a model and guiding document which is a compendium of available mineral resources, geographical set up, environmental and ecological set up of the district and is based on data of various departments, published report and e-source. The District Survey Report will form the basis for application for environmental clearance, preparation of reports and appraisal of projects.

Date- 01/11/2023



District Collector
Nagpur

Chapter 1

INTRODUCTION

1.1 District Nagpur

Nagpur District is a District in the Vidarbha region of Maharashtra state in central India. The city of Nagpur is the district headquarters. The district is part of Nagpur Division. In 1853, after the death of Raghoji III, the princely state of Nagpur was annexed by the British and the territory occupied by the present district became part of Nagpur Province. In 1861, it was merged with the Central Provinces and Nagpur district became a part of one of its divisions, Nagpur division. In 1903, it became part of the Central Provinces and Berar. In 1950, Nagpur district became part of the newly formed Madhya Pradesh state and Nagpur became its capital. In 1956, after the reorganisation of states, Nagpur district was incorporated in Bombay state. On 1 May 1960, it became a district of Maharashtra state.

Nagpur district is bounded by Bhandara District on the east, Chandrapur District on the southeast, Wardha District on the southwest, Amravati District on the northwest and Chhindwara District of Madhya Pradesh state on the north. Nagpur city is the winter capital of the state of Maharashtra, with a population of 2,405,421. It has also recently been ranked as the cleanest city and the second greenest city of India. In addition to being the seat of annual winter session of Maharashtra state assembly "Vidhan Sabha", Nagpur is also a major commercial and political centre of the Vidarbha region of Maharashtra.

1.2 History

The city was founded by the Gonds but later became part of the Maratha Empire under the Bhonsles. The British East India Company took over Nagpur in the 19th century and made it the capital of the Central Provinces and Berar. After the first reorganization of states, the city lost its capital status but according to the "Nagpur Pact" between political leaders it was made the second capital of Maharashtra.



Figure 1. The Zero Mile Stone, landmark denoting geographical centre of India

Nagpur is also called. "Tiger Capital of India" as it connects many Tiger Reserves in India to the world. It is among the important cities for IT sector in Maharashtra after Pune, Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India.

Princely states are shown in yellow. The Nag River, a tributary of the Kanhan River, flows in a serpentine path and is therefore named "Nag", the Marathi word for snake. And hence, the river and city is named as Nagpur, While others says that the river flows through the old city of Nagpur and hence the city is named after this river. "Pur" is a common suffix given to cities, villages and towns across India, and is often simply translated "city" The seal of Nagpur Municipal Corporation depicts a cobra in the water of a river.

Human existence around present day Nagpur city can be traced back 3000 years to 8th century BC. Mehir burial sites at Drugdhamna (near Mhada colony) indicate megalithic culture existed around Nagpur and is still followed in present times. The first reference to the name Nagpur is found in a 10th century copper-plate inscription discovered at Devali in the neighbouring Wardha district. The inscription is a record of grant of a village situated in the visaya (district) of Nagpura - Nandivardhana during time of Rastrakuta king Krsna III in the Saka year 862 (940 CE). Towards the end of third century King Vakataka dynasty. Vindhyaasakti is known to have ruled the Nagpur region. In the 4th century Vakataka Dynasty ruled over the Nagpur region and surrounding areas and had good relations with the Gupta Empire. The Vakataka king Prithvisena I moved his capital to Nagardhan (ancient name Nandivardhana), located at 28 kilometres (17 mi) from Nagpur. After the Vakatakas, the region came under the rule of the Hindu kingdoms of the Badami Chalukyas, the Rashtrakutas, and finally the Yadavas. In AD 1296 Allauddin Khilji invaded the Yadava Kingdom after capturing Deogiri, after which the Tughlaq Dynasty came to power in 1317.

In the 17th century, the Mughal Empire conquered the region. However, regional administration was carried out by the Gond kingdom of Deogarh- Nagpur in the Chhindwara district of the modern-day state of Madhya Pradesh.

Recent history ascribes the founding of Nagpur to Bakht Buland, a prince of the kingdom of Deogarh-Nagpur. The next Rajs of Deogarh was Chand Sultan, who resided principally in the country below the hills, fixing his capital at Nagpur which he made a walled town. On Chand Sultan's death in 1739, Wali Shah, an illegitimate son of Bakht Buland, usurped the throne and Chand Sultan's widow invoked the aid of the Maratha leader Raghuji Bhonsle of Berar in the interest of her sons Akbar Shah and Burhan Shah The usurper was put to death and the rightful heirs placed on the throne. After 1743, a series of Maratha ralers came to power, starting with Raghoji Bhonsle, who conquered the territories of Deogarh, Chanda and Chhattisgarh by 1751.

In 1803 Raghoji II joined the Peshwa against the British in the Second Anglo-Maratha War, but the British prevailed. After Raghoji II's death in 1816, his son Parsaji was deposed

and murdered by Mudhoji II. Despite the fact that he had entered into a treaty with the British in the same year, Mudhoji joined the Peshwa in the Third Anglo-Maratha War in 1817 against the British, but suffered a defeat at Sitabuldi in present-day Nagpur city. The fierce battle was a turning point as it laid the foundations of the downfall of the Bhonsles and paved the way for the British acquisition of Nagpur city. Mudhoji was deposed after a temporary restoration to the throne, after which the British placed Raghoji III the grandchild of Raghoji II, on the throne. During the rule of Raghoji III (which lasted till 1840), the region was administered by a British resident. In 1853, the British took control of Nagpur after Raghoji III died without leaving an heir.

From 1853 to 1861, the Nagpur Province (which consisted of the present Nagpur region, Chhindwara, and Chhatisgarh) became part of the Central Provinces and Berar and came under the administration of a commissioner under the British central government, with Nagpur as its capital. Berar was added in 1903. Tata group started the country's first textile mill at Nagpur, formally known as Central India Spinning and Weaving Company Ltd. The company was popularly known as "Empress Mills" as it was inaugurated on 1 January 1877, the day queen Victoria was proclaimed Empress of India.

The Non-cooperation movement was launched in the Nagpur session of 1920. After Indian Independence in 1947, Central Provinces and Berar became a province of India, and in 1950 became the Indian state of Madhya Pradesh, again with Nagpur as its capital. However, when the Indian states were reorganised along the linguistic lines in 1956, Nagpur and Berar regions were transferred to Bombay state, which in 1960 was split between the states of Maharashtra and Gujarat.

At a formal public ceremony on 14 October 1956 in Nagpur B. R. Ambedkar along with his supporters converted to Buddhism starting Dalit Buddhist movement which is still active. Nagpur is a city with great capabilities to grow and prosper in the coming days. It is very important for State and Central Governments to contribute to the growth, development, prosperity of Nagpur. Nagpur completed 300 years of establishment in the year 2002. A big celebration was organized to mark the event.

1.3 Location and Geographical data:

Nagpur is located in central India in the eastern part of Maharashtra state between 20°35" north to 21°44" north latitudes and 78°15' east to 79°40' east longitudes. Nagpur is bordered by Amravati and Wardha in the west, Bhandara in the east and Chandrapur in the south. In the north, it shares its boundary with the state of Madhya Pradesh.

It falls in parts of the Survey of India Toposheet Nos. 55 K/7, 55 K/8, 55 K/11, 55 K/12, 55 K/15, 55 K/16, 55 L/13, 55 O/2, 55 O/3, 55 O/4, 55 O/6, 55 O/7, 55 O/8, 55 O/10, 55 O/11, 55 O/12, 55 P/1, 55 P/2, 55 P/5, 55 P/6, 55 P/9. The general elevation of the District ranges between 150 to 600 m AMSL. The terraced landscape of the Deccan lava on the west appear as several flat topped hills well furrowed by streams.

The upland ridges in the north are an extension of the ranges of the Satpura hills and the eastern and south eastern part exhibit an apparently featureless tract with scattered isolated hillocks

1.4 Administrative set up

The Nagpur District is divided into 7 sub divisions, i.e Nagpur (City) Nagpur (Rural), Umred, Ramtek, Mouda, Saoner, and Katol, which are further divided into 14 Tehsils, given in Table 1.1 and tehsil map is illustrated in Fig 1.3. The Nagpur is the district's headquarter.

Sr No.	Subdivision	Tehsil
1	Nagpur(City)	Nagpur City
2	Nagpur(Rural)	Nagpur (Rural),Hingna
3	Umred	Umred,Bhiwapur,Kuhi
4	Ramtek	Ramtek,Parseoni
5	Mouda	Mouda, Kamptee
6	Saoner	Saoner, Kalmeshwar,
7	Katol	Katol, Narkhed

Table- 1.1 Administrative Units of the Dsitric

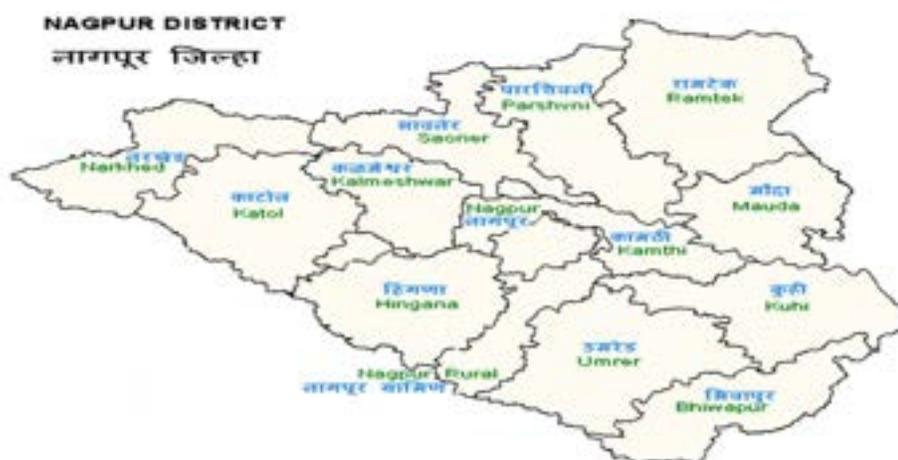


Fig 1.3 Tehsil Map of the District

1.5 Demography:

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932.. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76% and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census

1.6 Basin/ Sub Basin:

The district falls in the Godavari Basin which is further divided into Kanhan sub basin. and Pench Sub basin which is drained in the south. Important Rivers of the district are Kanhan, Pench, Nag, Kolar, Pur, Wainganga and Wardha.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is moderately rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee apart from the high grade coal found in Umred tahsil.

Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	No of Mines
1	Manganese Ore	41
2	Coal	13
3	Dolomite	15
6	Sand (Stowing)	02
7	Stone Quarry	87

Table 2: Mineral production in Nagpur district

The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned. As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 16-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 17-18. The details of royalty collected from minor mineral from 2015-2016 to 2020-21 are given in the Chapter 5. The quantity of minor mineral consumption is a thermometer to assess the quantity of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through river borne sand whereas the demand of bajri/grit is either met through river borne collection

or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope. The 8 local residents used to lift gravel etc. from the river beds to meet out their bonafide requirement. However after coming into being the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013, and Revised sand Mining Policy dated 03/09/2019 for sand mining projects as the mining was allowed in accordance to the rules.

Main Objectives of Sustainable Sand Mining:

- To ensure that sand and gravel mining is done in environmentally sustainable and socially responsible manner.
- To ensure availability of adequate quantity of aggregate in sustainable manner.
- To improve the effectiveness of monitoring of mining and transportation of mined out material.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Avoid aggradations at the downstream reach especially those with hydraulic structures such as jetties, water intakes etc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and in stream habitats.
- Avoid pollution of river water leading to water quality deterioration.
- To prevent depletion of ground water reserves due to excessive draining out of groundwater.

CHAPTER 3
THE LIST OF SAND MINING LEASES IN THE DISTRICT
WITH LOCATION, AREA AND PERIOD OF VALIDITY

Details of the Sand mining leases in the district are as follows.

Table No.1 List of Sand Ghats Proposed / auctioned in the year 2016-2017

Sand Ghat Name	Taluka	Survey No.	Area in Hecor	Availabl e Brass	Upset Price
Waregaon 2	Kamptee	204 ,3 part	3.00 hec	10601	5820000
Khairi Panjab Nalla 2	Mauda	1 adjoining and 4 part	2.25 hec	3975	1590000
Saholi B	Parseoni	136/2,141/2,1116/2,115/2,113/2,112/2, 110/2	4.16 hec	14700	13304000
Walni	Saoner	8 part,9,10 Adjoining	3.60 hec	6360	8733000
Kodamendi	Mauda	115,116 Adjoining	0.30 hec	530	262000
Khedikhurd	Narkhed	15,16,18,19,20/1,20/2,3,4,5/1,5/2,6/1,6/2,7 ,8 part	2.00 hec	7067	2827000
Bawangaon D	Saoner	208,204 Adjacent 203 some part	3.60 hec	12721	7544000
Palora A	Parseoni	150part	2.47 hec	4373	2440134
Mahalgaon	Mauda	260part	4.50 hec	7950	4389000
Naygaon Thakre	Narkhed	103part	1.87hec	3313	1326000
Thadipauni	Narkhed	80	0.80 hec	2845	1138000
Moregaon	Mauda	22,23adjoining	1.82 hec.	3216	1293000
Saholi A	Parseoni	15,16,17,18,19,20,21	4.80 hec.	8481	8828721
Wagoda	Saoner	127/1 Adjoining Some Part	4.68 hec	24837	11996271
Pardi	Parseoni	135,138 part	4.00 hec	7067	7258000
Ramdondri A	Saoner	144, 143 part	5.00 hec	8834	12130000
Umri Ja Nalla	Saoner	89,91,94part	3.71 hec	6555	2622000
Karajghat	Saoner	15 Adjacent	4.00 hec	14134	8382000
Wadna	Mauda	53,54part 55 part 52	3.02 hec	10689	4319000
Sihora	Parseoni	169, 142 part	2hec	3534	2736000
Bhamewada B	Kamptee	old 115 new 124Adjacent	1.35 hec	2385	

Indora A	Mauda	159 and 165/2 Adjacent	0.39 hec	689	277000
Bawangaon A	Saoner	254,253,251, 252	3.5 hec	12367	5500500
Wakodi B	Mauda	44 part	2 hec	7067	9703000
Mohadi	Mauda	89,90part	0.36 hec	636	257000
Gowari	Mauda	63/2, 69 and 79 some part	0.36 hec	636	257000
Nandapur	Saoner	220,221,237, 238	3.85 hec	13604	8067172
Itgaon	Parseoni	420 some part 421 and 422	2.24 hec	3958	4674398
Khairi Panjab Nalla 1	Saoner	5,6,14 part	0.75 hec	1325	530000
Chichghat	Kuhi	46 Adjoining	3 hec	5300	2120000
Sirsoli	Mauda	10,11part	2.34 hec	4134	1435532

Table No.2 List of sand ghat proposed in 2017-2018

Sr. No.	Name of Sand Ghat	Tehsil	Name of River / Nalas	Gut number on the river bank near the sand Ghat	Area (Hectore)	Available Sand (Brass)	Upset price
1	2	3	4	5	6	7	8
1	Rohna	Saoner	Kanhan River	168	2.80	4947	7267150
2	Dahegaon R A	Saoner	Kolar River	243	1.25	2208	3243560
3	Esapur -A	Saoner	Kanhan River	92, 91,93,94,115 adjacent part	3.60	12720	18685680
4	Randongri-A	Saoner	Kanhan River	30,31,32,and 33 Excluding the adjacent part	3.15	11130	23539950
5	Kairi Panjab Nalah -A	Saoner	Kairi Panjab Nalah	17,18 adjacent part	0.40	706	955800
6	Khapapeth	Saoner	Kanhan River	The northern part of 284 up to 500 meters	4.0	14134	10982120
7	Gosevadi-A	Saoner	Kanhan River	2572,85,286	4.80	8480	12457120
8	Kochhi	Saoner	Kanhan River	2632,64,267	4.50	7950	4603050
9	Vaki-A	Saoner	Kanhan River	180,181,182Part	4.05	7155	9823820
10	Temburdoh-A	Saoner	Kanhan River	260,274,279 adjacent part	3.20	11308	6705650
11	Temburdoh-B	Saoner	Kanhan River	2502,40,239	3.20	11308	6705650

12	Pardi-B	Parshivani	Kanhan River	144,142 / 5 to 142/9 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
13	Pardi-C	Parshivani	Kanhan River	146, 148, 153, 157 (excluding 100 meters on both sides of the bridge)	2.50	4417	5167890
14	Pipla	Parshivani	Pench River	353/1,353/2,354	1.89	3339	1863170
15	Bakhari	Parshivani	Pench River	188,189,190 (excluding 100 meters distance of municipal supply well and bridge)	1.93	3418	1907250
16	Palora-B	Parshivani	Pench River	43/1,43/2,45/1	1.75	3092	1725340
17	Sonegaon (Raja)-No.2B	Kamptee	Kanhan River	341 Part,342,345	3.75	13250	13223500
18	Neri Ghat No.2A	Kamptee	Kanhan River	217,219,220,221,223and 224 Part	5	8833	8815340
19	Neri Ghat No.2B	Kamptee	Kanhan River	224 Part 230,227,229	5	8833	8815340
20	Ungaon Ghat No.2A	Kamptee	Kanhan River	206, 208, 211, 212 Part	4.5	7950	7934100
21	Ungaon Ghat No.2B	Kamptee	Kanhan River	212 Part, 217,218,219	4.5	7950	7934100
						157545	167523470

- In the year 2018-2019 auctions of sand ghat were not carried out due to PIL67/2017 in High Court, Nagpur

Table No.3 List of Sand ghat proposed for the year 2018-2019

Sr No	Name of Sand Ghat	Tahsil	Name of River/Nallas	Nearest Sr No.	Depth	Length in Meter	Width in Meter	Area in Hectore	Quantity in Brasses
1	Temburdoh-A	Saoner	Kanhan	260,274,279Adjoining	0.5	400	80	3.2	5654
2	Temburdoh-B	Saoner	Kanhan	239Part,240,250Part	1	400	80	3.2	11307
3	Walni	Saoner	Kanhan	9,8,10Part and 276 survey no. of river	0.3	400	80	3.2	3392
4	Ramdongri A	Saoner	Kanhan	31,32,30	0.9	450	70	3.15	10018
5	Ramdongri B	Saoner	Kanhan	143,144 part	0.5	400	100	4	7076
6	Ramdongri k	Saoner	Kanhan	140,135 part	0.5	400	70	2.8	4947
7	Badegaon	Saoner	Kanhan	431,433,435,436,437 Adjoining	0.75	500	90	4.5	11926

8	Khapap eth	Saoner	Kanhan	The northern part of 284 adjoins up to 500 m	0.60	500	80	4.00	8481
9	Khairi Panjab	Saoner	Khairi Panjab	18 Some part of 19 adjacent	0.40	200	20	0.40	565
10	Wakodi	Saoner	Kanhan	44 Adjoining	0.40	500	90	4.50	6360
11	Gosewadi A	Saoner	Kanhan	285,286,287 Adjoining	0.60	480	100	4.80	10177
12	Gosewadi B	Saoner	Kanhan	254,253 Adjoining	0.50	320	75	2.40	4240
13	Nandapur	Saoner	Kanhan	220 Adjoining	0.40	475	80	3.80	5371
14	Esapur A	Saoner	Kanhan	91 some part 93,94,115 in adjacent river basin Survey.No.92	0.40	450	80	3.60	5088
15	Esapur B	Saoner	Kanhan	85,87 in the adjacent river basin,Survey.No.92	0.85	300	80	2.40	7208
16	Rohana	Saoner	Kanhan	129,132 degrees in the adjacent river basin, Surevy no.168	0.75	350	80	2.10	7420
17	Dahega on Rangari B	Saoner	Kanhan	211,212,214 Nearby and river basin Surevy.No.244	0.40	300	40	1.20	1696
18	Waki A	Saoner	Kanhan	180,181,182 Adjoining	0.40	450	90	4.05	5724
19	Waki B	Saoner	Kanhan	189, 190, 191 Adjoining	0.50	350	80	2.80	4947
20	Raiwadi	Saoner	Kanhan	185,183,180,179 व 188 Adjoining (Survey no..171 and 190 Excluding)	0.60	450	75	3.37	7155
21	Ungao n	Kampte e	Kanhan	222,219,218,217,212, 211 Adjoining	0.40	650	74	4.81	6799
22	Warega on A	Kampte e	Kolar	204 and 3 Adjacent	1.00	350	50	1.75	6184
23	Warega on B	Kampte e	Kolar	10/1, 10/2, 13/1, 13/2, Adjoining	0.60	550	58	3.19	6763
24	Bina	Kampte e	Kanhan	56,57,53/अ/1 ,58 Adjoining	0.40	830	60	4.98	7039
25	Sonega on Raja	Kampte e	Kanhan	338,339, 337Adjoining	1.00	752	65	4.88	17272
26	Chikna	Kampte e	Kanhan	7 some part 8, 9, 10, 11 and 12 some part	1.00	450	40	1.8	6360
27	Neri	Kampte e	Kanhan	217 some part 219, 220, 221, 223 and 224/1 some part	1.00	565	86	4.85	17170
28	Bhame wada	Kampte e	Kanhan	128 some part, 144 some part,135/2,136/2,129 Adjacent	0.80	600	30	1.8	5088
29	Nayaku nd	Parseon i	Pench River	33 and 26 Adjoining	0.40	200	100	2.00	2827
30	Pardi K	Parseon i	Kanhan	153 Adjoining	0.50	250	100	2.50	4417

31	Wagoda	Parseoni	Pench River	127/1 Adjoining	0.50	334	120	4.00	7081
32	Ghatrohana	Parseoni	Pench River	54 Some part 148 Adjoining	0.40	300	100	3.00	4240
33	Yesamba	Parseoni	Pench River	207 Adjoining	0.80	304.5	36	1.09	3099
34	Sihora	Parseoni	Kanhan	170/1,170/2 Some part 170/3,170/4 Adjacent	0.50	200	90	1.80	3180
35	Palora A	Parseoni	Pench River	150 Adjoining	0.40	200	50	1.00	1413
36	Pimpla	Parseoni	Pench River	353 Adjacent 354 Adjoining	0.50	215	90	1.93	3419
37	Chichghat	Kuhi	Kanhan	45 Adjoining	0.80	200	100	2.00	5654
38	Khedikhurd A	Narkhed	Wardha	3,4,5,6,7,8,15,16 Adjacent	0.40	750	25	1.87	2650
39	Khedikhurd B	Narkhed	Wardha	155,157,168,169 Adjoining	0.40	1150	25	2.87	4064
40	चिकना घाट	Mauda	Kanhan	532 some part 541,542 Adjacent	0.50	550	90	4.95	8746
41	Mohkhedi A	Mauda	Kanhan	117,118 Adjoining	0.90	490	100	4.9	15583
42	Mohkhedi B	Mauda	Kanhan	132,133,135,136 Adjoining	0.50	490	100	4.9	8657
43	Mahalgaoon A	Mauda	Sur	Some parts of Survey No. 6 & 260 and Survey No. 23,24,25,26,261 in front of Mauja Pipalgaon	0.50	380	60	2.28	4028
44	Mahalgaoon B	Mauda	Sur	385,386,387,389 Adjoining	0.50	275	70	1.92	3401
45	Sirsoli	Mauda	Sur	188 Adjoining	0.40	170	75	1.27	1802
46	Kirnapur	Mauda	Kanhan	109, 110, 111, 107, 105, 104,103 Adjacent	1.00	620	80	4.96	17527
47	Wakeshwar	Mauda	Sur	16 Adjacent 17 Adjacent	0.40	150	30	0.45	636
48	Belda	Ramket	Kundiya Nalla	180 Adjoining	0.40	300	25	2.27	1060

- In the year 2019-2020 Sand ghats were not auctioned because of PIL 11/208

Table No.4 List of Sand ghat proposed for the year 2020-2021

List of in the district 26 Sand Ghats were finalized for the auction in 2020-2021. The details of there are as follows:

SR No.	Name of Sand Ghat	Taluka	Name of River	Adjacent Survey number to Sand ghat	Length (Meter)	Width (Meter)	Area (Hector)	Extractable depth (Meter)	Available Quantity (Brass)
1.	Raiwadi-A	Savner	Kanhan	179, 180, 183, 184, 186	450	75	3.37	0.40	4770
2.	Temburdoh	Savner	Kanhan	1(Part), 279, near gavthan	425	75	3.18	0.80	9011
3.	Wakodi	Savner	Kanhan	44 (Part)	500	70	3.35	0.80	9894
4.	Ramdongari-B	Savner	Kanhan	143 (Part), 144 (Part)	400	100	4.00	0.30	4240
5.	Khapapeth	Savner	Kanhan	284 North part 500 m	500	75	3.75	0.40	5300
6.	Karajghat	Savner	Kanhan	15 (Part)	470	75	3.52	0.80	9965
7.	Isapur-A	Savner	Kanhan	90 (Part) 93, 94, 115, 116	475	80	3.80	0.60	8057
8.	Rohana	Savner	Kanhan	168, 3 (Part) 7 B(Part)	350	60	2.10	0.60	4452
9.	Bawangaon-A	Savner	Kanhan	252, 253	243	80	1.94	0.50	3435
10.	Ghatrohana	Parshivani	Pench	53 (Part), 52, 46, 45 (Part)	500	60	3.00	0.80	8481
11.	Paradi	Parshivani	Kanhan	153, 157	740	90	6.66	0.50	11767
12.	Sinagdeep	Parshivani	Kanhan	80, 81, 82	550	80	4.40	0.50	7774
13.	Palora	Parshivani	Pench	43 (Part)	250	80	2.00	0.50	3534
14.	Pipla	Parshivani	Pench	354 (Part), 353 (Part)	215	90	1.93	0.50	3419
15.	Sihora	Parshivani	Kanhan	170/1, 170/2 (Part)	500	90	4.50	0.50	7951

16.	Waghoda	Parshivan i	Pench	127/1 (Part)	33 4	120	4.00	1.00	14163
17.	Yesamba	Parshivan i	Pench	207 (Part)	21 0	75	1.57	2.00	11131
18.	Garanda	Parshivan i	Pench	104 (Part)	40 0	80	3.20	1.50	16961
19.	Bina	Kamptee	Kanhan	57/1, 57/2, 56,53/A1	50 0	100	5.00	0.50	8834
20.	Sonegaon Raja	Kamptee	Kanhan	338, 339, 337(Part)	75 2	65	4.88	0.50	8636
21.	Ungaon	Kamptee	Kanhan	212, 217, 218, 219, 222, 211 (Part)	65 0	74	4.81	0.50	8498
22.	Chikna-A	Kamptee	Kanha n	8, 9/1, 9/2, 10/1, 10/2, 11, 12 (Part)	45 0	50	2.25	1.00	7951
23.	Chichghat	Kuhi	Kanha n	45 part	45 0	90	4.05	0.80	11449
24.	Chiknaghat	Mouda	Kanha n	543/1,542,5 41,543/2	54 0	90	4.86	1.50	25760
25.	Mohkhedi	Mouda	Kanha n	117, 118, 119	75 0	100	7.5	1.00	26502
26.	Kirnapur	Mouda	Kanhan	109,110,1 11 ,107,106,1 0 5,113,115, 1 16,118,11 9, 4,5	85 0	80	6.8	0.8	19223

Table No.5 List of Sand Ghats proposed for the year 2021-2022

Sr No.	Name of Sand Ghat	Taluka	Name Of River	Adjacent Survey Number of Sand Ghat	Length (Meter)	Width (Meter)	Area (Hector)	Depth	Brass
1	Gosewadi A	Saoner	Kanhan	285,286,287 part	420	100	4.20	0.50	7420
2	Bawangao n B	Saoner	Kanhan	203,204,208	450	60	2.70	0.60	5724
3	JuniKampt ee(Gadega on)	Parseoni	Kanhan	241/2,230	200	100	2.00	0.80	5653
4	Pardi k	Parseoni	Kanhan	153	450	100	4.50	0.80	12720
5	Saholi A	Parseoni	Kanhan	15,16,17,18,19	500	50	2.50	0.80	7067
6	Saholi B	Parseoni	Kanhan	115/2,112/2,136/2,141/2	600	60	3.60	1.00	12720
7	Kirnapur	Mauda	Kanhan	103,104,105,107,109,110,111,113,115,116,117,118,119,4,5	620	80	4.95	0.80	14021
8	Mohkhedi	Mauda	Kanhan	117,118,119	490	100	4.9	0.70	12120
9	Neeri Ghat	Kampthe	Kanhan	217/2/3,219,220,221/1/2,223,224/1 Part	565	86	4.85	1.50	25754
10	Chichghat	Kuhi	Kanhan	43 area2.08 ha	300	100	3.00	0.50	5300
11	Wakodi	Saoner	Kanhan	44part	500	70	3.50	0.40	4946
12	Raywadi A	Saoner	Kanhan	179,180,183,184,186,185 &188 part	450	75	3.37	0.40	4770
13	Rohana	Saoner	Kanhan	168,3part 7B part	350	60	2.10	0.50	3710
14	Esapur A	Saoner	Kanhan	90part, 93,94,115,116	475	80	3.8	0.45	6042
15	Karajgha t	Saoner	Kanhan	15part	470	75	3.52	0.40	4982
16	Bawanga on A	Saoner	Kanhan	252,253	243	80	1.94	0.40	2747
17	Ramagon gri B	Saoner	Kanhan	144part, 143 Part	400	100	4.0	0.30	4240
18	Ghatroha na	Parseoni	Pench	Part53,52,46,45 Part	500	60	3.00	0.40	4240
19	Sihora	Parseoni	Kanhan	170/1,170/2	500	90	4.50	0.	4770

				part				30	
20	Old Waghoda	Parseoni	Pench	127/1 part	334	120	4.0	0.90	12746
21	Yesamba	Parseoni	Pench	207 part	210	75	1.57	0.90	5008
22	Garanda	Parseoni	Pench	104 part	400	80	3.20	0.70	7915
23	Pipla	Parseoni	Pench	354 part,353 part	215	90	1.93	0.40	2734
24	Palora B	Parseoni	Pench	43 part	250	80	2.00	0.40	2826
25	Singardip	Parseoni	Kanhan	80,81,82	550	80	4.40	0.30	4664
26	Chiknaghat	Mauda	Kanhan	543/1,542,541,543/2	540	90	4.86	0.60	10303
27	Chikna A	Kampthe	Kanhan	8,9/1,9/2,10/1,10/2,11,12 part	450	50	2.25	0.50	3975
28	Ungaon	Kampthe	Kanhan	212,217,218,219,222,211 part	650	74	4.81	0.30	5098

Table No.6 List of Sand Ghats proposed for the year 2022-2023

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Mineable Depth (m)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	0.90	11162
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	0.80	14021
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	0.80	13851
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	0.50	4028
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	0.50	3401
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	0.50	1987
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	0.60	5088
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	0.50	1855
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	0.80	4388
10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	0.90	3361
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	0.80	5653
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	0.70	7420
13	Parseoni	Palora	Pench	S.No. 103 Part, 99	200	X	60	1.20	1.0	4240

				Part, 43 Part						
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	1.0	8745
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	0.90	6153
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	1.0	17385
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	0.60	2289
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	0.60	3434
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	0.90	14310
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	0.50	2826
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	1.0	17314
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	1.0	16996
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	x	86	4.85	1.0	17169
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	0.80	7067
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	1.20	8480

26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	0.50	3180
27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	0.80	13568
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	0.80	9894
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	0.80	10176
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	1.0	7420
31	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	x	70	3.15	0.80	8904
32	Saoner	Ramdongri-B	Kanhan	143 part, 144 part	400	x	100	4.00	0.80	11307
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	0.60	7473
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	0.60	7950
35	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	x	80	3.60	0.50	6360
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	0.80	6360
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	0.80	5088
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	0.50	2782
39	Saoner	Bawangaon-B	Kanhan	203, 204, 208	450	x	60	2.70	0.60	5724
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	0.50	5300
Total										314109

Table No.7 List of Sand Ghats proposed for the year 2023-2024

SI No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, 119 adjacent part	490	x	100	4.90
4	Mouda	Vadhna	Kanhan	S.No. 52, 53, 54, 55 adjacent part	300	x	80	2.40
5	Mouda	Panmara	Kanhan	S.No. 230 adjacent part	650	x	75	4.87
6	Mouda	Dahadi	Kanhan	S.No. 110, 111 adjacent part	125	x	35	0.38
7	Mouda	Morgaon	Kanhan	S.No. 22, 23 adjacent part	250	x	60	1.50
8	Mouda	Mahalgaon-A	Sur	S.No. 6, 260 Pimpalgaon S.No. 23/2, 24, 25, 26 adjacent part	380	x	60	2.28
9	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92
10	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	170	x	75	1.27
11	Mouda	Wakeshwar	Sur	S.No. 15, 16/1, 17/1 adjacent part	130	x	20	0.26
12	Mouda	Govri	Sand River	S.No. 62, 63/1, 63/2, 67, 73	90	x	30	0.27
13	Ramtek	Loda	Bawanthadi	S.No. 102 adjacent part	68	x	43	0.29
14	Ramtek	Belda	Tundiya Nalla	S.No. 180 adjacent part	97	x	33	0.32
15	Narkhed	Saiwada	Wardha	S.No. 13, 14/1, 14/2, 16/1, 16/12, 17	900	x	40	3.60
16	Narkhed	Junona (Gharad)	Madar	S.No. 6, 7, 8, 16, 17, 18, 19	500	x	40	2.00

17	Narkhed	Bopapur	Madar	S.No. 102/1, 102/2, 124, 125/1, 126, 127, 129/1A, 128/1B, 128/2	450	x	30	1.35
18	Narkhed	Narsingi	Madar	S.No. 162, 159, 158/A, 158/B, 157, 156, 155, 154, 153, 151	600	x	20	1.20
19	Narkhed	Naigaon (Thakre)	Jamb River	S.No. 103, 104	750	x	40	3.0
20	Narkhed	Kharbadi	Wardha	S.No. 2, 3, 4, 5/1, 5/2, 6/1, 6/2, 7, 169, 185	1000	x	40	4.0
21	Parseoni	Garanda	Pench	S.No. 104/1/A/1, 104/1/A/2, 104/1/B/1, 104/1/B/2, 104/2/A, 104/2/B/2	345	X	45	1.55
22	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05
23	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230/1 part	400	X	50	2.00
24	Parseoni	Ghat Rohana	Pench	S.No. 52, 53, 45, 46	500	X	60	2.78
25	Parseoni	Palora	Pench	S.No. 43/1, 43/2, 43/3, 102/1, 102/2, 102/4, 105/5	200	X	60	1.20
26	Parseoni	Singardip	Kanhan	S.No. 80, 81/1, 81/2, 82	330	X	75	2.47
27	Parseoni	Sihora	Kanhan	S.No. 169/2, 169/3, 169/4, 169/5, 170/1, 170/2	500	x	90	4.50
28	Parseoni	Pipla	Pench	S.No. 353/1, 353/2, 354	215	X	90	1.93
29	Parseoni	Waghoda	Pench	S.No. 127/1	410	X	120	4.92
30	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18, 19, 20	600	x	50	3.00
31	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/2, 113/2, 115/2, 116/2	360	X	30	1.10
32	Parseoni	Nayakund	Pench	33, 26	360	X	45	1.62

33	Parseoni	Pardi K	Kanhan	153	450	X	100	4.5
34	Kamptee	Bina	Kanhan	S.No. 57/1, 57/2, 56, 53/3	500	x	100	5.00
35	Kamptee	Waregaon	Kolar	10/1, 10/2, 13/2	390	x	60	2.34
36	Kamptee	Sonegaon Raje	Kanhan	S.No. 337 part, 338, 339	752	x	65	4.88
37	Kamptee	Ungaon	Kanhan	S.No. 211, 212, 217, 218, 219, 222	650	x	74	4.81
38	Kamptee	Neri	Kanhan	S.No. 217/2/3, 219, 220, 221/1/2, 223, 224	565	x	86	4.85
39	Kamptee	Chikna-A	Kanhan	S.No. 9/1, 9/2, 10/1, 10/2, 11, 12	500	x	50	2.50
40	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00
41	Kamptee	Bhamewada	Kanhan	S.No. 136/2, 135/2, 129, 144 part	600	x	30	1.80
42	Saoner	Waki-A	Kanhan	S.No. 180, 181, 182	450	x	90	4.05
43	Saoner	Waki-B	Kanhan	S.No. 189, 190, 191	350	x	80	2.80
44	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80
45	Saoner	Gosewadi -B	Kanhan	S.No. 253, 254	320	x	75	2.40
46	Saoner	Wakodi	Kanhan	S.No. 44	500	x	70	3.50
47	Saoner	Dohanghat	Kanhan	S.No. 2, 3, 36	300	x	70	2.10
48	Saoner	Walni	Kanhan	S.No. 276, 7, 8/1, 8/2, 9	480	x	80	3.84
49	Saoner	Isapur-A	Kanhan	S.No. 92, 64, 115, 116, 117, 118, 119, 120, 126	450	x	80	3.60
50	Saoner	Isapur-B	Kanhan	S.No. 92, 85/1, 85/2, 87, 87/3, 87/1	380	x	80	3.04
51	Saoner	Rohana	Kanhan	168, 3 part 7 B part	350	x	60	2.10
52	Saoner	Ramdongri-A	Kanhan	30, 31, 32	450	x	70	3.15
53	Saoner	Ramdongri-B	Kanhan	143 part, 144 part	400	x	100	4.00
54	Saoner	Ramdongri-K	Kanhan	140, 135	400	x	70	2.80
55	Saoner	Bawangaon-A	Kanhan	252, 253	170	x	80	1.36
56	Saoner	Bawangaon- B	Kanhan	203, 204, 208	450	x	60	2.70
57	Saoner	Karajghat	Kanhan	S.No. 15, part 5	470	x	75	3.52
58	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75
59	Saoner	Kocchi	Kanhan	S.No. 264, 267,	450	x	80	3.60

				263				
60	Saoner	Raiwadi	Kanhan	S.No. 190, 191 Adjoining	300	x	75	2.25
61	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 Adjoining	300	x	60	1.80
62	Saoner	Nandapur	Kanhan	S.No. 220A, 221	475	x	80	3.80
63	Saoner	Bhanegaon-A	Kanhan	S.No. Old 58, 227,	200	x	80	1.60
	Saoner	Bhanegaon-B	Kanhan	240, 241, 242/1, 242/2, 243/1, 243/2	180	x	100	1.80
64	Saoner	Patansaongi	Kolar	S.No. 337,443, 441/1, 446	80	x	30	0.24
65	Saoner	Kawadas	Kolar	S.No. 218, 219, 220, 244, 243	450	x	35	1.57
66	Saoner	Dahegaon Rangari-A	Kolar	S.No. 243 व 165, 167, 168, 169	250	x	50	1.25
67	Saoner	Dahegaon Rangari-B	Kolar	S.No. 244, 211, 212, 213, 214/1, 214/2, 215, 242, 245	300	x	40	1.20
68	Saoner	Chicholi	Kolar	Old S.No. 89 New S.No. 59 लगत	150	x	50	0.75
69	Saoner	Khairi (Panjab)	Khairi (Panjab) Nallah	S.No. 18, 19 adjacent part	200	x	20	0.40
70	Saoner	Umri (ja)	Umri Ja	S.No. 94, 91, 149, 152, 138	300	x	30	0.90

Table No.8 List of Pre Monsoon Surveyed Sand Ghats for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)			Area (Ha)	Excavated/ Non excavated
						x			
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 543/1, 542, 541 and 543/2 adjacent part	540	x	65	3.51	Excavated
2	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	x	80	4.95	Non Excavated
3	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	x	100	4.90	Excavated
4	Mouda	Mahalgaon-A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	x	60	2.28	Excavated
5	Mouda	Mahalgaon-B	Sur	S.No. 373, 368, 387 adjacent part	275	x	70	1.92	Excavated
6	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	x	45	1.125	Non Excavated
7	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	x	80	2.40	Non Excavated
8	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	x	30	1.05	Excavated
9	Parseoni	Garanda	Pench	S.No. 104 Part	345	X	45	1.55	Non Excavated
10	Parseoni	Yesamba	Pench	S.No. 207 part	302	X	35	1.05	Excavated
11	Parseoni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	X	50	2.00	Excavated
12	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	X	60	2.78	Non Excavated
13	Parseoni	Palora	Pench	S.No. 103 Part, 99	200	X	60	1.20	Excavated

				Part, 43 Part					
14	Parseoni	Singardip	Kanhan	S.No. 80, 81, 82	330	X	75	2.47	Excavated
15	Parseoni	Pipla	Pench	S.No. 353 Part, 354 Part	215	X	90	1.93	Excavated
16	Parseoni	Waghoda	Pench	S.No. 127 part	410	X	120	4.92	Excavated
17	Parseoni	Saholi-B	Kanhan	S.No. 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	360	X	30	1.10	Excavated
18	Parseoni	Nayakund	Pench	33 Part, 34 Part	360	X	45	1.62	Excavated
19	Parseoni	Pardi K	Kanhan	153, 146 part	450	X	100	4.50	Excavated
20	Parseoni	Saholi-A	Kanhan	S.No. 15, 16, 17, 18	400	x	40	1.60	Excavated
21	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	x	100	4.90	Excavated
22	Kamptee	Ungaon	Kanhan	S.No. 211part, 212, 217, 218, 219, 222	650	x	74	4.81	Non Excavated
23	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	x	86	4.85	Excavated
24	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11, 12	500	x	50	2.50	Excavated
25	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	x	50	2.00	Non Excavated

26	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	x	30	1.80	Non Excavated
27	Saoner	Gosewadi -A	Kanhan	S.No. 285, 286, 287	480	x	100	4.80	Excavated
28	Saoner	Wakodi	Kanhan	S.No. 44 part	500	x	70	3.50	Non Excavated
29	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	x	80	3.60	Non Excavated
30	Saoner	Rohana	Kanhan	3 part 7 part	350	x	60	2.10	Non Excavated
31	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	x	70	3.15	Non Excavated
32	Saoner	Ramdongri-B	Kanhan	143 part, 144 part	400	x	100	4.00	Non Excavated
33	Saoner	Karajghat	Kanhan	S.No. 15, part	470	x	75	3.52	Non Excavated
34	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	x	75	3.75	Excavated
35	Saoner	Kocchi	Kanhan	S.No. 264, 267 Part, 263 Part	450	x	80	3.60	Non Excavated
36	Saoner	Raiwadi	Kanhan	S.No. 190	300	x	75	2.25	Excavated
37	Saoner	Tembhurdoh	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	x	60	1.80	Excavated
38	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	x	35	1.57	Non Excavated
39	Saoner	Bawangaon-B	Kanhan	203, 204, 208	450	x	60	2.70	Non Excavated
40	Kuhi	Chichghat	Kanhan	43 part	300	x	100	3.00	Non Excavated

Table No.9 List of Sand Ghats applied for revalidation of EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)		Depth	Area	Brass
1	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	80	0.80	4.95	14021
2	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	45	0.50	1.125	1987
3	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	80	0.60	2.40	5088
4	Parseoni	Garanda	Pench	S.No. 104 Part	345	45	0.80	1.55	4388
5	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	60	0.80	2.78	5653
6	Kamptee	Ungaon	Kanhan	S.No. 211 part, 212, 217, 218, 219, 222	650	74	1.0	4.81	16996
7	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	50	1.20	2.00	8480
8	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	30	0.50	1.80	3180
9	Saoner	Wakodi	Kanhan	S.No. 44 part	500	70	0.80	3.50	9894
10	Saoner	Isapur-A	Kanhan	S.No. 94 part, 115, 116, 117, 118, 119, 120, 126 part	450	80	0.80	3.60	10176
11	Saoner	Rohana	Kanhan	3 part 7 part	350	60	1.00	2.10	7420
12	Saoner	Ramdongri-A	Kanhan	30 part, 31, 32	450	70	0.80	3.15	8904
13	Saoner	Ramdongri-B	Kanhan	143 part, 144	400	100	0.80	4.00	11307

				part					
14	Saoner	Karajghat	Kanhan	S.No. 15, part	470	75	0.60	3.52	7473
15	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	450	80	0.50	3.60	6360
16	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	450	35	0.50	1.57	2782
17	Saoner	Bawangaon- B	Kanhan	203, 204, 208	450	60	0.60	2.70	5724
18	Kuhi	Chichghat	Kanhan	43 part	300	100	0.50	3.00	5300
Total					7935	1194		52.155	135133

Table No.10 List of Excavated Sand Ghats applied for EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Revised Proposed Length Width (m)		Depth	Area (Ha)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 542, 541 and 543 adjacent part	590	65	0.90	3.83	12196
2	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	100	0.90	4.90	15583
3	Mouda	Mahalgaon -A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	60	0.50	2.28	4028
4	Mouda	Mahalgaon -B	Sur	S.No. 373, 372, 387 adjacent part	275	70	0.50	1.92	3401
5	Mouda	Dahadi	Kanhan	107 part, 108, 120, 110, 111	350	30	0.50	1.05	1855
6	Parseo ni	Yesamba	Pench	S.No. 207 part	302	35	0.80	1.05	2987
7	Parseo ni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	90	0.90	3.60	11448
8	Parseo ni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	400	60	1.30	2.40	11024
9	Parseo ni	Singardip	Kanhan	S.No. part 81, 82	460	75	0.90	3.45	10971
10	Parseo ni	Pipla	Pench	S.No. 353 Part, 354 Part	255	95	1.50	2.42	12840
11	Parseo ni	Waghoda	Pench	S.No. 127 part	410	120	1.50	4.92	26077
12	Parseo ni	Saholi-B	Kanhan	S.No. 104 part, 108/2, 109/2, 110/2, 112/3, 113/2, 115/2,	500	50	0.80	2.50	7067

				116/2 Part					
1 3	Parseo ni	Nayakund	Pench	33, 34 Part	360	45	0.60	1.62	3434
1 4	Parseo ni	Pardi K	Kanhan	153, 146 part	450	100	0.80	4.50	12720
1 5	Parseo ni	Saholi-A	Kanhan	S.No. 15 part, 16, 17, 18	400	40	0.60	1.60	3392
1 6	Kampte e	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	100	0.70	4.90	12120
1 7	Kampte e	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	86	1	4.85	17169
1 8	Kampte e	Chikna-A	Kanhan	S.No. 9, 10, 11	500	64	0.90	3.20	10176
1 9	Saoner	Gosewadi - A	Kanhan	S.No. 285, 286, 287 part	480	100	0.50	4.80	8480
2 0	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	75	0.50	3.75	6625
2 1	Saoner	Raiwadi	Kanhan	S.No. 190	300	75	0.50	2.25	3975
2 2	Saoner	Tembhurdo h	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	60	0.50	1.80	3180
					915 7	159 5		67.5 9	20074 8

CHAPTER 4

DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected from Minor mineral are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2023-2024	15583.00	5590.50 (Till July)
2	2022-2023	13913.00	15415.96
3	2021-2022	20978.00	15991.85
4	2020-2021	20700.00	18398.80
5	2019-2020	13800.00	13984.28
6	2018-2019	13500.00	15067.87
7	2017-2018	12000.00	13513.07

Table-4.1: Details of royalty collected

CHAPTER 5
DETAILS OF PRODUCTION OF SAND OR BAJRI OR
MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

Table 5.1: Details of production of minor mineral

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2022-2023	40	314109	57328.20	
2	2021-2022	1	7420	7420	
3	2020-2021	20	174673	172373	
4	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
5	2018-2019	11	79742	79742	
6	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
7	2016-2017	31	213883	213883	

Table 5.2 : Details of Production of Sand

i) Demand Supply Analysis:

In the year 2022-2023 total nearly 314109 brass of sand was proposed from 40 Sand Ghats for auction out of which only 22 sand ghat having 57328.20 brass quantity is excavated. Along with the several other uses of sand, continuous stream of developing infrastructure also triggers the rapid and generous demand of sand. To fulfill this ever-increasing demand and consumption needs to increase the quantity of extraction of sand. So, for the upcoming season proposed quantity of sand 335881 Brass.

Also, it will ensure that all the policies and rules regarding sustainable sand mining will be followed rigorously.

RBI Index based methodology for Demand:

(Source- Sand Mining Framework-2018)

Demand of sand in the District for has been estimated based on the following factor:

Conversion factor- Normative cement to sand mixture ratio of 1:2.5

In this method, per capita cement consumption is used to calculate demand of sand. Once cement consumption of the District is known, the same is multiplied by the factor of 2.5 to derive the sand consumption.

1. Per capita cement consumption of India 195 Kg (Source: BEE's website:<https://beeindia.gov.in/>)
2. Total Population of District* 195 = Total cement Consumption

$$46,53,570 * 195 = 90,74,46,150 \text{ kg}$$

$$= 907446.15 \text{ Metric Tonnes}$$

3. Sand Demand of the District: Total cement Consumption * 2.5 = 907446.15251

$$= \mathbf{22,68,615 \text{ Metric tonnes of sand}}$$

From above calculation it seems that total demand of the district is very high as compared to supply or production of sand in Proposed Sand Ghat Mining 2023-2024, as total sand excavation will be 335881 brass (14,10,700.2 Metric tonnes) from 40 sand spots. This huge gap will be fulfilled by procuring of sand from other district or suppliers.

CHAPTER 6

PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

Deposition is the geological process in which sediments, soil and rocks are added to a landform or land mass. Wind, ice, and water, as well as sediment flowing via gravity, transport previously eroded sediment, which, at the loss of enough kinetic energy in the fluid, is deposited, building up layers of sediment.

Deposition occurs when the forces responsible for sediment transportation are no longer sufficient to overcome the forces of gravity and friction, creating a resistance to motion, this is known as the null-point hypothesis. Deposition can also refer to the buildup of sediment from organically derived matter or chemical processes. For example, chalk is made up partly of the microscopic calcium carbonate skeletons of marine plankton, the deposition of which has induced chemical processes (diagenesis) to deposit further calcium carbonate. Similarly, the formation of coal begins with deposition of organic material, mainly from plants, in anaerobic conditions.

Sediment in rivers gets deposited as the river slows down. Larger, heavier particles like pebbles and sand are deposited first, whilst the lighter silt and clay only settle if the water is almost still. The flow of water is strongest on the outside of river bends, eroding the bank, but is slowest on the inside of the bends, allowing deposition of sand and gravel. When a river “bursts its banks” after heavy rain, flood water spreads out across the floodplain and, because this water hardly moves, finer silt and clay are deposited – often making good farmland.

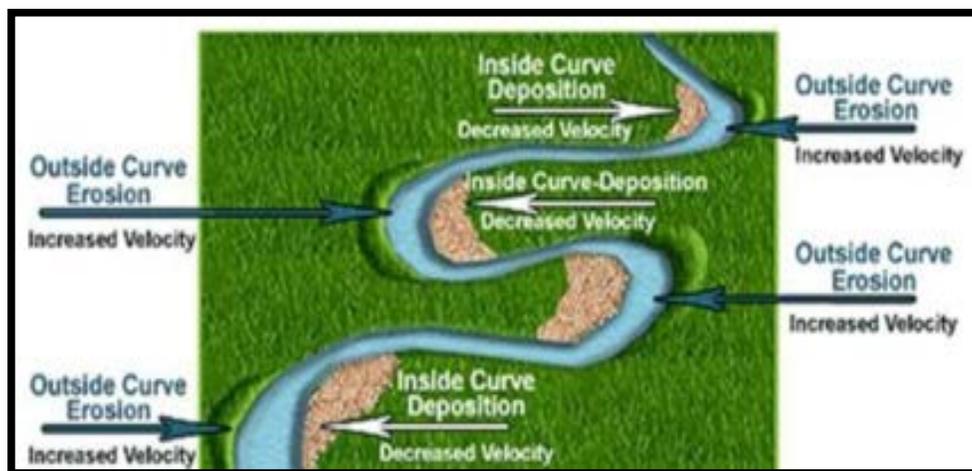


Fig 1: Erosional and Depositional Sites in River (Mending)

The term load is technically defined as the total weight of solid detritus transported in unit time. The transporting capacity of a stream rises very rapidly as the discharge and the velocity increases. Experiments show that with debris of mixed shapes and sizes, the maximum load that can be carried is proportional to something between the third and fourth power of the velocity. But the fragments of a given shape, the largest size that can be moved (not the actual mass of mixed debris) is proportional to the sixth power of the velocity, provided of course that the depth of water is also adequate for the purpose. As the velocity of a river is checked, the bed load s first to come to rest with continued slackening of the flow, the larger ingredients of the suspended load are dropped, followed succevely by finer and finer particles. When the stream begins to flow more vigoursly, the finer materials are the first to move again. A river begins to sort out its load or burden as soon as it receives it. The proportion of fine to coarse amongst the deposited materials tend on average to increase downstream, but there may be interruptions of this tendency because of addition of coarse debris from tributaries or from landslides and steepening of thebanks.

Sediment Transportation

Sediment transport is the movement of organic and inorganic particles by water. In general, greater the flow more sediment that will be conveyed. Water flow can be strong enough to suspend particles in the water column as they move downstream, or simply push them along the bottom of a waterway. Transported sediment may include mineral matter, chemicals and pollutants, and organic material. Another name for sediment transport is sediment load. The total load includes all particles moving as bed load, suspended load, and wash load.

Bed load



Fig 2: Bed load particles travel with water flow by sliding or bouncing along the bottom.

Bed load is the portion of sediment transport that rolls, slides or bounces along the bottom of a waterways. This sediment is not truly suspended, as it sustains intermittent contact with the streambed, and the movement is neither uniform nor continuous. Bed load

occurs when the force of the water flow is strong enough to overcome the weight and cohesion of the sediment. While the particles are pushed along, they typically do not move as fast as the water around them, as the flow rate is not great enough to fully suspend them. Bed load transport can occur during low flows (smaller particles) or at high flows (for larger particles). Approximately 5-20% of total sediment transport is bed load. In situations where the flow rate is strong enough, some of the smaller bed load particles can be pushed up into the water column and become suspended.

Suspended Load

While there is often overlap, the suspended load and suspended sediment are not the same thing. Suspended sediment are any particles found in the water column, whether the water is flowing or not. The suspended load, on the other hand, is the amount of sediment carried downstream within the water column by the water flow. Suspended loads require moving water, as the water flow creates small upward currents (turbulence) that keep the particles above the bed. The size of the particles that can be carried as suspended load is dependent on the flow rate. Larger particles are more likely to fall through the upward currents to the bottom, unless the flow rate increases, increasing the turbulence at the streambed. In addition, suspended sediment will not necessarily remain suspended if the flow rate slows.

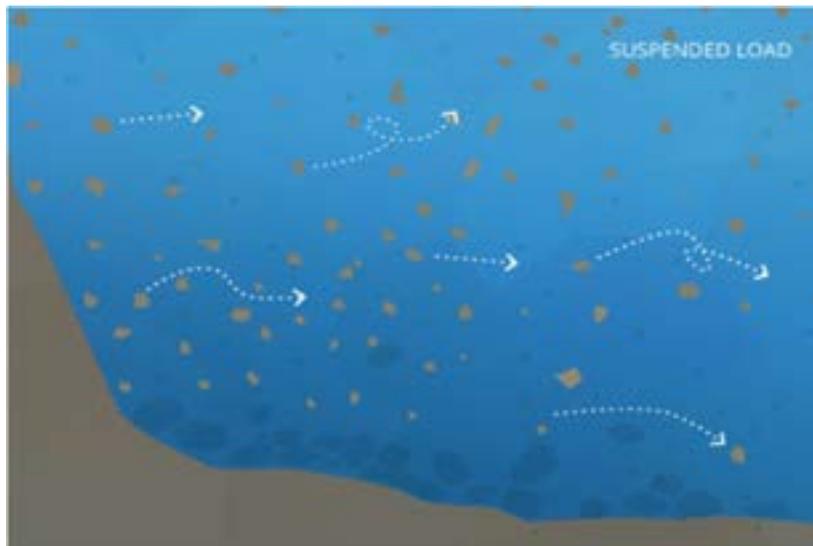


Fig 3: If the water flow is strong enough to pick up sediment particles, they will become part of the suspended load.

Wash Load



Fig 4: The wash load is the portion of sediment that will remain suspended even when there is no water flow.

The wash load is a subset of the suspended load. This load is comprised of the finest suspended sediment (typically less than 0.00195 mm in diameter). The wash load is differentiated from the suspended load because it will not settle to the bottom of a waterway during a low or no flow period. Instead, these particles remain in permanent suspension as they are small enough to bounce off water molecules and stay afloat. However, during flow periods, the wash load and suspended load are indistinguishable. Turbidity in lakes and slow-moving rivers is typically due to the wash load. When the flow rate increases (increasing the suspended load and overall sediment transport), turbidity also increases. While turbidity cannot be used to estimate sediment transport, it can approximate suspended sediment concentrations at a specific location.

What is Sediment Deposition?

Sediment is necessary to the development of aquatic ecosystems through nutrient replenishment and the creation of benthic habitat and spawning areas. These benefits occur due to sediment deposition – when suspended particles settle down to the bottom of a body of water. This settling often occurs when water flow slows down or stops and heavy particles can no longer be supported by the bed turbulence. Sediment deposition can be found anywhere in a water system, from high mountain streams, to rivers, lakes, deltas and floodplains. However, it should be noted that while sediment is important for aquatic habitat growth, it can cause environmental issues if the deposition rates are too high, or too low.

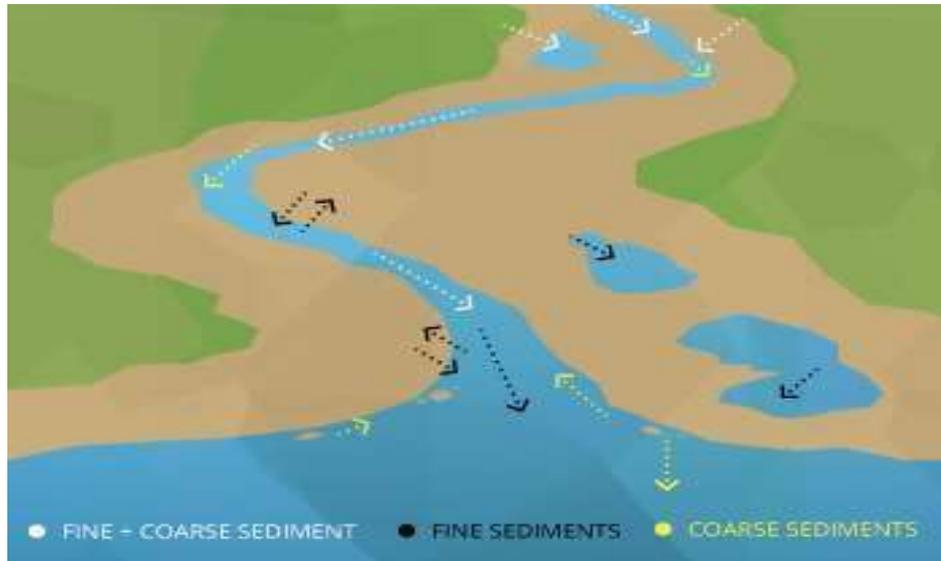


Fig 4: When the flow rate changes, some sediment can settle out of the water, adding to point bars, channel bars and beaches

Sediment transportation and Deposition is depending upon various factors like Slope of the Area, Annual Rainfall, Lithology, and flow intensity of River, Geomorphology, Soil, Geology and Land use.

CHAPTER- 7

GENERAL PROFILE OF THE DISTRICT

7.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India

Table 7.1: Brief Description of Nagpur District

Sr. No.	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

7.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

7.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

7.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

7.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city. An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region.

(Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 8

REPLENISHMENT STUDY OF SAND GHAT

The deposition in a river bed is more pronounced during rainy season although the quantum of deposition varies from stream to stream depending upon numbers of factors such as catchment, lithology, discharge, river profile and geomorphology of the river course where annual deposition is one meters, but it is noticed that during flood season whole of the pit so excavated is completely filled up and as such the excavated area is replenished with new harvest of minerals.

The data below represents thickness of sand in respective Sand Ghats which is allowed to be excavated after the Survey carried out by taluka level technical committee who estimated the depth and area of each Sand Ghat as per Sand Mining Policy existing during the surveys. This data shows the trend of replenishing sand each year in the respective Sand Ghats well as of the River in Nagpur district.

Methodology adopted for the sand replenishment study

1. **Field data collection** followed by cross section survey over the sections of fixed intervals. Along the river showing river bed material (RBM) with present elevations.
2. **Remote sensing**- used for identification of watershed area relevant to the mine lease. The data used from the latest satellite imagery.
3. **Estimation of catchment yield and bed load transport.** The catchment yield has been computed using the Strange"s runoff method (Strange"s Monsoon runoff curves) for the runoff coefficient. The iso-pluvial maps of IMD have been used for estimation of catchment yield and peak flood discharge for the study area by various methods like Dickens, Jarvis, and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport comprises of use of analytical models namely the Einstein, Meyer Peter and Ackers & White's equation for calculation of bed load transport.

Study area:

Proposed leases are located all over the entire district. There are two major Rivers in the District namely Kanhan and Pench.

Kanhan River: Kanhan River: The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh.

Pench River: The Pench River is a left bank tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and Nagpur district of Maharashtra.

Rainfall Data for the study area:

The district falls in assured rainfall zone and receives 80% of the total rainfall during June to October. The average rainfall of the district is 1086.26 mm over rainy days.

Year	Rainfall	Year	Rainfall
1998	1154.3	2011	943.5
1999	1385	2012	1030.5
2000	1384.5	2013	1433.4
2001	1455.8	2014	797.3
2002	870.1	2015	1100.9
2003	1075.8	2016	823.6
2004	699.2	2017	821.5
2005	1333.5	2018	902.6
2006	1002	2019	1129.1
2007	1150.2	2020	1106.9
2008	849.6	2021	1410.2
2009	947.8	2022	1678.3
2010	1263		
Avarage Rainfall in mm			1109.94

Table: Rainfall of the District (Source: maharain.maharashtra.gov.in)

Strange's monsoon rainfall-runoff curves:

The dependability has been calculated on the basis of last 25 years rainfall, as indicated in Table-2 where water availability has been considered for arriving at 50% dependability (Table-3 and 4) respectively.

S. N.	Rainfall (Mm)	S. N.	Rainfall (Mm)
1	1455.8	12	1030.5
2	1433.4	13	1002.3

3	1385.	14	947.8
4	1384.5	15	943.5
5	1333.5	16	902.6
6	1263	17	870.1
7	1154.3	18	849.6
8	1150.2	19	823.6
9	1129.1	20	821.5
10	1100.9	21	797.3
11	1075.8	22	699.2

Table: Rainfall data (arranged in descending order) of each year's rainfall as mentioned.

	Rainfall dependability percentage
	p= 50%
m=	$N * P/100$
	N=22, p=50
m=	11

Table: Calculation of order number (m)

Where, m-Order number

N- The available rainfall data of the past N years is first of all arranged in the descending order of magnitude

p=Dependability percentage

The rainfall value tabulated above in Table, the Order No. 11 has the values of 1075.8 mm

So, $P_{50\%} = 107.58$ cm

Average value of Strange's Run off percentage is calculated from Strange's monsoon rainfall runoff curves (Figure-7.1) considering the catchment area as good and the Runoff % for the area is

Runoff % at 50% dependability of rainfall = 40%

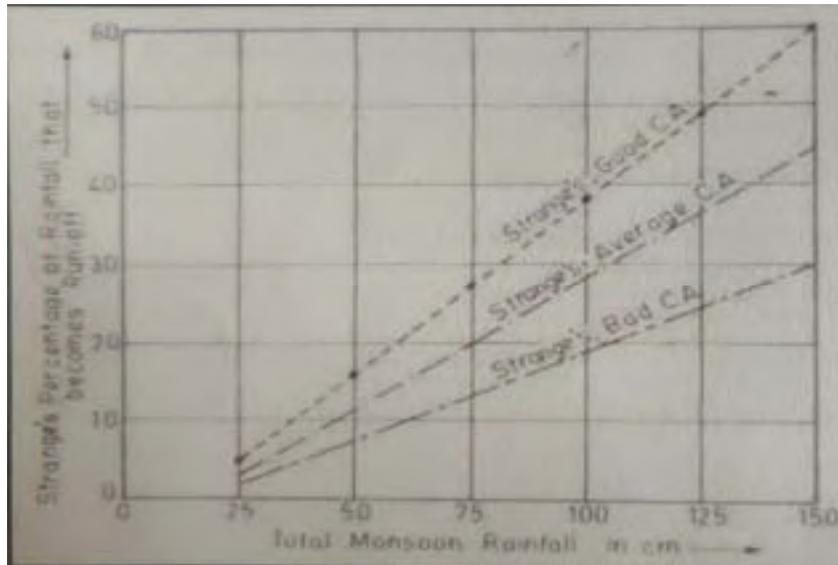


Figure- Strange's monsoon rainfall- runoff curves

Sedimentation, in the geological sciences, is a process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Broadly defined it also includes deposits from glacial ice and those materials collected under the impetus of gravity alone, as in talus deposits, or accumulations of rock debris at the base of cliffs.

Sedimentation is generally considered by geologists in terms of the textures, structures, and fossil content of the deposits lay down in different geographic and geomorphic environments.

There are nearly 40 locations of Proposed sand ghats over Kanhan and PENCH and Kolar river where sand deposition are allowed from replenishment and other safety point of view in the district.

The factor which affects the "Computation of Sediment" is:

- a) Geomorphology & Drainage Pattern : The following geomorphic units plays important role :
- Structural Plain
 - Structural Hill
 - Structural Ridge
 - Denudation Ridge & Valley
 - Plain & Plateau of Gangetic plain
 - Highly Dissected pediment

- Un dissected pediment
- b) Distribution of Basin Area River wise (Area in Sq. Km or Sq. Miles)
- c) Drainage System/Pattern of the area (Drainage Density =Km/Sq. Km of River)
- d) Rainfall & Climate : Year wise Rainfall data for previous 10 years of Basin/River

There are many sediment transport equations which are suitable for use in the prediction of the replenishment rate of rivers/ watershed. Some of the famous sediment transport equations are:-

1. Dendy – Bolton Equation

2. Yang Equations

3. Engelund-Hansen Equation

4. Modified Universal Soil Loss Equation (MUSLE) developed by Williams and Berndt (1977) – it includes only one type of sediment yield (sheet and rill Erosion). Dendy - Bolton formula is often used to calculate the sedimentation yield. The formula uses catchment area and mean annual runoff as key determinants to give a yield value. It does not differentiate in basin wide smaller streams and their characteristics. Dendy and Bolton equation calculates all types of sediment yield i.e. sheet and rill Erosion, gully Erosion, channel Bed and bank erosion and mass movement etc.

Sand is an essential minor mineral used extensively across the country as a useful construction constituent and variety of other uses in sports, agriculture, glass making (a form of sand with high silica content) etc. It is common knowledge that minerals are non-renewable but this form of mineral (sand) naturally gets replenished from time to time in a given river system and is very much interrelated to the hydrological cycle in a river basin. The Rivers originating from the Himalayas bring with them lots of aggregate materials whereas as they move downstream, only finer elements / minerals like sand are found in abundance.

Rivers under Study

Kanhan River:-

The Kanhan River is an important right bank tributary of the Wainganga River draining a large area lying south of Satpura range in central India. Along its 275 km run through the Indian States of Maharashtra & Madhya Pradesh, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur.

Kanhan was surprisingly not mentioned in the 2001 list of notified rivers in Maharashtra which has led to unrestricted exploitation in the form of sand mining along the river bed. This failure to recognise its presence has been viewed as a deliberate attempt at unregulated economic gains. The catchment area has also seen large scale coal mining in recent years. Efforts are currently underway to notify the river to prevent further environmental damage. This has been undermined by plans for construction of a barrage. The river was perennial until a few decades ago, but now goes dry by February every year.

The Kanhan rises on the slopes of the hills at the southern edge of the Satpura range to the north of Damua and west of Junnardeo, a town in Madhya Pradesh, India. The source lacks clear documentation and is not celebrated or considered holy, unlike most other rivers of a similar size.

The Kanhan is Wainganga's longest tributary, at 275 km. It rises in the southern spurs of the Satpura Range in the north-western region of Chhindwara District. Flowing south from its origin, Damua is the first town it encounters. Here it intersects the town and allows for its flow to be controlled by means of a dam. It then runs along a south & southeastern direction, meandering through the countryside of Chhindwara District where it has been productively harnessed for growing Tur dal and cotton. The river comes to lie about 5 km to the south of Deogarh fort where it humbly receives an insignificant tributary. Upon reaching the town of Ramakona it is crossed by a rail bridge as well as another road bridge which supports NH-26 B. Nearly at the end of its course in Madhya Pradesh at Razadi Bargaon, it is joined by Jam River, and for a short distance provides a natural boundary with adjoining state Maharashtra.

Within Maharashtra the river is at its widest at Kamptee where it receives the Pench River - a left bank tributary and its largest one. Another tributary connecting it at its right bank is Kolar River - the spill off from Kolar Dam. The river now comes to be at the northeast of Nagpur from which it receives the metropolitan city's effluent waste by way of the Nag

River. A little further from Kamptee, it flows along the town Kanhan - its etymology derived from the river. Situated alongside the town is a large coal mine, one of the many coal mines situated along its river basin. From here the river flows south-east and ends its course by joining the Wainganga at the village of Ambora in Nagpur District.

Along its 275 km run through the Indian States of Madhya Pradesh & Maharashtra, it receives its largest tributary - Pench River, a major water source for the metropolis of Nagpur. The catchment area of the sub-catchment is about 7968 km².



Fig: Kanhan River Path

Pench River:

The **Pench River** is an Indian tributary of the Kanhan River. It originates in the Chhindwara district of Madhya Pradesh and flows across Pench National Park, which is a reserve for the Tiger Project of India.

The two big dams of the Pench River supply water to the city of Nagpur and to the big thermal power plant located there.

The catchment area of the sub-catchment is about 4847 km². The climate of the sub-catchment area is usually pleasant most of the year, except in summer. The sub-catchment lies in the medium rainfall zone. Most of the rainfall is received during the South-West monsoon from June to October.



Fig: Pench River Stream order

Dendy Bolton Equation for Estimation of Sediment Yield

Dendy Bolton formula is often used to calculate the sedimentation yield. But use of these equations to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation's development. However, they may provide a quick, rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Computed sediment yields normally would be low for highly erosive areas and high for well stabilized drainage basins with high plant density because the equations are derived from average values.

The equations express the general relationships between sediment yield, runoff, and drainage area. Many variables influence sediment yield from a drainage basin. They include climate, drainage area, soils, geology, topography, vegetation and land use. The effect of any of these variables may vary greatly from one geographic location to another, and the relative importance of controlling factors often varies within a given land resource area. Studies revealed that sediment yield per unit area generally decreases as drainage area increases.

As drainage area increases, average land slopes usually decrease; and there is less probability of an intense rainstorm over the entire basin. Both phenomena tend to decrease sediment yield per unit area. In arid regions, sparse precipitation and low run-off are the limiting factors. As precipitation increases, density of vegetation also increases, resulting in less erosion. In areas with adequate and evenly distributed precipitation, vegetation thus becomes the limiting factor.

The accuracy of the sedimentation surveys varied, ranging from reconnaissance type measurements of sediment deposits to detailed surveys consisting of closely spaced cross-sections or contours. Runoff data are translated to inches per year per unit area and sediment deposition data to tons per year per square mile of net drainage area. Net drainage area is defined as the sediment-contributing area and normally excluded areas above upstream reservoirs or other structures that were effective sediment traps. Actual sediment yields undoubtedly were slightly higher because most reservoirs do not trap inflowing sediment.

As per **Dendy & Bolton study**, "Sediment Yield" can be related to

- i. Catchment Area and
- ii. Mean Annual Run-off

Sediment Yield versus Drainage Area:

Dendy and Bolton studied sedimentation data from about 1500 reservoirs, ponds, and sediment detention basins. In developing their formulas, they used data from about 800 of these reservoirs with drainage areas greater than or equal to 1 mi². The smaller watersheds-those of drainage area less than 1 mi², were excluded because of their large variability of sediments yield, reflecting the diverse effects of soils, local terrain, vegetation, land use, and agricultural practices.

For drainage areas between 1 and 30,000 mi², Dendy and Bolton found that the annual sediment Yield per unit area was inversely related to the 0.16 power of the drainage area:

In which S= sediment yield in tons per square mile per year;

SR = Reference sediment yield

Corresponding to a 1mi² drainage area, equal to 1645 tons per year;

A = drainage area in square miles; and

AR = reference drainage area (1 mi²)

Sediments Yield versus Mean Annual Runoff

Dendy and Bolton studied sedimentation data from 505 reservoirs having mean annual runoff data. Sediment yield increased sharply to about 1,860 tons per square mile per year as run-off increased from 0 to about 2 inches. As runoff increased from 2 to about 50 inches, sediment yield decreased exponentially. Because sediment yield must approach zero as runoff approaches zero, a curve through the plotted points must begin at the origin. The abrupt change in slope of a curve through the data points at Q equals 2 inches precluded the development of a continuous function that would adequately define this relationship. Thus, there are two equations derived for when Q was less than 2 inches and when Q was greater than 2 inches.

This led to the following equations.

For Q <2in.:

For Q >2in.:

In which QR = reference mean annual runoff QR = 2 in.

Combined Effect of Drainage area and Run off on Sediment Yield

Dendy- Bolton determined the combined influence of runoff and drainage area on sediment yield to compute the sediment yield. They developed two equations i.e. for run off less than 2 inch and for run off more than 2 inch, which are given below:-

For run off less than 2 inches:

$$(Q < 2 \text{ in}) S = 1280 * (Q)^{0.46} * [1.43 - 0.26 \text{ Log}(A)]$$

For run off more than 2 inches:

$$(Q > 2 \text{ in}): S = 1965 * (e^{-0.055Q}) * [1.43 - 0.26 \text{ Log}(A)]$$

Where: S = Sediment yield (tons/sq miles/yr)

Q = Mean Annual runoff (inches)

A = Net drainage area in sq mile

Calculation of Sediment Yield

- Average Annual Rainfall of Nagpur district (1998 to 2022) :

1109.94 mm (43.69 inch)

- Catchment area of Kanhan River:

7968 km² (i.e. 3076.44 mi²)

- Catchment area of Pench river :

4847 km². (i.e. 1871.42 mi²).

With above inputs, the calculation of the sediment yield by the Dendy -Bolton formula is illustrated below:

Sr. No.	Sediments Yield	
1	Here: Q (In) = Mean Annual run off = 1109.94 mm (43.698 in) (= Run-off Coefficient * Average Annual Rainfall) = $0.27 * 43.96 = 11.86$ inches A (mi ²) = Catchment area Kanhan River = 7968 km ² (i.e., 3076.44 mi ²) Pench River = 4847 km ² . (i.e., 1871.42 mi ²).	For $Q < 2$ $S = 1280 Q^{0.46} [1.43 - 0.26 \log(A)]$ For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(A)]$
2	Sediment Yield for Kanhan River = Sediments Yield $S =$ Layer/Year For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(7968)]$ $S = 259456.03$ M. tons/yr or 32.56 M. tons/km ² /yr	259456.03 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves
3	Sediment Yield for Pench River = Sediments Yield $S =$ Layer/Year For $Q > 2$ $S = 1965 e^{-0.055Q} [1.43 - 0.26 \log(4847)]$ $S = 174765.43$ M. tons/yr or 36.06 M. tons/km ² /yr	174765.43 M. tons/yr Sediments will be regenerated every year increasing the mineable reserves

(Source: sediment yield by the Dendy-Bolton formula)

Conclusion:

From the above calculations, annual replenishment rate for Kanhan river is estimated at **259456.03 M. tons/yr** and that for Pench River is estimated at **174765.43 M. tons/yr** for the year **2023-2024**.

Dendy – Boltan formula also says that actual sediments yield from individual drainage basins may vary 10-fold or even 100-fold from computed yields. The equations express the general relationships between sediment yield runoff and drainage area. They may provide a quick rough approximation of mean sediment yields on a regional basis for preliminary watershed planning. Because Dendy & Bolton have derived the equation from

average values computed sediment yields normally would be low for highly erosive area and high for well stabilized drainage basins with high plant density.

Factors which have direct bearing on sediments yield & limitations of Dendy -Bolton equation: Sediment yield of a sediment basin has direct impact of local terrain, climate, vegetation, soils, agricultural practices & land use pattern of catchment area of the sediment basin aforesaid factors varies from basin to basin therefore, Dendy - Bolton has categorically stated that use of the equation to predict sediment yield for a specific location would be unwise because of the wide variability caused by local factors not considered in the equation development. **Actual sediment yield form individual drainage basins may vary 10-fold or even 100-fold from computed yields.**

References:

1. Ponce, V. M., 1989. Engineering Hydrology, Principles and Practices, Prentice Hall, pages 547-548.
2. Online sediment yield by the Dendy-Bolton formula

		2018/19		2019/20		2020/21		2021/2022		2022/23	
Sl No	Name of Sand Ghat	Excavated Sand Thickness	Available Sand Thickness	In this year 2019/20 Sand ghats were not auctioned because of PIL 11/208		Excavated Sand Thickness	Available Sand Thickness	Excavated Sand Thickness	Available Sand Thickness	Excavated Sand Thickness	Available Sand Thickness
1	Mouda (Chikna Ghat)	0.5	2.5			1.5	3.0	0.60	2.0	0.90	2.5
2	Kirnapur	1.0	3.0			0.8	2.0	0.80	2.0	0.80	2.5
3	Mohkhedi	0.90	3.0			1	3.0	0.70	2.0	0.80	2.5
4	Mahalgaon-A	0.50	2.50			#	#	#	#	0.50	2
5	Mahalgaon-B	0.50	2.50			#	#	#	#	0.50	2
6	Sirsoli	0.40	2			#	#	#	#	0.50	2
7	Vadna	#	#			#	#	#	#	0.60	2
8	Dahadi	#	#			#	#	#	#	0.50	1.5
9	Garanda	#	#			1.5	3.0	0.70	2.50	0.80	2.5
10	Yesamba	0.80	2.0			2	3.0	0.90	2.50	0.90	2.5
11	Juni Kamptee (Gadeghat)	#	#			#	#	0.80	2.50	0.80	2.5
12	Ghat Rohana	0.40	2.0			0.8	2.0	0.40	2.0	0.70	2.5
13	Palora	0.40	2.0			0.5	2.0	0.40	2.0	1.0	2.5
14	Singardip	#	#			0.5	2.0	0.30	2.0	1.0	2.5
15	Pipla	0.50	2.0			0.5	2.0	0.40	2.0	0.90	2.5
16	Waghoda	0.50	2.0			1	3.0	0.90	3.0	1.0	3
17	Saholi-B	#	#			#	#	1.0	3.0	0.60	2.5

18	Nayakund	0.40	2.0			#	#	#	#	0.60	2.5
19	Pardi K	0.50	2.0			0.5	2.0	0.80	2.0	0.90	2
20	Saholi A	#	#			#	#	0.80	2.50	0.50	2
21	Bina	0.40	2.0			0.5	2.0	#	#	1.0	2.5
22	Ungaon	0.40	2.0			0.5	2.0	0.30	2.0	1.0	2.0
23	Neri	1.0	3.0			#	#	1.50	3.0	1.0	3.0
24	Chikna-A	1.0	3.0			1	3.0	0.50	2.0	0.80	2.0
25	Chikna-B	#	#			#	#	#	#	1.20	2.0
26	Bhamewada	0.80	2.50			#	#	#	#	0.50	2.0
27	Gosewadi -A	0.60	2.0			#	#	0.50	2.0	0.80	2.0
28	Wakodi	0.40	2.0			0.8	2.0	0.40	2.0	0.80	2.0
29	Isapur-A	0.40	2.0			0.6	2.0	0.45	2.0	0.80	2.0
30	Rohana	0.75	2.50			0.6	2.0	0.50	2.0	1.0	2.0
31	Ramdongri-A	0.90	2.50			#	#	#	#	0.80	2.5
32	Ramdongri-B	0.50	2.0			0.3	1.50	0.30	1.50	0.80	1.5
33	Karajghat	#	#			0.8	2.0	0.40	1.50	0.60	1.5
34	Khapapeth	0.60	2.0			0.6	2.0	0.60	2.0	0.60	2.0
35	Kocchi	#	#			#	#	#	#	0.50	2.0
36	Raiwadi	0.60	2.0			0.4	1.50	0.40	1.50	0.80	2.5
37	Tembhurdoh	0.90	2.50			0.8	2.0	#	#	0.80	2.0
38	Kawadas	#	#			#	#	#	#	0.50	1.5
39	Bawangaon-B	#	#			#	#	#	#	0.60	2.0
40	Chichghat	0.80	2.50			0.80	2.50	0.50	2.0	0.50	2.0

Note- From the above table it is observed that the replenishment capacity of the river in the district is 90-95 % annually.

CHAPTER 9
LAND UTILIZATION PATTERN IN THE DISTRICT:
FOREST, AGRICULTURE, HORTICULTURE, MINING

Forest:

During the year 2011-2012 an estimated 2523 Sq. KMs. of area was under forest which is 25.51% of the total area. Most of the land under forest can be found on the banks of Pench River, at the foot hills of Satpuda in Ramtek tahsil forest has been divided in 3 categories namely reserved, protected and unclassified. Area under these categories is given below.

Sr.No	Category	Area in Sq.Kms.
1	Reserved Forest	1387
2	Protected Forest	832
3	Unclassified Forest	304
	Total	2523

Table –A: Forest Category in the District

Sr.No	Forest Produce	Production	Value for Sale in '000'
A) Major forest products:			
1	Timber wood (m3)	1.613	17820
2	Fuel wood (m3)	6.969	6774
B) Minor forest products:			
3	Bamboo (Nos.)	13702	127.85
4	Tendu Leave (S.B.)	38408	31405.74
5	Gum (Quintal)	12	65.70
6	Others	10	14.40

Table B: The Major and Minor forest products of the district

Agriculture:

Nagpur district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The district has total geographical area of 9892 Sq.Km. Out of these 644 th.hq. is cultivable area. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. The area and production of principal crops are given in Table –C

Sr. No.	Crop	Area in '00'	Production in	Productivity in kg/ha.
		ha.	'00'tonnes	
		2009-2010	2011-2012	2008-2009
1	Paddy	646	1466	1419
2	Soyabean	2779	1411	823
3	Wheat	636	1073	1191
4	Ground Nut	43	23	670
5	Jowar	259	60	305
6	Cotton	7454	213	250
7	Tur	294	466	532
8	Gram	394	611	734

Horticulture:

As a cash crop, concept of growing different variety flowers in the district is on constant increase. Indication of society towards flower decoration on different occasion has enhanced. Total area under floriculture was 22742 hectares and the total production of Rose, Shewanti, Zendu, Nishigandha, Gladioli, Gaillardia, White Lilly, Goldenrod, Dezi, Mogra and Ostre are 1365.53 M.T. Camomile, Rose, Mogra, Lilly and Marigold can be developed in Nagpur dist. for the industrial use. It may used to manufacture perfumes, Rose water and Gulkand. The important cut flowers like Rose, Lilly, Chrysanthemum, Gladidus, Carnation, Tuberose and Orchids can be developed in Nagpur for Exports.

Land Use pattern:

The total area of the district is 986 thousand hectares of which forest cover 159 thousand hectares, 121 thousands hectares are not used for the Agriculture and area under cultivation is 644 thousands Hectares. The land utilization pattern of the district is given in Table -D

Sr.No	Classification	Area in '000' hectare
1	Total geographical area	986
2	Forest land	159
3	Barren land	128
4	Land to non-agriculture use	121
5	Cultivable area	644

Table D: Land Utilisation**Mineral Resources:**

Nagpur district is moderately rich in minerals. Deposits of coal, manganese Ore, Dolomite, Limestone, Iron Ore, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan (Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Sr.No	Mineral	Production (MT)	Value (Rs. Lakh)	No of Mines
1	Manganese Ore	644590	28169.7616	37
2	Coal	16638820	17010814.54	15
3	Dolomite	43207	60.66	7
6	Sand (Stowing)	34562.814	518.422	04

Table -E: Mineral production in Nagpur district 2006-2007

Sr.No	Mineral	Deposits in Million Tonnes
1	Coal	1183.395
2	Lime stones	31.000
3	Manganese ore	9.389
4	Dolomite	28.740
5	Clay	3.555
6	Copper ore	1.300
7	Tungsten ore	19.980
8	Zinc ore	8.270
9	Chromites	0.056
10	Granite (Million Cubic mt.)	4.880

Table E: Mineral deposits in Nagpur

Fisheries:

Out of the total geographical area of the district an area of 15037 hectares can be used for fish farming apart from the 650 Kms long area under river water. During the 2010-2011 the fish production in the district was around 11200M.T. valued at approximately over Rs. 5600 lacs. Maharashtra Govt. has undertaken various developmental schemes/project for fish farming.

Sericulture:

Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world. India has also the distribution of producing all the three commercially known varieties of silk viz. Mulberry, Tassar, Iri and Murga. Maharashtra state stands third in the country in Mulberry and Tassar cultivation according to latest estimates. The present area under Sericulture in Nagpur district is about 141.00 acres which is mostly concentrated in Nagpur, Kalmeshwar, Katol, Narkhed and Ramtek of Nagpur district.

CHAPTER 10

PHYSIOGRAPHY OF THE DISTRICT

Nagpur district is situated in the eastern part of Maharashtra and renowned for its citrus orchards and manganese deposited and manganese deposits. Nagpur District lies in the southern fringes of Satpura range. It is hilly in the northeast and west where the elevation varies from 350m to 583m msl. The Southern and eastern parts have vast pediplain with gentle slopes towards east. The average elevation of the pediplain surface is about 300m msl. Pench and Kanhan are the main tributaries of Wainganga River flowing from northwest to southeast in the northern part.

The western and south western parts of the district are drained by Wardha and its tributaries like Bor, Wenna Jam and Kar rivers. The Wainganga and its tributaries viz Kanhan, Kolar, Pench, Sur and Nag drain the eastern and east central parts of the district. The area contained within the district is underlain by the Archaean rocks to the north and east and younger sedimentaries like Lametas and Gondwanas, being embedded by flows (Deccan basalt) to the west and south. The district is well known for the minerals of economic importance like coal, manganese ore, dolomites, white clay, copper, tungsten ore etc. The principal soil of the district is known as morand' (light deep, black and grey in colour) covers about two-third of the cultivated area. Kali (medium- deep, black) is found in small pockets of Wardha and other river valleys. Khardi (shallow, grayish) is sandy soil. found in the eastern part and bardi (red gravelly, with boulders) is found in the trap hill region of the western part of the district.

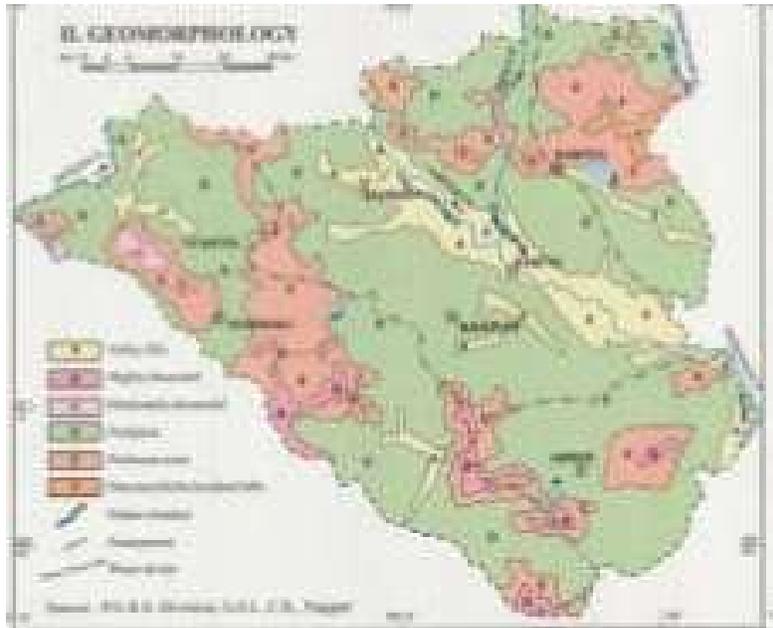


Fig: Image Showing Physiography of the district

CHAPTER 11

RAINFALL OF THE DISTRICT & CLIMATIC CONDITION

Climate and Rainfal: The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, Le. June to September The mean minimum temperature is 12°C and mean maximum temperature is more than 45°C The normal annual rainfall (1901-1992) over the district ranges from about 1000 mm to 1200 mm. It is the minimum in the Narkhed (869.9mm) and increases in the eastern direction and reaches a maximum around Umred (1164.9 mm) Rainfall data from 14 rain gauge stations for the periods 2010-2022 are given in Chapter 8. The average annual rainfall for the last 10 years ranges from 479.2 in Hingni to 1856.3 in Umrer. It is also observed that all stations hang recoded average annual rainfall within the range of district normal annual rainfall except at Hingni, Katol, Narkhed and Kamleshwar where it is less than normal.(Source: www.agri.mah.nic.in)

CHAPTER 12

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganese rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessartite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite*, *Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiagneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks:

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southerly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Supergroup:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluvial and lacustrine origin were deposited in troughs, generally produced

by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki-Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide). Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south-south-west and their estimated thickness is about 1,500

km. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggera-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula* and *Physa*.

Deccan Basalt (Traps) and Intertrappeans:

The western part of the district is covered by layers or doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are

generally dark grey in colour having a specific gravity of 2.9.

Geological succession of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows (Traps)with Associated Intertrappean sediments	Lower Eocene to pper cretaceous
Lametabeds	Cretaceous.
Gondwana group: Kamthi stage Barakar stage Talchir stage	Permian Corboniferous
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvialsoil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

1) Disrtict wise details of rivers and others Stream:

Sr. No.	Name of river	Area drained in sq. km	% area drained in district
1	Kanhan	1488	46 %
2	Pench	557	17 %
3	Wardha	223	07 %
4	Kolar	996	30 %

2) Saight features of important rivers and streams

Sr. No	Name of the river or stream	Total length in the district in km	Place of origin	Altitude at origin
1	Kanhan	113	Damua, Satpura range, MP	-
2	Pench	56	Junnarde, Chindawara District, MP	1048m
3	Wardha	60	Khairwani near Multai, Betul. District, MP	785m
4	Kolar	54	N-E corner of Katol Taluka, MH	600m

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Kanhan River (29)	6.450	1009	452300.00	271380.00
Pench River (2)	0.845	120	43300.00	25980.00
Kolar River (1)	0.450	60	27000.00	16200.00
Sur River (1)	0.250	45	12500.00	7500.00

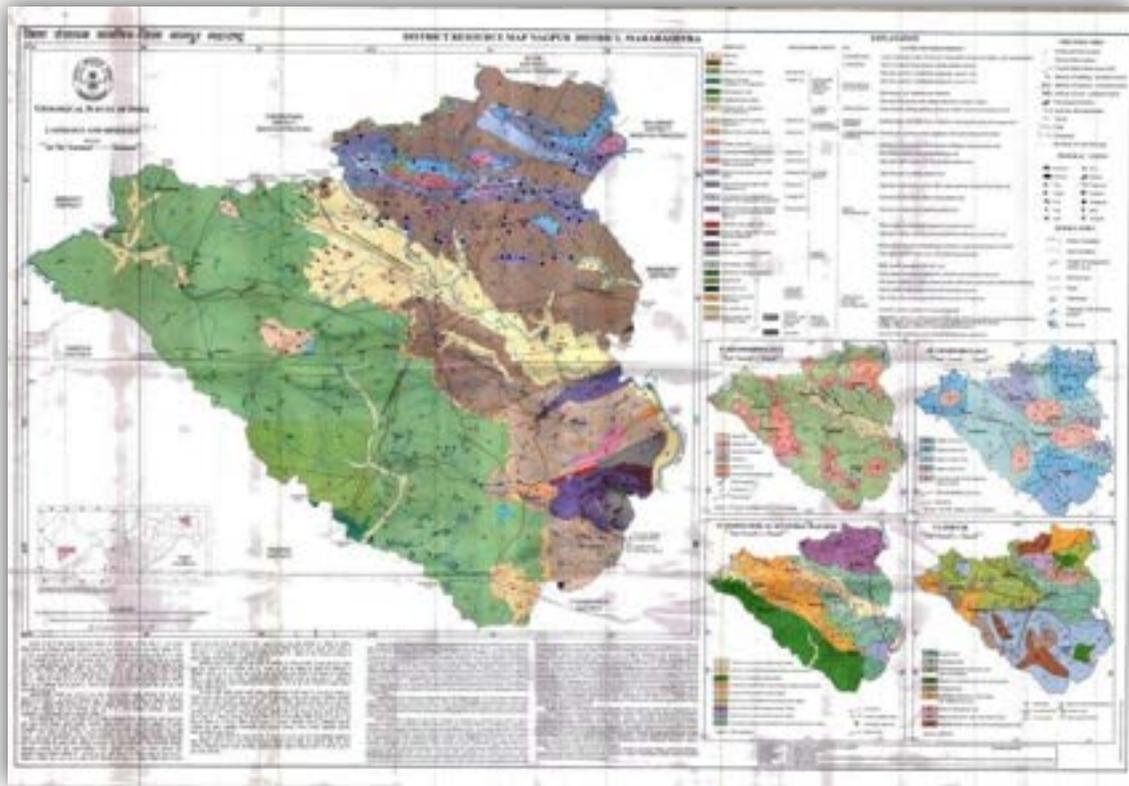
Mineral potential

Sr. No.	Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
2018	7063875	3803625	205992	11073492

Methodology adopted for calculation of mineral potential

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

The District Survey Report shall be prepared in the district and its draft shall be placed in the public domain by keeping its copy in Collectorate and posting it on the district's website for twenty-one days. The comments received shall be considered and if found correct, shall be incorporated in the final Report to be finalised within six months by the District Environment Impact Assessment Authority.



.Fig: Geological map of Nagpur District

**RECOMMENDATION OF ENFORCEMENT & MONITORING GUIDELINES FOR
SAND MINING BY MOEF&CC-2020**

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. (Source: EM guidelines, MoEF&CC, New Delhi 2020).

The need for replenishment study for river bed sand is also required in order to "nullify the adverse impacts arising due to excessive sand extraction". No riverbed mining will be allowed during the monsoon. In cases where rivers become district boundaries or state boundaries, the districts or states sharing the boundary shall constitute the combined task force for monitoring of mined materials. Mining activity and participate in the preparation of District Survey Reports (DSR) by providing appropriate inputs. The guidelines say the

detailed survey needs to be carried out for quantification of minerals and the demand and supply of the riverbed material through market survey, including the future demand for the next five years.

OBJECTIVE OF GUIDELINES

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand & Gravel Mining in the Country since its identification to its final end-use by the consumers and the general public.
3. Use of IT-enabled services & latest technologies for surveillance
4. Reduction in demand & supply gaps.
5. Setting up the procedure for replenishment study of Sand
6. Post Environmental Clearance Monitoring.
7. Procedure for Environmental Audit
8. To control the instance of illegal mining.

Salient Features of the Guidelines

District Survey Report:

The guidelines provide the procedure to be followed for identifying areas where mining can be allowed or prohibited. It provides guidelines for preparing a district survey report, which includes: Preparing a report before granting a mining lease, and Defining mining and no mining zones based on certain environmental and social factors.

Preventing Illegal Mining:

The guidelines suggest that sites can be monitored remotely. Drones can also be used for quantity estimation and land use monitoring. Further, the guidelines propose night surveillance of mining activity through night-vision drones. The environmental damages incurred due to illegal mining will be assessed by a committee constituted by the District Administration;

Environmental Clearance:

Environmental Clearance for mining is given by regulatory after considering the potential environmental impact. However, it has been observed that often the Letter of Intent (LoI) is granted for a location which is not feasible for environment-friendly mining. The guidelines provide that LoIs should be granted for those locations which have the least possibility of an impact on the environment nearby habitation.

The guidelines also encourage for online sale and purchase of sand and other riverbed materialsto make the process transparent.

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 andproximity 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.

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/c-auction/grant of the mining lease/Letter of Intent (Lol) by Mining department or department dealing the mining activity in respective states.
- b) The first step is to develop t entory 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.
- 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.

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 part of the river, width needs to be identified on a map. Out of the Nath part area, where there is a deposition aggradation of the material needs to be identified. The remaining 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 NABI. Accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

f) The permanent boundary pillars need to be erected after identification of an area of aggradation and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.

g) Identifying the mining and no mining zone shall follow with defining the area of sensitivity by ascertaining the distance of the mining area from the protected area, forest, bridges, important structures, habitation etc, and based on the sensitivity the area needs to be defined in sensitive and non-sensitive area.

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 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.

ANNEXURES

ANNEXURE NO- 1

Compliance of Enforcement and Monitoring Guidelines for Sand Mining-2020

Details of Sand/M-Sand Sources

a) Rivers

River Name/M- Sand	Total Stretch of River(in Km)	Type of River (Perennial or Non- Perennial)
Kanhan River	12.84	Non- Perennial
Pench River	2.32	Non- Perennial
Kolar River	0.45	Non- Perennial
Sur River	0.90	Non- Perennial

b) De-siltation (Lakes/Ponds/Dams etc.)

Name of Reservoir/Dams	Maintain/Cpntrolled By State Govt./PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil						

c) Patta Lands/Khatedari Land

Owner	Sy. No.	Area (ha)	District	Tehsil	Village	Agriculture Land (Yes/No)
Nil						

d) M sand

Plant Name	Owner	District	Tehsil	Village	Geo-Location	Quantity Tonnes/Annum
Nil						

ANNEXURE NO- II

List of Potential Non Excavated Mining Leases (Proposed Sand Ghat) 2023-2024

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest (In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri /RBM etc.)	Existing/Proposed)
Mauda									
1	Kanhan	Kirnapur	4.95	27	Approx 500 m	No	14021	Sand	Proposed
2	Sur	Sirsoli	1.27	15	Approx 500 m	No	1987	Sand	Proposed
3	Kanhan	Wadna	3.0	18	Approx 500 m	No	5088	Sand	Proposed
Parseoni									
4	Pench	Garanda	1.55	11.38	Approx 500 m	No	4388	Sand	Proposed
5	Pench	Ghat Rohana	2.78	15.87	Approx 500 m	No	7420	Sand	Proposed
Kamptee									
6	Kanhan	Ungaon	4.81	21.77	Approx 500 m	No	16996	Sand	Proposed
7	Kanhan	Chikna-B	2	25	Approx 500 m	No	8480	Sand	Proposed
8	Kanhan	Bhamewada	1.8	27.69	Approx 500 m	No	3180	Sand	Proposed
Saoner									
9	Kanhan	Wakodi	3.5	5.47	Approx 500 m	No	9894	Sand	Proposed
10	Kanhan	Isapur-A	3.6	8.5	Approx 500 m	No	10176	Sand	Proposed
11	Kanhan	Rohana	2.1	10	Approx 500 m	No	7420	Sand	Proposed
12	Kanhan	Ramdongri-A	3.15	7.05	Approx 500 m	No	8904	Sand	Proposed
13	Kanhan	Ramdongri-B	4	7	Approx 500 m	No	11307	Sand	Proposed
14	Kanhan	Karajghat	3.52	4.51	Approx 500 m	No	7473	Sand	Proposed
15	Kanhan	Kocchi	3.6	5	Approx 500 m	No	6360	Sand	Proposed
16	Kolar	Kawadas	1.57	15.69	Approx 500 m	No	2782	Sand	Proposed
17	Kanhan	Bawangaon-B	2.7	15.5	Approx 500 m	No	5724	Sand	Proposed
Kuhi									
18	Kanhan	Chichghat	3	18.65	Approx 500m	No	5300	Sand	Proposed

List of Potential Excavated Mining Leases (Proposed Sand Ghat) 2023-2024

Sr. No	River	Lease Details	Area (in HA)	Distance In Km from PA/BR/WC	Distance from Forest (In KM)	Mining Leases within 500m (if yes cluster area)	Total excavation in brass/annum considering digging max as per survey	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing/Proposed
Mauda									
1	Kanhan	Mouda (Chikna Ghat)	3.83	23	Approx 500 m	No	12196	Sand	Proposed
2	Kanhan	Mohkhedi	4.90	34	Approx 500 m	No	15583	Sand	Proposed
3	Sur	Mahalgaon -A	2.28	16.4	Approx 500 m	No	3816	Sand	Proposed
4	Sur	Mahalgaon -B	1.92	17	Approx 500 m	No	3401	Sand	Proposed
5	Kanhan	Dahadi	1.05	18	Approx 500 m	No	1855	Sand	Proposed
Parseoni									
10	Pench	Yesamba	1.05	12.05	Approx 500 m	No	2987	Sand	Proposed
11	Kanhan	Juni Kamptee (Gadeghat)	3.60	20	Approx 500 m	No	11448	Sand	Proposed
13	Pench	Palora	2.40	5.65	Approx 500 m	No	11024	Sand	Proposed
14	Kanhan	Singardip	3.45	22.06	Approx 500 m	No	10971	Sand	Proposed
15	Pench	Pipla	2.42	9.42	Approx 500 m	No	12840	Sand	Proposed
16	Pench	Waghoda	4.92	12.18	Approx 500 m	No	26077	Sand	Proposed
17	Kanhan	Saholi-B	2.50	15.23	Approx 500 m	No	7067	Sand	Proposed
18	Pench	Nayakund	1.62	6.78	Approx 500 m	No	3434	Sand	Proposed
19	Kanhan	Pardi K	4.50	9.9	Approx 500 m	No	12720	Sand	Proposed
20	Kanhan	Saholi-A	1.60	14.23	Approx 500 m	No	3392	Sand	Proposed
Kamptee									
21	Kanhan	Bina	4.90	17.69	Approx 500 m	No	12120	Sand	Proposed
23	Kanhan	Neri	4.85	21.19	Approx 500 m	No	17169	Sand	Proposed

24	Kanhan	Chikna-A	3.20	34.56	Approx 500 m	No	10176	Sand	Proposed
Saoner									
27	Kanhan	Gosewadi - A	4.8	6.44	Approx 500 m	No	13568	Sand	Proposed
34	Kanhan	Khapapeth	3.75	4.5	Approx 500 m	No	7950	Sand	Proposed
36	Kanhan	Raiwadi	2.25	0.43	Approx 500 m	No	6360	Sand	Proposed
37	Kanhan	Tembhurdoh	1.8	1.41	Approx 500 m	No	5088	Sand	Proposed

Annexure III

Cluster & Contiguous details

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Annexure IV

Transportation Routes for 18 Non Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Kamptee						
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewada	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved
Ramdongri -A	1	4	4	830	Black Topped/ Paved road	Unpaved

					already exists	
Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

Transportation Routes for 22 Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Yesamba	1	9	9	500	Kuchha Road	Unpaved

Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved
Singardip	1	7	7	429	Black Topped/ Paved road already exists	Unpaved
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved
Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhurdoh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved

Annexure V

Final List of Potential Mining Leases (Existing & Proposed)

Details of Sand Ghats (River bed) eligible in 2023-2024:

List of 18 Sand Ghats applied for revalidation of EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Proposed Length x Width (m)		Depth	Area	Brass
1	Mouda	Kirnapur	Kanhan	S.No. 103, 104, 105, 107, 109, 110, 111, 113, 115, 116, 117, 118, 119, 4, 5 adjacent part	620	80	0.80	4.95	14021
2	Mouda	Sirsoli	Sur	S.No. 188 adjacent part	250	45	0.50	1.125	1987
3	Mouda	Vadhna	Kanhan	S.No. 52 part, 54, 55 adjacent part	300	80	0.60	2.40	5088
4	Parseoni	Garanda	Pench	S.No. 104 Part	345	45	0.80	1.55	4388
5	Parseoni	Ghat Rohana	Pench	S.No. 46 part	500	60	0.80	2.78	5653
6	Kamptee	Ungaon	Kanhan	S.No. 211 part, 212, 217, 218, 219, 222	650	74	1.0	4.81	16996
7	Kamptee	Chikna-B	Kanhan	S.No. 7, 6	400	50	1.20	2.00	8480
8	Kamptee	Bhamewada	Kanhan	S.No. 128 part, 129, 135/2, 136, 144 Part	600	30	0.50	1.80	3180
9	Saoner	Wakodi	Kanhan	S.No. 44 part	500	70	0.80	3.50	9894
10	Saoner	Isapur-A	Kanhan	S.No. 94	450	80	0.80	3.60	1017

				part, 115, 116, 117, 118, 119, 120, 126 part					6
11	Saoner	Rohana	Kanhan	3 part 7 part	35 0	60	1.00	2.10	7420
12	Saoner	Ramdongri- A	Kanhan	30 part, 31, 32	45 0	70	0.80	3.15	8904
13	Saoner	Ramdongri- B	Kanhan	143 part, 144 part	40 0	10 0	0.80	4.00	1130 7
14	Saoner	Karajghat	Kanhan	S.No. 15, part	47 0	75	0.60	3.52	7473
15	Saoner	Kocchi	Kanhan	S.No. 264, 267Part, 263 Part	45 0	80	0.50	3.60	6360
16	Saoner	Kawadas	Kolar	S.No. 219, 220, 244	45 0	35	0.50	1.57	2782
17	Saoner	Bawangaon -B	Kanhan	203, 204, 208	45 0	60	0.60	2.70	5724
18	Kuhi	Chichghat	Kanhan	43 part	30 0	10 0	0.50	3.00	5300

List of 22 Sand Ghats applied for EC for the year 2023-2024

Sl No	Taluka	Name of Sand Ghat	Name of River/Nalla	Adjoining Survey No	Revised Proposed Length Width (m)		Dept h	Area (Ha)	Brass
1	Mouda	Mouda (Chikna Ghat)	Kanhan	Juna S.No. 542, 541 and 543 adjacent part	590	65	0.90	3.83	12196
2	Mouda	Mohkhedi	Kanhan	S.No. 116, 117, 118, adjacent part	490	100	0.90	4.90	15583
3	Mouda	Mahalgaon -A	Sur	S.No. 261 Pimpalgaon S.No. 23part, 24, 25, 26 adjacent part	380	60	0.40	2.28	3816
4	Mouda	Mahalgaon -B	Sur	S.No. 373, 372, 387 adjacent part	275	70	0.40	1.92	3401
5	Mouda	Dahadi	Kanhan	107 part, 108, 120,	350	30	0.50	1.05	1855

				110, 111					
6	Parseo ni	Yesamba	Pench	S.No. 207 part	302	35	0.80	1.05	2987
7	Parseo ni	Juni Kamptee (Gadeghat)	Kanhan	S.No. 230 part, 241/1 part	400	90	0.90	3.60	11448
8	Parseo ni	Palora	Pench	S.No. 103 Part, 99 Part, 43 Part	400	60	1.30	2.40	11024
9	Parseo ni	Singardip	Kanhan	S.No. part 81, 82	460	75	0.90	3.45	10971
10	Parseo ni	Pipla	Pench	S.No. 353 Part, 354 Part	255	95	1.50	2.42	12840
11	Parseo ni	Waghoda	Pench	S.No. 127 part	410	120	1.50	4.92	26077
12	Parseo ni	Saholi-B	Kanhan	S.No. 104 part, 108/2, 109/2, 110/2, 112/3, 113/2, 115/2, 116/2 Part	500	50	0.80	2.50	7067
13	Parseo ni	Nayakund	Pench	33, 34 Part	360	45	0.60	1.62	3434
14	Parseo ni	Pardi K	Kanhan	153, 146 part	450	100	0.80	4.50	12720
15	Parseo ni	Saholi-A	Kanhan	S.No. 15 part, 16, 17, 18	400	40	0.60	1.60	3392
16	Kamptee	Bina	Kanhan	53 part, 56, 57/1, 57/2 part	490	100	0.70	4.90	12120
17	Kamptee	Neri	Kanhan	S.No. 217, 219, 220, 221, 223, 224 Part	565	86	1	4.85	17169
18	Kamptee	Chikna-A	Kanhan	S.No. 9, 10, 11	500	64	0.90	3.20	10176

19	Saoner	Gosewadi - A	Kanhan	S.No. 285, 286, 287 part	480	100	0.50	4.80	8480
20	Saoner	Khapapeth	Kanhan	S.No. 284 Part	500	75	0.50	3.75	6625
21	Saoner	Raiwadi	Kanhan	S.No. 190	300	75	0.50	2.25	3975
22	Saoner	Tembhurdo h	Kanhan	S.No. 279, 274 and Old Gaonthan part	300	60	0.50	1.80	3180
					9157	1595		67.59	199261

b) Patta Lands/Khatedari Land:

Owner	Sy. No	Area (Ha)	District	Tehsil	Village	Agricultural Land (Yes/No)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

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

Name of Reservoir / Dams	Maintain/Controlled by State Govt. / PSU etc.	Location	District	Tehsil	Village	Size (Ha)
Nil	Nil	Nil	Nil	Nil	Nil	Nil

d) M-Sand Plants:

Plant Name	Owner	District	Tehsil	Village	Geo-location	Quantity Tonnes/Annum
Nil	Nil	Nil	Nil	Nil	Nil	Nil

ANNEXURE VI – FINAL CLUSTER & CONTIGUOUS CLUSTER DETAILS

Cluster:

River Name	Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

Contiguous Cluster:

River Name	Contiguous Cluster No	Lease No	Location(Riverbed/patta/Land)	Village	Area(In Ha)	Total Excavation (Ton)	Total Mineral Excavation (Ton)
Nil							

ANNEXURE VII – FINAL TRANSPORTATION ROUTE FOR INDIVIDUAL LEASES & LEASES IN CLUSTER

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Kirnapur	1	9	9	450	Kuchha Road	Unpaved
Sirsoli	1	11	11	300	Kuchha Road	Unpaved
Vadhna	1	6	6	469	Kuchha Road	Unpaved
Parseoni						
Garanda	1	6	6	336	Black Topped/ Paved road already exists	Unpaved
Ghat Rohana	1	3	3	455	Black Topped/ Paved road already exists	Unpaved
Kamptee						
Ungaon	1	5	5	397	Kuchha Road	Unpaved
Chikna-B	1	3	3	458	Kuchha Road	Unpaved
Bhamewada	1	3	3	700	Black Topped/ Paved road already exists	Unpaved
Saoner						
Wakodi	1	9	9	300	Kuchha Road	Unpaved
Isapur-A	1	6	6	354	Black Topped/ Paved road already exists	Unpaved
Rohana	1	9	9	209	Kuchha Road	Unpaved
Ramdongri -A	1	4	4	830	Black Topped/ Paved road already	Unpaved

					exists	
Ramdongri -B	1	3	3	668	Kuchha Road	Unpaved
Karajghat	1	9	9	1001	Black Topped/ Paved road already exists	Unpaved
Kocchi	1	6	6	252	Kuchha Road	Unpaved
Kawadas	1	3	3	620	Black Topped/ Paved road already exists	Unpaved
Bawangao n-B	1	4	4	200	Kuchha Road	Unpaved
Kuhi						
Chichghat	1	6	5	640	Kuccha Road	Unpaved

Transportation Routes for 22 Excavated Sand Ghat individual and lease in Cluster

Lease No	Transportation Route No	No of tippers / day of lease	No of tippers / day of all the lease on route	Length of Route in m	Type of Road (Black topped / unpaved)	Recommendation for Road (Black Topped / unpaved)
Mauda						
Mouda (Chikna Ghat)	1	3	3	934	Kuchha Road	Unpaved
Mohkhedi	1	7	7	747	Kuchha Road	Unpaved
Mahalgaon -A	1	6	6	469	Kuchha Road	Unpaved
Mahalgaon -B	1	5	5	409	Black Topped/ Paved road already exists	Unpaved
Dahadi	1	4	4	1560	Kuchha Road	Unpaved
Parseoni						
Yesamba	1	9	9	500	Kuchha Road	Unpaved

Juni Kamptee (Gadeghat)	1	4	4	800	Kuchha Road	Unpaved
Palora	1	9	9	608	Kuchha Road	Unpaved
Singardip	1	7	7	429	Black Topped/ Paved road already exists	Unpaved
Pipla	1	6	6	339	Black Topped/ Paved road already exists	Unpaved
Waghoda	1	4	4	737	Kuchha Road	Unpaved
Saholi-B	1	4	4	122	Kuchha Road	Unpaved
Nayakund	1	3	3	469	Kuchha Road	Unpaved
Pardi K	1	4	4	236	Kuchha Road	Unpaved
Saholi A	1	4	4	128	Kuchha Road	Unpaved
Kamptee						
Bina	1	4	4	639	Kuchha Road	Unpaved
Neri	1	9	9	1300	Black Topped/ Paved road already exists	Unpaved
Chikna-A	1	7	7	630	Kuchha Road	Unpaved
Saoner						
Gosewadi - A	1	3	3	855	Kuchha Road	Unpaved
Khapapeth	1	7	7	413	Black Topped/ Paved road already exists	Unpaved
Raiwadi	1	4	4	232	Kuchha Road	Unpaved
Tembhurdoh	1	7	7	440	Black Topped/ Paved road already exists	Unpaved

SAND GHAT SITE SPECIFIC ENFORCEMENT & MONITORING PLAN AS PER GUIDELINES STIPULATED IN ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING ISSUED BY MOEF&CC IN JANUARY 2020

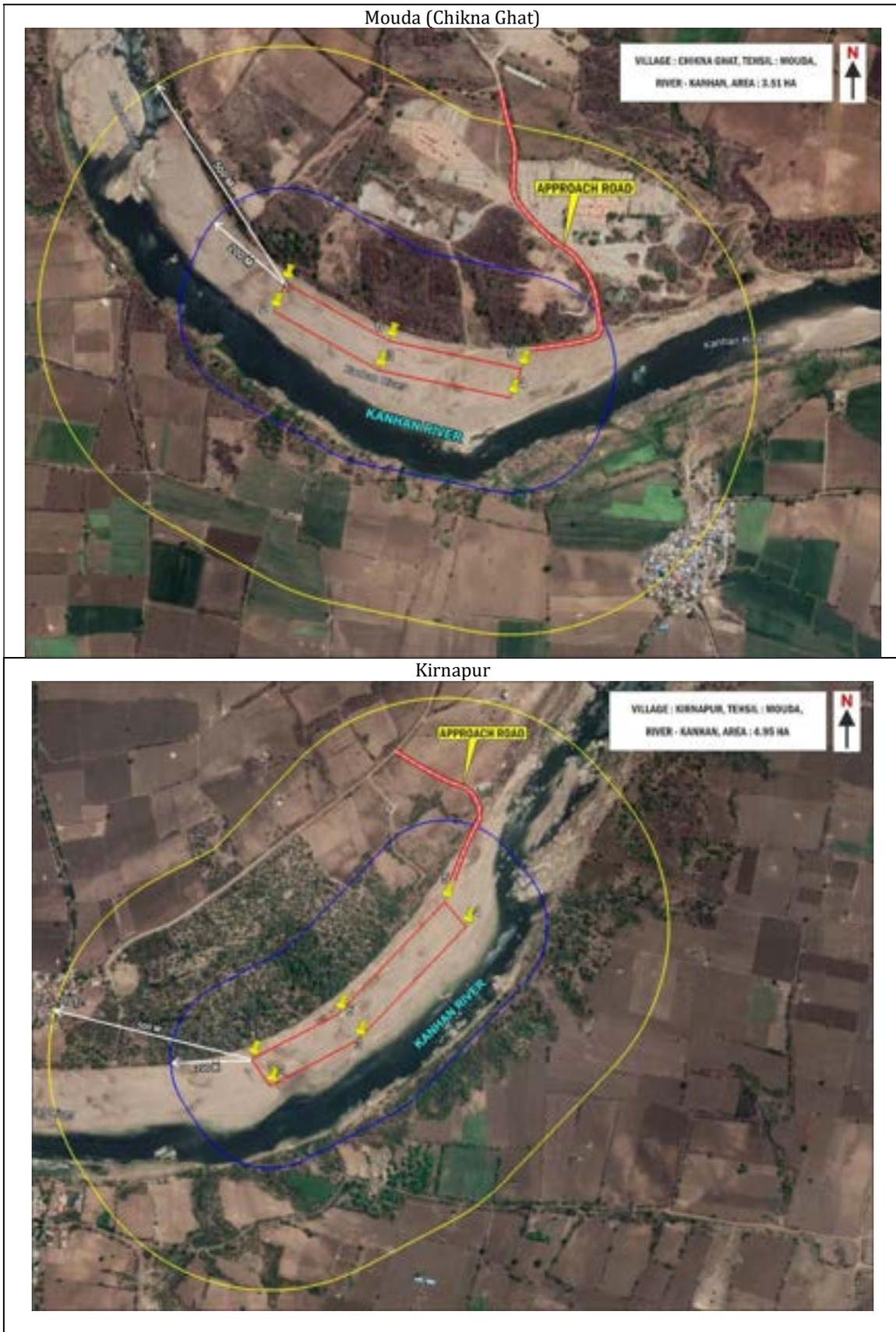
Sr. No.	Condition as per E & M guideline	Compliance
1	Three-member committee for environmental audit	District Magistrate formed a committee for monitoring of compliances as per EM guidelines after grant of prior Environmental Clearance.
2	LOI should be preferably granted to those locations which have least possibility of an impact on the environment and nearby habitation	Environmental feasibility will be checked before issuance of LOI.
3	Identification of sand Ghats its quantification and feasibility considering various environmental parameters like proximity of protected area, wetlands, creeks, forest etc. and other factors such as places of archaeological importance, habitation, prohibited area etc.	All sand ghat locations are physically surveyed by technical committee as per Government of Maharashtra revised sand policy dated 28.01.2022 and ensured that all the parameters regarding sustainable sand mining is followed.
4	Mining plan and its initial level of mining leases at shorter interval say 10m x 10 m	Mining plans by DGM, Nagpur. It is ensured that Mining plan and its initial level of mining leases at shorter interval 10m x 10 m showing in surface plan
5	Responsibility of mine owner to obtain all statutory clearances	It will be ensured by District administration before commencement of mining.
6	Emphasis of district survey report and its format of reporting	Draft DSR will be published in accordance with format given in notification dated 25 July 2018.
7	Regular replenishment study to ascertain rate of depositing, plan and section needs to be prepared.	It is ensured that regular replenishment study to ascertain rate of depositing, plan and section to be prepared.
8	Movement of transportation of mineral from mining area to end user needs to monitor.	It will be ensured by using IT enabled services as per guidelines.
Preparation of District Survey Report		
9	Preparation of District Survey Report	DSR is prepared as per format S.O. 3611(E) dated 25.07.2018 and EM guidelines 2020 issued by MoEF&CC. New Delhi
10	Publication of District Survey Report	Draft DSR published on district portal for public inventory of river bed materials in the district comments.
11	Development of inventory of river bed material and other sources in the district.	Attached as Annexure I to V as per EM guidelines 2020
12	District Survey Report is prepared in such a way that it is not only identifies the mineral bearing area but also	All the parameters are covered in final DSR.

	defines mining and no mining zones Considering environmental and social factors.	
13	Identification of sources of Sand and M-sand, De silting Locations, river type perennial or non perennial, village, tehsil, agriculture/nonagricultural land, M-sand plant etc.	Attached as Annexure-1, II and V
14	Defining the sources of Sand for identification of the potential area, entire river stretch needs to be recorded and area of aggradations/deposition needs to be ascertaining by comparing the level difference between outside river bed OGL and Water Level.	Areas of deposition are identified and levels are recorded for actual replenishment.
15	Boundary Pillars needs to be erected after identification of an area of aggradation and deposition outside bank of river at safe location for future survey.	Geographical co-ordinates of leases are marked on google Earth for future reference and to
16	Identifying mining and no mining zone shall Follow sensitively.	It is ensured that the mining activity and no mining zone shall be followed sensitively by mine owner
17	Demand and Supply for river bed material through market survey	Demand and supply is mentioned in the report on the basis of actual demand of various departments in the District and RBI's index. Based method which is given in Chapter 4.
18	Cluster situation shall be examined.	As per the sand mining is concerne there is no cluster situation in the District.
19	Mining outside river bed area on Patta/Khatedari land be granted when there is possibility of replenishment of material For govt. projects mining could be allowed on Patta/Kahtedari land but mining should be done by Govt. agencies and material shall not be used for sale.	There is no sand mining outside the River bed.
20	State Govt. should define transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely	It is ensured that transportation route from mining lease considering maximum production from mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely
21	List of recommended sites in the format Annexure-II, Details of Cluster in Annexure-III and transportation route in Annexure IV needs to be provided	Attached as Annexure- II, III and IV
22	Public Consultation	Public consultation has been conducted on 26 th December 2022
23	Grant of Letter of Intent for leases falling in potential zone	After getting all the statutory clearance of sand ghats it will be auctioned as per sand mining policy of State Govt. 2023
24	The mining plan should include the original ground level recorded at an interval not more than 10 m x 10m along and across the length of river	Surface plan is prepared keeping OGL, at an interval of 10 mx 10 m across length of river.

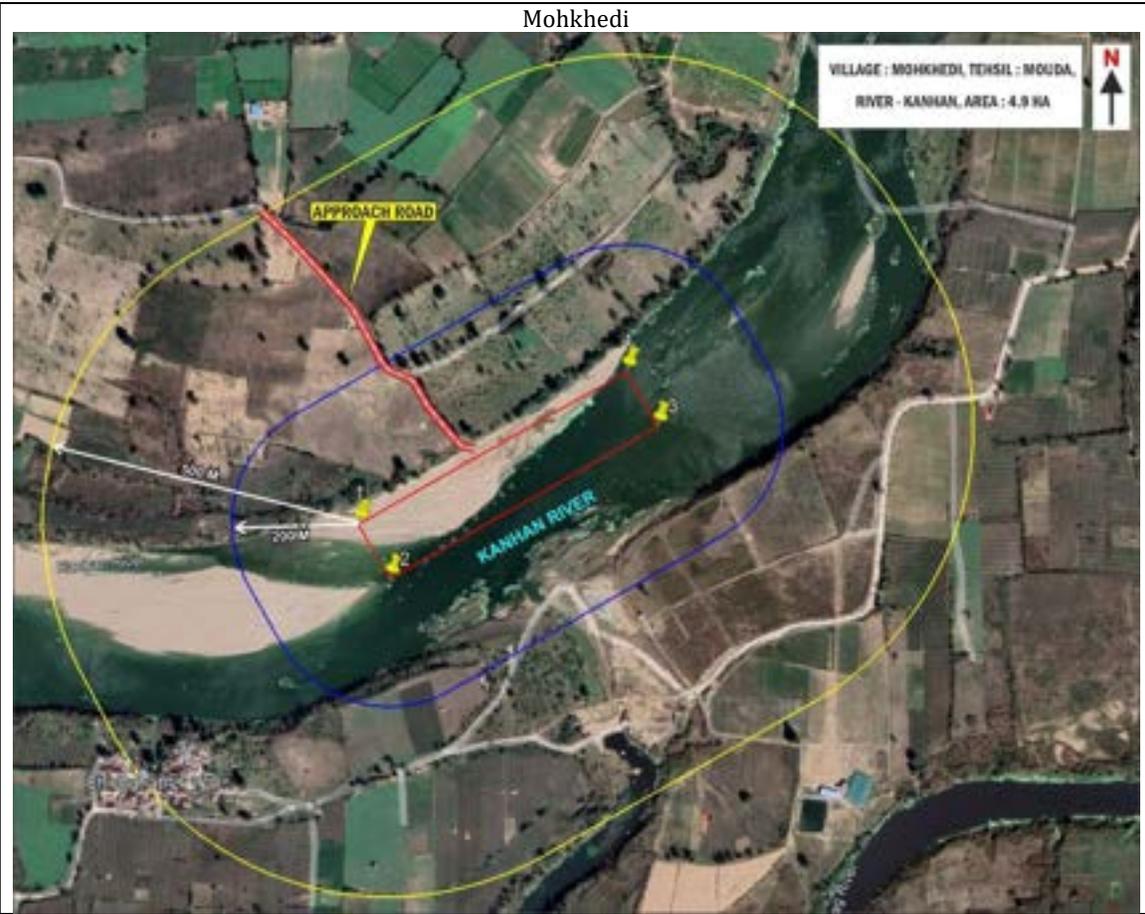
25	In addition to this outside mine lease and bank of river up to meter needs to be recorded	Details are given in Annexure-VII
26	Time period of monsoon should be defined in the DSR/MP.	Time period of monsoon is defined as 10th June to 30th September of every year during which scooping of sand is not allowed.
27	Details of replenishment needs to be included in the mining plan	Preparation of mining plan is done on the basis of established thickness.
28	Parts of river reach that experience deposition or aggradations shall be identified Leaseholder/Environmental clearance holder may be allowed to extract the sand and gravel deposit in these locations to aggradations problems	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
29	Distance of sites for sand and gravel mining shall be depending on replenishment rate of river. Sediment rating curve shall be developed and checked against extracted volume of sand and gravel	All the parameters are covered in the replenishment study.
30	Sand and gravel may be extracted across the I entire active channel during dry season	It will be ensured before commencement of Mining
31	Abandoned stream channels on the terrace and inactive flood plains are preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form inactive channel.	All sand ghat are exposed during non-monsoon period and their deltas and flood plains. The stream should not to diverted to form inactive channel.
32	Layers of sand and gravel which could be removed from river bed shall depend on width of river and replenishment rate of the river.	It is ensured by the technical committee, and Mineable depth is decided after physical survey and there is no possibility of adverse impacts on River morphology
33	Sand ghat shall not be allowed to be extracted where erosion may occur such as concave bank	it is ensured by Technical committee, All the sand ghat locations are Depositional or Aggradation areas and Sand ghat will not be allowed to be extracted where erosion may occur such as concave bank
34	Segment of braided river system should be used preferably falling within lateral migration area of river regime that enhances feasibility of sediment Replenishment.	All the sand ghat locations are Depositional or Aggradation areas and it is ensured by Technical committee.
35	Sand and gravel shall not be extracted from the bridge subjected to 250m on the upstream and 500 meter on downstream side	All sand ghat locations are at suitable distance form bridges as per Guidelines.
36	Mining depth should be restricted to 3 meters and distance from bank should be 1/4th of river width and should not be less than 7.5 meters	Mining depth is decided after physical survey conducted by technical committee and ensures that all the parameters is followed mentioned in the sand mining guidelines.
37	Demarcation of mining areas with pillars and dereferencing should be done prior to start of mining	All the sand ghat locations are demarcated and georeferenced.

38	A buffer distance of 50m after every block of 1000m over which mining is undertaken or at such distance as may be the directed prescribed by the regulatory authority shall be maintained	All the parameters are followed.
39	Obtaining Environmental Clearance and other statutory clearance	No mining will be done before grant of prior Environmental Clearance.
40	Baseline data before commencement of Mining Operations	It will be ensured that collection of baseline data before commencement of mining Operation.
41	Generic Structure of Replenishment Study	Replenishment study conducted scientifically and included in DSR
42	Particle size distribution and bulk density of deposited material to be assessed	It is followed

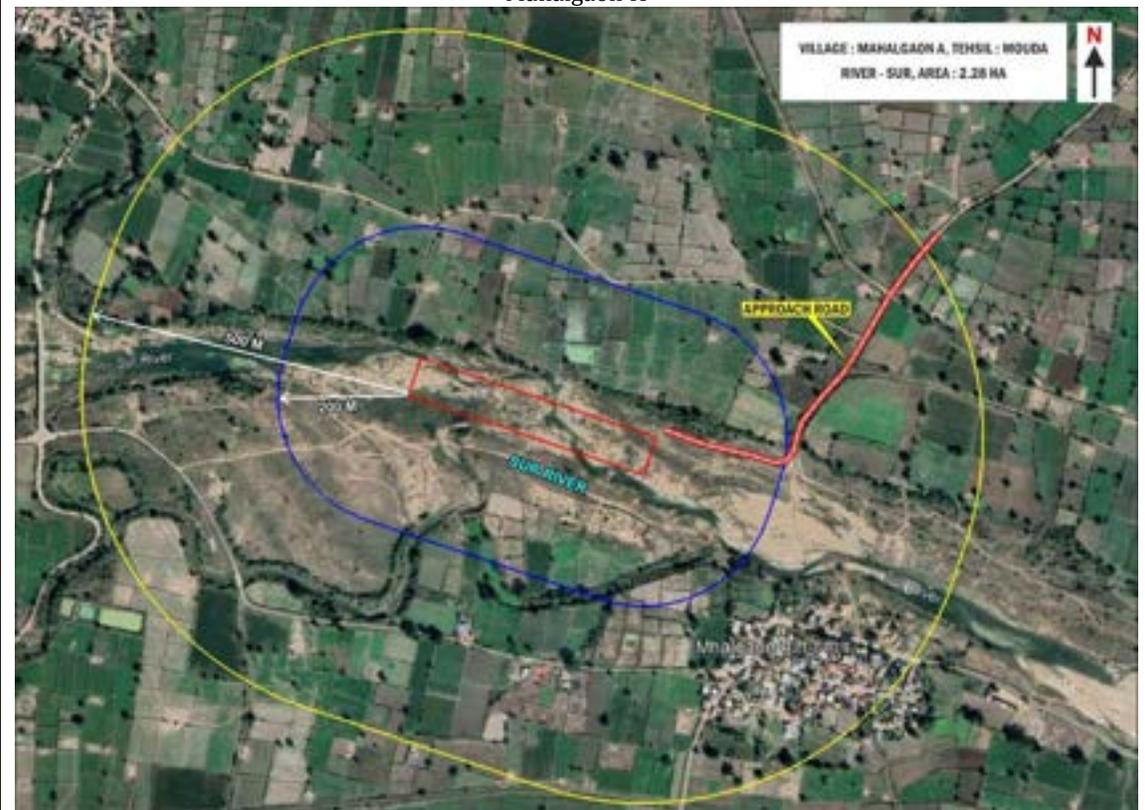
Location map of Proposed Nagpur District Sand Ghat



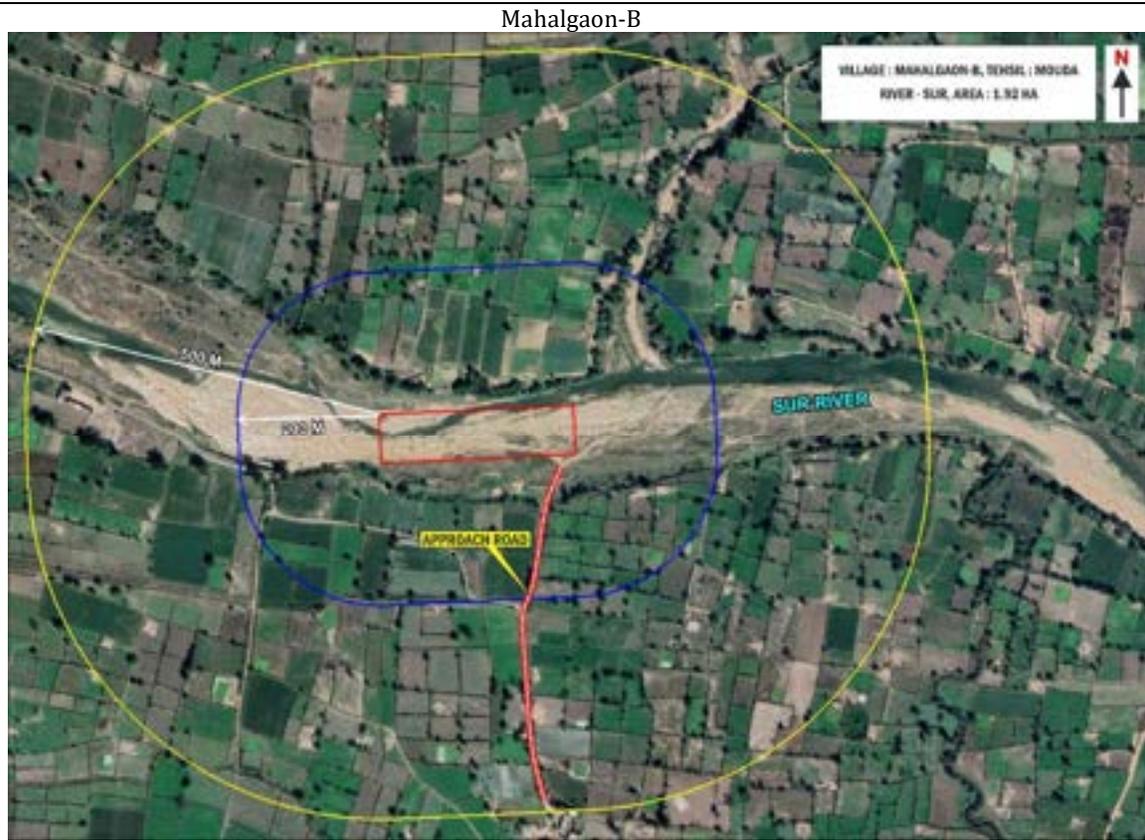
Mohkhedi



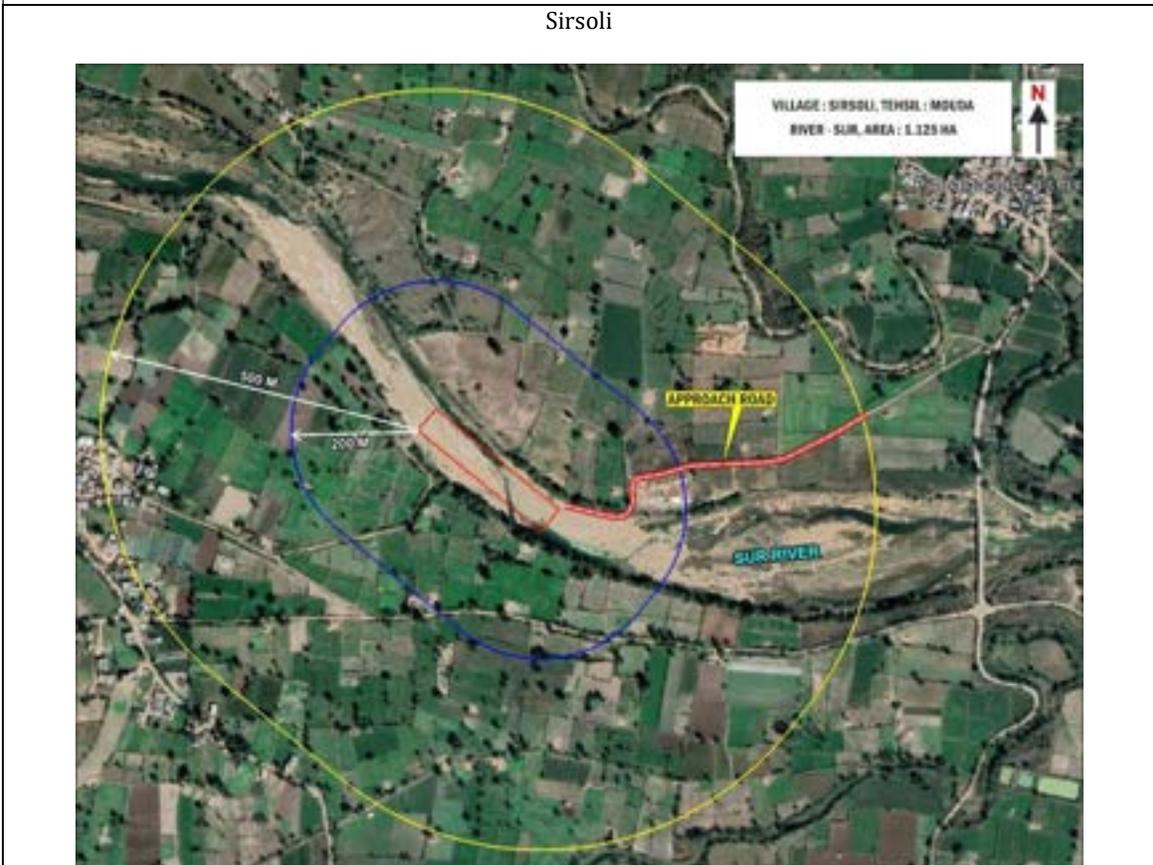
Mahalgaoon-A



Mahalgaon-B



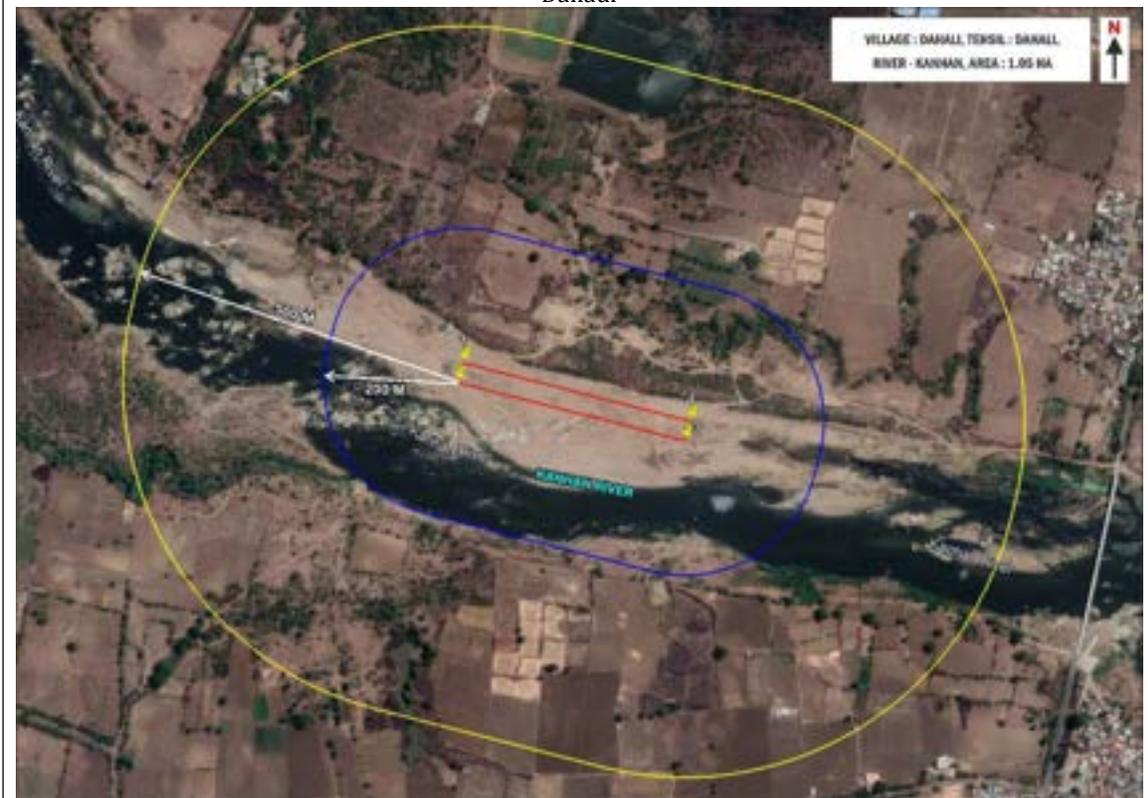
Sirsoli



Vadhna



Dahadi



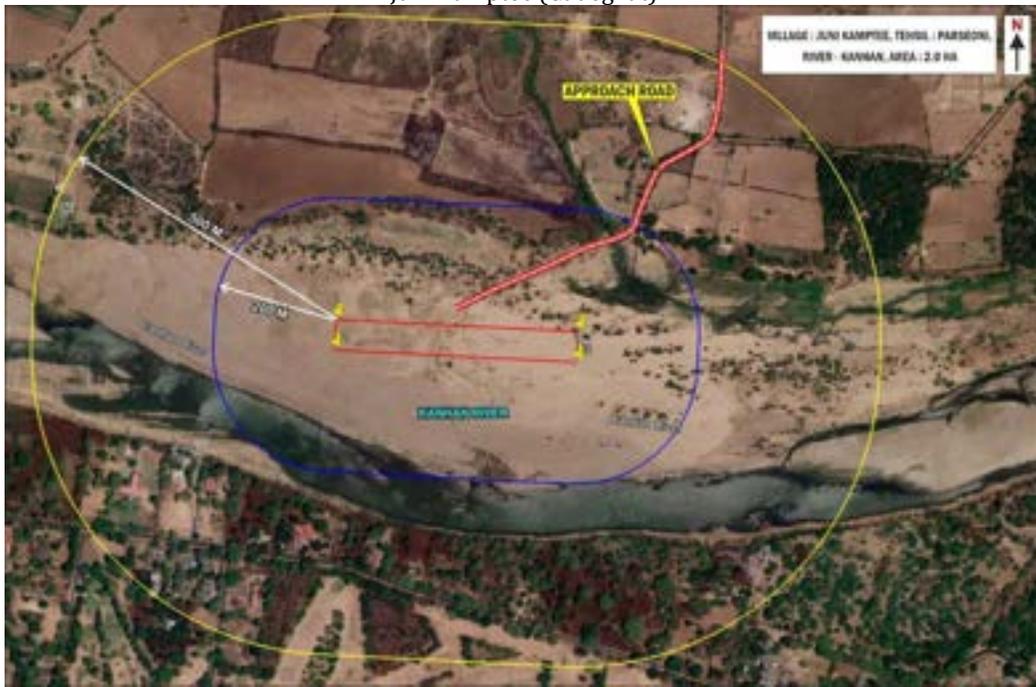
Garanda



Yesamba



Juni Kamptee (Gadeghat)



Ghat Rohana



Palora



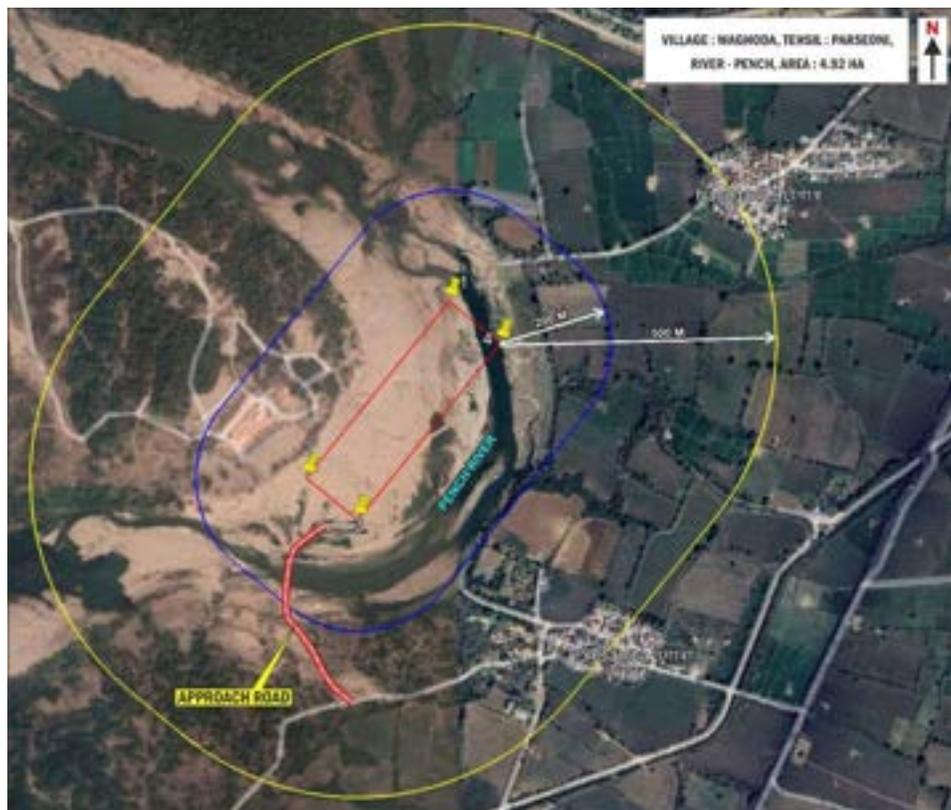
Singardip



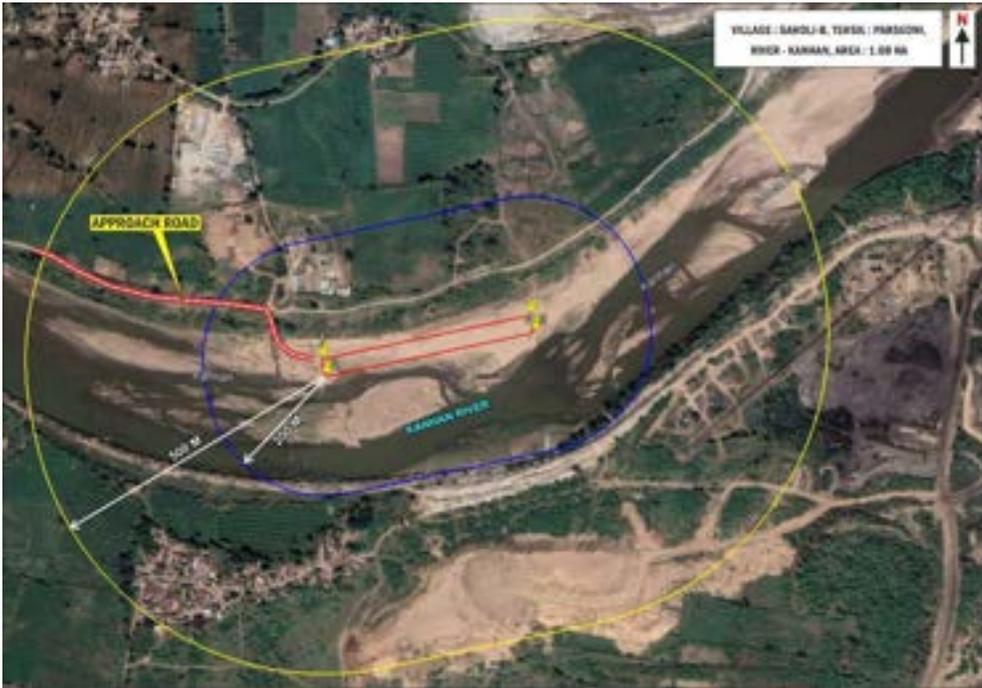
Pipla



Waghoda



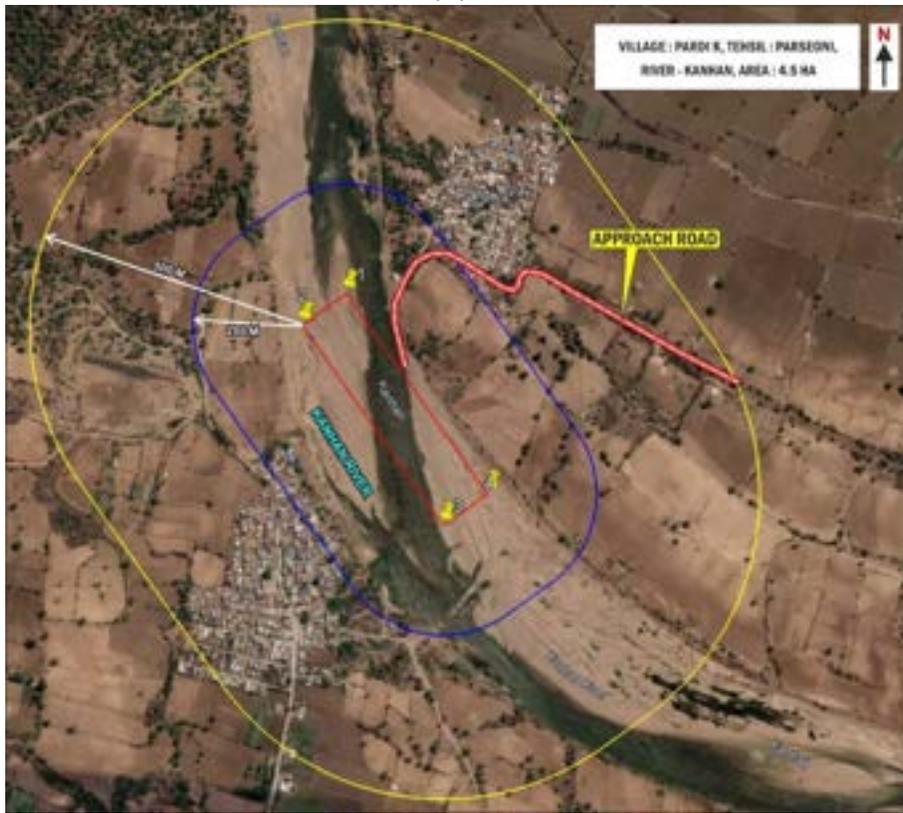
Saholi-B



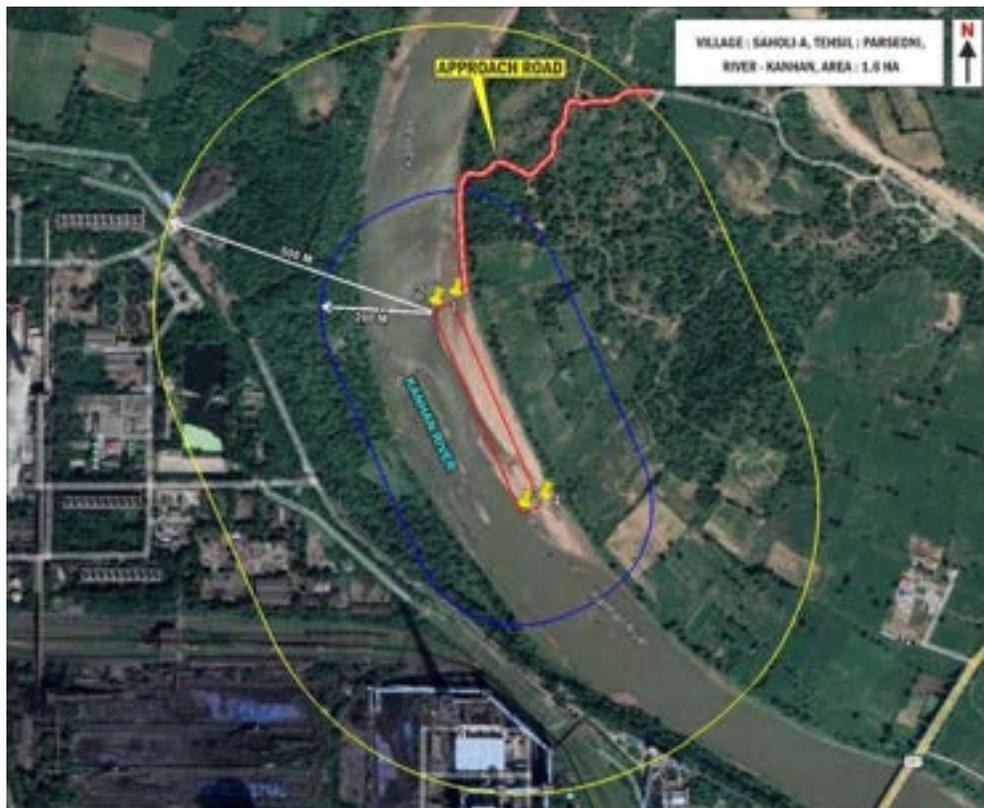
Nayakund

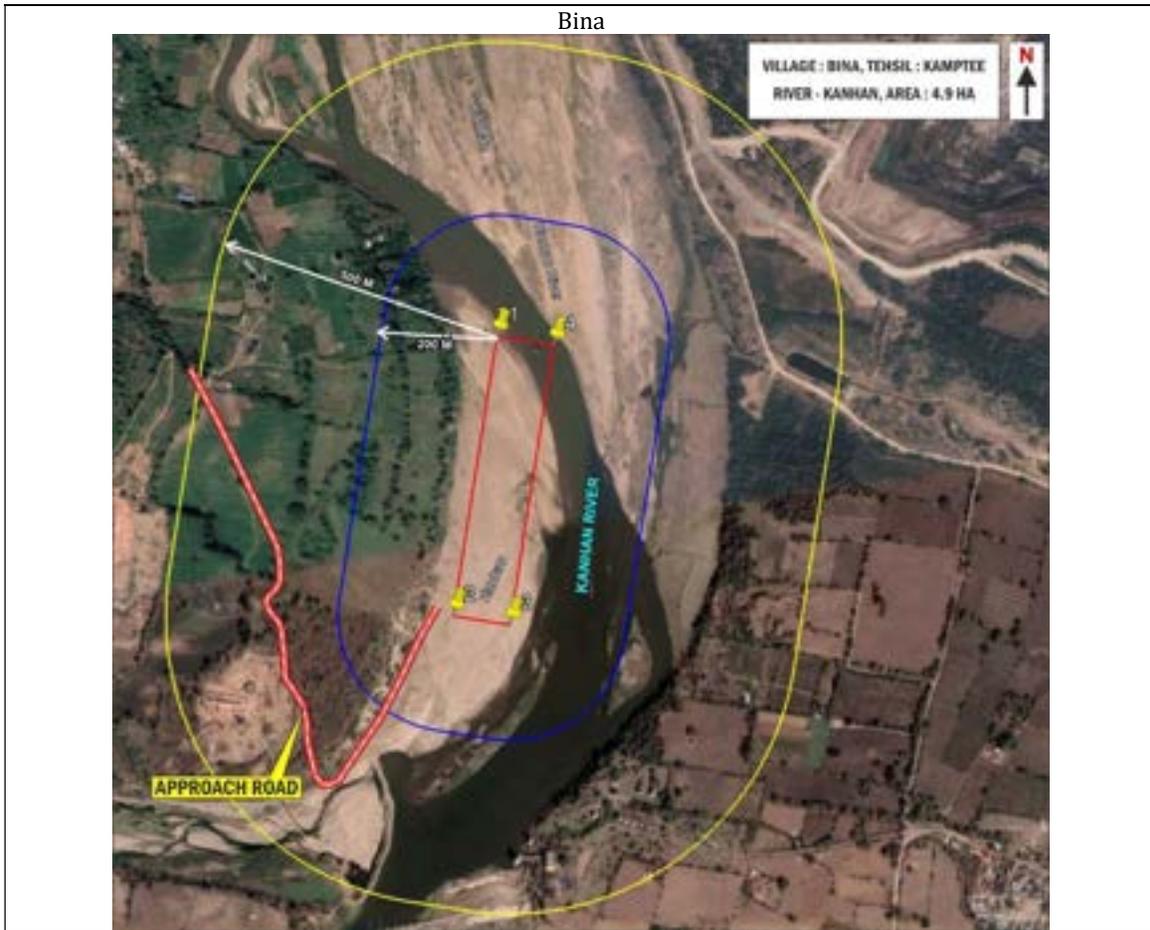


Pardi K

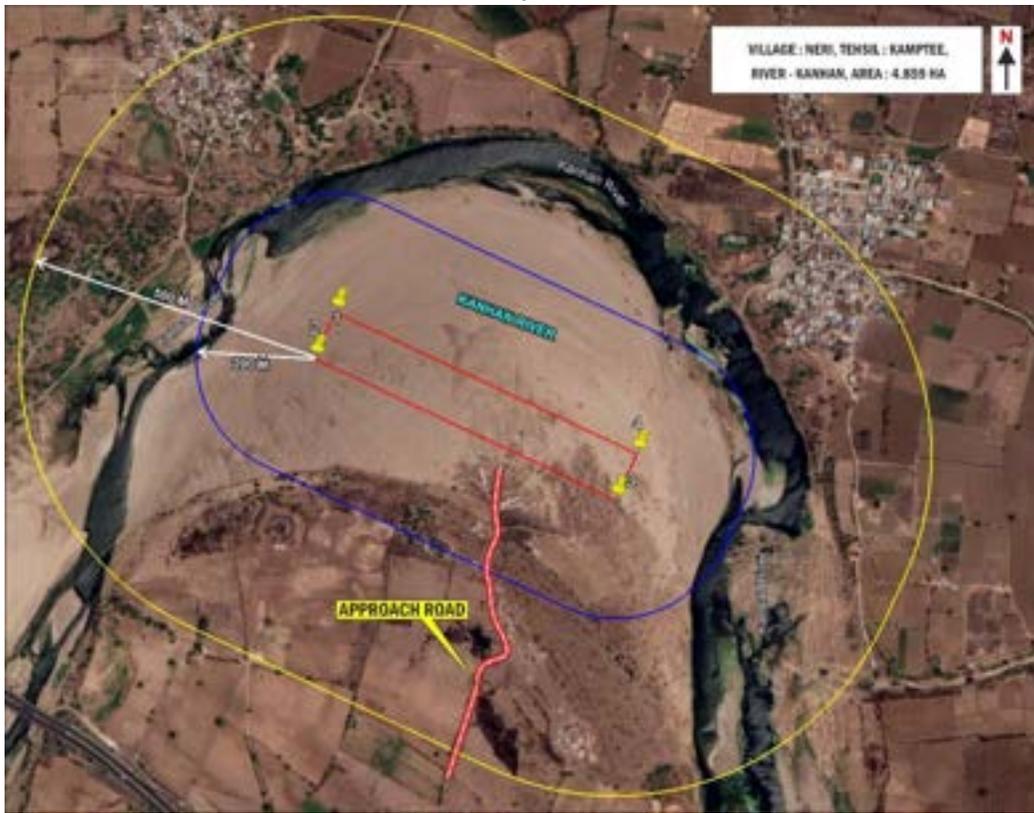


Saholi-A





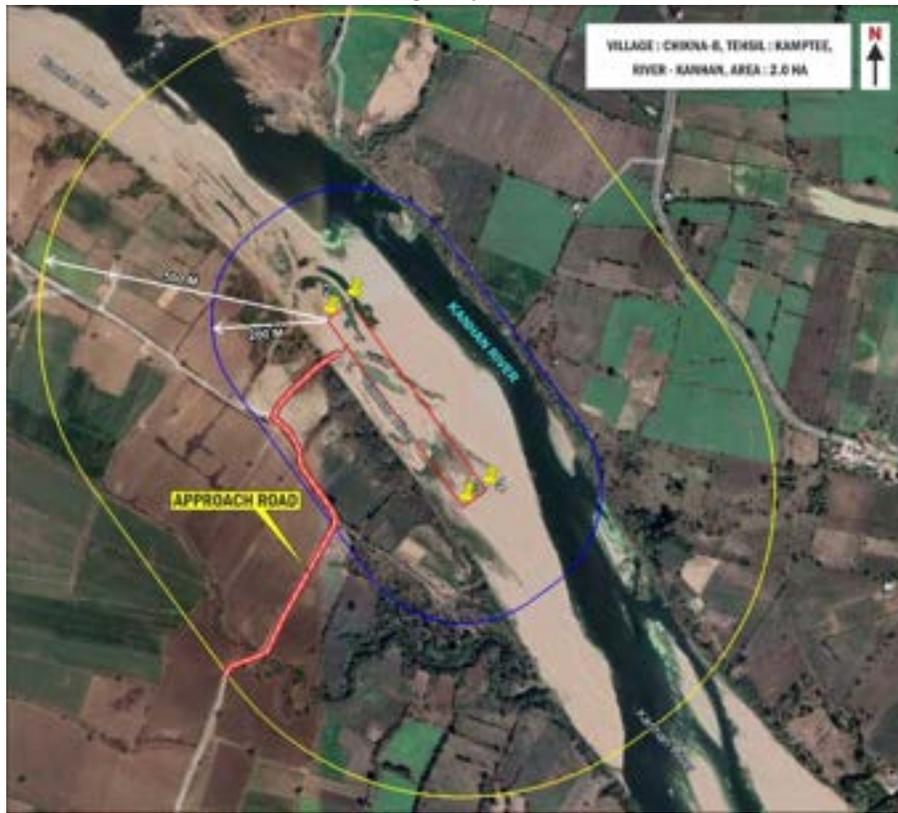
Neri



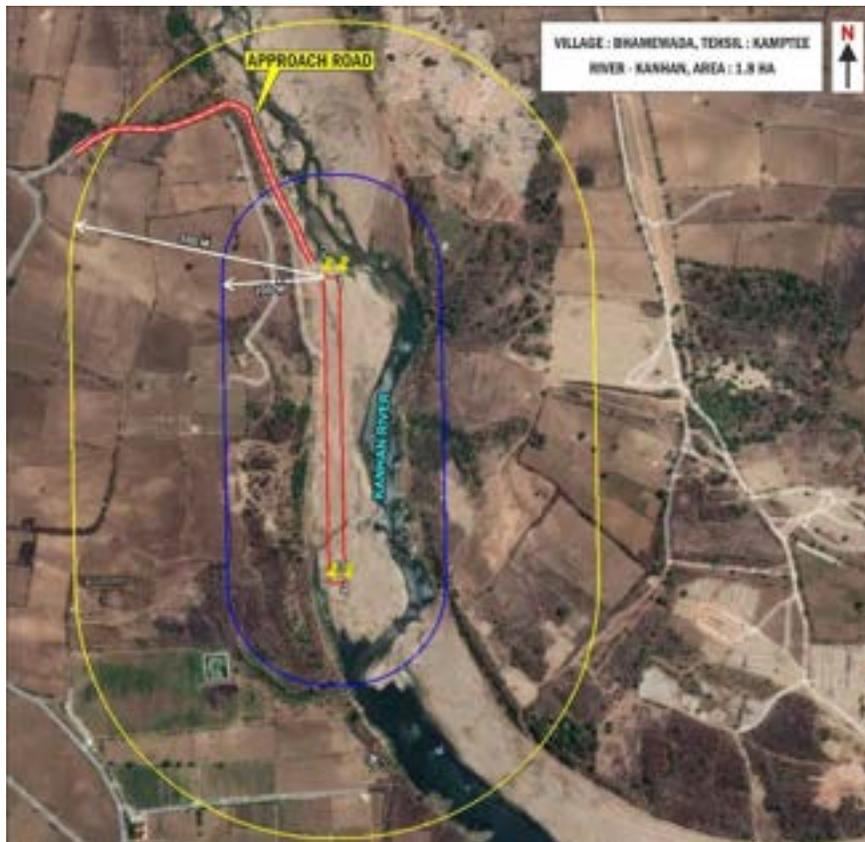
Chikna-A



Chikna-B



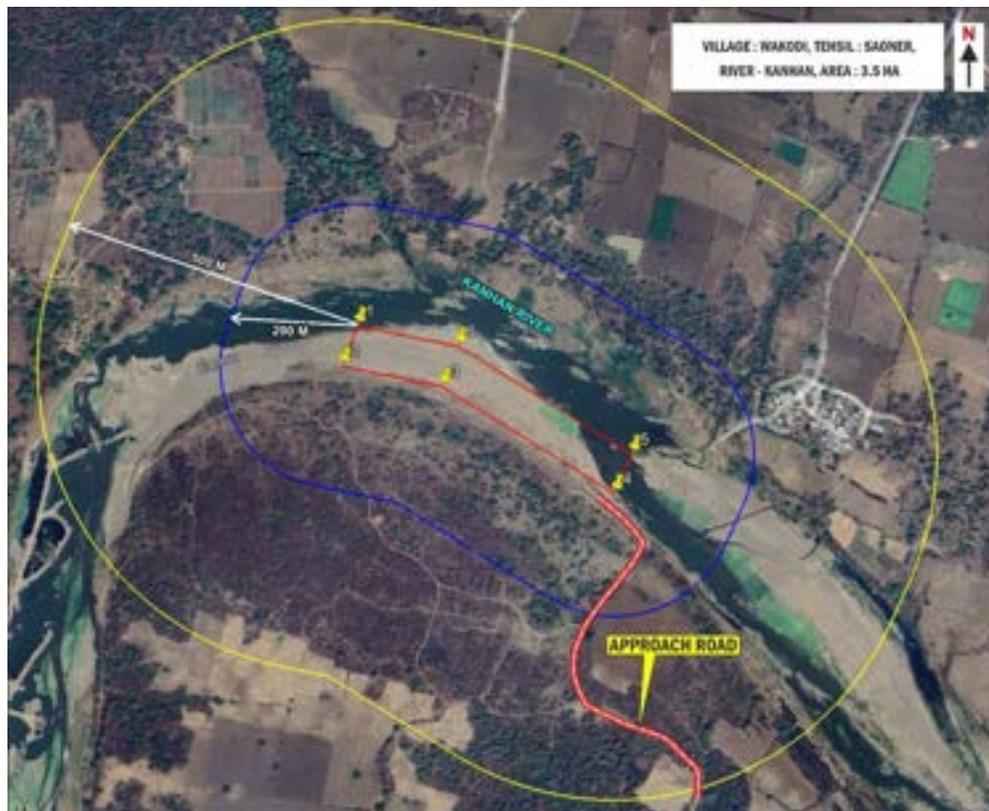
Bhamewada



Gosewadi -A



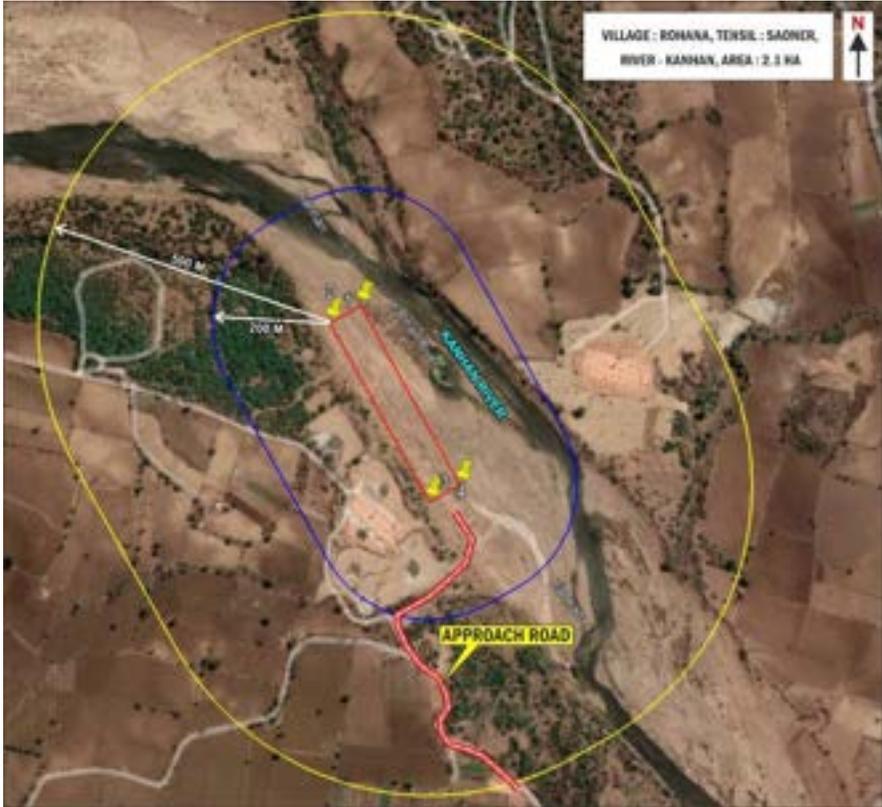
Wakodi



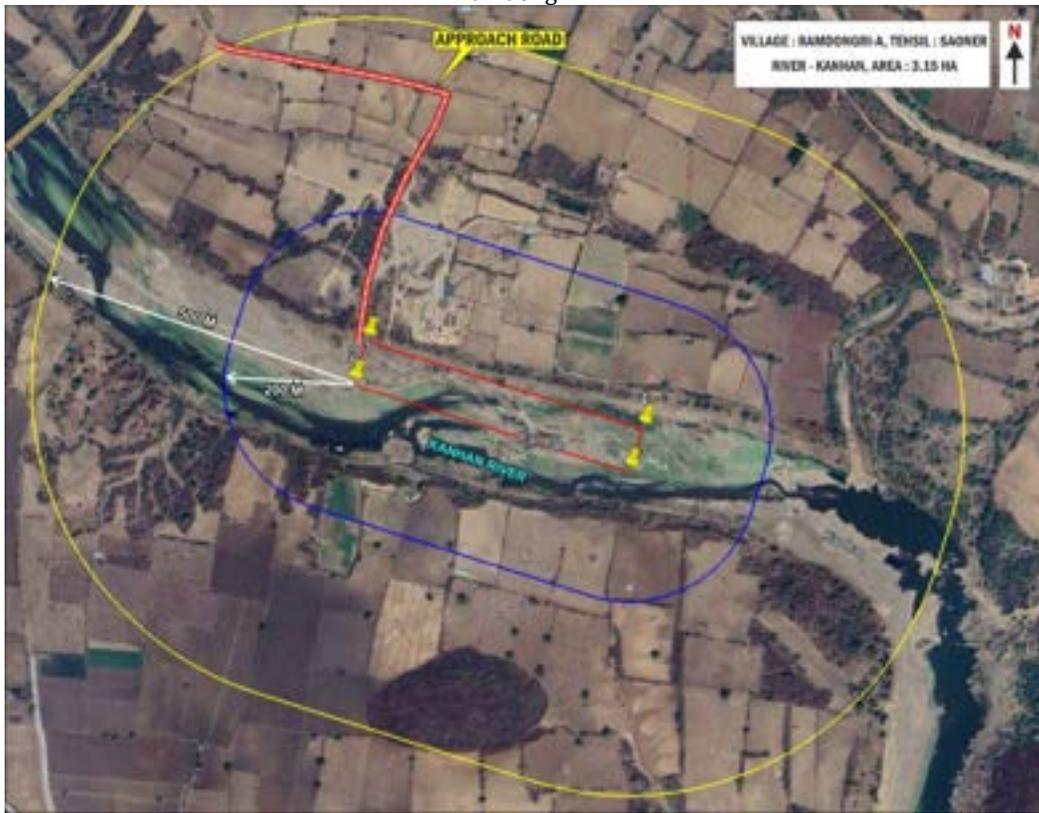
Isapur-A



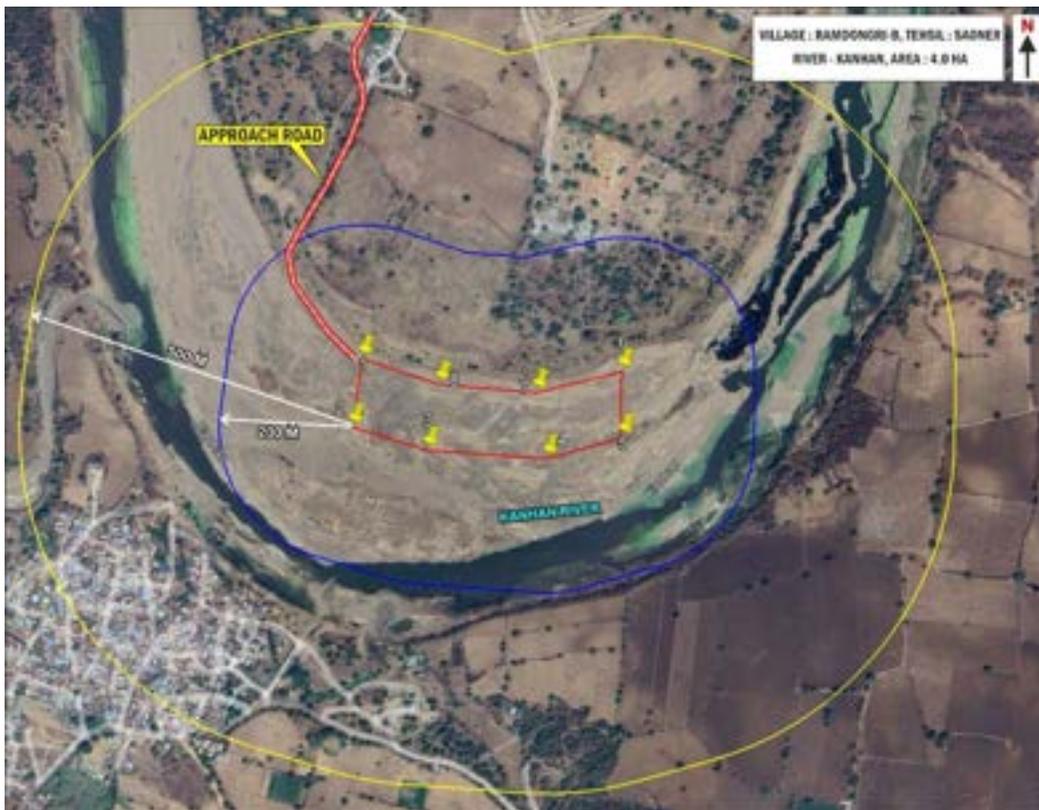
Rohana



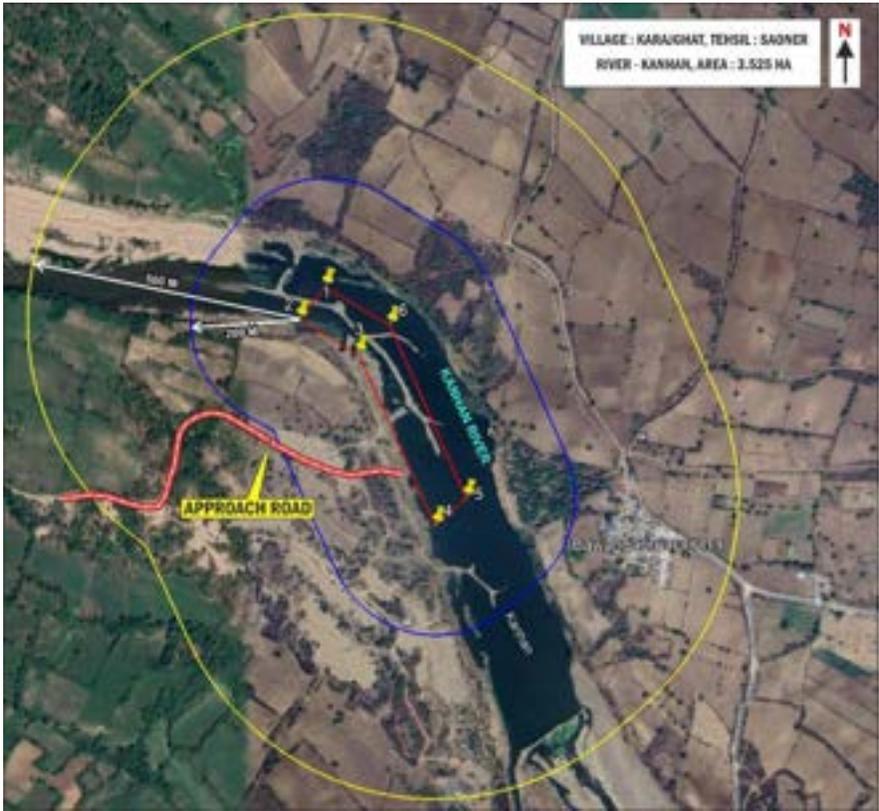
Ramdongri-A



Ramdongri-B



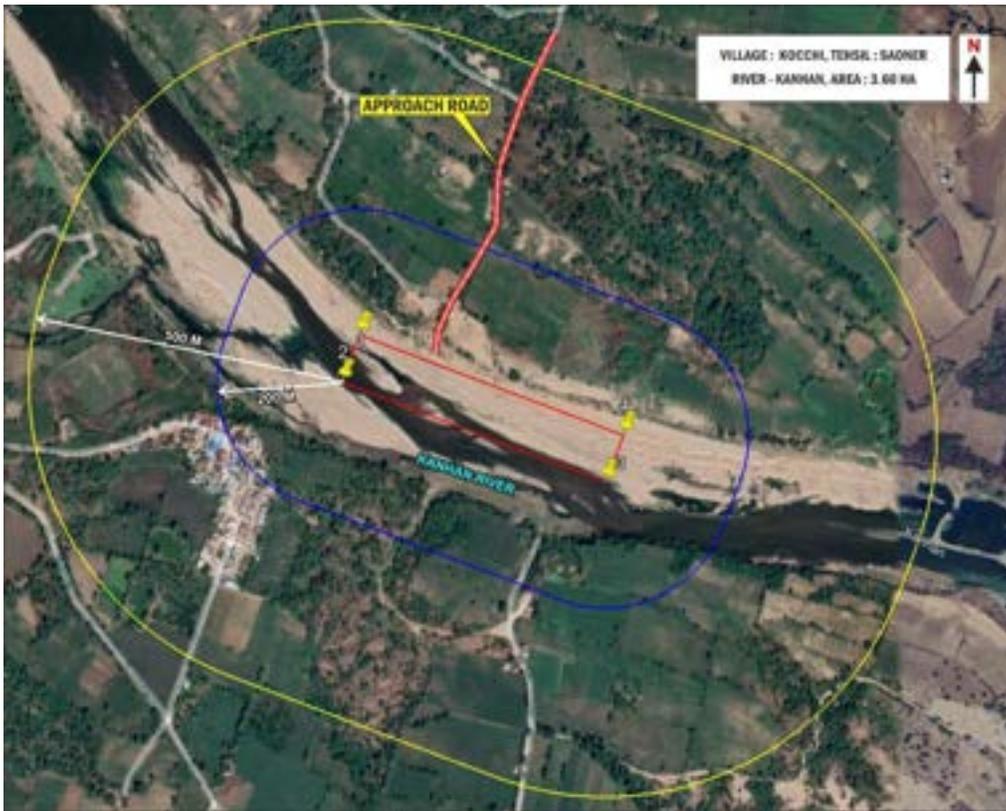
Karajhat



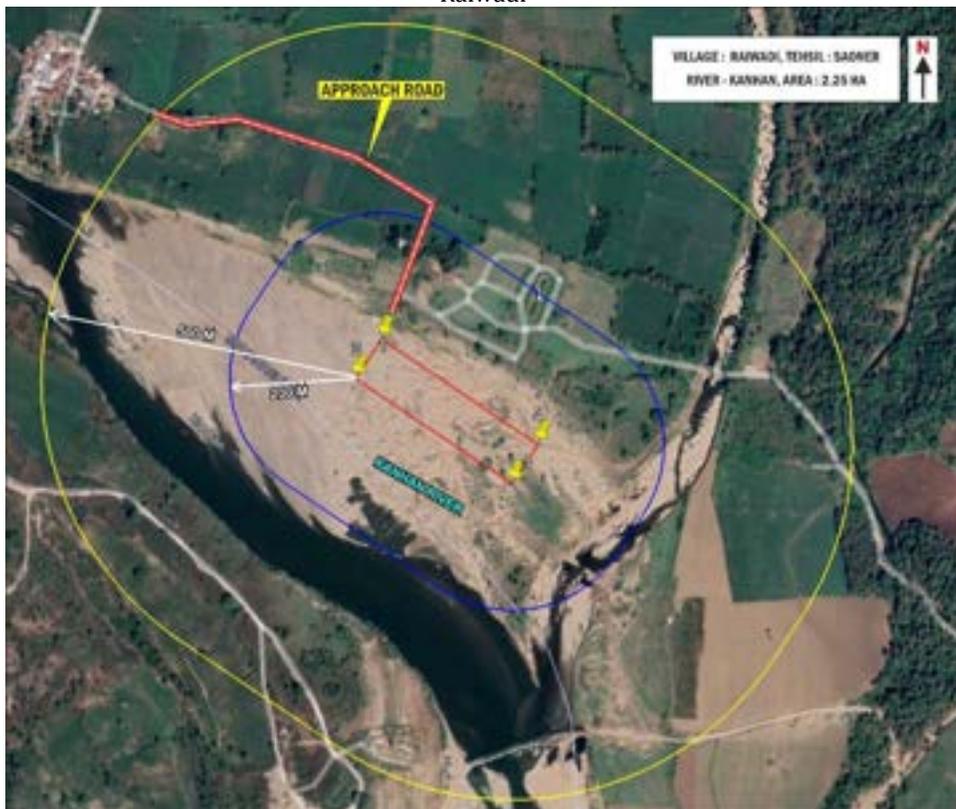
Khapapeth



Kocchi



Raiwadi



Tembhurdoh



Kawadas



Bawangaon-B



Chichghat



PART-B**FOR MINOR MINERALS OTHER THAN SAND MINING OR RIVER
BED MINING****Prepared under:**

- a) Appendix-X of MoEF&CC, Gol Notification S.O. 141(E) dated
15.1.2016 b) MoEF&CC, Gol Notification S.O. 3611(E) dated
25.07.2018**

CHAPTER 1

INTRODUCTION

Hon'ble Supreme Court of India dated 27th February, 2012 in LA. No.12-13 of 2011 in Special Leave Petition (C) No.19628-19629 of 2009, in the matter of Deepak Kumar etc. Vs. State of Haryana and Others etc., prior environmental clearance has made mandatory for mining of minor minerals irrespective of the area of mining lease. Accordingly, Ministry of Environment Forest & Climate Change (MoEF& CC) had issued Office Memorandum No. LIIIOII/47/2011-1A II(M) dated 18th May 2013. As per this O.M. all mining projects of minor minerals would henceforth require prior Environmental Clearance irrespective of the lease area. The stone quarry and sand quarrying projects need environmental clearance as per the MoEF guidelines and such pg. 47 projects are treated as Category 'B' even if the lease area is less than 5 Ha. Subsequently, various amendments were made as regards to obtain environmental clearance of the minor minerals.

The Hon'ble National Green Tribunal, vide its order dated the 13th January, 2015 in the matter regarding sand mining has directed for making a policy on environmental clearance for mining leases in cluster for minor minerals. As per the latest amendment S.O. 141 (E) & S.O.190(E) dated 15th January 2016 & 20th January in exercise of the powers conferred by sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) and in pursuance of notification of Ministry of Environment and Forest number S.O. 1533 (E), dated the 14th September, 2006 the Central Government had constituted the District Level Environment Impact Assessment Authority (DEIAA), for grant of Environmental Clearance. for Category B2¹ Projects for mining of minor minerals, for all the districts in the country. But later on Hon. NGT, vide its order dated 13th Sept 2018, stated that for 0-5 Ha areas also recommendation of grant EC by SEIAA instead of DEAC/DEIAA.

The MoEF&CC in its Notification dated 15th January 2016 has prescribed Preparation of District Survey Report for Sand Mining or River Bed Mining and Mining of other Minor Minerals. A detailed procedure and format for preparation of District Survey Report is provided in the said Notification. Further the procedure for preparation of DSR and format is amended vide MoEF&CC Notification S.O. 3611(E) dated 25.07.2018. The DSR is defined at "Appendix -X (See Paragraph 7(iii)(a))" of the notification S.O.141(E)dated 15.01.2016 and S.O. 3611(E) dated 25.07.2018.

CHAPTER 2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

Nagpur district is very rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore, Granites etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee. Apart from this the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saciner and Parshivani tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district.

Sr.No	Mineral	No of Mines
1	Manganese Ore	41
2	Coal	13
3	Dolomite	15
6	Sand (Stowing)	02
7	Stone Quarry	87

Table 2: Mineral production in Nagpur district

As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 2016-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 2017-18.

The quantity of minor mineral consumption is a thermometer to assess the rate of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds and stone quarries respectively. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of -dressed or undressed stone is met through the broken rock material from the hill slope.

CHAPTER 3

GENERAL PROFILE OF THE DISTRICT

3.1 District at a glance:

Nagpur is the winter capital of the state of Maharashtra, a fast-growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,570 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India.

Table 3.1: Brief Description of Nagpur District

Sr. No	Item	Statistic
1	Area	9892 sq.km
2	Population	4653570
3	No. Taluka	14
4	No. of Sub Division	4
5	No. of Councils	14
6	No. of Nagar Panchayat	6

3.2 Climatic Condition:

The Nagpur lies on 150-600m above sea level. Nagpur has tropical savannah climate with dry conditions prevailing for most of the year. In winter, there is much less rainfall than in summer. The Köppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 F). The highest recorded temperature in the city was 47.9 °C on 29 May 2013, while the lowest was 3.5 °C on 29 December 2018.

3.3 Forest Details

Sr. No	Description	Area
1	District Geographical Area	9892(Sq.km)
2	Total Forest Area	2765(Sq.km)
3	Forest Deptt. Area	2180(Sq.km)
4	Revenue Deptt. Forest Area	191(Sq.km)
5	F.D.C.M Forest Area	394(Sq.km)
6	Forest Division	Nagpur
7	Protected Area (if any)	Pench NP, Bor WLS (part)

Source: <https://mahaforest.gov.in>

3.4 Demographic features of the district

As of the 2011 census, Nagpur District comprising 14 tahsils had a population of 46,53,171 and Nagpur city had a population of 24,05,421 and the urban agglomeration had a population of 25,23,911. The district had a sex ratio of 948 per 1000 male compared to 2001 census figure of 932. Average literacy rate was 89.52% compared to 84.03 of 2001; male literacy was 93.76 % and female literacy was 85.07%. 52.5% of Nagpur's population is in the 15-59 years age category. 10.35% of the population were under six years old.

Out of the total District population for 2011 census, 68.30 percent lives in urban regions of district. Sex Ratio in urban region of Nagpur district is 951 as per 2011 census whereas for rural area it is 942. (Source: <https://nagpur.gov.in/demography>)

3.5 Connectivity:

Nagpur is located at practically the geographical center of India; in fact, the Zero Milestone of India (a heritage monument) is in this city. (Nagpur is 837 km from Mumbai, 1094 km south of Delhi, 1092 km north of Chennai and 1140 km west of Kolkata). All major highways NH-7 (Varanasi - Kanyakumari) and NH-6 (Mumbai - Sambalpur - Kolkata) and major railway trunk routes (Mumbai, Chennai, Howrah and Delhi) pass through the city.

An electrified broad-gauge railway track connects Nagpur to the four major metros. Destinations connected include Mumbai, Delhi, Calcutta, Chennai, Kolhapur, Pune, Ahmedabad, Hyderabad, Jammu, Amritsar, Lucknow, Varanasi, Bhubaneswar, Thiruvananthapuram, Cochin, Gorakhpur, Visakhapatnam, Bangalore, Mangalore, Patna and Indore.

The Sonegaon airport is 7.5 kilometres south of Nagpur city. It is connected to some important Indian and international cities including Mumbai, Calcutta, Delhi, Hyderabad, Raipur, Singapore, Saudi Arabia and Bangkok. Thus, distance and connectivity with all the important Indian cities gives Nagpur an inherent advantage. It can be seen as a transport hub, connecting the Indian cities to each other and international destinations as well. Various IT and ITES companies are also viewing this characteristic as a strong positive factor. The city provides access to its own skilled manpower and also to that of the entire region. (Source: <https://www.nmcnagpur.gov.in/location-and-connectivity>)

CHAPTER 4

GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Deccan trap encompasses major parts of Maharashtra state. Deccan trap belongs to Upper Cretaceous to Eocene in age. An array of Deccan trap exist, they are frequently weathered leading to formation of Murom, rubbles and clayey and black cotton soil. The Basalt rock is of varying composition, their flow beds are together known as Deccan trap, The Igneous activity during upper Cretaceous period released tremendous outburst of volcanic energy resulting in the eruption of thick series of lava and associated pyroclastic materials lava flows called as Basalt is a significant event in the evolution of the Deccan Plateau. The Basalt rock is the solidified lava flow of Upper cretaceous to eocene period, the Basalt outcrop runs for nearly 800km towards the coast of Mumbai. This portion is tail end of Basaltic lava flows in Vidharba towards east and south east.

Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calcyphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganiferous rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi

and Ramdongri), Vrendenburgite-a strongly magnetic manganese ore (from Beldongri), *Hollandite*- crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganiferous rocks of the region, *Sitaparite*, *Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.

Streaky-Granitiagneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks.

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deolapar from west to east all of them having a low southerly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards East.

Gondwana Super group:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki- Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are

seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide).

Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south- south-west and their estimated thickness is about 1,500 km. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained micaceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone. Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggeria-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula* and *Physa*.

Deccan basalts (Traps) and Intertrappeans:

The western part of the district is covered by layers of doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other.

Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are generally dark grey in colour having a specific gravity of 2.9.

Geological Succsesion of the Nagpur District:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows(Traps)with Associated Intertrappeansediments	Lower Eocene to upper cretaceous
Lameta beds	Cretaceous.
Gondwana group: Kamthistage Barakar stage Talchir stage	Permian Corboniferous
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvial soil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

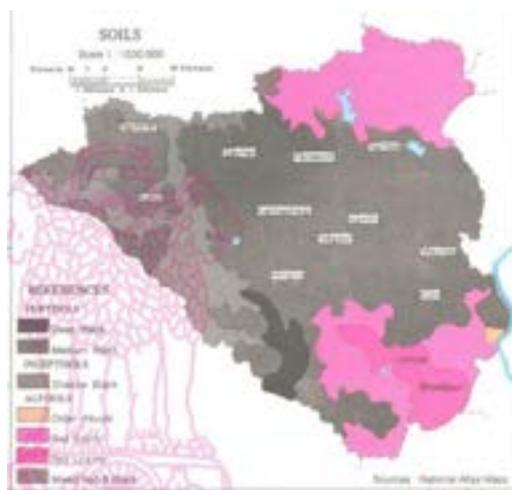


Fig: Type of Soil in Nagpur District

CHAPTER 5 DRAINAGE AND IRRIGATION PATTERN

5.1 Basin/Sub basin

The district falls in the Godavari Basin which is further divided Kanhan sub basin and Pench Sub basin which is drained in the south. Important Rivers of the district are kanhan, Pench, Nag, Kolar, Sur and Wardha

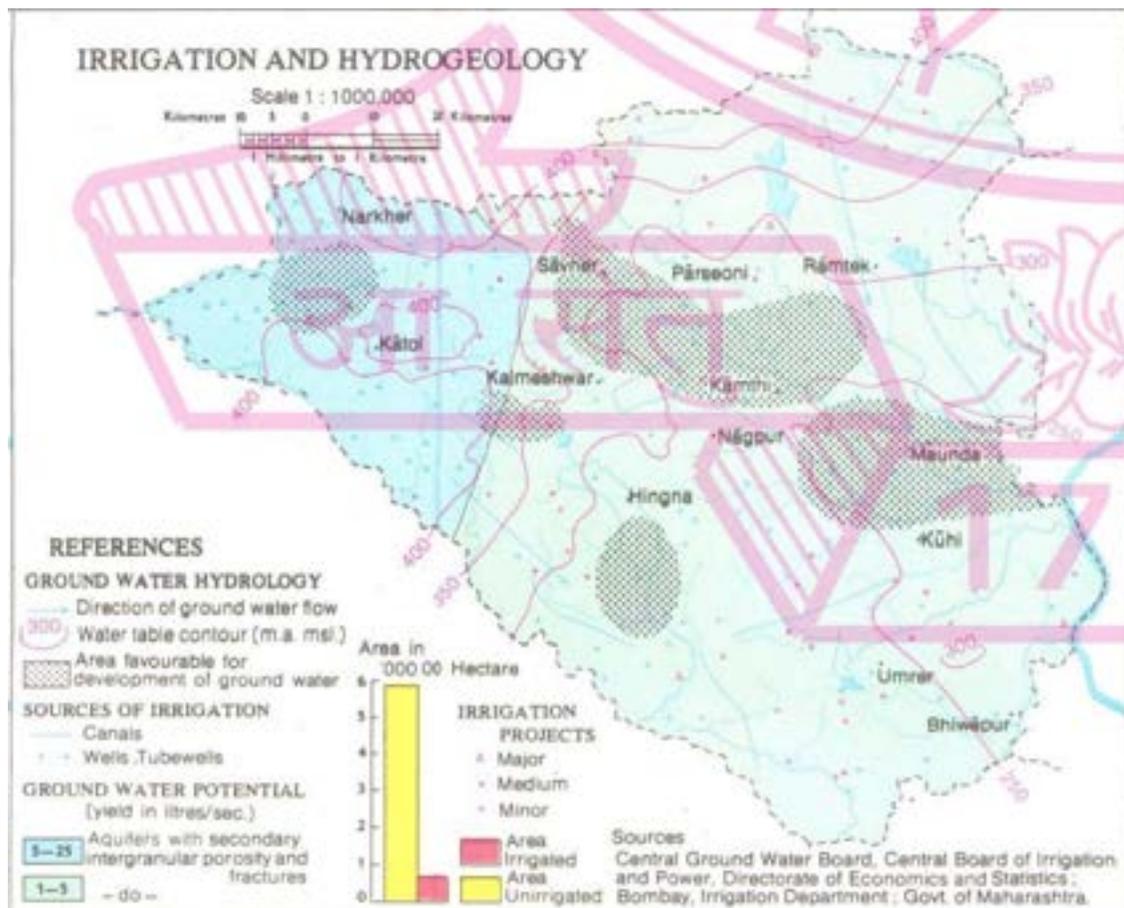


Fig: Irrigation and Hydrogeological Map of Nagpur District

5.2 Irrigation pattern:

Table 5.1: Irrigation pattern of the District

Irrigation	Area(*000 ha)		
Not irrigated area	134		
Gross irrigated area	228.9		
Rainfed Area	499		
Sources of Irrigation	Number	Area(*000 ha)	Percentage of total irrigated area
Canals		86.92	63.5
Tanks	216		2.6
Open wells	55277	56.16	27.1
Bore wells	5661	-	
Lift Irrigation schemes	3	-	
Micro Irrigation		-	
Drip	3433(Sets)	3.1	
Sprinkler	5353(Sets)	4.8	
Other sources (Please specify)	730	7.9	6.6
Total Irrigated Area			
Pump Sets	39189		
No. of Tractors	9951		

Source: Agriculture contingency plan of Nagpur

CHAPTER 6

LAND UTILIZATION PATTERN IN THE DISTRICT

Land Use pattern

The total area of the district is 986 thousands hectares of which forest cover 155 thousands hectares and area under cultivation or 643 thousands hectares. The land utilization pattern of the district is given in Table 6.1

Table 6. Land utilization

Sr. No.	Description	Area (Area in HaR)
1	Forest	1541
2	Barren & uncultivated	338
3	Land under non-agriculture	994
4	Cultivable waste land	345
5	Permanent Pasture	551
6	Misc. trees & groves	78
7	Current Fallow	208
8	Other fallow	217
9	Net area Shown	5592
10	Area shown more than once	1030
11	Gross cropped area	6622
12	Gro graphical area	9864
13	Cropping intensity	118
14	Cultivable area	6440

(Source: <http://krishi.maharashtra.gov.in/1074/Land-Utilization-Statistics>)



Fig: Land Use Map of Nagpur District

CHAPTER 7

SURFACE WATER AND GROUND WATER SCENARIO OF THE DISTRICT

7.1 GROUND WATER SCENARIO

Nagpur District is a part of the Wainganga alluvial plains and is underlain by quaternary alluvium comprising mainly sands of various grades with clay and kankar. The central alluvial plains extends from north to south are made up of finer clastics comprising mainly clay, silt, sandy clay with Kankar and subordinate sands.

7.2 HYDROGEOLOGY

The ground water in the area occurs both under confined and water table condition. It occurs in the zone of saturation within the granular zones encountered below the land surface. The principal source of replenishment to the ground water body is precipitation. The north-eastern and east central parts of the district are drained by the Wainganga and its tributaries. The central and western portion is drained by the Wene which is tributary of Wardha River. The aquifer materials comprised of fine to medium sand and coarse sand with gravel.

The important water bearing formations of Nagpur district are discussed below. A map depicting the hydrogeological features is shown in figure below.

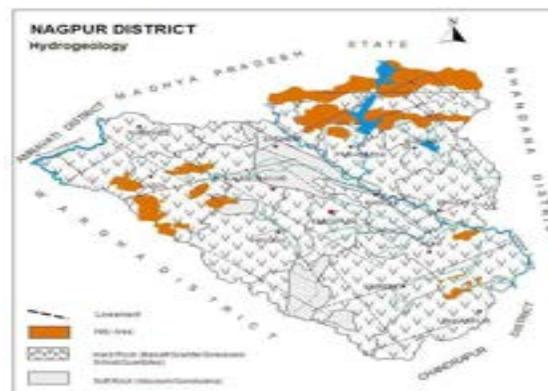


Fig: Hydrogeological Map of District

Water Level Scenario

Central ground water board periodically monitors the National Hydrograph network Stations (NHNS) Stations In Nagpur district, four times a year i.e., January May (Pre-monsoon) , August and November (Post-monsoon). The data on pre and post monsoon water level along with fluctuation during 2019.

Depth to Water Level-Pre-monsoon

The depth to water level in the district during May 2021 ranges between 0.05 (umrer) and 15.59 (Sathnaovi) mbgl. Depth to water levels during pre-monsoon (May 2019) has been depicted in Fig 7.2. Shallow water level within 10 m bgl are seen in almost entire district.

Water levels in the range of 10-20 m bgl are observed parts of Kamleshwar, Hingna, Narkhed, Paraseoni, talukas, as isolated patches.

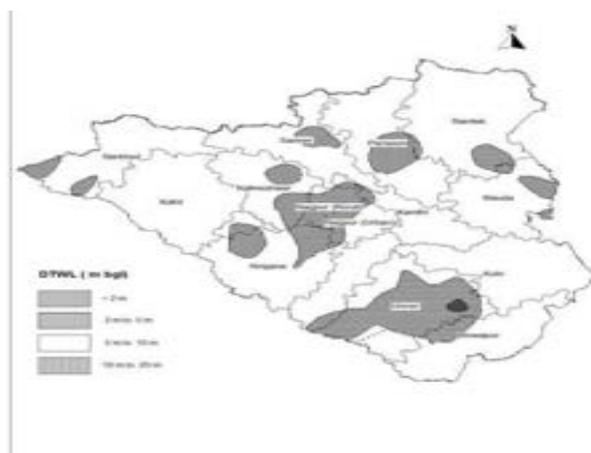


Fig 7.2: Depth to Water Level (Pre-monsoon-May)

Depth of water level-Post-monsoon

The depth to water levels during Nov. 2021 ranges between 0.60 m bel (Umrer) and 10.60 m (Manegaontek) Spatial variation in post-monsoon depth to waterlevels is shown in Fig 7.3. in the district the water levels are shallow within 10 m bgl Water levels of 2-5 m bgl is the most dominant range occupying major part of Ramtek, Mouda, Kuhi and Bhivapur talukas. Water level of less than 2 m bgl are observed in isolated patched i.e. part of Narkhed, Nagpur, Umrer and Mouda talukas.

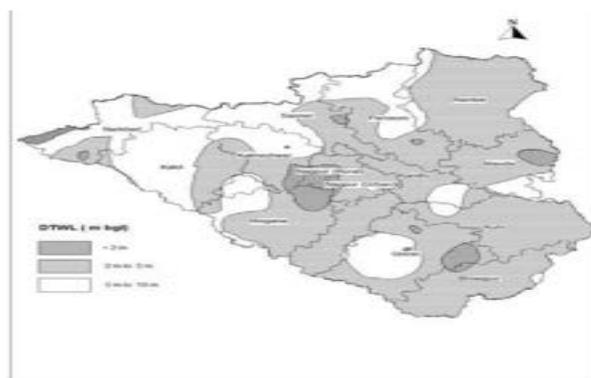


Fig. 7.3: Depth to Water Level (Post-monsoon-Nov. 2021)

Ground Water Resources

Central Ground Wates Board and Groundwater Survey and Development Agency (GSDA) have jointly estimated the ground water resorces of Nagpur district based on GEC-97 methodology. Taluka wise ground water resources are shown in Fig. 7.4. As per the estimation the net annual ground water availability comes to be 1058.12 MCM The total gross draft for all uses is estimated at 407.80 MCM with irrigation sector being the major consumer having a draft of 343.59 MCM The allocation for domestic and industrial water requirements are worked at 126.80 MCM. The net ground water availability for future

irrigation is estimated at 588.05 MCM. Stage of ground water development varies from 12.0% (Mouda) to 75% (Narkhed). The overall stage of ground water development for the district is 38.54%. All the talukas have been categorised as "Safe".

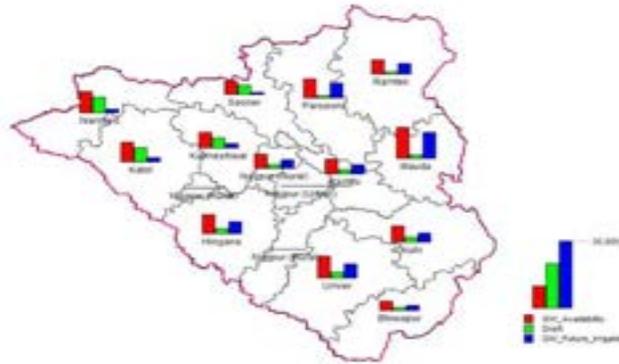


Fig: Ground Water Resources of the District

Ground Water Management Strategy

Ground water has special significance for agricultural development in the State of Maharashtra. The ground water development in some parts of the State has reached a critical stage resulting in decline of ground water levels. There is thus a need to adopt an integrated approach of development of ground water

Ground Water Development

The basalt is the main formation of the district and occupies an area of about 4300 sq. km. It is observed that the vesicular and weathered basalts are more productive than the massive and jointed basalts. Though the Archaeans are highly weathered, they form moderate potential aquifers. Alluvium is the most potential aquifer occurring in the district. In general, the Gondwana formation gives moderate to high yield while the Lameta is poor yielding aquifer in the district. Dug wells are most common ground water extraction structure in the district and are used for both domestic and irrigation purposes. The formation wise yield of dug wells is given in Table below.

Table No. 7.1: Formation-wise yield of Dugwells.

Sr. No	Rock Formation	Depth range (m bgl)	Yeild range (m ³ /day)		Remarks
			Winter	Summer	
1	Archaen	4.97-26.00	20-300	5-120	Weathered and fractured formation from good aquifers
2	Gondwana	8.00-19.65	40-200	20-80	Kamathi is the best aquifer
3	Lameta	5.85-17.15	-	-	Poor aquifer and cannot sustain pumping
4	Deccan Trap				
a	Massive	5.1-13.00	20-90	10-20	Poor aquifer
	Basalt				Limited pumping
b	Vesicular	5.7-13-15	20-288	20.240	During Summer yield is

	Basalt				Mostly between 20-60
					M ³ /day
c	Weathered Basalt	4.00-17.25	30-384	10-128	Summer yield is between 20 to 80
					M ³ /day
d	Jointed Basalt	5.20-11.75	35-240	6-190	Summer yield is around 40 M ³ /day
5	Alluvium	8.10-16.30	110-300	40-300	Restricted along the Rivers and their tributaries

(Source: CGWB, Groundwater broacher of Nagpur District)

CHAPTERS 8

RAINFALL OF THE DISTRICT AND CLIMATIC

CONDITION

Climatic Condition:

The Nagpur lies on 150-600 above sea level. Nagpur has tropical savannah climate with dry condition prevailing for most of the year. In winter there is much less rainfall than in summer. The Koppen-Geiger climate classification is Aw. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to January, during which temperatures drop below 10 °C (50 °F) The highest recorded temperature in the city was 47.9 °C on 29 May, 2013, while the lowest was 3.5 °C on December 2021.

Rainfall of the District

Table 8.1: Rainfall of the District

Month	Normal Rain	Actual Rain	Rain Days
January	13.2	36.0	4.0
February	8.2	5.0	0.0
March	11.2	0.6	0.0
April	7.8	1.9	0.0
May	12.2	20.5	2.0
June	187.1	125.3	13.0
July	362.3	680.8	29.0
August	347.8	419.4	17.0
September	175.3	301.8	20.0
October	53.4	84.6	11.0
November	13.8	0.0	0.0
December	6.7	2.4	0.0
Total	1199.0	1678.3	96.0

Source: maharain.maharashtra.gov.in

Chapter 9
DETAILS OF MINING LEASES OF THE DISTRICT

List of mine holder in Nagpur District:

Sr · No.	Name of the Lease Holder	Mouza	Tahsil	Survey No.	Area in HR	Date of Order	EC Date	Valid ity Perio d (Yrs)	From Date	To Date
1	S K mehta through Ashish Mehta	Sayki	Umred	153/5	2.02	03/11/ 2018	07/08/2018	5	03/11/2018	02-11-2023
2	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	Umred	142	4.80	10-12- 2018	11-12-2018	5	10-12-2018	09-12-2023
3	Sanjay Raghunath Tidke	Haladg aon	Umred	30, 57/2	3.97	30/10/ 2018	07/08/2018	5	30/10/2018	29-10-2023
4	Murli Govindra m Wadhvani	Pachga on	Umred	427	1.21	11-12- 2018	25-10-2018	5	11-12-2018	10-12-2023
5	Dilip Madhukar Sambare	Haladg aon	Umred	60	3.90	21-12- 2018	07-08-2018	5	21-12-2018	20-12-2023
6	Tushar Chandraka nt Wekhante	Undri	Umred	71, 69	1.26	20-03- 2019	25-10-2018	5	20-03-2019	19-03-2024
7	Shree Stone Crusher through Dinesh Pagariya	Salaim endha	Umred	37/1	1.74	25-02- 2022		5	25-02-2022	02-10-2023
8	AEC Metals through Sanjay Vijaywargi ya	Sayki	Umred	125/2	1.90	20-03- 2019	25-10-2018	5	20-03-2019	19-03-2024
9	Karan	Pachga	Umred	429	2.06	09-05-	25-10-2018	5	09-05-2019	08-05-2024

	Shyamkumar Jaiswal	on				2019				
10	Abdul Quadir Mo. Ismail	Surgao n	Umred	195	8 Acre	01-07-2014		10	17-09-2014	16-09-2024
11	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	Umred	146, 148	3.00	20-03-2019	06-09-2017	5	20-03-2019	19-03-2024
12	Murli Govindram Wadhvani	Pachga on	Umred	426	2.30	27-11-2018	15-10-2018	5	27-11-2018	26-11-2023
13	M/s Siddheshwar Infra through Shyam Jaiswal	Pachga on	Umred	479/2, 479/3	2.04	17-01-2018	07-08-2018	5	17-01-2018	16-11-2023
14	Vishal Ajay Jaiswani	Haladga on	Umred	81, 83	4.54	03-11-2018	07-08-2018	5	03-11-2018	02-11-2023
15	Suresh Kumar Bhagwandas Kunjwani	Surgao n	Umred	368	3 Acre	08-08-2014		10	10-10-2014	09-10-2024
16	M/s Ashokwan Enterprises through Kalpana Bhende	Surgao n	Umred	368	5.50 Acre	08-07-2014		10	17-09-2014	16-09-2024
17	Manoj Trilokchand Arora	Salaim endha	Umred	27	1.47	08-03-2021	05-01-2021	5	05-01-2021	17-12-2024
18	S K Mehta & Co. through Arvind Suresh Kumar Mehta	Pachga on	Umred	147/1, 147/2, 149	4.90	01-11-2018	25-10-2018	5	01-11-2018	30-10-2023
19	Vinod Ramkaran Mittal	Surgao n	Umred	368	2.02	29-06-2015	15-05-2014	10	24-07-2015	23-07-2025
20	Pramod Ramkaran das Mittal	Surgao n	Umred	341	5 Acre	28-08-2015	07-05-2013	10	10-09-2015	09-09-2025

21	M/s Luky Metal thru Mahesh M. pinjani	undri	umred	72	1.07	25-02-2021	05-01-2021	05-01-2021 to 17-12-2024	25-02-2021	17-12-2024
22	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sardar	Pachgaon	Umred	512/2, 513	1.88	14-11-2018	25-10-2018	5	14-11-2018	13-11-2023
23	Sundar D Khatri	Surgao n	Umred	368	1.15	23.04.2015		10	29-06-2015	28-06-2025
24	Anand Eknath Lokhande	Surgao n	Umred	354/1, 353	1.10	10-10-2014	07-05-2013	10	31-01-2015	30-01-2025
25	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	Umred	64	2.36	02-05-2019	25-10-2018	5	02-05-2019	01-05-2024
26	Ashwin Suresh Kumar Mehta	Paradgaon	Umred	153	4.11	01-11-2018	25-10-2018	5	01-11-2018	30-10-2023
27	Sachin Laxmikant Pitale	Surgao n	Umred	359	1.75	14-11-2018	07-08-2018	5	14-11-2018	13-11-2023
28	Rajesh Shardananand Jaiswal	Khapri (Raja)	Umred	76/1	0.21	01-11-2018	25-10-2018	5	01-11-2018	31-10-2023
29	Sitaram Parasram Kamble	Khapri (Raja)	Umred	76/1	0.80	06-08-2018	13-07-2018	5	06-08-2018	05-08-2023
30	Harcharan Singh Ranjeetsingh Bhatiya	Surgao n	Umred	368	7 Acre	04-08-2014		10	10-10-2014	09-10-2024
31	Bhagwanji bhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhvani , Mayur M Wadhvani	Pachgaon	Umred	521/2	2.66	14/11/2018, 22/02/2019	03-10-2016	5	14/11/2018, 22/02/2019	13-11-2023

32	Rahul Maniram Yadav	Haladgaon	Umred	77/1	2.91	01-12-2018	25-10-2018	5	01-12-2018	30-11-2023
33	Shri Purushottam Bhimji Patel	Pachgaon	Umred	516, 517	1.96	19-05-2020	12-03-2020	5	19-05-2020	17-12-2024
34	Shri Purushottam Bhimji Patel	Pachgaon	Umred	480/2	1.38	17-11-2018	25-10-2018	5	17-11-2018	16-11-2023
35	Omraj Dattuji Jichkar	Uti	Umred	162-1, 162-2	2.68	16-03-2022		3	16-03-2022	06-08-2025
36	Smt Meena Ajay jaiswani	Mohapaa	Umred	43	2.72	22-03-2022		5	22-03-2022	21-03-2027
37	Smt Meena Ajay jaiswani	Mohapaa	Umred	43	2.72	22-03-2022		5	22-03-2022	21-03-2027
38	Shri Lokesh Damodhar Zode	Dhurkheda	Umred	200/1	2.50	10-08-2022		5	10-08-2022	09-08-2027
39	Akash Ghanshyam Gangwani	Khadgaon	Nagpur Rural	234	2.02	30-07-2020	16-01-2016	5	30-07-2020	29-07-2025
40	Murli Govindram Wadhwani	Khadgaon	Nagpur Rural	152	2.71	10-01-2022		5	10-01-2022	10-01-2027
41	Radha Stone Industries through Pawan S Bihani	Salai Godhani	Nagpur Rural	206/1, 206/2	1.21	22-02-2022		5	22-02-2022	07-10-2023
42	Shri Ram Govindram Wadhwani	Khadgaon	Nagpur Rural	171/3	2.44	06-01-2022		5	06-01-2022	08-12-2027
43	Prakash Wamanrao Atkar	Mahurzari	Nagpur Rural	148, 149, 150, 163	3.00	16-11-2018	25-10-2018	5	16-11-2018	15-11-2023
44	Ghanshyam Gurumal Gangwani	Khadgaon	Nagpur Rural	239	1.83	30-07-2020	25-10-2018	5	30-07-2020	29-07-2025

45	Rajesh Ladharam madhwani	Navegaon	Nagpur Rural	37	2.30	31-03-2022		5	31-03-2022	30-03-2027
46	Aditi Stone Industries Through Dilip Rajaram Warjurkar	Navegaon	Nagpur Rural	41	2.12	30-08-2021	06-07-2020	5	30-08-2021	17-12-2024
47	Shri Kulind Sitaram Mankar	Khadgaon	Nagpur Rural	158	1.01	21-09-2021	05-01-2021	5	02-09-2021	17-12-2024
48	Shailesh Shankar patil	Mahurzari	Nagpur Rural	245	2.00	18-08-2021		5	18-08-2021	17-12-2024
49	Shri Mihir Varun Hiranwar	Panjari	Hingna	61/4	1.18	29-09-2022		5	29-09-2022	28-09-2027
50	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	16-07-2019	25-10-2018	5	16-07-2019	15-07-2024
51	Altaf Ahmad Majid Ahmad	Sawangi Aasola	Hingna	67	2.81	29-01-2015		10	29-01-2015	23-02-2025
52	Ashish Anand Durugkar	Kohla	Hingna	6/1	1.47	20-03-2019	25-10-2018	5	20-03-2019	19-03-2024
53	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	Hingna	68	2.00	15-05-2015		10	28-08-2015	27-08-2025
54	Kailash Pandurang Thakre	Panjari	Hingna	68	2.00	15-05-2015		10	28-08-2015	27-08-2025
55	Mayuresh Mukund Hardas	Haladgaon	Hingna	146	5 Acre	26-09-2013		10	05-10-2013	04-10-2023
56	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	1.20	31-07-2020	19-12-2014	5	31-07-2020	21-12-2023
57	Radheshyam	Haladgaon	Hingna	146	10 Acre	05-10-2013		10	18-10-2013	17-10-2023

	Durugkar									
58	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
59	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
60	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	Hingna	186	4.00	09-10-2013		10	17-09-2014	16-09-2024
61	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu-Uddeshiya Sewa	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024

	Sahakari Sanstha Maryadit. (SR-3)									
62	Sunil Borikar, President, MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024
63	Sunil Borikar, President, MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	Hingna	186	4.00	08-07-2014		10	08-07-2014	07-07-2024
64	Ashish Anand Durugkar	Haladgaon	Hingna	146	5 Acre	23-07-2014	07-05-2013	10	19-08-2014	18-08-2024
65	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	Hingna	146	10 Acre	04-08-2014	07-05-2013	10	17-09-2014	16-09-2024
66	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	Hingna	186	4.00	09-10-2013	13-05-2013	10	10-10-2014	09-10-2024
67	President, Cargo Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	Hingna	186	4.00	09-10-2013	13-05-2013	10	10-10-2014	09-10-2024

68	President, Cargo Prakalpgrat Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawan gi (D)	Hingna	186	4.00	09-10- 2013	13-05-2013	10	10-10-2014	09-10-2024
69	PBA Infrastruct ure TRANSFER to Drishti Structural Engineerin g Pvt. Ltd. Through Sunil Wadhawa n	Sawan gi (D)	Hingna	194/3, 194/5	2.83	31/01/ 2019, 30/07/ 2019	07-08-2018	5	31/01/2019, 30/07/2019	30-01-2024
70	Rushi Ramesh Agrawal	Metau mri	Hingna	101	3 Acre	24-02- 2015	19-12-2014	10	16-03-2015	15-03-2025
71	Mahesh Arvind Sabne	Haladg aon	Hingna	146	5 Acre	26-09- 2013	07-05-2013	10	26-09-2013	25-09-2023
72	Prashant Anandrao Durugkar	Kohala	Hingna	7	1.92	22-03- 2022		5	22-03-2022	21-03-2027
73	Anil Subhashku mar Agrawal, Smt Haripriya Suresh Malhotra	Singard ip (Rithi)	Hingna	86, 87, 88, 89, 90	3.36	30-07- 2020	27-03-2020	5	23-11-2020	22-10-2025
74	Manikrao Dabre TRANSFER to Rahul M Dabre	Singard ip (Rithi)	Hingna	64	3.97	06-11- 2018	25-10-2018	5	06-11-2018	05-11-2023
75	Kamal R. Agrawal	Mhasal a	Hingna	125,126	1.97	15-02- 2021	05-01-2021	17/1 2/20 24	05-01-2021	17-12-2024
76	Tushar Madan Umathe	Chhatr apur	Saoner	85/1	1.87	15-06- 2021	23-12-2020	5	26-04-2021	25-04-2026
77	M/s DD Associates	Chhatr apur	Saoner	74/3	1.89	21-07- 2020	10-06-2020	5	21-07-2020	20-07-2025

	through Nilesh Ravindra Damle									
78	Pravin Sukhdev Bhaiswar	Borgao n (Jangli)	Saoner	100, 101	4.30	17/05/ 2019	25-10-2018	5	17/05/2019	16-05-2024
79	Ankit Constructi no Shri Kishor Kanhere	Khapri (Uma)	Kalme shwar	84/2	3.58	02-12- 2021	29-04-2021	5	02-12-2021	17-12-2024
80	Vijaykuma r Chetumal Kewalram ani	Khapri (Uma)	Kalme shwar	93/1	0.84	15-09- 2014	13-05-2013	10	01-12-2014	30-11-2024
81	Vijay Ramchand ra Kukreja	Khapri (Uma)	Kalme shwar	90	1.75	18-03- 2019	25-10-2018	5	18-03-2019	17-03-2024
82	Shri Dnyanash war Shankarra o Nimbalkar	Junewa ni (Panay a)	Kalme shwar	45	2.83	30-08- 2022		5	30-08-2022	29-03-2027
83	M/s Om Saibaba Constructo n Through Ajay G Batra	Kawad asi (Barad)	Bhiwa pur	113	4.00	11-07- 2020	31-03-2020	5	11-07-2020	10-07-2025
84	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawad asi (Barad)	Bhiwa pur	43/1, 42/2, 42/3	4.49	11-07- 2020	31-03-2020	5	11-07-2020	10-07-2025
85	Moh. Sajid Shafik Ahamad Ansari	Kaudas i (Barad)	Bhiwa pur	115, 116	3.24	10-08- 2022		5	10-08-2022	09-08-2027
86	Shri Ajay Gopaldas Jaswani	Charga on (Ghota di	Bhiwa pur	27, 29/2, 29/3	1.75	10-08- 2022		5	10-08-2022	09-08-2027
87	Shri Shrawan Vitthal Lamsonge	Charga on (Ghota di	Bhiwa pur	105/3	2.00	10-08- 2022		5	10-08-2022	09-08-2027

Chapter 10
DETAILS OF ROYALTY & REVENUE RECEIVED

The details of Royalty collected in lakhs are as follows.

Sr. No.	Year	Target	Total Collection (Rs in Lakhs)
1	2023-2024	15583.00	5590.50 (Till July)
2	2022-2023	13913.00	15415.96
3	2021-2022	20978.00	15991.85
4	2020-2021	20700.00	18398.80
5	2019-2020	13800.00	13984.28
6	2018-2019	13500.00	15067.87
7	2017-2018	12000.00	13513.07

Table10.1: Details of royalty collected

Chapter 11
DETAILS OF PRODUCTION OF SAND OR BAJRI OR
MINOR MINERAL

In Nagpur district number of development project like Railway, Metro Rail, Ring Roads, Outer ring roads, Samruddhi Express Highway and so on are going on, which requires a large quantity of minor mineral - stone (metal), murrom, soil, sand; for construction purpose. This lead to increasing demand for the minor minerals which can be easily verified from the royalty collected from during last five years.

The details of production are as follows.

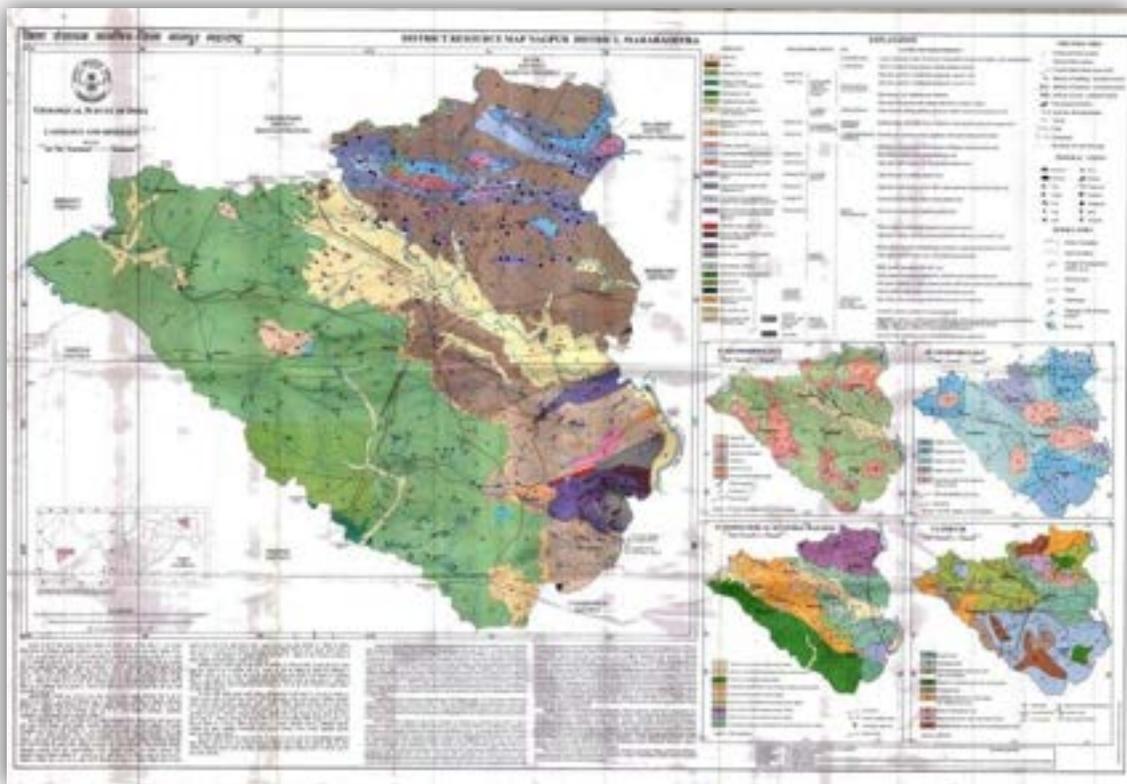
Table 11.1: Details of production of minor mineral:

Sr No	Year	Production (Brass)	Dispatch Quantity
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

Table 11.2 : Details of Production of Sand

Sr no	Year	Auctioned Sand Ghats	Proposed Quantity	Dispatched Quantity	Remark
1	2022-2023	40	314109	57328.20	
2	2021-2022	1	7420	7420	
3	2020-2021	20	174673	172373	
4	2019-2020	0	0	0	Sand Ghat not auctioned due to PIL 67/2017
5	2018-2019	11	79742	79742	
6	2017-2018	0	0	0	Sang Ghat not auctioned due to PIL 67/2017
7	2016-2017	31	213883	213883	

Chapter 12
MINERAL MAP OF THE DISTRICT



Source: Geological Survey of India

Chapter 13
LIST OF LETTER OF INTENT (LOI) HOLDERS IN NAGPUR
DISTRICT

Sr.No	Name	Village Name	Taluka	Survey No.	Hectore	LOI issue Date
1	Nandkishor Ramteke	Singardeep Rithi	Hingna	25	1.41	21/7/2018
2	Jyoti Ramteke	Singardeep Rithi	Hingna	26	1.41	21/7/2018
3	Neeti Agrawal	Singardeep Rithi	Hingna	138/1,2,3	4.69	27/8/2018
4	Shyam Wahane	Singardeep Rithi	Hingna	94	1.43	16/3/2019
5	Rrushiraj Infra C/o Tarun Hiranwar	Savangi	Hingna	190	1.14	8/11/2019
6	Kahid Johar Ibrahim Gondiwala	Kohla	Hingna	6/2	3.23	11/5/2020
7	Rahul Yadao	Haldgaon	Umred	77/1	2.91	3/9/2018
8	Rahul Patel	Uti	Umred	97/1	2.60	3/9/2018
9	Rambhau Musle	Uti	Umred	95/2, 95/3	3.25	11/2/2019
10	Subhash Grovar	Sukli Pai.	Umred	89/2, 89/3	3.25	11/2/2019
11	Chirag Jain	Pardgaon	Umred	150/2, 150/3	1.70	11/2/2019
12	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	158/2, 158/3 158/6	4.93	2/7/2019
13	Pawanputra Concrete C/o Amit Taori	Sayki	Umred	147/1,2,3,4	4.82	8/7/2019
14	Pawanputra Concrete C/o Yogesh Taori	Parsodi (Uti)	Umred	131/1,2,3,4,5	4.91	8/7/2019
15	Purshottam Patel	Umred	Umred	516, 517	1.96	13/9/2019

16	Manish Mishra	Sayki	Umred	163/1	2.33	20/9/2019
17	Mayank Mishra	Sayki	Umred	163/2	2.32	21/9/2019
18	Vinod Choukase	Masalkund	Umred	20/1	3.63	30/9/2019
19	Yogesh Taori	Kawdsi (Barad)	Umred	28/1, 28/2, 28/3	4.98	9/10/2019
20	P.L.Agraval C/o Paras Agraval	Sayki	Umred	140/4, 141, 142	5.00	9/10/2019
21	Tekchand Gangwani	Pachgaon	Umred	546/6, 546/7	3.83	13/12/2019
22	Vandna stone crusher C/o Gaorav Jichkar	Uti	Umred	144	1.29	6/1/2020
23	Vandna stone crusher C/o Omraj Jichkar	Uti	Umred	145	1.70	6/1/2020
24	Jash Techno Treders	Bhivapur (Uti)	Umred	67	3.07	26/2/2020
25	Rahul Patel	Uti	Umred	97/1, 97/2	3.00	24/6/2020
26	Shoiab Shadikbhai Vali	Pitesur	Nagpur Gramin	43	3.77	11/2/2019
27	Pankaj Khadse	Salaigodhani	Nagpur Gramin	184/1	2.73	28/2/2019
28	Amir Siyab Vali	Pitesur	Nagpur Gramin	54	1.74	16/3/2019
29	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	206/1/1	1.22	29/11/2019
30	Shreedatt stone C/o Murlidhar Amdhare	Salaigodhani	Nagpur Gramin	184/2	1.21	6/1/2020
31	Kulind Mankar	Khadgaon	Nagpur Gramin	158	1.01	11/5/2020

32	Sarla Hiranwar	Mahurjhari	Nagpur Gramin	238/2	2.02	17/6/2020
33	Raja Patel	Borgaon Jan.	Saoner	133/2	1.80	4/8/2018
34	Dric Infra. C/o Nilima Dahake	Borgaon Jan.	Saoner	120/2	1.30	24/12/2019
35	Om Saibaba C/o Ajay Batra	Kavdsi (Barad)	Bhivapur	113	4.00	9/10/2019
36	B.V.M.Crusher LTD	Chargaon (go)	Bhivapur	35/1	4.28	6/3/2020
37	Bediwale Enterprises Pvt. Ltd.	Kavdsi (Barad)	Bhivapur	107/2 ँ	1.62	29/7/2020
38	Shyam Vadhwani	Khapri (Uma)	Kalmeshwar	83/2	0.89	11/11/2019
39	Harish Kevalramani	Khapri (Uma)	Kalmeshwar	55/7	0.81	10/2/2020
40	Sandeep Surajbhan Gupta	Pachgaon	Umred	570/2	1.74	10/13/2020
41	Dilip Madhukar Sambare	Haladgaon	Umred	62, 63, 208	3.63	10/13/2020
42	Block Rock C/o Ramandeep Bindra	Haladgaon	Umred	86/1, 88, 89/1, 89/3 91/1, 91/2, 91/3, 210/211/212/1, 210/211/212/2	16.40	10/13/2020
43	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	102 (Part) 104, 105, 106/2, 107, 108,111, 112/1, 112/2, 113	14.80	12/9/2020
44	Sandesh Ajay Jaiswani and Vishal Ajay Jaiswani	Haladgaon	Umred	59/1, 59/2, 59/3, 59/5, 81, 82/1, 82/2, 83, 84, 86/2, 89/2, 89/4	19.12	12/9/2020
45	Partha Shyam Jaiswal and Karan Shyam Jaiswal	Masalkund	Umred	35, 36, 41	12.77	1/25/2021

46	Anil Sadashiv Vat	Salaimendha	Umred	8, 9	9.98	1/25/2021
47	Irshan Majid Shete	Metaumri	Hingna	86/2	4.00	2/8/2021
48	Tushar Madanrao Umathe	Chatrapur	Saoner	85/1	1.87	2/8/2021
49	Prashant Aanandrao Durugkar	Kohla	Hingna	7	1.92	2/25/2021
50	Mesars. Paras Stone Industries Pro. Sunil Ns. Mishra	Singardeep Rithi	Hingna	24/1	4.73	2/24/2021
51	Habib Rhib Beg	Mahurjhari	Nagpur Gramin	162/3	1.41	3/12/2021
52	Nitin Kedar Kamble	Salaimendha	Umred	57	2.02	5/27/2021
53	Praful Prakash Dewalkar	Uti	Umred	131, 132, 133, 134, 135/1, 137, 138, 139	7.12	5/28/2021
54	P.L.Agrawal	Sayki	Umred	138, 140/3, 140/4, 141, 142	4.00	5/28/2021
55	Dhyaneshwar Shankar Nimbalkar	Junevani	Saoner	45	2.83	6/11/2021
56	Mihir Tarun Hiranwar	Panjari	Saoner	61/4	1.18	7/2/2021
57	Omprakash Dwarkadas Gurubakshani	Pachgaon	Umred	495/1	2.02	7/7/2021
58	Rohit Sonbaji Musle	Chatrapur	Umred	208, 209, 211	2.31	7/7/2021
59	Ram Govindrao Wadhwani	Kadgaon	Saoner	171/3	2.44	8/11/2021
60	Murli Govindram Wadhwani	Kadgaon	Nagpur Gramin	152	2.71	8/11/2021
61	Mayank Ramprakash Mishra	Sayki	Umred	163/1, 163/2	4.65	8/31/2021
62	Rajesh Ldharam Madhwani	Navegaon	Nagpur Gramin	37	2.30	8/30/2021
63	Khemraj Mate & Dhanraj	Chargaon (Gotadi)	Bhiwapur	35/1	3.47 out of 4.28	07/20/2022

	Mate					
64	Amol Prabhakar Pillare	Salaimendha	Umred	18/2	1.20	29/07/2022
65	Shahid Habib Baig and three others	Mahurzhar i	Nagpur Rural	256 257	2.00 ha out of 5.01	29/08/2022
66	Vinit Sanjar Agrawal	Metmangrud (Ri)	Umred	105,104,103,102,101,100,99,98	3.84 out of 7.19	01/09/2022
67	Ashok Pandit Shirsagar	Tandurwani	Kamptee	74/1	1.36	28/07/2022
68	Preeti Vinit Agrawal	Mohpa	Umred	45 A	1.80	08/09/2022
69	Mihir Tarun Hiranwar	Panjara	Hingana	61/1	1.18	02/06/2022
70	Basil Paul Gorge	Durkheda	Umred	208	2.00 ha out of 3.64 ha	17/08/2022
71	M/s jagrutshwar Metals Pvt Ltd	Singardip (Rithi)	Hingana	137/3	1.21 ha	17/08/2022
72	Vishal Ajay Jaiswani ,Sandesh Ajay Jaiswani and Ajay Jaiswani	Godhani	Umred	72/1, 72/2, 72/3, 72/4 and 72/5	4.00 out of 8.51	17/08/2022
73	Meena Ajay Jaiswani	Metmangru	Umred	92/2 and 94	2.65 out of 2.90	17/08/2022
74	Ajay Shyamlal Bachwani	Metmangru	Umred	46,47 &48	4.95 Ha out of 9.15 Ha	08/02/2022
75	M/s Pruthvi Metals & Metals by Partner Sunil Shatrugan Mishra	Singardeep (Rithi)	Hingana	74,75,76	4.84 Ha	20/03/2023

Chapter 14
TOTAL MINERAL RESERVE AVAILABEL IN THE
DISTRICT

Minerals	Quantity (Metric Ton)
Basalt	7515280.50
Murrum	2890492.50
Soil	1156197.00
Sand (For year 2022-2023)	2.62 Mill. Tonnes

CHAPTER 15

QUALITY GRADE OF MINERAL

The miner mineral depots in the District are quite good in respect of quality and quantity. The method of mining should be adopted Opencast Mining Method for digging, excavation and removal of stone with the help of traditional drilling and blasting methods.

Basalt stone is used as boulders of different sizes for dam construction, embankment work etc. After crushing into different sizes, it can be used in construction and road projects. Fine grained compact basalt and Medium grained sandstone type of aggregate is available in the district so that the quality of stone available in Nagpur district is building grade stone confirming IS standards IS:7779 (Part II/Sec 3) of 1979 and also in terms of strength it is confirming IS standards IS: 1121 (Part 2 to 4) 1974

CHAPTER 16

USE OF THE MINERAL

Basalt:

Basalt is used for a wide variety of purposes. It is most commonly crushed for use as an aggregate in construction projects. Crushed basalt is used for the road base, concrete aggregate, asphalt pavement aggregate, railroad ballast, filter stone in drain fields, and may have other purposes. Basalt is also cut into dimension stone. Thin slabs of basalt are cut and sometimes polished for use as floor tiles, building veneer, monuments, and other stone objects.

Moorum:

Moorum is also a type of soil, mostly used for construction purposes. Generally, it is deep brown or red in color. Moorum is used in plinth filling, road pavements, backfilling in trenches, footing pits etc. It is a suitable type of soil in the construction field, since it does not contain any organic matters and can be compacted easily forming a hard surface.

Ordinary Sand/ River Sand

Sand is a very useful material in all types of construction activities. It is mainly used as one of the important items in concrete mix and used for plastering work.

CHAPTER 17
DEMAND AND SUPPLY OF THE MINERAL:

Basalts are the ultrabasic igneous rocks which are an important component in construction of any kind. These are used as building stone, in railway ballast and most important is used in concrete as important raw material where they are available in abundance. Along with the increasing need of developing infrastructure there is an increase in demands of basalt. As it has high compressive strength, high shear strength, it proves to be a compact, stable and sound rock which make difficult for anything to replace. The rock might be omnipresent all over the Maharashtra but a compact, un-weathered rock is present in very limited quantities.

Table: Demand and Supply

Sr.No.	Year	Production (Brass)	Dispatched Quantity (Brass)
1	2022-2023	2752850.00	2477565.00
2	2021-2022	3051987.55	2749538.333
3	2020-2021	5105667.00	4599700.00
4	2019-2020	3880637.7	3496070.00
5	2018-2019	4181333.925	3766967.5
6	2017-2018	3749876.925	3378267.5

CHAPTER 19
DETAILS OF THE AREA OF WHERE THERE IS A CLUSTER
OF MINING LEASE

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pachgaon									
1	Priya Pradip Kolhe	Pachgaon	510, 511	1.60	5	29-11-2017	28-11-2022	23-05-2018	
2	Karan Shyamkumar Jaiswal	Pachgaon	429	2.06	5	09-05-2019	08-05-2024	17-06-2019	
3	M/s D C Gurubakshani	Pachgaon	494/1, 494/2	2.50	5	01-06-2017	31-05-2022	13-07-2017	
4	Murli Govindram Wadhvani	Pachgaon	426	2.30	5	27-11-2018	26-11-2023	15-03-2019	
5	M/s Siddheshwar Infra through Shyam Jaiswal	Pachgaon	479/2, 479/3	2.04	5	17-01-2018	16-11-2023	06-02-2019	
6	S K Mehta & Co. through Arvind Sureshkumar Mehta	Pachgaon	147/1, 147/2, 149	5.16	5	01-11-2018	30-10-2023	19-11-2018	
7	Santoshkumar Tekchand Gangwani	Pachgaon	505	2.13	5	02-12-2016	01-12-2021	08-12-2016	
8	Shri Vyankatesh Casting Pvt Ltd through Jitendra Sarda	Pachgaon	512/2, 513	1.88	5	14-11-2018	13-11-2023	26-11-2018	
9	Khushal Bapurao Bhojar	Pachgaon	450/3	1.50	5	06-12-2016	05-12-2021	21-12-2016	
10	Harinarayan Shyamsundar Gupta	Pachgaon	351	3.08	5	13-12-2016	12-12-2021	17-02-2016	
11	M/s Siddheshwar Infrastructure through Shyam L Jaiswal	Pachgaon	480/1, 480/4	4.25	5	22-11-2016	21-11-2021	08-12-2016	
12	Tekchand Gurumal Gangwani	Pachgaon	540, 546/4, 535, 536/1	4.55	5	15-03-2017	14-03-2022	27-03-2017	

13	Vyankateshwara Basalt Corporaton TRANSFER to Anil Jayram Panchbudhe	Pachgaon	523/2, 523/3	1.60	5	20/04/2017, 22/06/2019	19-04-2022	09-10-2020	
14	Bhagwanjibhai Dhanjibhai Patel TRANSFER to Shyamlal G Wadhvani, Mayur M Wadhvani	Pachgaon	521/2	2.66	5	14/11/2018, 22/02/2019	13-11-2023	29-12-2018	
15	Shri Purushottam Bhimji Patel	Pachgaon	516, 517	1.96	5	19-05-2020	17-12-2024	24-06-2020	
16	Karan Shyamkumar Jaiswal	Pachgaon	480/2	1.38	5	17-11-2018	16-11-2023	26-03-2019	
17	Murli Govindram Wadhvani	Pachgaon	427	1.21	5	11-12-2018	10-12-2023	15-03-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sayaki									
1	S K mehta through Ashish Mehta	Sayki	153/5	2.02	5	03/11/2018	02-11-2023		
2	AEC Metals through Sanjay Vijaywargiya	Sayki	125/2	1.90	5	20-03-2019	19-03-2024	18-09-2019	
3	Contero Minerals Pvt Ltd Through Swapnil Bhende	Sayki	146, 148	4.82	5	20-03-2019	19-03-2024	04-10-2019	
4	M/s AEC Minerals through Shailabh Radheshyam Vijaywargiya	Sayki	124/1, 124/2	3.40	5	20-03-2017	19-03-2022	27-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Sanjay Raghunath Tidke	Haladgaon	30, 57/2	3.97	5	30/10/2018	29-10-2023	10-12-2018	
2	Dilip Madhukar Sambare	Haladgaon	60	3.90	5	21-12-2018	20-12-2023	16-01-2019	
3	Black Rock Crusher through Ramandip Bindra	Haladgaon	210, 211, 212	5.68	5	02-05-2018	01-05-2023	05-06-2018	
4	Vishal Ajay Jaiswani	Haladgaon	81, 83	7.04	5	03-11-2018	02-11-2023	17-12-2018	
5	Rahul Maniram Yadav	Haladgaon	77/1	2.91	5	01-12-2018	30-11-2023	30-01-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Haladgaon									
1	Mayuresh Mukund Hardas	Haladgaon	146	5 Acre	10	05-10-2013	04-10-2023	19-11-2007	Govt
2	Radheshyam Durugkar	Haladgaon	146	10 Acre	10	18-10-2013	17-10-2023	08-10-2013	Govt
3	Ashish Anand Durugkar	Haladgaon	146	5 Acre	10	19-08-2014	18-08-2024	25-07-2014	Govt
4	Balaji Buildcon through Sanjay C Heliwal	Haladgaon	146	10 Acre	10	17-09-2014	16-09-2024		Govt
5	Mahesh Arvind Sabne	Haladgaon	146	49.85	10	26-09-2013	25-09-2023	26-09-2013	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Undri									
1	M/s Bestone minrals and pricost solution through Ullas Pagariya	Undri	142	14.89	5	10-12-2018	09-12-2023	10-12-2018	
2	Tushar Chandrakant Wekhande	Undri	71, 69	1.26	5	20-03-2019	19-03-2024	03-06-2019	
3	M/s Luky Metal thru	undri	72	1.07	05-01-2021	25-02-2021	17-12-2024	07-07-2021	

	Mahesh M. pinjani				to17-12- 2024				
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Surgaon									
1	Nagsen Zinger Lokhande	Surgaon	192	1.00	EC 22/04/2023	23-04-2019	22-04-2023	03-05-2019	
2	Sunil Gangadhar Kimmatkar	Surgaon	354/1	29.91	10	28-05-2013	27-05-2023	06-05-2013	Govt
3	Sukhdyal Lalchand Arora	Surgaon	354/1	29.91	EC 29/11/2022	02-02-2013	11-02-2023	05-02-2013	Govt
4	Prachi Enterprises, Pradip Prakash Rupani	Surgaon	368	86.77	10	25-06-2013	24-06-2023	29-05-2013	Govt
5	Nitin Krushnarao Vaidya	Surgaon	354	29.91	10	15-02-2013	14-02-2023		Govt
6	Abdul Quadir Mo. Ismail	Surgaon	195	12.55	10	17-09-2014	16-09-2024	15-07-2014	Govt
7	Sureshkumar Bhagwandas Kunjwani	Surgaon	368	86.77	10	10-10-2014	09-10-2024	11-08-2014	Govt
8	M/s Ashokwan Enterprises through Kalpana Bhende	Surgaon	368	86.77	10	17-09-2014	16-09-2024	20-08-2014	Govt
9	Vinod Ramkaran Mittal	Surgaon	368	86.77	10	24-07-2015	23-07-2025		Govt
10	Pramod Ramkarandas Mittal	Surgaon	341	23.74	10	10-09-2015	09-09-2025	28-08-2015	Govt
11	Sundar D Khatri	Surgaon	368	86.77	10	29-06-2015	28-06-2025	30-04-2015	Govt
12	Anand Eknath Lokhande	Surgaon	354/1, 353	30.27	10	31-01-2015	30-01-2025	17-11-2014	Govt
12	Sachin Laxmikant Pitale	Surgaon	359	1.75	5	14-11-2018	13-11-2023	20-12-2018	
13	Nitin Krushnarao Vaidya	Surgaon	354		10	15-02-2013	14-02-2023		
14	N D Enterprises through Nikunj D Shah	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
15	S N Enterprises through Suresh Kungwani	Surgaon	368	86.77	10	29-09-2011	28-09-2021		Govt
16	Harcharansingh Ranjeetsingh Bhatiya	Surgaon	368	86.77	10	10-10-2014	09-10-2024	19-08-2014	Govt
17	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	30-03-2019	29-03-2023	08-03-2013	Govt
18	Shri Altaf Ahmad	Surgaon	354/1	29.91	10	29-05-2013	28-05-	08-03-2013	Govt

							2023		
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salaimendha									
1	Shree Stone Crusher through Dinesh Pagariya	Salaimendha	37/1	2.06	5	08-11-2016	07-11-2021	08-11-2016	
2	Krishna Stone Crusher Through Rupesh Khat	Salaimendha	66, 67, 68, 71, 72	3.92	5	02-12-2016	01-12-2021	19-01-2017	
3	Shri Gajanan Stone ind. Swati Ravikumar Pillare	Salaimenda	18/1	1.20	5	20-03-2017	19-03-2022	31-03-2017	
4	Manoj Trilokchand Arora	Salaimendha	27	1.47	5	05-01-2021	17-12-2024	06-04-2021	
5	Pawankumar Satyanarayan Bihani	Salaimendha	30	1.57	5	05-12-2017	04-12-2022	14-12-2017	
6	Gajanan Stone Industries through Ravikumar Prabhakar Pillare	Salaimendha	78/1	1.20	5	20-03-2017	19-03-2022		
7	Devendra Suryabhanji Shirbhate	Salaimendha	37/2	2.00	5	11-01-2017	10-01-2022	11-01-2017	
8	Vinod Gulabrao Pillare	Salaimendha	16/1	1.01	5	07-10-2017	06-10-2022	23-10-2017	
9	Sweta Stone Through Shashikant Awaghate	Salaimendha	29/2-1	1.00	5	29-11-2017	28-11-2022	16-01-2018	
10	Amol Prabhakar Pillare	Salaimendha	18/2	1.20	5	07-12-2017	06-12-2022	06-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi (D)									
1	Pramod Shriram Dehankar, President, Cargo MIHAN Prkalpgrast Berojgar Bahu-Uddeshiya Sewa Sahakari Sanstha (SR-8)	Sawangi (D)	186	4.00	10	17-09-2014	16-09-2024	17-04-2014	Govt

2	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-9)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
3	Pramod Shriram Dehankar, President, Cargo MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-10)	Sawangi (D)	186	4.00	10	17-09-2014	16- 09- 2024	17-04-2014	Govt
4	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-3)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
5	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-4)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
6	Sunil Borikar, President, MIHAN Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha Maryadit. (SR-5)	Sawangi (D)	186	4.00	10	08-07-2014	07- 07- 2024		Govt
7	Keshav Dhanraj Sontakke (SR-17)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt
8	President, Cargo Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-18)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt
9	President, Cargo Prakalpgrast Berojgar Bahu- Uddeshiya Sewa Sahakari Sanstha (SR-19)	Sawangi (D)	186	4.00	10	10-10-2014	09- 10- 2024		Govt

10	PBA Infrastructure TRANSFER to Drishti Structural Engineering Pvt. Ltd. Through Sunil Wadhawan	Sawangi (D)	194/3, 194/5	2.83	5	31/01/2019, 30/07/2019	30-01-2024	27-11-2020	
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Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khadgaon									
1	Akash Ghanshyam Gangwani	Khadgaon	234	2.02	5	30-07-2020	29-07-2025	22-02-2016	
2	Murli Govindram Wadhvani	Khadgaon	152	2.71	5	09-12-2016	08-12-2021	29-12-2016	
3	Rushiraj Infra through Prop Tarun R Hiranwar	Khadgaon	171/2	1.78	5	20-04-2017	19-04-2022	04-05-2017	
4	Mohini Vijay Naik	Khadgaon	225	1.56	5	14-12-2017	13-12-2022	06-06-2018	
5	Shri Ram Govindram Wadhvani	Khadgaon	171/3	2.44	5	09-12-2016	08-12-2021	29-12-2016	
6	Ghanshyam Gurumal Gangwani	Khadgaon	239	1.83	5	30-07-2020	29-07-2025		

Sr. No.	Name of the Lease Holder	Village	Tahsil	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Singardip (Rithi)										
1	Harish Dashrath Fulsunge	Singardip (Rithi)	Hingna	96	1.43	5	09-03-2018	08-03-2023	23-05-2018	
2	Rajesh Ramkisan Nikhare	Singardip (Rithi)	Hingna	137/1	1.62	5	22-11-2017	21-11-2022	15-12-2017	

3	Niti Prashant Agrawal TRANSFER TO Kamalnayan Concrete through Ramniwas Gupta	Singardip (Rithi)	Hingna	138/1, 138/2, 138/3	4.69	5	16-07-2019	15-07-2024	29-08-2019	
4	Mukesh Shyamlal Lulla	Singardip (Rithi)	Hingna	97	2.72	5	31-07-2020	21-12-2023	27-10-2020	
5	M/s Jagruteshwar Metals Pvt. Ltd. Through Laxmi C Kapse	Singardip (Rithi)	Hingna	136	2.07	5	26-10-2017	25-10-2022	30-11-2017	Govt
6	Anil Subhashkumar Agrawal, Smt Haripriya Suresh Malhotra	Singardip (Rithi)	Hingna	86, 87, 88, 89, 90	6.51	5	23-11-2020	22-10-2025	23-11-2020	
7	M/s Jagruteshwar Metals Pvt. Ltd. Through Vaishali P Kapse	Singardip (Rithi)	Hingna	148	2.22	5	25-01-2017	24-01-2022	25-01-2017	
8	Manikrao Dabre TRANSFER to Rahul M Dabre	Singardip (Rithi)	Hingna	64	3.97	5	06-11-2018	05-11-2023	14-12-2018	
9	Rank Silicon Industries Pvt Ltd through Sayyappa Raju	Singardip (Rithi)	Hingna	92	9.80	5	03-05-2018	02-05-2023	21-05-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Agreement Date	Land Govt/Pvt
Khapri (Raja)									
1	Rajesh Shardanand Jaiswal	Khapri (Raja)	76/1	1.45	5	01-11-2018	31-10-2023	26-11-2018	Govt
2	Sitaram Parasram Kamble	Khapri (Raja)	76/1	2.02	5	06-08-2018	05-08-2023	05-12-2018	Govt
3	M/s B R Aakre	Khapri (Raja)	79	3.94	5	30-01-2018	29-01-2023	03-12-2018	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mahurzari									
1	Prakash Wamanrao Atkar	Mahurzari	148, 149, 150, 163	7.82	5	16-11-2018	15-11-2023		
2	Smt. Sultana Habib Baig	Mahurzari	148, 149, 150, 163	1.01	5	06-07-2021	11-05-2023	30-07-2021	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Bhiwapur (Ooty)									
1	Shri Agrawal Minerals through Sushilkumar Agrawal	Bhiwapur (Ooty)	64	2.36	5	02-05-2019	01-05-2024	10-06-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Paradgaon									
1	Ashwin Sureshkumar Mehta	Paradgaon	153	4.62	5	01-11-2018	30-10-2023	19-11-2018	

Sr. No.	Name of the Lease Holder	Mouza	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Lawa									
1	Rushiraj Infra through Tarun Rushiraj Hiranwar	Lawa	229/2	1.77	5	23-11-2016	22-11-2021	09-12-2016	
2	Tulsabai Ganesh Hiranwar	Lawa	236	1.91	5	21-01-2017	20-01-2022	21-01-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Santoshkumar Yaduka	Navegaon	21/1	2.02	5	01-08-2017	31-07-2022	09-08-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Pitesur									
1	Zoeb Sadikbhai Wali & Others	Pitesur	43	3.77	5	20-08-2020	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khapri (Uma)									
1	Vijaykumar Chetumal Kewalramani	Khapri (Uma)	93/1	0.84	10	01-12-2014	30-11-2024	29-09-2014	
2	M/s Sawala Traders through Nikunj D Shah	Khapri (Uma)	87/1	3.00	5	16-11-2016	15-11-2021		
3	Sureshkumar R Jagyasi	Khapri (Uma)	91	3.19	5	01-04-2017	31-03-2022	20-04-2017	
4	Ram Govindram Wadhvani	Khapri (Uma)	55/6	1.21	5	02-05-2018	01-05-2023	01-06-2018	
5	Vijay Ramchandra Kukreja	Khapri (Uma)	90	1.75	5	18-03-2019	17-03-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Chhatrapur									
1	Ashok Hiran Umathe	Chhatrapur	218	2.47	5	27-09-2017	26-09-2022		
2	Tushar Madan Umathe	Chhatrapur	85/1	1.87	5	26-04-2021	25-04-2026	30-06-2021	
3	Umesh Nagorao Nimje	Chhatrapur	197	1.07	5	01-01-2018	31-12-2022		
4	Sudhakar Bapurao Bandhekar	Chhatrapur	213	2.00	5	17-03-2016	16-09-2021		

5	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	74/3	1.89	5	21-07-2020	20-07-2025		
6	M/s D D Associates through Nilesh Ravindra Dande	Chhatrapur	204, 207	3.14	5	05-06-2020	05-05-2023	25-06-2020	
7	ketankumar arunkumar singh	Chhatrapur	72/1,72/2	3.72	05-05-2023	27-07-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Panjari									
1	Shri Anil Balkisan Hiranwar	Panjari	61/2	1.18	5	27-09-2017	26-09-2022	02-11-2017	
2	M K Builders Pro. Manohar Sukhdyal Arora	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
3	Kailash Pandurang Thakre	Panjari	68	2.00	10	28-08-2015	27-08-2025		Govt
4	Madhu Industries Through Shri Subhashchandra Agrawal	Panjari	55/2, 55/3	2.96	05/05/2023	29-01-2021	05-05-2023		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mhasala									
1	Modern Minerals Industries through Mo. Asad Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
2	Quality Minerals through Mo. Samir Rangunwala	Mhasala	109/1	10.16	5	28-11-2017	27-11-2022	20-01-2018	
3	Kamal R. Agrawal	Mhasala	125,126	1.97	17/12/2024	05-01-2021	17-12-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kawadasi (Barad)									
1	M/s Om Saibaba Constructon Through Ajay G Batra	Kawadasi (Barad)	113	5.47	5	11-07-2020	10-07-2025	20-08-2020	
2	Om Stone Crusher through Subhash Natthuji Dewalkar	Kawadasi (Barad)	43/1, 42/2, 42/3	4.49	5	11-07-2020	10-07-2025	24-08-2020	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Salai Godhani									
1	Arvind Janrao Gajbhiye	Salai Godhani	186/2, 186/3	2.59	5	16-12-2016	15-12-2021		
2	Radha Stone Industries through Pawan S Bihani	Salai Godhani	206/1, 206/2	1.21	5	06-12-2016	05-12-2021	13-12-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Navegaon									
1	Vijay Kumar Onkarmal Yadukar	Navegaon	45/1	1.78	5	05-06-2017	04-06-2022	09-08-2017	
2	Nayan Jamnadas Makdiya	Navegaon	30/7, 30/9	2.00	5	19-11-2016	18-11-2021	12-09-2016	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Sawangi Aasola									
1	Altaf Ahmad Majid Ahmad	Sawangi Aasola	67	2.81	10	29-01-2015	23-02-2025	22-02-2025	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Kohla									
1	Ashish Anand Durugkar	Kohla	6/1	1.47	5	20-03-2019	19-03-2024	06-05-2019	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Khairi Khurd									
1	Shri Sana Stone Crusher Pvt Ltd. Through Mo. Akram Sheikh	Khairi Khurd	86/1	2.83	5	20-03-2017	19-03-2022	21-03-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	Lease Period From Date	To Date	Date of Registration	Land Govt/Pvt
Mohgaon Zilpi									
1	Nandkishor Burade	Mohgaon Zilpi	28/2	1.80	5	01-02-2017	31-01-2022	01-02-2017	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Mandav Ghorad									
1	Saikrupa Stone Crusher (LLP) through Ashish Tonde	Mandav Ghorad	161/2, 162	2.01	5	20-12-2017	19-12-2022	15-01-2018	

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Metaumri									
1	Rushi Ramesh Agrawal	Metaumri	101	3 Acre	10	16-03-2015	15-03-2025	24-02-2015	Govt

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Borgaon (Jangli)									
1	Pravin Sukhdev Bhaiswar	Borgaon (Jangli)	100, 101	4.30	5	17/05/2019	16-05-2024		

Sr. No.	Name of the Lease Holder	Village	Survey No.	Total Area in HR	Validity Period (Yrs)	From Date	To Date	Date of Registration	Land Govt/Pvt
Nimji									

1	M/s Indirabai Girde Stone Quarry, Prop Rakesh Ramesh Girade	Nimji	347 Old, 94 New	2.20	5	03-07- 2017	02-07- 2022	15-01-2018	Govt
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CHAPTER 20
DETAILS OF ECO-SENSITIVE AREA

In Nagpur District there are following Eco sensitive zones

- 1) Umred Karandala Wildlife Sanctuary
- 2) Pench National Park and Mansinghdeo Wildlife Sanctuary
- 3) Bor Wildlife Sanctuary.

CHAPTER 21

IMPACT ON THE ENVIRONMENT DUE TO MINING

ACTIVITY:

The baseline environment quality to represent the background / existing environmental scenario of various environmental components such as air, noise, land ecological and socio-economic status of the study area. All the mine owners in the district assured to follow stipulated conditions of EC for sustainable and environment friendly mining.

1. Impact on Air Environment

The baseline status for air environment includes reconnaissance, identification and selection of specific significant air pollution due to the project activity and measuring their existing levels. The data required to assess the ambient status was collected, analysed and evaluated through a well-designed to assess the ambient air quality monitoring (AAQM) network.

Sources:

- Fugitive dust emission during mining activities inside the Quarry area like site preparation, drilling, blasting, excavation, loading of material transport and dumping of the stone
- Some amount of SO₂, NO_x and CO will be generated due to plying of mine machinery like Excavator, compressors, Jack Hammer, etc and transporting vehicles.

2. Impact on Water Environment:

Since the mining activity is related to excavation of stone, well above ground water table of the area, water contamination is not likely to be there. As basalt is a nontoxic material, so any contact of water with material does not produce any toxic pollutant. If there is a need of dewatering for the mine, then NOC will be opted from competent authority.

3. Impact on Noise Environment:

The main objective of noise monitoring in the study area is to establish the baseline noise levels and assess the impact of the total noise expected to be generated during the project operations in the project site.

Sources:

The main sources of noise pollution are identified as

- Mining activities inside the Quarry area like Drilling, Blasting, loading.
- Noise generated due to transporting vehicles.

4. Impacts due to Ground Vibration and Fly Rocks.

- The major source of ground vibration from the mine is blasting, however controlled blasting activity is being carried out. The major impact of the ground vibrations is on the domestic houses located in the villages surrounding the mine lease area. The kuchha houses are more prone to cracks and damage due to the vibrations. Apart from this, the ground vibrations may develop a fear factor in the nearby settlements
- Another impact due to blasting activities is fly rocks. These may effect on the houses nearby the mining lease area and may cause injury to humans and animals.

5. Impact on Flora and Fauna

In the District most of the mine leases proposed on barren or scantily vegetated area so minimal impact is observed on existing flora, however in some cases trees needs to be cut down for mining activities and prior approval for it will take from competent authority. All existing and proposed mine leases is will be away from forest area and wild life sanctuaries, so minimal impact is observed on wild life.

6. Impact on Land Environment:

The topography of the mine lease area altered due to on-going/ proposed mining activities it will be altered further due to the proposed mining operations as per the approved mining plan. Due to mining operations, mine pits and dumps are being developed within the mine lease area.

7. Impact on Socioeconomics:

Critically analyzing the existing environmental status of the socio-economic profile and visualizing the scenario with the project, the impacts of the project would be varied and may generate positive impacts of the mining in the region that are stated below:

- . The mining operations will provide direct & indirect employment village people.
- . The villages and their inhabitants & domestic animals will not be disturbed due to mining as quarry is far from their settlements.
- . Local work force will be given first preference for employment.
- . Mining activities will benefit the local people due to provision of more infrastructural facilities (developments of approach routes within the village area).

Currently there are 40 existing mining leases in the District and as per area of the mine leases 10-20 people are engaged by direct employment i.e. 400-800 people employed.

CHAPTER 22
REMEDIAL MEASURES TO MITIGATE THE IMPACT OF
MINING ON THE ENVIRONMENT

Particulars	Details		
Air Quality Management	<p>Adoption scientific mining methods to reduce dust emission from point and line source:</p> <p>Scientific methods of mining and pollution control systems are being will be adopted in the mine to control dust emissions from point and line sources, as follows:</p> <p>Point Source: These includes drilling, blasting, loading, unloading, manual sizing and grading activities</p> <ul style="list-style-type: none"> • Use of wet drilling/ drills with dust arrestors to control dust generation during drilling activities • Blasting to be avoided during high winds and overcast conditions. • Controlled blasting by using delay detonators is already adopted. • Avoiding secondary blasting by use of rock breakers. • Water sprinkling on blasted material before loading • Reducing dropping height of excavator bucket while loading material into dumpers/tippers. • Reducing dropping height for trucks during unloading. • Provision of mobile tanker for water sprinkling arrangement <p>Line Source: These includes Haul roads & approach roads</p> <ul style="list-style-type: none"> • Development of plantation along approach road. • Periodic maintenance of tippers dumpers used for Mineral transport • Periodic maintenance of haul roads • Regular water sprinkling on haul roads. 		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Monitoring</td> <td> <ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken </td> </tr> </table>	Monitoring	<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken
Monitoring	<ul style="list-style-type: none"> • Periodic air quality monitoring will be done and adequate measures will be taken 		
Noise Management	<p>Standard specified mining equipment is being /will be used and the equipment will be in good working conditions, properly lubricated and maintained to keep Noise within permissible limits.</p> <p>Drilling is being will be carried out with sharp drill bits which help in reducing noise and same will be continued</p> <p>Controlled blasting with proper spacing and optimum charge/delay will be Maintained.</p> <p>Tall trees with heavy foliage are being /will be planted along the boundary of mining lease area which will act as a natural barrier to propagating noise. Regular noise monitoring is being /will be carried at project site to check compliance with prevailing rules.</p> <p>Personal Protective Equipment's (PPEs) like ear plugs/car muffs are provided.</p>		

Particulars	Details
Vibration	<ul style="list-style-type: none"> • Blasting will be carried out by person with blaster's certificate issued by DGMS or by outside agency necessary. • Safety tools and implements that are required will be kept adequately near blasting site at the time of charging. • Portable blasting shelter will be provided near the blasting site • Blasting will be preferably done during 12.30PM to 2.00 PM depending

	<p>on seasonal variation of break hours or the end of the day in order to ensure that no person or animals are within the blasting zone.</p> <ul style="list-style-type: none"> • Misfires will be handled carefully as per stipulated procedures. • Proper warning system before blasting will be adopted and clearance of the area before blasting will be ensured.
Greenbelt Development	Plantation will be carried out at the approach road and vicinity area to control Dust, Air & Noise Pollution and improve aesthetic environment.
Water Environment	<ul style="list-style-type: none"> • Construction of garland drains and settling tanks to divert surface runoff of the mining area to the natural drainage. • Construction of checks dams/ gully plugs at strategic places to arrest silt wash off from broken up area. • Retaining wall and garland drain and adequate treatment system like settling ponds shall be provided around the OB dump for proper surface runoff management • The mined out pits shall be converted in to the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure. • Periodic analysis of mine pit water and ground water quality in nearby villages are to be undertaken. • Domestic effluent if any from mine shall be discharged to soak pit via septic tank constructed as per BIS specification. • Water conservation measures shall be taken by rain water harvesting and recycling and reuse of treated mine water after getting NOC from competent authority.

CHAPTER 23

RECLAMATION

As per the Government order and rule the applicant has to submit Mine Plan with Mine Closure Plan for their respective leases Reclamation of the mined out pit by way of back filling will not be possible because of the existence of the mineral up to deeper depth. The quarry depth will not be blocked and the quarry owner may exploit the same and precede further deep after taking clearances according to acts and rules applicable hence the detailed Quarry Closure Plan will be submitted further. Top soil would be utilized for intensive plantation and green belt development along the quarry area.

As generation waste is much less as in the case minor mineral mining, then following action taken place:

1. Plantation on the broken up surface if the depth of quarry is not much below the surrounding surface level.
2. Converted water reservoir after stabilization of the slopes if the exhausted quarry continues much below the surrounding surface level.
3. It is preferred to encircle the abundant either wire fencing or retaining wall with plantation from the safety point of view.

CHAPTER 24

RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Hazard analysis involves the identification and quantification of various hazards (unsafe conditions) that will exist in the mines. On the other hand, risk analysis deals with the identification and quantification of risks, mining equipment and personnel are exposed to, due to accidents resulting from the hazards present in the mine. Risk analysis follows an extensive hazard analysis. It involves the identification and assessment of risks the neighboring populations are exposed to as a result of hazards present.

In the sections below, the identification of various hazards, probable risks, maximum credible accident analysis, and consequence analysis are addressed which gives a broad identification of risks involved. Based on the risk estimation disaster management plan has to be prepared.

The mining will be carried out under the management control and direction of a qualified Mine Manager holding a first class manager's certificate of competency. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert.

Mining is among the most hazardous activities all around the world, being always accompanied with different accidents, injuries, loss of lives, and land damages. Dimension stone quarrying constitutes a big portion of mining activities. In risk assessment the words Hazards and Risks are often used and it is necessary to be clear what Hazards and Risks are:

- A hazard is anything that has the potential to cause harm
- The risk is how likely it is that a hazard may cause actual harm.

Having defined the work to be undertaken, risk assessment will give a clearer picture of what could go wrong and how serious an accident could be. It will depend upon following a set model which will enable the risk to be assessed.

Hazard identification at Stone quarry site

Hazard identification and risk assessment is a continual process. At mining operation following could be the main hazard:

- ❖ Drilling operation
- ❖ Blasting operation
- ❖ Health Hazard
- ❖ Accident at site/crusher
- ❖ Transportation
- ❖ Natural hazards

It is performed to identify whatever could cause injury, damage, ill-health, financial loss and loss of reputation to the organization. Hazard identification is an analysis to determine whether a risk agent under plausible conditions would cause harm to population or the environment.

Mitigation measures**A) Drilling:**

1. Drilling machine shall be fitted with dust suppression, collection and disposal arrangement.
2. Deep wetting of drilling zones shall be done by water sprinkling before starting drilling.
3. During the drilling operations the efforts shall be made to reduce dust generation by taking appropriate measures

B) Blasting:

1. Proper blasting geometry shall be designed.
2. Blast site shall be wetted before and after blasting operations are completed.
3. Only optimum quantity of permissible explosives shall be used so that the vibrations do not damage the structures/houses if the quarrying operations are close to human habitation.
4. Blasting shall be conducted only during favorable weather conditions and only during the day time and permissible hours.
5. The blasting operations shall be given publicity the local area through Announcement and other available media so that local people become aware of the blasting activities being undertaken in the area.
6. The vibrations should be monitored periodically in consultation with the local Mining authorities.
7. The storage of the explosives and its transfer to and from the quarry area shall be strictly in accordance with the conditions listed in the permission granted by Explosives Department

C) Heavy Earth moving Machinery (HEMM):

1. The operator/ transporter shall carry out regular maintenance of the machinery and vehicles.
2. The speed limit shall be adhered to
3. Operator's cabin of the HEMMs should preferably be air conditioned at least air tight.
4. The smoke emission should conform to the standards notified in Motor Vehicle Act.
5. The trucks carrying the mined products shall be covered with tarpaulin so that there are no fugitive emissions during transportation.
6. The transportation should not through the busy roads in the city/towns/villages if by pass roads are available.

D) Haul Roads:

1. All the haul and roads shall be metttled and well maintained.
2. Unmetttled haul roads shall be free of ruts and pot holes.
3. All haul roads and surface roads shall be regularly sprayed with water.
4. Plantation alongside haul roads (avenue plantation) shall be carried out done.

E) Overburden:

1. Non-operative dumps shall be subjected to technical and biological reclamation.
2. Plantation over and around over burden stability of slopes, prevention of dust by wind action and soil erosion during the run off. Wetting of surface of O. B. dump shall be regularly practiced.

Occupational Health & Safety Measures to Control Dust Inhalation

All the necessary precautions would be adopted to prevent dust generation at site and to be dispersed in the outside environment. However, for the safety of workers at site, engaged at strategic locations/dust generation points like loading and unloading points, dust masks would be provided Dust masks would prevent inhalation of RPM thereby reducing the

risk of lung diseases and other respiratory disorders. Regular health monitoring of workers will be carried out.

Health and Safety Monitoring Plan

All the potential occupational hazardous work places would be monitored regularly. The health of employees working in these areas would be monitored once in two years for early detection of any ailment due to exposure to plant operation.

Personal Protective Equipment (PPE):

The following PPE will be provided to the persons working in the quarry area:

- ❖ Steel-Shoed Industrial Safety Shoes
- ❖ Safety Helmet
- ❖ Earmuffs and Earplugs by workers, who are working in areas.
- ❖ Safety Goggles & Safety Belts

Disaster Management Plan

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation and restoration of production. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel training should be given.

The objective of the Disaster Management Plan is to make use of the combined resources of the mine and the outside services to achieve the following:

- ❖ Effect the rescue and medical treatment of casualties;
- ❖ Safeguard other people;
- ❖ Minimize damage to property and the environment,
- ❖ Initially contain and ultimately bring the incident under control;
- ❖ Secure the safe rehabilitation of affected area
- ❖ Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.
- ❖ Emergency escape route will be designated.

CHAPTER 25
OCCUPATIONAL HEALTH ISSUES IN THE DISTRICT

As all the precautions are taken during mining operations, no health issues are found till date (2016-20).

CHAPTER 26
PLANTATION AND GREENBELT DEVELOPMENT IN
RESPECT OF LEASES ALREADY GRANTED IN THE
DISTRICT

Plantation and greenbelt development is as per approved mining scheme for respective leases previously granted in the District and all proposed lease holder are adhere to comply with the stipulated conditions mentioned in the EC. As per the Approved Environmental Clearance General Condition Point No.10 Green belt development is carried out by lease holder in mine lease area along 7.5m barrier.



No.B-29012/ESS(CPA)/2015-16/

March 07, 2016

To

The Chairman
All the State Pollution Control Boards / Pollution Control Committees
(List Attached)

SUB: MODIFIED DIRECTIONS UNDER SECTION 18(1)(b) OF THE WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 and THE AIR (PREVENTION & CONTROL OF POLLUTION) ACT, 1981 REGARDING HARMONIZATION OF CLASSIFICATION OF INDUSTRIAL SECTORS UNDER RED / ORANGE / GREEN / WHITE CATEGORIES.

WHEREAS, under section 16 (2)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(c) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974, is to coordinate activities of the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs); and

WHEREAS, under section 16 (2)(c) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(d) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the CPCB is to provide technical assistance and guidance to SPCBs and PCCs; and

WHEREAS, it was brought to the notice of CPCB, that different SPCBs /PCCs were following different criteria for classification of industrial sectors under Red/Orange/ Green category and that classification was being used by the SPCBs/PCCs for grant of consents to industries and for Inventorization / surveillance of industries.

WHEREAS, the issue regarding classification of industries was deliberated upon in the 56th Conference of Chairmen & Member Secretaries of CPCB & SPCBs/PCCs held on August 31, 2010 and a working group comprising of representatives from SPCBs & CPCB was constituted to prepare a consolidated list of industrial sectors falling under Red/Orange/Green category to bring uniformity in classification of industrial sectors across the country;

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

'Parivesh Bhawan', East Arjun Nagar, Delhi - 110032

दूरभाष/Tel. : 43102030, फ़ैक्स/Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल/e-mail : cpcb@nic.in वेबसाइट/Website : www.cpcb.nic.in

WHEREAS, the report prepared by the Working Group was discussed in the 57th Conference of Chairmen & Member Secretaries of CPCB & SPCBs/PCCs held in Delhi on September 15, 2011, wherein some modifications were proposed;

WHEREAS, the final report of the working group was prepared, incorporating the suggestions/observations made in the 57th Conference of Chairmen and Member Secretaries of CPCB & SPCBs/PCCs and in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water Act, 1974, following directions were issued for compliance to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, orange and green as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green':

a). To maintain uniformity in categorization of industries under Red/ Orange/Green category, the SPCBs /PCCs shall adopt the list as finalized by CPCB based on the recommendations of that Working Group for grant of Consent, inventorization of industries under Red, Orange and Green categories and other related activities.

(b). The SPCBs/PCCs shall revise the list of Red, Orange and Green categories of industries operating in their jurisdiction based on the criteria specified in the final report of that Working Group and submit the same to CPCB within 90 days in hard copy as well as soft copy;

WHEREAS, later-on, it was observed that the process of categorization thus far was primarily based on the size of the industries and consumption of resources and pollution due to discharge of emissions and effluents and its likely impact on health was not considered as primary criteria;

WHEREAS, there have been proposals from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more pragmatic manner. The issue was discussed during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and also during the Conference of the Chairmen and Member Secretaries of CPCB and SPCBs/PCCs held in New Delhi on April 08, 2015. Accordingly, a 'Working Group' comprising of the Members from Central Pollution Control Board and State Pollution Control Boards representing the States of Andhra Pradesh, Punjab, Tamilnadu, West Bengal, Madhya Pradesh and Maharashtra, was constituted to revisit the criteria of categorization of industries and suggest rationale based on pollution potential for categorization of industrial sectors and adopting it for implementation of pollution control plan;

WHEREAS, the Working Group has developed the criteria of categorization of industrial sectors based on the concept of Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control

of Pollution) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act, 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index (PI) of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector;

WHEREAS, based on the series of consultations with SPCBs, different Government / Non-government Institutions including industries and MoEFCC, the following criteria on 'Range of Pollution Index' for the purpose of categorization of industrial sectors has been finalized:

- o Industrial Sectors having Pollution Index score of 60 and above - Red category
- o Industrial Sectors having Pollution Index score of 41 to 59 -Orange category
- o Industrial Sectors having Pollution Index score of 21 to 40 -Green category
- o Industrial Sectors having Pollution Index score incl. & upto 20 -White category

WHEREAS, based on the revised criteria, the 'Final Report on Revised Categorization of Industrial Sectors under Red/Orange/Green/White' has been evolved. The 'Categorization' is based on the relative pollution potential of the industrial sectors and grouping of the industrial sectors based on the use of raw materials, manufacturing process adopted and pollutants likely to be generated;

WHEREAS, based on relative Pollution Index, the number of industries in various categories are as under :

- i. The Red category of industrial sectors: 60
- ii. The Orange category of industrial sectors: 83
- iii. The Green category of industrial sectors: 63 and
- iv. The Newly introduced White category: 36

WHEREAS, there shall be no necessity of obtaining the Consent to Operate" for White category of industries and an intimation to concerned SPCB / PCC shall suffice;

WHEREAS, the purpose of categorization is to ensure that the industry is established in a manner consistent with the environmental objectives and to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in generation of no or minimum pollutants.

WHEREAS the new categorization system shall also facilitate in self-assessment by industries;

Now, therefore, in exercise of the powers delegated to the Chairman, CPCB under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and Section 18(1)(b) of the Air (Prevention & Control of Pollution), Act, 1981 the earlier Directions issued in June 2012 in the context of categorisation of industries as Red, Orange & Green are withdrawn with immediate effect and following 'Directions' are hereby issued for compliance by all SPCBs and PCCs :

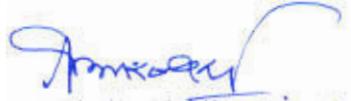
1. That the SPCBs and PCCs shall adopt the Revised Criteria of categorization of industrial sectors as detailed in table nos. F1, F2, F3 and F4 and Revised Lists of Red, Orange, Green and White categories of industrial sectors, presented at table no. G2, G3, G4 and G5 respectively, in the 'Final Report' as attached herewith immediately.
2. That all pending applications for consideration of 'Consent to Establish' and 'Consent to Operate' and future such applications shall be processed as per revised criteria.
3. That the SPCBs and PCCs will provide the list of industries identified in each category existing in the State which have been considered for grant of consents. SPCBs/PCCs will forward the list of such industries before 31.05.2016 and the same will be uploaded on the websites of respective SPCB/PCC.
4. That the 'Revised Lists of Red, Orange, Green and White category of industrial sectors' shall be used by the SPCBs and PCCs for Consent Management and inventorization of industries under Red, Orange, Green and White categories. Siting of industries shall be only in conforming areas. SPCBs / PCCs shall evolve sector specific plans for control of pollution and industrial surveillance for verifying compliance.
5. That the SPCBs and PCCs shall revise /prepare the inventory of Red, Orange, Green and White categories of industries operating in their jurisdiction based on the revised criteria specified in the Final Report and submit the same to CPCB within 90 days i.e., before 30.05.2016 in hard copy as well as soft copy.
6. That the listed category of industries or those identified later-on under different categories shall not be linked to sanction of loan / finance or bank proceedings.
7. That any further addition of any new or left-over industrial sector and their categorization which is not listed in the revised list of Red, Orange, Green and White industrial sectors, shall be done at the level of concerned SPCB /PCC following revised criteria & guidelines as detailed in the attached document and no concurrence of CPCB shall normally be required. It is further clarified that while categorizing the industries, fractional numbers shall be rounded off to nearest integer.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the 'Action Taken Report' in compliance with these directions to CPCB before 15.04.2016.


(Arun Kumar Mehta)
Chairman
7/3/16

Copy to:

1. The Chief Secretary of all the States and UTs
2. The Secretary ,
Ministry of Micro, Small and Medium Entrepreneurs
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
3. The Secretary ,
Ministry of Heavy Industries
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
4. The Secretary,
Ministry of New and Renewable Energy
Block-14, CGO Complex,
Lodhi Road, New Delhi-110 003,
5. The Advisor(CP Division)
Ministry of Environment ,Forests and Climate Change
Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi - 110 003
6. All Zonal Offices of CPCB


(A. B. Akolkar) 7.3.16
Member Secretary

Final Document
on
Revised
Classification
of
Industrial Sectors
Under

Red, Orange, Green and White Categories
(February 29, 2016)



Central Pollution Control Board
Delhi

Executive Summary

Categorization of Industrial Sectors under Red, Orange, Green and White Category

The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications in 1989, with the purpose of prohibition/ restriction of operations of certain industries to protect ecologically sensitive Doon Valley. The notification introduced the concept of categorization of industries as " Red", "Orange "and "Green" with the purpose of facilitating decisions related to location of these industries. Subsequently, the application of this concept was extended in other parts of the country not only for the purpose of location of industries, but also for the purpose of Consent management and formulation of norms related to surveillance / inspection of industries.

The concept of categorization of industries continued to evolve and as different State Pollution Control Boards interpreted it differently, a need arose to bring about necessary uniformity in its application across the country. In order to harmonize the 'Criteria of categorization', Directions were issued by CPCB under Section 18(1)(b) of the Water (Prevention & Control of Pollution) , Act, 1974 to all SPCBs/PCCs to maintain uniformity in categorization of industries as red, green and orange as per list finalized by CPCB, which identified 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'.

The process of categorization thus far was primarily based on the size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its likely impact on health was not considered as primary criteria. There was demand from the SPCBs / PCCs and industrial associations for categorization of the industrial sectors in a more transparent manner. Accordingly, the issue was discussed thoroughly during the national level conference of the Environment Ministers of the States, held in New Delhi during April 06-07, 2015 and a 'Working Group' comprising of the members from CPCB, APPCB, TNPCB, WBPCB, PPCB, MPPCB and Maharashtra PCB is constituted to revisit the criteria of categorization of industries and recommend measures for making the system transparent and rational.

The Working Group has developed the criteria of categorization of industrial sectors based on the Pollution Index which is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and consumption of resources. For this purpose the references are taken from the the Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003, Standards so far prescribed for various pollutants under Environment (Protection) Act , 1986 and Doon Valley Notification, 1989 issued by MoEFCC. The Pollution Index PI of any industrial sector is a number from 0 to 100 and the increasing value of PI denotes the increasing degree of pollution load from the industrial sector. Based on the series of brain storming sessions among CPCB, SPCBs and MoEFCC , the following criteria on 'Range of Pollution Index 'for the purpose of categorization of industrial sectors is finalized.

- | | |
|---|------------------|
| ○ Industrial Sectors having Pollution Index score of 60 and above | - Red category |
| ○ Industrial Sectors having Pollution Index score of 41 to 59 | -Orange category |
| ○ Industrial Sectors having Pollution Index score of 21 to 40 | -Green category |
| ○ Industrial Sectors having Pollution Index score incl.&upto 20 | -White category |

The newly introduced White category of industries pertains to those industrial sectors which are practically non-polluting such as Biscuit trays etc. from rolled PVC sheet (using automatic vacuum forming machines), Cotton and woolen hosiers making (Dry process only without any dyeing/washing operation), Electric lamp (bulb) and CFL manufacturing by assembling only, Scientific and mathematical instrument manufacturing, Solar power generation through photovoltaic cell, wind power and mini hydel power (less than 25 MW).

The salient features of the 'Re-categorization' Exercise are as follows :

- Due importance has been given to relative pollution potential of the industrial sectors based on scientific criteria . Further, wherever possible, splitting of the industrial sectors is also considered based on the use of raw materials, manufacturing process adopted and in-turn pollutants expected to be generated.
- The Red category of industrial sectors would be 60.
- The Orange category of industrial sectors would be 83.
- The Green category of industrial sectors would be 63.
- Newly introduced White category contains 36 industrial sectors which are practically non-polluting.
- There shall be no necessity of obtaining the Consent to Operate'' for White category of industries. An intimation to concerned SPCB / PCC shall suffice.
- No Red category of industries shall normally be permitted in the ecologically fragile area / protected area.

The purpose of categorization is to ensure that the industry is established in a manner which is consistent with the environmental objectives. The new criteria will prompt industrial sectors willing to adopt cleaner technologies, ultimately resulting in generation of fewer pollutants. Another feature of the new categorization system lies in facilitating self-assessment by industries as the subjectivity of earlier assessment has been eliminated. This 'Re-categorization' is a part of the efforts, policies and objective of present government to create a clean & transparent working environment in the country and promote the Ease of Doing Business.

Other similar efforts include installation of Continuous Online Emissions/ Effluent Monitoring Systems in the polluting industries, Revisiting of the CEPI (Comprehensive Environment Pollution Index) concept for assessment of polluted industrial clusters, Revision of existing industrial Emission/Effluent discharge standards, initiation of special drive on pollution control activities in Ganga River basin and many more in coming future.

Revised Criteria of Categorization of Industries

“Securing industrial pollution control in accordance with the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention & Control of Pollution) Act, 1981 by linking with categorization of industries, consent management and vigilance – ‘In context of Red, Orange, Green and White categories of industries’”

A: Genesis of Categorization:

- The Ministry of Environment, Forest and Climate Change (MoEFCC) had brought out notifications, which inter-alia refers to Prohibition/ Restriction on operation of industries to protect ecologically sensitive areas or areas of specific importance. This has for the first time brought the concept of categorization of industries to “Red”, “Orange” and “Green” and restrict their operation in certain areas of importance. Therefore, it is at-once interpreted that Red, Orange and Green categorization is linked with location specific needs.
- The notification of MoEF was first brought on 2nd February, 1989 in case of “Restriction on location of industries, mining operations and other developmental activities in Doon Valley in “Uttarakhand” and thereafter another notification on 24th February 1999 regarding restriction on the setting up of industries in Dahanu Taluka in Maharashtra. The categorization had been made mainly on the basis of size of the industries, man power and consumption of resources.
- However, in other parts of the country, there have been variations in context to the classification of industries under Red, Orange and Green categories. SPCBs / PCCs were following their own criteria in different States thereby creating confusion.
- In order to harmonize the ‘Criteria of categorization’, a ‘Working Group’ was formed as per resolution passed during the 57th Conference of the Chairmen & Member Secretaries of CPCB and SPCBs. Based on the recommendations of the Working Group, Directions dated 4/6/2012 under Section 18(1)(b) of the Water

(Prevention & Control of Pollution), Act, 1974 were issued to all SPCBs/PCCs with the effects to maintain uniformity in categorization of industries as red, green and orange as per list finalized by the Working Group. This indicative list included 85 types of industrial sectors as 'Red', 73 industrial sectors as 'Orange' and 86 sectors as 'Green'. However, these identified categories have not been assigned with scores as per existing criteria/ or any new criteria

B: Categorization criteria used by SPCBs/PCCs:

SPCBs and PCCs use the criteria of Red, Orange and Green categories for consent management and vigilance purposes for carrying out inspections to verify compliance to the stipulated standards. However the above categorization do not emphasize on sector-specific plan for control of pollution in accordance with priority based on pollution index.

C: Gap in the process:

1. The categorization has been made mainly on the basis of size of the industries and consumption of resources. The pollution due to discharge of emissions & effluents and its impact on health was not considered as primary criteria.
2. Categorization was on random basis, no scoring system was adopted.

D: Resolutions made during National Level Conferences

The issue was discussed thoroughly during the following national level conferences held in New Delhi:

- Conference of the Environment Ministers of Central Government and State Governments during April 06-07, 2015
- 59th Conference of Chairmen & Member Secretaries of Pollution Control Boards / Pollution Control Committees held on April 08, 2015

Accordingly following resolutions were made during the Conferences:

Table G-3 : Final List of Orange Category of Industrial Sectors

Final Sl. No.	Orgnl S.No	Industry Sector	W1	W2	W	A1	A2	A	H	W+A+H	Revised category	Remarks
1.	20	Dismantling of rolling stocks (wagons/ coaches)	--	--	--	15	--	15	10	41.67	O-O	Emissions of dust and generation of waste oils take place during dismantling. Air pollution & HW generation scores (15+10=25) are normalized to 100.
2.	5	Bakery and confectionery units with production capacity > 1 TPD. (With ovens / furnaces)	20	--	20	15	--	15	--	43.75	O-O	
3.	10	Chanachur and ladoo from puffed and beaten rice(muri and shira) using husk fired oven	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
4.	23	Coated electrode manufacturing	15	0	15	20	0	20	0	43.75	G-O	Preparation of core wire / rod, preparation of dry mix, preparation of wet mix, application of coating by extrusion, baking of coated electrodes
5.	24	Compact disc computer floppy and cassette manufacturing / Reel manufacturing	15	0	15	20	0	20	0	43.75	G-O	Generates waste-water and process emissions.
6.	24	Flakes from rejected PET bottle	20	-	20	15	-	15	-	43.75	R-O	Normal water & air pollutions are generated.
7.	30	Food and food processing including fruits and vegetable processing	20	--	20	15	--	15	--	43.75	O-O	Normal water and air polluting.
8.	40	Jute processing without dyeing	20	--	20	15	--	15	--	43.75	O-O	CPCB has notified standards for this category. Both air and water pollutions are generated.
9.	56	Manufacturing of silica gel	15	0	15	20	0	20	0	43.75	G-O	Waste-waters containing TDS and emissions of H ₂ SO ₄ are generated.



केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

CP-18/1/2023-IPC-VI-HO-CPCB-HO

Date: 12.02.2025

To

The Chairman
State Pollution Control Board/Pollution Control Committee
(As per the list)

Sub: Directions under section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention & Control of Pollution) Act, 1981 regarding harmonization of classification of industrial sectors under Red, Orange, Green, White and Blue categories.

WHEREAS, under section 16 (2)(b) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(c) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention and Control of Pollution) Act, 1974, is to coordinate activities of the State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs); and

WHEREAS, under section 16 (2)(c) of the Water (Prevention and Control of Pollution) Act, 1974 and under Section 16 (2)(d) of the Air (Prevention & Control of Pollution) Act, 1981, one of the functions of the CPCB is to provide technical assistance and guidance to SPCBs and PCCs; and

WHEREAS, it was brought to the notice of CPCB, that different SPCBs/PCCs were following different criteria for the classification of industrial sectors under different categories. Therefore, in 2012, to have uniformity in classification throughout the country, CPCB vide letter no. B-29012/1/2012/ESS/1526-1563, dated 04.06.2012 issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement standardized list of Red, Orange and Green categories of industries; and

WHEREAS, in 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for classification of industrial sectors. The PI is determined based on Precautionary Principle- by evaluating potential of water pollution, air pollution, and hazardous waste generation from particular sector. CPCB vide letter no. B-29012//ESS(CPA)/2015-16, dated 07.03.2016 issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs to adopt and implement revised classification. SPCBs/PCCs were also directed to categorize any new or left over sectors at their level by constituting a Committee and following the methodology prescribed by CPCB; and

Page 1 of 5

‘परिवेश भवन’ पूर्वी अर्जुन नगर, दिल्ली-110032

Parivesh Bhawan, East Arjun Nagar, New Delhi - 110032

दूरभाष/Tel: 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in



WHEREAS, CPCB vide letter no. B-29016/ROGW/IPC-VI/2020-21, dated 30.04.2020, issued directions under section 18(1)(b) of the Water Act, 1974 and the Air Act, 1981 to SPCBs/PCCs regarding segregated list of non-industrial sectors (activities/ facilities/ infrastructure/ services) such as sewage treatment plants, healthcare facilities, hotels, building and construction projects, airports, highways etc. Further, CPCB also classified few additional sectors from time to time; and

WHEREAS, based on the experience gained over the years in Pollution Index calculation, use of cleaner fuels like PNG/CNG etc., adoption of cleaner technology resulting in reduced emission/wastewater generation, a need was felt to revisit the classification methodology of 2016; and

WHEREAS, during July 2023, CPCB prepared a “Draft Report on Classification of Industrial Sectors into Red, Orange, Green and White Categories: A Tool for Progressive Environmental Management” which was uploaded on CPCB website for seeking comments/suggestions of the stakeholders/public on the same. The draft report was also circulated to SPCBs/PCCs/MoEF&CC for comments; and

WHEREAS, CPCB vide office order dated 26.09.2023 constituted a committee to critically examine and analyse the comments/suggestions and to make recommendations for suitable incorporation in the finalizing the methodology and classification; and

WHEREAS, based on the stakeholders’ comments, a need was felt to promote/incentivize units for adopting measures resulting in better environmental performance. Additionally, a requirement was also felt for separate category – Blue Category- for essential environmental services for management of environmental pollution arising from domestic/household activities. Accordingly, CPCB prepared an “Addendum and substitution thereto in Draft Report on Classification of Sectors into Red, Orange, Green, White and Blue Categories”, which was shared with SPCBs/PCCs and also uploaded on CPCB website on 11.07.2024 for seeking inputs/comments; and

WHEREAS, the amendment in Section-21 of the Air (Prevention and Control of Pollution) Act, 1981 through the Jan Vishwas (Amendment of Provisions) Act, 2023 and amendment in Section-25 of the Water (Prevention and Control of Pollution) Act, 1974 through the Water (Prevention and Control of Pollution) Amendment Act, 2024, grant exemption to certain categories of industries, as notified by Central Government, for obtaining consent under these Acts; and

WHEREAS, the Ministry of Environment, Forest and Climate Change, Government of India vide notification no. G.S.R. 702(E), dated 12.11.2024 granted exemption of consent under the Water Act, 1974 and the Air Act, 1981 to exemption of Consent to Establish (CTE) and Consent to Operate (CTO) to all industrial plants having pollution index score upto 20 (at present total 39 industrial sectors under white categories as per 2016 methodology) subject to

condition that such plant shall inform in writing to the concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC); and

WHEREAS, the MoEF&CC vide letter no. Q-15012/2/2022/-CPW-Part (1)/e-240741, dated 14.11.2024 has issued Standard Operating Procedure for implementation of the said Notification dated 12.11.2024. The SOP includes the following provisions for White categories of industries:

- i. Industry to intimate to concerned SPCB/PCC about operations and self-declare the compliance with prevalent rules & regulations,
- ii. Concerned SPCB/PCC to maintain separate list of such industries/activities, and
- iii. Concerned SPCB/PCC to ensure that no activities other than those intimated, are carried out by exempted units.

WHEREAS, the Committee constituted by CPCB evaluated the comments, incorporated the suitable changes and finalized the revised methodology as well as classification of sectors. Final report in this regard titled as "Classification of sectors in to Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)" was submitted to Ministry of Environment, Forest and Climate Change (MoEF&CC) for concurrence. The MoEF&CC vide letter no. Q-16017-57-2015-CPA, dated 15.01.2025 granted concurrence to the revised classification; and

WHEREAS, as per the revised methodology, the category of the sector is decided based on the following ranges of Pollution Index:

- i. Red: $PI \geq 80$,
- ii. Orange: $55 \leq PI < 80$,
- iii. Green: $25 \leq PI < 55$,
- iv. White: $PI < 25$; and

WHEREAS, based on the revised methodology, CPCB has classified a total of 419 sectors and sub-sectors as under:

- i. The Red Category: 125
- ii. The Orange Category: 137
- iii. The Green Category: 94
- iv. The White Category: 54
- v. The Blue Category: 9; and

WHEREAS, the purpose of classification is to ensure that the industry is established in a manner consistent with the environmental objectives and also to prompt industrial sectors to adopt cleaner technologies, ultimately resulting in the generation of no or minimum pollutants. The revised classification system also defines criteria for incentivizing such industry. The industry may self-assess the PI score as per defined criteria and can submit application to respective SPCBs/PCCs for consideration; and



NOW, THEREFORE, in the exercise of the powers delegated under Section 18(1)(b) of the Water (Prevention & Control of Pollution) Act, 1974 and Section 18(1)(b) of the Air (Prevention & Control of Pollution), Act, 1981 the earlier directions dated 07.03.2016 and subsequent directions/letter in the context of categorization of industries are withdrawn with immediate effect and following '**Directions**' are hereby issued for compliance by all SPCBs and PCCs:

1. That SPCBs and PCCs shall immediately adopt the revised methodology for classification of sectors and list of 419 sectors/sub-sectors classified under Red, Orange, Green, White, and Blue categories as detailed in the **attached** report- "Classification of Sectors into Red, Orange, Green, White and Blue Categories (A tool for progressive environmental management)".
2. That all pending application for consideration of consent (CTE/CTO) and future such application shall be processed as per the revised classification. In case CTE granted before the revised classification, applicability of CTO will be as per revised classification.
3. That the revised sectors/subsectors classified under Red, Orange, Green, White, and Blue category of sectors as given in the attached document shall be used by the SPCBs and PCCs for consent management, inventorization of units under different categories, siting criteria, deciding environmental surveillance frequency, calculation of environmental compensation, etc., as per the guidelines issued from time to time.
4. That SPCBs and PCCs shall prepare the inventory of Red, Orange, Green, White and Blue categories of units operating in their jurisdictions, based on the revised classification. SPCBs and PCCs shall upload the category and sector-wise list of such units on their website. SPCBs and PCCs shall also forward such list to CPCB, latest by 30.06.2025 and thereafter updated list by 30th June every year.
5. That the classification of sectors shall not be linked to sanction of loans/finance of bank proceedings.
6. That any further addition of any new or left-out sector and their classification which is not listed in the revised list of Red, Orange, Green, and White categories, shall be done at the level of concerned SPCB /PCC by constituting a Committee and following revised criteria & guidelines as detailed in the attached report and no concurrence of CPCB shall normally be required. Intimation of same from time to time will suffice. However, addition in Blue Category Sectors-Essential Environmental Services for domestic waste management, will be done at the level of CPCB only. SPCBs/PCCs may forward their proposal, if any, to CPCB in this regard.
7. That SPCBs and PCCs are required to prepare and submit list of additional sector classified under white category to CPCB on annual basis, by 30th of June every year, in the prescribed format (Annexure-V) as given in the attached report, for further notification for exemption from consent as per the provisions of the Jan Vishwas (Amendment of Provisions) Act, 2023, the Water Act, and the Air Act as amended from time to time by MoEF&CC.
8. That SPCBs and PCCs shall constitute a committee as prescribed in the report to evaluate the applications of the units for incentives due to adopting measures resulting in better environmental performance and reduction in PI score. The SPCB/PCC shall

place the separate list of such units on their website and also submit list of such units to CPCB on Annual Basis by 30th June every year.

The SPCBs/PCCs shall acknowledge the receipt of directions and submit the "Action Taken Report" in compliance with these directions to CPCB before 20.02.2025.

Encl. As above.



(Bharat Kumar Sharma)
Member Secretary



Copy to:

1. The Chief Secretary of all the States and UTs
(As per the list)
2. The Secretary,
Ministry of Micro, Small and Medium Entrepreneurs
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
3. The Secretary,
Ministry of Heavy Industries
Udyog Bhawan, Rafi Marg, New Delhi - 110 011
4. The Secretary,
Ministry of New and Renewable Energy
Block-14, CGO Complex,
Lodhi Road, New Delhi-110 003
5. The Joint Secretary (CP Division)
Ministry of Environment, Forests and Climate Change
Indira Paryavaran Bhawan
Jor Bagh Road, New Delhi - 110 003
6. All Regional Directorates, CPCB
(As per the list)



(Bharat Kumar Sharma)
Member Secretary



Address List of The Chief Secretaries of States/UTs	
1. The Chief Secretary, Government of Andhra Pradesh, 1 st Block, A.P Secretariat Office, Velagapudi- 522503 E-mail:- (cs@ap.gov.in)	2. The Chief Secretary, Government of Arunachal Pradesh, Civil Secretariat, Itanagar-791111 E-mail:- (Cs-arunachal@nic.in)
3 The Chief Secretary, Government of Assam, Block-C,3 rd Floor, Assam Sachivalaya, Dispur-781006 E-mail:- (Cs-assam@nic.in)	4 The Chief Secretary, Government of Bihar, Main Secretariat, Patna-800015 E-mail:- (Cs-bihar@nic.in)
5. The Chief Secretary, Government of Chattisgarh, Mahanadi Bhawan, Mantralaya, Naya Raipur-492002 E-mail:- (Csoffice.cg@gov.in)	6. The Chief Secretary, Government of Goa, Secretariat, Porvrom, Bardez, Goa-403521 E-mail:- (Cs-goa@nic.in)
7. The Chief Secretary, Government of Gujarat, 1 st Block, 5 th Floor, Sachivalaya, Gandhinagar-382010 E-mail:- (chiefsecretary@gujarat.gov.in)	8. The Chief Secretary, Government of Haryana, 4 th Floor, Haryana Civil Secretariat, Sector-1, Chandigarh-160019 E-mail:- (cs@hry.nic.in)
9 The Chief Secretary, Government of Himachal Pradesh, H.P Secretariat, Shimla-171002 E-mail:- (Cs-hp@nic.in)	10 The Chief Secretary, Government of Jammu & Kashmir, R. No. 2/7, 2 nd Floor, Main Building, Civil Secretariat, Jammu-180001 E-mail:- (Cs-jandk@nic.in)
11. The Chief Secretary, Government of Jharkhand, 1 st Floor, Project Building, Dhurwa, Ranchi-834004 E-mail:- (Cs-jharkhand@nic.in)	12. The Chief Secretary, Government of Karnataka, Room No. 320, 3 rd Floor, Vidhan Soudha, Bengaluru-560001 E-mail:- (cs@karnataka.gov.in)

13.	The Chief Secretary, Government of Kerala, Secretariat, Thiruvananthapuram-695001 E-mail:- (chiefsecy@kerala.gov.in)	14.	The Chief Secretary, Government of Maharashtra, CS office main building, Mantralaya, 6 th Floor, Madame Cama Road, Mumbai-400032 E-mail:- (cs@maharashtra.gov.in)
15	The Chief Secretary, Government of Manipur, South Block, Old Secretariat, Imphal-795001 E-mail:- (Cs-manipur@nic.in)	16	The Chief Secretary, Government of Mizoram, New Secretariat Complex, Aizwal-796001 E-mail:- (Cs_miz@rediffmail.com)
17	The Chief Secretary, Government of Meghalaya, Main Secretariat Building, Room No. 316, Shillong-793001 E-mail:- (Cso-meg@nic.in)	18.	The Chief Secretary, Government of Madhya Pradesh, MP Mantralaya, Vallabh Bhavan, Bhopal-462004 E-mail:- (cs@mp.nic.in)
19.	The Chief Secretary, Government of Nagaland, Civil Secretariat, Kohima-797004 E-mail:- (csngl@nic.in)	20	The Chief Secretary, Government of Odisha, General Administration Department, Odisha Secretariat, Bhubaneswar-751001 E-mail:- (csori@nic.in)
21	The Chief Secretary, Government of Punjab, Chandigarh-160001 E-mail:- (cs@punjab.gov.in)	22	The Chief Secretary, Government of Sikkim, New Secretariat, Gangtok-737101 E-mail:- (Cs-skm@nic.in)
23.	The Chief Secretary, Government of Rajasthan, Secretariat, Jaipur-302005 E-mail:- (csraj@rajasthan.gov.in)	24.	The Chief Secretary, Government of Telangana, Block C, 3 rd Floor, Telangana Secretariat, Khairatabad, Hyderabad-500022 E-mail:- (cs@telangana.gov.in)

25	The Chief Secretary, Government of Tripura, New Secretariat Complex, Agartala-799010 E-mail:- (Cs-tripura@nic.in)	26	The Chief Secretary, Government of Tamil Nadu, Secretariat, Chennai-600009 E-mail:- (cs@tn.gov.in)
27.	The Chief Secretary, Government of Uttarakhand, 4 Subash Road, Uttarakhand Secretariat, Dehradun-248001 E-mail:- (Cs-uttarakhand@nic.in)	28.	The Chief Secretary, Government of Uttar Pradesh, 1 st Floor, Room No. 110, Lal Bahadur Shastri Bhawan, Uttar Pradesh Secretariat, Lucknow-226001 E-mail:- (csup@nic.in)
29.	The Chief Secretary, Andaman and Nicobar Administration, Secretariat, Port Blair-744101 E-mail:- (Cs-andaman@nic.in)	30	The Advisor to the Administrator, Chandigarh Secretariat, Sector 9, Chandigarh-160009 E-mail:- (adviser-chd@nic.in)
31.	The Chief Secretary, Government of NCT of Delhi, Delhi Secretariat, IP Estate, New Delhi-110002 E-mail:- (csdelhi@nic.in)	32.	The Advisor to Administrator, Daman & Diu and Dadar & Nagar Haveli, Secretariat, Moti, Daman-396220 E-mail:- (Devcom-dd@nic.in)
33.	The advisor to the Administrator, U.T of Lakshadweep, Kavaratti-682555 E-mail:- (lk-advisor@gov.in)	34.	The Chief Secretary, Government of Puducherry, Main Building, Chief Secretariat, Puducherry-605001 E-mail:- (cs@py.gov.in)
35.	The Chief Secretary, Government of West Bengal, Nabanna, 13 th Floor, 325 Sarat Chatterjee Road, Mandirtala, Shibpur, Howrah-711102 E-mail:- (Cs-westbengal@nic.in)	36	The Advisor to Hon'ble Lt. Governor of Ladakh, Civil Secretariat, Leh-Ladakh-194101 E-mail:- (Advisor-lg-ladakh@gov.in)

Address List of The Chairman, SPCBs/PCCs			
1.	<p>The Chairman Andhra Pradesh Pollution Control Board D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamvari Street, Kasturibaipet, Vijayawada- 520007 (Andhra Pradesh)</p> <p>Email:- (chairman@appcb.gov.in)</p>	2.	<p>The Chairman Arunachal Pradesh State Pollution Control Board Paryavaran Bhawan, Yupia Road, Papu Nalah, Naharlagun – 791110 (Arunachal Pradesh)</p> <p>Email:- (arunachalspcb@gmail.com)</p>
3.	<p>The Chairman Assam Pollution Control Board Bamunimaidan, Guwahati – 781021 (Assam)</p> <p>Email:- (chairman@pcbassam.org)</p>	4.	<p>The Chairman Bihar State Pollution Control Board Parivesh Bhawan, Plot No.N-B/2, Patliputra Industrial Area Patna-800010 (Bihar)</p> <p>Email:- (chairmanbspcb-bihar@gov.in)</p>
5.	<p>The Chairman Chhattisgarh Environment Conservation Board Paryavas Bhawan, North Block, Sector-19 Atal Nagar, Raipur– 492 002 (Chhattisgarh)</p> <p>Email:- (henv.cg@nic.in)</p>	6.	<p>The Chairman Goa State Pollution Control Board Nr. Pilerne Industrial Estate, Opp. Saligao Seminary, Saligao ,Bardez,- 403511(Goa)</p> <p>Email:- (chairman-gspcb.goa@nic.in)</p>
7.	<p>The Chairman Gujarat Pollution Control Board Paryavaran Bhavan, Sector-10A, Gandhinagar– 382043 (Gujarat)</p> <p>Email:- (chairman-gpcb@gujarat.gov.in)</p>	8.	<p>The Chairman Haryana State Pollution Control Board C-11, Sector 6, Panchkula- 134109 (Haryana)</p> <p>Email:- (hspcbho@gmail.com)</p>
9.	<p>The Chairman Himachal Pradesh State Pollution Control Board Paryavaran Bhavan, Phase III, New Shimla – 171009</p> <p>Email:- (chairmanpcbhp@gmail.com)</p>	10.	<p>The Chairman Jammu & Kashmir Pollution Control Committee, Parivesh Bhawan, Forest Complex, Gladni, Narwal, Transport Nagar, Jammu-180004</p> <p>Email:- (chairman87jkspcb@gmail.com)</p>
11.	<p>The Chairman Jharkhand State Pollution Control Board T.A Building, HEC Campus, P.O. Dhurwa Ranchi – 834004, (Jharkhand)</p> <p>Email:- (ranchijspcb@gmail.com)</p>	12.	<p>The Chairman Karnataka State Pollution Control Board Parisara Bhavan, #49, Church Street, Bengaluru – 560 001, (Karnataka)</p> <p>Email:- (chairman@kspcb.gov.in)</p>

13.	The Chairman Kerala State Pollution Control Board Plamoodu, Pattom P.O Thiruvananthapuram-695004 (Kerala) Email:- (chn.kspcb@gov.in)	14.	The Chairman Maharashtra Pollution Control Board Kalpataru Point, 3rd& 4th floor, Opp. PVR Cinema, Sion Circle (E), Mumbai- 400022 (Maharashtra) Email:- (chairman@mpcb.gov.in)
15	The Chairman Manipur Pollution Control Board Lamphepat, Imphal West D.C. Office Complex – 795004 (Manipur) Email:- (radhakishore888@gmail.com)	16	The Chairman Mizoram State Pollution Control Board New Secretariat Complex, Khatla, Thlanmual Peng, Aizwal Mizoram- 796001 Email:- (mpcb@mizoram.gov.in)
17	The Chairman Meghalaya State Pollution Control Board Arden, Lumpyngngad, Shillong – 793014 Email:- (megspcb@rediffmail.com)	18.	The Chairman Madhya Pradesh Pollution Control Board ParyavaranParisar, E-5 Arera Colony Bhopal – 462016 Email:- (chairman-mppcb@mp.gov.in)
19.	The Chairman Nagaland State Pollution Control Board Signal Point, Dimapur, Nagaland – 797112 Email: - (npcb2@yahoo.com)	20	The Chairman Odisha State Pollution Control Board Paribesh Bhawan A-118, Nilakanta Nagar, Unit –VIII, Bhubaneshwar – 751012. Email: - (chairman@ospboard.org)
21	The Chairman Punjab State Pollution Control Board Nabha Road, ITI Rd, Adarsh Nagar, Prem Nagar, Patiala - 147001. Email:- (chairman.ptl.ppcb@punjab.gov.in)	22	The Chairman Sikkim State Pollution Control Board Department of Forest, Environment & Wildlife Management Government of Sikkim, Deorali, Gangtok, -737102 (Sikkim) Email:- (spcbsikkim@gmail.com)
23.	The Chairman Rajasthan State Pollution Control Board A-4 Institutional Area, Jhalane Dungri Jaipur – 302004. (Rajasthan) Email:- (chairperson@rpcb.nic.in)	24.	The Chairman Telangana Pollution Control Board Paryavaran Bhavan A-3, Industrial Estate, Sanath Nagar, Hyderabad – 500 018 (Telangana) Email:- (chief.advisor@telangana.gov.in)

25.	The Chairman Tripura State Pollution Control Board Parivesh Bhawan Pt. Nehru Complex, Gorkhabasti P.O., Kunjaban, Agartala, Tripura - 799 006 Email:- (bagarwala00@gmail.com)	26.	The Chairman Tamil Nadu Pollution Control Board No. 76, Mount Salai, Guindy, Chennai – 600032 (Tamil Nadu) Email:-(chairman@tnpcb.gov.in)
27.	The Chairman Uttarakhand Pollution Control Board Gaura Devi Bhawan, 46 B IT Park Sahastradhara, Dehradun-248001 Uttarakhand Email:- (Secy-for-ua@nic.in)	28.	The Chairman Uttar Pradesh Pollution Control Board Building No. TC-12V VibhutiKhand, Gomti Nagar, Lucknow– 226010, (Uttar Pradesh) Email:- (chairman@uppcb.in)
29.	The Chairman Andaman & Nicobar Islands Pollution Control Committee Department of Science & Technology Dollyganj Van Sadan, Haddo P.O., Port Blair-744102, (Andaman & Nicobar) Email:- (secretaryuddm@gmail.com)	30.	The Chairman Chandigarh Pollution Control Committee Paryavaran Bhawan Madhya Marg, Sector - 19 B, Chandigarh – 160019. Chandigarh Email:- (cpcc-chd@nic.in)
31.	The Chairman Delhi Pollution Control Committee 4 th & 5 th Floor, ISBT Building, Kashmere Gate, Delhi - 110006. Email:- (chdpcc@nic.in)	32.	The Chairman Daman, Diu & Dadra Nagar Haveli Pollution Control Committee 1 st Floor, Udhog Bhavan Bhenslore, Dunetha Nani Daman, Daman – 396210 Email:- (fs-dmn-diu@nic.in)
33.	The Chairman Lakshadweep Pollution Control Committee Lakshadweep Administration Department of Science, Technology & Environment Kavarati – 682555. (Lakshadweep) Email:- (lk-advisor@gov.in)	34.	The Chairman Puducherry Pollution Control Committee Department of Science, Technology & Environment 3rd Floor, Housing Board Complex, Anna Nagar, Nellithope, Puducherry – 605 005 Email:- (secytran@py.gov.in)
35.	The Chairman West Bengal Pollution Control Board Paribesh Bhavan Canteen, 10A, Sector III, Bidhannagar, Kolkata- 700106 West Bengal Email:- (chrnm.wbpcbwb@bangla.gov.in)	36.	The Chairman Ladakh Pollution Control Committee Skara Yokma, Near KBR Airport, Leh-194101 UT of Ladakh Email:- (Admsecyutl.hfee@gmail.com)

Address list of The Regional Directors, CPCB	
1.	<p>The Regional Director (Kolkata) Central Pollution Control Board 502, Southend Conclave 1582, Rajdanga Main Road Kolkata-700107</p> <p>E-mail:- (rdkolkata.cpcb@gov.in)</p>
2.	<p>The Regional Director(Vadodara) Central Pollution Control Board Parivesh Bhawan, Opp. Ward No. 10 VMC Office Subhanpura, Vadodara – 390 023 Gujarat</p> <p>E-mail: - (pcrdvad.cpcb@gov.in)</p>
3.	<p>The Regional Director (Shillong) Central Pollution Control Board BSNL NE- 1, Telecom Circle CTO Building Ground Floor Shillong-793001</p> <p>E-mail: - (zoshillong.cpcb@nic.in)</p>
4.	<p>The Regional Director (Bhopal) Central Pollution Control Board 3rd Floor, Sahkar Bhawan North T.T Nagar Bhopal- 462003</p> <p>E-mail: - (cpcb.bhopal@gov.in)</p>
5.	<p>The Regional Director (Lucknow) Central Pollution Control Board Ground Floor, PICUP Bhawan Vibhuti Khand, Gomti Nagar Lucknow- 226020</p> <p>E-mail: - (zolucknow.cpcb@nic.in)</p>
6.	<p>The Regional Director (Bengaluru) Central Pollution Control Board 1st& 2nd Floors, Nisarga Bhawan A-Block, Thimmaiah Main Road 7th D Cross, Shivanagar Opposite Pushpanjali Theatre Bengaluru-560010</p> <p>E-mail:- (zobangalore.cpcb@nic.in)</p>
7.	<p>The Regional Director(Chandigarh) Central Pollution Control Board BSNL Exchange, 2nd Floor Sector 49-C, Chandigarh-160047</p> <p>E-mail: - (rdchandigarh.cpcb@gov.in)</p>
8.	<p>The Regional Director (Chennai) Central Pollution Control Board Regional Directorate - Chennai 2nd Floor, 40-E, BSNL Building TVK Industrial Estate, CIPET Road, Guindy, Chennai – 600032.</p> <p>E-mail: - (rdchennai.cpcb@gov.in)</p>
9.	<p>The Regional Director (Pune) Central Pollution Control Board Row House No. 1, Nisarg Vihar, Near Mitcon International Public School, Balewadi, Pune-411045</p> <p>E-mail: - (rdpune.cpcb@gov.in)</p>



Classification of Sectors into Red, Orange, Green, White and Blue Categories

(A tool for progressive environmental management)



Central Pollution Control Board

“Parivesh Bhawan”, East Arjun Nagar

Delhi-110032

(January 2025)

CONTRIBUTORS

Overall Guidance

1. Shri Tanmay Kumar, IAS, Chairman, CPCB
2. Shri Bharat Kumar Sharma, Member Secretary, CPCB

Working Committee

1. Shri B. Vinod Babu, : Chairman
Scientist 'F' and Div. Head, WM-II & IT, CPCB, Delhi
2. Shri V. P. Yadav : Member
Scientist 'F' and Div. Head, WM-I, CPCB, Delhi
3. Shri Dinabandhu Gauda, : Member
Scientist 'F' and Div. Head, IPC-I, CPCB, Delhi
4. Shri Nazimuddin, : Member
Scientist 'F' and Div. Head, IPC-II, CPCB, Delhi
5. Shri Kamlesh Singh, : Member
Scientist 'E' and Div. Head, IPC-III, CPCB, Delhi
6. Smt. Anamika Sagar, : Member
Scientist 'E' and Div. Head, IPC-IV & V, CPCB, Delhi
7. Shri P. K. Gupta, : Member
Scientist 'F' and Div. Head, IPC-VI & VII, CPCB, Delhi
8. Shri Amit Thakkar, : Member Convenor
Scientist 'E', IPC-VI & VII Division, CPCB, Delhi

Report preparation, finalization and overall coordination

1. Shri P. K. Gupta, Former Scientist 'F', CPCB, Delhi
2. Shri Amit Thakkar, Scientist 'E', and Divisional Head, IPC-VI&VII, CPCB, Delhi
3. Shri Saubhagya Dixit, Scientist 'D', IPC-VI Division, CPCB, Delhi

Development of Online Calculator:

Dr. Anantha N. S., Senior Scientific Assistant, Regional Directorate, Bengaluru

EXECUTIVE SUMMARY

The concept of classification of industrial sectors into red, orange, and green categories based on the size of operations and consumption of resources was first introduced in 1989 for Doon Valley, Uttarakhand. This classification aimed to aid decisions regarding siting of industries. Over the period of time, this concept was extended nationwide to manage consents and establish norms for surveillance and inspection of industry. In 2012, to have uniformity in classification throughout the country, the Central Pollution Control Board (CPCB) issued a standardized list of 244 sectors, classified under red (85 sectors), orange (73 sectors) and green (86 sectors) categories.

In 2016, the Central Pollution Control Board (CPCB) developed a scoring methodology based on the Pollution Index (PI) to harmonize the criteria for categorizing industries. This PI was determined by evaluating water pollution, air pollution, and hazardous waste generation. Using this methodology, CPCB classified 257 industrial sectors into four categories: Red (63 sectors), Orange (91 sectors), Green (65 sectors), and White (38 sectors). The White category was introduced for sectors considered "practically non-polluting" during 2016. Additionally, State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) were authorized to categorize any new or left over sectors according to the CPCB's 2016 methodology.

Further, based on the experience gained over the years, the increased use of cleaner fuels like PNG and bio-CNG, adoption of cleaner technology resulting into reduced wastewater generation, normalisation approach & different formula for calculating PI etc. a need was felt to revisit the classification methodology of 2016 for several such identified areas for improvement. Separate scoring for trade effluent and sewage effluent was also required due to differing characteristics and treatment methods.

Considering the scope of revision, CPCB published a draft report revising the methodology for calculating PI and accordingly classification of sectors into Red, Orange, Green, and White categories based on pollution index range was placed in the public domain for inputs/comments. Around 160 representations comprising more than 700 comments were received. Based on feedback/suggestions and examination of same by the working committee constituted for the purpose, the methodology was finalised. As per the final methodology, the scoring criteria for the following three major pollutant groups are as follows:

- i. Water Pollutant Score (PI_W): Assesses the water pollution potential considering the oxygen demand of wastewater, other pollutants in the wastewater and quantity of wastewater generated.
- ii. Air Pollutant Score (PI_A): Evaluates the potential air pollution due to process emissions (point source), work zone emissions (fugitive and odour) and type & quantity of fuel used.
- iii. Waste Pollutant Score (PI_H): Considering the type and quantity of waste (which are hazardous/toxic/infectious/bulk in nature) generated.

Each pollutant group is scored out of 100, and the Cumulative Pollution Index is calculated. The category of the sector is decided based on the pollution index range, if $PI \geq 80$ the category

of sector is Red, if PI ranges between $55 \leq PI < 80$, the category of sector is orange, similarly for the range of PI between $25 \leq PI < 55$, the category is Green and for $PI < 25$, the category of the sector is white.

Further, based on the stakeholders' comments, a need was felt to introduce a separate "blue category" for Essential Environmental Services (ESS) required for management of waste generated from domestic/household activities and, an incentive mechanism to promote units in a particular sector, taking measures resulting into better environmental performance. An addendum was prepared, shared and presented to all SPCBs/PCCs. The addendum was also placed in the CPCB Website on 11.07.2024 for inputs/comments. 09 representations were received in the addendum. All representations were examined, and classification based on revised methodology is finalised. Based on the revised methodology, CPCB has classified total 419 sectors and sub-sectors under Red (125), Orange (137), Green (94), White (54) and Blue (9) categories.

The report introduced incentive mechanism for the units in any sector that adopt environment friendly practices such as treatment and recovery of 100% wastewater, use of 100% cleaner fuel/renewal energy etc. and ensuring continuous compliance. These incentives are designed to encourage continuous improvement in environmental performance and to reward units that demonstrate proven implementation of sustainable practices and compliances.

Following are the salient features of the revised classification methodology:

- Methodology focusses on "Potential to pollute the environment" by the sector.
- Simplified single formula for Cumulative Pollution Index for all cases.
- Equal weightage to all three pollutant groups- Air, Water, and Waste.
- Cumulative PI based on weighted proportionate scores of pollutant groups.
- Separate scoring criteria for sectors generating sewage (such as Building & construction projects, STPs, Airports, etc.) and bio-medical waste (Health Care Facilities).
- Introduced Blue Category for 9 sectors under Essential Environmental Services required for management of waste generated from domestic/household activities.
- Appropriate weightage to scale of operations by introducing more slabs to bifurcates sub-sectors based on pollution load, scale of operation, production technology and type of fuel used.
- Introduction of sub-categories for sectors based on cleaner technologies, fuel types, integrated/segregated operations etc.
- Motivation to industries for progressive environmental management.
- A tool to assess the Cumulative Pollution Index and category based on revised method.

This report, prepared by the Central Pollution Control Board (CPCB), presents a revised methodology for classifying sectors based on their pollution potential. The classification aims to enhance environmental management and regulatory oversight by classifying sectors into red, orange, green, white, and blue categories. The report covers in detail about the genesis of

classification, need for the revision of 2016 methodology, scoring methodology for calculation of cumulative PI, etc.

The report also outlines guidelines for implementing the classification system. The classification may be used for consent management, inspection frequency, siting criteria, cluster development, pollution control plans, levying environmental compensation, promoting progressive environmental management, etc.

S. No.	Sector	W1	W2	W3	Pl ^w	A1	A2	A3	Pl _A	H1	H2	Pl _H	Pollution Index (PI)	Category	Remarks	Concerned Division
RAILWAY SIDINGS																
7.0	RAILWAY SIDINGS															
7.1	Railway sidings / Mineral stock yard	0	0	0	0	0	25	0	25	0	0	0	25.0	Green	Fugitive emissions due to loading, unloading, storage and transportation of the minerals.	UPC-I
7.2	Railway sidings only for defence purpose	0	0	0	0	0	0	0	0	0	0	0	0.0	White		UPC-I
PORTS AND HARBOURS																
8.1	Ports and harbours, jetties and dredging operations	20	30	25	75	0	25	0	25	30	20	50	84.4	Red		WM-I
8.2	Ports and harbours (only containers handling)/ Captive jetties	20	25	20	65	0	25	0	25	30	10	40	76.4	Orange		WM-I
9.0	Automobile service stations/ workshops	20	25	20	65	20	0	0	20	30	10	40	75.5	Orange		IPC-V
BUILDING CONSTRUCTION PROJECTS																
10.0	BUILDING CONSTRUCTION PROJECTS															
10.1	Building construction project $\geq 20,000$ sq. m. built-up area	20	0	25	45	25	0	25	50	0	0	0	61.3	Orange	i. During the construction phase, the sector is mainly air polluting. However, in post construction phase it is mainly water polluting due to generation of sewage. Consent to Establish/Operate to be taken as per EC conditions, as applicable. ii. Building construction project $\geq 5,000$ sq. m., but $< 20,000$ sq. m. built-up area (with connectivity to terminal STP) may not require separate classification. iii. For projects < 5000 the wastewater shall be managed according to on-site sanitation methods as mentioned in the Manual on Sewerage and Sewage Treatment System (2013), published by the	UPC-I
10.2	Building construction project $\geq 5,000$ sq. m., but $< 20,000$ sq. m. built-up area (without connectivity to terminal STP)	20	0	20	40	0	0	0	0	0	0	0	40.0	Green		UPC-I

Item No.13

Court No. 1

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

Original Application No. 801/2023
(IA No. 891/2023, IA No. 890/2023, IA No. 209/2024,
IA No. 108/2024 & IA No. 103/2024)

Mohan Prakash

Applicant

Versus

Ministry of Environment Forests and
Climate Change through the Secretary & Ors.

Respondent(s)

Date of hearing: 07.05.2024
Date of uploading: 14.05.2024

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

Applicant: Mr. Tanay, Adv. for Applicant (Through VC)

Respondent: Dr. Sapna Aggarwal, Adv. for MoEF & CC (Through VC)
Mr. Ankit Verma, Adv. for the State of UP
Ms. Priyanka Swami, Adv. for SEIAA, UP
Mr. Pradeep Misra & Mr. Daleep Dhyani, Advs. for UPPCB (Through VC)

ORDER

1. In this Original Application, applicant has challenged the advertisement dated 22.06.2022 issued by respondent no. 6, District Magistrate Agra for e-auction for six months (short term permit) and the LOI issued in pursuance thereto in favour of respondent no. 7, M/s P.D. Contractor in respect of the area at Gata No. 1 and 2 situated in village Swami Ehatmali, Tehsil Sadar, District Agra admeasuring 6.07 hectares. The plea of the applicant is that the District Survey Report (DSR) for District Agra was prepared in 2017 for five years which has come to an end in 2022 and thereafter, no fresh DSR has been prepared nor any replenishment study has been done. Therefore, the impugned auction

notice cannot be sustained in view of the judgment of the Supreme Court in the matter of *Deepak Kumar & Ors. vs. State of Haryana & Ors.* reported in (2012) Vol 4 SCC 629.

2. The Tribunal by order dated 05.01.2024 had issued notice to the respondents and had directed the Member Secretary, UPPCB to file the report. The MoEF&CC has filed the response mentioning the judgment of the Hon'ble Supreme Court dated 10.11.2021 in *Civil Appeal No. 3661-3662 of 2020* in the matter of *State of Bihar & Ors. vs. Pawan Kumar & Ors.*, emphasizing the importance of DSR and that DSR is required to be prepared before the auction/e-auction/grant of mining lease by the Mining Department.

3. The UPPCB has also filed the report stating that vide letter dated 18.01.2024, UPPCB had requested to the Director, Mining & Geology, State of UP and SEIAA, UP to provide the details about District Survey Report and replenishment study but the information is awaited.

4. The District Magistrate, Agra has filed the report stating that the requisite details were supplied to the UPPCB and that DSR for District Agra for the period 2017-2022 was prepared in terms of the EIA Notification dated 15.01.2016 which was subsequently approved by DEIAA in its meeting held on 16.11.2017 for a period of five years and thereafter, the e-auction notice dated 22.06.2022 was issued and LOI dated 21.07.2022 was awarded in favour of the respondent no. 7. Hence, at the time of issuance of the advertisement and LOI, the DSR for Agra was existing. The reply of the District Magistrate further states that the Environmental Clearance in respect of the above Gata is pending consideration before the SEIAA, UP and has not been granted till now and no mining activity is being carried out on that Gata. It has further been stated that in terms of the direction

of the Hon'ble Supreme Court in the order dated 10.11.2021 passed in *Civil Appeal No. 3661-3662 of 2020* in the matter of *State of Bihar & Ors. vs. Pawan Kumar & Ors.*, office order dated 22.03.2024 has been issued by the District Magistrate wherein sub-Divisional Committee has been formed for preparation of fresh DSR. A stand has been taken that respondent no. 7 will not be permitted to carry out any mining activity till the time of Environmental Clearance by SEIAA.

5. The Central Government, Ministry of Environment and Forests & Climate Change exercising the powers under Section 3 (5) (i) of the Environment Protection Act, 1986 read with Rule 5 (3) (d) of the Environment Protection Rule, 1986 had issued the Notification dated 14.09.2016 providing for the requirement of prior Environmental Clearance in respect of the project specified in Clause 2 of the Notification read with the project/activities listed in the Schedule to the Notification. Notification further provides for constitution of the State Level Environment Impact Assessment Authority and also provides for the recommendations by SEAC. Detailed procedure has been prescribed therein for granting the Environment Clearance. The Notification dated 14.09.2006 was amended by the subsequent Notification dated 15.01.2016 and following clause was inserted in the Schedule to the Notification after clause k:-

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

6. The issue relating to the Environment Impact Assessment in respect of the mining area of less than 5 hectare for mining/quarrying of minor minerals, boulders, gravel, and sand quarries in notified area in river beds came up for consideration before the Hon'ble Supreme Court in the case of *Deepak Kumar & Ors. vs. State of Haryana & Ors.* reported in (2012) Vol 4 SCC 629 wherein the Hon'ble Supreme Court has held as under:-

"8. We have no materials before us to come to the conclusion that the removal of minor minerals, boulders, gravel, sand quarries, etc. covered by the auction notices dated 3-6-2011 and 8-8-2011, in the places notified therein and also in the riverbeds of Yamuna, Ghaggar, Tangri, Markanda, Krishnavati River basin, Dohan River basin, etc. would not cause environmental degradation or threat to the biodiversity, destroy riverine vegetation, cause erosion, pollute water sources, etc. Sand mining on either side of the rivers, upstream and instream, is one of the causes for environmental degradation and also a threat to the biodiversity. Over the years, India's rivers and riparian ecology have been badly affected by the alarming rate of unrestricted sand mining which damage the ecosystem of rivers and the safety of bridges, weakening of riverbeds, destruction of natural habitats of organisms living on the riverbeds, affects fish breeding and migration, spells disaster for the conservation of many bird species, increases saline water in the rivers, etc.

9. Extraction of alluvial material from within or near a streambed has a direct impact on the stream's physical habitat characteristics. These characteristics include bed elevation, substrate composition and stability, instream roughness elements, depth, velocity, turbidity, sediment transport, stream discharge and temperature. Altering these habitat characteristics can have deleterious impacts on both instream biota and the associated riparian habitat. The demand for sand continues to increase day by day as building and construction of new infrastructures and expansion of existing ones is continuous thereby placing immense pressure on the supply of the sand resource and hence mining activities are going on legally and illegally without any restrictions. Lack of proper planning and sand management cause disturbance of marine ecosystem and also upset the ability of natural marine processes to replenish the sand.

10. We are expressing our deep concern since we are faced with a situation where the auction notices dated 3-6-2011 and 8-8-2011 have permitted quarrying, mining and removal of sand from instream and upstream of several rivers, which may have serious environmental impact on ephemeral, seasonal and perennial rivers and riverbeds and sand extraction may have an adverse effect on biodiversity as well. Further, it may also lead to bed degradation and sedimentation having a negative effect on the aquatic life. The rivers mentioned in the auction notices are on the foothills of the fragile

Shivalik Hills. Shivalik Hills are the source of rivers like Ghaggar, Tangri, Markanda, etc. River Ghaggar is a seasonal river which rises tūp in the outer Himalayas between Yamuna and Satluj and enters Haryana near Pinjore, District Panchkula, which passes through Ambala and Hissar and reaches Bikaner in Rajasthan. River Markanda is also a seasonal river like Ghaggar, which also originates from the lower Shivalik Hills and enters Haryana near Ambala. During monsoon, this stream swells up into a raging torrent, notorious for its devastating power, as also. River Yamuna.

11. We find that it is without conducting any study on the possible environmental impact on/in the riverbeds and elsewhere the auction notices have been issued. We are of the considered view that when we are faced with a situation where extraction of alluvial material within or near a riverbed has an impact on the river's physical habitat characteristics, like river stability, flood risk, environmental degradation, loss of habitat, decline in biodiversity' it is not an answer to say that the extraction is in blocks of less than 5 ha., separated by 1 km, because their collective impact may be significant, hence the necessity of a proper environmental assessment plan."

7. In that judgment, Hon'ble Supreme Court has duly taken note of the recommendations made by the MoEF&CC and has expressed that the State Government/Union Territories have to give due weightage to the recommendations of the MoEF&CC.

8. The stand of District Magistrate, Agra is that DSR for Agra was approved by DEIAA on 16.11.2017. The Tribunal by orders dated 13.09.2018 passed in O.A. No. 186/2016, 26.02.2021 in O.A. No. 360/2015 and 12.04.2024 in O.A. No. 370/2024 has already disapproved the formation of DEIAA. The NGT in OA No. 186/2016, Satendra Pandey Vs. Ministry of Environment, Forest & Climate Change & Anr. vide order dated 13.09.2018 has held:-

"d) The District Level Environment Impact Assessment Authority (DEIAA) and District Level Expert Appraisal Committee (DEAC) comprises mostly of officers/bureaucrats who have no expertise and scientific knowledge to assess environmental implications, and have been conferred with excessive and uncanalized power devoid of any guidelines. Even the power to appoint the Expert Members vested upon the authorities in the DEIAA and DEAC are unguided whereas there is an extensive elaborations with regard to qualifications, skill sets and competencies for the members of SEAC and SEIAA."

9. In Original Application No. 360/2015, National Green Tribunal Bar Association vs. Virender Singh (State of Gujarat) & Ors. vide order dated 26.02.2021 NGT has held:-

“Procedure for DSR/EC

13. Vide order dated 14.10.2020 in O.A. No. 40/2020, Pawan Kumar v. State of Bihar & Ors., the issue of preparation of District Survey Report (DSR) by Experts was considered. Vide Notification dated 25.07.2018 issued by the MoEF&CC, under Section 3(2)(v) of the EP Act, 1986 amending EIA Notification dated 14.09.2006, procedure for preparation of DSR for sand mining/riverbed mining was laid down. **The DSR is crucial as it contains Environment Management plan, including the replenishment study and other safeguards and is the basis to consider the environment impact of mining based on which decision to grant the Environmental Clearance is taken.** The Tribunal held that for such crucial exercise, the **Experts should be out of those accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India (NABT/QCCI) in terms of O.M. of MoEF&CC dated 16.03.2010.** Verification by the District Magistrate and evaluation by the SEAC was also necessary. Accordingly, following directions were issued in relation to a matter arising from the State of Bihar:-

“(ii) As the DEIAA is not functioning as a consequence of the decision of the Tribunal in Satendra Pandey (supra), the DSR shall be prepared through a consultant(s) accredited by the National Accreditation Board of Education and Training/ Quality Control Council of India in terms of O.M. of MoEF&CC dated 16.03.2010.

(iii) The DSR so prepared shall be submitted to the District Magistrate who shall verify the DSR only in respect of the relevant facts pertaining to the physical and geographical features of the district which shall be distinct from the scientific findings based on the parameters prescribed in the SSMMG- 2016. After such verification, the District Magistrate shall forward the DSR for examination and evaluation by the State Expert Appraisal Committee (SEAC) having regard to the fact that the SEIAA comprises of technical/scientific experts. The SEAC after appraisal of the report shall forward it to the SEIAA for consideration and approval if it meets all scientific/technical requirements.

(iv) While preparing the DSR, the MoEF&CC Accredited Agency/Consultant shall scrupulously follow the procedure and the parameters laid down under the SSMMG-2016 and EMGSM-2020 read in sync with each other.”

14. Considering the above, vide order dated 04.11.2020 in O.A. No. 726 of 2018, *Rupesh Pethe v. State of M.P. & Ors.*, the Tribunal directed that the above direction ought to be followed pan India, as follows:-

“5. The above direction may be followed by the State of MP also for the sake of uniformity. Further information required to be furnished is about the extent of illegal mining, extent of action taken, including the compensation recovered, vehicles seized and other coercive measures and impact of such action. The State of M.P. may compile relevant directions on the subject including the binding order of any Courts or Tribunal. This exercise may be undertaken jointly by the Secretary Geology and Mining, Member Secretary State PCB and Member Secretary SEIAA. In light of above, the State may further revise its policy and exercise. Let further compliance status be furnished before the next date by e-mail at judicial-ngt@gov.in preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF.

6. We are of the view that the above directions need to be followed by all other States where the issue of mining is relevant.

7. A copy of this order be forwarded to the Chief Secretaries of all the States and UTs by e-mail for compliance.”

10. In Original Application No. 370/2024 (I.A. No.165/2024), *Noble M Paikada vs. Union of India* vide order dated 12.04.2024 NGT has held:-

“4.....Tribunal in the matter of O.A. No. 142/2022 in *Jayant Kumar Vs. MoEF & CC* vide order dated 07.12.2022 had further held that only such leases where environmental clearance was granted by DEIAA may continue which have been on re-appraisal granted environment clearance by SEIAA, by holding as under:

“14. Further, this Tribunal has observed that mining leases in which environmental clearance was granted by DEIAA in view of amendment notification dated 15.01.2016 are still continuing even after passing of order dated 13.09.2018 by this Tribunal in **Satendra Pandey** (supra) and issuance of OM dated 12.12.2018 by MoEF&CC without any re-appraisal by SEIAA and appropriate remedial action on the basis of such re-appraisal. All such mining leases in which environmental clearance was granted by DEIAA need to be brought in consonance with the directions given by Hon’ble Supreme Court in **Deepak Kumar** (supra) and order dated 13.09.2018 by this Tribunal in **Satendra Pandey** (supra) by re-appraisal by SEIAA and only such mining leases may be continued which have been on re-appraisal granted environmental clearance by SEIAA. MoEF & CC is, therefore, directed to take appropriate steps for compliance in this regard by issuance of requisite directions in exercise of the statutory powers under the Environment

(Protection) Act, 1986. For this purpose, MoEF & CC is directed to collect information regarding such mining leases in which environmental clearance was granted by DEIAA and the period of which has not yet expired and are still continuing in all the States and Union Territories and by issuing appropriate directions for compliance with directions given by Hon'ble Supreme Court in **Deepak Kumar** (supra) and order dated 13.09.2018 passed by this Tribunal in **Satendra Pandey** (supra) by re-appraisal for grant of EC by SEIAA.”

5. He further submits in O.A. 90/2022 in Sharvesh Sharma Vs. State of Madhya Pradesh & Ors. the Tribunal vide order dated 23.03.2022 had held that orders and actions initiated by the environmental clearance issued by DEIAA are void-ab-initio by observing as under:

“17. Thus, the orders as quoted above and the chart submitted by the applicant reveals that **orders and actions initiated on the basis of the EC issued by DEIAA in district Datia and Narsinghpur are void-ab-initio having no force of law and thus against the provision of Sustainable Mining Management Guidelines, 2016 and Sustainable Sand Mining Management Guidelines, 2020, and against the orders of Hon'ble Supreme Court of India and orders passed by this Tribunal quoted above.**

18. Accordingly, in light of the order dated 01.07.2022 passed by Principal Bench of this Tribunal in Dilip Singh vs. State of Uttar Pradesh & Ors in O.A. No. 319/2022, we direct that the Environment Clearances granted in district Datia and Narsinghpur by the DEIAA could not be enforced, being in contravention with the judgment of the Hon'ble Supreme Court of India in Deepak Kumar vs. State of Haryana and Ors (2012) 4 SCC, 629 and should have been revoked immediately and not to be acted upon.”

6. He has further submitted that the same issue again came up before the Tribunal in Execution Application No. 55/2018 in Original Application No. 520/2016 in Vikrant Tongad Vs. Union of India and the Tribunal vide order dated 11.12.2018 held as under:

“3. The District Expert Appraisal Committee (DEAC) comprised officers having no expertise or scientific knowledge to assess environment implications. Permitting DEAC to make assessment was also not consistent with the Sustainable Sand Mining Management Guidelines, 2016. Accordingly, MoEF&CC was directed to take steps to revise the procedure laid down in the Notification dated 15.01.2016.”

7. He has also placed reliance upon the order of the Tribunal dated 06.11.2023 passed in O.A. No. 36/2023 in Brijendra Kumar Mala & Anr. Vs. State of Madhya Pradesh & Ors. wherein the Tribunal held as under:

“15. Respondents as well as the applicant pressed these lines to clarify though this Tribunal is not meant to clarify but since the application has been placed, thus, we are quoting the lines as below:-

- i. mining leases in which environmental clearance was granted by DEIAA in view of amendment notification dated 15.01.2016 are still continuing..... means “that it should not be continued.”
- ii. even after passing of order dated 13.09.2018 by this Tribunal in Satendra Pandey (supra) and issuance of OM dated 12.12.2018 by MoEF&CC – means “it should not be continued after these orders and notification.”
- iii. without any re-appraisal by SEIAA – means “the mandatory provisions up EIA 14.09.2006 must be complied with and prior environmental clearance must be obtained and required by the SEIAA.”
- iv. An appropriate remedial action on the basis of such re-appraisal means “after the re-appraisal remedial action is required.”
- v. All such mining leases in which environmental clearance was granted by DEIAA need to be brought in consonance with the directions given by Hon'ble Supreme Court of India in Deepak Kumar (supra) and order dated 13.09.2018 by this Tribunal in Satendra Pandey (supra) by re-appraisal by SEIAA means “This must be in consonance with the Deepak Kumar Case and re-appraisal by SEIAA.”
- vi. And only such mining leases may be continued which have been on re-appraisal granted environmental clearance by SEIAA means “the matters in which the environmental clearance was not granted by SEIAA may not be continued and it also means only such mining activities leases may be continued which have been re-appraised granted environmental clearance by SEIAA.”
- vii. Para 4 of the notification says, “in view of the above, it is hereby directed that all concerned SEIAA shall re-appraised the issued by the DEIAA between 15.01.2016 and 13.09.2018 including both dates and all fresh ECs in this regard shall be granted only by SEIAAs based on such appraisal.” That means all such ECs should be appraised by SEIAA and fresh EC shall be issued.”

8. He submits that the order of the Tribunal dated 13.09.2023 and 06.11.2023 in O.A. 36/2023 in Brijendra Kumar Mala (supra) was subject matter of challenge in the Hon'ble Supreme Court in Civil Appeal Diary No. 49608/2023 and Hon'ble Supreme Court vide order dated 13.12.2023 had passed the following interim order while issuing notice in the SLP which is as under:

“Permission to file the appeal(s) is granted.
Issue notice and tag with Civil Appeal Diary no. 5072/2019.
Notice will be served by all modes, including dasti. In the meanwhile, after the State Environment Impact Assessment Authority¹ grants approval/clearance, the mining will be permitted. The SEIAA will be also entitled to pass interim orders

*to ensure availability of sand etc., while also ensuring proper compliance with the norms.
Re-list alongwith connected matter(s) in the month of January 2024.”*

9. *He submits that in terms of the above order it is clear that only SEIAA has the power to issue environmental clearance. DEIAA has no power to issue environmental clearance and the environmental clearances issued by DEIAA are not valid therefore MoEF & CC cannot extend the validity of environmental clearances issued by DEIAA.”*

11. Admittedly, no DSR with the approval of the SEIAA has been prepared for District Agra till now.

12. The issue relating to publication of auction notice and grant of mining lease without the DSR and replenishment study had come up before the Tribunal in the matters of *in OA No.38/2022* dated 17.10.2022 in the matter of *Ajit Kumar v. State of Madhya Pradesh & Ors.* wherein the Tribunal has held as under:-

“45. *The main questions raised in this petition are as follows:-*

i. **Question No. 1 :** *Requirement of DSR and its finality.*

Answer: *The Sustainable Sand Mining Management Guideline, 2016 & 2020 provides for the preparation of DSR and MoEF has 97 issued necessary directions. It is settled Law that District Survey Report for Sand Mining shall be prepared before the auction/eauction/grant of mining lease by the Mining Department or department dealing with the mining activities in the respective States. DSR is to be approved at the level of SEIAA with the help of SEAC. The DSR becomes final on the date when it is approved by the SEIAA. With regard to the DSR relating to the district Raisen it was approved on 23.05.2022. Thus, the valid DSR/approved DSR came into existence on 23.05.2022 district Raisen, the question is replied accordingly.*

ii. **Question no. 2:** *Sanctity of NIT in absence of DSR or DSR duly approved by SEIAA.*

Answer: *In view of the discussion made above and in view of Prabhat Mohan Pandey case (Supra) and the direction issued in the Pawan Kumar Case, the action of NIT in absence of valid*

DSR is in violation of Sand Mining Guidelines issued in 2016 & 2020, it becomes final only after the approval of the SEIAA. Any NIT before the date of approval of DSR by SEIAA is in contravention of the Rules, Guidelines and the directions issued by the Hon`ble Supreme Court. The question is replied accordingly.

iii. **Question no. 3:** *Continuance of mining operation, in absence of valid environment clearance or after expiry of the term.*

Answer: *Any mining activities on the basis of environmental clearance which was expired w.e.f. 31.03.2021 & 31.03.2022 ceased to be in accordance with law and the mining activities and EC granted in violation of category is also against the provisions of law and against the Sustainable Sand Mining Rules, 2020.”*

46.....xxx.....xxx.....xxx

47. *In view of the above facts, the summary of the conclusions and directions are as follows :-*

- i. *The DSR in the district Raisen was finalized/approved by the MPSEIAA on 23.05.2022. Any action taken on the basis of NIT issued prior to 23.05.2022 including (26.11.2021) is irregular, void, having no effect and, in violation of guidelines and stands cancelled. The respondents may initiate exercise as fresh on the basis of approved DSR i.e. dated 23.05.2022 in the district of Raisen.*
- ii. *The environment clearance whose terms has expired either on 31.03.2021 & 31.03.2022 stands canceled and Madhya Pradesh State Environmental Impact Assessment Authority is directed to cancel the remaining matters, where the matter is under scrutinization before the authorities concerned and take appropriate decision within 15 days. Till the Final decision is taken by the appropriate authority/ MPSEIAA, no mining activities are permitted in the concerned districts under question where the EC has been expired on the basis of expired ECs.*
- iii. *We direct the Madhya Pradesh State Mining Corporation and the MPSEIAA to rectify the EC in accordance with law and in*

light of the judgment and orders passed by this Tribunal in Prabhat Mohan Pandey vs. State of MP & Ors. (Supra).

- iv. Issue of electronic traffic passes by the MPSC portal from the mines whose EC has expired is illegal, irregular and in contravention of Sand Management Guidelines and the respondents are directed to take necessary actions to control the illegal mining in accordance with law”*

13. Hence, it is settled that DSR earlier prepared by DEIAA cannot be given seal of approval without reappraisal by SEIAA. The DSR prepared for Agra in 2017 by DEIAA was not reappraised by SEIAA and was not brought in consonance with direction issued by Hon'ble Supreme Court in the judgment of Deepak Kumar (supra) and order of NGT in Satendra Pandey (supra). It is also settled that the auction notice/NIT issued prior to finalization of DSR cannot be sustained.

14. In view of the above settled legal position, the e-auction notice without the replenishment study and DSR for the District prepared by the District Magistrate and approved by the SEIAA cannot be issued and lease for miner minerals/sand cannot be granted.

15. Hence, OA is allowed and impugned advertisement for e-auction dated 22.06.2022 is set aside. Pending IA, if any, is also disposed of accordingly.

Prakash Shrivastava, CP

Sudhir Agarwal, JM

Dr. A. Senthil Vel, EM

May 07, 2024

Original Application No. 801/2023

(IA No. 891/2023, IA No. 890/2023, IA No. 209/2024,

IA No. 108/2024 & IA No. 103/2024)

SN

Item No. 1

(Pune Bench)

**BEFORE THE NATIONAL GREEN TRIBUNAL
WESTERN ZONE BENCH, PUNE**

(By Video Conferencing)

ORIGINAL APPLICATION NO.34 OF 2022 (WZ)

Subhash Bhai Ishwar Bhai Parmar,
Resi – 186, Mahayanshi Mohallo,
Karanj (V), Mandvi (T), Surat (D),
Gujarat - 394110

.....Applicant(s)

Versus

1. State of Gujarat,
Through Chief Secretary,
5th Floor, Block No.1,
Sardar Bhavan Sachivalaya,
Gandhi Nagar, Gujarat – 382010

2. State Environment Impact Assessment Authority (SEIAA),
Through Member Secretary,
Paryawaran Bhawan,
Sector – 10A, Gandhinagar,
Gujarat – 382010

3. Department of Industry & Mines,
Through Secretary,
Block No.05, 3rd Floor,
New Sachivalaya, Gandhi Nagar,
Gujarat – 382010

....Respondent(s)

**CORAM: HON'BLE MR. JUSTICE DINESH KUMAR SINGH, JUDICIAL MEMBER
HON'BLE DR. VIJAY KULKARNI, EXPERT MEMBER**

Applicant : Mr. Rahul Choudhary, Advocate

Respondent : Mr. Parth Bhatt, Advocate for R-1 and R-3
Mr. Maulik Nanavati, Advocate for R-2/SEIAA

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Reserved on : 23.09.2022

Pronounced on : 29.09.2022

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JUDGMENT

1. This application has been filed drawing our attention to issuing of auction notices of mining of sand and other minor minerals without

preparation of District Survey Report (for short, "DSR") in violation of EIA Notification of 2006, as amended in 2016 and 2018, Sustainable Sand Mining Guidelines (SSMG), 2016, Enforcement and Monitoring Guidelines for Sand Mining (EMGSM), 2020, across the State of Gujarat. It is, therefore, prayed that such auction notices be declared null and void. It is further prayed that clear direction be issued that no auction notices for sand mining and mining of minor minerals be issued without preparation of DSR.

2. It is revealed from the contents of the application that the applicant has gathered information in this regard under the Right to Information Act. The applicant has given a tabular chart of such auctions notices, which is annexed as Annexure-A/1 to the application, which have been issued without preparing the DSR from the year 2018-2021. The auction notices are stated to be 106 and are annexed to the application as Annexure-A/7 (colly). It is further submitted that the main objection of the preparation of DSR is to ensure the identification of the areas of aggradations or deposition, where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installations, where mining should be prohibited. The decisions in a large number of cases have been relied upon in this regard by the applicant such as **Anjani Kumar Vs. State of U.P. & Ors; (2017 SCC Online NGT 979**, orders dated 18.06.2018 and 19.06.2018 [**W.P. (PIL) No.1806 of 2015** (In the matter of Court on its **Own Motion Vs. The State of Jharkhand & others**) along with **W.P. (PIL) No.290 of 2013 (Hemant Kumar Shilkarwar Vs. the State of Jharkhand and others)** passed by the Hon'ble High Court of Jharkhand, wherein preparation of DSR is held to be mandatory for sand mining as well as mining of minor minerals. Reliance is also placed on the judgment of this

Tribunal in **Original Application No.360 of 2015 (National Green Tribunal Bar Association Vs. Virender Singh)**, wherein directions were issued to all States/Union Territories to strictly follow the SSMG-2016 read with EMGSM-2020 reinforced by mechanism for preparation of DSRs (in terms of directions of the Tribunal dated 14.10.2020) in **State of Bihar and Ors. Vs. Pawan Kumar and Ors.etc. (Civil Appeal No.3661-3662 of 2020) decided on 10.11.2021** and in **Rupesh Pethe Vs. State of M.P. and others (Original Application No.726/2018) decided on 26.02.2021** .

3. This application was admitted by us on 19.05.2022 and on that day, the learned counsel for respondent Nos.1 to 3 Mr. Maulik Nanavati was present.

4. The stand of respondent No.2 - State Environment Impact Assessment Authority (for short, "SEIAA") is as follows:-

5. The Gujarat Minor Mineral Concession Rules, 2017 (for short, "Rules, 2017") provide that the Government of Gujarat may grant quarry lease through an electronic auction in the manner specified in the Rules in areas where evidence of mineral resources has been established in accordance with the parameters prescribed in the Schedule to the Rules. Thus, grant of quarry lease by way of auction is performed by the State Government in accordance with the Rules, 2017. It is further submitted that the SEIAA is not directly involved in the process of holding auction for grant of quarry lease or sand mining lease as all such acts are performed solely and exclusively by the Department of Geology and Mining, Government of Gujarat. The answering respondent does not dispute or deny the need and necessity for preparation of DSR. One of the conditions for granting quarry lease is to obtain environmental clearance from SEIAA. It is only after clearance from SEIAA that written

order shall be passed by the Government granting quarry lease, whereafter actual work of excavation and/or extracting mineral can be lawfully performed by any person. It is further submitted that the applicant has not made it clear as to whether written order has been passed by the Government granting quarry lease to any successful bidder pursuant to the auction proceeding. He is also not sure whether Letter of Intent has expired or still survives. This information was necessary as the right to extract mineral may not have ripened in some cases and no mineral extraction work has actually begun in or over the leased area. In this background, the apprehension of the applicant that the completion of procedure for holding auction will result in violation of environmental laws or will have adverse effect on the environment, is misplaced. Even if the auction is found to have been hastily conducted, there does not exist any valid reason to declare the entire process to be bad as it involves public money.

6. The Enforcement & Monitoring Guidelines for Sand Mining, published in January, 2020 read with judicial decisions, mandate preparation of DSR prior to holding auction and granting quarry lease by the State Government. The work of preparing DSR is presently being undertaken by the concerned authority. There is implied acceptance of the fact that the DSRs had not been prepared and were not ready when the electronic auction process for grant of quarry lease was undertaken by the State Government under the provisions of Rules, 2017. The role of SEIAA is limited to examining any application that may be submitted before it by a Letter of Intent holder for grant of Environment Clearance, if permissible under law. In the present case, the answering respondent has received applications for grant of Environment Clearance from all the successful bidders of the auction process held by the State Government

under the auction notices appended to the application. In all the cases where applications have been received by the answering respondent, Terms of Reference were issued to the project proponent. In majority of cases, the work of preparing Environment Impact Assessment Report is being carried out at the instance of the project proponent and the final documents have not yet been submitted before the answering respondent for final evaluation leading to grant of Environment Clearance. In a handful of cases, the project proponent had submitted all the requisite documents. After evaluation, the answering respondent has granted Environment Clearance in some cases. In future, no application from any project proponent would be granted Environment Clearance in absence of DSR. Such application shall be kept in abeyance till the process of DSR is completed. In the cases where Environment Clearance has already been granted by the answering respondent, the State Government has declared that it shall not be issuing any order for grant of lease under Rule 8 Sub-Rule (4) of the Rules, 2017. Hence, in these circumstances, the successful bidder, despite possessing Environment Clearance, shall not be able to commence actual work of extracting minerals. The quashing of the auction notices, which are impugned in the present application and nullifying the auction process is not warranted as the action of the State Government is not outrightly illegal, at the best it can be treated to be irregular. A huge public money is spent in the conduct of electronic auction process under different advertisements impugned herein. The auction process under all the advertisements has been completed till the stage of Letters of Intent to successful bidders. In the event of quashing of auction notices, the public money would go waste and would lead to further legal complications, as rights stand created in favour of different parties by action of issuing of Letters of Intent to the successful bidders. All the

successful bidders have deposited their first instalment of 20% to the Government and have agreed to fulfill the conditions mentioned in the Letters of Intent. All these persons are not parties in the present proceeding. Therefore, the situation demands striking a balance to save the already concluded auction process while ensuring at the same time that no activity is undertaken under the said concluded auction process which is detrimental to environment or otherwise in violation of any law. It is suggested that in the interest of justice, an order may be passed restraining the commencement of actual mining activity till preparation and completion of DSR for each district, identifying blocks or areas where mining activity can be permitted without adversely impacting the environment. This would serve the ends of justice.

7. The Rules, 2017 clearly stipulate that no mining activities can be permitted without prior 'Environment Clearance Certificate' and 'Mining Plan'. Therefore, the order granting any lease for excavating minerals is issued only after process of lease-holder applying to acquire valid Environment Clearance as well as approval of the Mining Plan from the competent authority. Before issuing any notice for inviting tender for auction of any mineral, a detailed exploration of the proposed block is carried out in accordance with Schedule-I of the Rules, 2017, which are enacted in consonance with the United Nations Framework Classification (UNFC) Version-1997 and the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) Template. The Commissioner of Geology and Mining has established EC-Cell which has engaged regionwise NABET accredited agencies for obtaining Environment Clearance from the competent authority before carrying out any mining activity in the allocated blocks. These agencies have been given work to prepare DSR for each district in consultation with

concerned departments which is under process as the DSR is necessary document for issuance of Environment Clearance. The reliance is placed on the provisions of Section 15 of the Mines and Minerals (Development and Regulation) Act, 1957 which empowers the State Governments to frame policy/rules with respect to matters related to minor mineral and that ordinary sand is a minor mineral, making policy for its disposal falls in the ambit of the State Government. 95% of the revenue generated from the mining of sand is given to the Panchayat empowering local governance and ensuring development at the grass root level. Besides that the State of Gujarat collects 10% of the royalty as contribution towards District Mineral Foundation and the same is being utilized for the betterment of the Mining affected area in accordance with the Gujarat District Mineral Foundation Rules, 2016. Lastly it is submitted that there is no violation committed by the answering respondent of the judgment of the Apex Court since the auctioned blocks will be allowed to excavate after taking valid Environment Clearance from the competent authority.

8. The State of Gujarat has put up 2578 blocks for auction under Rules, 2017 after carrying out exploration under Schedule-I of the said Rules and out of those blocks, 1206 blocks have been issued Letters of Intent. In all for 64 blocks, grant order has been issued after all the clearances, including Environment Clearance. In this act, the State of Gujarat has incurred an amount of Rs.20,06,79,288/- towards exploration and auction of the blocks. As per Rules, 2017, no mining activity will be permitted without prior Environment Clearance. The grant is issued only after successful bidder gets the mining plan approved and after acquiring all the clearances and therefore, excavation of any mineral in the auctioned blocks will only be allowed after the

bidder acquires Environment Clearance and other mandatory clearance from the competent authority. The State of Gujarat is committed to protect the environment and no action in contravention or violation of the directions of the Apex Court would be allowed.

9. We have heard the arguments of the learned counsel for the parties and gone through the rival contentions of the parties, so also perused the record.

10. The learned counsel for the respondents has categorically admitted that there is no DSR prepared before issuing the auction notices and that the same is, in fact, in violation of the Enforcement and Monitoring Guidelines for Sand Mining (EMGSM), 2020, issued by the MOEF as well as against the judicial pronouncements to the effect that DSR is a condition precedent for issuing auction notice for any parcels or blocks for sand mining. He emphatically stated that huge amount to the tune of Rs.20,06,79,288/- has already been spent by the State of Gujarat in conducting the electronic auction process and in reaching the stage of issuing Letter of Intent to the successful bidders, which will all go waste in case the entire auction process is declared null and void or quashed. Therefore, the process which has been conducted till date should be protected as it does not result in any harm being caused to the environment as no actual mining has been permitted so far in any of the blocks. He further argued that this Tribunal may direct that no actual mining would be allowed till the DSR is prepared and pursuant thereto, the Environment Clearance has been granted to the successful bidders. In several cases, this kind of protection has been given by various judicial forums. In this case also, this kind of protection be granted.

11. As against above, the learned counsel for the applicant vehemently urged that in the light of the law laid down by the Apex Court in the case

of *Deepak Kumar & Anr. Vs. State of Haryana & Ors.; (2012)4 SCC 629* and also as per the Guidelines of 2020, there is a legal mandate that DSR has to be prepared in advance before issuing any auction notice for the sand mining. He also pointed out that there is a judicial pronouncement also to the effect that if any act is to be done in a particular manner, it must be done in the same manner and not otherwise. He also expressed his apprehension that in case protection is given to the process which has been conducted till now, that may lead to taking decision at the end by authorities in favour of those persons in whose favour Letters of Intent have already been issued. Therefore, all the auction notices which have so far been issued, for want of DSR, need to be quashed outrightly.

12. The learned counsel for the applicant further argued that the State of Gujarat had passed a resolution dated 05.03.2019 about Sustainable Sand Mining Management Guidelines, 2016 at the time of preparing sand blocks for auction. He has drawn our attention to the said resolution which is annexed by him with his reply-affidavit at pages 962 to 963 of the paperbook as Annexure-A-1 and in the light of this resolution, it is argued by him that even after giving an undertaking in 2019, electronic auction process has been undertaken by the State of Gujarat without preparing DSR, which shows that they do not have respect for their undertaking given before the judicial authority. Therefore, any undertaking which they now give before this Tribunal that the auction process should be protected and because of financial loss likely to be caused to the State of Gujarat, let the DSR proceeding be completed and fresh decision in accordance with law be allowed to be taken thereafter, should not be believed.

13. We are of the considered opinion that there are no two views about the fact that DSR is bound to be there before issuance of any e-tender for the purpose of sand mining as has been laid down in the Guidelines and following judgments :-

- (i) **State of Bihar and Ors. Vs. Pawan Kumar and Ors.etc.**
(Civil Appeal No.3661-3662 of 2020) decided on 10.11.2021
- (ii) **Anjani Kumar Vs. State of U.P. & Ors**
(2017 SCC Online NGT 979)

14. The Hon'ble Supreme Court of India in **Pawan Kumar and Ors.** (supra), considered the essentiality and prerequisite of DSR and held as follows:-

“7. It cannot be in dispute that though the developmental activities are not stalled, the environmental issues are also required to be addressed. A balanced approach of sustainable development ensuring environmental safeguards, needs to be resorted to. At the same time, it also cannot be ignored that when legal mining is banned, it gives rise to mushroom growth of illegal mining, resulting into clashes between sand mafias, criminalization and at times, loss of human lives. It also cannot be disputed that sand is required for construction of public infrastructural projects as well as public and private construction activities. A total ban on legal mining, apart from giving rise to illegal mining, also causes huge loss to the public exchequer.

8. Taking into consideration these aspects of the matter, we propose to issue certain interim directions.

9. The Tribunal, in the case of Satendra Pandey (supra), has found that the notification dated 15th January 2016, which provided Environmental Clearance to be given by the District Environment Impact Assessment Authority (hereinafter referred to as the “DEIAA”) was not in consonance with the judgment of this Court in the case of Deepak Kumar v. State of Haryana and Others. The Tribunal therefore in Satendra Pandey (supra), had directed Ministry of Environment, Forest and Climate Change (hereinafter referred to as “MoEF and CC) to take steps to revise the procedure laid down in the notification dated 15th January 2016. It is to be noted that MoEF and CC, in accordance with the directions of the Tribunal, had issued Enforcement and Monitoring Guidelines for Sand Mining (hereinafter to referred to as “the 2020 guidelines”) in the month of January 2020. Chapter 4 of the 2020 guidelines deals with identification of possible sand mining sources and preparation of DSR. It will be relevant to refer to Clause 4.1.1 (a), (o) and (p) of the 2020 guidelines:

“4.1 Identification of possible sand mining sources and preparation of District Survey Report (DSR)

4.1.1 Preparation of District Survey Report.

District Survey Report for sand mining shall be prepared before the auction/e-auction/ grant of the mining lease/Letter of Intent (Loi) by Mining department or department dealing the mining activity in respective states.

o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as Annexure II. The Sub Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in Annexure III. The details of the transportation need to be provided as in Annexure IV.

*p) **Public consultation-** The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the sub divisional committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatadari 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.”*

10. It could thus be seen that in accordance with the 2020 guidelines, the DSR is required to be prepared before the auction/e-auction/ grant of mining lease by Mining Department or Department dealing with mining activity in the respective States. It is further provided that the potential site for mining having its impact on the forest, protected area, habitation and bridges should be avoided. For this, a sub divisional committee is required to be formed which, after the site visit, is required to decide regarding the suitability of the sites for mining. The sub divisional committee is further required to record its reasons for selecting the mining lease in the patta land. Various details are required to be given in the annexure appended to the said policy.

11. It is further to be noted that Appendix-X of the notification dated 15th January 2016, issued by MoEF and CC also provides for composition of the sub divisional committee:

“A Sub Divisional Committee comprising of Sub Divisional Magistrate, Officers from Irrigation department, State Pollution Control Board or Committee, Forest department, Geology or mining

officer shall visit each site for which environmental clearance has been applied for and make recommendation on suitability of site for mining or prohibition thereof.”

12. It is to be noted that with the advent of modern technology, various technological gadgets like Drones and satellite imaging etc. can be used for identification of the potential sites and preparation of the DSR and also to check misuse and unauthorized mining.

13. We further find that when the 2020 guidelines as well as the notification issued by MoEF and CC of 2016 itself provide for constitution of sub divisional committees comprising of the officers of the State Government from various Departments for identification of the potential sites for mining, there would be no necessity of the DSRs being prepared through private consultants as directed by the Tribunal in the impugned order. The sub divisional committee consists of various officers from Revenue Department, Irrigation Department, State Pollution Control Board, Forest Department and Geology Mining Department of the State Government. They are better equipped to visit the sites and prepare the draft DSR for the concerned district. Apart from that, preparation of DSR through private consultants would also unnecessarily burden the public exchequer. We are therefore of the view that the direction in that regard issued by the Tribunal requires to be modified. We are further of the considered view that until the DSRs are finalized and granted approval by SEAC and SEIAA, it is appropriate that certain necessary arrangements are permitted so that the State can continue with legal mining activities. This apart from preventing illegal mining activities, would also ensure that the public exchequer is not deprived of its share in legalized mining.

14. We therefore find it appropriate to substitute the directions issued by the Tribunal vide judgment and order dated 14th October 2020, with the following directions:-

(i) The exercise of preparation of DSR for the purpose of mining in the State of Bihar in all the districts shall be undertaken afresh. The draft DSRs shall be prepared by the sub divisional committees consisting of the Sub-Divisional Magistrate, Officers from Irrigation Department, State Pollution Control Board or Committee, Forest Department, Geological or mining officer. The same shall be prepared by undertaking site visits and also by using modern technology. The said draft DSRs shall be prepared within a period of 6 weeks from the date of this order. After the draft DSRs are prepared, the District Magistrate of the concerned District shall forward the same for examination and evaluation by the SEAC. The same shall be examined by the SEAC within a period of 6 weeks and its report shall be forwarded to the SEIAA within the aforesaid period of 6 weeks from the receipt of it. The SEIAA will thereafter consider the grant of approval to such DSRs within a period of 6 weeks from the receipt thereon;

(ii) Needless to state that while preparing DSRs and the appraisal thereof by SEAC and SEIAA, it should be ensured that a strict adherence to the procedure and parameters laid down in the policy of January 2020 should be followed;

(iii) Until further orders, we permit the State Government to carry on mining activities through Bihar State Mining Corporation for which it may employ the services of the contractors. However, while doing so, the State Government shall ensure that all environmental concerns are taken care of and no damage is caused to the environment.”

15. This Tribunal in the case of **Anjani Kumar** (supra), while holding that a District Survey Report (DSR) is a pre-requisite and condition precedent before the grant of any mining lease of sand and bajri, has observed thus :-

“31. From the extracted portion, it could well be understood that to begin with the process prescribed for preparing of survey document mapping the status of the sand sources in a District is an integral but an essential part. The Survey has to be conducted and report be prepared for each District. It must also be noticed that while taking into consideration the fact that rivers cut across districts and States and every river is an ecosystem in itself but keeping in mind the fact that district is a most established unit of administration conduct of survey, planning and monitoring can be ensured effectively, the scheme proposed that every district will prepare this document (District Survey Report) taking river stretch in that district as an ecological and inventorising other sources of sand in the district...”

65. Thus there is merit in the contention of the applicant that the District Survey Report is not only an important act but it should be conducted prior to sanctioning of the permission/concession.

71. In other words it is evident that absence of the factual District Survey Report after due inspection grant of mining lease will be in conflict of the environmental laws as sand mining lease could be granted in an area only when aspect of replenishment of miner mineral especially in river sand is clearly established.

96. It is true that under the Mining Policy, Rules, the State is empowered to conduct survey for the purpose of inviting bids opine. The preparation of DSR and obtaining of Environmental Clearance is also a condition precedent to carrying on mining activity. It is for the State Government to ensure that there is no conflict between two and they are balanced so as to ensure that neither there is scope for illegal mining nor there should be environmental degradation.”

16. The learned counsel for respondent Nos.1 to 3 has fairly admitted that DSR has not been prepared in this case and the electronic auction

for sand mining has been done in respect of the blocks which have been detailed in the application. He, however, states that the process which has been completed till now should be protected for want of financial loss. We are not inclined to accept this argument because there is specific breach of the provisions of law which was settled as back as in the year 2016 and the same has been reiterated in Guidelines of 2020, so also in the law affirmed by various judgments as well as this Tribunal. We also find that the Rules, 2017 in respect of State of Gujarat, relied upon by respondent Nos.1 to 3, which do not provide for prior DSR to be conducted, is not found to be in consonance of the law has has been laid down in **Anjani Kumar** (supra).

17. The learned counsel for respondent Nos.1 to 3 has placed reliance upon the decisions in the cases of **Pahwa Plastics Pvt. Ltd. and Another Vs. Dastak NGO and others; 2022 SCC OnLine SC 362, Electrosteel Steels Limited Vs. Union of India and others; 2021 SCC OnLine SC 1247** and the judgment of the Apex Court passed in **Civil Appeal No.3132 of 2018 (D. Swamy Vs. Karnataka State Pollution Control Board and others)**, delivered on **22.09.2022** and argued that based on the principle laid down in above cases the *ex post facto* EC may be granted in specific cases where facts would require such decision to be taken. Therefore, it is argued that in the present case, looking to the fact that DSR process is going on, the proceeding in regard to grant of mining leases till date should be protected as already a huge amount has been spent, in the interest of justice.

18. We have gone through the aforecited judgments. The main thrust in these judgments is in respect of *ex post facto* EC being granted in appropriate cases and not to adopt pedantic rigid approach regardless of the consequences of stopping the operations. We find that the facts in

the cases cited supra are totally different from the facts in the present case and particularly from the judgment of the Apex Court in **Pawan Kumar and Ors.** (supra) wherein the matter of DSR was considered thoroughly and the same was found to be essential before initiating e-tendering process, we would like to follow the principle laid down in the said judgment instead of the judgments relied upon by the learned counsel for respondent Nos.1 to 3.

19. In view of the above discussion and the law laid down by the Apex Court and this Tribunal, we think that all the impugned auction notices need to be quashed and are accordingly quashed, with the direction that no proceeding/e-tendering be done in respect of sand mining without preparation of DSR first.

20. The Original Application stands disposed of. No cost.

Dinesh Kumar Singh, JM

Dr. Vijay Kulkarni, EM

21. After pronouncement of the above order, Mr. Parth Bhatt, learned counsel for respondent Nos. 1 and 3 prays for grant of stay to the effect of the above order for a period of four weeks. At his request, the effect of the above judgment and order shall stand stayed for four weeks from today.

Dinesh Kumar Singh, JM

Dr. Vijay Kulkarni, EM

September 29, 2022
OA 34/2022
NPJ

FOR THE BENEFIT OF ALL

Government of Maharashtra
Revenue and Forest Department
Madam Cama Marg, Hutatma Rajguru Chowk
Mantralaya, Mumbai - 400 032
Email ID: dokh.rfd@maharashtra.gov.in

Sl. No. Gaukhani-34/0525/Case No./58/B-1

Date: 19th April, 2025

To,
The Divisional Commissioner, Nagpur

Subject: Regarding conducting a thorough investigation of irregularities at sand stockyard, depots, and stockyards in Nagpur district and taking appropriate action.

Respected Adv. Ashish Jaiswal, Minister of Finance, Planning, Agriculture, Assistance and Rehabilitation, Law and Judiciary, Labour, has enclosed a copy of the letter addressed to the Hon'ble Minister (Revenue).

02. The Hon'ble Minister of State has lodged a complaint regarding 7 sand depots in Nagpur district, stating that there has been a gross violation of the terms and conditions as well as other provisions of the policies dated 19.04.2023 and 16.02.2024, and has requested an inquiry into the same. The information of the seven depots against whom the complaint has been lodged is as follows:-:-

1. Mansvi Traders, through their organization, have illegally deposited sand at Waghoda Gat (Group) No. 1269/1, Saholi-A, and Waghoda Gat (Group) No., Saholi-B. Despite there being no remaining authorized sand deposit at Waghoda, they have illegally extracted and stored sand in the new Gat (Group) No. 126 under the guise of clearing the old Gat (Group) No. 126 with the help of tractors, trucks, and dozers from the Pench River. Based on a false pond report, a large sand deposit has been shown. There are numerous complaints from customers against this organization, and some customers have filed cases in court. Illegal black market trading is ongoing with the help of the District Mining Officer, Nagpur, and officials related to the sand policy. The Tahsildar, Parsheoni, submitted a report to the District Mining Department on 07/01/2025, stating that illegal sand extraction and sale have occurred there, and all activities carried out in the name of the depot are unauthorized. Therefore, the said depot should be inspected, and action should be taken.

2. M/s Nissar Sons has been permitted to create a depot at Gat (Group) No. 144 in Parsodi. At this location, despite excavating sand illegally from the Pench and Kanhan rivers and showing a stock of sand as per the rules, false and fabricated information was provided.

Due to this, the actual stock was hidden, leading to a complaint of unauthorized extraction.

3. Ramdoot Multiservices Pvt. Ltd. has been permitted to create a depot at Mouza Junikathi, Gat (Group) No. 42 and Mouza Nilaj, Sub Depot. The old work from the Kanhan river yard at Singardeep, whose term has expired, has been shown as the depot. This order is from the Additional Collector, Nagpur, dated 25.11.2024. Irregularities have occurred in this depot as well, similar to the above. By showing the wrong stock in the name of sand, unlimited lifting has been done, and a thorough investigation regarding this unauthorized extraction and irregularities is necessary.
4. The Executive Engineer, DPDC Division, Nagpur Municipal Corporation, has been granted permission for a depot at Mouza - Pipla by the Collector, Nagpur, vide order dated 03.02.2025. There is no need for a separate depot for the Nagpur Municipal Corporation at this location. Sand can be made available for necessary work by using the stock rate at the depot. The District Mining Officer, Nagpur, has made this allocation. Unauthorized individuals are extracting sand from the government yard.
5. M/s. M.Z. Enterprises has been granted permission by the District Collector, Nagpur, on 31.01.2025 for sand

depot in Dhorli Depot, Group No. 19 in Dhorli Tahsil (Painganga River). As a special case, permission was given to lift 763 brass of sand until 30.04.2025. However, there is no sand at the said sand yard. With the help of a farm bund, an unauthorized sand yard has been created. The case regarding the sand in this yard is sub judice. Before the depot was set up, there was no sand at this location. Sand has been lifted from the Painganga river bed and an artificial sand stock has been created. This false sand stock has been verified on paper by the Revenue Officer and the Patwari of Dhorli. None of the rules laid down by the government for the depot have been followed at this place. Sand transportation has been going on continuously for the last 7 months. However, there has been no reduction in the size of the stock. Trucks are used to replenish the stock at night. There are no CCTV cameras at this location.

6. Mr. Mirza Baig was given the order by the District Mining Officer, Nagpur, to allocate a depot at Palora for the period from 26.02.2025 to 17.05.2025. Irregularities have occurred at Palora as well, similar to the above. Violating government rules, a total of 7 depots have been allocated in Parsivni Taluka. All depots have been allocated by illegally flouting the sand policy. The District Mining Officer, Nagpur, and

the concerned Talathi are responsible for this entire matter.

03. According to the mention in the Hon'ble Minister of State's letter, a police report should be requested regarding the information that Mr. Tabrez Siddiqui, an official, is involved in sand theft and illegal transportation under the protection of some political leaders.
04. Regarding the sand depot created in Nagpur district, complaints have been received. According to the government decision dated 19.04.2023 and 16.02.2024, inquire whether the said depot is functioning according to the provisions and whether the terms and conditions therein are being followed. By appointing a committee under your chairmanship, inspect all the sand depots in Nagpur district, including the one mentioned in the Hon'ble Minister of State's letter, and submit a report on it to the government immediately.
05. This is to inform you that after receiving your report on the above subject and upon its consideration by the government, approval has been granted to the sand groups in Nagpur district for excavation, transportation, stocking, and sale of sand as per the prescribed procedure.

Sd/-
(Shivaji Choure)
Under Secretary,
Maharashtra Government

To,

1. The District Collector, Nagpur
2. M/s. Shorya Techno Soft Pvt. Ltd., Pune

TRANSLATED COPY

Adv. Ashish Jaiswal

Minister of State
Finance, Planning,
Agriculture, Relief and
Rehabilitation, Law and
Justice, Labour
Government of
Maharashtra

Subject: Regarding conducting a thorough inquiry into irregularities at sand stockyards, depots, and stocks in Nagpur district and taking appropriate action.

Respected Sir/Humble Request

In Nagpur district, there is frequent violation of rules regarding sand mining. Despite the guidelines, instructions, and orders issued by the government regarding the sand policy, these are being flouted. Illegal extraction and transportation of sand are ongoing by showing existing stock and remaining stock at various sand yards. Even when the auction period for sand yards has expired, stock is shown as existing, and after a long period of expiry, permission is granted to sell this stock again by acting contrary to the government's policy. Sand is extracted and sold from the stock, and then the stock is left as is. At the aforementioned locations, the orders given by the Hon'ble High Court on September 26, 2023, regarding CCTV cameras, as per the government's decision, have not been implemented. The terms and conditions laid down in the sand policy of April 19, 2023, regarding the excavation, transportation, storage, production, and management of

sand, have been violated. However, no action has been taken by the District Mining Officer, Nagpur, on behalf of the administration. Action has not been taken according to the preventive measures that were mentioned. Excavation is not being carried out at any sand yard according to the mining plan, and there is a violation of environmental permits. However, no action has been taken on this either.

The sand policy of February 16, 2024, regarding the excavation of sand, its transportation up to the storage point, and the management of the storage, has also been completely violated in terms of its conditions. However, no action has been taken on the directives issued by the government regarding preventive measures. No inquiry or action has been initiated by the office of the District Mining Officer, Nagpur, regarding the irregularities that have occurred at the sand yards and storage points, and it has been deliberately ignored. Common citizens are being made to wait for hours to obtain sand. If an inquiry is conducted in this matter, many issues will come to light.

If we examine the sand yard in Parshivani Taluka as an example, we will notice several things. No inspection was conducted regarding the GPS system and CCTV, despite the government's directives, and the sand mafia received full cooperation and protection.

Illegal sand yards and depots have been distributed unauthorizedly in the Kanhan and Pench river areas of

Parshivani Taluka, which is inconsistent with the minor mineral excavation, extraction, and storage policy of the Maharashtra Government. The District Mining Officer, Nagpur, Parshivani Taluka, has un-authorizedly distributed a total of 7 depots between November 2024 and February 2025, which is inconsistent with the State Government's Sand Policy. The information regarding this is as follows.

1. M/s. Manswi Traders, Wadhoda Gat (Group) No. 127/1, the name of the sand yard is Saholi-A, Saholi-B, Wadhoda Gat (Group) No. 134, 138, 127/7 respectively has a sand depot at Mouza-Saholi. This allocation was done by the Additional Collector, Nagpur's order No. Khani/Karm 2/Kavi 393/2024 dated 21.11.2024.

There is no old sand stock at Wadhoda. New sand yard no. 126 has been created in the Pench river bed with the help of tractors and dozers, and sand has been stored there. Based on false reports, the old sand stock has been shown. There is no new sand stock at Wadhoda. The Saholi A or B sand yard is not currently operational, and there is no sand stock. There are many complaints from customers against M/s. Manswi Traders. Some complaints are pending in the Consumer Court, Nagpur. The District Mining Officer, Nagpur, and the concerned authorities under the sand policy are facilitating black marketing of sand.

Regarding this, the Tahsildar, Parshivani, submitted a report to the District Mining Department, Nagpur, on 07.01.2025. In reality, illegal excavation and sale of sand have taken place here. All activities carried out in the name of the depot are illegal. An inquiry should be conducted and action taken in this matter.

2. M/s. Nissar Sons has been granted permission for the sand yard (riverbed sand extraction site) and depot in Gut (Group) No. 144 at Pardi, covering Pardi, Palora, and Nayakund sand yards, by the Additional Collector, Nagpur, on 25.11.2024. Additionally, a sub-depot has been given at Pardi, which is against the rules, in the name of the depot, sand from the Pench and Kanhan rivers has been illegally extracted, and a stock of sand has been shown as per the above. In this work, Talathi, Palora has also provided false information. The sand stock that was actually shown did not exist. However, illegal extraction and sale were carried out in the area under this name.
3. Ramdoot Multiservices Pvt. Ltd. has been granted permission for a depot in Mauza-Junikamathi Gat (Group) No. 41 and a sub-depot in Mauza-Nilaj. The sand yard of the Kanhan River at Old Kamthi, Singardeep, which has expired, has been shown. This order is from the Additional District Collector, Nagpur, dated 25.11.2024. Irregularities have occurred in this

depot as well, similar to the above. In the name of this sand block, an incorrect stock has been shown again, and unlimited extraction has been carried out. A thorough investigation is necessary regarding this illegal excavation and irregularities.

4. Permission for the depot has been granted in the name of the Executive Engineer, DDC Cell, Nagpur Municipal Corporation at Mouza-Pimpal by the order of the Collector, Nagpur on 03.02.2025. There is no need to give a separate depot to Nagpur Municipal Corporation at this place. Sand can be made available for necessary work by using the stock rack at the depot. The District Mining Officer, Nagpur has made his allocation in this manner. Non-government persons are extracting sand at the government yard.
5. M/s. M. Z. Enterprises, by the name of Mirza Baig, has been granted permission for the Doreli sand depot, group no. 79, Doreli sand yard (Pench river) by the District Collector, Nagpur, on 31.01.2024. A special permission to lift 763 brass of sand was given until 30.04.2025. However, there is no sand at the mentioned location. An unauthorized sand depot has been created with the help of agricultural land. The case of illegal sand extraction from this yard is pending in court. There was no sand at the location before the depot was created. An artificial sand stock

has been created by diverting the riverbed of the PENCH river. The false sand stock has been certified by the revenue officer, Patwari, Doreli. None of the rules laid down by the government for the depot have been followed at this location. Sand transportation has been continuously going on for the last 4 months but there has been no reduction in the size of the stock. The stock is replenished at night with the help of tractors. There are no CCTV cameras here either.

6. Mirza Beg was ordered by the District Mining Officer, Nagpur to allocate depots at Palora during the period from 26.02.2025 to 17.05.2025. Similar irregularities have occurred at Palora as well. A total of 7 depots have been allocated in Parshivani Taluka by violating Government Rules. The entire depot allocation has been done by unauthorized violation of the sand policy. The District Mining Officer, Nagpur, and the concerned Talathi are responsible for this entire matter.

The period given for extracting sand by auction was too long. The entire sand yard is operated by a person named Tabrej Siddiqui. Offences of sand theft and illegal transportation are registered against Tabrej Siddiqui. This person has been involved in the sand business for many years and works in collusion with officials and some political leaders and is known as the

sand mafia. A report should be sought from the police regarding the said person. It is requested that a high-level special investigation committee be formed to investigate this entire matter concerning the Parshevani Taluka and most of the sand yards in the Nagpur district or the individuals involved, and action should be taken against the guilty officials by fixing responsibility.

Yours sincerely,
Sd/-
(Adv. Ashish Jaiswal)

To,
Hon. Chandrashekhar Bawankule,
Minister, Revenue,
Maharashtra State,
Mantralaya, Mumbai - 32.

TRANSLATED COPY



जनहिताय सर्वदा

महाराष्ट्र शासन

महसूल व वन विभाग

मादाम कामा मार्ग, हुतात्मा राजगुरु चौक

मंत्रालय, मुंबई-४०००३२.

Email ID : dokh.rfd@maharashtra.gov.in

क्रमांक.गौखनि-३४/०४२५/प्र.क्र.५८/ख-१

दिनांक:- १७ एप्रिल, २०२५

प्रति,

विभागीय आयुक्त, नागपूर

विषय:- नागपूर जिल्ह्यातील रेतीघाट, डेपो व स्टॉक येथील गैरप्रकाराची सखोल चौकशी करून उचित कार्यवाही करण्याबाबत

मा. अॅड. आशिष जयस्वाल, राज्यमंत्री, वित्त, नियोजन, कृषी, मदत व पुनर्वसन, विधी व न्याय, कामगार यांनी मा. मंत्री (महसूल) यांना अग्रेषित केलेल्या पत्राची प्रत यापत्रासोबत पाठविण्यात येत आहे.

०२. मा. राज्यमंत्री महोदयांनी नागपूर जिल्ह्यातील ७ वाळू डेपोबाबत तक्रार केली असून दि. १९.०४.२०२३ व १६.०२.२०२४ च्या वाळू धोरणातील अटी व शर्ती तसेच इतर तरतूदीचे सर्रास उल्लंघन केले असल्याने त्याची चौकशी करण्याची विनंती केली आहे. तक्रार करण्यात आलेल्या सात डेपोंची माहिती पुढीलप्रमाणे आहे.:-

१. मनस्वी ट्रेडर्स, या संस्थेतर्फे वाघोडा गट क्र. १२७/१ साहोली-अ व वाघोडा गट क्र. अनुक्रमे १५,१०४,१२७/१, साहोली-ब या ठिकाणी डेपोनिर्मिती करण्यात आली आहे. वाघोडा येथे जुना कोणताही रेतीसाठा शिल्लक नव्हता, सदर संस्थेने पेंच नदी पात्रातून ट्रक्टर, ट्रक व डोजर्स च्या मदतीने नवीन गट क्र. १२६ मध्ये अवैध रेतीची साठवणूक केली आहे. तलाठ्याच्या खोटेच्या रिपोर्ट च्या आधारे जुना रेतीसाठा दाखविण्यात आला आहे. सदर संस्थेविरुद्ध ग्राहकांच्या अनेक तक्रारी असून काही तक्रारी ग्राहक न्यायालयात करण्यात आल्या आहेत. जिल्हा खनिकर्म अधिकारी नागपूर आणि वाळू धोरणाच्या संबंधित अधिकाऱ्यांच्या मदतीने काळा बाजार सुरू आहे. सदर वाळू घाटाबाबत तहसिलदार पारशिवनी यांनी ०७.०१.२०२५ रोजी जिल्हा खनिकर्म विभाग येथे अहवाल दिला असून या ठिकाणी अवैध वाळू उपसा व विक्री झाली, डेपोच्या नावाने झालेली सर्व कार्यवाही बेकायदेशीर असून सदर वाळू डेपोची चौकशी करून कारवाई करावी.

२. मे. निस्सार सन्स यांना पारडी येथील गट क्र. १४४ मध्ये डेपो निर्मिती करण्यासाठी परवानगी दिलेली आहे. याठिकाणी देखील पेंच व कन्हान नदीतील अवैधरित्या रेती उत्खनन करून वरीलप्रमाणे रेतीचा स्टॉक दाखविला आहे. या कामात सुध्दा तलाठी, पालोरा यांनी खोटी माहिती पुरविली असून जो वाळूसाठा प्रत्यक्षात दाखविण्यात आला आहे तो अस्तिवातच नव्हता अशी तक्रार केली आहे.

३. रामदूत मल्टीसर्विसेस प्रा. लि. यांना मौजा जुनिकामठी गट क्र. ४१ मध्ये डेपोची आणि मौजा निलज येथे सब डेपोची परवानगी देण्यात आली आहे. जुनी कामठी, सिंगारदीप येथील कन्हान नदीचा रेतीघाट दाखविण्यात आला आहे ज्याची मुदत संपलेली आहे. हा आदेश अपर जिल्हाधिकारी, नागपूर यांचा दि. २५.११.२०२४ रोजीचा आदेश आहे. या डेपोमध्येसुद्धा वरीलप्रमाणे गैरप्रकार झालेला आहे. या वाळूगटाच्या नावाने पुन्हा चुकीचा साठा दाखवून अमर्यादित उपसा करण्यात आला व या प्रकरणी अवैध उत्खनन व गैरप्रकाराबाबत सखोल चौकशी आवश्यक आहे.

४. कार्यकारी अभियंता, डीपीडीसी कक्ष, नागपूर महानगरपालिका यांचे नावाने मौजा - पिपळा येथे जिल्हाधिकारी, नागपूर यांच्या आदेशाने दिनांक ०३.०२.२०२५ रोजी डेपोची परवानगी देण्यात आली. या ठिकाणी नागपूर महानगरपालिका यांना वेगळा डेपो देण्याची आवश्यकता नाही. डेपो येथील स्टॉक रेतीचा वापर करून आवश्यक कामासाठी रेती उपलब्ध होऊ शकते. जिल्हा खनिकर्म अधिकारी, नागपूर यांनी आपला अशा पद्धतीने वाटप केला आहे. सरकारी घाटावर गैरसरकारी व्यक्ती रेतीचा उपसा करीत आहे.
५. मे. एम. झेड. इंटरप्राइजेस तर्फे मिर्झा बेग यांचे नावाने डोरली डेपो, गट क्र ७१ मध्ये डोरली रेतीघाट (पेंच नदी) ची परवानगी जिल्हाधिकारी, नागपूर यांनी दि. ३१.०१.२०२५ रोजी दिली आहे. खास बाब म्हणून ७६३ ब्रास रेती उचलण्याची परवानगी दि. ३०.०४.२०२५ पर्यंत दिलेली आहे. डोरली येथे नमूद सर्वमध्ये रेतीघाट नाही. शेतमालकाच्या मदतीने अनाधिकृत रेतीघाट निर्माण करण्यात आला आहे. याच गटातील अवैध रेतीचे प्रकरण न्यायप्रविष्ट आहे. डेपोच्या निर्मितीपूर्वी या ठिकाणी रेती नव्हती. पेंच नदीच्या पात्रातील रेती उपसून कृत्रिम रेतीसाठी निर्माण करण्यात आला आहे. खोटा रेतीसाठी, कागदपत्रांची पूर्तता महसूली अधिकारी, पटवारी डोरली यांनी केली आहे. डेपोकरिता शासनाने ठरवून दिलेल्या कोणत्याही नियमांचे पालन याठिकाणी झालेले नाही. सतत ४ महिन्यांपासून रेतीवाहतूक सुरू आहे. परंतु स्टॉकच्या आकारात कोणतीही कमी आलेली नाही. रात्रीच्या वेळी ट्रॅक्टरच्या सहाय्याने स्टॉक पूर्ववत करण्यात येत असतो. या ठिकाणी सीसीटीव्ही कॅमेरासुद्धा नाही.
६. मिर्झा बेग यांना पालोरा येथे दि. २६.०२.२०२५ ते १७.०५.२०२५ या कालावधीत जिल्हा खनिकर्म अधिकारी, नागपूर यांनी डेपो वाटपाचा आदेश दिला. पालोरा याठिकाणी सुद्धा वरीलप्रमाणेच गैरप्रकार झाला आहे. शासनाच्या नियमांची पायमल्ली करून पारशिवनी तालुक्यात एकूण ७ डेपोचे वाटप करण्यात आले आहे. अनाधिकृतरीत्या वाळू धोरणाची पायमल्ली करून संपूर्ण डेपोचे वाटप करण्यात आले आहे. जिल्हा खनिकर्म अधिकारी, नागपूर आणि संबंधित तलाठी या संपूर्ण प्रकरणास जबाबदार आहेत.
०३. मा. राज्यमंत्री महोदयांनी त्यांच्या पत्रात उल्लेख केल्याप्रमाणे श्री. तबरेज सिध्दीकी हा अधिकारी व काही राजकीय नेत्यांच्या संरक्षणात वाळू चोरी व अवैध वाहतूक करण्यात येत असल्याबाबत पोलीसांकडून अहवाल मागविण्यात यावा.
०४. नागपूर जिल्ह्यात निर्माण केलेल्या वाळू डेपोबाबत प्राप्त झालेल्या तक्रारी, दि. १९.०४.२०२३ व १६.०२.२०२४ च्या शासन निर्णयातील तरतूदीनुसार सदर डेपो कार्यान्वित करून त्यामधील अटी व शर्तीचे पालन केले आहे किंवा कसे याबाबत आपल्या अध्यक्षतेखाली समिती नियुक्त करून मा. राज्यमंत्री महोदयांच्या पत्रात नमूद केलेल्या वाळू डेपोसह नागपूर जिल्ह्यातील सर्व डेपोंची तपासणी करून त्याबाबतचा अहवाल शासनास तात्काळ सादर करण्यात यावा.
०५. याबाबतचा आपला अहवाल प्राप्त होऊन त्यावर शासनाचा अंतिम निर्णय होईपर्यंत नागपूर जिल्ह्यातील सर्व वाळू गटातून उत्खनन, वाहतूक व साठवणूक व डेपोतून वाळू विक्री करण्यास या पत्राद्वारे स्थगिती देण्यात येत आहे.


(शिवाजी चौर)

अवर सचिव, महाराष्ट्र शासन

- प्रत: १. जिल्हाधिकारी, नागपूर
२. शौर्य टेक्नोसॉफ्ट प्रा. लि., पुणे.

अॅड. आशिष जयस्वाल



राज्यमंत्री
वित्त, नियोजन, कृषी, मदत व
पुनर्वसन, विधि व न्याय, कामगार
महाराष्ट्र शासन

विषय:- नागपूर जिल्ह्यातील रेतीघाट, डेपो व स्टॉक येथील गैरप्रकाराची सखोल चौकशी करून उचित कार्यवाही करण्याबाबत.

Acc

(म.न.वि.वि.) स.न.वि.वि.

नागपूर जिल्ह्यात वाळुगटात सातत्याने नियमांची पायमल्ली होत आहे. शासनाने वाळु धोरणाद्वारे व वेगवेगळ्या शासन निर्णयाने जे मार्गदर्शक तत्त्वे, सुचना, आदेश दिलेले आहे त्याची पायमल्ली होत असून अनेक रेतीघाटात स्टॉक, शिल्लक साठा दाखवून वाळुचे अवैध उपसा व वाहतुक सुरु आहे. वाळुच्या लिलावाची मुदत संपल्यानंतर प्रत्यक्षात साठा नसतानाही साठा दाखविण्यात आला व मुदत संपल्यानंतर बऱ्याच कालावधी झाल्यानंतर या स्टॉकला शासनाच्या धोरणाशी विसंगत कृती करून असे स्टॉक पुन्हा विकण्याची परवानगी देण्यात आली आहे. स्टॉकमधून रोज रेती विकण्यात आली व विक्री झाल्यानंतर तो स्टॉक तसाच ठेवण्यात आला. उपरोक्त ठिकाणी शासनाने दि. २७ सप्टेंबर, २०२३ च्या शासन निर्णयानुसार मा. उच्च न्यायालयाने सीसीटीव्ही कॅमेरेबाबत जे आदेश दिले होते त्या आदेशाची अंमलबजावणी करण्यात आली नाही. दि. १९ एप्रिल, २०२३ रोजीच्या वाळु धोरणात वाळुचे उत्खनन, डेपोपर्यंतची वाहतुक, डेपोची निर्मिती व व्यवस्थापन याबाबत ज्या अटी व शर्ती नमुद होत्या त्याचा भंग झाला. परंतु जिल्हा खनिकर्म अधिकारी, नागपूर यांच्या वतीने कुठलीही कार्यवाही करण्यात आली नाही. ज्या प्रतिबंधात्मक उपाययोजना नमुद करण्यात आल्या होत्या त्यानुसारही कार्यवाही करण्यात आली नाही. कुठल्याही रेतीघाटात मायनिंग प्लाननुसार उत्खनन करण्यात आले नाही, पर्यावरण अनुमतीचा भंग झाला. मात्र त्यावर कुठलीही कार्यवाही करण्यात आली नाही.

दि. १६ फेब्रुवारी, २०२४ च्या वाळु धोरणातदेखील वाळुचे उत्खनन, वाळुची डेपोपर्यंत वाहतुक व डेपोचे व्यवस्थापनाबाबत ज्या अटी व शर्ती नमुद करण्यात आल्या त्याचे सर्रास उल्लंघन झाले. मात्र प्रतिबंधात्मक उपाययोजनेबाबत शासनाने जे निर्देश दिले होते त्यावर कुठलीही कार्यवाही करण्यात आली नाही. ज्या रेतीघाटात, डेपोत गैरप्रकार झाले त्याबाबत जिल्हा खनिकर्म अधिकारी, नागपूर यांच्या कार्यालयामार्फत कोणतीही चौकशी किंवा कार्यवाही करण्यात आली नाही व जाणीवपूर्वक दुर्लक्ष करण्यात आले. सामान्य नागरिकांना वाळु देण्यास टाळाटाळ करण्यात आली व नागरिकांना तासनतास थांबविण्यात येत होते. याबाबतीत चौकशी केल्यास अनेक बाबी उघडकीस येतील.

अ.स. (अ.स.)
नागपूर
नागपूर
१६/१२/२४

अॅड. आशिष जयस्वाल



राज्यमंत्री
वित्त, नियोजन, कृषी, मदत व
पुनर्वसन, विधि व न्याय, कामगार
महाराष्ट्र शासन

उदाहरण म्हणुन पारशिवनी तालुक्यातील रेतीघाटाबाबत तपासणी केल्यास आपल्याला अनेक बाबी लक्षात येतील. जीपीएस यंत्रणा व सीसीटीव्ही तपासणीबाबत. जे निर्देश शासनाने दिले होते त्याबाबत कुठलीही तपासणी करण्यात आली नाही व वाळू माफियांना पुर्णपणे सहकार्य व संरक्षण देण्यात आले.

पारशिवनी तालुक्यातील कन्हान आणि पेंच नदीच्या परिसरात नियमबाह्य रेतीघाट आणि डेपोचे अनाधिकृतारित्या वाटप केले आहे जे की महाराष्ट्र शासनाच्या गौण खनिज उत्खनन, काढणे व साठवणूक धोरणाशी विसंगत आहे. पारशिवनी तालुक्यात जिल्हा खनिकर्म अधिकारी, नागपूर यांनी माहे नोव्हेंबर-२०२४ ते फेब्रुवारी-२०२५ या कालावधीत एकूण ७ डेपोचे अनाधिकृतारित्या वाटप केले आहे जे की राज्य शासनाच्या रेती धोरणाशी विसंगत आहे. त्याची माहिती खालीलप्रमाणे आहे.

१. मे. मनस्वी ट्रेडर्स, वाघोडा गट क्र. १२७/१, रेतीघाटाचे नाव साहोली-अ, साहोली-ब, वाघोडा गट क्र. अनुक्रमे १५, १०४, १२७/१ यांचे सब डेपो मौजा- साहोली अशा पध्दतीने अपर जिल्हाधिकारी, नागपूर यांचे आदेश क्र. खनिकर्म २/कक्ष २१/कावि ३१३/२०२४ अन्वये दिनांक २९.११.२०२४ रोजी रेतीघाट वाटप झालेले आहे.

वाघोडा येथे जुना कोणताही रेतीसाठा शिल्लक नव्हता. नव्याने पेंच नदीच्या पात्रातून ट्रॅक्टर, ट्रकच्या सहाय्याने तसेच डोजर्सच्या मदतीने नवीन गट क्र. १२६ मध्ये अवैधरित्या रेतीची साठवणूक केलेली आहे. तलाठ्यांच्या खोट्या रिपोर्टच्या आधारे जुना रेतीसाठा दाखविण्यात आला आहे. वाघोडा येथे नव्याने कुठलाही रेतीसाठा नव्हता. साहोली येथे अ किंवा ब असाही रेतीघाट सद्यस्थितीत नाही आणि रेतीसाठा स्टॉक सुद्धा नाही. मे. मनस्वी ट्रेडर्स यांचे विरुद्ध ग्राहकांच्या अनेक तक्रारी आहेत. काही तक्रारी ग्राहक न्यायालय, नागपूर येथे सुरू आहेत. जिल्हा खनिकर्म अधिकारी, नागपूर आणि वाळू धोरणाशी संबंधित अधिनस्त अधिकाऱ्यांच्या मदतीने रेतीचा काळाबाजार सुरू झाला. याबाबतीत तहसीलदार, पारशिवनी यांनी दि. ०७.०१.२०२५ रोजी जिल्हा खनिकर्म विभाग, नागपूर येथे अहवाल दिला. प्रत्यक्षात येथे अवैध पध्दतीने वाळूचा उपसा झाला व विक्री झाली. डेपोच्या नावाने झालेली सर्व कार्यवाही बेकायदेशीर आहे. या प्रकरणी चौकशी करून कार्यवाही करण्यात यावी.

२. मे. निसार सन्स यांना पारडी येथील गट क्र. १४४ मध्ये पारडी, पालोरा आणि नयाकुंड रेतीघाटाच्या नावावर अपर जिल्हाधिकारी, नागपूर यांनी दि. २५.११.२०२४ रोजी रेतीघाट आणि डेपोची परवानगी दिली आहे. सोबत पारडी येथे सब डेपो दिलेला आहे जो नियमबाह्य

अॅड. आशिष जयस्वाल



राज्यमंत्री
वित्त, नियोजन, कृषी, मदत व
पुनर्वसन, विधि व न्याय, कामगार
महाराष्ट्र शासन

आहे. याठिकाणीसुद्धा डेपोच्या नावाने पेंच आणि कन्हान नदीतील रेती अवैधरित्या उपसून वरीलप्रमाणे रेतीचा स्टॉक दाखविला आहे. या कामात सुद्धा तलाठी, पालोरा यांनी खोटी माहिती पुरविली आहे. प्रत्यक्षात जो वाळुसाठा दाखविण्यात आला आहे तो साठा अस्तित्वात नव्हता. मात्र या नावाने परिसरात अवैध उपसा व विक्री करण्यात आली.

३. रामदूत मल्टीसर्विसेस प्रा. लि. यांना मौजा- जुनिकामठी गट क्र. ४१ मध्ये डेपोची आणि मौजा- निलज येथे सब डेपोची परवानगी देण्यात आली आहे. जुनी कामठी, सिंगारदीप येथील कन्हान नदीचा रेतीघाट दाखविण्यात आला आहे ज्याची मुदत संपलेली आहे. हा आदेश अपर जिल्हाधिकारी, नागपूर यांचा दि. २५.११.२०२४ रोजीचा आदेश आहे. या डेपोमध्येसुद्धा वरीलप्रमाणे गैरप्रकार झालेला आहे. या वाळुगटाच्या नावाने पुन्हा चुकीचा साठा दाखवून अमर्यादित उपसा करण्यात आला व या प्रकरणी अवैध उत्खनन व गैरप्रकाराबाबत सखोल चौकशी आवश्यक आहे.

४. कार्यकारी अभियंता, डीपीडीसी कक्ष, नागपूर महानगरपालिका यांचे नावाने मौजा- पिपळा येथे जिल्हाधिकारी, नागपूर यांच्या आदेशाने दिनांक ०३.०२.२०२५ रोजी डेपोची परवानगी देण्यात आली. या ठिकाणी नागपूर महानगरपालिका यांना वेगळा डेपो देण्याची आवश्यकता नाही. डेपो येथील स्टॉक रेतीचा वापर करून आवश्यक कामासाठी रेती उपलब्ध होऊ शकते. जिल्हा खनिकर्म अधिकारी, नागपूर यांनी आपला अशा पद्धतीने वाटप केला आहे. सरकारी घाटावर गैरसरकारी व्यक्ती रेतीचा उपसा करित आहे.

५. मे. एम. झेड. इंटरप्राइजेस तर्फे मिर्झा बेग यांचे नावाने डोरली डेपो, गट क्र ७१ मध्ये डोरली रेतीघाट (पेंच नदी) ची परवानगी जिल्हाधिकारी, नागपूर यांनी दि. ३१.०१.२०२५ रोजी दिली आहे. खास बाब म्हणून ७६३ ब्रास रेती उचलण्याची परवानगी दि. ३०.०४.२०२५ पर्यंत दिलेली आहे. डोरली येथे नमूद सर्वेमध्ये रेतीघाट नाही. शेतमालकाच्या मदतीने अनाधिकृत रेतीघाट निर्माण करण्यात आला आहे. याच गटातील अवैध रेतीचे प्रकरण न्यायप्रविष्ट आहे. डेपोच्या निर्मितीपूर्वी या ठिकाणी रेती नव्हती. पेंच नदीच्या पात्रातील रेती उपसून कृत्रिम रेतीसाठा निर्माण करण्यात आला आहे. खोटा रेतीसाठा, कागदपत्रांची पूर्तता महसूली अधिकारी, पटवारी डोरली यांनी केली आहे. डेपोकरिता शासनाने ठरवून दिलेल्या कोणत्याही नियमांचे पालन याठिकाणी झालेले नाही. सतत ४ महिन्यांपासून रेतीवाहतूक सुरू आहे. परंतु

अॅड. आशिष जयस्वाल



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स्टॉकच्या आकारात कोणतीही कमी आलेली नाही. रात्रीच्या वेळी ट्रॅक्टरच्या सहाय्याने स्टॉक पूर्ववत करण्यात येत असतो. या ठिकाणी सीसीटीव्ही कॅमेरासुद्धा नाही.

६. मिर्झा बेग यांना पालोरा येथे दि. २६.०२.२०२५ ते १७.०५.२०२५ या कालावधीत जिल्हा खनिकर्म अधिकारी, नागपूर यांनी डेपो वाटपाचा आदेश दिला. पालोरा याठिकाणी सुद्धा वरीलप्रमाणेच गैरप्रकार झाला आहे. शासनाच्या नियमांची पायमल्ली करून पारशिवनी तालुक्यात एकूण ७ डेपोचे वाटप करण्यात आले आहे. अनाधिकृतरित्या वाळू धोरणाची पायमल्ली करून संपूर्ण डेपोचे वाटप करण्यात आले आहे. जिल्हा खनिकर्म अधिकारी, नागपूर आणि संबंधित तलाठी या संपूर्ण प्रकरणास जबाबदार आहेत.

आक्षेपार्ह बाब म्हणजे डेपोतून वाळूची उचल करण्याकरिता जो कालावधी देण्यात आला होता तो फार लांब देण्यात आला होता. हे संपूर्ण रेतीघाट तबरेज सिद्धिकी नावाचा व्यक्ती संचालित करित असतो. तबरेज सिद्धिकी याच्यावर रेती चोरी आणि अवैध वाहतुकीचे गुन्हे दाखल असावे. हा अनेक वर्षांपासून रेती व्यवसायात गुंतला असून हा व्यक्ती अधिकारी व काही राजकीय नेत्यांच्या संरक्षणात रेतीव्यवसायात काम करतो व रेती माफिया म्हणून ओळखला जातो. सदर व्यक्तीबाबत पोलीसांकडून अहवाल मागविण्यात यावा. पारशिवनी तालुक्यातील व नागपूर जिल्ह्यातील बहुतांश रेतीघाटात या व्यक्तीचे हितसंबंध आहेत.

करिता या संपूर्ण प्रकरणाची वरिष्ठ स्तरावरून विशेष चौकशी समिती गठीत करून चौकशी करून दोषी अधिकाऱ्यांवर जबाबदारी निश्चित करून कार्यवाही करण्यात यावी, ही विनंती.

आपला,

(अॅड. आशिष जयस्वाल)

मा.ना.श्री. चंद्रशेखरजी बावनकुळे,
मंत्री, महसूल,
महाराष्ट्र राज्य,
मंत्रालय, मुंबई-३२



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523

Illegal Sand, Material Worth ₹100 Crore Seized by Nagpur Rural Police; 192 Killed by Trucks in City in 2024



NAGPUR, APRIL 09, 2025 – SHUBHAM NAGDEVE

Nagpur: In a major crackdown on illegal mining and transportation, the Nagpur Rural Police have seized sand and other construction materials worth over ₹100 crore since 2023. Many of these trucks, operating primarily on the outskirts of the city, have been involved in a staggering 192 fatal road accidents within the Nagpur city police jurisdiction this year alone.

The scale of the illegal sand trade has escalated sharply over the past year. In 2023, police registered 194 cases, apprehended 372 individuals, and seized 208 vehicles valued at ₹30.20 crore. However, the situation worsened in 2024 with 302 cases, 656 arrests, and the seizure of 361 vehicles and mined material collectively worth ₹70 crore.

According to officials, the sand mafia continues to operate with impunity, allegedly backed by political support and organized syndicates. Their operations have spread aggressively into Bhandara and surrounding districts. One of the most alarming cases this year involved the death of Zahoor Hasan, where the truck responsible was found to be part of a Bhandara-based sand trafficking network. Despite its permit having expired five days before the incident, the truck continued to ply illegally.

Nagpur City Police also registered 17 cases of illegal sand mining in 2024, arrested 57 individuals, and seized 29 trucks and other equipment worth ₹45.86 lakh. In the early months of 2025, two more cases have already been reported, with five accused arrested and material worth ₹31.46 lakh confiscated.

Commenting on the crackdown, Nagpur Rural Superintendent of Police Harssh Poddar stated, "Sand mafias often have criminal records, including property and bodily offences. We've intensified surveillance on key hotspots like the Madhya Pradesh and Bhandara borders and have launched targeted action using externment and MPDA provisions."

Poddar emphasized that strict vigilance, enhanced intelligence, and coordinated field operations have resulted in significant seizures. Confiscated materials are auctioned by the police, and vehicles are only released post RTO verification and payment of penalties.

The audacity of the sand mafia was showcased in January 2024 when members attempted to run over Ramtek Sub-Divisional Officer Vandana Virani and a revenue team during a 10-kilometre chase near Ghoti Tok. They had been caught transporting stolen sand and tried to flee. In another instance, they illegally



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have disrupted river flow during monsoon. Media reports brought the incident to light, prompting swift action by the administration.

Authorities warn that the scale and brazenness of the racket indicate possible collusion with local revenue and administrative officials, making the crackdown all the more critical.

The ongoing enforcement by Nagpur Rural and City Police sends a strong message: those involved in the illicit sand trade will face serious consequences.

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THE TIMES OF INDIA

TOI Impact: Illegal bridge built by sand mafia on Kanhan river being dismantled

Dec 5, 2024, 01.05 AM IST



Nagpur: Acting on The Times of India's expose of an unauthorized steel and abutment bridge built across Kanhan river, a team from Kamptee Tehsil office began dismantling the 400meter-long and 10foot-wide bridge. Constructed without govt approval, it obstructs 75% of Kanhan river's width and was primarily used to facilitate sand transportation by the mafia.

Nagpur district collector Vipin Itankar on Wednesday morning directed the immediate demolition of the illegal structure after TOI's back-to-back stories highlighted how the illegal bridge was obstructing smooth flow of the river and choking water pipelines to Nagpur.

Tehsildar (Kamptee) Ganesh Jagdale, who was summoned by the collector on Wednesday morning, confirmed to TOI that dismantling of the bridge had already begun in the afternoon.

Earlier in the day, the collector instructed Jagdale to conduct a detailed demarcation of the river's natural flow. "Sand excavation activities will be stalled until further orders," Itankar declared, emphasizing no further extraction till the river's original course is verified through modern mapping techniques like GPS and ETS (Electronic Total

Station). The collector also ordered erection of cement poles to clearly delineate legally permitted sand excavation zones.

Initially, Jagdale based on the talathi's spot inspection report had defended the bridge, claiming it was built alongside a narrow water body, rather than obstructing Kanhan river. As the sand excavation site had no motorable road, the bridge was constructed by farmer Iftekhar Ahmad Mohammad Nawab with the help of contractor Mohammad Munawar Rizvi, who would excavate sand. However, photographic evidence presented by TOI contradicted this claim, showing significant alterations to the river's natural course. On reviewing the evidence, Itankar acknowledged the bridge had disrupted river's flow, raising concerns about potential environmental damage and threats to the region's water supply.

Residents and environmentalists had been demanding immediate removal of the bridge, warning of irreversible harm to the river's ecosystem. Preliminary findings indicated that over 100 tonnes of murrum and boulders were dumped into the riverbed at Mouza Bina, Kamptee (khasra No. 94) to create the makeshift platform. The bridge's construction reportedly occurred during election period, exploiting the distraction caused by the model code of conduct.

Despite delay in action, Itankar's directive marks a significant development. "The unauthorized structure must be dismantled to restore river's natural flow," the collector emphasized, hinting at possible legal action against those responsible for the illegal construction and sand excavation.

The bridge enabled illegal sand transportation from private agricultural land, allegedly owned by Iftekhar Ahmad Mohammad Nawab and leased to Mohammad Munawar Rizvi, who claimed floods in 1994 and 2020 deposited over 1.75 million cubic feet of sand on the land. However, this assertion was met with scepticism. Adjacent plots show no signs of similar sand accumulation, casting doubt on legitimacy of the sand mining operation.

Satellite images further refute Rizvi's claims, indicating the sand was part of the riverbed —govt property protected by environmental regulations and Supreme Court guidelines. The lack of any official permission to

bridge construction or sand extraction underscores the blatant disregard for legal norms.

While the collector's orders signal a crackdown on illegal sand mining, questions remain about how such large-scale unauthorized construction went unnoticed by local authorities, including the Kamptee tehsil office. Environmental activists are calling for stricter measures to prevent the sand mafia from exploiting natural resources.

"We are monitoring the situation closely. A comprehensive report will be submitted, and those responsible for violating environmental laws will face consequences," said Itankar.

For now, the focus remains on dismantling the illegal bridge and restoring Kanhan river's natural course, averting further ecological and infrastructural damage.

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Ramtek cops register 6 illegal sand mining cases, 7 held, material worth Rs1.60 crore seized

TNN / Apr 20, 2025, 22:28 IST

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Nagpur: The Nagpur rural police launched a major crackdown on illegal sand mining in the Ramtek sub-division, registering six cases, arresting seven accused, and seizing property worth Rs1.60 crore. The operation began on April 8 when Ramtek police seized a tipper loaded with 10 brass sand worth

Rs60,000 and a vehicle worth Rs25 lakh at Mansar Chowk, arresting driver Sanket Nakade.

The next day, four more tippers involved in illegal sand transportation were intercepted. At Chargaon Road, driver Kamlesh Athawale was caught with 12 brass sand and a vehicle worth Rs40 lakh. On Shitalwadi-Chargaon Road, two tippers were seized — one driven by Rakesh Bhojar carrying 8 brass sand (Rs22 lakh tipper), and another driven by Prakash Varthe with 12 brass sand (Rs25 lakh tipper).

Simultaneously, Aroli police seized a tractor and bike worth Rs5.66 lakh from Hingna village, arresting driver Pintu Patil. In Devlappar, a tipper worth Rs40 lakh with 10 brass sand was seized near Chorbahuli, with driver Vicky Meshram arrested.

Cases were registered under relevant sections of IPC, Maharashtra Land Revenue Act, Mines and Minerals Act, and Prevention of Loss to Public Property Act. The action, taken under the guidance of SP Harsh A Poddar and the leadership of SDPO Ramtek, Ramesh Barkate, involved coordinated efforts by Ramtek, Aroli, and Devlappar police stations.



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1 message

Ayush Anand <ayush.nna@gmail.com>

30 April 2025 at 10:02

To: aniruddha1488@gmail.com, "nitindeshpande0311@gmail.com" <nitindeshpande0311@gmail.com>

Cc: Shubhendu Anand <a.shubhendu@gmail.com>, mansi@eldfindia.com

Respected sir,
Please find the attachment.

 Rejoinder Affidavit by the Applicant along with
Annexures.pdf

Regards:

Ayush Anand,

Advocate on Record,

Supreme Court of India

Office: 34, Babar Lane, 1A-LGF, Bengali Market, New Delhi-110001

M- 8766392665, 9958854192

Office Email: ayush.aor@gmail.com