DISTRICT SURVEY REPORT

of

RIVER BED SAND MINING

for

MANDLA DISTRICT, MADHYA PRADESH

As per gazette Notification No. S.O. 3611 (E) New Delhi dated 25th July 2018 of Ministry of Environment , Forest and Climate Change,Government of India, "Sustainable Sand Mining guidelines 2016" and EMGSM 2020

YEAR 2022

State Level Environment Impact Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

SAND - DSR

कार्यालय कलेक्टर (खनिज शाखा) जिला मण्डला म0प्र0

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मण्डला दिनॉक 12.09.2022

कमॉक खनिज 01/2022/1422

प्रति,

सदस्य सचिव,
राज्य स्तरीय विशेषज्ञ आकलन समिति (SEAC)
म0प्र0 भोपाल

विषय :– जिला सर्वे रिपोर्ट प्रेषित किये जाने के संबंध में।

सन्दर्भ :– संचालक, भौमिकी तथा खनिकर्म भोपाल का पत्र कमांक 4755 भोपाल दिनांक 08.04.2022

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उपरोक्त विषयांतर्गत संदर्भित पत्रानुसार जिले में रेत एवं अन्य गौण खनिज हेतु जिला सर्वेक्षण रिपोर्ट अनुमोदन किये जाने हेतु SEAC की बैठक दिनांक 27.08.2022 को प्रस्तुत किया गया था। उक्त बैठक में माननीय सदस्यों द्वारा पूर्तियॉ किये जाने का निर्देश दिया गया था।

निर्देशानुसार मण्डला जिले के रेत एवं अन्य गौण खनिजों हेतु पृथक–पृथक तैयार जिला सर्वेक्षण रिपोर्ट की प्रति अनुमोदन किये जाने हेतु सादर प्रेषित है।

संलग्न :– उपरोक्तानुसार

सहायक खनि अधिकारी
जिला मण्डला म0प्र0

पृष्ठ0 कमॉक खनिज 01/2022/1422A मण्डला दिनॉक 12.09.2022

प्रतिलिपि :–

संचालक, भौमिकी तथा खनिकर्म म0प्र0 भोपाल की ओर सादर सूचनार्थ।

सहायक खनि अधिकारी
जिला मण्डला म0प्र0

PREFACE

The present District Survey Report is prepared in compliance of interim order passed by the Hon'ble Supreme Court on 10-11-21 in the case of Civil Appeal No. 3661-3662/2020, State of Bihar & Others vs. Pawan Kumar & Others. The District Collector through letter Khanij/1/2022/615 Mandla, dated 02-05-2022had constituted the sub-divisional committee to prepare the District Survey Report.

The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF & CC) vide their Notification No. 125 (Extraordinary, Part II Section 3, Sub-section ii), S.O. 141 (E), dated 15th January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation. District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Reports has been introduced. Subsequently, Ministry of Environment, Forest and Climate Change has published Notification No. 3611 (E), dt. 25th July, 2018 regarding inclusion of the —Minerals Other than Sand and format for preparation of the DSR has been specified. Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020, Issued by Ministry of Environment, Forest and Climate Change is prepared in consideration of various orders/directions issued by Hon'ble NGT in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams. This DSR has been prepared in conformity with the S O 141 (E), S O 3611 (E) and other sand mining guidelines published by MOEF & CC time to time as well as the requirement specified in Madhya pradesh Sand (Mining, Transportation, Storage and trading) Rules, 2019.

The purpose of DSR is to identify the mineral potential areas where mining can be allowed; and also, to distinguish areas where mining will not be allowed due to proximity to infrastructural structures and installations, areas of erosion, areas of environmental sensitivities etc. The DSR would also help to estimate the annual rate of replenishment wherever applicable and allow time for replenishment.

The DSR of Mandla District also describes the general geographical profile of the district, distribution of natural resources, livelihood, climatic condition and sources of revenue generation.

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DISCLAIMER

The data may vary due to flood, heavy rains and other natural calamities. Therefore, it is recommended that SEIAA may take into consideration all its relevant aspects / data while scrutinizing and recommending the application for EC to the concerned authority.

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Chapter-1
Introduction

The District Survey Report of Mandla District has been prepared in compliance of interim order passed by the Hon'ble Supreme Court on 10-11-21 in the case of Civil Appeal No. 3661-3662/2020, State of Bihar & Others vs. Pawan Kumar & Others and as per the guide line of Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India vide Notification S.O.-1533(E) dated 14th Sept, 2006 and subsequent MoEF & CC Notification S.O. 141(E) dated 15th Jan, 2016. This report shall guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. Further, MoEF & CC published a notification S.O. 3611(E) Dated 25th July, 2018 and recommended the format for District Survey Report.

The main objective of DSR is to identify 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 and estimation of annual rate of replenishment and allowing time for replenishment after mining in that area. The DSR would also help to calculate the annual rate of replenishment wherever applicable and allow time for replenishment. Besides the sand mining, the DSR also include the potential development scope of insitu minor minerals. The objectives of the District Survey Report are as following:

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. To regulate the Sand & Gravel Mining in the Country, identification of site-specific end-use consumers and reduction in demand & supply gaps.
3. Use of information technology (IT) & latest scientific method of mining for surveillance of the sand mining at each step.
4. District Survey report shall enable Environmental Clearance for cluster of Sand & Gravel Mines. It shall assist concern Department during post Environmental Clearance Monitoring.
5. To control the instance of illegal mining.
6. To control the flood in the area.
7. To maintain the livelihood of aquatic habitat.
8. To protect the incursion of ground water in the area. Limiting extraction of material in floodplains to an elevation above the water table generally disturbs more surface area than allowing extraction of material below the water table.
9. To keep accumulated data records viz. details of Mineral Resource, potential area, lease, approved mining plan, co-ordinates of a district at one place.
10. To maintain the records of revenue generation.
11. In-stream extraction of gravel from below the water level of a stream generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the water level.
12. In-stream extraction of gravel below the deepest part of the channel generally causes more changes to the natural hydrologic processes than limiting extraction to a reference point above the thalweg.
13. Excavating sand and gravel from a small straight channel with a narrow floodplain generally will have a greater impact on the natural hydrologic processes than excavations on a braided channel with a wide floodplain.
14. Extracting sand and gravel from a large river or stream will generally create less impact than extracting the same amount of material from a smaller river or stream.

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15. A concise guide line can be framed considering the point discussed in the DSR for sand and or minor mineral mining in the district.

The District Survey report (DSR) is comprised of secondary data published and endorsed by various departments and websites about geology of the area, mineral resources, climate, topography, land form, forest, rivers, soil, agriculture, road, transportation, irrigation etc. Data on lease and mining activities in the district, revenue etc. are collected and collated from concern district Head Quarter.

ABOUT DISTRICT

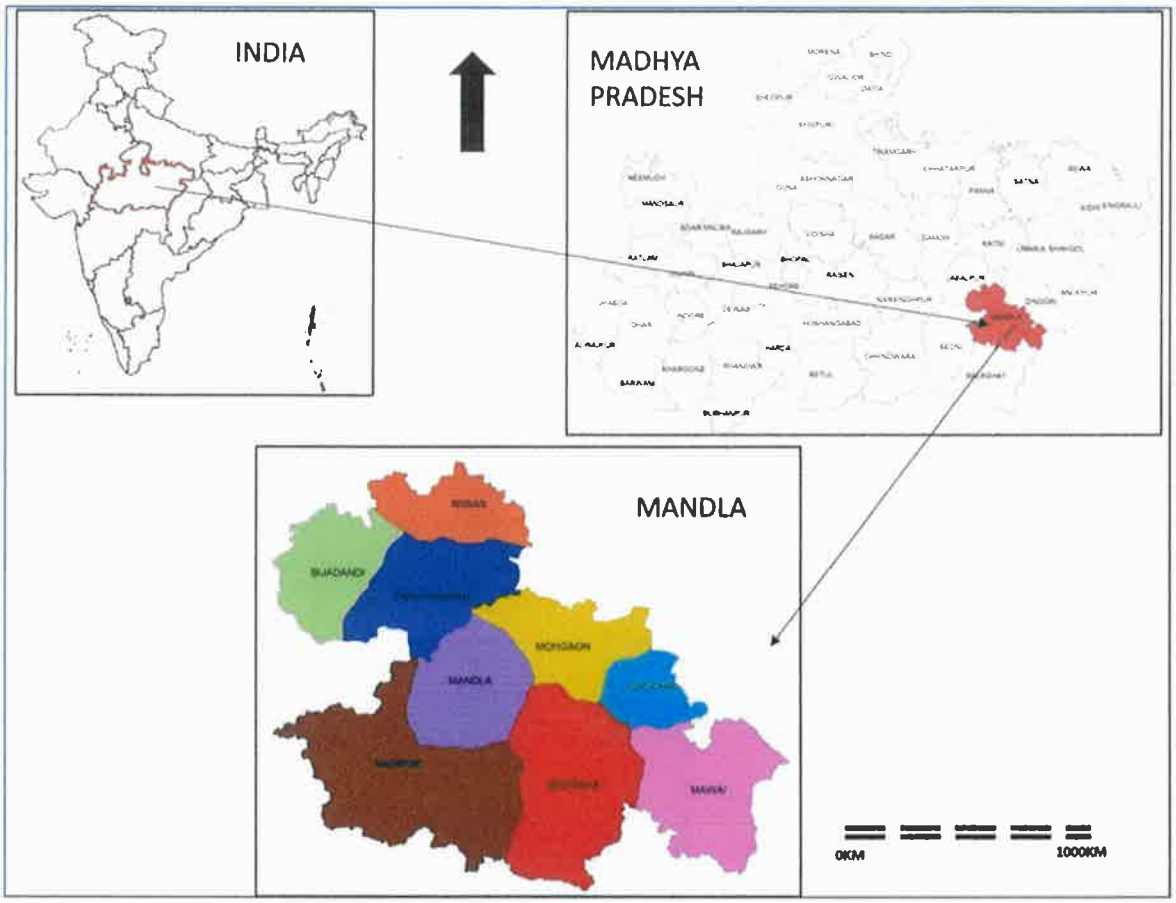
The Mandla district lies in the Southeast part of the state of Madhya Pradesh spanning over an area of about 7544 km2. Mandla district is situated in the south eastern part of Madhya Pradesh and cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22 12': 23 22'' 02' and longitude 79 59'23" : 81 44 22 E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The geogenic problem of high concentration of fluoride in ground water widely affect the quality life of the people of region. As per 2011 census, the population of Mandla district is about 1053522 . The district is primarily a tribal district. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.

Historical Prospective :

Writers such as Alexander Cunningham, John Faithfull Fleet, Moti Raven Kangali, Girija Shankar Agrawal and Brajesh Mishra identify Mandla as the location of ancient Mahishmati. Gondwana queen, Rani Durgavati shah ruled Mandla province and fought against Akbar in her valiant effort to save her kingdom; which is still subject to folklore. Rani Avantibai of Ramgarh later fought with the British to save her kingdom from annexation. The Gondwana dynasty of Garha Kingdom commenced, according to an inscription in the palace of Ramnagar, in the fifth century, with the accession of Jadho Rai, an adventurer who entered the service of an old Gond king, married his daughter and succeeded him to the throne. Alexander Cunningham placed the date two centuries later in 664. The Garha-Mandla kingdom was a petty local chiefship until the accession of Raje Sangram Shah, the forty-seventh king, in 1480. This prince extended his dominions over the Narmada Valley, and possibly Bhopal, Sagar, and Damoh and most of the Satpura hill country, and left fifty-two forts or districts to his son. In addition to Mandla, Jabalpur and Garha in Jabalpur District and Ramnagar in Mandla District served at times as capitals of the kingdom.

Location and Geographical Data:

The Mandla district cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22012': 230 22'' 02' and longitude 7959'23" : 81 44 22E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.



Demography of the Mandla District:

As of 2011 India census, Mandla had a population of 1054905. Males constitute 51% of the population and females 49%. In 2011 Mandla has an average literacy rate of 68.3%, higher than the national average of 59.85%: male literacy is 79.5%, and female literacy is 57.2%. Scheduled tribes dominate the population, so there is a Special education programs to promote them. In Mandla, 13.7% of the population is under 6 years of age. 90% of the population are Hindus, 4% Christians, 5% Muslims and 1% are of other faiths.

As per the official census data 2011 of Mandla district, total population is 1,054,905 and population density is 120/km2. Total no. of male population is 525,272 and female population is 529,633. 12.34% of total population, i.e., 130,189 comes under urban population and the remain g 87.66% i.e., 924,716 comes under rural population.

The district is sub divided into seven administrative 9 blocks and 6 Tehsils.There are 278-gram panchayats and 1221 villages in the district. As per census 2011, the total population of the district is 1053522.

Drainage System:

The district falls under two major drainage basins - the Narmada in the north and the Godawari in the south. It shows a typical dendritic drainage pattern of river network. The general slop of the Narmada valley is towards west. The Narmada river & its tributaries drain in northern and northwestern part of area. The Wainganga river flowing southerly and its tributaries drain the south western part They have broad, flat, shallow valleys with low imperceptible gradients, because their channels have reached the base level of erosion. Vertical erosion has ceased and lateral erosion is taking place.

Soil:

The soils in the area are generally of clayey loam types with sandy loam soil in some areas. In the northern and central parts of the District, the undulating plateau with mounds are covered with slightly deep soil, well drained, fine to fine loamy soils on gentle slopes marked by moderate erosion. The southern hilly region is covered by very shallow loamy soils, some what excessively drained. The soils developed on moderately steep slopes are marked by severe erosion. The soils have been classified as Ustocherpts/ Ustorthents/ Rhodustalfs/ Haplustalfs/ Haplusterts, as per pedological taxonom

Climate:

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevation and abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm.

Connectivity:

- **By Air**

Nearest Airport is Dumna Airport, situated at Jabalpur, which is 100 km away from Mandla.

- **By Rail**

Nearest Railway Stations are at Mandla.

- **By Road**

Mandla is connected by road to nearby cities like Jabalpur, Nagpur and Raipur through NH-30 (National Highway). From Jabalpur to Mandla, it takes more than 4 hours by bus (96 km approx.) as the road condition is very poor. Earlier Mandla has been connected by Indian Railway's Narrow Gauge Track via Nainpur to Jabalpur, Gondia, Chhindwara. Mandla is connected by Indian railway Broad gauge Track & Traveler can travel by train from Chiraidongri to Jabalpur via Nainpur, as soon as the covid restriction is over.

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CHPATER -2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

The major part of study area is characterized by a typical trappean-basaltic geomorphology comprising extensive plain, low lying hills and hill clusters with gentle Southerly slope. Eastern, South-eastern and Northern parts are highly undulating terrains with broad pointed topped hills of granites, terraces and isolated hills constituting mesas and butte. Central, Southwestern and Western parts of the district forms flat landmass having a moderately rolling topography with small mounds and hillocks and plains of Gondwana beds.

The study area is a part of the Satpura Region with an elevation range of 364 to 958m aMSL and the average relief is 604 m aMSL. Maximum elevation is towards Mawai in Southeast, Bichhiya in South and Gughri in Northeast directions. Minimum elevation is towards Mandla and Nainpur in Central parts.

The major hydro-geomorphological units in the study area can be classified into depositional landforms including alluvial plains and valley fills, structural landforms including lineaments and intrusive landforms consisted of basaltic dykes. The basaltic up-lands and Deccan plateau basalts are main physiographic units in the study area which are acting as good groundwater occurring and control units along with Gondwana and granite.

There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Approach to Sand Mining:

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

Mainly three types of minor minerals constituents such as sand, stone and Bajri are required for any type of construction apart from other material like cement and steel. In earlier times, the houses/buildings were constructed in form of small dwellings with walls made up of mud plaster, stone and interlocking provided with wooden frames and there were negligible commercial as well as developmental activities resulting in less demand of building material. However with the passage of time, new vistas of developmental activities were started. The quantity of minor minerals consumption in a particular area is a thermometer to assess the development of the area. Thus with the pace of development activities, the consumption of minor minerals also increased. As such the demand of minor minerals in the district has started an increasing trend. In order to meet the requirement of raw material for construction, the extraction of sand is being carried out exclusively from the river beds. In Mandla district, the demand of sand (river borne collection) and of Bajri/Grit (river borne collection or through manufactured grit by stone crushers) is mainly met by the supply from Narmada, Banjar and Budner river beds.

CHPATER -3

LIST OF EXISTING AND PROPOSED SAND GHATS WITH LOCATION, AREA AND OTHER DETAILS

Sr No.	Mine Name	Tehsil	Khasra No.	Area In Ha	GPS Coordinates		Existing/ Proposed
					Latitude	Longitude	
1	Silgi No. 2	Mandla	786	3.800	22°29'33.50"N 22°29'42.68"N 22°29'33.71"N 22°29'50.63"N 22°29'50.47"N 22°29'41.32"N	80°22'24.69"E 80°22'27.92"E 80°22'27.72"E 80°22'25.02"E 80°22'22.75"E 80°22'24.84"E	Existing
2	Bamhani No.4	Mandla	670	2.023	22°28'54.44"N 22°28'56.58"N 22°29'00.89"N 22°28'58.93"N	80°22'46.48"E 80°22'49.42"E 80°22'44.70"E 80°22'41.76"E	Existing
3	Naara	Bichhiya	348	2.000	22°31'11.08"N 22°31'11.68"N 22°31'16.45"N 22°31'14.61"N	80°25'8.66"E 80°25'9.55"E 80°24'56.08"E 80°24'56.41"E	Existing
4	Poudimal	Ghughri	1	3.000	22°48'38.67"N 22°48'41.00"N 22°48'47.76"N 22°48'45.45"N	80°39'50.92"E 80°39'52.80"E 80°39'44.51"E 80°39'42.83"E	Existing
5	Mainpuri	Bichhiya	165	1.800	22°32'15.27"N 22°32'6.88"N 22°32'5.78"N 22°32'13.92"N	80°52'40.07"E 80°52'50.52"E 80°52'49.43"E 80°52'39.11"E	Existing
6	Pipri Raiyat	Bichhiya	259	1.000	22°32'14.45"N 22°32'15.70"N 22°32'12.80"N 22°32'11.66"N	80°52'31.75"E 80°52'32.01"E 80°52'41.53"E 80°52'40.79"E	Existing

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7	Karegaon	Ghughri	62	4.000	22°48'29.92"N 22°48'15.16"N 22°48'14.47"N 22°48'27.55"N	80°40'14.38"E 80°40'24.46"E 80°40'22.15"E 80°40'13.07"E	Existing
8	Kisli	Ghughri	486	2.000	22°38'25.77"N 22°38'27.28"N 22°38'24.85"N 22°38'23.72"N	80°47'40.25"E 80°47'49.72"E 80°47'50.23"E 80°47'40.55"E	Existing
9	Ghughri	Ghughri	807	3.240	22°40'50.99"N 22°40'46.02"N 22°40'43.93"N 22°40'48.76"N	80°42'5.79"E 80°42'20.63"E 80°42'19.63"E 80°42'5.07"E	Existing
10	Indri	Mandla	719	4.680	22°23'13.58"N 22°23'12.89"N 22°23'4.76"N 22°23'5.86"N	80°21'19.33"E 80°21'21.05"E 80°20'37.44"E 80°20'37.06"E	Existing
11	Bhadiya	Mandla	1	1.440	22°26'14.57"N 22°26'17.26"N 22°26'16.98"N 22°26'14.19"N	80°23'0.95"E 80°23'1.03"E 80°23'7.15"E 80°23'6.86"E	Existing
12	Raygaon	Ghughri	275	2.900	22°44'19.94"N 22°44'9.75"N 22°44'8.67"N 22°44'18.69"N	80°34'25.49"E 80°34'30.93"E 80°34'28.47"E 80°34'22.72"E	Existing
13	Gariya	Ghughri	01	2.000	22°44'8.00"N 22°44'0.71"N 22°44'0.22"N 22°44'7.57"N	80°41'53.71"E 80°41'54.85"E 80°41'52.01"E 80°41'50.64"E	Existing
14	Devgaon	Mandla	01	2.000	22°30'55.94"N 22°30'57.92"N 22°30'48.05"N 22°30'47.16"N	80°22'54.77"E 80°22'54.66"E 80°22'39.87"E 80°22'40.64"E	Existing

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15	Bakcheradona	Mandla	370	3.700	22°39'53.50"N 22°39'54.90"N 22°39'43.61"N 22°39'42.24"N	80°28'57.76"E 80°28'55.63"E 80°29'02.14"E 80°28'59.17"E	Existing
16	Baheri	Mandla	100	1.000	22°24'27.44"N 22°24'27.23"N 22°24'17.98"N 22°24'18.52"N	80°22'14.36"E 80°22'15.96"E 80°22'12.48"E 80°22'11.49"E	Existing
17	Silgi No. 1	Mandla	1	6.000	22°30'21.13"N 22°30'21.17"N 22°29'58.11"N 22°29'58.55"N	80°22'18.91"E 80°22'16.22"E 80°22'16.32"E 80°22'20.30"E	Existing
18	Tharka	Mandla	969	5.200	22°30'1.52"N 22°30'21.94"N 22°30'20.73"N 22°30'01.97"N	80°22'12.81"E 80°22'12.62"E 80°22'15.77"E 80°22'14.51"E	Existing
19	Tikarwara	Mandla	298/1	6.000	22°32'07.38"N 22°32'08.41"N 22°31'45.36"N 22°31'45.58"N	80°23'07.59"E 80°23'10.14"E 80°23'15.29"E 80°23'11.72"E	Existing
20	Hirdenagar	Mandla	220	8.000	22°32'24.47"N 22°31'56.10"N 22°31'55.24"N 22°32'22.98"N	80°23'4.05"E 80°23'19.10"E 80°23'16.17"E 80°23'1.69"E	Existing
21	Bhapsa No. 01	Mandla	412	5.100	22°32'58.87"N 22°32'48.96"N 22°32'46.77"N 22°32'56.46"N	80°21'8.89"E 80°21'21.93"E 80°21'20.18"E 80°21'6.13"E	Existing
22	Bhavarda	Mandla	325	6.000	22°32'49.08"N 22°32'50.81"N 22°32'37.63"N 22°32'36.01"N	80°21'10.30"E 80°21'12.06"E 80°21'35.70"E 80°21'33.97"E	Existing

23	Chiblatola	Ghughri	450	2.000	22°44'17.83"N 22°44'17.92"N 22°44'9.96"N 22°44'9.98"N	80°41'46.62"E 80°41'50.13"E 80°41'49.44"E 80°41'47.44"E	Existing
24	Khairimal	Ghughri	58	1.000	22°48'46.35"N 22°48'44.03"N 22°48'41.94"N 22°48'44.72"N	80°39'49.65"E 80°39'53.47"E 80°39'51.64"E 80°39'47.71"E	Existing
25	Gurarkheda	Mandla	228	1.000	22°36'27.60"N 22°36'26.63"N 22°36'22.05"N 22°36'23.00"N	80°28'57.30"E 80°28'59.13"E 80°28'55.92"E 80°28'53.98"E	Existing
26	Koko	Bichhiya	417	2.000	22°28'42.39"N 22°28'42.54"N 22°28'40.83"N 22°28'40.48"N	80°46'27.36"E 80°46'38.81"E 80°46'38.86"E 80°46'27.28"E	Existing
27	Barbaspur	Bichhiya	699	4.000	22°27'58.46"N 22°27'57.08"N 22°27'50.03"N 22°27'51.85"N	80°23'24.13"E 80°23'26.24"E 80°23'08.73"E 80°23'07.81"E	Proposed
28	Mugdara	Nainpur	968	2.800	22°27'42.39"N 22°27'41.80"N 22°27'30.84"N 22°27'31.49"N	80°22'44.18"E 80°22'46.88"E 80°22'45.11"E 80°22'42.51"E	Proposed

Note- 1. All the 26 existing sand mines are allotted to M/s Ashtvakra IT Solutions Limited from December 2020 upto June 2023.
2. Serial No. 27 & 28 Mines are Proposed for mining Activity.

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CHAPTER-4

DETAILS OF ROYALTY OR REVENUE RECIEVED IN LAST THREE YEARS

Financial Year	Revenue Target (in Cr)	Revenue From Major Mineral (in Cr)	Revenue From Minor Mineral (in Cr)	Total Revenue (in Cr)
2019-20	18.00	0.00	11.33	11.33
2020-21	14.00	0.00	14.06	14.06
2021-22	48.00	0.00	46.23	46.23

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E-5, Arera Colony,

CHAPTER-5

DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS

Year	Sand (In Cum)	Stone (in Cum)	Dolomite (in Metric Tonne)
2019-20	238276.11	112037.313	419803.92
2020-21	27324.0	130895.458	328113.86
2021-22	288644.94	116866.30	623671.74

State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
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CHPATER - 6

REPLENISHMENT REPORT / PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

7.1 General

Sediment refers to the conglomerate of materials, organic and inorganic, that can be carried away by water, wind or ice. While the term is often used to indicate soil-based, mineral matter (e.g. clay, silt and sand), decomposing organic substances and inorganic biogenic material are also considered sediment. Most mineral sediment comes from erosion and weathering, while organic sediment is typically detritus and decomposing material such as algae. Sediment particles come in different sizes and can be inorganic or organic in origin. These particulates are typically small, with clay defined as particles less than 0.00195 mm in diameter, and coarse sand reaching up only to 1.5 mm in diameter. However, during a flood or other high flow event, even large rocks can be classified as sediment as they are carried downstream. Sediment is a naturally occurring element in many bodies of water, though it can be influenced by anthropogenic factors.

In an aquatic environment, sediment can either be suspended (floating in the water column) or bedded (settled on the bottom of a body of water). In other words, waterflow tries to scour its surface whenever it flows in the channel. Silt or gravels even larger boulders are detached from its bed or banks. The moving water sweeps these detached particles in downstream along its flow. Silting and scouring is not very uncommon and must be avoided by proper designs. It reduces supply level of water. The channel section gets reduced by silt and reduces discharging capacity. Sediments seriously threaten various projects due to silt carried out by rivers up to point of interceptions. Sediment is also threatening denudation of forests. Sediment is a major obstruction on the flow line. It shortens longevity of channel. It causes soil erosion. Therefore data base must be needed for policy making and planning.

The mineral potential is calculated based on field investigation and geology of the catchment area of the river/ streams. As per the policy of the State and location, depth of minable mineral is defined. The area for removal of mineral in a river or stream can be decided depending on geomorphology and other factors, it can be 50% to 60% of the area of a particular river/stream, e.g. in river mineral constituents like sand up to a depth of three meter are considered as resource mineral. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river/ stream.

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

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

7.2 Process of Deposition:-

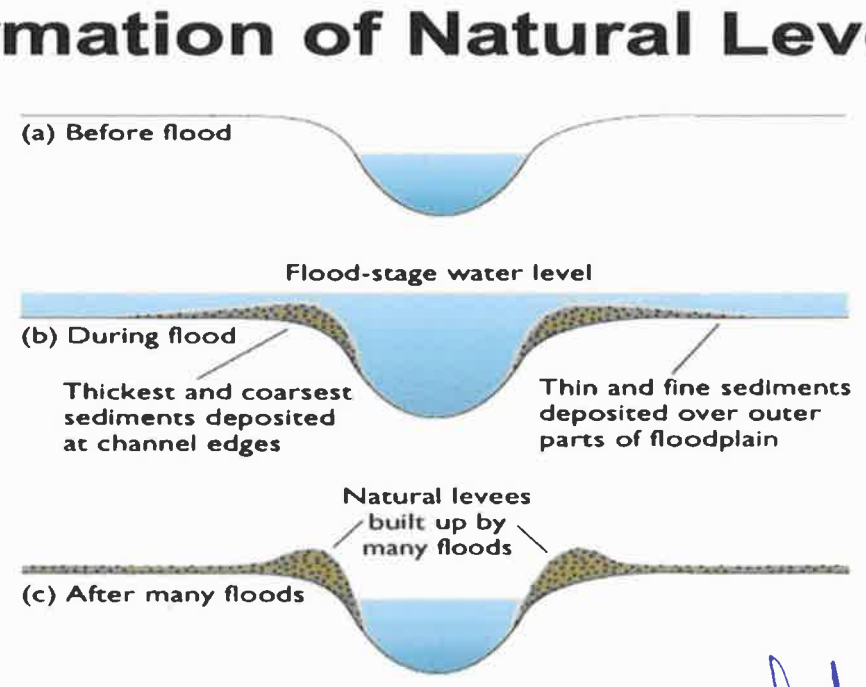
Sediment is a naturally occurring material that is broken down by processes of weathering and erosion, and is subsequently transported by the action of wind, water and/or by the force of gravity acting on the particles. Sediments are most often transported by water. Sediment is transported based on the strength of the flow that carries it and its own size, volume, density, and shape. Stronger flows will increase the lift and drag on the particle, causing it to rise, while larger or denser particles will be more likely to fall through the flow.

Deposition is the processes where material being transported by a river is deposited. Deposition occurs when a river loses energy. This can be when a river enters a shallow area (this could be when it floods and comes into contact with the flood plain) or towards its mouth where it meets another body of water.

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.

Rivers flood on a regular basis. The area over which they flood is known as the floodplain and this often coincides with regions where meanders form. Meanders support the formation of flood plains through lateral erosion.

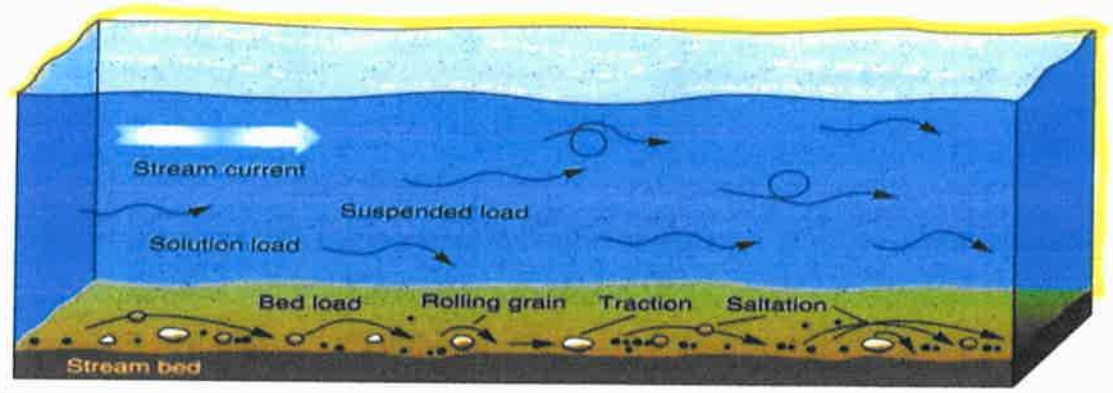
When river floods the velocity of water slows. As the result of this the river's capacity to transport material is reduced and deposition occurs. This deposition leaves a layer of sediment across the whole floodplain. After a series of floods, layers of sediment form along the floodplain.



7.3 Modes of Sediment Transport

The sediment load of a river is transported in various ways although these distinctions are to some extent arbitrary and not always very practical in the sense that not all of the components can be separated in practice:

- ✓ Dissolved load
- ✓ Suspended load
- ✓ Intermittent suspension (saltation) load
- ✓ Wash load
- ✓ Bed load



The sand deposits being an integral part of the dynamic river system to which it belongs. Therefore, as a part of natural cycle, the monsoon flow of every river carries with it replenishment of silt and washed-out soil and clay from upstream areas in the catchment. This silt shall be removed during the sieving of sand before it is loaded into truck/tipper/trailer to carry to the consumers.

Sand mining is critical to infrastructure development around the globe. 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. The rivers are the most important source of Sand. It acts as source of transportation and deposition of sand etc.

7.4 Annual Replenishment of Mineral in River Bed Area/ Sedimentation

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.

In order to calculate the mineral deposits in the stream beds, the mineral constituents have been categorized as clay, silt, sand, Bajri and boulder. However during present calculation, the waste material i.e. silt which varies from 10 to 20% in different streams has also been included in the total production. Further, the Survey of India Topo-Sheets has been used as base map to know the extent of river course. The mineral reserves have been calculated only upto 3.0 meter depth although there are some

portions in the river beds such as channel bars, point bars and central islands where the annual deposition is raising the level of river bed thus causing shifting of the rivers towards banks resulting in to cutting of banks and at such locations, removal of this material upto the bed level is essential to control the river flow in its central part to check the bank cutting. While calculating the mineral potentials, the mineral deposits lying in the sub-tributaries of that particular stream/river has not been taken into consideration. Since these mineral deposits are adding annually.

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. The factors which affects the "Computation of Sediment":

- Geomorphology & Drainage Pattern: The following geomorphic units plays important role:
  - Structural Plain
  - Structural Hill
  - Structural Ridge
  - Denudation Ridge & Valley
  - Plain & Plateau
  - Highly Dissected pediment
  - Undissected pediment

- Distribution of Basin Area River wise
- Drainage System/Pattern of the area, Rainfall & Climate: Year wise Rainfall data

7.5 Replenishment Study (As per EMGSM guidelines, 2020)

Replenishment study for a river solely depends on estimation of sediment load for any river system and the estimation is a time consuming and should be done over a period. The process in general is very slow and hardly measurable on season-to-season basis except otherwise the effect of flood is induced which is again a cyclic phenomenon. Usually, replenishment or sediment deposition quantities can be estimated in the following ways as given below:

A. Direct measurement of the sand bar upliftment, monitoring of the new sand bars created in the monsoon within the channel, elimination of sand bars during the monsoon etc. With systematic data acquisition, over a period, regression equations can be developed for modeling of the sediment yield and annual replenishment with variable components. In this report, for volume estimation of sand, —Depth x Area has been followed. The sand bars are interpreted with the help of satellite imageries. Ground truthing done for 100% of the total identified sand bars. While ground truthing, width and length of each segment were physically measured. It has also been observed that in few cases, sand bars have attained more than 3 meters height from the average top level of the river beds. Considerations of sand resources have been restricted within 3 meters from the average top surface of the river bed. Thus, in few occasions, heights for sand reserve estimation are found to be more than 3 meters.

B. The replenishment estimation based on a theoretical empirical formula with the estimation of bed-load transport comprising of analytical models to calculate the replenishment estimation.

Replenishment estimation

Sedimentation in any river is dependent on sediment yield and sediment yield depends on soil erosion in river's catchment area. Catchment yield is computed using Strange's Monsoon runoff tables for runoff coefficient against rainfall return period. Peak flood discharge calculated by using Dickens, Jarvis and Rational formula at 25, 50 and 100 years return period. The estimation of bed load transport using Ackers and White Equation.

- **Assessment of sediment load in the river:**

  Assessment of sediment load in a river is subjective to study of the whole catchment area, weathering index of the various rock types which acts as a source of sediments in the specific river bed, rainfall data over a period not less than 20 years, and finally the detail monitoring of the river bed upliftment with time axis. Again, the sediment load estimation is not a dependent variable of the imaginary district boundary, but it largely depends upon the aerial extents of the catchment areas, which crossed the district and state boundaries.

- **Estimation of annual sand deposition:**

  The major sand producing river of the Mandla district is Banjar, Budner & Narmada. Planning has been done for systematic sand mining in the rivers.

  As discussed in the previous sections, sand production in the district has been planned from mostly Banjar, Budner & Narmada rivers. Altogether 28 ghats has been planned for production and mining operation strated only in 17 sand Ghats.

  While calculation of the areas of sand bar, a classification system has been adopted with three categories of land identified within the channel areas. the class which followed for classification are as follows:

a. The untapped Sand Bars.
b. The Sand bars worked in the pre-monsoon period.
c. Main channel course within the channel.

Details of sand replenishment in each sand mine in district with their sand resources in pre monsoon and post monsoon period are provided in below table:

REPLENISHMENT STUDY FOR YEAR 2021

Sr No.	River Name	Mine Name	Area (Ha)	Pre Monsoon			Post Monsoon			
				Total Area (in Sqm)	Average depth of Sand Deposit (in meters)	Total Quantity of Sedimant Load (in cum)	Total Area (in Sqm)	Average depth of Sand Deposit (in meters)	Total Quantity of Sedimant Load (in cum)	Mineable mineral potential (in Cubic meter) (60% of total mineral potential)
1	Banjar	Silgi No. 2	3.800	38000	2.5	95000	38000	3.0	114000	68400
2	Banjar	Bamhani No. 4	2.023	20230	1.5	30345	20230	3.0	60690	36414
3	Surpan	Nara	2.00	20000	2.0	40000	20000	3.0	60000	36000
4	Budhner	Paudimal	3.000	30000	2.0	60000	30000	3.0	90000	54000
5	Budhner	Mainpuri	1.800	18000	1.0	18000	18000	1.5	27000	16200
6	Budhner	Pipri Raiyat	1.000	10000	1.5	15000	10000	2.0	20000	12000
7	Budhner	Karegaon	4.000	40000	1.5	60000	40000	2.0	80000	48000
8	Budhner	Kisli	2.000	20000	1.5	30000	20000	1.8	36000	21600
9	Budhner	Gughari	3.240	32400	1.5	48600	32400	2.0	64800	38800
10	Banjar	Indri	4.680	46800	1.5	70200	46800	1.8	84240	41040
11	Banjar	Bhadiya	1.440	14400	2.0	28800	14400	2.5	36000	21600
12	Budhner	Raygaon	2.900	29000	1.5	43500	29000	2.0	58000	34800

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13	Budhner	Garaiya	2.000	20000	1.2	24000	20000	1.5	30000	18000
14	Banjar	Devgaon	2.000	20000	1.5	30000	20000	2.0	40000	24000
15	Narmada	Bakchheradona	3.700	37000	1.5	55500	37000	2.0	74000	44400
16	Banjar	Baheri	1.000	10000	1.7	17000	10000	1.8	18000	10800
17	Banjar	Silgi No. 1	6.000	60000	1.0	60000	60000	1.5	90000	54000
18	Banjar	Tharka	5.200	52000	0.9	46800	52000	1.0	52000	31200
19	Banjar	Tikarwara	6.000	60000	0.9	54000	60000	1.0	60000	36000
20	Banjar	Hirdenagar	8.000	80000	0.9	72000	80000	1.0	80000	48000
21	Banjar	Bhapsa	5.100	51000	0.6	30600	51000	0.8	40800	24480
22	Banjar	Bhawarda	6.000	60000	0.9	54000	60000	1.0	60000	36000
23	Budhner	Chhiblatola	2.000	20000	1.3	26000	20000	1.5	30000	18000
24	Budhner	Khairimal	1.000	10000	1.5	15000	10000	1.8	18000	10800
25	Narmada	Gurarkheda	1.000	10000	1.8	18000	10000	2.0	20000	12000
26	Halon	Koko	2.00	20000	1.0	20000	20000	1.2	24000	14400

Note-

- Replenishment study has been done only for above mentioned 26 sand mines.
- Replenishment study has not been for Barbaspur & Mugdara sand mine because of they are proposed mines.
- Normal date of onset of monsoon for year 2021 is 20 June.
- Normal date of offset of monsoon for year 2021 is 01 October.

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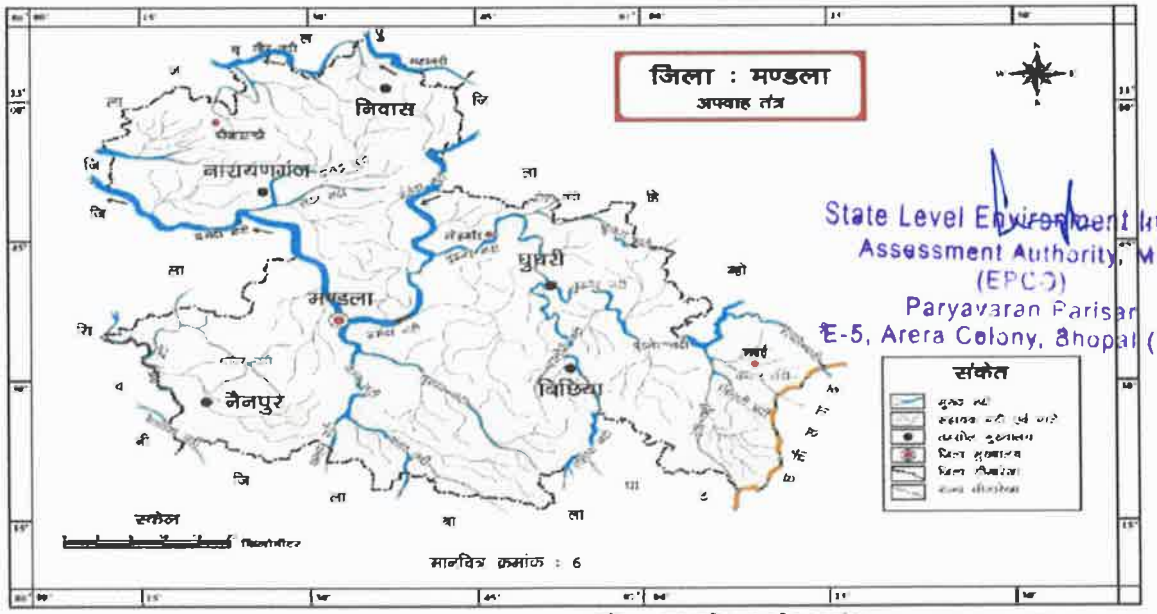
CHAPTER -7

GENERAL PROFILE OF THE DISTRICT

Mandla district, in Jabalpur Revenue Division is situated on the east- central part of the State and lies between *22°* 12' and 23 ° 22 north latltude and 79 57 and 81˚ 45 east Longltude. The district is bounded by Jabalpur district on the north-west; Shahdol district on the north-east; Bilaspur and Rajnandgaon on the south east; Balaghat on the south and Seoni districts on the south west., Its extreme length is about 133 Kms from north to south, and extreme breadth 182 kms from east to west. The tropic of cancer passes from about 5 Kms distance of the northern west boundary. The district can be called a mountainous tract, comprising the valleys of numerous rivers and is endowed with rich forests.

Mandla district is situated in the south eastern part of Madhya Pradesh and cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22°12': 23°22' 02" and longitude 79°59'23" : 81°44' 22"E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The geogenic problem of high concentration of fluoride in ground water widely affect the quality life of the people of region. As per 2011 census, the population of Mandla district is about 1053522 . The district is primarily a tribal district. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.

DRAINAGE: The district falls under two major drainage basins - the Narmada in the north and the Godawari in the south. It shows a typical dendritic drainage pattern of river network. The general slop of the Narmada valley is towards west. The Narmada river & its tributaries drain in northern and northwestern part of area. The Wainganga river flowing southerly and its tributaries drain the south western part They have broad, flat, shallow valleys with low imperceptible gradients, because their channels have reached the base level of erosion. Vertical erosion has ceased and lateral erosion is taking place.



स्रोत : स्थलाकृतिक मानचित्र क्रमांक 55M, 55N, 64A, 64B, 64E, 64F

m	Km²	% Of total				
Narmada	3130	35.90	150	1000	Perennial	Basalt/Sand
(i) Banjar	1520.0	31.07	62	1 in 3650	Ephemeral	Granite/Sand
Surpan				1 in 3650	Perennial	Basalt
(ii) Burhner	2708.0	17.44	12	1 in 1000	Perennial	Basalt
(iii) Balai	412.0	4.73	9	1 in 500	Ephemeral	Basalt
(iv) Bijra			41	1 in 250	Ephemeral	Basalt
(v) Hingra				1 in 300	Perennial	Basalt
Newari				1 in 350	Ephemeral	Basalt
(vi) Gaur	217.0	2.49	3			
			2			
Godawari Basin						
Wainganga	730.0	8.36	35	1 in 600	Perennial	Archaean
Halen				1 in 1250	Perennial	Archaean
Thanwar				1 in 250	Perennial	Basalt
Chaknamla				1 in 250	Ephemeral	Basalt

Climate and Rainfall:

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevation and abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm.

Flora And Fauna:

The other species which are commonly found in the forests of this districts are Tinsa (ongeinia-dalbergioides), Dhaura (Anogissus Latifolia), Dhamin (Grewia teliaefolia), Bija (Pterocarpus marsupium, India (Lagerstroelema porviflora), Haedu (Adina cardifolia), Koehar, (Teminalian AlJuna), Palas (tlutea trondosas), Harra (Terrninalia Chebula) Mahua (Bassia intifolla), Nonia (phyllanthus omblica), tendu (Diespyres tomentosa), Khamer (Gmelina arberea), Jamun (Eugenia Jamboland) and achar (Buchananis larifollas). Bambee forests are not common, though bamboos are found here and there in the forests of the district. It may be interesting to note that babul (Acacia-arabica) and nim (Melia azadirachta) are very rare but bar (Ficus bengh-lensis), Pi pal (Ficus religiosa) are found in open country.

FAUNA: The district is famous for its rich wild life as the famous Kanha National park is situate in the district which has once been the best shooting ground in the State. Among the camiverous fauna tiger (felis tigris), panther (felis pardus) the wi~d dogs (kuon rutilans), the bear (melursus ursinus labiatus), the wolf (Ganis pallipes) are found in the thick forests of the district. Jackal (Canis aurens), fox (Vulpes bengalensis, hyena (Hyenastriata) and wild cats are found throughout the district.

Temperature:

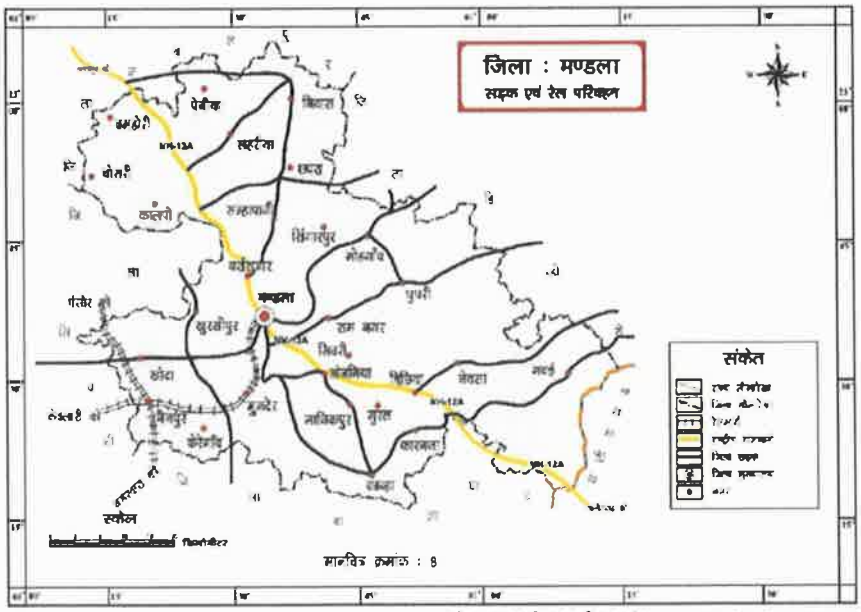
The climate of Mandla district characterized by a hot summer and general dryness except during the southwest monsoon season. The year may be divided into four seasons. The cold season, December to February is followed by the hot season from

March to middle of June. The period from the middle of June to September is monsoon season. October and November form the post monsoon or transition period.
The January is the coldest month of the year. The individual day temperature comes as low as 1- 2°C. From March onwards, the temperature starts rising and maximum temperature is observed during the month of May upto 44°C. On the arrival of monsoon, the weather becomes pleasant. In October, on the retreating of monsoon the temperature rises slightly during the day time.

Humidity & Wind:

During the southwest monsoon season the relative humidity generally exceeds 88% (August month). In rest of the year is drier. During summer season, relative humidity is less than 38% and April is the driest month of the year. The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity of 6.8 km/hr. is observed during the month of June and minimum 2.3 km/hr. during the month of December. The average normal annual wind velocity of Mandla district is 4.3 km/hr.

Mining: There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.



स्रोत : तत्कालिक मानचित्र क्रमांक 55M, 55N, 64A, 64B, 64E, 64F

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CHPATER -8

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

Mandla district is a pride district in agriculture. There are two principal cropping regions: Alluvial on the northern part and laterite on the southern part, and about 69 percent of the
total population depends on agriculture. Primary crop of the district are rice, gram and wheat. According to Madhya Pradesh agriculture contingency plan for Mandla district there has been 28.78 percent of cultivable land, 61.43 percent forest land, 2.22 percent cultivable waste land and 3.25 percent current fellow land in the district.

Land use pattern of the district	Geographical area	Cultivable land	Forest area	Land under non agricultural use	Permanent pastures	Cultivable waste land	Land under mix tree crop and groves	Barren and uncultivable land	Current fellow	Other fellows
Area (`000ha)	965.6	277.9	593.2	42.4	19.9	21.5	0.1	10.6	31.4	32.2

Irrigation : The area irrigated by borewell is 106300 ha (41.4% of the total irrigated area), by open-wells 42700 ha (16.6%), irrigated by canals is 39900 ha (15.5% of the total irrigated area) and by tanks 4800 ha (1.8%). The net area under irrigation is 255500 ha and the area under rainfed irrigation is 275900 ha.

Forest : The forest survey of India was established in 1981. The first report on the forest cover of the country was published in 1987. Using land sat data of us satellite through visual interpretation techniques on 1:1 million scales. From the second assessment of forest cover the resolution of the sensor improved to 30m and the scale of interpretation to 1.25,000. The India Remote Sensing (IRS P6LISS III) satellite data having a resolution of 23.5m has been used in the analysis of data (State Forest Report, 2011). Total recorded forest land in the district is 2830 km2 which about 48.79 percent of the total geographical area of the district. According to FSI assessment in 2011 there were 751 km² very dense, 1204 km² moderate and 875 km² open forest cover of the district.

Mining: There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Sr No.	Mineral	Area (in Hectare)
1	Dolomite	153.218
2	Stone	155.51
3	Sand	89.89

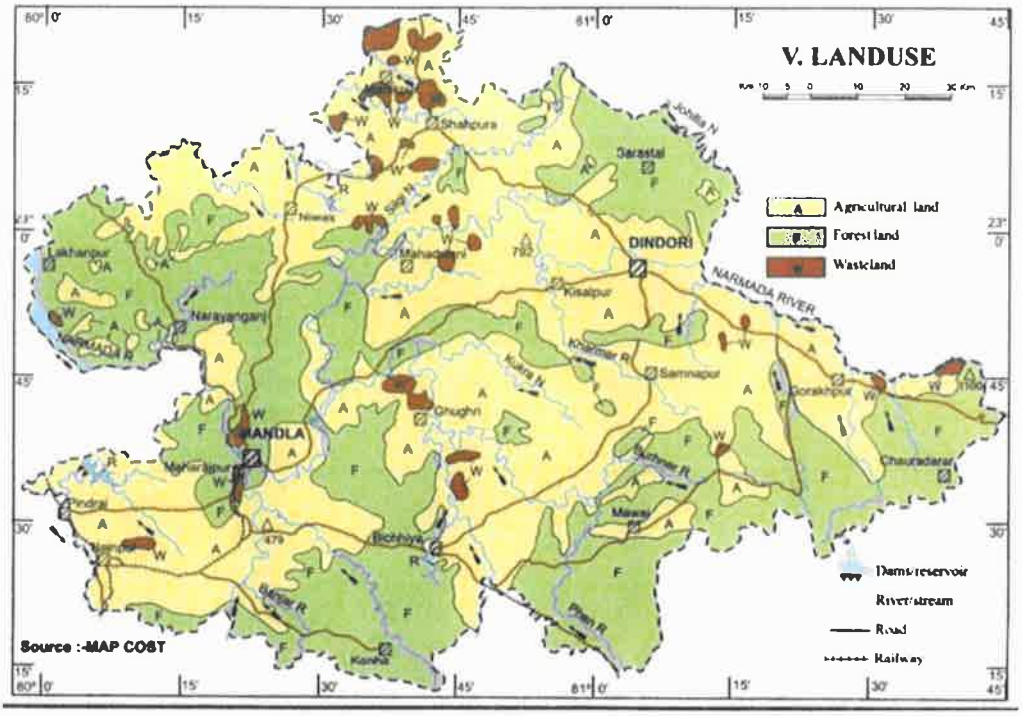

Fig : Land Use/ Land Cover Map of Mandla District

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CHPATER - 9

PHYSIOGRAPHY OF THE DISTRICT

Mandla district is hilly and forested (Satpura hill range) and highly undulating with narrow strip of cultivated plains in the valley portion of river and nala. The plateau is in the northern part formed by basalt and east west trending hill in the southern part. The highest elevation 934 m amsl in the northern part and lowest elevation in around 400 m amsl in northwestern part of area.

The district can be called a mountainous tract, comprising the valleys of numerous rivers; these valleys being broken into irregular sizes and shaped by the spurs of low hills running down from the main ranges towards the larger rivers. The most important range of the Satpura in the district is Maikal, which forms a watershed between western and eastern India which is well known in ancient Sanskrit literature as the source of the holy Narmada. The altitude is the least in the south-west corner of the district which consists of a complex block of about two hundred prosperous villages, known as the 'Haveli' or the rice and wheat growing tract round Hirdenagar and Pathar the open wheat plain round Nainpur. The extreme upper valley of the Narmada in Dindori, Niwas and shahpura tahsils is an undulating plain, without much forest, broken by curious flat
topped hills which enclose patches of fertile black soil; A long squr of the Amarkantak, starting from north of Shahpura running out west towards the reg on between villages Junawani and kosumghat for about 64 Kms. separates the upper Narmada Valley, from the narrow but fertile valley of river kharmer. Many smaller spurs run north from this long spur, forming short valleys of some fertility. To the south of kharmer Valley is a fine plateau containing the Baiga Chak, and a long and rugged strip of Sal Jungle. The mean height of the plateau is well over about 600 metres in Niwas tahsil, Narmada flows through a rugged and inaccessible trat between high rocky banks tlll It enters the rough about 32 kms, of forest and hill country, and then forms the boundary of Mandla district and tuhs parrallel to the Mandla Jabalpur road for a few kilometres. The southern portion of eastern Mandla tahsil is covered by the undulating grass prairies of Raigarh Bichhia tract. It is in this area the famous forest sanctuaries of Kanha the tiger reserved and Kisli-home of countless deer and antelope and a variety of other wild fauna which attract tourists; from far and wide.

The soils in the area are generally of clayey loam types with sandy loam soil in some areas. In the northern and central parts of the District, the undulating plateau with mounds arecovered with slightly deep soil, well drained, fine to fine loamy soils on gentle slopes markedby moderate erosion. The southern hilly region is covered by very shallow loamy soils, some what excessively drained. The soils developed on moderately steep slopes are marked by severe erosion. The soils have been classified as Ustocherpts/ Ustorthents/ Rhodustalfs/Haplustalfs/ Haplusterts, as per pedological taxonom

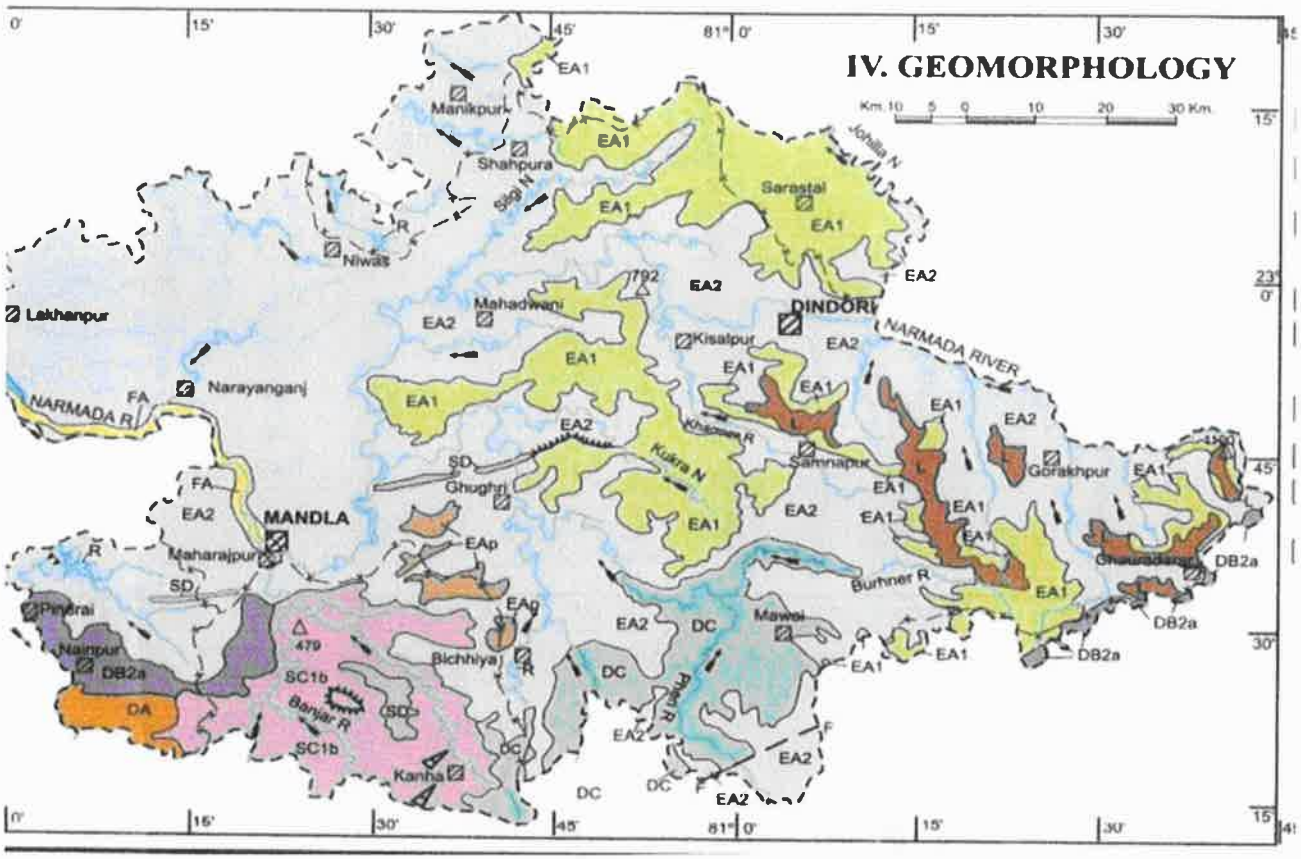


Fig : Map Showing Geomorphological Setup of Mandla District

CHPATER -10

RAINFALL: MONTH-WISE

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevation and abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm. The district has three clearly distinguishable s~asons which divide the year into three more or less equal parts. They are the rainy season, the winter and the Summer roughly corresponding to june-Seotemher. November, February and March-May respectively. the month October-wever withnesses a transition from the rainy to the cold weather.

Sr No.	Month	Annual Rainfall (mm)		
		Year 2019	Year 2020	Year 2021
1	January	14.4	26.2	0.0
2	February	7.7	39.9	20.6
3	March	18.09	47.3	10.6
4	April	8.0	15.0	0.4
5	May	0.0	12.6	77.3
6	June	81.2	210.6	243
7	July	443.2	237:7	294.3
8	August	556.7	664	179
9	September	526.6	131	254.9
10	October	41.4	45.2	24.2
11	November	0.0	8.1	10.3
12	December	19.9	0.0	22.2
Total		1117.39	1810.1	1406.5

CHPATER -11

GEOLOGY AND MINERAL WEALTH

Geology of Mandla District

Geological succession of Mandla

AGE	LITHOSTRATIGRAPHIC UNIT	LITHOLOGY
Recent to subrecent	Alluvium, Laterite	Sandy loam, silty sand, coarsemedium laterite
Cretaceous toEocene	Deccan Trap	Basaltic lava flows and olderdolerite dykes and sills.
Lower Cretaceous	Gondwana	White clays and mediumgrained sandstone
Late Norian toRhaetic	Mandla formation of Amarkantak group	Coarse-grained sandstone variegated shale and clays.
Upper Permian	Lameta group	Coarse grained sandstone greyshale, red shale, red green and mottled clay with thin coalbands
Late Permian	Barakar	Sand stone, Shales and Coalseams
Upper Carboniferous to Lower Permian	Talchir	Tillite, sandstone and greenshale

Archean:

The oldest rock is the area belongs to the Archean that comprises granite Gneisses and schist. These rocks occur the southwestern part of Mandla area. Granite rock is generally well-jointed and fractured up to depth to 10 to 150 mbgl.

Lameta bed

This group of rocks is formed of sedimentary laid prior to the eruption of lava flows to the Deccan traps. It is unconformable overlies the granite gneisses and is mainly exposed below Deccan trap in the central and eastern part of Mandla area Its contact with Deccan trap slops from east (510 m amsl) to west (430m amsl). In the eastern part due to step faults this contact goes up to 680 m amsl. These rocks occur as small pockets bordering the great mass of lava flow along its northern boundary. The rocks comprise limestone and sandstone and occur over an areaof about 90 sq. km. The rock is fine to medium grained and compact in nature and form thickness in the range of 1 to 6 m thickness.

Deccan traps:

Deccan trap are the most extensive geological formation of the Mandla district. They are differentiated into a succession of basaltic flows as interflow zone of red/green below of varying thickness. The 500 m thick lava sequence of Mandla area has been divided into four formations on the basis of lithe characters, type of flow and their long-distance continuity. All the formation exhibits thickening in the centre, thinning out in the marginal area.

Characteristic of basaltic flows:

Basaltic lava flows of Narmada basin of Mandla area mainly of two types

1. Simple flow and 2. Compound flow

The simple flows are characterized by 1-7 m thick vesicular and amygdular and 20-70 cm thick lower vesicular zone. The compound flows comprise number of flow unity and show large variation in thickness and aerial extent as well as thinning and pinching units. These units exhibitpahohoe character such as chilled and ropy surface basalt zones of pipe amygdular, vesicle cylinder etc.

Intertrappean bed

Intertrappean beds mark definite Stratigraphic horizons in the lava sequence and have been used to divide the lava sequence into four formations. Episodic nature of volcanism is also evident from the presence of fairly persistent Intertrappean beds these bed form 1-10 thick sedimentary sequence consisting of limestone, chart clay. It is exposed all along the valley of Narmada and Banjar River. Along Chalked to Malpur, Bamhni banjar to Mugdare and exhibit thickening in thecentre area. It also shown a gradient of 1:200 toward WSW. The limestone of this bed shows development of nodules at places.

Infratrapean bed:

The lava pile is underlain by 2-3 m thick sequence of sedimentary rocks which are fairly persistent as to area and have been correlated with the lameta bed of Jabalpur are it comprise hard sandstone occurs along Ganghi, Chechile along chakar nala near Nainpur.

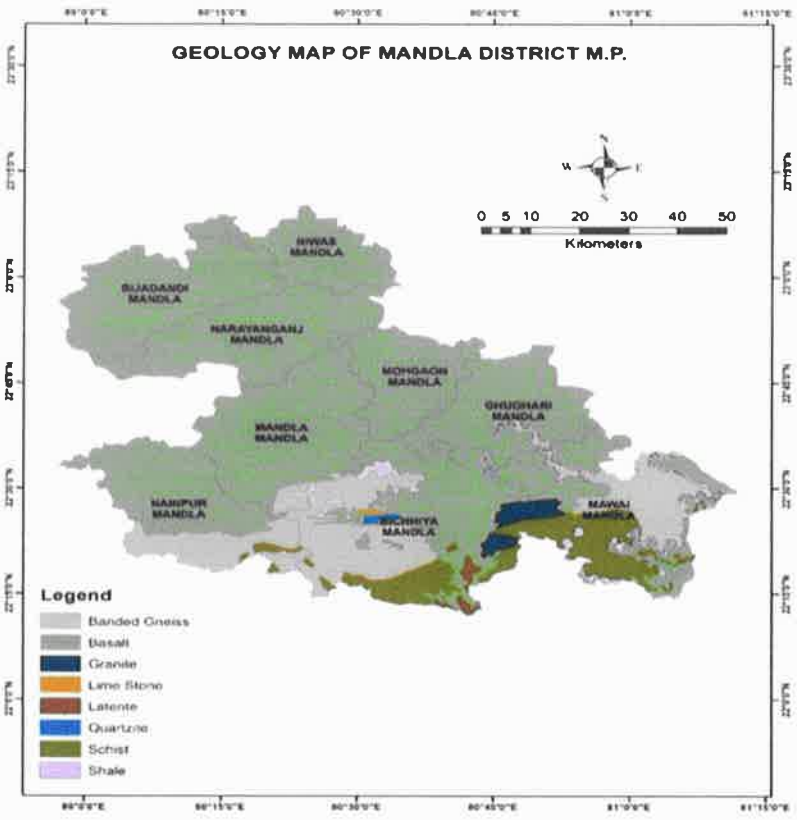
Structure:

The Deccan lava pile of Mandla area is bounded by Narmada - Son lineament to the north and Tapti lineament to the south. The reactivation of these lineaments during upper cretaceous period result into **formation of a rift basin.** The initial volcanism, which follows the deposition of lameta formation, was sub aqueous in nature as evident from the presence of Pillow lava in many parts of the area and gradient of lava pile suggest easterly source.

Intrusive:

A few thin ENE-WSW trending basaltic dykes interlude the lava sequence. These dykes are confined to the marginal area along major ENE-WSW trending faults. A porphyritic dyke has been observed is Burner River section Jhingartola in the southern part of area and abets 2-3 km length of dyke in the area below Chairaidongri, Bamhni.

Detailed geological map of Mandla district is given as fig.no.8.



Regional Geology Classification of lava flows

GSI has carried out extensive mapping of Mandla. The Southern fringe of Son Narmada (SONATA) lineament zone, the ENE-WSW trending major technique zone activity from plateau porters to the recent. ENE-WSW trending central Indian technique zone CCITE is located in southern part. This sub divided the area into two major crystal provinces. The area to the south ofthe ITE from part of deccan lava sequence of Mandla region.

The lava sequence consists mainly of pahohoe flows which are simple and compound nature. A flow is rase the gradient of flows varies from 1:200 to 1: 500 towards north west and west coinciding with the paleo slope based on the presence of inter trappean beds, mega scope character of flows such as grain size porphyricity and mineralogical constituents, presence of bole beds. The lava sequence of the area has been classified as given in table 11. Flows showing highly porphyritic and glomeroporphyritic texture form marker flow for correction of the flow sequence.

Table 11: Classification lava sequence.

	Lava stratigraphy	**Lava flows**	**Nature & character**
Amarkantak group (Deccan trap)	Linga formation	Non porphyritic lava flows 4 flows	Dark brownish black greenish non porphyritic hand & compact rock

Creteceous	Piparde hi formati on	Highly porphyritic basalt fen (3 fen)	Dark grey, fine to medium grain porphyritic ha & compact rock
	Dhuma formation	"Aa" and compounds "pahoehoe" basalt flow (8 flow)	Black to greyish black non porphyritic hard & compact with porphyritic texture in flow
	Mandla formation	Basaltic flows	Dark grey fine to medium grain highly pumping hand campus.

Mandla Formation

It occurs in the north-central and eastern part and unconformably over the lameta group and granite gneiss. It consists of one compounded flow and three to four simple flows (table 12).

Table: 12 Lava sequence & Deccan traps of Mandla area.

Formation	Flows	Type of flow & litho characters	Thickness (m)
	Kosamghat	Chert limestoneclay/ red bole	1-10
Mandla flows	Chabi	Compound aphyric	20-40
	Bataundha	Compound porphyritic aphyric/aphyric	10-20
	Sarwahi	Compound porphyritic aphyric	20-40
	Kathautiya	Compound porphyritic aphyric/aphyric	20

In the eastern part of the area, the basalt flow is highly porphyritic simple. The thickness decreases from 40 min the west to 15 m in the central part the rock is fine grain to medium grained hard, compact, highly porphyritic with feldspar phenocryst varying in length from 1 mm to 7mm. The rock at place is characterized by glomero phyritic texture compound flow of the Mandla formation consists of 2-7 flow units and show variation thickness from 20 m to 100 m due to pinching and swelling of different units within short distances. The basalt flows commonly show pahoehoe characters with ropy structure, pipe vesicle and bun structures. Some of the flow short acylindrically vesicles at the base.

Dhuna formation:

It comprises two flows and varies in thickness from 50 m to 80m. the lower flow shows glomeroporphyritic texture correlation of the flows. it is developed mainly in the central and north eastern part with thickness varying from 50 m in the east to 15; m in the west. In the east central part this shows thinning and pinches at ultimately. This flow forms liner ridges of 15 km to 30 km length which possible

represent structurally controlled paleo channel filled by this flow. The channel show gradient 1:2000 towards WSW.

Linga formation:

It forms the top most part of the lava sequence and consists of flow in the section 2-3 flow are generally exposed and their top is covered with lateritic. This is mainly exposed in the northern part. Fairly persistent Intertrappean bed marks the lower contact of this formation this contact is exposed between 780-800m amsl in north-eastern part and between 660 m – 700 m amsl in the north central part. All the flows are dark brownish black to greyish black fine to medium grained and non-porphyritic the top of this formation is character by the presence of laterite which varies in thickness from 2 m to 70 m.

Mining:

There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Sr No.	Mineral	Area (in Hectare)
1	Dolomite	153.218
2	Stone	155.51
3	Sand	89.89

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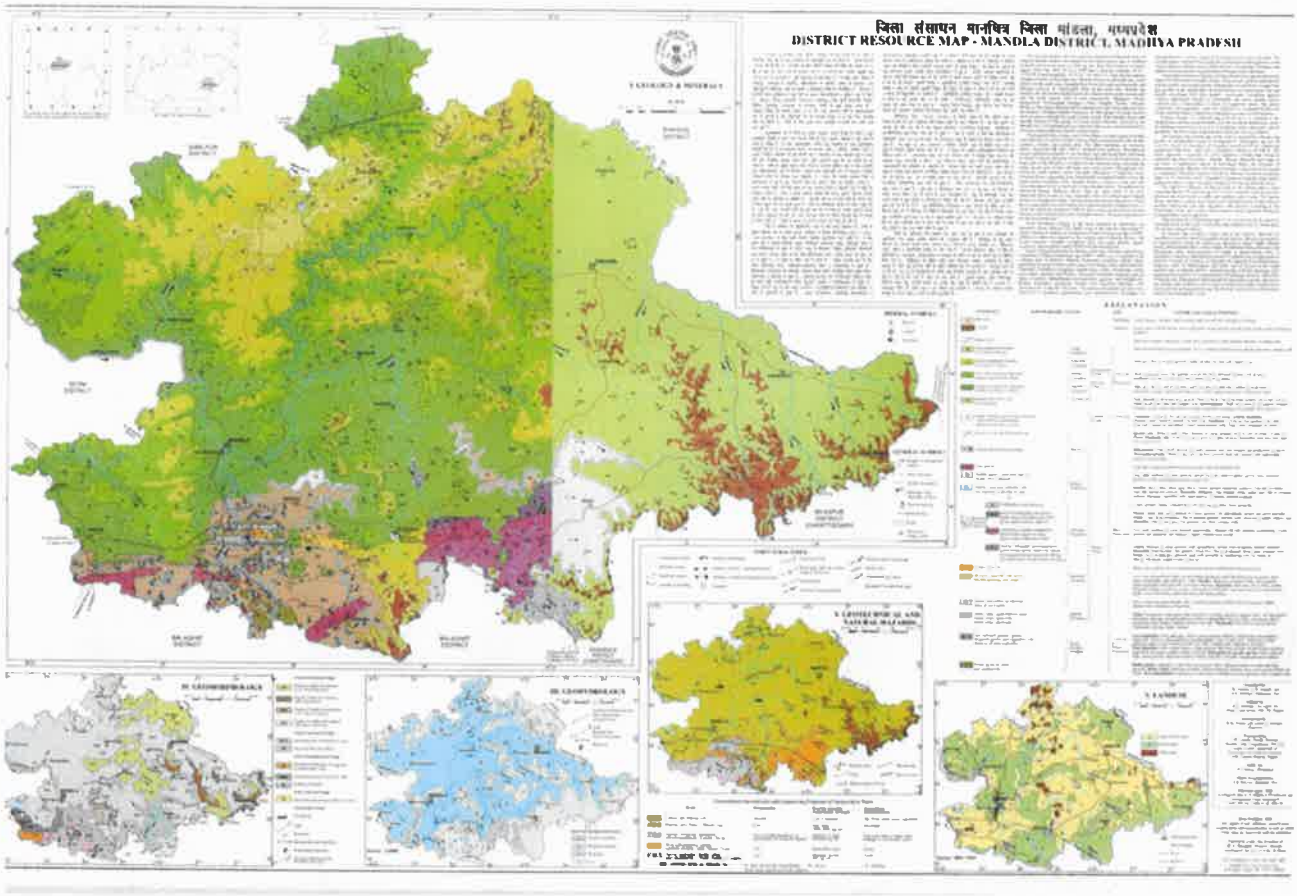

Fig : Map Showing District Resource map of Mandla

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CHPATER -12

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

4.1 Introduction

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 activity particularly sand mining in the country.

Following a series of orders by the National Green Tribunal in 2018, the Ministry of Environment, Forests and Climate Change has for the first time released guidelines to monitor and check illegal sand mining in the country. The Enforcement and Monitoring (EM) Guidelines for Sand Mining 2020 released by the Ministry include directions to states to carry out river audits, put detailed survey reports of all mining areas online and in the public domain, conduct replenishment studies of river beds, constantly monitor mining with drones, aerial surveys, ground surveys and set up dedicated task forces at district levels. The guidelines also push for online sales and purchase of sand and other riverbed materials to make the process transparent. They propose night surveillance of mining activity through night-vision drones.

While the MoEF&CC has already put in place the Sustainable Sand Management Guidelines 2016, which focus on the management of sand mining in India, that there is an urgent need to have guidelines for effective enforcement of regulatory provisions and their monitoring.

4.2 Background

The Mines and Minerals (Development and Regulation) Act, 1957 has empowered state governments to make rules to prevent illegal mining, transportation and storage of minerals. "But in the recent past, it has been observed that there were a large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties to curb illegal mining. Illegal and uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment. The enforcement guidelines focus on the "effective monitoring of sand mining from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public and looks at a uniform protocol for the whole country".

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.

The guidelines also push for the sale and purchase of sand and river bed material (RBM) online to make the process more transparent. "In order to curb illegal mining, it is very necessary that the general public is aware of the legal source of sand and RBM suppliers. It is suggested that the state government should develop an online portal for sale and purchase of sand and RBM. The state government will also decide the model of sale and the price of RBM. "It is suggested that the controlled price model is more effective in controlling illegal sand mining," the guidelines state.

This document will serve as a guideline for collection of critical information for enforcement of the regulatory provision(s) and also highlights the essential infrastructural requirements necessary for effective monitoring for Sustainable Sand Mining. The document is prepared in consideration of various orders/directions issued by Hon'ble NGT in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams.

Further, this document is supplemental to the existing "Sustainable Sand Mining Management Guideline-2016" (SSMG-2016), and these two guidelines viz. "Enforcement & Monitoring Guidelines for Sand Mining" (EMGSM-2020) and SSMG-2016 shall be read and implemented in sync with each other. In case, any ambiguity or variation between the provisions of both this document arises, the provision made in "Enforcement & Monitoring Guidelines for Sand Mining-2020 "shall prevail.

4.3 Objective of Guidelines

- Identification and Quantification of Mineral Resource and its optimal utilization.
- To regulate the Sand & Gravel Mining in the Country since its identification to its final enduse by the consumers and the general public.
- Use of IT-enabled services & latest technologies for surveillance of the sand mining at each step.
- Reduction in demand & supply gaps.
- Setting up the procedure for replenishment study of Sand.
- Post Environmental Clearance Monitoring.
- Procedure for Environmental Audit.
- To control the instance of illegal mining.

4.4 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 by using unmanned artificial vehicles or drones. 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 authorities 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 and nearby habitation.

- The guidelines also push for online sales and purchase of sand and other riverbed materials to make the process transparent.

There are some important key points of EM guildlines for sand mining 2020:

a) **Source to Destination Monitoring:**

- The new set of guidelines focuses on the effective monitoring of sand mining from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public and look at a uniform protocol for the whole country.
- Constantly monitor mining with drones and night surveillance of mining activity through night-vision drones.

b) **Audits:**

- States to carry out river audits put detailed survey reports of all mining areas in the public domain.

c) **Enforcement:**

- It gives directions to states to set up dedicated task forces at district levels.
- 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.

d) **Sustainability:**

- Conduct replenishment study for river bed sand in order to nullify the adverse impacts arising due to excessive sand extraction.
- No riverbed mining will be allowed during the monsoon.

4.5 Requirement for Monitoring & Enforcement

Sustainable Sand Mining Management Guidelines (SSMMG) 2016 and past experience suggest that the sources of sand in India are through:

- ✓ River (riverbed and flood plain),
- ✓ Lakes and reservoirs,
- ✓ Agricultural fields,
- ✓ Coastal / marine sand,
- ✓ Palaeo-channels and
- ✓ Manufactured Sand (M-Sand).

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4.6 Preparation of District Survey Report

"Sustainable Sand Mining Guidelines, 2016" issued by MoEF&CC requires preparation of District Survey Report (DSR), which is an important initial step before grant of mining lease/LoI. The guidelines emphasize detailed procedure to be followed for the purpose of identification of areas of aggradation/ deposition where mining can be allowed and identification of areas of erosion and proximity to infrastructural structures and installation where mining should be prohibited. Calculation of annual rate of replenishment, allowing time for replenishment after mining, identification of ways of scientific and systematic mining; identifying measures for protection of environment and ecology and determining measures for protection of bank erosion, benchmark (BM) with respect to mean Sea Level (MSL) should be made essential in mining channel reaches (MCR) below which no mining shall be allowed.

Therefore, preparation of District Survey Report is a very important step and sustainable sand mining in any part of the country will depends on the quality of District Survey Report.

Considering the importance of district survey report, the Ministry of Environment Forest and climate change, after consultation with experts dealing with mining-related matters, formulated the following guidelines for the preparation of comprehensive District Survey Report for sand mining.

a) District Survey Report for sand mining shall be prepared before the auction/eauction/grant of the mining lease/Letter of Intent (LoI) by Mining department or department dealing the mining activity in respective states.

b) The first step is to develop the inventory of the River Bed Material and Other sand sources in the District. In order to make the inventory of River Bed Material, a detailed survey of the district needs to be carried out, to identify the source of River Bed Material and alternative source of sand (M-Sand). The source will include rivers, de-siltation of reservoir/dams, Patta lands/Khatedari Land, M-sand etc.

c) District Survey Report is to be prepared in such a way that it not only identifies the mineralbearing area but also define the mining and no mining zones considering various environmental and social factors.

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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 MSand Plant [Owner Name, Sy No, Area, Quantity/Annum, Villages, Tehsil, District], needs to be recorded as per format given in **Annexure-I**.

e) Defining the sources of Sand/M-Sand in the district is the next step for identification of the potential area of deposition/aggradation wherein mining lease could be granted. Detailed survey needs to be carried out for quantification of minerals. The purpose of mining in the river bed is for channelization of rivers so as to avoid the possibility of flooding and to maintain the flow of the rivers. For this, the entire river stretch needs to be surveyed and original ground level (OGL) to be recorded and area of aggradation/deposition needs to be ascertained by comparing the level difference

between the outside riverbed OGL and water level. Once the area of aggradation/deposition is identified, then the quantity of River Bed Material available needs to be calculated. The next step is channelization of the river bed and for this central ¾th part of the river; width needs to be identified on a map. Out of the ¾th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining ¼th area needs to be kept as no mining zone for the protection of banks. The specific gravity of the material also needs to be ascertained by analyzing the sample from a NABL accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.

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

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

h) Demand and supply of the Riverbed Material through market survey needs to be carried out. In addition to this future demand for the next 5 years also needs to be considered.

i) It is suggested that as far as possible the sensitive areas should be avoided for mining, unless local safety condition arises. Such deviation shall be temporary & shall not be a permanent feature.

j) The final area selected for the mining should be then divided into mining lease as per the requirement of State Government. It is suggested the mining lease area should be so selected as to cover the entire deposition area. Dividing a large area of deposition/aggradation into smaller mining leases should be avoided as it leads to loss of mineral and indirectly promote illegal mining.

k) Cluster situation shall be examined. A cluster is formed when one mining lease of homogenous mineral is within 500 meters of the other mining lease. In order to reduce the cluster formation mining lease size should be defined in such a way that distance between any two clusters preferably should not be less than 2.5 Km. Mining lease should be defined in such a way that the total area of the mining leases in a cluster should not be more than 10 Ha. l) The number of a contiguous cluster needs to be ascertained. Contiguous cluster is formed when one cluster is at a distance of 2.5 Km from the other cluster. m) The mining outside the riverbed on Patta land/Khatedari land be granted when there is possibility of replenishment of material. In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market. Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.

n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available

with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.

o) Potential site for mining having its impact on the forest, protected area, habitation, bridges etc, shall be avoided. For this, a sub-divisional committee may be formed which after the site visit shall decide its suitability for mining. The list of mining lease after the recommendation of the Committee needs to be defined in the following format given in as **Annexure-II**. The Sub-Divisional Committee after the site visit shall make a recommendation on the site for its suitability of mining and also records the reason for selecting the mining lease in the Patta land. The details regarding cluster and contiguous cluster needs to be provided as in **Annexure-III**. The details of the transportation need to be provided as in **Annexure IV**.

p) **Public consultation**-The Comments of the various stakeholders may be sought on the list of mining lease to be auctioned. The State Government shall give an advertisement in the local and national newspaper for seeking comments of the general public on the list of mining lease included in the DSR. The DSR should be placed in the public domain for at least one month from the date of publication of the advertisement for obtaining comments of the general public. The comments so received shall be placed before the sub-divisional committee for active consideration. The final list of sand mining areas [leases to be granted on riverbed & Patta land/Khatedari land, de-siltation location (ponds/lakes/dams), M-Sand Plants (alternate source of sand)] after the public hearing needs to be defined in the final DSR in the format as per **Annexure-I**. The details regarding cluster and contiguous cluster needs to be provided in **Annexure-III**. The details of the transportation need to be provided in **Annexure-IV**.

No. of Annexure	Details
Annexure -I	Details of Sand/ M-Sand Sources
Annexure -II	List of Potential Mining Leases (Existing & Proposed)
Annexure -III	Cluster & Contiguous Cluster details
Annexure -IV	Transportation Routes for individual leases and leases in Cluster

ANNEXURE NO.-I

COMPLIANCE TO ENFORCEMENT AND MONITORING GUIDELINES FOR SAND MINING-2020

Details of Sand/M-Sand Sources.

a) Rivers.

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River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Narmada River	110	Perennial
Budner River	129	Perennial
Banjar River	45	Perennial

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

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

c) Patta Lands/Khatedari Land:

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

d) M-Sand Plants:

Plant Name	Owner.	District	Tehsil	Village	Geo-Location	Quantity Tones/Annum
NIL						

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ANNEXURE NO.- II

List of Potential Sand Mining Area (Exisiting & Proposed) Rivers:

Sr No.	River Details	Lease Details	Area (Ha)	Distance (in KM) from PA/BR/WC	Distance from Forest Area (in Km)	Mining leases within 500 meters (if yes cluster area)	Total Excavation in Cum/Annum considering digging depth max as 3 meters.	Mineral to be mined (Sand/ Bajri /RBM etc)	Existing/ Proposed
1	Banjar	Silgi No. 2	3.800	More than 10 KM	More than 0.25	Yes	68400	Sand	Existing
2	Banjar	Bamhani No. 4	2.023	More than 10 KM	More than 0.25	No	36414	Sand	Existing
3	Surpan	Nara	2.00	More than 10 KM	More than 0.25	No	36000	Sand	Existing
4	Budhner	Paudimal	3.000	More than 10 KM	More than 0.25	Yes	54000	Sand	Existing
5	Budhner	Mainpuri	1.800	More than 10 KM	More than 0.25	Yes	16200	Sand	Existing
6	Budhner	Pipri Raiyat	1.000	More than 10 KM	More than 0.25	Yes	12000	Sand	Existing
7	Budhner	Karegaon	4.000	More than 10 KM	More than 0.25	No	48000	Sand	Existing
8	Budhner	Kisli	2.000	More than 10 KM	More than 0.25	No	21600	Sand	Existing
9	Budhner	Gughari	3.240	More than 10 KM	More than 0.25	No	38800	Sand	Existing
10	Banjar	Indri	4.680	More than 10 KM	Within 0.25	No	41040	Sand	Existing
11	Banjar	Bhadiya	1.440	More than 10 KM	Within 0.25	No	21600	Sand	Existing

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12	Budhner	Raygaon	2.900	More than 10 KM	More than 0.25	No	34800	Sand	Existing
13	Budhner	Garaiya	2.000	More than 10 KM	More than 0.25	Yes	18000	Sand	Existing
14	Banjar	Devgaon	2.000	More than 10 KM	More than 0.25	No	24000	Sand	Existing
15	Narmada	Bakchheradon a	3.700	More than 10 KM	Within 0.25	No	44400	Sand	Existing
16	Banjar	Baheri	1.000	More than 10 KM	Within 0.25	No	10800	Sand	Existing
17	Banjar	Silgi No. 1	6.000	More than 10 KM	More than 0.25	Yes	54000	Sand	Existing
18	Banjar	Tharka	5.200	More than 10 KM	More than 0.25	Yes	31200	Sand	Existing
19	Banjar	Tikarwara	6.000	More than 10 KM	More than 0.25	Yes	36000	Sand	Existing
20	Banjar	Hirdenagar	8.000	More than 10 KM	More than 0.25	Yes	48000	Sand	Existing
21	Banjar	Bhapsa	5.100	More than 10 KM	More than 0.25	Yes	24480	Sand	Existing
22	Banjar	Bhawarda	6.000	More than 10 KM	More than 0.25	Yes	36000	Sand	Existing
23	Budhner	Chhiblatola	2.000	More than 10 KM	Within 0.25	Yes	18000	Sand	Existing
24	Budhner	Khairimal	1.000	More than 10 KM	More than 0.25	Yes	10800	Sand	Existing
25	Narmada	Gurarkheda	1.000	More than 10 KM	Within 0.25	No	12000	Sand	Existing
26	Halon	Koko	2.00	More than 10 KM	Within 0.25	No	14400	Sand	Existing
27	Banjar	Barbaspur	4.00	More than 10 KM	More than 0.25	No	36000	Sand	Proposed
28	Banjar	Mugdara	2.800	More than 10 KM	More than 0.25	No	25200	Sand	Proposed

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Patta Lands/Khatedari Land: (existing & proposed)

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

De-Siltation Location: (Lakes/Ponds/Dams etc.) (existing & proposed)

Name of reservoir/ Dams	Maintain/ Controlled by State Govt/PSU etc.	Location	District	Tehsil	Village	Size(Ha)	Quantity MT/Year	Existing/ Proposed
NIL								

M-Sand Plants: (existing & proposed)

Plant Name	Owner	Location	District	Tehsil	Village	Geo-Location	Quantity Tones/Annum	Existing/ Proposed
NIL								

ANNEXURE-III

Cluster & Contiguous Cluster details

1. Clusters:

River Name	Cluster No.	Lease No.	Location (Reverbed/ Patta Land)	Village	Area(Ha)	Total Mineral Excavation (cum)
Banjar	1	17	River Bed	Silgi No.1	6.00	54000
		1	River Bed	Silgi No.2	3.80	68400
		18	River Bed	Tharka	5.20	31200
	2	19	River Bed	Tikarwara	6.00	36000
		20	River Bed	Hirdenagar	8.00	48000
	3	21	River Bed	Bhapsa	5.10	24480
		22	River Bed	Bhawarda	6.00	36000
Budner	4	13	River Bed	Garaiya	2.00	18000
		23	River Bed	Chiblatola	2.00	18000
	5	5	River Bed	Mainpuri	1.80	16200
		6	River Bed	Pipri Raiyat	1.00	12000
	6	24	River Bed	Khairimal	1.00	10800
		4	River Bed	Poudimal	3.00	54000

2. Contiguous Cluster:

River Name	Contiguous Cluster No.	Cluster No.	Number of leases in the cluster	Location (Reverbed/ Patta Land)	Distance between clusters	Village	Area of cluster (Ha)	Total Mineral excavation (ton)
NIL								

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ANNEXURE-IV

Transportation Routes for individual Sand Quarry and Sand Quarry in Cluster

1. Transportation Routes for Individual Sand Quarry

Sr No.	Lease Name	Transportation Route No.	Number of tippers/day of lease	Number of tippers/day of all lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be constructed by Govt/ lease owner	Route Map & Location
1	Devgaon	1	0	0	0.36	unpaved	unpaved	lease owner	Enclosed
2	Bamhani No. 4	1	15	15	0.15	unpaved	unpaved	lease owner	Enclosed
3	Raygaon	1	0	0	0.5	unpaved	unpaved	lease owner	Enclosed
4	Kisli	1	0	0	1.3	unpaved	unpaved	lease owner	Enclosed
5	Karegaon	1	05	05	1.3	unpaved	unpaved	lease owner	Enclosed
6	Gughari	1	0	0	1.1	unpaved	unpaved	lease owner	Enclosed
7	Nara	1	11	11	0.55	unpaved	unpaved	lease owner	Enclosed
8	Indri	1	3	3	0.80	unpaved	unpaved	lease owner	Enclosed
9	Baheri	1	0	0	0.50	unpaved	unpaved	lease owner	Enclosed
10	Bhadiya	1	4	4	0.62	unpaved	unpaved	lease owner	Enclosed
11	Koko	1	0	0	2.10	unpaved	unpaved	lease owner	Enclosed
12	Bakcheradona	1	1	1	0.90	unpaved	unpaved	lease owner	Enclosed
13	Gurarkheda	1	0	0	0.70	unpaved	unpaved	lease owner	Enclosed

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2. Transportation Routes for Sand Quarry in Cluster

Cluster No.	Transportation Route No.	Number of tippers/day of lease	Number of tippers/day of all lease on route	Length of Route in KM	Type of Road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be constructed by Govt/ lease owner	Route Map & Location
1	1	25	25	0.25	unpaved	unpaved	lease owner	Enclosed
2	1	0	0	0.20	unpaved	unpaved	lease owner	Enclosed
3	1	0	0	0.20	unpaved	unpaved	lease owner	Enclosed
4	1	1	1	0.30	unpaved	unpaved	lease owner	Enclosed
5	1	9	9	0.50	unpaved	unpaved	lease owner	Enclosed
6	1	6	6	0.52	unpaved	unpaved	lease owner	Enclosed

*Data Year 2021

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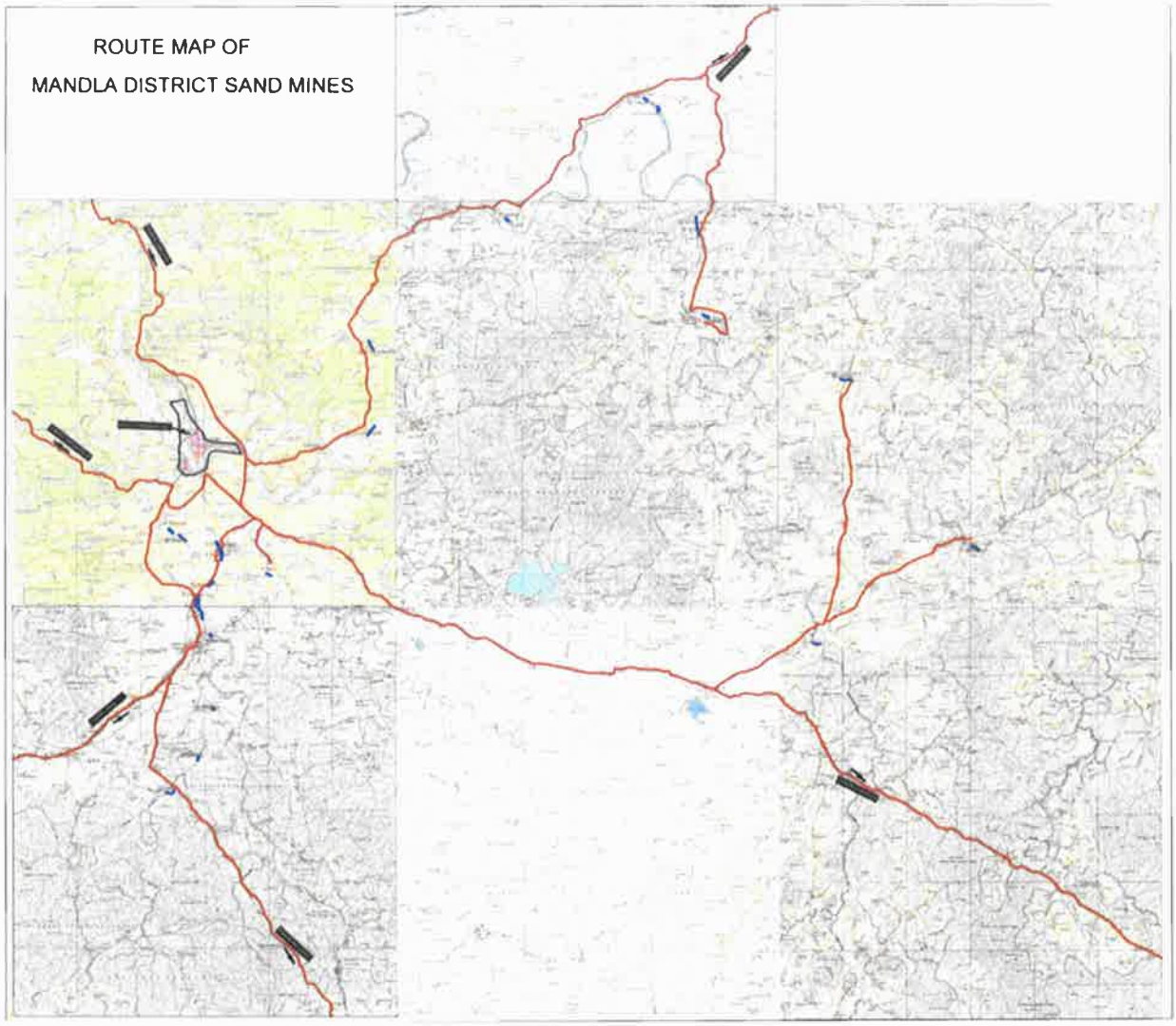
▪ Identification of possible route for sand transportation:-

The map of identification of possible routes for sand transport is attached below-



Sand Mines -

Transport Route -

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CHPATER -13

ADDITIONAL IMPORTANT PROSPECT OF THE SAND MINING

o **Tehsil wise detail of river or stream and other sand source**

S.No.	Tehsil	River or River stream for Sand Source
1	Mandla	Narmada River, Banjar River
2	Bichhiya	Budner River, Halon River
3	Ghughri	Budner River, Surpan River
4	Nainpur	Banjar River

o **Tehsil wise Availability of sand or gravel or aggregate resources**

S.No.	Tehsil	River Name	Name of Sand Ghat
1	Mandla	Narmada River, Banjar River	Devgaon, Indri, Baheri, Bhadiya, Bamhani No.4, Silgi No.2, Silgi No.1, Tharka, Tlkarwara, Hirdenagar, Bhapsa, Bhawarda, Gurarkhedam Bakcheradona
2	Ghughri	Budner River, Surpan River	Raygaon, Garaiya, Chhiblatola, Kiski, Khairimal, Paudimal, Karegaon, Ghughri, Nara
3	Bichhiya	Budner River, Halon River	Koko, Barbaspur
4	Nainpur	Banjar River	Mugdara

o **River wise Recommended Sand Ghats for availability of sand**

S.No.	Resource of Sand	No. of Sand Ghats
1	Budner River	10
2	Narmada River	02
3	Banjar River	14
4	Surpan River	01
5	Halon River	01
	Total	28

Table : List of Main Rivers flowing in Mandla District

S.No.	Name of River	Length in the District (km.)	Brief information of the River
1	Narmada River	110	This river originates from Amarkantak in Anuppur district and covers a distance of 110 km in Mandla district.
2	Budner River	129	This river originates from Mekal mountain (Chada) and covers 129 km in the district. flows over the area.
3	Banjar River	45	This river originates from Banjarpur (CG) and covers 45 km in the district flows over the area.

- **Drainage system with description of main rivers-**

S. No.	Name of River	Area Drained (Sq. km.)	% Area Drained
1	Narmada	3130	35.90
2	Budner	2708	17.44
3	Banjar	1520	31.07

- **Salient Features of Important Rivers and Streams**

S. No.	Name of River	Total Length in the district (in Km)	Place of Origin	Altitude at Origin
1	Narmada	110	Amarkantak (Anuppur District)	1057 meter
2	Budner	129	Mekal Mountain (Chada)	1142 meter
3	Banjar	45	Banjargarh (CG)	635 Meter

Methodology Adopted for Calculating of Mineral Potential

The mineral potential is calculated based on field investigation and geology of the catchment area of the river/ streams. As per the policy of the State and location, depth of minable mineral is defined. The area for removal of mineral in a river or stream can be decided depending on geomorphology and other factors, it can be 50% to 60% of the area of a particular river/stream. Other constituents like clay and silt are excluded as waste while calculating the mineral potential of particular river/ stream.

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

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

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- **Salient Features of Important Rivers and Streams**

Portion of the River or Stream Recommended for Mineral Concession Area in District

Sr No.	River Name	Mine Name	Area (Ha)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter) X depth	Total mineral concession in cum.	Mineable mineral potential (in Cubic meter) (60% of total mineral potential)	Production in Year 2019-20 in cum.	Production in Year 2020-21 in cum.	Production in Year 2021-22 in cum.
1	Banjar	Silgi No. 2	3.800	525	72.3	38000 × 3.0	114000	**68400**	29729.23	485.4	76421.78
2	Banjar	Bamhani No. 4	2.023	190	106.4	20230 × 3.0	60690	**36414**	4892.16	8646.99	28442.01
3	Surpan	Nara	2.00	400	50	20000 × 3.0	60000	**36000**	6244.0	3243.73	33195.89
4	Budhner	Paudimal	3.000	300	100	30000 × 3.0	90000	**54000**	4769.77	13091.26	50406.67
5	Budhner	Mainpuri	1.800	400	45	18000 × 1.5	27000	**16200**	0	0	12832.28
6	Budhner	Pipri Raiyat	1.000	280	35.7	10000 × 2.0	20000	**12000**	0	0	5600
7	Budhner	Karegaon	4.000	500	80	40000 × 2.0	80000	**48000**	0	0	16682.31
8	Budhner	Kisli	2.000	270	74	20000 × 1.8	36000	**21600**	0	0	13631.53
9	Budhner	Gughari	3.240	463	70	32400 × 2.0	64800	**38800**	0	0	14816.40
10	Banjar	Indri	4.680	1350	34.6	46800 × 1.8	84240	**41040**	0	0	8172.27
11	Banjar	Bhadiya	1.440	170	84.7	14400 × 2.5	36000	**21600**	0	0	5096.64
12	Budhner	Raygaon	2.900	345	82.8	29000 × 2.0	58000	**34800**	0	0	2208.23
13	Budhner	Garaiya	2.000	225	88.8	20000 × 1.5	30000	**18000**	0	0	2464.58

14	Banjar	Devgaon	2.000	500	40	20000 × 2.0	40000	**24000**	0	0	12205.24
15	Narmada	Bakchheradona	3.700	400	92.5	37000 × 2.0	74000	**44400**	0	0	264.66
16	Banjar	Baheri	1.000	290	34.4	10000 × 1.8	18000	**10800**	0	0	0
17	Banjar	Silgi No. 1	6.000	740	81	60000 × 1.5	90000	**54000**	0	0	0
18	Banjar	Tharka	5.200	680	76.4	52000 × 1.0	52000	**31200**	0	0	0
19	Banjar	Tikarwara	6.000	725	82.7	60000 × 1.0	60000	**36000**	0	0	0
20	Banjar	Hirdenagar	8.000	800	100	80000 × 1.0	80000	**48000**	0	0	0
21	Banjar	Bhapsa	5.100	510	100	51000 × 0.8	40800	**24480**	0	0	0
22	Banjar	Bhawarda	6.000	800	75	60000 × 1.0	60000	**36000**	0	0	0
23	Budhner	Chhiblatola	2.000	250	80	20000 × 1.5	30000	**18000**	0	0	0
24	Budhner	Khairimal	1.000	140	71.4	10000 × 1.8	18000	**10800**	0	0	0
25	Narmada	Gurarkheda	1.000	175	57.1	10000 × 2.0	20000	**12000**	0	0	0
26	Halon	Koko	2.00	330	60.6	20000 × 1.2	24000	**14400**	0	0	0
27	Banjar	Barbaspur	4.00	540	74	40000 × 1.5	60000	**36000**	0	0	0
28	Banjar	Mugdara	2.800	380	73.6	28000 × 1.5	42000	**25200**	0	0	0

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Mineral Potential :

Sr No.	River Name	Mine Name	Area (Ha)	Total Area in sqm	Standard Depth in meter	Total mineral concession in cum.	Mineable mineral potential (in Cubic meter) (60% of total mineral potential)	Mineable mineral potential (in Metric Tonne)
1	Banjar	Silgi No. 2	3.800	38000	3.0	114000	68400	95760
2	Banjar	Bamhani No. 4	2.023	20230	3.0	60690	36414	50980
3	Surpan	Nara	2.00	20000	3.0	60000	36000	50400
4	Budhner	Paudimal	3.000	30000	3.0	90000	54000	75600
5	Budhner	Mainpuri	1.800	18000	1.5	27000	16200	22680
6	Budhner	Pipri Raiyat	1.000	10000	2.0	20000	12000	16800
7	Budhner	Karegaon	4.000	40000	2.0	80000	48000	67200
8	Budhner	Kisli	2.000	20000	1.8	36000	21600	30240
9	Budhner	Gughari	3.240	32400	2.0	64800	38800	54320
10	Banjar	Indri	4.680	46800	1.8	84240	41040	57456
11	Banjar	Bhadiya	1.440	14400	2.5	36000	21600	30240
12	Budhner	Raygaon	2.900	29000	2.0	58000	34800	48720
13	Budhner	Garaiya	2.000	20000	1.5	30000	18000	25200
14	Banjar	Devgaon	2.000	20000	2.0	40000	24000	33600
15	Narmada	Bakchherado na	3.700	37000	2.0	74000	44400	62160
16	Banjar	Baheri	1.000	10000	1.8	18000	10800	15120
17	Banjar	Silgi No. 1	6.000	60000	1.5	90000	54000	75600
18	Banjar	Tharka	5.200	52000	1.0	52000	31200	43680
19	Banjar	Tikarwara	6.000	60000	1.0	60000	36000	50400
20	Banjar	Hirdenagar	8.000	80000	1.0	80000	48000	67200
21	Banjar	Bhapsa	5.100	51000	0.8	40800	24480	34272
22	Banjar	Bhawarda	6.000	60000	1.0	60000	36000	50400
23	Budhner	Chhiblatola	2.000	20000	1.5	30000	18000	25200

24	Budhner	Khairimal	1.000	10000	1.8	18000	10800	15120
25	Narmada	Gurarkheda	1.000	10000	2.0	20000	12000	16800
26	Halon	Koko	2.00	20000	1.2	24000	14400	20160
27	Banjar	Barbaspur	4.00	40000	1.5	60000	36000	50400
28	Banjar	Mugdara	2.800	28000	1.5	42000	25200	35280
	Total						8,27,734	11,58,828

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ANNUAL DEPOSITION :

Sr No.	River Name	Mine Name	Area (Ha)	Length of area recommended for mineral concession (in meter)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter) X depth	Total mineral concession in cum.	Mineable mineral potential (in Cubic meter) (60% of total mineral potential)	Mineable mineral potential (in Metric Tonne)
1	Banjar	Silgi No. 2	3.800	525	72.3	38000 × 3.0	114000	68400	95760
2	Banjar	Bamhani No. 4	2.023	190	106.4	20230 × 3.0	60690	36414	50980
3	Surpan	Nara	2.00	400	50	20000 × 3.0	60000	36000	50400
4	Budhner	Paudimal	3.000	300	100	30000 × 3.0	90000	54000	75600
5	Budhner	Mainpuri	1.800	400	45	18000 × 1.5	27000	16200	22680
6	Budhner	Pipri Raiyat	1.000	280	35.7	10000 × 2.0	20000	12000	16800
7	Budhner	Karegaon	4.000	500	80	40000 × 2.0	80000	48000	67200
8	Budhner	Kisli	2.000	270	74	20000 × 1.8	36000	21600	30240
9	Budhner	Gughari	3.240	463	70	32400 × 2.0	64800	38800	54320
10	Banjar	Indri	4.680	1350	34.6	46800 × 1.8	84240	41040	57456
11	Banjar	Bhadiya	1.440	170	84.7	14400 × 2.5	36000	21600	30240
12	Budhner	Raygaon	2.900	345	82.8	29000 × 2.0	58000	34800	48720
13	Budhner	Garaiya	2.000	225	88.8	20000 × 1.5	30000	18000	25200

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14	Banjar	Devgaon	2.000	500	40	20000 × 2.0	40000	24000	33600
15	Narmada	Bakchheradona	3.700	400	92.5	37000 × 2.0	74000	44400	62160
16	Banjar	Baheri	1.000	290	34.4	10000 × 1.8	18000	10800	15120
17	Banjar	Silgi No. 1	6.000	740	81	60000 × 1.5	90000	54000	75600
18	Banjar	Tharka	5.200	680	76.4	52000 × 1.0	52000	31200	43680
19	Banjar	Tikarwara	6.000	725	82.7	60000 × 1.0	60000	36000	50400
20	Banjar	Hirdenagar	8.000	800	100	80000 × 1.0	80000	48000	67200
21	Banjar	Bhapsa	5.100	510	100	51000 × 0.8	40800	24480	34272
22	Banjar	Bhawarda	6.000	800	75	60000 × 1.0	60000	36000	50400
23	Budhner	Chhiblatola	2.000	250	80	20000 × 1.5	30000	18000	25200
24	Budhner	Khairimal	1.000	140	71.4	10000 × 1.8	18000	10800	15120
25	Narmada	Gurarkheda	1.000	175	57.1	10000 × 2.0	20000	12000	16800
26	Halon	Koko	2.000	330	60.6	20000 × 1.2	24000	14400	20160
27	Banjar	Barbaspur	4.000	540	74	40000 × 1.5	60000	36000	50400
28	Banjar	Mugdara	2.800	380	73.6	28000 × 1.5	42000	25200	35280
				Total				8,27,734	11,58,828

Note :- Annual deposition of sand data is as per replenishment study 2021.

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• Other Information :

➢ Prohibited Areas for Mining:-

As per rule 3(5) of Madhya pradesh sand (Mining, Transportation, Storage and Trading) Rule, 2019 Extraction and removal of sand from the following area shall be prohibited as provided in sustainable sand mining guidelines, 2016 issued by Government of India-

(a) within 200 meters from any bridge;

(b) within 200 meter upstream and downstreamareas of any water supply scheme or water resources scheme;

(c) within 100 meter from edge of national highway and Railway line;

(d) within 50 meter from any canal, reservoir or building;

(e) within 50 meter from edge of state highway and 10 meters from edge of other village road;

(f) within fixed distance from any areas which has been built to control the flood;

(g) within 200 meter distance from the place of cultural, religious, historical, and archaeological importance or within the distance as provided in the Act/Rule;

(h) such areas which have been declared prohibited by Collector due to environmental or other reasons:

Provided that, on receipt of representation, permission to grant for mining within the limit of prohibited area may be considered, after getting NOC/Consent from the concerned administrative department.

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E-5, Arera Colony, Bhopal (M.P.)

DISTRICT SURVEY REPORT

of

MINOR MINERAL (OTHER THAN SAND) MINING

for

MANDLA DISTRICT, MADHYA PRADESH

As per gazette Notification No. S.O. 3611 (E) New Delhi dated 25th July 2018 of Ministry of Environment , Forest and Climate Change,Government of India, "Sustainable Sand Mining guidelines 2016" and EMGSM 2020

YEAR 2022

State Level Environment Impact Assessment Authority, M.P. (EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

कार्यालय कलेक्टर (खनिज शाखा) जिला मण्डला म0प्र0

modgmmad@mp.gov.in

मण्डला दिनॉक 12.09.2022

कमॉक खनिज 01/2022/1422

प्रति,

सदस्य सचिव,
राज्य स्तरीय विशेषज्ञ आकलन समिति (SEAC)
म0प्र0 भोपाल

विषय :– जिला सर्वे रिपोर्ट प्रेषित किये जाने के संबंध में।

सन्दर्भ :– संचालक, भौमिकी तथा खनिकर्म भोपाल का पत्र कमांक 4755 भोपाल दिनांक 08.04.2022

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उपरोक्त विषयांतर्गत संदर्भित पत्रानुसार जिले में रेत एवं अन्य गौण खनिज हेतु जिला सर्वेक्षण रिपोर्ट अनुमोदन किये जाने हेतु SEAC की बैठक दिनांक 27.08.2022 को प्रस्तुत किया गया था। उक्त बैठक में माननीय सदस्यों द्वारा पूर्तियॉ किये जाने का निर्देश दिया गया था।

निर्देशानुसार मण्डला जिले के रेत एवं अन्य गौण खनिजों हेतु पृथक–पृथक तैयार जिला सर्वेक्षण रिपोर्ट की प्रति अनुमोदन किये जाने हेतु सादर प्रेषित है।

संलग्न :– उपरोक्तानुसार

सहायक खनि अधिकारी
जिला मण्डला म0प्र0

पृष्ठ0 कमॉक खनिज 01/2022/1422A मण्डला दिनॉक 12.09.2022

प्रतिलिपि :–

संचालक, भौमिकी तथा खनिकर्म म0प्र0 भोपाल की ओर सादर सूचनार्थ।

सहायक खनि अधिकारी
जिला मण्डला म0प्र0

PREFACE

The present District Survey Report is prepared in compliance of interim order passed by the Hon'ble Supreme Court on 10-11-21 in the case of Civil Appeal No. 3661-3662/2020, State of Bihar & Others vs. Pawan Kumar & Others. The District Collector through letter no. Khanij/1/2022/615 Mandla, dated 02-05-2022 had constituted the sub-divisional committee to prepare the District Survey Report.

The need for District Survey Report (DSR) have been necessitated by Ministry of Environment, Forest and Climate Change (MoEF & CC) vide their Notification No. 125 (Extraordinary, Part II Section 3, Sub-section ii), S.O. 141 (E), dated 15th January 2016. The notification was addressed to bring certain amendments with respect to the EIA notification 2006 and in order to have a better control over the legislation. District level committees have been introduced in the system. As a part of this notification, preparation of District Survey Reports has been introduced. Subsequently, Ministry of Environment, Forest and Climate Change has published Notification No. 3611 (E), dt. 25th July, 2018 regarding inclusion of the —Minerals Other than Sand and format for preparation of the DSR has been specified. Enforcement & Monitoring Guidelines for Sand Mining (EMGSM) January 2020, Issued by Ministry of Environment, Forest and Climate Change is prepared in consideration of various orders/directions issued by Hon'ble NGT in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams. This DSR has been prepared in conformity with the S O 141 (E), S O 3611 (E) and other sand mining guidelines published by MOEF & CC time to time as well as the requirement specified in Madhya pradesh Sand (Mining, Transportation, Storage and trading) Rules, 2019.

The purpose of DSR is to identify the mineral potential areas where mining can be allowed; and also, to distinguish areas where mining will not be allowed due to proximity to infrastructural structures and installations, areas of erosion, areas of environmental sensitivities etc. The DSR would also help to estimate the annual rate of replenishment wherever applicable and allow time for replenishment.

The DSR of Mandla District also describes the general geographical profile of the district, distribution of natural resources, livelihood, climatic condition and sources of revenue generation.

State Level Expert Appraisal/Impact Assessment Authority, M.P. (EIA-II)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

DISCLAIMER

The data may vary due to flood, heavy rains and other natural calamities. Therefore, it is recommended that SEIAA may take into consideration all its relevant aspects / data while scrutinizing and recommending the application for EC to the concerned authority.

State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

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State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Parvavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

Chapter-1
Introduction

The District Survey Report of Mandla District has been prepared in compliance of interim order passed by the Hon'ble Supreme Court on 10-11-21 in the case of Civil Appeal No. 3661-3662/2020, State of Bihar & Others vs. Pawan Kumar & Others and as per the guide line of Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India vide Notification S.O.-1533(E) dated 14th Sept, 2006 and subsequent MoEF & CC Notification S.O. 141(E) dated 15th Jan, 2016. This report shall guide systematic and scientific utilization of natural resources, so that present and future generation may be benefitted at large. Further, MoEF & CC published a notification S.O. 3611(E) Dated 25th July, 2018 and recommended the format for District Survey Report.

The main objective of DSR is to identify 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 and estimation of annual rate of replenishment and allowing time for replenishment after mining in that area. The DSR would also help to calculate the annual rate of replenishment wherever applicable and allow time for replenishment. Besides the sand mining, the DSR also include the potential development scope of insitu minor minerals.

The objectives of the District Survey Report are as following:

1. Identification and Quantification of Mineral Resource and its optimal utilization.
2. District Survey report shall enable Environmental Clearance for cluster of Mines. It shall assist concern Department during post Environmental Clearance Monitoring.
3. To control the instance of illegal mining.
4. To maintain the livelihood of aquatic habitat.
5. To protect the incursion of ground water in the area. Limiting extraction of material in floodplains to an elevation above the water table generally disturbs more surface area than allowing extraction of material below the water table.
6. To keep accumulated data records viz. details of Mineral Resource, potential area, lease, approved mining plan, co-ordinates of a district at one place.
7. To maintain the records of revenue generation.
8. A concise guide line can be framed considering the point discussed in the DSR for minor mineral mining in the district.

The District Survey report (DSR) is comprised of secondary data published and endorsed by various departments and websites about geology of the area, mineral resources, climate, topography, land form, forest, rivers, soil, agriculture, road, transportation, irrigation etc. Data on lease and mining activities in the district, revenue etc. are collected and collated from concern district Head Quarter.

State Level Environment Impact Assessment Authority, M.P. (EPCO) Paryavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

ABOUT DISTRICT

The Mandla district lies in the Southeast part of the state of Madhya Pradesh spanning over an area of about 7544 km2. Mandla district is situated in the south eastern part of Madhya Pradesh and cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22 12': 23 22'' 02' and longitude 79 59'23" : 81 44 22 E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The geogenic problem of high concentration of fluoride in ground water widely affect the quality life of the people of region. As per 2011 census, the population of Mandla district is about 1053522 . The district is primarily a tribal district. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.

Historical Prospective :

Writers such as Alexander Cunningham, John Faithfull Fleet, Moti Raven Kangali, Girija Shankar Agrawal and Brajesh Mishra identify Mandla as the location of ancient Mahishmati. Gondwana queen, Rani Durgavati shah ruled Mandla province and fought against Akbar in her valiant effort to save her kingdom; which is still subject to folklore. Rani Avantibai of Ramgarh later fought with the British to save her kingdom from annexation. The Gondwana dynasty of Garha Kingdom commenced, according to an inscription in the palace of Ramnagar, in the fifth century, with the accession of Jadho Rai, an adventurer who entered the service of an old Gond king, married his daughter and succeeded him to the throne. Alexander Cunningham placed the date two centuries later in 664. The Garha-Mandla kingdom was a petty local chiefship until the accession of Raje Sangram Shah, the forty-seventh king, in 1480. This prince extended his dominions over the Narmada Valley, and possibly Bhopal, Sagar, and Damoh and most of the Satpura hill country, and left fifty-two forts or districts to his son. In addition to Mandla, Jabalpur and Garha in Jabalpur District and Ramnagar in Mandla District served at times as capitals of the kingdom.

Location and Geographical Data:

The Mandla district cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22012': 230 22'' 02' and longitude 7959'23" : 81 44 22E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.

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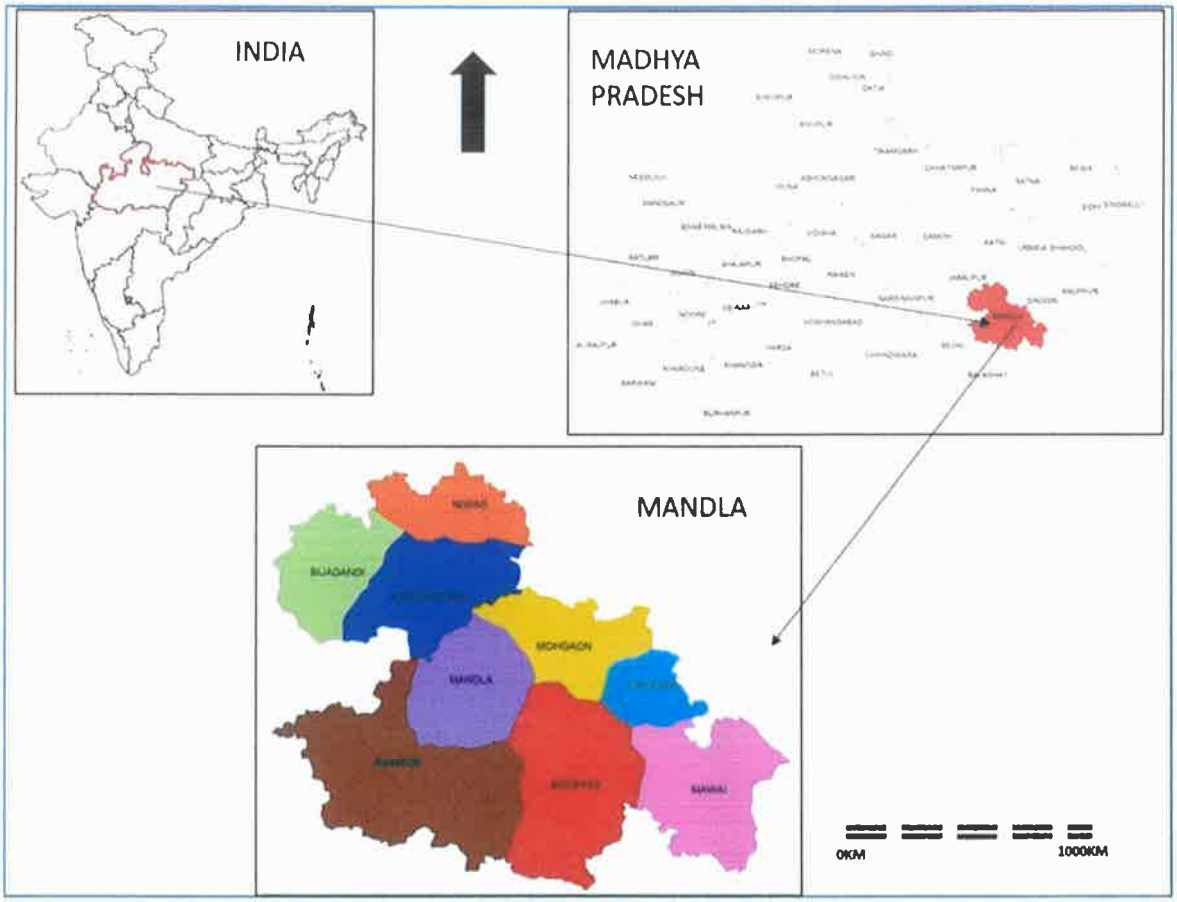


Demography of the Mandla District:

As of 2011 India census, Mandla had a population of 1054905. Males constitute 51% of the population and females 49%. In 2011 Mandla has an average literacy rate of 68.3%, higher than the national average of 59.85%: male literacy is 79.5%, and female literacy is 57.2%. Scheduled tribes dominate the population, so there is a Special education programs to promote them. In Mandla, 13.7% of the population is under 6 years of age. 90% of the population are Hindus, 4% Christians, 5% Muslims and 1% are of other faiths.

As per the official census data 2011 of Mandla district, total population is 1,054,905 and population density is 120/km2. Total no. of male population is 525,272 and female population is 529,633. 12.34% of total population, i.e., 130,189 comes under urban population and the remain g 87.66% i.e., 924,716 comes under rural population.

The district is sub divided into seven administrative 9 blocks and 6 Tehsils.There are 278-gram panchayats and 1221 villages in the district. As per census 2011, the total population of the district is 1053522.

Drainage System:

The district falls under two major drainage basins - the Narmada in the north and the Godawari in the south. It shows a typical dendritic drainage pattern of river network. The general slop of the Narmada valley is towards west. The Narmada river & its tributaries drain in northern and northwestern part of area. The Wainganga river flowing southerly and its tributaries drain the south western part They have broad, flat, shallow valleys with low imperceptible gradients, because their channels have reached the base level of erosion. Vertical erosion has ceased and lateral erosion is taking place.

Soil:

The soils in the area are generally of clayey loam types with sandy loam soil in some areas. In the northern and central parts of the District, the undulating plateau with mounds are covered with slightly deep soil; well drained, fine to fine loamy soils on gentle slopes marked by moderate erosion. The southern hilly region is covered by very shallow loamy soils, some what excessively drained. The soils developed on moderately steep slopes are marked by severe erosion. The soils have been classified as Ustocherpts/ Ustorthents/ Rhodustalfs/ Haplustalfs/ Haplusterts, as per pedological taxonom

Climate:

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevation and abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm.

Connectivity:

- **By Air**

Nearest Airport is Dumna Airport, situated at Jabalpur, which is 100 km away from Mandla.

- **By Rail**

Nearest Railway Stations are at Mandla.

- **By Road**

Mandla is connected by road to nearby cities like Jabalpur, Nagpur and Raipur through NH-30 (National Highway). From Jabalpur to Mandla, it takes more than 4 hours by bus (96 km approx.) as the road condition is very poor. Earlier Mandla has been connected by Indian Railway's Narrow Gauge Track via Nainpur to Jabalpur, Gondia, Chhindwara. Mandla is connected by Indian railway Broad gauge Track & Traveler can travel by train from Chiraidongri to Jabalpur via Nainpur, as soon as the covid restriction is over.

State Level Environment Impact Assessment Authority, M.P. (SEIAA) Paryavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHPATER -2

OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

The major part of study area is characterized by a typical trappean-basaltic geomorphology comprising extensive plain, low lying hills and hill clusters with gentle Southerly slope. Eastern, South-eastern and Northern parts are highly undulating terrains with broad pointed topped hills of granites, terraces and isolated hills constituting mesas and butte. Central, Southwestern and Western parts of the district forms flat landmass having a moderately rolling topography with small mounds and hillocks and plains of Gondwana beds.

The study area is a part of the Satpura Region with an elevation range of 364 to 958m aMSL and the average relief is 604 m aMSL. Maximum elevation is towards Mawai in Southeast, Bichhiya in South and Gughri in Northeast directions. Minimum elevation is towards Mandla and Nainpur in Central parts.

The major hydro-geomorphological units in the study area can be classified into depositional landforms including alluvial plains and valley fills, structural landforms including lineaments and intrusive landforms consisted of basaltic dykes. The basaltic up-lands and Deccan plateau basalts are main physiographic units in the study area which are acting as good groundwater occurring and control units along with Gondwana and granite.

There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Approach to Sand Mining:

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

Mainly three types of minor minerals constituents such as sand, stone and Bajri are required for any type of construction apart from other material like cement and steel. In earlier times, the houses/buildings were constructed in form of small dwellings with walls made up of mud plaster, stone and interlocking provided with wooden frames and there were negligible commercial as well as developmental activities resulting in less demand of building material. However with the passage of time, new vistas of developmental activities were started. The quantity of minor minerals consumption in a particular area is a thermometer to assess the development of the area. Thus with the pace of development activities, the consumption of minor minerals also increased. As such the demand of minor minerals in the district has started an increasing trend. In order to meet the requirement of raw material for construction, the extraction of sand is being carried out exclusively from the river beds. In Mandla district, the demand of sand (river borne collection) and of Bajri/Grit (river borne collection or through manufactured grit by stone crushers) is mainly met by the supply from Narmada, Banjar and Budner river beds.

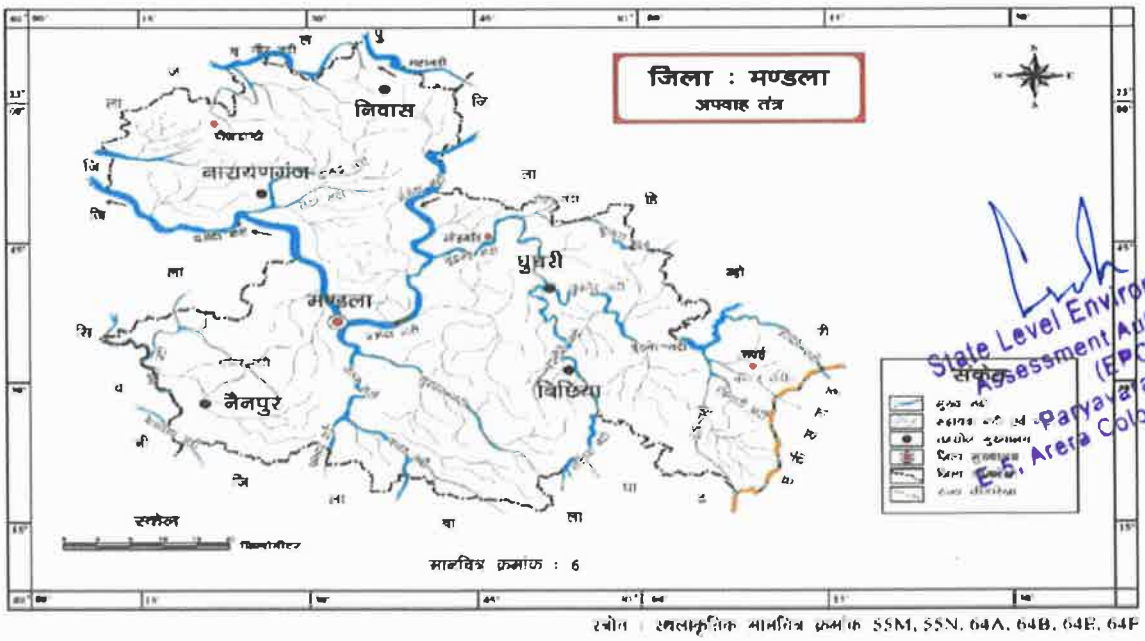
CHAPTER -3

GENERAL PROFILE OF THE DISTRICT

Mandla district, in Jabalpur Revenue Division is situated on the east- central part of the State and lies between *22°* 12' and 23 ° 22 north latitude and 79 57 and 81' 45 east Longitude. The district is bounded by Jabalpur district on the north-west; Shahdol district on the north-east; Bilaspur and Rajnandgaon on the south east; Balaghat on the south and Seoni districts on the south west., Its extreme length is about 133 Kms from north to south, and extreme breadth 182 kms from east to west. The tropic of cancer passes from about 5 Kms distance of the northern west boundary. The district can be called a mountainous tract, comprising the valleys of numerous rivers and is endowed with rich forests.

Mandla district is situated in the south eastern part of Madhya Pradesh and cover an area of 7544 sq km falling in survey of India degree sheet no 64A, B, E and F, 55 N between north latitudes 22°12': 23°22' 02" and longitude 79°59'23" : 81°44' 22"E. It is bounded by Jabalpur on the north west, Dindori and Seoni district in south west and Kawardha district and Chhatisgarh state on the south east. Mandla is well connected with all parts of country by Rail and roads. It lies on Jabalpur-Balaghat narrow gauge railway line. One State highway SH 37 (Jabalpur - Raipur) passes through Mandla town. The geogenic problem of high concentration of fluoride in ground water widely affect the quality life of the people of region. As per 2011 census, the population of Mandla district is about 1053522 . The district is primarily a tribal district. The district is divided into 6 tehsil and 9 blocks. There are one city (Mandla), three town (Mandla,Nainpur,Bamhni) and 1239 villages.

DRAINAGE: The district falls under two major drainage basins - the Narmada in the north and the Godawari in the south. It shows a typical dendritic drainage pattern of river network. The general slop of the Narmada valley is towards west. The Narmada river & its tributaries drain in northern and northwestern part of area. The Wainganga river flowing southerly and its tributaries drain the south western part They have broad, flat, shallow valleys with low imperceptible gradients, because their channels have reached the base level of erosion. Vertical erosion has ceased and lateral erosion is taking place.



स्रोत : सर्वेक्षण मानचित्र क्रमांक 55M, 55N, 64A, 64B, 64E, 64F

River/ Stream	Catchment area		Lengt hkm	Gradient	Nature	Bed formation
	Km²	% Of total				
Narmada	3130	35.90	150	1000	Perennial	Basalt/Sand
(i) Banjar	1520.0	31.07	62	1 in 3650	Ephemeral	Granite/Sand
Surpan			12	1 in 3650	Perennial	Basalt
(ii) Burhner	2708.0	17.44	9	1 in 1000	Perennial	Basalt
(iii) Balai	412.0	4.73		1 in 500	Ephemeral	Basalt
(iv) Bijra			41	1 in 250	Ephemeral	Basalt
(v) Hingra			-	1 in 300	Perennial	Basalt
Newari				1 in 350	Ephemeral	Basalt
(vi) Gaur	217.0	2.49	3			
			2			
Godawari Basin						
Wainganga	730.0	8.36	35	1 in 600	Perennial	Archaean
Halen				1 in 1250	Perennial	Archaean
Thanwar				1 in 250	Perennial	Basalt
Chaknamla				1 in 250	Ephemeral	Basalt

Climate and Rainfall:

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevation and abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm.

Flora And Fauna:

The other species which are commonly found in the forests of this districts are Tinsa (ongeinia-dalbergioides), Dhaura (Anogissus Latifolia), Dhamin (Grewia teliaefolia), Bija (Pterocarpus marsupium, India (Lagerstroelema porviflora), Haedu (Adina cardifolia), Koehar, (Teminalian AlJuna), Palas (tlutea trondosas), Harra (Terrninalia Chebula) Mahua (Bassia latifolla), Nonia (phyllanthus omblica), tendu (Diespyres tomentosa), Khamer (Gmelina arberea), Jamun (Eugenia Jamboland) and achar (Buchananis larifollas). Bambee forests are not common, though bamboos are found here and there in the forests of the district. It may be interesting to note that babul (Acacia-arabica) and nim (Melia azadirachta) are very rare but bar (Ficus bengh-lensis), Pi pal (Ficus religiosa) are found in open country.

FAUNA: The district is famous for its rich wild life as the famous Kanha National park is situate in the district which has once been the best shooting ground in the State. Among the camiverous fauna tiger (felis tigris), panther (felis pardus) the wi~d dogs (kuon rutilans), the bear (melursus ursinus labiatus), the wolf (Ganis pallipes) are found in the thick forests of the district. Jackal (Canis aurens), fox (Vulpes bengalensis, hyena (Hyenastriata) and wild cats are found throughout the district.

Temperature:

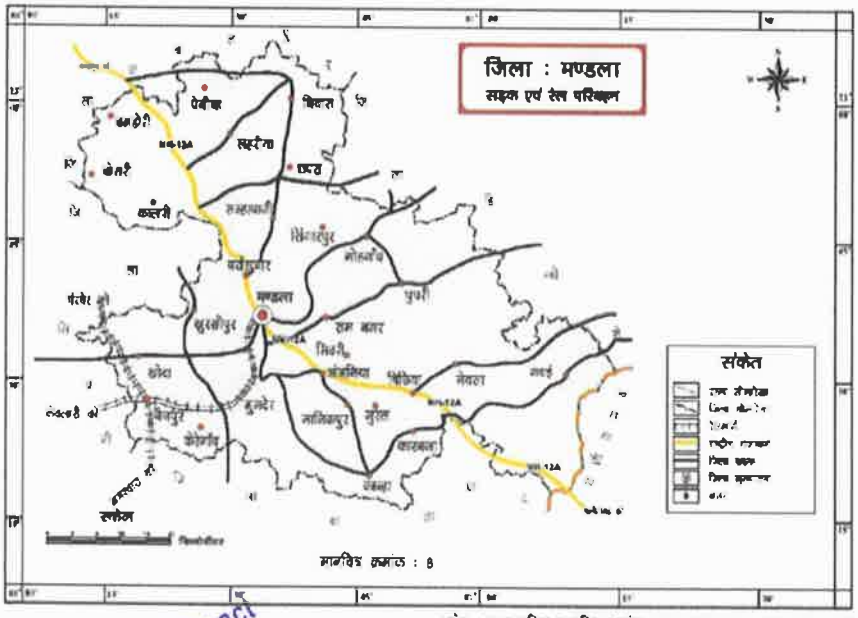
The climate of Mandla district characterized by a hot summer and general dryness except during the southwest monsoon season. The year may be divided into four seasons. The cold season, December to February is followed by the hot season from March to middle of June. The period from the middle of June to September is monsoon season. October and November form the post monsoon or transition period.

The January is the coldest month of the year. The individual day temperature comes as low as 1- 2°C. From March onwards, the temperature starts rising and maximum temperature is observed during the month of May upto 44°C. On the arrival of monsoon, the weather becomes pleasant. In October, on the retreating of monsoon the temperature rises slightly during the day time.

Humidity & Wind:

During the southwest monsoon season the relative humidity generally exceeds 88% (August month). In rest of the year is drier. During summer season, relative humidity is less than 38% and April is the driest month of the year. The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity of 6.8 km/hr. is observed during the month of June and minimum 2.3 km/hr. during the month of December. The average normal annual wind velocity of Mandla district is 4.3 km/hr.

Mining: There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.



स्रोत : स्थलाकृतिक मानचित्र क्रमांक 55M, 55N, 64A, 64B, 64E, 64F

State Level Environment Impact Assessment Authority, M.P. (EPCO) Paryavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHPATER - 4

PHYSIOGRAPHY OF THE DISTRICT

Mandla district is hilly and forested (Satpura hill range) and highly undulating with narrow strip of cultivated plains in the valley portion of river and nala. The plateau is in the northern part formed by basalt and east west trending hill in the southern part. The highest elevation 934 m amsl in the northern part and lowest elevation in around 400 m amsl in northwestern part of area.

The district can be called a mountainous tract, comprising the valleys of numerous rivers; these valleys being broken into irregular sizes and shaped by the spurs of low hills running down from the main ranges towards the larger rivers. The most important range of the Satpura in the district is Maikal, which forms a watershed between western and eastern India which is well known in ancient Sanskrit literature as the source of the holy Narmada. The altitude is the least in the south-west corner of the district which consists of a complex block of about two hundred prosperous villages, known as the 'Haveli' or the rice and wheat growing tract round Hirdenagar and Pathar the open wheat plain round Nainpur. The extreme upper valley of the Narmada in Dindori, Niwas and shahpura tahsils is an undulating plain, without much forest, broken by curious flat
topped hills which enclose patches of fertile black soil; A long squr of the Amarkantak, starting from north of Shahpura running out west towards the reg on between villages Junawani and kosumghat for about 64 Kms. separates the upper Narmada Valley, from the narrow but fertile valley of river kharmer. Many smaller spurs run north from this long spur, forming short valleys of some fertility. To the south of kharmer Valley is a fine plateau containing the Baiga Chak, and a long and rugged strip of Sal Jungle. The mean height of the plateau is well over about 600 metres in Niwas tahsil, Narmada flows through a rugged and inaccessible trat between high rocky banks tlll It enters the rough about 32 kms, of forest and hill country, and then forms the boundary of Mandla district and tuhs parrallel to the Mandla Jabalpur road for a few kilometres. The southern portion of eastern Mandla tahsil is covered by the undulating grass prairies of Raigarh Bichhia tract. It is in this area the famous forest sanctuaries of Kanha the tiger reserved and Kisli-home of countless deer and antelope and a variety of other wild fauna which attract tourists; from far and wide.
The soils in the area are generally of clayey loam types with sandy loam soil in some areas. In the northern and central parts of the District, the undulating plateau with mounds are covered with slightly deep soil, well drained, fine to fine loamy soils on gentle slopes marked by moderate erosion. The southern hilly region is covered by very shallow loamy soils, some what excessively drained. The soils developed on moderately steep slopes are marked by severe erosion. The soils have been classified as Ustocherpts/ Ustorthents/ Rhodustalfs/ Haplustalfs/ Haplusterts, as per pedological taxonom

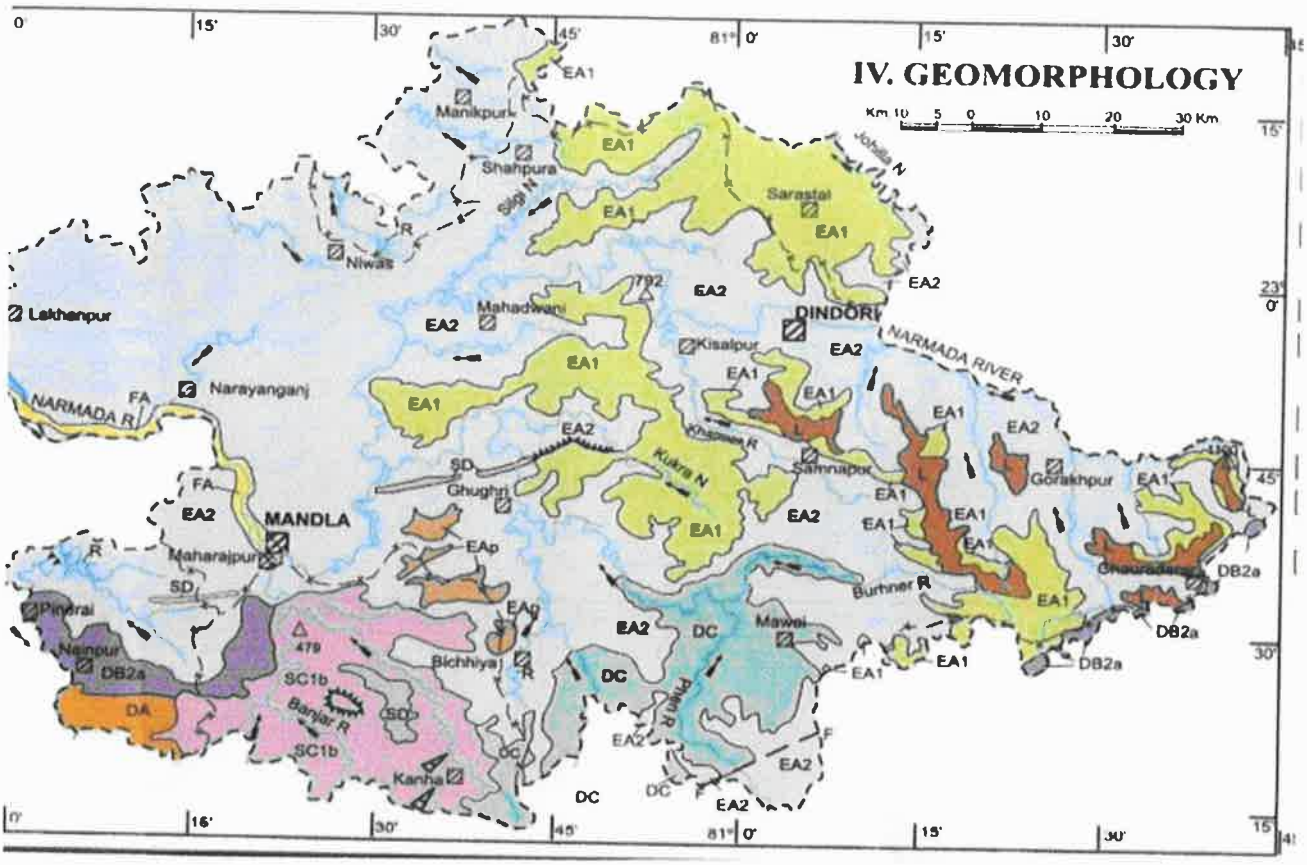


Fig : Map Showing Geomorphological Setup of Mandla District

State Level Environment Impact Assessment Authority, M.P. (SEIAA) Parvavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHAPTER - 5
DRAINAGE & IRRIGATION PATTERN

DRAINAGE: The district falls under two major drainage basins - the Narmada in the north and the Godawari in the south. It shows a typical dendritic drainage pattern of river network. The general slop of the Narmada valley is towards west. The Narmada river & its tributaries drain in northern and northwestern part of area. The Wainganga river flowing southerly and its tributaries drain the south western part They have broad, flat, shallow valleys with low imperceptible gradients, because their channels have reached the base level of erosion. Vertical erosion has ceased and lateral erosion is taking place.The Area forms water divided between the major Narmada basin in the north and the Wainganga (Part of the Godavari basin) in the southwest. The Narmada River and its tributaries drain the northern and northern western part of the area. Banjar river flowing northwards in the southcentral part is major tributary to the Narmada River. The Wainganga River following in southerly direction and its tributaries, drain the southwestern part. Tributaries of these rivers are intermittent and the streams are flashier with peak flows occurring during monsoon season after the soil moisture deficits have been replenished. Smaller streams in the area ephemeral and usually short seeping in the head water area and gain run off in the downstream. As the streams in the district are ephemeral, domestic water supply depends upon groundwater, which is generally confined to weathered vesicular/amygdaloidal basalt, occurring in the top portion of lava flows. In summer as the water table goes down the water resources dry up. This causes the permanent exploitation of deeper aquifer.

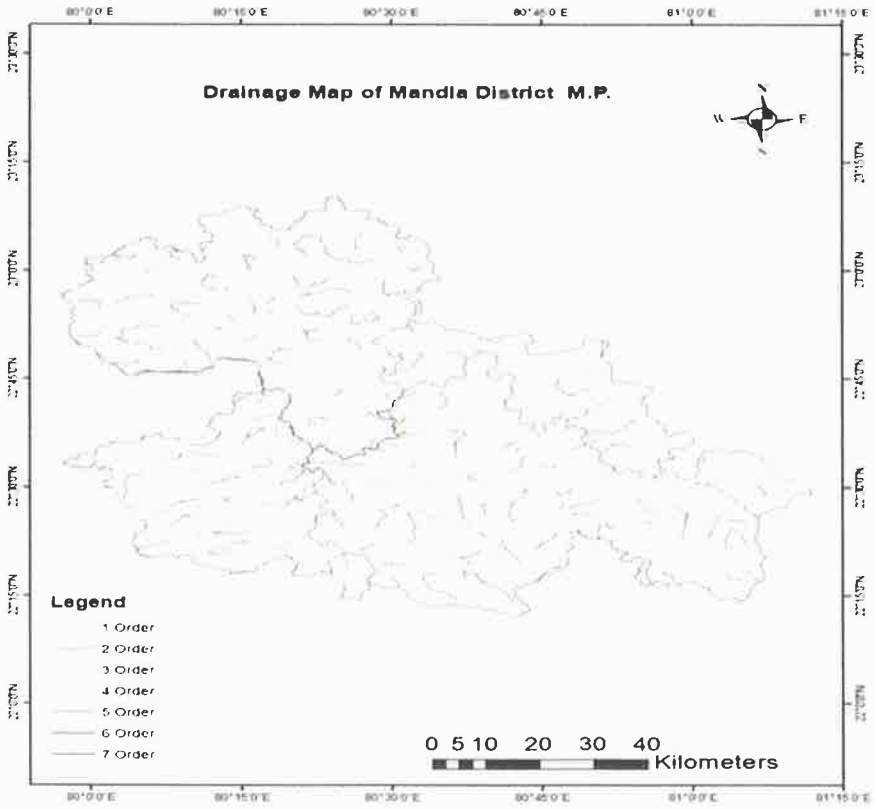


Table-1: Drainage of the Mandla district

River/ Stream	Catchment area		Length km	Gradient	Nature	Bed formation
	Km²	% Of total				
Narmada	3130	35.90	150	1000	Perennial	Basalt/Sand
(vii) Banjar	1520.0	31.07	62	1 in 3650	Ephemeral	Granite/Sand
Surpan	2708.0	17.44	129	1 in 3650	Perennial	Basalt
(viii) Burhner	412.0	4.73	41	1 in 1000	Perennial	Basalt
(ix) Balai			-	1 in 500	Ephemeral	Basalt
(x) Bijra			3	1 in 250	Ephemeral	Basalt
(xi) Hingra Newari	217.0	2.49	2	1 in 300	Perennial	Basalt
(xii) Gaur				1 in 350	Ephemeral	Basalt
Godawari Basin						
Wainganga	730.0	8.36	35	1 in 600	Perennial	Archaean
Halen				1 in 1250	Perennial	Archaean
Thanwar				1 in 250	Perennial	Basalt
Chaknamla				1 in 250	Ephemeral	Basalt

Irrigation Pattern :

The area irrigated by borewell is 106300 ha (41.4% of the total irrigated area), by open-wells 42700 ha (16.6%), irrigated by canals is 39900 ha (15.5% of the total irrigated area) and by tanks 4800 ha (1.8%). The net area under irrigation is 255500 ha and the area under rainfed irrigation is 275900 ha.

Table 8: Irrigation data of Mandla district

Irrigation	Area (ha)		
Net irrigated area	199		
Gross irrigated area	255.5		
Rainfed area	275.9		
Sources of irrigation	**Number**	**Area**	**Percentage of total irrigated area**
Canals	11	39.9	15.5
Tanks	23	4.8	1.8
Open wells	11816	42.7	16.6
Bore wells	16057	106.3	41.4
Lift irrigation Schemes	NA	-	-
Micro-irrigation	NA	-	-
Other sources (reservoir)	03	61.90	24.14
Total irrigated area	-	255.50	-

Major crops cultivated in Mandla district includes paddy, maize, wheat, peas, mustard and lentil. Area under Kharif crops is 191.1 Sq.Km and area under Rabi crops is 87.5Sq.km. Details are given in table 9.

Table 9: Cropping details of Mandla district

Kharif			Rabi		
Area	**Avg. Yield Kg/Sq.km**	**Production (tons)**	**Area**	**Avg. Yield Kg/Sq.km**	**Production (tons)**
191.1	610	118.4	87.5	654	57.2

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CHPATER - 6

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

Mandla district is a pride district in agriculture. There are two principal cropping regions: Alluvial on the northern part and laterite on the southern part, and about 69 percent of the total population depends on agriculture. Primary crop of the district are rice, gram and wheat. According to Madhya Pradesh agriculture contingency plan for Mandla district there has been 28.78 percent of cultivable land, 61.43 percent forest land, 2.22 percent cultivable waste land and 3.25 percent current fellow land in the district.

Land use pattern of the district	Geographical area	Cultivable land	Forest area	Land under non agricultural use	Permanent pastures	Cultivable waste land	Land under mix tree crop and groves	Barren and uncultivable land	Current fellow	Other fellows
Area ('000ha.)	965.6	277.9	593.2	42.4	19.9	21.5	0.1	10.6	31.4	32.2

Irrigation : The area irrigated by borewell is 106300 ha (41.4% of the total irrigated area), by open-wells 42700 ha (16.6%), irrigated by canals is 39900 ha (15.5% of the total irrigated area) and by tanks 4800 ha (1.8%). The net area under irrigation is 255500 ha and the area under rainfed irrigation is 275900 ha.

Forest : The forest survey of India was established in 1981. The first report on the forest cover of the country was published in 1987. Using land sat data of us satellite through visual interpretation techniques on 1:1 million scales. From the second assessment of forest cover the resolution of the sensor improved to 30m and the scale of interpretation to 1.25,000. The India Remote Sensing (IRS P6LISS III) satellite data having a resolution of 23.5m has been used in the analysis of data (State Forest Report, 2011). Total recorded forest land in the district is 2830 km2 which about 48.79 percent of the total geographical area of the district. According to FSI assessment in 2011 there were 751 km^2 very dense, 1204 km^2 moderate and 875 km^2 open forest cover of the district.

Mining: There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. In the last year 2021-22, Rs. 46.3 Crore revenue has been received from minor mineral against the revenue target Rs.48.0 Cr fixed for the district by MP Govt. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Sr No.	Mineral	Area (in Hectare)
1	Dolomite	153.218
2	Stone & Murrum	155.51
3	Sand	89.89

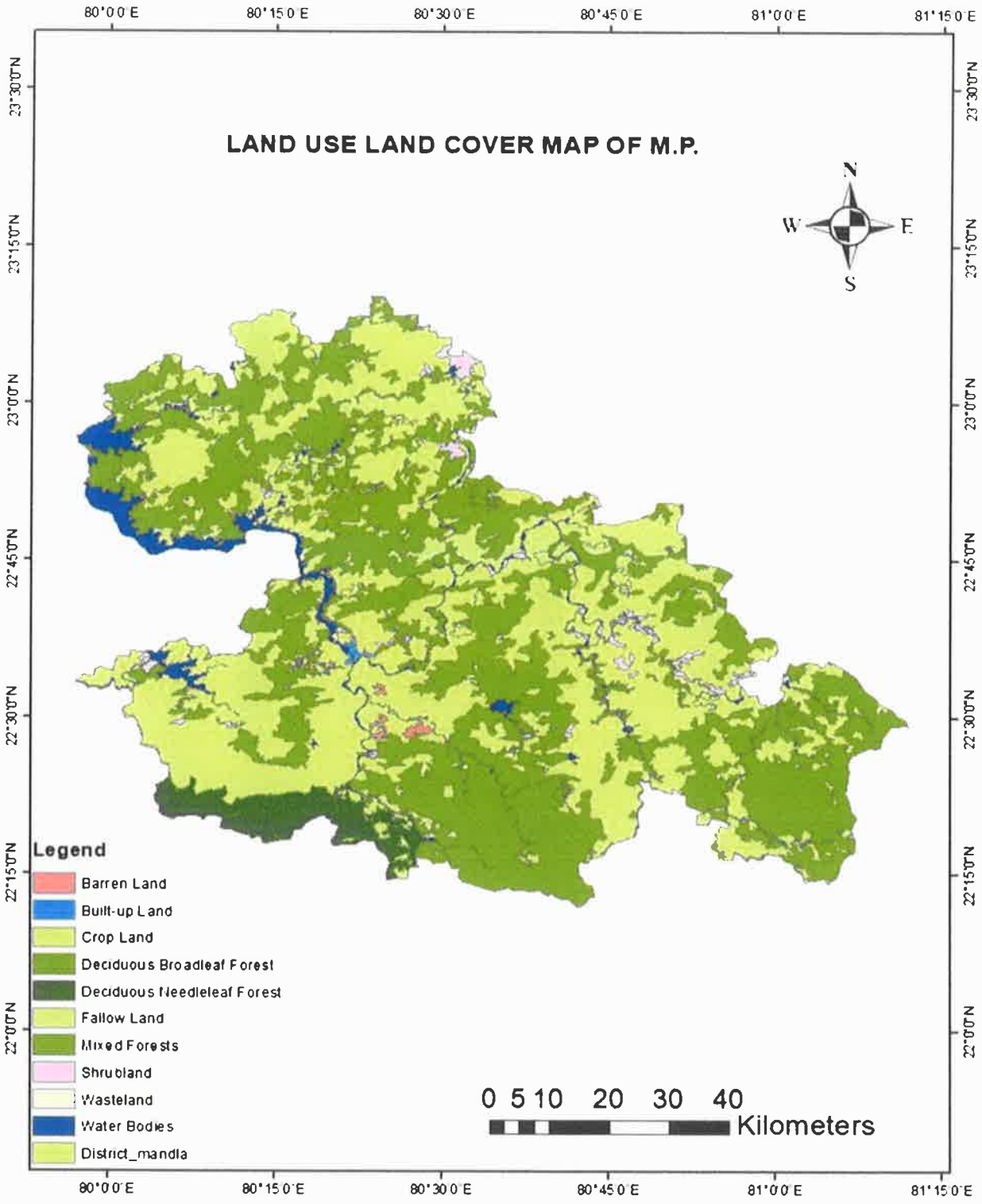

Fig : Land Use/ Land Cover Map of Mandla District

State Level Environment Impact Assessment Authority, M.P. (SEIAA) Parvavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHAPTER - 7
SURFACE & GROUND WATER SCENERIO OF THE DISTRICT

Surface Water Resources data of Mandla district

The surface water resources in the Mandla district area have a connecting network of canals created through medium and minor irrigation. There are 18 irrigation projects in the area.

Irrigation Projects

There are no major irrigation projects in the area. However medium irrigation dam and 16 minor irrigation tanks are constructed in the Mandla and Nainpur blocks as given below. In both blocks,canal water is released for 100 days during non-monsoon period and 10 days during monsoon period. Details are given in table13

Table 13: Surface Water Irrigation Schemes

Blocks	No of irrigation schemes		Left irrigation schemes
Mandla	01	14	04
Nainpur	02	02	-
Total	03	16	04

Medium Irrigation Scheme

Dhuandhar tank and Thanwar tank are constructed in Nainpur block and Matyare tank is construct in the vicinity of Mandla block area under medium irrigation schemes. These irrigation schemes are at Dhundhar stream, Thanawar river and Matyari river respectively. Details given intables 14-15.

Table14: Water spread area irrigation scheme

Salient feature	Matiyari tank	Dhundhar	Thanwar tank
1 Water spread area (Ha)	433.8	102.02	428.3
2. Number of days water available during A. Monsoon B. Non monsoon	10 days 100 days	10 days 100 days	10 days 100 days
3. Designed discharge (Ha-m/day) A. Monsoon B. Non-Monsoon		4.80	15.0

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Table 15: Canal Irrigation Structure

Block	Canal system/ scheme	Total length of canal	Design depth	Base width	Side slope	Wetted pre	Water area	Canal seepage	No of days running	
	Project	(m)	(m)	(m)	(ratio)	(m)	(mSq.)		Mon.	Non. Mon.
Mandla										
	Matyari									
	(a) QBC	19000	1.42	1.5	1.51	7.44	14.13	4.0	10	110
	(b) LBC	18000	1.25	1.34	1.51	6.56	11.80	4.0	10	110
Mohgaon block										
	Nighori	2100	0.38	2.01	-	1.88	0.287	20	10	120
	Jhandatoli	1530	0.38	2.01	-	1.88	0.287	20	10	120
Bijadandi block										
	Bijdandi Tank	610	-	0.6	2.01	1.68	0.1024	20	10	120
	Dhanwahi	1830	-	0.3	2.01	0.98	0.179	20	10	120
	Khapa	6660	-	0.3	2.01	2.91	1.938	20	10	120
Nainpur blcok										
	Dhundhar	19350	0.9	1.20	1:2	4.02	7.77	20	10	120
	Thanwar	48000	1.52	6.71	1:5:1	10.31	49.48	20	10	120

Minor Irrigation Projects:

Structures under minor irrigation project have been constructed in the district. Local storage capacity of these projects is 05.3 mcm and canal length 11083 m. The common area of these structure is 2092 ha.

Table16: Minor Irrigation Projects

Minor irrigation project	Catchment area (Sq. Km)	Gross storage mcm	Live storage mcm	Crop area CHA	
				Kharif	Rabi
Jantipur	5.05	1.60	1.412	435	
Jhalpani	4.92	0.781	0.655	368	
Mawai	3.10	0.861	0.792	81	97
Barbuspur	3.75	1.32	1.23	122	101
Deori	0.90	0.202	0.179	60	5
Mohgaon mali	2.48	0.546	0.182	182	
Bineka	14.48			177	
Semarkhape	17.09			142	
Bakon	16.83			101	
Jharmart	8.02			100	
Bagdori	10.13			121	
Total	**86.72**			**320.92**	**203**

Lift Irrigation Schemes (LIS)

There are 3 lift irrigation schemes in the area at Khairi Tharka and mandli table 4.5. The command area of schemes is about 1183 ha. These left irrigation schemes irrigation rabi crops area about 637 Ha (table 17).

Table No. 17 Lift irrigation schemes.

LIS	Area (Ha)	Crop area Ha	
		Kharif	Rabi
Khairi	690	279	411
Tharka	323	170	153
Manadehi	170	97	73
Total	1183	446	637

Occurrence of Ground Water

Deccan trap basalt forms the major aquifer in the district. The distinct geohydrological features of lava flows is the significant primary porosity in the form of vesicles, formed due to escape of gases at a later stage of cooling. Secondary porosity is developed due to fracturing during culling of the lava's tectonic disturbances and weathering. The vesicular porosity is considerably reduced by filling up with minerals like zeolites and silica to from amygdales. One flow is separated from the other by sedimentary beds, deposited during quiescent period between successive expulsions. Flows are nearly conformable in stratification from effective confining layers. Alternating sequences of previous and compact horizon function as a multi aquifer system. If the flow dips at angles gentler than the land surface slope, artesian condition may result to cause free flow in wells.

Shallow ground water occurs in the weathered vesicular jointed and fractured zones of basaltic flows. When the weathered layer is continuous, the aquifer is likely to be extensive but of low permeability on higher ground the weathered basalt may be thin or will be restricted to the joints and will be localized in occurrence. In the shallow weathered jointed and fractured basaltic rocks, ground water occurs generally under unconfined conditions at some places under semi confined to confined conditions due to the presence of thick silty clays overlying the jointed rocks.

At deeper level ground water occurs under semi confined to confined conditions in the fractures jointed section, at the flow contacts and at some places in the vesicular amygdaloidal section. The recharge to the deep zones up to 60m occurs from the shallow aquifer through the deep joints and contact zones. Shallow aquifers are also noticed in alluvium (sandy and gravely) Alluvium pre dominantly clayey, occurs along the river courses. Gondwana Sandstone and fractured granite acts as aquifer in Mawai and Bicchiya blocks. Both pink and grey granite developed secondary porosity as fractures and joints in deep aquifers. Gondwana sandstone is semi-compact with secondary porosity forming deeper aquifer alongwith loose Lameta sand. Hydrogeology map is given in fig.no.11.

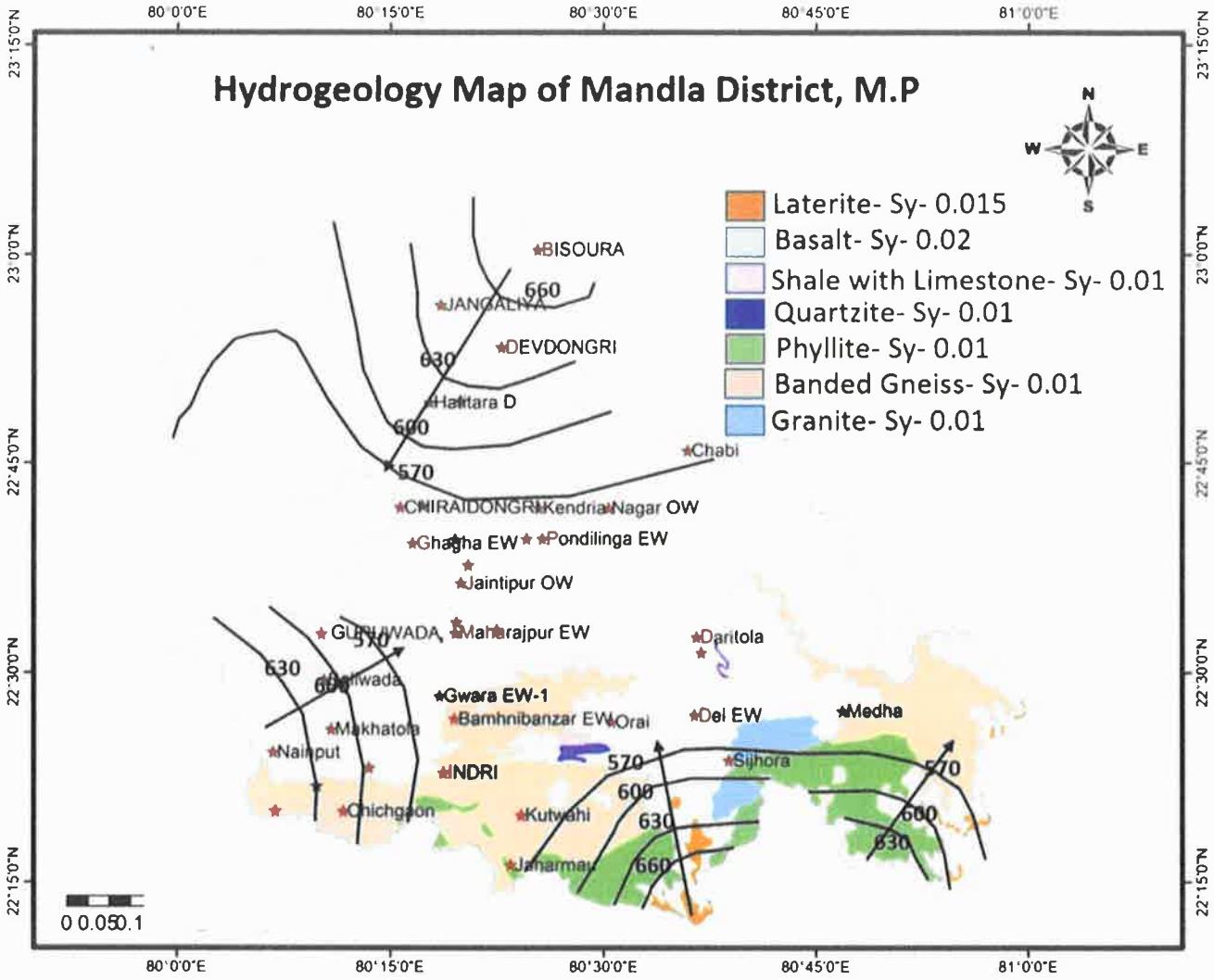


Fig No.11: Hydrogeology map of Mandla district

Aquifer System and Aquifer Parameters

Geology of the study area is constituted by hard rocks as well as alluvium. Major portion of the study area is mainly covered by the weathered basalts except the occurrence of sandstone and granite towards East and Southeast. Basalt has low to moderate permeability. The occurrence of ground water is in general moderate, but it forms potential (higher yielding) aquifers wherever it occurs in topographic depression and low-lying areas and tapped by most dug wells and shallow tube wells. The water level depth during pre-monsoon period ranges from 2.5 to 10.5 mbgl. The yields of the dug wells and shallow tube wells from 5-8lps.

Fractured sandstone and granite forms good aquifers towards the East and South east. Wells yield ranged from 3-4lps. Massive granite with high elevation are exposed at some parts of the district. Massive basalt is also exposed at some part of the district.

Average discharge of bore wells ranges from 2-8 lps in most parts of the district. At Gagha, discharge of bore wells were observed is 27lps and in Telaipani and Pondilinga, discharge observed is 15lps. Specific yield of deeper aquifer is 0.02 except for Mawai where the specific yield is 0.015. Fractured vesicular basalt, fractured and jointed

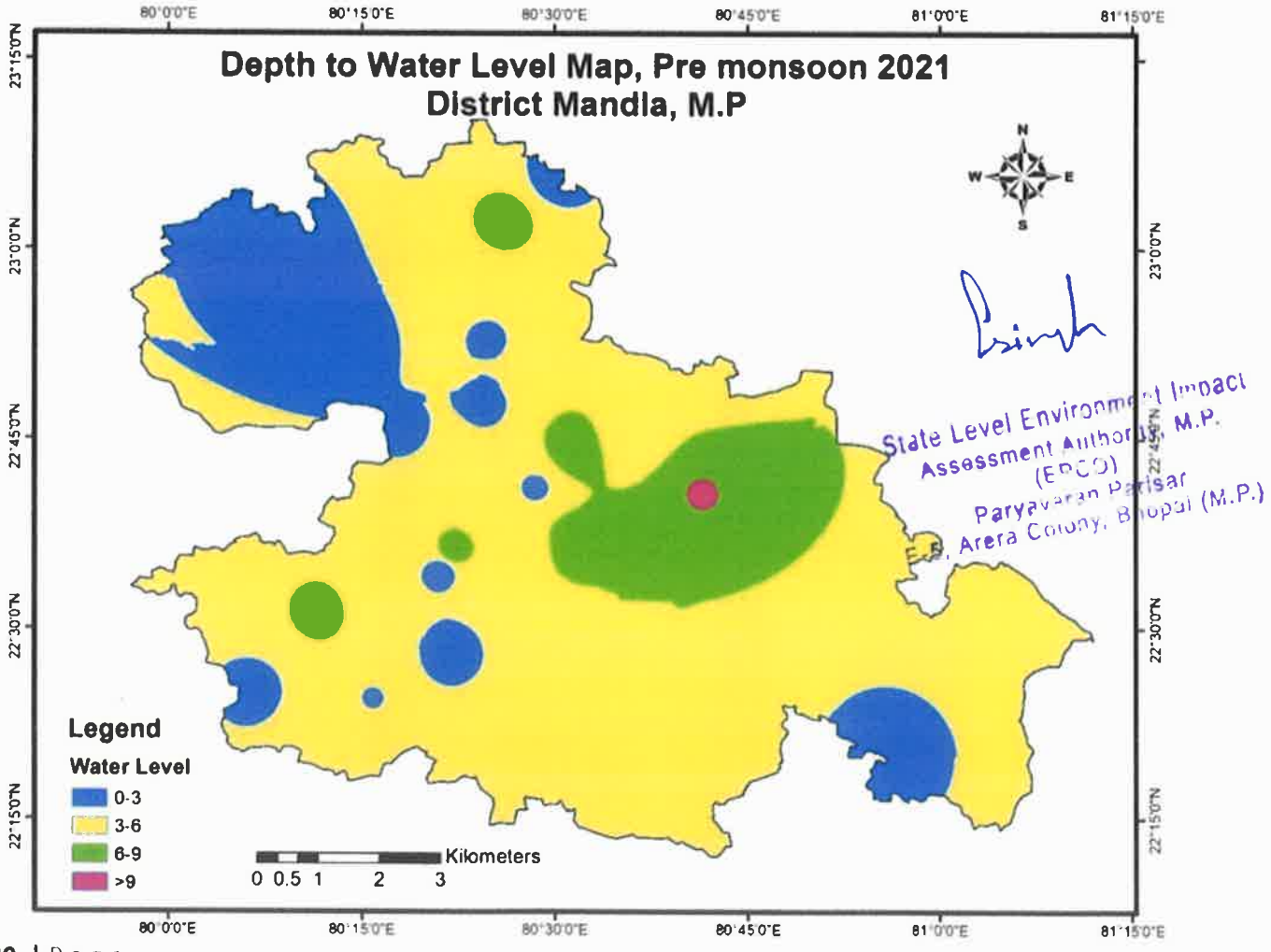
massive basalt act as major aquifer in the district. Weathered basalt and fractured vesicular basalt are observed in dug wells which is acting as the aquifer at shallow depths.

Water level in Mandla district

In Mandla district, it has been observed that in most of the places, water table is subdued replica of the land surface. Close to hills and high grounds, water table lies at comparatively higher altitudes than in valleys. The configuration of the water table confirm to the land surface to a greater degree in board undulating terrains than in rugged terrains. The addition to the primary control of topography, water table is also influenced by geologic control like dykes and permeability of water bearing rocks. Local variation in abstraction and depletion from the groundwater reservoirs are also reflected in the water table. In very permeable formation the water table may tend to be flat, irrespective of the topographic highs and lows.

Pre monsoon water level

The depth to water levels monitored in 31 NHS monitoring wells during May 2021 has been used to prepare the pre monsoon depth to water level map of the district. The map shows that the depth to water levels during pre monsoon period in general rages 3-6 mbgl. The water level ranges 5 to 10 mbgl occur in north-eastern parts of the study area with small pocket in the central. Shallow water levels (0-3m bgl) occur as pocket in central part of the area around north west (fig.no.12).Fig. No.12: Pre monsoon water level map of Mandla district



Post Monsoon Water Level

The post monsoon depth to water levels were monitored during November 2021 and has been used to prepared the post monsoon depth to water level maps The map shows water logging condition in 50% of the district. The average post monsoon water level map for 2021 shows that the general depth to water level during post monsoon period over the study area ranges from 3-6 mgl. Shallow water level (0-3m) occur in the western part of the area, deeper water level > 6 mbgl area also encountered in central part near Chabi(fig.no.13).

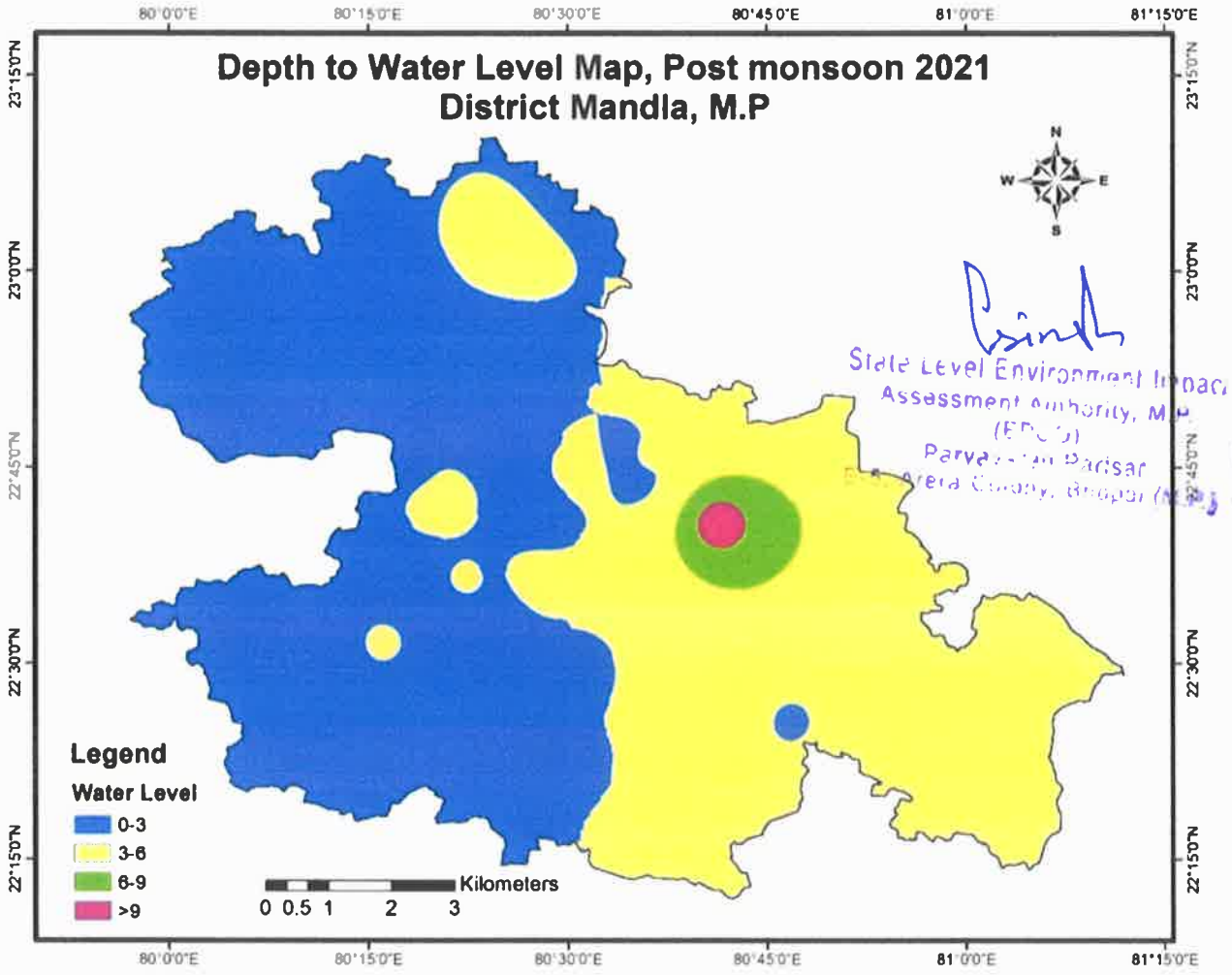


Fig. No. 13: Post monsoon water level map of Mandla district

Annual Water Level Fluctuation

The fluctuation between pre and post monsoon period water level for the year 2021 had calculated to determine the effect of rainfall on recharge. A general rise of water levels over the entire survey area is observed and average fluctuation of the area is 0-2 m recorded in 70% of the total study area the fluctuation range is 4-5 m higher level of water level fluctuation observed in central part(fig.no.14).

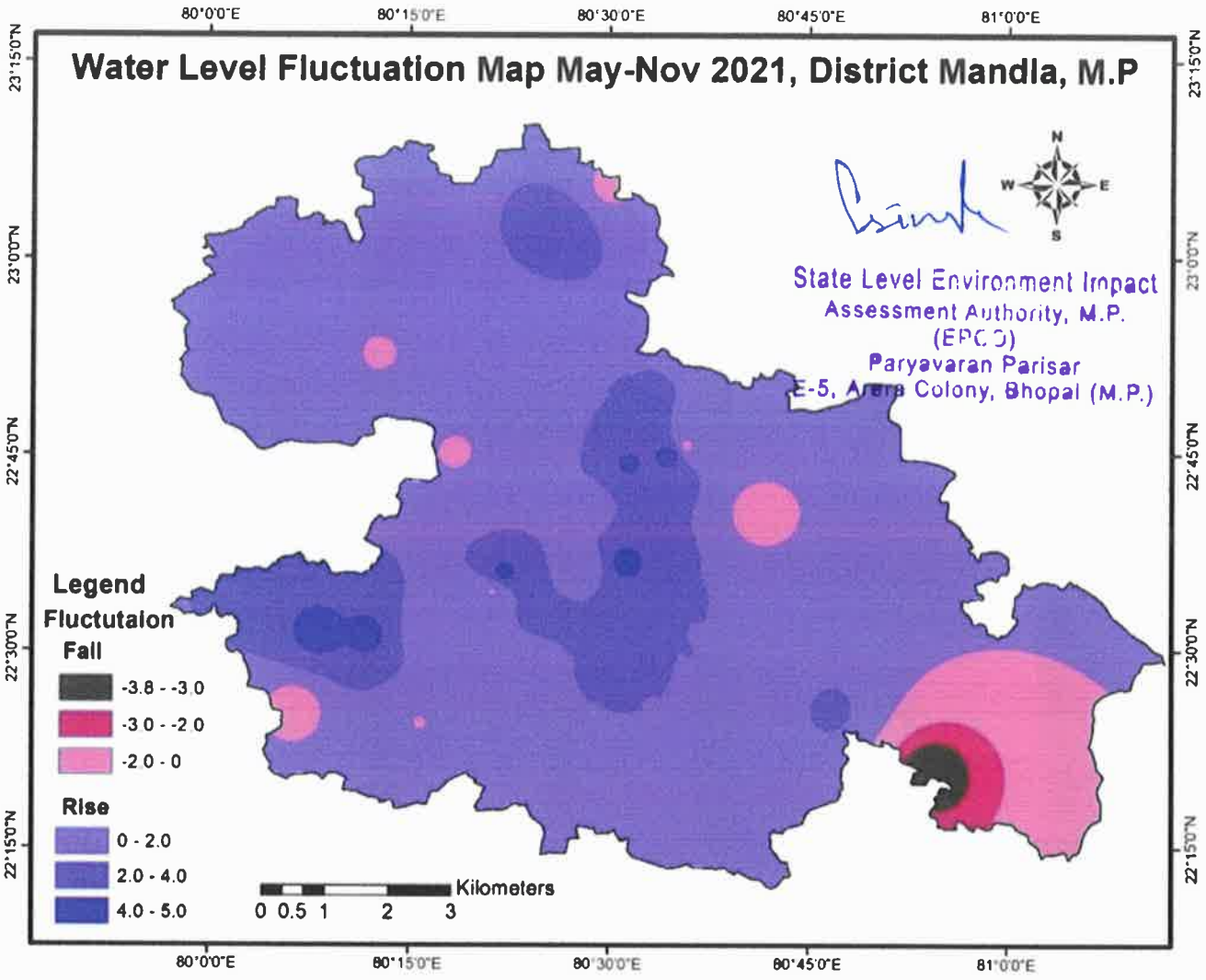


Fig. No. 14: Annual water level fluctuation map of Mandla district

Decadal Water Level Trend

The trend of the ground water levels of an area over a period of time reflects the behaviour of ground water over time. In order to understand the long trend water level trend in Mandla district, Decadal water level fluctuation map and hydrographs of Mandla district were analysed. The Decadal water level trend map (2010-21) shows both falling and rising trend in the district (fig.no.15&16). The decadal water level trends indicates that pre monsoon water levels are showing rise in major part of the district and the post monsoon water levels are declining in Bicchiya, Gughri and parts of Mawai blocks. This indicates that during monsoon period, due to the geomorphological and hydrogeological setup, natural recharge to ground water in Mandla district is taking place in a slow rate. It may also cause due to the extraction of groundwater for irrigation and other uses during post monsoon.

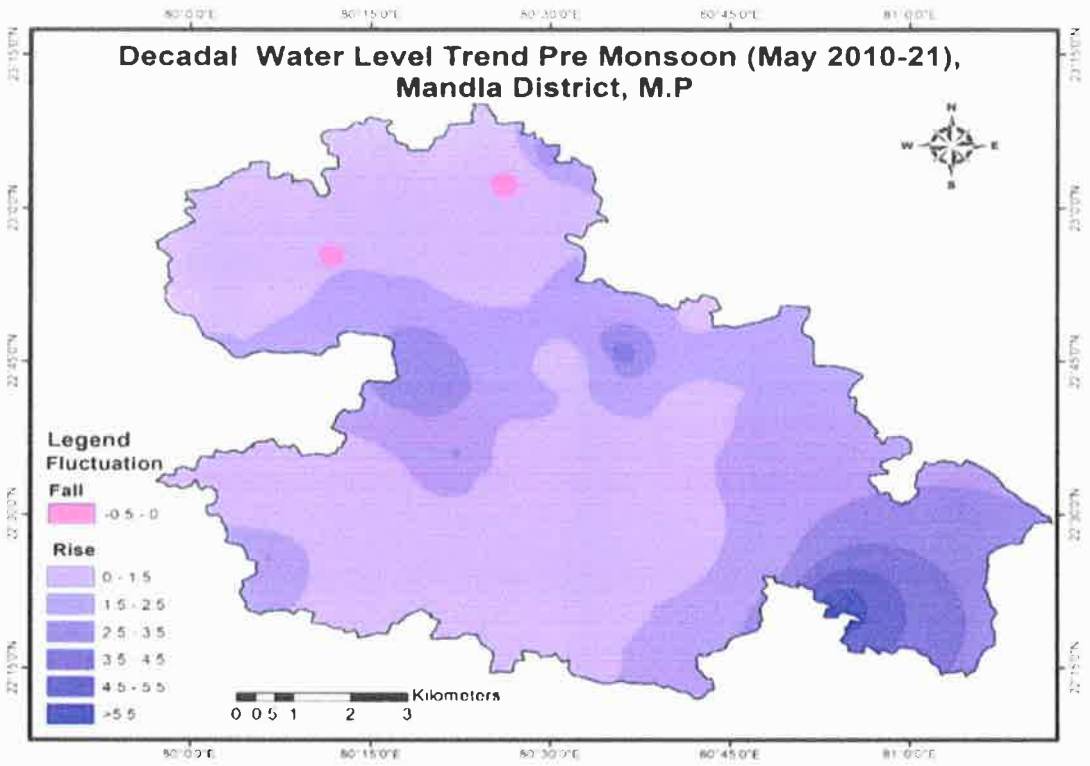


Fig. No.15: Decadal Water Level Trend Map (Premonsoon) of Mandla district

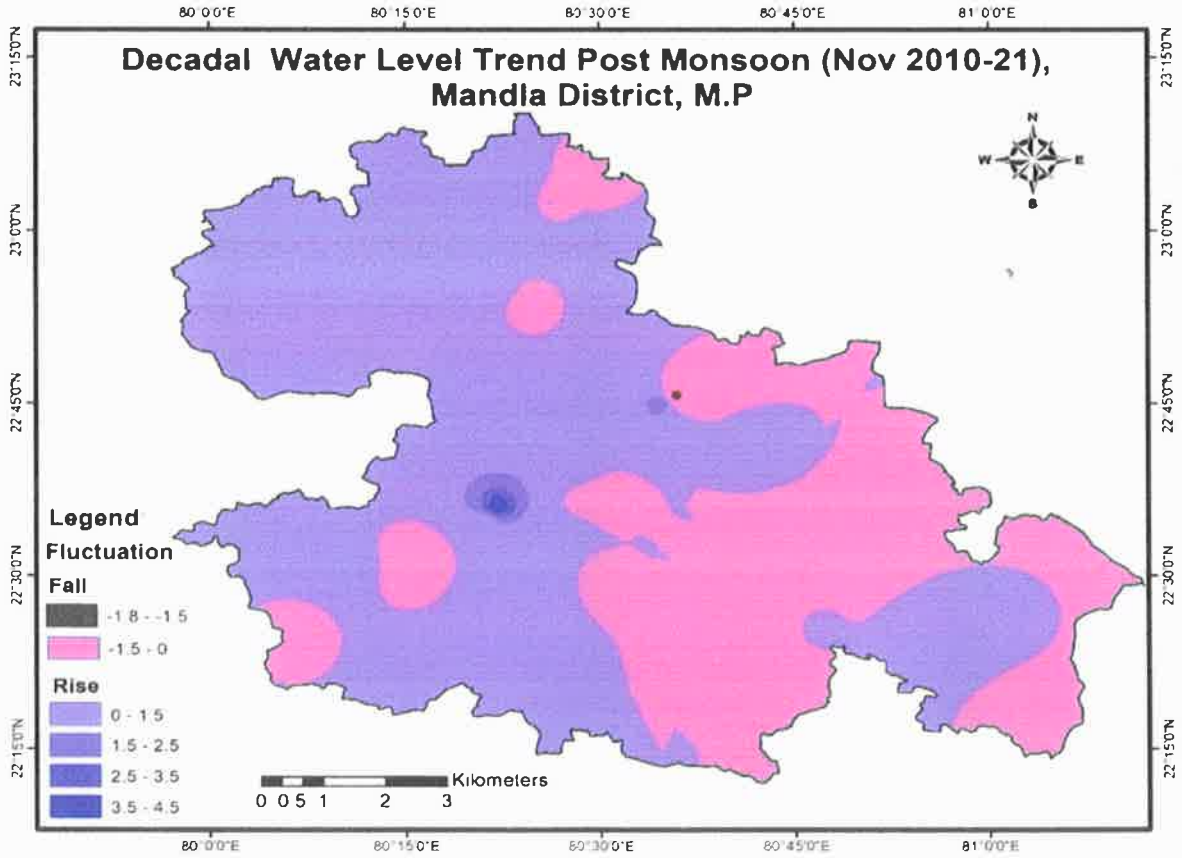


Fig. No.16 Decadal Water Level trend map (post monsoon) of Mandla district

Hydrograph monitored by central ground water board in the study area, it is observed that over a period of last 10 years (2011-21) that the post monsoon levels have declining in the district in three blocks namely Bichhiya, Bijadandi and Ghugri.

Quality of Ground Water for Drinking Purpose:

The ground water samples from Mandla district have varied range of pH from 7.08 to 8.40. As per BIS (IS 10500:2012) recommendation, all the water samples have pH recorded within the permissible limits of 6.5 to 8.5, the maximum pH recorded in the water sample of Manikpur (8.40). The pH of ground water can be assessed as neutral to slightly alkaline in nature. The electrical conductivity of ground water samples in Mandla district varies from 310 to 1513 µS/cm at 25°C. In the district, 26 (89.7%) locations of sample show EC less than 1000 µS/cm while 2 (10.3%) locations of sample show EC in between 1000 to 1500 µS/cm from Kudomali New (1007) and Mandla (1513 µS/cm) villages. So, overall ground water quality of Mandla district is good to saline in nature in few pockets of the districts.

The fluoride concentration in Mandla district lies in between 0.04 to 1.18 mg/l, which represent that all the samples are within the permissible limit i.e. 1.5 mg/l of BIS standard. The maximum concentration of fluoride has been observed in the dug well of Manikpur village i.e. 1.18 mg/l. The nitrate concentration in the Mandla districts ranges in between 1 to 104 mg/l. In the district, 13.8% samples have nitrate concentration more than the acceptable limit of 45 mg/l, while rest 86.2% samples have concentration less than acceptable limit. Highest concentration of nitrate has been recorded in the village of Babaliya (104 mg/l).

The total hardness in the ground water of the districts ranges between 20 to 505 mg/l. In the district, all the ground water samples recorded total hardness within the BIS permissible limit of 600 mg/l. The maximum concentration of total hardness has been observed in the village of Mandla i.e. 505 mg/l. Chemical data is given as annexure 4.

Piper diagram has three parts: a Cation triangle, an Anion triangle, and a Central diamond- shaped field. In Cation triangle, the relative percentages of the major cations (Ca^{2+}, Mg^{2+}, Na^{+}, K^{+}) are plotted. In Anion triangle the major anions ($HCO_3^{-}+CO_3^{2-}$, SO_4^{2-}, Cl^{-}) are plotted. These points are then projected to the central diamond shaped field. In the district; piper diagram shows that the samples are Calcium-Bicarbonate type (temporary hardness) and Mixed type types of water.

Quality of Ground Water for Irrigation Purpose:

The classification of water for irrigation purpose, it is assumed that the water will be used for irrigation purpose based upon its soil texture, infiltration rate, drainage and climate. The chemical data of all the water samples from Mandla district is plotted on U.S. Salinity Laboratory diagram

The USSL diagram shows that the districts falls under C_2-S_1 Class (Medium Salinity & Low Sodium); C_3-S_1 Class (High Salinity & Low Sodium). The ground water of the district may be used for irrigation with proper soil management.

CHPATER -8

RAINFALL & CLIMATE CONDITION OF THE DISTRICT

Climate of the district is tropical with moderate winter and severe summers and well distributed rainfall received from southwest monsoon. However due to higher general elevationand abundance of forests, summer temperature do not rise as much as in other areas. The normal annual rainfall of Mandla district is 1427.7 mm. The district has three clearly distinguishable seasons which divide the year into three more or less equal parts. They are the rainy season, the winter and the Summer roughly corresponding to june-September. November, February and March-May respectively. the month October-wever withnesses a transition from the rainy to the cold weather.

Sr No.	Month	Annual Rainfall (mm)		
		Year 2019	Year 2020	Year 2021
1	January	14.4	26.2	0.0
2	February	7.7	39.9	20.6
3	March	18.09	47.3	10.6
4	April	8.0	15.0	0.4
5	May	0.0	12.6	77.3
6	June	81.2	210.6	243
7	July	443.2	237.7	294.3
8	August	556.7	664	179
9	September	526.6	131	254.9
10	October	41.4	45.2	24.2
11	November	0.0	8.1	10.3
12	December	19.9	0.0	22.2
Total		1117.39	1810.1	1406.5

CHAPTER – 9

THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA AND VALIDITY

List of Mines sanctioned in Mandla Dis

Sr No.	Name of Mineral	Name & Address of Lessee's	Contact No. of Lessee	Mining Lease Grant Order	Area in Ha	Period Mining Lease (Initial)		Period Mining Lease (Renewal)		Date of Comme ncme			If Yes letter no. Date of EC)	Lattitude		Method of
						From	To									
1	2	3	4	5	6	7	8				12	13	14	15		16
1	Dolomite	Shri Raghvendra Singhaniya S/o Shri Maluram Singhaniya Resi- Tatyapara Chowk, Raipur (CG)	8085130204	No. F-3-21/98/12/2 Bhopal Date 19.06.98	0.78	[illegible]				.10.1998	Non Working	Non Captive		22°26"30.6" 22°26"29.7" 22°26"27.6" 22°26"26.9" 22°26"28.2"	80°24 .2" 80°24'53.9" 80°24'53.4" 80°24'51.5" 80°24'50.8"	Opencast
2	Dolomite	Shri Santosh Jain S/o Shri Sampat Lal Jain Resi- TV Tower Road Shankar Nagar, Raipur (CG)	8085130204	No. F-3-22/98/12/2 Bhopal Date 19.06.1998	1.03	15.9.1998	[illegible] 2018	15.9.2018	14.9.2048	25.10.1998	Working	Non Captive	Deiaa 43 Date 17/08/2016	22°26'21.7" 22°26'21.2" 22°26'24.7" 22°26'24.6" 22°26'23.7" 22°26'24.3" 22°26'26.7"	80°25'04.6" 80°25'04.3" 80°24'58.2" 80°24'56.7" 80°24'55.8" 80°24'54.7" 80°24'54.8"	Opencast
3	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi- Malviya Nagar Durg (CG)	7974008400	No. F-3-23/98/12/2 Bhopal Date 16.06.1998	2.41	15.9.1998	14.9.2018	15.9.2018	14.9.2048	25.10.1998	Working	Non Captive	Deiaa 41 Date 17/08/2016	22°27"04.9" 22°27"05.5" 22°27"05.1" 22°27"01.1" 22°27"01.3"	80°25'02.1" 80°25'05.1" 80°25'09.6" 80°25'09.4" 80°25'03.1"	Opencast

State Level Environment Impact
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4	Dolomite	Smt Aruna Sahare W/o Shri Narendra Share Resi-Civil Lines, Mandla (MP)	9425417793	No. F-3-16/2 004/12/2 Bhopal Date 12.04.20 05	6.60	01.05.2008	05.05.2048	.	.	15.6.2008	Working	Non Captive	Seiaa 189 Date 05/05/2 012	22°26"31.3" 22°26"31.7" 22°26"33.1" 22°26"32.1" 22°26"30.9" 22°26"30.6" 22°26"30.4" 22°26"26.6" 22°26"26.5" 22°26"24.4" 22°26"22.3" 22°26"20.6" 22°26"23.5" 22°26"25.1" 22°26"24.6" 22°26"26.9" 22°26"25.6" 22°26"27.5"	80°25'11.5" 80°25'18.9" 80°25'19.8" 80°25'22.2" 80°25'22.0" 80°25'22.7" 80°25'25.0" 80°25'22.0" 80°25'18.0" 80°25'17.8" 80°25'17.2" 80°25'14.3" 80°25'12.2" 80°25'12.7" 80°25'14.7" 80°25'14.9" 80°25'13.1" 80°25'11.8"	Opencast
5	Dolomite	Shri Shobhakant Jha S/o Shri Sambhunath Jha Resi-Mandla (MP)	9424339424	No. F-3/421/ 85/12/2 Bhopal Date 15.10.19 92	4.41	03.11.1992	02.11.2042	.	.	25.12.1992	Working	Non Captive	Deiaa 41 Date 17/08/2 016	22°26"46.8" 22°26"47.4" 22°26"47.6" 22°26"48.5" 22°26"48.8" 22°26"45.3" 22°26"45" 22°26"44.9" 22°26"44.2" 22°26"43.6" 22°26"41.9" 22°26"41.3" 22°26"44.6"	80°24'42" 80°24'45.1" 80°24'46.3" 80°24'47.3" 80°24'50" 80°24'49.2" 80°24'48.4" 80°24'47.9" 80°24'46.7" 80°24'46.4" 80°24'42.7" 80°24'42" 80°24'42"	Opencast

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6	Dolomite	Sumedha Minerals Pro. Smt Suman Agrawal W/o Late Shri Sameer Agrawal Resi-	9424339424	No. F-3-99/93/12/2 Bhopal Date 22.09.1997	4.45	15.12.1997	14.12.2047			20.02.1998	Working	Non Captive	Deiaa 56 Date 17/08/2016	22°26"32.3" 22°26"31.8" 22°26"31.6" 22°26"31.7" 22°26"30.6" 22°26"28.8" 22°26"27.9" 22°26"28.0" 22°26"26.5" 22°26"26.8" 22°26"27.9" 22°26"28.9" 22°26"29.4" 22°26"29.9" 22°26"31.3" 22°26"32.0" 22°26"33.5" 22°26"34.0" 22°26"35.3" 22°26"34.8"	80°25'03.6" 80°25'02.6" 80°24'59.2" 80°24'56.7" 80°24'56.0" 80°25'58.0" 80°25'00.3" 80°25'03.6" 80°25'03.0" 80°25'03.9" 80°25'04.7" 80°25'05.1" 80°25'08.4" 80°25'08.6" 80°25'06.7" 80°25'08.6" 80°25'08.6" 80°25'07.2" 80°25'06.8" 80°25'02.8"	Opencast
7	Dolomite	Shri Kamlesh Mohan Jhikram S/o Shri Mohanlal Jhikram Resi- Badi Khairi, Mandla (MP)	9301120567	No. F-3-10/94/12/1 Bhopal Date 12.12.1994	2.43	05.01.1995	04.01.2045			10.03.1995	Working	Non Captive	Deiaa 57 Date 17/08/2016	22°26"19.4" 22°26"21" 22°26"25.1" 22°26"25.1" 22°26"24" 22°26"23.7" 22°26"24.1" 22°26"23.3" 22°26"20.8"	80°24'52.1" 80°24'51.5" 80°24'52.3" 80°24'54.1" 80°24'54" 80°24'54.9" 80°24'57.1" 80°24'58.8" 80°24'56.6"	Opencast
8	Dolomite	Shri Praveen Chand Patel S/o Shri P D Patel Resi- Bastar Road, Dhamtari, Raipur (CG)	9425152137	No. F-3-38/2000/12/2 Bhopal Date 01 09.2001	3.14	02.02.2002	01.02.2052			10.05.2002	Non Working	Non Captive		22°26"45.5" 22°26"46.0" 22°26"44.6" 22°26"45.9" 22°26"45.7" 22°26"39.0" 22°26"39.6" 22°26"39.5" 22°26"36.2" 22°26"35.0" 22°26"34.6" 22°26"37.2" 22°26"41.4"	80°24'51.5" 80°24'50.5" 80°24'47.8" 80°24'47.2" 80°24'42.0" 80°24'42.9" 80°24'43.4" 80°24'44.9" 80°24'46.0" 80°24'46.1" 80°24'47.3" 80°24'47.5" 80°24'49.3"	Opencast

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9	Dolomite	Smt Sheeldevi Jha W/o Shri Amidatt Jha Resi- Azad Ward, Mandla (MP)	9669589179	No. F-3-52/2006/12/2 Bhopal Date 19.2.2009	4.61	29.06.2009	28.06.2039			12.09.2009	Working	Non Captive	Deiaa 39 Date 17/08/2016	22°26"39.0" 22°26"36.6" 22°26"36.4" 22°26"36.2" 22°26"36.2" 22°26"37.9" 22°26"39.7" 22°26"36.2" 22°26"43.5" 22°26"43.8" 22°26"41.4"	80°24'37.4" 80°24'36.4" 80°24'34" 80°24'31.3" 80°24'29.7" 80°24'27.1" 80°24'27.9" 80°24'28" 80°24'30" 80°24'31.4" 80°24'33.7"	Opencast
10	Dolomite	Jai Shri Shyam Minerals Pro Shri Santosh Kumar Agrawal Resi-Bamhani Banjar, Mandla (MP)	9301120567	No. F-3-18/09/12/2 Bhopal Date 26.06.2011	4.48	06.09.2011	05.09.2041			10.11.2011	Working	Non Captive	Deiaa 55 Date 17/08/2016	22°26"33.45" 22°26"34.57" 22°26"36.60" 22°26"38.69" 22°26"36.24" 22°26"35.69" 22°26"35.86" 22°26"33.70" 22°26"31.20" 22°26"31.00" 22°26"31.80" 22°26"32.60" 22°26"31.80"	80°24'45.56" 80°24'43.11" 80°24'39.40" 80°24'37.67" 80°24'36.97" 80°24'34.30" 80°24'30.71" 80°24'30.30" 80°24'35.90" 80°24'37.70" 80°24'37.40" 80°24'38.90" 80°24'41.60"	Opencast

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11	Dolomite	Taal Minerals Partner Neelu Pathak Smt Laxmi Agrawal Resi- Civil Line, Mandla (MP)	9425821414	No. F-21/2008/12/2 Date 05.04.2012	4.45	11.06.2012	10.06.2052			13.09.2012	Working	Non Captive		22°26'46.2" 22°26'42.2" 22°26'37.3" 22°26'35.9" 22°26'34.3" 22°26'34.3" 22°26'33.3" 22°26'35.1" 22°26'36.4" 22°26'38.7" 22°26'39.8" 22°26'39.9" 22°26'40.7" 22°26'38.8" 22°26'38.9" 22°26'40.8" 22°26'39.8" 22°26'38.7" 22°26'36.6" 22°26'36.5" 22°26'38.5" 22°26'44.2" 22°26'45.3" 22°26'46.1"	80°24'52.6" 80°24'51.4" 80°24'49.7" 80°24'48.3" 80°24'48.1" 80°24'47.0" 80°24'47.4" 80°24'43.5" 80°24'41.8" 80°24'38.3" 80°24'41.3" 80°24'41.0" 80°24'43.2" 80°24'43.0" 80°24'44.4" 80°24'44.6" 80°24'46.2" 80°24'46.7" 80°24'45.7" 80°24'47.2" 80°24'46.6" 80°24'50.2" 80°24'49.7" 80°24'51.6"	Opencast
12	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi- Malviya Nagar, Durg (CG)	7974008400	No. F-3-121/93/121/2 Bhopal Date 15.01.1996	1.21	19.04.1996	18.04.2046				Non Working	Non Captive		22°27'02.10" 22°27'00.9" 22°27'00.2" 22°27'00.5" 22°26'57.6" 22°26'58.4" 22°26'58.1" 22°27'01.1" 22°27'01.2"	80°24'19.80" 80°24'23.4" 80°24'23.3" 80°24'22.1" 80°24'21.5" 80°24'20.4" 80°24'19.3" 80°24'18.9" 80°24'19.9"	Opencast

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13	Dolomite	M/s Narmada Mininig Corporation Pro. Shri Nilesh Rai Resi-Mandla	9425138873	No. F-3-71/2 007/12/2 Bhopal Date 14.08.20 08	4.54	11.09.2008	10.09.2028			12.11.2008	Working	Non Captive	Deiaa 100 Date 06/09/2 017	22°27'00.8" 22°27'02.0" 22°27'02.1" 22°27'05.0" 22°27'05.0" 22°27'08.8" 22°27'08.8" 22°27'10.1" 22°27:09.7" 22°27'08.0" 22°27'08.8" 22°27'08.5" 22°27'08.1" 22°27'07.4" 22°27'06.5" 22°27'06.4" 22°27'05.9" 22°27'05.9" 22°27'04.3" 22°27'02.6" 22°27'03.1" 22°27'04.1" 22°27'03.8" 22°27'01.0"	80°23'36.3" 80°23'36.2" 80°23'35.5" 80°23'35.8" 80°23'34.3" 80°23'34.2" 80°23'33.4" 80°23'33.3" 80°23'35.6" 80°23'35.5" 80°23'38.1" 80°23'41.0" 80°23'41.2" 80°23'43.7" 80°23'43.5" 80°23'43.1" 80°23'43.5" 80°23'43.7" 80°23'42.3" 80°23'42.3" 80°23'40.5" 80°23'40.2" 80°23'39.2" 80°23'38.8"	Opencast
14	Dolomite	Shri Nitin Kumar Agrawal S/o Shri Rajkumar Agrawal Resi- Mandla	9425163943	No. F-3-14/9 5/12/2 Bhopal Date 08.10.19 96	1.81	18.01.1997	17.01.2047			11.03.1997	Working	Non Captive	Deiaa 59 Date 17/08/2 016	22°27'13.7" 22°27'14.2" 22°27'13.6" 22°27'14.7" 22°27'17.2" 22°27'17.8" 22°27'18.3" 22°27'18.1" 22°27'20.7" 22°27'20.6" 22°27'18.3" 22°27'15.6" 22°27'15.7" 22°27'13.9"	80°23'12.8" 80°23'13.4" 80°23'14.5" 80°23'14.5" 80°23'12.4" 80°23'11.5" 80°23'11.5" 80°23'12.8" 80°23'12.5" 80°23'10.6" 80°23'10.3" 80°23'09.6" 80°23'09.2" 80°23'10.0"	Opencast

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15	Dolomite	Smt Vidhya SoniResi-Bamhani Banjar, Mandla (MP)	9302573355	No. F-3-114/ 93/12/2 Bhopal Date 03.11.93	1.42	24.11.1993	23.11.2043			24.02.1994	Working	Non Captive	Deiaa 50 Date 17/08/2 016	22°27"12" 22°27"12" 22°27"12.5" 22°27"14" 22°27"14.2" 22°27"15.6" 22°27"15.4" 22°27"14.3" 22°27"14"	80°23'17" 80°23'17.6" 80°23'21.5" 80°23'21.8" 80°23'24.6" 80°23'25" 80°23'18.3" 80°23'18" 80°23'17"	Opencast
16	Dolomite	Shri vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	No. F-3/149/ 93/12/2 Bhopal Date 21.06.20 02	6.81	01.08.2002	21.07.2052			15.12.2002	Working	Non Captive	Seiaa 154 Date 27/04/2 012	22°28'14.8" 22°28'10.5" 22°28'10.5" 22°28'08.0" 22°28'07.5" 22°28'04.2" 22°28'07 22°28'08.6" 22°28'10.9" 22°28'15.1" 22°28'16.7" 22°28'16.7" 22°28'15.9"	80°26'40.2" 80°26'40.1" 80°26'38.1" 80°26'38.6" 80°26'39.3" 80°26'38.3" 80°26'36" 80°26'32.9" 80°26'30.7" 80°26'31" 80°26'31.7" 80°26'33.8" 80°26'37.1"	Opencast
17	Dolomite	Shri Vinod Kumar Agrawal Resi- Civil Line, Mandla(MP)	9425821414	No. F-3/63/9 5/12/2 Bhopal Date 12.05.19 97	5.11	20.09.1997	19.07.2047			16.02.1998	Working	Non Captive	Seiaa 193 Date 04/05/2 018	22°28'24.8" 22°28'26.6" 22°28'29.8" 22°28'31.3" 22°28'31.3" 22°28'33" 22°28'33.3" 22°28'27.5" 22°28'27.7" 22°28'30.2" 22°28'30" 22°28'28" 22°28'28" 22°28'26.5" 22°28'25.9" 22°28'24.7"	80°26'40.1" 80°26'39.4" 80°26'40.5" 80°26'35.5" 80°26'31.4" 80°26'31.3" 80°26'28.2" 80°26'27.2" 80°26'30" 80°26'30.4" 80°26'31.7" 80°26'31.6" 80°26'32.6" 80°26'32.7" 80°26'36" 80°26'38"	Opencast

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18	Dolomite	Shri vinod Kumar Agrawal Resi- Civil Line, Mandla (MP)	9425821414	No. F-3/163/ 97/12/2 Bhopal Date 10.03.19 98	3.23	31.03.1998	30.03.2048			13.08.1998	Working	Non Captive	Deiaa 30 Date 17/08/2 016	22°28'23.4" 22°28'22.6" 22°28'21.8" 22°28'22.0" 22°28'19.2" 22°28'16.3" 22°28'16.4" 22°28'18.8" 22°28'16.1" 22°28'14.4" 22°28'14.9" 22°28'15.9" 22°28'19.1" 22°28'21.2"	80°26'20.7" 80°26'23.1" 80°26'23.7" 80°26'25.8" 80°26'25.9" 80°26'24.1" 80°26'25.4" 80°26'25.9" 80°26'28.1" 80°26'27.8" 80°26'24.8" 80°26'22.1" 80°26'20.0" 80°26'19.9"	Opencast
19	Dolomite	Shri Arun Kumar DongasreResi Mandla (MP)	9301120567	No F-3-145/ 96/12/2 Bhopal Date 17.01.20 00	1.40	24.03.2001	23.03.2021			19.07.2001	Non Working	Non Captive	Deiaa 28 Date 17/08/2 016	22°28"25.4" 22°28"25.4" 22°28"26.4" 22°28"27.6" 22°28"28.9" 22°28"30.1" 22°28"30.6" 22°28"27.8"	80°26'40.1" 80°26'40.1" 80°26'44.4" 80°26'47.1" 80°26'42.5" 80°26'41.8" 80°26'41.2" 80°26'39.6"	Opencast

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20	Dolomite	Heera Power & Steels Limited Resi- Raipur (CG)	9424360784	No. F-3-4/20 12/12/2 Date 31.07.20 19	13.25	25.10.2019	24.10.2049			16.04.2020	Non Working	Non Captive	Seiaa 932 Date 02/06/2 018	22°28"33.8" 22°28"30.5" 22°28"31.0" 22°28"30.8" 22°28"29.6" 22°28"29.7" 22°28"27.5" 22°28"23.2" 22°28"22.4" 22°28"21.4" 22°28"21.4" 22°28"22.8" 22°28"23.7" 22°28"26.4" 22°28"26.8" 22°28"29.0" 22°28"29.4" 22°28"29.6" 22°28"30.2" 22°28"30.3" 22°28"32.2" 22°28"32.3" 22°28"32.3" 22°28"32.9" 22°28"33.1" 22°28"33.1" 22°28"34.1"	80°26'21.9" 80°26'21.6" 80°26'23.4" 80°26'24.4" 80°26'24.4" 80°26'26.6" 80°26'26.8" 80°26'26.0" 80°26'24.1" 80°26'23.9" 80°26'22.9" 80°26'22.7" 80°26'20.6" 80°26'20.7" 80°26'21.2" 80°26'21.2" 80°26'20.6" 80°26'20.1" 80°26'19.9" 80°26'18.7" 80°26'17.5" 80°26'18.8" 80°26'20.5" 80°26'20.7" 80°26'18.9" 80°26'18.5" 80°26'18.6"	Opencast
21	Dolomite	M/s Super Minerals Pro SmtNavita Dubey Resi- Mandla (MP)	8989191948	No. F-3-95/9 3/12/2 Bhopal Date 10.11.19 93	2.10	22.12.1993	21.12.2013			17.08.1994	Non Working	Non Captive		22°26'56.09"N 22°26'56.11"N 22°26'51.91"N 22°26'52.00"N 22°26'52.89"N	80°22'32.69E 80°22'36.53E 80°22'36.53E 80°22'30.47E 80°22'30.41E	Opencast

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22	Dolomite	M/s Pooja Minerals Pro Shri Narendra Sihare Resi-Mandla (MP)	9425417793	F-3-47/2003/12/2 Bhopal Date 25.05.2007	1.21	05.11.2007	04.11.2057	.	.	.	Non Working	Non Captive	.	22°26"33.1" 22°26"32.8" 22°26"32.9" 22°26"32.7" 22°26"32.1" 22°26"31.6" 22°26"30.4" 22°26"30.3" 22°26"33.4" 22°26"33.5" 22°26"34.2" 22°26"34.6" 22°26"33.6"	80°22'24.2" 80°22'24.1" 80°22'26.1" 80°22'28.6" 80°22'26" 80°22'26.2" 80°22'26" 80°22'22.2" 80°22'22.5" 80°22'23.8" 80°22'23.9" 80°22'25.7" 80°22'25.8"	Opencast
23	Dolomite	M/s Pooja Minerals Pro Shri Narendra Sihare Resi-Mandla (MP)	9425417793	F-3-96/93/12/2 Bhopal Date 10.11.1993	2.22	22.12.1993	21.12.2043	.	.	13.07.1994	Working	Non Captive	Deiaa 38 Date 17/08/2016	22°26"27.6" 22°26"28.7" 22°26"29.3" 22°26"31.1" 22°26"32.0" 22°26"31.6" 22°26"30.4" 22°26"30.3" 22°26"27.6" 22°26"27.6" 22°26"27.6"	80°22'31.1" 80°22'31" 80°22'29.5" 80°22'29.9" 80°22'26.5 80°22'26.2" 80°22'2[illegible]" 80°22'22.2" 80°22'21.9" 80°22'25.2" 80°22'29"	Opencast
24	Dolomite	Shri Narendra Goyal S/o Shri Hariram Goyal Resi- Guru Govind Nagar, Pandri, Dist-Raipur (CG)	7999081095	F-3-27/98/12/2 Bhopal Date 15.10.1998	2.08	19.03.1999	18.03.2049	.	.	18.10.1999	Working	Non Captive	Deiaa 53 Date 17/08/2016	22°26'21.16" 22°26'24.58" 22°26'25.30" 22°26'21.43" 22°26'21.34" 22°26'21.05" 22°26'21.05" 22°26'20.76" 22°26'20.86" 22°26'20.73" 22°26'21.09"	80°22'37.18" 80°22'37.48" 80°22'31.25" 80°22'31.30" 80°22'31.69" 80°22'32.84" 80°22'33.37" 80°22'33.44" 80°22'33.89" 80°22'35.40" 80°22'35.78"	Opencast
25	Dolomite	Rocks Minerals Pro Shri Shobhakant Jha Resi-Mandla (MP)	9424339424	F-3-10/92/12/2 Bhopal Date 12.05.1995	1.56	04.11.1995	03.11.2045	.	.	09.07.1996	Working	Non Captive	Deiaa 27 Date 17/08/2016	22°26'24.9" 22°26"24.8" 22°26"24.6" 22°26"24.9" 22°26"27.7" 22°26"24.1" 22°26"19.9" 22°26"21.4" 22°26"22.8" 22°26"24.1"	80°22'21.7" 80°22'23" 80°22'26.3" 80°22'29.6" 80°22'30.7 80°22'28.1" 80°22'29.6" 80°22'26.7" 80°22'25.2" 80°22'21.5"	Opencast

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26	Dolomite	M/s Gouri Minerals Pro Shri Nitish Agrawal Resi-Civil Line, Mandla (MP)	9425163943	F-3-130/ 97/12/2 Bhopal Date 26.06.19 97	2.86	06.11.1997	05.11.2017	06.11.2017	05.11.2047	15.07.1998	Working	Non Captive	Deiaa 58 Date 17/08/2 016	No. 1 - 22°26"24.9" No. 2 - 22°26"24.8" No. 3 - 22°26"24.6" No. 4 - 22°26"24.9" No. 5 - 22°26"27.7" No. 6 - 22°26"24.1" No. 7 - 22°26"19.9" No. 8 - 22°26"21.4" No. 9 - 22°26"22.8" No. 10 - 22°26"24.1" No. 11 - 22°26"28.6"	No. 1 - 80°22'35.1" No. 2 - 80°22'34.5" No. 3 - 80°22'31.7" No. 4 - 80°22'29.1" No. 5 - 80°22'29.6 No. 6 - 80°22'26.3" No. 7 - 80°22'23" No. 8 - 80°22'23.3" No. 9 - 80°22'27.6" No. 10 - 80°22'31.5" No. 11 - 80°22'31.0"	Opencast
27	Dolomite	M/s OCL India Limited Shri Narayan Chandra Nayak	7978048663	F-3-170/ 93/12 Bhopal Date 13/12/19 93	19.223	25.05.1994	24.05.2024	25-05-1974	24-05-1994	10.11.1994	Non Working	Non Captive	Seiaa 7663 Date 16/11/2 015	22°26"36.70" 22°26"34.10" 22°26"32.40" 22°26"30.50" 22°26"29.30" 22°26"30.80" 22°26"26.80" 22°26"24.90" 22°26"26.20" 22°26"29.40" 22°26"32.70" 22°26"33.00" 22°26"29.60" 22°26"29.70" 22°26"32.70" 22°26"32.80" 22°26"34.50" 22°26"34.00" 22°26"31.70" 22°26"31.50" 22°26"36.10" 22°26"37.90"	80°23'16.10" 80°23'17.80" 80°23'17.10" 80°23'16.40" 80°23'17.20" 80°23'19.60" 80°23'20.80" 80°23'13.06" 80°23'11.60" 80°23'11.80" 80°23'02.80" 80°23'57.10" 80°23'57.30" 80°23'56.10" 80°23'54.80" 80°23'51.90" 80°23'51.60" 80°23'43.70" 80°23'44.10" 80°23'41.80" 80°23'41.10" 80°23'51.80"	Opencast

28	Dolomite	M/s Salasar Minerals Pro Shri Vibhor Agrawal S/o Shri Vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	F-3-98/93/12/2 Bhopal Date 28.04.1999	2.26	22.02.1994	21.02.2044			18.09.1994	Working	Non Captive	Deiaa 32 Date 17/08/2016	No. 1 - 22°26'29.4" No. 2 - 22°26'29.6" No. 3 - 22°26'31.9" No. 4 - 22°26'36.2" No. 5 - 22°26'36.3"	No. 1 - 80°23'41" No. 2 - 80°23'42" No. 3 - 80°23'45.6" No. 4 - 80°23'45.3" No. 5 - 80°23'41.1"	Opencast
29	Dolomite	M/s Salasar Minerals Pro Shri Vibhor Agrawal S/o Shri Vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	F-3-25/94/12/2 Bhopal Date 29.11.1994	2.82	05.01.1995	04.01.2045			15.08.1995	Working	Non Captive	Deiaa 34 Date 17/08/2016	No. 1 - 22°26'34.1" No. 2 - 22°26'34.3" No. 3 - 22°26'34.5" No. 4 - 22°26'31.1" No. 5 - 22°26'28.3" No. 6 - 22°26'28.1" No. 7 - 22°26'28.7" No. 8 - 22°26'32.1"	No. 1 - 80°23'36.3" No. 2 - 80°23'38.5" No. 3 - 80°23'48.7" No. 4 - 80°23'40.8" No. 5 - 80°23'40.5" No. 6 - 80°23'38.3" No. 7 - 80°23'36.3" No. 8 - 80°23'36.3"	Opencast

30	Dolomite	Shri Rajkumar Agrawal S/o Late Shri R P Agrawal Resi- Mandla (MP)	9425163943	F-3-186/ 92/12/2 Bhopal Date 03.02.19 93	2.205	15.02.1993	14.02.2043			10.12.1993	Working	Non Captive	Deiaa 61 Date 17/08/2 016	No. 1 - 22°26"28.0" No. 2 - 22°26"28.1" No. 3 - 22°26"29.4" No. 4 - 22°26"29.6" No. 5 - 22°26"30.5" No. 6 - 22°26"32.7" No. 7 - 22°26"34.4" No. 8 - 22°26"34.6" No. 9 - 22°26"34.7"	No. 1 - 80°23'26.3" No. 2 - 80°23'21.8" No. 3 - 80°23'22.2" No. 4 - 80°23'23.8" No. 5 - 80°23'24.0" No. 6 - 80°23'22.5" No. 7 - 80°23'23.1" No. 8 - 80°23'24.7" No. 9 - 80°23'27.4"	Opencast
31	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi-Malviya Nagar, Durg (CG)	9425239955	F-3-98/9 5/12/2 Bhopal Date 21.01.19 97	0.98	05.03.1997	04.03.2047			15.12.1997	Working	Non Captive	Deiaa 42 Date 17/08/2 016	No. 1 - 22°26"24.3" No. 2 - 22°26"26.9" No. 3 - 22°26"27.2" No. 4 - 22°26"25.8" No. 5 - 22°26"24.5"	No. 1 - 80°23'33.2" No. 2 - 80°23'33.9" No. 3 - 80°23'31.8" No. 4 - 80°23'28.8" No. 5 - 80°23'26.2"	Opencast
32	Dolomite	Shri Rajkumar Agrawal S/o Late Shri R P Agrawal Resi-Mandla (MP)	9425163943	F-3-126/ 92/12/2 Bhopal Date 04.03.19 93	2.30	19.03.1993	18.03.2043			12.11.1993	Working	Non Captive	Deiaa 60 Date 17/08/2 016	No. 1 - 22°26"28.0" No. 2 - 22°26"34.7" No. 3 - 22°26"33.3" No. 4 - 22°26"29.6" No. 5 - 22°26"28.0" No. 6 - 22°26"27.2" No. 7 - 22°26"27.4"	No. 1 - 80°23'26.3" No. 2 - 80°23'27.4" No. 3 - 80°23'31.6" No. 4 - 80°23'31.5" No. 5 - 80°23'31.6" No. 6 - 80°23'32.1" No. 7 - 80°23'31.5"	Opencast

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33	Dolomite	M/s Gupta Log. Pro Krishna Gupta S/o Shri Prabhudatt Gupta Resi-SavtiManjil, Shriram Tower, Nagpur (MH)	7000516959	F-3-61/97/12/2 Bhopal Date 19.12.1997	1.42	09.01.1998	08.01.2048			23.10.1998	Working	Non Captive	Deiaa 92 Date 11/05/2017	No. 1 - 22°22''26" No. 2 - 22°22''28.5" No. 3 - 22°22''29.1" No. 4 - 22°22''25.5"	No. 1 - 80°23'38.2" No. 2 - 80°23'38.4" No. 3 - 80°23'42.5" No. 4 - 80°23'42.4"	Opencast
34	Dolomite	M/s Narmada Minerals Pro Shri Robin Agrawal Resi-Mandla (MP)	9425821414	F-3-267/93/12/2 Bhopal Date 17.11.1993	2.20	23.12.1993	22.12.2043			25.11.1994	Working	Non Captive	Deiaa 33 Date 17/08/2016	No. 1 - 22°26'34.2" No. 2 - 22°26'37.6" No. 3 - 22°26'37.6" No. 4 - 22°26'38.0" No. 5 - 22°26'38.3" No. 6 - 22°26'40.8" No. 7 - 22°26'38.6" No. 8 - 22°26'34.0"	No. 1 - 80°23'23.1" No. 2 - 80°23'22.1" No. 3 - 80°23'22.1" No. 4 - 80°23'22.6" No. 5 - 80°23'23.3" No. 6 - 80°23'22.8" No. 7 - 80°23'25.2" No. 8 - 80°23'23.6"	Opencast
35	Dolomite	M/s Mahaveer Minerals Pro Shri Nirmalchand Jain S/o Shri Shobhachand Jain Resi-Durg (CG)	7999846981	F-3-33/97/12/2 Bhopal Date 30.05.1997	2.83	11.06.1997	10.06.2047			28.02.1998	Working	Non Captive	Deiaa 36 Date 17/08/2016	No. 1 - 22°26"26.6" No. 2 - 22°26"26.1" No. 3 - 22°26"26.1" No. 4 - 22°26"26.4" No. 5 - 22°26"26.5" No. 6 - 22°26"26.7" No. 7 - 22°26"26.1" No. 8 - 22°26"26.6" No. 9 - 22°26"26.6" No. 10 - 22°26"26.7"	No. 1 - 80°23'36.5" No. 2 - 80°23'37.7" No. 3 - 80°23'38.1" No. 4 - 80°23'40.6" No. 5 - 80°23'43.1" No. 6 - 80°23'43.2" No. 7 - 80°23'43.4" No. 8 - 80°23'39.5" No. 9 - 80°23'36.3" No. 10 - 80°23'36.5"	Opencast

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36	Dolomite	M/s Hanuman Mines & Minerals Pro Shri Balram Agrawal S/p Shri Ramchandra Agrawal Resi-2/2 Arihant Complex, Station Road, Raipur (CG)	9425285734	F-3-259/ 95/12/2 Bhopal Date 03.11.19 95	1.41	13.12.1995	12.12.2045	.	.	26.10.1996	Working	Non Captive	Deiaa 63 Date 17/08/2 016	22°26'30.6" 22°26'31.7" 22°26'31.6" 22°26'34.6" 22°26'34.5" 22°26'30.1"	80°23'46.7" 80°23'47.8" 80°23'48.9" 80°23'48.1" 80°23'44.5" 80°23'45.1"	Opencast
37	Dolomite	M/s Narmada Minerals Pro Shri Robin Agrawal Resi-Mandla (MP)	9425821414	F-3-215/ 93/12/2 Bhopal Date 22.06.19 95	0.87	17.10.1995	16.10.2045	.	.	10.10.1996	Working	Non Captive	Deiaa 35 Date 17/08/2 016	22°26'34.4" 22°26'36.2" 22°26'37.6" 22°26'38.1" 22°26'38.3" 22°26'40.0" 22°26'38.8" 22°26'38.6" 22°26'37.4" 22°26'34.0"	80°23'23.1" 80°23'22.6" 80°23'22.1" 80°23'22.2" 80°23'23.3" 80°23'22.8" 80°23'24.7" 80°23'25.2" 80°23'24.9" 80°23'23.6"	Opencast
38	Dolomite	Smt Laxmi Agrawal W/o Shri Vinod Agrawal Resi-Mandla (MP)	9425821414	F-3-232/ 93/12/2 Bhopal Date 29.09.19 93	2.80	13.10.1993	12.10.2043	.	.	29.06.1994	Working	Non Captive	Deiaa 31 Date 17/08/2 016	No. 1 - 22°26'21" No. 2 - 22°26'26.5" No. 3 - 22°26'27.1" No. 4 - 22°26'24.1" No. 5 - 22°26'24" No. 6 - 22°26'20"	No. 1 - 80°23'36" No. 2 - 80°23'36.3" No. 3 - 80°23'34.8" No. 4 - 80°23'33.2" No. 5 - 80°23'29" No. 6 - 80°23'28.7"	Opencast
39	Dolomite	Kumari SiptenBano (Alika Minerals) Mandla	8458964993	F-3-272/ 97/12/2 Bhopal Date 20.02.20 01	3.40	02.06.2001	01.06.2051	.	.	06.02.2002	Working	Non Captive	Deiaa 29 Date 17/08/2 016	22°26'22.2" 22°26'24.5" 22°26'26.0" 22°26'27.1" 22°26'28.1" 22°26'27.7" 22°26'29.6" 22°26'30.0" 22°26'27.7"	80°23'24.1" 80°23'26.6" 80°23'28.9" 80°23'31.1" 80°23'26.3" 80°23'21.6" 80°23'22.2" 80°23'19.9" 80°23'20.5"	Opencast
40	Dolomite	Shri Prabhat Shankar Agrawal S/o Shri Krishna Goyal Agrawal Resi- 39/4 Nehru Nagar Purv, Dist Durg (CG)		F-3-25/9 8/12/2 Bhopal Date 28.04.19 99	2.40	11.10.1999	10.10.2019	.	.	17.08.2000	Non Working	Non Captive		22°26'38.06"N 22°26'33.90"N 22°26'33.62"N 22°26'38.02"N	80°23'41.63"E 80°23'41.98"E 80°23'36.39"E 80°23'35.95"E	Opencast

41	Dolomite	Shri Dharmendra Modi S/o Shri Premchand Modi Resi- Durg (CG)	9644807860	F-3-131/97/12/2 Bhopal Date 26.07.1997	0.86	12.11.1997	11.11.2047			15.08.1998	Working	Non Captive	Deiaa 49 Date 17/08/2016	22°26'34.7" 22°26'34.6" 22°26'35.7" 22°26'37.7" 22°26'38.0" 22°26'36.2"	80°23'22.8" 80°23'21.5" 80°23'18.8" 80°23'19.2" 80°23'21.8" 80°23'22.7"	Opencast
42	Dolomite	M/s Hanuman Mines & Minerals Pro Shri Balram Agrawal S/o Shri Ramchandra Agrawal Resi- 2/2 Arihant Complex, Station Road, Raipur (CG)	9425285734	F-3-25/09/12/2 Bhopal Date 01.03.2011	4.70	30.06.2011	29.06.2061			15.11.2011	Working	Non Captive	Deiaa 62 Date 17/08/2016	22°26'31.5" 22°26'32.7" 22°26'32.2" 22°26'28.2" 22°26'23.8" 22°26'23.5" 22°26'25.4" 22°26'29.7"	80°23'46.4" 80°23'47.5" 80°23'48.9" 80°23'50.3" 80°23'43.2" 80°23'43.4" 80°23'43" 80°23'42.8"	Opencast
43	Dolomite	MP State Mining Corporation Ltd Resi-Bamhani Banjar, Mandla (MP)		F-3-205/95/12/2 Bhopal Date 26.10.1996	2.52	07.12.1996	06.12.2046			19.06.1997	Non Working	Non Captive		22°26'25.02" 22°26'24.35" 22°26'23.21" 22°26'22.99" 22°26'22.51" 22°26'22.28" 22°26'20.95" 22°26'20.66" 22°26'22.15" 22°26'22.15" 22°26'20.83" 22°26'20.05" 22°26'20.95"	80°22'15.16" 80°22'13.64" 80°22'20.24" 80°22'21.89" 80°22'22.14" 80°22'22.98" 80°22'22.25" 80°22'23.30" 80°22'23.50" 80°22'23.75" 80°22'25.83" 80°22'24.05" 80°22'14.95"	Opencast

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44	Dolomite	M/s P D Minerals Pro Shri Devendra Shivhare	9617825055	F-3318-19/khanij. QL/file no.2/2022 Date 10.03.2022	4.80	LOI Granted					Non Working	Non Captive		No. 1 - 22°26'46.94" No. 2 - 22°26'49.53" No. 3 - 22°26'49.60" No. 4 - 22°26'49.92" No. 5 - 22°26'50.76" No. 5 - 22°26'50.74" No. 6 - 22°26'52.35" No. 7 - 22°26'52.59" No. 8 - 22°26'52.47" No. 9 - 22°26'52.31" No. 10 - 22°26'51.26" No. 11 - 22°26'51.37" No. 12 - 22°26'51.14" No. 13 - 22°26'52.37" No. 14 - 22°26'52.56" No. 15 - 22°26'51.47" No. 16 - 22°26'51.13" No. 17 - 22°26'46.28" No. 18 - 22°26'45.98" No. 19 - 22°26'45.20" No. 20 - 22°26'45.74" No. 21 - 22°26'46.24"	No. 1 - 80°22'17.35" No. 2 - 80°22'17.67" No. 3 - 80°22'16.26" No. 4 - 80°22'15.95" No. 5 - 80°22'15.94" No. 6 - 80°22'16.18" No. 7 - 80°22'16.34" No. 8 - 80°22'14.96" No. 9 - 80°22'14.07" No. 10 - 80°22'13.19" No. 11 - 80°22'12.98" No. 12 - 80°22'11.35" No. 13 - 80°22'09.87" No. 14 - 80°22'10.01" No. 15 - 80°22'05.70" No. 16 - 80°22'05.48" No. 17 - 80°22'08.13" No. 18 - 80°22'08.00" No. 19 - 80°22'10.61" No. 20 - 80°22'10.64" No. 21 - 80°22'13.82" No. 21 - 80°22'13.85"	Opencast

45	Dolomite	M/s Ganpati Minerals Pro Shri Shobhakant Jha Resi-Mandla	9424339424	3315-16/ khanij/QL /File no.02/20 22 Date 10.03.20 22	3.62	LOI Granted					Non Working	Non Captive		No. 1 - 22°26'31.67" No. 2 - 22°26'29.73" No. 3 - 22°26'27.74" No. 4 - 22°26'27.46" No. 5 - 22°26'26.38" No. 6 - 22°26'26.03" No. 7 - 22°26'27.32" No. 8 - 22°26'27.12" No. 9 - 22°26'24.87" No. 10 - 22°26'25.32" No. 11 - 22°26'23.04"	No. 1 - 80°25'11.81" No. 2 - 80°25'12.12" No. 3 - 80°25'12.94" No. 4 - 80°25'12.60" No. 5 - 80°25'12.32" No. 6 - 80°25'12.89" No. 7 - 80°25'31.60" No. 8 - 80°25'14.74" No. 9 - 80°25'14.32" No.10 - 80°25'12.40" No.11 - 80°25'11.36"	Opencast
46	Stone	Shri Bhupendra Singh Resi-Poudi Mahrajpur Tehsil & Dist Mandla (MP)	9425165275	590 05-11-20 07	2.00	03.10.2003	02.10.2018	03.10.2018	02.10.2028	21-10-2003	Working	Non Captive	Deiaa 71 Date 17/08/2 016	N 22°34'27.4" N 22°34'28.0" N 22°34'28.4" N 22°34'29.5" N 22°34'31.5" N 22°34'31.0"	E 80°18'59.1" E 80°18'55.2" E 80°18'51.8" E 80°18'51.7" E 80°18'57.7" E 80°18'59.0"	Opencast
47	Stone	Smt Sunita Agrawal W/O Uday Agrawal Resi-Narmada Ji Ward Dist Mandla (MP)	9826865058	463 Date 01-07-20 08	1.60	18.12.2004	17.12.2008	18.12.2008	17.12.2018	10/03/2004	Non Working	Non Captive	Deiaa 68 Date 17/08/2 016	N 22°4'45.25" N 22°34'44.38" N 22°34'44.59" N 22°34'41.84" N 22°34'41.16" N 22°34'42.39" N 22°34'41.06"	E 80°8'52.09" E 80°18'50.86" E 80°18'50.40" E 80°18'47.92" E 80°18'51.79" E 80°18'51.79" E 80°18'52.00"	Opencast
48	Stone	Shri Anup Jaiswal S/O Shri Ramchandra Jaiswal Resi- Jaiswal Niwas Dada Dhaniram Maharajapur Mandla	8889686379	972 Date 22-06-20 19	1.53	01.04.2004	31.3.2019	01.04.2019	31.3.2029	01/04/2004	Non Working	Non Captive	Deiaa 69 Date 17/08/2 016	N 22°34'46.9" N 22°34'48.1" N 22°34'48.0" N 22°34'46.3" N 22°34'44.4" N 22°34'45.5" N 22°34'44.0"	E 80°20'22.2" E 80°20'26.0" E 80°20'26.6" E 80°20'29.0" E 80°20'26.9" E 80°20'25.4" E 80°20'23.1"	Opencast

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49	Stone	Shri Manoj Gurwani S/O Shri Rochiramgurwani Resi-Sardar Bhagat Singh Ward ,Mandla (MP)	7828627788	369A Date 02/03/2009	0.85	23.04.2004	22.04.2009	23.04.2009	22.04.2019	23-04-2004	Non Working	Non Captive	Deiaa 70 Date 17/08/2016	N 22°31'50.7" N 22°31'50.9" N 22°31'53.0" N 22°31'53.7"	E 80°16'46.8" E 80°16'48.8" 80°16'49.9" E 80°16'47.4"	Opencast
50	Stone	Shri Devandrasukhwani S/O Shri Chetramsukhwani Resi-Sahid uday chandra Ward Mandla (MP)	9229671990	355A Date 30/11/2009	2.000	01.12.1999	30-11-2009	01.12.2009	30-11-2019	21/12/1999	Non Working	Non Captive	Deiaa 52 Date 17/08/2016	N 22°34'40.3" N 22°34'40.3" N 22°34'38.7" N 22°34'40.9" N 22°34'36.2" N 22°34'35.7" N 22°34'37.0" N 22°34'37.3" N 22°34'37.9" N 22°34'36.7"	E 80°19'01.9" E 80°19'03.2" E 80°19'04.3" E 80°19'09.3" E 80°19'09.3" E 80°19'07.3" E 80°19'06.8" E 80°19'07.5" E 80°19'06.5" E 80°19'03.1"	Opencast
51	Stone	Shri Shailendramishra S/O Shri Rajendrakumar Mishra Resi- Badikheri, Dist mandla (MP)	7000623375	711 Date 22-07-2015	1.00	01-06-2011	31-05-2016	01-06-2016	31-05-2026	19-04-2011	Working	Non Captive	Seiaa 542 Date 06/04/2016	N 22°34'38.7" N 22°34'34.6" N 22°34'34.6" N 22°34'34.9" N 22°34'36.0" N 22°34'37.9"	E 80°18'55.0" E 80°18'55.5" E 80°18'54.4" E 80°18'53.9" E 80°18'50.0" E 80°18'51.3"	Opencast
52	Stone	Shri Riteshkachwaha S/O Shreechamanlalkachwaha Resi-Subhash Ward Mandla	9425821445	257 Date 24-04-2004	1.00	14-06-2004	13-06-2009	14-06-2009	13-06-2019	14/07/2004	Non Working	Non Captive	Deiaa 91 Date 17/08/2016	N 22°34'58.1" N 22°34'58.3" N 22°35'03.1" N 22°35'02.8"	E 80°19'59.6" E 80°20'02.6" E 80°20'01.4" E 80°19'58.5"	Opencast
53	Stone	Smtjyoti Agrawal W/O Shri Raman Agrawal Resi- Narmada Ji Ward Mandla	9425164217	582 Date 05-08-2008	4.00	05-08-2008	04-08-2018	05-08-2018	04-08-2028	06-09-2008	Working	Non Captive	Deiaa 885 Date 09/07/2018	N 22°36'20.7" N 22°36'31.8" N 22°36'31.2" N 22°36'20.2"	E 80°19'38.0" E 80°19'37.6" E 80°19'34.4" E 80°19'34.6"	Opencast
54	Stone	M/S Sai Stone Crushers Pro. Shri Arvind Sahu Pro. Shri Mahesh Sahu Resi - Shubhas Ward Mandla	9425148146	560 Date 09/11/2011	1.00	09-11-2011	08-11-2021			27/12/2012	Non Working	Non Captive	Deiaa 15 Date 30/06/2016	N 22°36'12.0" N 22°36'16.6" N 22°36'16.1" N 22°36'14.6"	E 80°19'44.4" E 80°19'45.6" E 80°19'39.3" E 80°19'39.1"	Opencast

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55	Stone	Shri Prakash Chandra Jain S/O Shreesanju Pratap Jain Resi -Pandav Ward Mandla Pro. Aadi Enterprisesmandla	8319020748	142 Date 10/02/2012	0.55	10-02-2012	09-02-2022	.	.	26/03/2012	Non Working	Non Captive	Deiaa 10 Date 30/06/2016	N 22°42'29.9" N 22°42'26.8" N 22°42'29.5" N 22°42'29.5"	E 80°22'21.2" E 80°22'19.0" E 80°22'19.4" E 80°22'21.4"	Opencast
56	Stone	Shri Anup Jaiswal S/O Shri Ramchandra Jaiswal Resi - Dada Dhani Ram Ward Maharajpur, Mandla (MP)	8871196433	21642-43 Date 27/11/2014	2.20	09-03-2015	08-03-2025	.	.	06/08/2015	Working	Non Captive	Seiaa 1301 Date 25/05/2015	N 22°36'6.06" N 22°36'5.12" N 22°36'9.44" N22°36'10.03"	E 80°14'48.63" E 80°14'54.90" E 80°14'54.57" E 80°14'48.57"	Opencast
57	Stone	Shri Santosh Kumar Pandey Resi-Maharajpur Mandla (MP)	9399095915	8218-19 Date 25/05/2015	1.51	22-08-2015	21-08-2025	.	.	11/12/2015	Working	Non Captive	Seiaa 6555 Date 20/10/2015	N22°34'48.5" N 22°34'46.8" N 22°34'48.8" N 22°34'47.1" N 22°34'45.2" N 22°34'44.3" N 22°34'47.0" N 22°34'46.2" N 22°34'49.2"	E 80°19'4.8" E 80°19'5.01" E 80°19'3.1" E 80°19'00.9" E 80°19'1.8" E 80°19'2.8" E 80°19'7.7" E 80°19'9.6" E 80°19'9.6"	Opencast
58	Stone	M/S Dubey Stone Crushers Pro. Shri Sumit Dubey S/O Shri Surendra Dubey Resi - Ambedkar Ward Mandla	9179631340	1302 Date 10/11/2015	2.000	22-08-2015	21-08-2025	.	.	02/02/2017	Working	Non Captive	Deiaa 67 Date 17/08/2016	N22°36'05.00" N22°36'05.00" N22°36'07.07" N 22°36'11.00"	E 80°27'42.00" E 80°27'46.00" E 80°27'46.10" E 80°27'43.00"	Opencast
59	Stone	M/S Om Sai Ram Crusher Pro. Shri Lokesh Rai Resi- Machli Talab Ke Pass Katrajabalpur Road Mandla (MP)	7000737362	508 Date 01/06/2015	1.500	08-07-2015	07-07-2025	.	.	22/08/2017	Working	Non Captive	Seiaa 562 Date 06/04/2016	N22°36'18.55" N22°36'18.10" N22°36'13.85" N22°36'13.82" N22°36'13.94" N 22°36'9.37" N 22°36'9.06"	E 80°19'31.21" E 80°19'33.21" E 80°19'30.72" E 80°19'33.36" E 80°19'29.09" E 80°19'29.09" E 80°19'30.39"	Opencast
60	Stone	Shri Vinod Kumar Agarwal Resi- Mandla Dist. Mandla	9425164217	48 Date 08/01/2019	2.80	24-01-2019	23-01-2029	.	.	17/06/2019	Working	Non Captive	Deiaa 884 Date 09/07/2018	N22°36'14.03" N22°36'15.50" N22°36'16.39" N22°36'18.97" N22°36'19.50" N22°36'19.86" N22°36'20.28" N 22°36'14.41"	E 80°19'30.56" E 80°19'30.71" E 80°19'30.67" E 80°19'31.19" E 80°19'29.25" E 80°19'26.96" E 80°19'23.32" E 80°19'26.52"	Opencast

61	Stone	Shri Shailendra Mishra s/o shri Rajendra kumar Mishra Resi- badi kheri mandla dist. Mandla (MP)	7000623375	1188 Date 05/10/2018	1.000	24-01-2019	23-01-2029			02/05/2020	Working	Non Captive	Deiaa 886 Date 09/07/2018	N 22°36'15.7" N 22°36'15.4" N 22°36'14.8" N 22°36'14.1" N 22°36'13.9" N22°36'13.54" N22°36'12.41" N 22°36'11.9" N22°36'13.58" N22°36'13.21"	E 80°14'59.2" E 80°15'00.6" E 80°15'00.5" E80°15'02.41 E80°15'02.62 E 80°15'3.91" E 80°15'3.75" E 80°15'3.39" E 80°15'0.45" E80°14'59.07	Opencast
62	Stone	M/S Aadi Enterprises Shri Prakash Chand Jain S/O Shri Shambhu Prashad Jain Resi- Padav Ward Mandla Dist. Mandla	9770025738	359 Date 21/04/2020	1.56	21-04-2020	20-04-2030			02/03/2021	Working	Non Captive	Seiaa 1311 Date 24/06/2019	N22°42'24.21" N22°42'24.14" N22°42'23.79" N22°42'24.46" N22°42'28.42" N22°42'29.79" N22°42'29.63" N22°42'26.12" N22°42'26.24"	E 80°22'19.06" E 80°22'21.88" E 80°22'22.05" E 80°22'24.64" E 80°22'23.59" E 80°22'23.02" E 80°22'21.73" E 80°22'21.76" E 80°22'19.15"	Opencast
63	Stone	Shri Manoj Chatri Resi- Dada Dhaniram Ward Maharajapur Dist.- Mandla (MP)	7000865612	9292-93 Date 03/05/2018	2.50	08-05-2019	07-05-2029			15.07.2019	Non Working	Non Captive	Deiaa 894 Date 09/07/2018	N 22°36'18.6" N 22°36'14.0" N 22°36'13.5" N 22°36'19.5"	E 80°19'33.3" E 80°19'33.4" E 80°19'38.7" E 80°19'39.2"	Opencast
64	Stone	Shri Ram Singh Thakur S/O Shri Babulal Thakur Resi.- Bhuaa Bichiya Tehsil Bichiya Dist- Mandla (Mp)	9131561148	17342-43 Date 03-11-2016	4.000	17-11-2016	16-11-2026			18-05-2017	Working	Non Captive	Seiaa 2242 Date 13/12/2016	N 22°30'30.7" N 22°30'31.3" N 22°30'26.6" N 22°30'27.6" N 22°30'31.4" N 22°30'35.2" N 22°30'37.3" N 22°30'37.8"	E 80°47'04.7" E 80°47'04.5" E 80°46'04.2" E 80°46'04.3" E 80°46'04.5" E 80°47'04.8" E 80°00'04.7" E 80°47'06.7"	Opencast
65	Stone	Shri Nishantkumar Jaiswal S/O Shri Heeralal Jaiswal Resi.-Bhuaa Bichiya Tehsil Bichiya Dist,- Mandla (Mp)	9303522226	829 Date 08/07/2021	3.33	07-09-2021	06-09-2031			08/11/2021	Non Working	Captive	Seiaa 2242 Date 19/09/2019	N 22°34'1.71" N 22°34'0.09" N 22°34'6.73" N 22°34'9.03" N 22°34'9.26" N 22°34'9.39" N 22°34'6.91" N 22°34'6.62" N 22°34'5.94" N 22°34'5.23"	E 80°42'51.40" E 80°42'55.08" E 80°42'57.58" E 80°42'50.57" E 80°42'50.54" E 80°42'49.80" E 80°42'49.63" E 80°42'50.72" E 80°42'50.90" E 80°42'53.07"	Opencast
66	Stone	Shri Ravishankar Rai S/O Shri Dilharan Rai Resi..- Bichiya Tehsil Bichiya Dist- Mandla	7000427252	531 Date 16/07/2008	1.00	07-08-2003	06-08-2008	07-08-2008	06-08-2018	14.10.2003	Non Working	Non Captive	Deiaa 77 Date 17/08/2016	N 22°26'58.1" N 22°26'59.6" N 22°26'57.1" N 22°26'57.5" N 22°26'55.8"	E 80°44'51.2" E 80°44'50.3" E 80°44'48.2" E 80°44'44.5" E 80°44'44.5"	Opencast

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67	Stone	Shri Pushpendra Thakur S/O Ram Singh Thakur Resi. Bhuaa Bichiya Tehsil Bichiya Dist,- Mandla	9977951149	353 Date 03/05/2008	1.00	09-12-2004	08-12-208	09-12-2008	08-12-2018	13.04.2004	Non Working	Non Captive	Deiaa 64 Date 17/08/2016	N22°29'11.25" N 22°29'8.90" N 22°29'9.23" N 22°29'5.10" N 22°29'5.23" N22°29'11.54"	E 80°46'16.27" E 80°46'16.95" E 80°46'18.36" E 80°46'18.47" E 80°46'19.53" E 80°46'19.52"	Opencast
68	Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal Resi.- Anjaniya Tehsil- Bichiya Dist.- Mandla	7000623156	826 Date 10-12-2009	1.00	09-12-2009	08-12-2019			18/03/2010	Non Working	Non Captive	Deiaa 74 Date 17/08/2016	N 22°26'06.4" N 22°26'09.4" N 22°26'09.5" N 22°26'06.4"	E 80°27'37.9" E 80°27'38.8" E 80°27'41.3" E 80°27'41.5"	Opencast
69	Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal Resi.- Anjaniya Tehsil- Bichiya Dist.- Mandla	7000623156	421 Date 26/07/2011	2.00	16-09-2011	15-09-2021			31/12/2011	Non Working	Non Captive		N 22°26'14.6" N 22°26'12.7" N 22°26'16.0" N 22°26'18.0"	E 80°27'41.4" E 80°27'34.9" E 80°27'34.0" E 80°27'40.9"	Opencast
70	Stone	Shri Rajesh Kumar Pandey S/O Narmada Prashad Pandey Resi.- Mavai Tehsil- Bichiya Dist.- Mandla	9424385520	687 Date 09/09/2013	1.000	27-08-2013	26-08-2023			01/05/2014	Working	Non Captive	Seiaa 867 Date 01/06/2013	N 22°31'20.3" N 22°31'18.2" N 22°31'20.5" N 22°31'22.6"	E 80°02'36.9" E 80°02'40.3" E 80°02'41.7" E 80°02'38.4"	Opencast
71	Stone	Smt Sadhna Jaiswal W/O Heeralal Resi.- Bichiya Tehsil Bichiya Dist,- Mandla	7049141408	268 Date 30/03/2015	1.630	22-08-2015	21-08-2025			22/01/2016	Working	Non Captive	Seiaa 6617 Date 23/10/2015	N 22°34'04.0" N 22°34'06.3" N 22°34'06.8" N 22°34'07.2" N 22°34'07.9" N 22°34'05.6" N 22°34'03.3" N 22°34'03.3" N 22°34'04.9"	E 80°42'48.1" E 80°42'47.3" E 80°42'46.0" E 80°42'46.1" E 80°42'42.1" E 80°42'41.4" E 80°42'41.1" E 80°42'44.1" E 80°42'44.4"	Opencast
72	Stone	Shri Vishal Tiwari S/O Shri Santosh Tiwari Resi.- Tehsil And Dist. Mandla	9977861197	15900-01 DATE 23/11/2021	2.00	22-07-2011	21-07-2021	22-07-2021	21-07-2031	01-10-2011	Working	Non Captive	Deiaa 19 Date 30/06/2016	N 23°00'59.1" N 23°01'02.2" N 23°00'58.3" N 23°00'54.9"	E 80°25'38.4" E 80°25'29.7" E 80°25'28.6" E 80°25'37.1"	Opencast

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73	Stone	Shri Prshant Soni S/o Shri Vikal Bihari SOni Resi-Pipariya Teh Niwas DIst-Mandla (MP)	9770865191	555 Date 08-08-2016	1.00	06-06-2012 06-06-2007	05-06-2017 05-06-2012	06-06-2017	05-06-2022	23-08-2007	Non Working	Non Captive	Seiaa 6222 Date 25/11/2014	N23°00'57.02" N23°00'57.64" N23°00'55.46" N23°00'53.90" N23°00'53.03" N23°00'51.90" N23°00'51.70" N23°00'57.40" N23°00'57.40" N23°00'54.07" N23°00'54.81" N23°00'57.02"	E 80°25'48.11" E 80°25'46.26" E 80°25'45.46" E 80°25'44.84" E 80°25'47.32" E 80°25'47.34" E 80°25'47.97" E 80°25'46.27" E 80°25'46.27" E 80°25'48.62" E 80°25'47.28" E 80°25'48.11"	Opencast
74	Stone	Shri Krishnapal Singh S/o Shri Satya Singh Resi-1571 Chandan Colony, Ganganagar, Gadha, Jabalpur (MP)	7999191432	771 Date 30/09/2013	1.00	04.06.2015	06.03.2025	.	.	18/02/2016	Working	Non Captive	Seiaa 2819 Date 03/03/2015	N 22°58'29.6" N 22°58'27.0" N 22°58'30.3"	E 80°25'46.0" E 80°25'40.1" E 80°25'40.5"	Opencast
75	Stone	Shri Vedprakash Kulaste Pro Hirak Infra Mine Pvt Ltd, Mandla		1120 Date 06/09/2017	1.00	23.11.2017	22.11.2022	.	.	No	Non Working	Non Captive	Deiaa 93 Date 11/05/2017	N22°58'59.96" N22°59'00.56" N22°59'00.91" N22°59'01.07" N22°59'01.18" N22°59'01.23" N22°59'01.14" N22°59'01.05" N22°59'00.82" N22°59'00.60" N22°59'00.38" N 22°58'59.93 N22°58'58.39" N22°58'58.32" N22°58'58.29" N22°58'58.35" N22°58'58.46" N22°58'58.77"	E 80°26'17.07" E 80°26'19.64" E 80°26'20.38" E 80°26'20.71" E 80°26'21.00" E 80°26'21.25" E 80°26'21.54" E 80°26'21.75" E 80°26'21.97" E 80°26'22.18" E 80°26'22.26" E 80°26'22.32" E 80°26'22.12" E 80°26'21.42" E 80°26'20.73" E 80°26'19.86" E 80°26'18.98" E 80°26'17.17"	Opencast
76	Stone	Shri Bhupendra Barkade Resi-Kobrikhurd, Narayanganj Dist Mandla (MP)	7999700215	1136-37 Date 27/01/2020	1.10	06.06.2020	05.06.2030	.	.	No	Non Working	Non Captive	Deiaa 882 Date 09/07/2018	N22°50'46.68" N22°50'49.53" N22°50'50.43" N22°50'51.59" N22°50'51.77" N22°50'51.15" N22°50'51.25" N22°50'50.10" N22°50'49.12" N22°50'47.01"	E 80°11'19.82" E 80°11'18.86" E 80°11'21.79" E 80°11'22.22" E 80°11'24.04" E 80°11'23.98" E 80°11'22.44" E 80°11'22.14" E 80°11'22.77" E 80°11'22.59"	Opencast

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77	Stone	Shri Arun Agrawal S/o Shri SHyam Sundar Agrawal Resi-Bamhani Banjar Teh &Dist Mandla (MP)	9425163534	809 Date 16-10-2008	1.00	19.11.2004	18.11.2008	19.11.2008	18.11.2018	25-02-2004	Non Working	Non Captive	Deiaa 13 Date 30/06/2016	N22°26'55.07" N 22°26'53.0" N 22°26'53.0" N 22°26'49.9" N 22°26'51.7" N22°26'54.96" N 22°26'54.5" N 22°26'55.7"	E 80°19'04.1" E 80°19'04.9" E 80°19'05.7" E 80°19'05.2" E 80°19'03.7" E 80°19'00.26" E 80°19'00.4" E 80°19'00.5"	Opencast
78	Stone	SmtJabin Malik W/o Shri Abdul Hamid Resi-Bamhani Banjar Tehsil NainpurDist Mandla (MP)	9407038441	9222-23 Date 07-07-2021	1.0	22.11.2015	21.11.2020	22.11.2020	21.11.2025	11-12-2015	Working	Non Captive	Deiaa 44 Date 17/08/2016	N 22°26'41.89" N 22°26'41.64" N 22°26'43.41" N22°26'44.47"	E 80°18'42.46" E 80°18'48.45" E 80°18'48.95" E 80°18'42.70"	Opencast
79	Stone	Shri Santosh Khandelwal S/o Shri Narayan Khandelwal Resi- Nainpur Bamhani Banjar, Mandla (MP)	9301309939	728 Date 06/10/2016	0.94	19-04-2012	18-04-2017	19-04-2017	18-04-2022	16-11-2012	Non Working	Non Captive	Deiaa 11 Date 30/06/2016	N 22°26'37.50" N 22°26'37.20" N 22°26'38.0" N 22°26'40.50" N 22°26'40.50" N 22°26'39.60" N22°26'38.40"	E 80°18'45.10" E 80°18'47.50" E 80°18'48.90" E 80°18'48.80" E 80°18'46.50" E 80°18'46.50" E 80°18'45.00"	Opencast
80	Stone	SmtJabin Malik W/o Shri Abdul Hamid Resi-Bamhani Banjar Tehsil Nainpur Dist Mandla (MP)	9407038441	1140 Date 11-09-2017	1.50	23.08.2008	22.08.2018	23.08.2018	22.08.2028	12-09-2008	Working	Non Captive	Deiaa 14 Date 30/06/2016	N 22°27'03.08" N 22°27'02.68" N 22°27'05.63" N22°27'08.54"	E 80°18'55.52" E 80°18'00.25" E 80°18'00.40" E 80°18'57.92"	Opencast
81	Stone	Smt Jyoti Pandey W/o Shri Amit Pandey Resi-Bamhani Banjar, Mandla (MP)	7000824536	549 Date 26/11/2010	1.10	02.02.2011	01.02.2021	-	-	01/05/2012	Non Working	Non Captive	Seiaa 11016 Date 02/02/2016	N22°26'51.10" N22°26'52.80" N22°26'52.50" N22°26'50.10" N22°26'49.90"	E 80°18'58.70" E 80°18'57.80" E 80°18'54.00" E 80°18'53.40" E 80°18'56.60"	Opencast
82	Stone	Shri Ritendra Kumar Chourasia S/o Shri Chandranath Resi-Bamhani Banjar Dist Mandla (MP)	9425484261	640 DATE 16/12/2011	0.64	03.01.2012	02.01.2022	03.01.2022	02.01.2032	25/04/2012	Working	Non Captive	Deiaa 18 Date 30/06/2016	N22°27'02.19" N22°27'04.08" N22°27'05.48" N22°27'08.30" N22°27'08.30"	E 80°19'01.40" E 80°19'03.69" E80°19'03.50" E 80°19'01.30" E 80°19'01.30"	Opencast

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83	Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/o Shri Shambhu Prasad Jain Resi- Bhagat Singh ward, Mandla (MP)	7000579386	130 Date 08/02/2012	1.60	10.02.2012	09.02.2022	.	.	03/03/2012	Non Working	Non Captive	Seiaa 1758 Date 08/06/2015	N 22°33'50.7" N 22°33'50.7" N 22°33'55.8" N 22°33'55.6" N 22°33'51.3"	E 80°11'06.6" E 80°11'04.6" E 80°11'06.3" E 80°11'08.7" E 80°11'08.7"	Opencast
84	Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/o Shri Shambhu Prasad Jain Resi- Bhagat Singh ward, Mandla (MP)	7000579386	131 Date 08/02/2012	3.61	10.02.2012	09.02.2022	.	.	03/03/2012	Non Working	Non Captive	Seiaa 3282 Date 08/07/2015	N 22°33'55.5" N 22°33'55.5" N 22°33'52.4" N 22°33'51.0" N 22°33'47.5" N 22°33'51.3" N 22°33'51.5" N 22°33'49.7" N 22°33'50.0" N 22°33'50.1" N 22°33'47.7" N 22°33'47.1"	E 80°10'58.7" E 80°10'59.4" E 80°10'59.9" E 80°11'01.9" E 80°11'02.2" E 80°11'02.8" E 80°11'03.5" E 80°11'05.1" E 80°11'07.7" E 80°11'08.5" E 80°11'08.3" E 80°11'04.8"	Opencast
85	Stone	Smt Sangeeta Agrawal W/o Shri Arun Agrawal Resi- Bamhani Banjar tehsil & Dist Mandla (MP)	9340362354	598 Date 23/11/2011	4.00	13.01.2012	12.01.2022	.	.	30/04/2012	Non Working	Non Captive	Deiaa 12 Date 30/06/2016	N 22°24'32.5" N 22°24'30" N 22°24'29.1" N 22°24'23.5" N 22°24'24.5" N 22°24'26.1" N 22°24'28.5"	E 80°18'51.8" E 80°18'58" E 80°19'03" E 80°18'19.0" E 80°18'57.7" E 80°18'57.7" E 80°18'51.1"	Opencast
86	Stone	Smt Pachli Bai W/o Shri Devsingh Saiyam Resi- Jhulpur Tehsil Nainpur Dist Mandla (MP)	7049077399	13 Date 04/01/2012	1.00	09.02.2012	08.02.2022	.	.	15/01/2013	Non Working	Non Captive	Deiaa 66 Date 17/08/2016	N 22°35'13.68" N 22°35'9.77" N 22°35'8.52" N22°35'10.31"	E 80°5'6.81" E 80°5'3.70" E 80°5'5.73" E 80°5'7.97"	Opencast
87	Stone	Shri Shersingh S/o Shri Tikaram Lodhi Resi- Khikhiri Tehsil Nainpur Dist Mandla (MP)	9174100355	521 Date 25/07/2013	1.00	03.05.2013	02.05.2023	.	.	12/02/2014	Working	Non Captive	Seiaa 921 Date 05/06/2013	N 22°31'50.4" N 22°31'54.8"	E 80°04'07.6" E 80°04'14.7"	Opencast

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89	Stone	Shri Dharmendra Chandrawanshi S/o Shri Sevakram Chandrawanshi Resi- Sarrapipariya Tehsil Nainpur Dlst Mandla (MP)	9669681773	639 Date 27/2013	1.00	27.04.2015	26.04.2025	.	.	25/05/2015	Working	Non Captive	Seiaa 585 Date 27/04/2015	N22°30'53.23" N22°30'55.60" N22°30'55.40" N22°30'53.00"	E 80°09'37.74" E 80°09'38.10" E 80°09'33.90" E 80°09'33.60"	Opencast
90	Stone	Smt Chhaya Agrawal W/o shri Rajesh Agrawal Resi-Bichhiya, Mandla (MP)	9171176493	4072-73 Date 17-03-2015	2.00	27.04.2015	26.04.2025	.	.	26/06/2015	Working	Non Captive	Seiaa 3224 Date 19/05/2015	N 22°34'13.7" N22°34'08.51" N22°34'88.64" N 22°34'09.5" N 22°34'09.5" N 22°34'11.8" N22°34'12.52" N22°34'15.02"	E 80°13'18.6" E 80°13'18.24" E 80°13'12.70" E 80°13'12.67" E80°13'15.46" E 80°13'15.9" E 80°13'14.51" E 80°13'1474"	Opencast
91	Stone	Shri Arun Kumar Agrawal S/o Shri Shyamsundar Agrawal Resi Bamhani Banjar , Mandla (MP)	9111377665	570 Date 07/04/2017	3.90	12.04.2017	11.04.2027	.	.	14/06/2017	Working	Non Captive	Seiaa 9717 Date 23/12/2015	N22°26'49.20" N22°26'48.72" N22°26'51.10" N22°26'49.72" N22°26'50.40" N22°26'50.58" N22°26'51.18" N22°26'48.51" N22°26'42.80" N22°26'42.82" N22°26'40.80" N22°26'41.20" N22°26'43.33" N22°26'44.40" N22°26'46.20" N22°26'46.23" N22°26'46.87" N22°26'47.29"	E 80°18'50.38" E 80°18'53.76" E 80°18'54.34" E 80°18'55.88" E 80°18'56.08" E 80°18'55.94" E 80°18'56.44" E 80°19'0.39" E 80°19'00.99" E 80°19'00.82" E 80°18'58.83" E 80°18'54.10" E 80°18'54.26" E 80°18'57.46" E 80°18'57.41" E 80°18'56.37" E 80°18'56.38" E 80°18'47.39"	Opencast
92	Stone	Shri Tarendra Baheliya S/o Shri Amritlal Baheliya Resi- Mali mohgaon Dist Mandla (MP)	9424631340	561 Date 10/08/2016	1.80	18.05.2017	17.05.2027	.	.	18/08/2017	Working	Non Captive	Deiaa 83 Date 11/05/2017	N 22°32'57.1" N 22°32'57.6" N 22°32'57.4" N 22°32'52.3" N 22°32'53.6" N 22°32'54.3" N 22°32'56.3" N 22°32'56.1" N 22°32'53.5" N 22°32'53.1" N 22°32'53.4"	E 80°12'54.0" E 80°12'58.1" E 80°12'02.3" E 80°12'00.2" E 80°12'00.1" E 80°12'58.2" E 80°12'57.9" E 80°12'56.4" E 80°12'56.0" E 80°12'54.6" E 80°12'54.0"	Opencast

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93	Stone	Shri Darshpreet Singh Singhu S/o Shri Gurmel Singh Singhu Resi- 24 Dasa Dhaniram Ward Maharajpur, Mandla (MP)	9977092379	876 Date 21/06/2017	1.90	19.09.2017	18.09.2027	-	-	09/03/2018	Working	Non Captive	Deiaa 87 Date 11/05/2017	N 22°34'28.7" N 22°34'29.2" N 22°34'29.3" N 22°34'25.9" N 22°34'25.8" N 22°34'25.8"	E 80°12'31.4" E 80°12'35.2" E 80°12'38.8" E 80°12'38.8" E 80°12'35.5" E 80°12'34.6"	Opencast
94	Stone	M/s Shyam Baba Stone Crusher Pro Ayush Agrawal Resi- Bamhani Banjar Mandla (MP)	9669683639	437 Date 19/05/2015	2.00	21.06.2017	20.06.2027	-	-	22/08/2017	Working	Non Captive	Seiaa 6923 Date 27/02/2021	N 22°33'31.2" N 22°33'35.2" N 22°33'36.4" N 22°33'33.0"	E 80°12'27.8" E 80°12'28.6" E 80°12'22.8" E 80°12'21.9"	Opencast
95	Stone	Shri Gajendra katre S/o Shri Digamber Katre Resi-Chargaon, Nainpur Dist Mandla (MP)	9425138873	41 Date 10-03-2016	3.00	15.09.2017	14.09.2027	-	-	29/11/2017	Working	Non Captive	Deiaa 88 Date 11/05/2017	N 22°33'20.9" N 22°33'24.3" N 22°33'26.2" N 22°33'25.1" N 22°33'25.3" N 22°33'25.4" N 22°33'25.5" N 22°33'21.2" N 22°33'21.5"	E 80°09'58.6" E 80°10'00.1" E 80°09'59.8" E 80°10'02.3" E 80°10'03.3" E 80°10'05.6" E 80°10'06.4" E 80°10'06.2" E 80°10'04.9"	Opencast
96	Stone	Shri Rajesh Singh Bais Resi- Chicholi, Nainpur Dist Mandla (MP)	9764891720	2925-26 Date 05/06/2017 1721/12/2017	1.50	18.05.2017	17.05.2027	-	-	02/02/2019	Working	Non Captive	Deiaa 90 Date 11/05/2017	N 22°33'7.67" N 22°33'7.86" N 22°33'11.93" N 22°33'12.89" N22°33'12.86"	E 80°10'36.12" E 80°10'39.95" E 80°10'38.49" E 80°10'39.98" E 80°10'36.32"	Opencast
97	Stone	Shri Arun Kumar Agrawal S/o Shri Shyamsundar Agrawal Resi- Bamhani Banjar, Mandla (MP)	9425855382	44 Date 08/01/2019	7.70	24.01.2019	23.01.2029	-	-	25/02/2019	Working	Non Captive	Seiaa 2048 Date 21/01/2019	N 22°33'7.31" N 22°33'7.15" N 22°33'8.76" N 22°33'7.23" N 22°33'8.17" N 22°33'6.86" N 22°33'5.85" N 22°33'5.52" N 22°33'4.64" N 22°33'4.53" N 22°33'2.08" N 22°33'1.21" N 22°33'0.47" N 22°32'59.73" N 22°32'58.79" N 22°32'59.58" N 22°33'0.31" N 22°33'0.61" N 22°33'3.90"	E 80°13'28.48" E 80°13'29.88" E 80°13'33.20" E 80°13'38.74" E 80°13'39.22" E 80°13'42.87" E 80°13'42.70" E 80°13'41.34" E 80°13'40.64" E 80°13'38.12" E 80°13'36.35" E 80°13'37.58" E 80°13'39.79" E 80°13'41.86" E 80°13'41.80" E 80°13'37.03" E 80°13'32.90" E 80°13'28.38" E 80°13'28.50"	Opencast

98	Stone	M/s Ganpati Minerals Pro Shri Shobhakant Jha Resi- Devdara, Mandla (MP)	9424339424	877 Date 21/06/2017	2.00	28.06.2017	27.06.2027	.	.	13/05/2019	Working	Non Captive	Deiaa 89 Date 11/05/2017	N22°33'41.15" N22°33'39.93" N22°33'43.15" N 22°33'44.90"	E 80°10'29.47" E 80°10'35.21" E 80°10'47.45" E 80°10'30.31"	Opencast
99	Stone	Maa Narmada Stone Crusher Partner Shri Manish Sahu Resi-Gajna Nainpur Dist Mandla (MP)	8305293673	1151 Date 13/09/2017	3.00	2.01.2019	28.01.2029	.	.	16/05/2019	Working	Non Captive	Seiaa 666 Date 18/05/2021	N22°33'52.23" N22°33'53.35" N22°33'57.94" N22°33'57.94" N22°33'56.77" N22°33'55.76" N22°33'49.40" N22°33'48.87" N22°33'48.53" N22°33'50.86" N 22°33'50.78"	E 80°11'18.64" E 80°11'19.07" E 80°11'19.05" E 80°11'22.88" E 80°11'23.30" E 80°11'23.21" E 80°11'23.74" E 80°11'23.11" E 80°11'22.10" E 80°11'21.44" E 80°11'21.31"	Opencast
100	Stone	Shri Manoj Guwani S/o Shri Rochiram Gurwani Resi-Mandla (MP)	7828627788	102 Date 14/01/2019	1.00	27.02.2019	26.02.2029	.	.	26/11/2019	Working	Non Captive	Deiaa 891 Date 09/07/2018	N22°33'33.21" N22°33'37.37" N22°33'37.28" N22°33'35.99" N22°33'34.40" N22°33'34.08" N 22°33'33.37"	E 80°11'13.01" E 80°11'12.70" E 80°11'07.91" E 80°11'09.42" E 80°11'10.45" E 80°11'11.92" E 80°11'12.10"	Opencast
101	Stone	Shri Abhay Sahu S/o Shri Rameshwar SahuResi-Khairi Narayanganj DIst Mandla (MP)	7489701086	260 Date 25-03-2015	3.10	08.01.2016	07.01.2026	.	.	01-03-2016	Working	Non Captive	Seiaa 9896 Date 22/12/2015	N22°50'43.62" N22°50'41.11" N22°50'41.77" N22°50'43.10" N22°50'47.36" N22°50'47.40" N 22°50'43.34"	E 80°17'56.60" E 80°17'57.85" E 80°17'59.41" E 80°18'4.53" E 80°18'2.25" E 80°17'59.07" E 80°17'59.58"	Opencast
102	Stone	Mahakali Stone Crusher Pro Smt Seema Namdev W/o Shri Nirvedh Namdev Resi-Narayanganj Mandla (MP)	6260585459	443 Date 20/05/2015	2.480	15.01.2016	14.01.2026	.	.	01/09/2016	Working	Non Captive	Seiaa 7368 Date 06/11/2015	N 22°49'30.1" N 22°49'30.1" N 22°49'28.1" N 22°49'26.9" N 22°49'26.5" N 22°49'25.8" N 22°49'23.6" N 22°49'22.1" N 22°49'26.4" N 22°49'25.3"	E 80°18'10.1" E 80°18'14.5" E 80°18'17.9" E 80°18'19.8" E 80°18'19.2" E 80°18'16.6" E 80°18'16.3" E 80°18'15.6" E 80°18'11.3" E 80°18'09.3"	Opencast
103	Stone	Ashib Hussain Resi-Bijadandam Tehsil Narayanganj Dist Mandla (MP)	9425654455	8897-98 Date 25/06/2019	1.00	17.02.2020	16.02.2030	.	.	22/05/2020	Working	Non Captive	Seiaa 2971 Date 06/11/2019	N22°55'47.54" N22°55'47.01" N22°55'45.38" N22°55'43.28" N22°55'42.62" N22°55'45.62"	E 80°07'52.01" E 80°07'55.91" E 80°07'54.66" E 80°07'56.75" E 80°07'54.92" E 80°07'51.50"	Opencast

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104	Stone	Shri Ashish Agrawal S/o Shri Mulchand Agrawal Resi-Ghughri Tehsil &Dist Mandla (MP)	7471164733	1140 Date 04-12/2014	1.00	11.02.2005	10.02.2015	-	-	11-01-2016	Working	Non Captive	Seiaa 2980 Date 03/07/2015	N 22°40'20.8" N 22°40'19.5" N 22°40'18.3" N 22°40'17.1" N 22°40'14.8" N 22°40'15.6" N 22°40'16.9" N 22°40'17.8" N 22°40'18.3"	E 80°41'46.4" E 80°41'46.3" E 80°41'48.3" E 80°41'46.4" E 80°41'44.4" E 80°41'42.3" E 80°41'42.1" E 80°41'42.1" E 80°41'43.5"	Opencast
105	Stone	Shri Deepak Agrawal S/o Shri Ramprasad Agrawal Resi-Ghughri Tehsil & Dist Mandla (MP)	7471164733	386 Date 02-05-2020		08-01-2008	07-01-2018	08-01-2018	07-01-2028	29-05-2008	Working	Non Captive	Deiaa 48 Date 17/08/2016	N 22°41'21.7" N22°41'20.08" N22°41'20.80" N22°41'20.41"	E 80°48'27.62" E 80°48'30.19" E 80°48'30.33" E 80°48'27.80"	Opencast
106	Stone	Shri Ramprakash Sahu S/o Shri Jamna Prasad Sahu Resi-Ghughri Tehsil & Dist Mandla (MP)	9425851814	180 Date 15-01-2021		27-06-2011	26-06-2021	27-06-2021	26-06-2031	24-11-2011	Working	Non Captive	Seiaa 5639 Date 16/09/2015	N 22°40'17.8" N 22°40'16.0" N 22°40'17.4" N 22°40'18.5" N 22°40'20.5"	E 80°42'24.6" E 80°42'18.8" E 80°42'18.9" E 80°42'19.5" E 80°42'24.5"	Opencast
107	Stone	Shri Khemkaran Sahu S/o Shri Narmada Prasad SahuResi- Mohgaon Tehsil Ghughri Dist Mandla (MP)	9752252299	641 Date 27/08/2013	1.50	31.03.2015	30.03.2025	-	-	23/05/2015	Working	Non Captive	Seiaa 3059 Date 13/01/2015	N 22°44'24.9" N 22°44'19.5" N 22°44'20.7" N 22°44'19.2" N 22°44'18.1" N 22°44'19.0" N 22°44'21.3" N 22°44'25.2"	E 80°37'03.1" E 80°37'02.2" E 80°36'59.4" E 80°36'59.0" E 80°36'58.4" E 80°36'55.9" E 80°36'57.9" E 80°37'01.5"	Opencast
108	Stone	Shri Ajay Kumar Sahu S/o Shri Munna Lal Sahu Resi-Bagli Chabi Dist Mandla (MP)	9424729215	1662 Date 11/12/2017	2.00	07.03.2018	06.03.2028	-	-	30/08/2018	Working	Non Captive	Deiaa 101 Date 6/09/2017	N 22°49'56.5" N 22°49'53.9" N22°49'53.60" N22°49'51.60" N 22°49'51.0" N22°49'55.20"	E 80°43'15.5" E 80°43'16.2" E 80°43'15.4" E 80°43'15.5" E 80°43'10.7" E 80°43'12.0"	Opencast
109	Stone	Maa Narmada Minerals Pro Shri Vipin Agrawal Resi-Ajaniya, Mandla (MP)	7000623156	152 Date 24/01/2019	1.00	31.01.2019	30.01.2029	-	-	04/07/2019	Working	Non Captive	Deiaa 893 Date 09/07/2018	N22°36'14.03" N22°36'15.03" N22°36'19.02" N22°36'16.07"	E 80°19'30.56" E 80°19'28.3" E 80°19'31.2" E 80°19'33.2"	Opencast

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110	Stone	Smt Saraswati Dhurbey W/o Shri Pandit Singh Dhurvey Resi- Bhai Bahan Nala, Motinala, Bichhiya Dist Mandla (MP)	9425852915	15347-48 Date 29/09/2018	1.94	08.05.2019	07.05.2029	.	.	05/02/2020	Working	Non Captive	Deiaa 892 Date 09/07/2018	N22°41'47.85" N22°41'48.37" N22°41'49.02" N22°41'49.54" N22°41'46.13" N22°41'45.06" N22°41'44.15" N22°41'42.94" N22°41'44.14" N22°41'47.78"	E 80°48'16.36" E 80°48'16.57" E 80°48'17.34" E 80°48'18.60" E 80°48'23.87" E 80°48'22.85" E 80°48'23.20" E 80°48'22.61" E 80°48'19.49" E 80°48'18.36"	Opencast
111	Stone	Shri Sushil Kumar Mishra Resi-Mandla (MP)	9425852123	1423 Date 14/11/2020	1.00	01.01.2021	31.12.2030	.	.	15-03-2021	Working	Non Captive	Seiaa 2572 Date 03/09/2020	N22°47'46.04" N22°47'46.52" N22°47'47.93" N22°47'50.83" N22°47'51.19" N22°47'49.03" N22°47'46.19" N22°47'45.95" N22°47'44.60"	E 80°46'18.89" E 80°46'17.83" E 80°46'17.13" E 80°46'17.85" E 80°46'15.87" E 80°46'15.30" E 80°46'15.32" E 80°46'14.58" E 80°46'14.29"	Opencast
112	Stone	Shri Sailesh Kumar Sahu Resi-Ramnagar, Bichhiya Dist Mandla (MP)	9425851855	1792-93 Date 06-02-2020	1.27	09.06.2020	08.06.2030	.	.	12/10/2021	Working	Non Captive	Seiaa 5172 Date 03/2020	N 22°38'28.3" N 22°38'30.3" N 22°38'32.4" N 22°38'32.4" N 22°38'30.3" N 22°38'27.9"	E 80°32'01.70" E 80°32'00.50" E 80°32'02.90" E 80°32'04.40" E 80°32'06.70" E 80°32'04.60"	Opencast
113	Stone	Shri Mevalal Baraya Resi- Danitola Bichhiya Dist Mandla (MP)	9131712238	388 Date 04/05/2020	1.00	12.05.2020	11.05.2030	.	.	09/11/2021	Working	Non Captive	Seiaa 3950 Date 14/01/2020	N22°35'57.42" N22°35'57.23" N 22°36'1.82" N 22°36'2.20"	E 80°41'38.20" E 80°41'40.30" E 80°41'41.80" E 80°41'39.10"	Opencast

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CHAPTER- 10

DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS

The details of revenue received in last three years as per record-

Financial Year	Revenue Target (in Cr)	Revenue From Major Mineral (in Cr)	Revenue From Minor Mineral (in Cr)	Total Revenue (in Cr)
2019-20	18.00	0.00	11.33	11.33
2020-21	14.00	0.00	14.06	14.06
2021-22	48.00	0.00	46.23	46.23

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CHAPTER-11

DETAILS OF PRODUCTION OF SAND OR BAJRI OR MINOR MINERAL IN LAST THREE YEARS

The details of production of minor minerals in the district as per record-

Year	Sand (In Cum)	Stone (in Cum)	Dolomite (in Metric Tonne)
2019-20	238276.11	112037.313	419803.92
2020-21	27324.0	130895.458	328113.86
2021-22	282434.512	116866.30	623671.74

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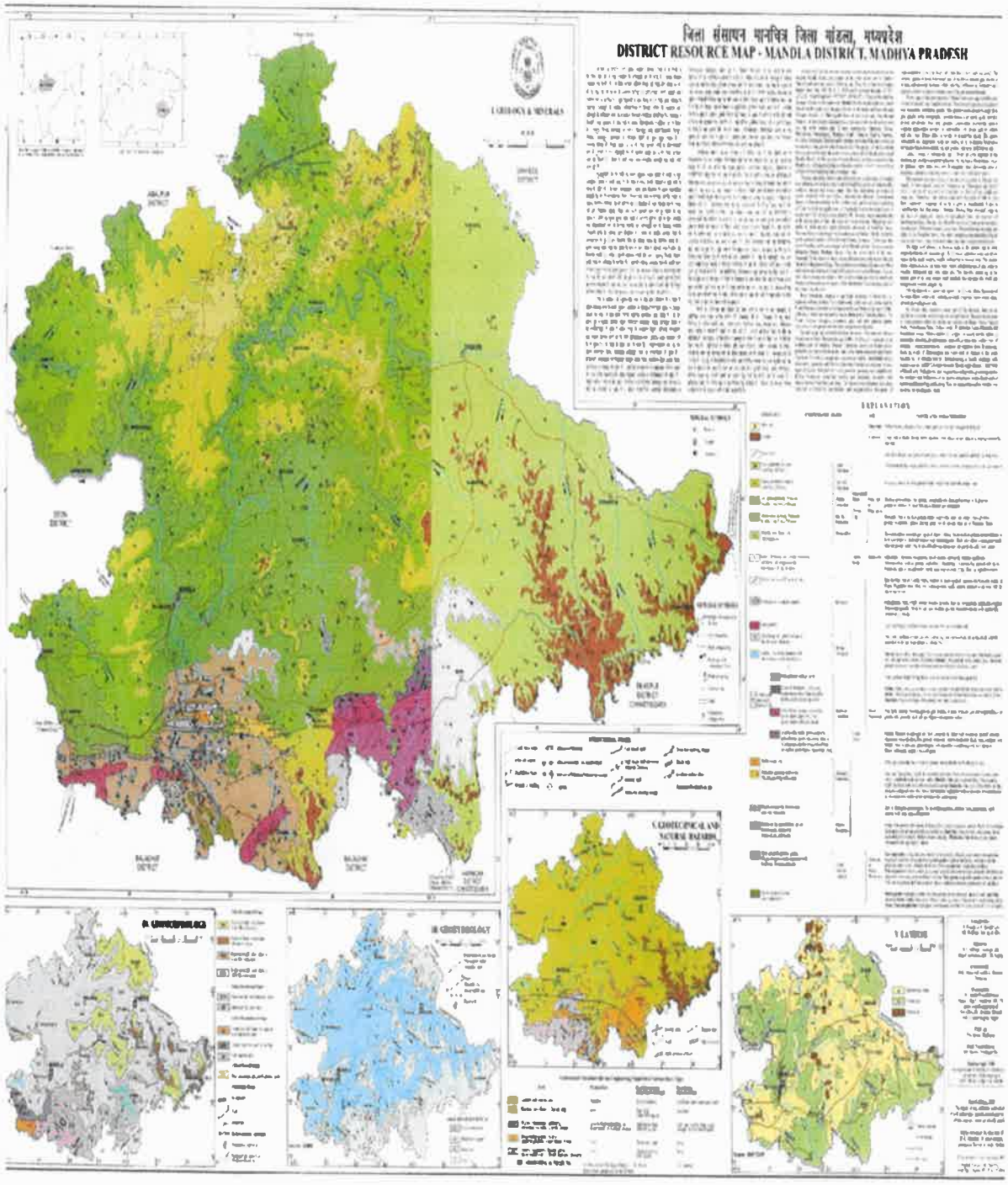
CHAPTER-12

MINERAL MAP OF THE DISTRICT



CHAPTER-13

LIST OF LOI HOLDERS IN THE DISTRICT

S. No.	Name of Minerals	Name of LOI holder	Address and Contact Numer of LOI holder	LOI Grant order No. and Date	Area of Mining Lease (in HA)	Valitidy of LOI	Use (Captive/Non-Captive)	Location of Mining Lease (Latitude/Longitude)	
1	2	3	4	5	6	7	8	9	
1	Stone	Shri Prateek Shrivastava S/o Shri Vinod Shrivastava	Resi- BichhiyaDist Mandla (MP)	98 Date 20-01-2021	1.69	06 Months	Non Captive	N 22°35'7.92" N 22°35'11.76" N 22°35'11.47" N 22°35'8.35"	E 80°48'12.94" E 80°48'12.58" E 80°48'17.20" E 80°48'18.15"
2	Stone	Maa Reva Stone Crusher Partner 1 SatyaprakashChandela 2 Rameshwar Katre	Resi- Mandla (MP)	1114 Date 16/08/2021	3.90	06 Months	Non Captive	N 22°28'40.88" N 22°28'34.50" N 22°28'33.75" N 22°28'32.32" N 22°28'37.11" N 22°28'37.18" N 22°28'38.41" N 22°28'39.42" N 22°28'40.53"	E 80°6'52.43" E 80°6'48.08" E 80°6'50.13" E 80°6'54.75" E 80°6'56.15" E 80°6'55.37" E 80°6'55.75" E 80°6'56.47" E 80°6'55.52"
3	Stone	Ramesh Kumar Mahule S/o Late Shri RamdulareMahule	Resi- Ward No. 15 SBI Bank Kepiche, Balaghat (MP)	1776 Date 30-11-2021	2.00	06 Months	Non Captive	N 22°33'39.01" N 22°33'40.82" N 22°33'41.65" N 22°33'43.07" N 22°33'41.48" N 22°33'37.36" N 22°33'36.40"	E 80°10'56.49" E 80°10'56.31" E 80°10'56.78" E 80°10'59.30" E 80°11'01.19" E 80°11'01.10" E 80°10'59.13"
4	Stone	SmtSmita Shrivastava W/o Shri Prateek Shrivastava	Resi- BhuaBichhiya, Mandla (MP)	1280 Date 02-08-2022	2.00	06 Months	Non Captive	N 22°29'47.27" N 22°29'46.80" N 22°29'47.59" N 22°29'47.28" N 22°29'48.59" N 22°29'48.15" N 22°29'46.75"	E 80°46'30.03" E 80°46'31.11" E 80°46'31.79" E 80°46'33.39" E 80°46'33.62" E 80°46'36.71" E 80°46'36.49"

								N 22°29'46.54" N 22°29'50.21" N 22°29'52.84" N 22°29'52.73" N 22°29'51.23" N 22°29'50.91" N 22°29'48.83" N 22°29'49.19" N 22°29'49.86" N 22°29'50.03" N 22°29'50.61" N 22°29'50.92" N 22°29'49.62" N 22°29'47.93"	E 80°46'37.59" E 80°46'39.15" E 80°46'39.17" E 80°46'37.30" E 80°46'37.34" E 80°46'37.03" E 80°46'36.78" E 80°46'34.03" E 80°46'34.03" E 80°46'32.76" E 80°46'33.05" E 80°46'32.51" E 80°46'31.28" E 80°46'29.84"
5	Stone	Perfect Tar Coat Pvt Ltd DirectorSohail Ali Khan	Resi- 778 Nepiyar Town Jabalpur Distt Jabalpur	1261 Date 28-07-2022	4.00	06 Months	Non Captive	N 23°3'42.37" N 23°3'45.59" N 23°3'45.86" N 23°3'46.37" N 23°3'49.89" N 23°3'49.24" N 23°3'45.92" N 23°3'41.86"	E 80°4'31.80" E 80°4'32.12" E 80°4'32.86" E 80°4'32.37" E 80°4'33.11" E 80°4'38.60" E 80°4'38.45" E 80°4'38.23"
6	Dolomite	M/s P D Minerals Pro Shri Devendra Shivhare	Resi- Indra nagar karvai distt. Mahoba U.P.	3318-19 Date 10-03-2022	4.80	06 Months	Non Captive	22°26'46.94" 22°26'49.53" 22°26'49.60" 22°26'49.92" 22°26'50.76" 22°26'50.74" 22°26'52.35" 22°26'52.59" 22°26'52.47" 22°26'52.31" 22°26'51.26" 22°26'51.37" 22°26'51.14" 22°26'52.37" 22°26'52.56" 22°26'51.47"	80°22'17.35" 80°22'17.67" 80°22'16.26" 80°22'15.95" 80°22'15.94" 80°22'16.18" 80°22'16.34" 80°22'14.96" 80°22'14.07" 80°22'13.19" 80°22'12.98" 80°22'11.35" 80°22'09.87" 80°22'10.01" 80°22'05.70" No80°22'05.48"

								22°26'51.13" 22°26'46.28" 22°26'45.98" 22°26'45.20" 22°26'45.74" 22°26'46.24"	80°22'08.13" 80°22'08.00" 80°22'10.61" 80°22'10.64" 80°22'13.82" 80°22'13.85"
7	Dolomite	M/s Ganpati Minerals Pro Shri Shobhakant Jha	Resi- Devdara Mandla Distt. mandla	3315-16 Date 10-03-2022	3.62	06 Months	Non Captive	22°26'31.67" 22°26'29.73" 22°26'27.74" 22°26'27.46" 22°26'26.38" 22°26'26.03" 22°26'27.32" 22°26'27.12" 22°26'24.87" 22°26'25.32" 22°26'23.04"	80°25'11.81" 80°25'12.12" 80°25'12.94" 80°25'12.60" 80°25'12.32" 80°25'12.89" 80°25'31.60" 80°25'14.74" 80°25'14.32" 80°25'12.40" 80°25'11.36"

State Level Environment Impact Assessment Authority, M.P. (EPCO) Paryavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHAPTER-14

TOTAL MINERAL RESERVE AVAILABLE IN THE DISTRICT

There are no major mineral mines operating in Mandla district. At present 26 mines of sand minerals, 45 Mines of Dolomite, 88 Mines of stone quarries are present in the district. Also mineral based industries are likely to come to this district in the near future due to the commencement of mining of major minerals.

Sr No.	Mineral	Quantity of Available Mineral
1	Dolomite	38963810 Metric tonne
2	Stone/ Murrum	17877193 Cum
3	Sand	1231664 Cum

State Level Environment Impact
Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

CHAPTER-15

QUALITY/GRADE OF MINERAL AVAILABLE IN THE DISTRICT

The deposit in the area is quite good in respect of quality and quantity. The method of mining should be adopted Opencast Mining Method by OTFM (Other then Fully mechanized method) for digging, excavation and removal of stone in conjunction with deep hole drilling and blasting.

Stone mineral can be used as boulders of diffirent sizes for dam construction, embankment works etc. After crushing into different sizes, it can be used in construction and road projects. Fine grained compact basalt is available in the district so that Quality of stone available in Mandla district is building grade stone confirming standards.

State Level Environment Impact Assessment Authority, M.P. (EPCO) Paryavaran Parisar E-5, Arera Colony, Bhopal (M.P.)

CHAPTER-16
USE OF MINERAL

Gitti/Building Stone :

Aggregates – stone for its strong phycial properties – crushed and sorted into various sizes for use in concerete, coated with bitumen to make asphalt or used 'dry' as bulk fill in construction, Mostly used in roads, concrete and building products.

Murum:

Murum is mostly used for construction purposes. Generally, it is deep brown or red in colour. Muroom is used in plinth filling, road pavements, backfilling in trenches, fotting 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 hard surfaces.

Ordinary Clay:

Clay is used for making pottery, both utilitarian and decorative, and construction products, such as bricks, wall and floor tiles. Different type of Clay, when used with different minerals and firing conditions, are used to produce earthenware, stoneware, and porcelain.

Ordinary sand:

Sand is not for manufacturing concrete, but it is the ideal material for asphalt mix. It is commonaly used to fix and level roads, and lay bedding for a variety of uses. This is in contrast with our three other main construction sand products, which are mainly used for building applications.

Dolomite :

Dolomite is used as an ornamental stone, a concrete aggregate, and a source of magnesium oxide, as well as in the Pidgeon process for the production of magnesium. It is an important petroleum reservoir rock, and serves as the host rock for large strata-bound Mississippi Valley-Type (MVT) ore deposits of base metals such as lead, zinc, and copper. Where calcite limestone is uncommon or too costly, dolomite is sometimes used in its place as a flux for the smelting of iron and steel. Large quantities of processed dolomite are used in the production of float glass.

In horticulture, dolomite and dolomitic limestone are added to soils and soilless potting mixes as a pH buffer and as a magnesium source.

Dolomite is also used as the substrate in marine (saltwater) aquariums to help buffer changes in the pH of the water.

Calcined dolomite is also used as a catalyst for destruction of tar in the gasification of biomass at high temperature. Particle physics researchers like to build particle detectors under layers of dolomite to enable the detectors to detect the highest possible number of exotic particles. Because dolomite contains relatively minor quantities of radioactive materials, it can insulate against interference from cosmic rays without adding to background radiation levels.

CHAPTER-17

DEMAND AND SUPPLY OF THE MINERAL IN THE LAST THEREE YEARS

Table : Detail of Demand and Supply for sand or Bajri or minor minerals in the financial year 2019-20

Details of Production (For Minor Mineral)				
Sr. No.	**Year**	**Name of Mineral**	**Production**	**Dispatch**
1	2019-20	Sand	238276.11 Cum	238276.11 Cum
2		Stone / Boulder / Gitti	112037.313 Cum	112037.313 Cum
3		Dolomite	419803.92 MT	419803.92 MT

Table : Detail of Demand and Supply for sand or Bajri or minor minerals in the financial year 2020-21

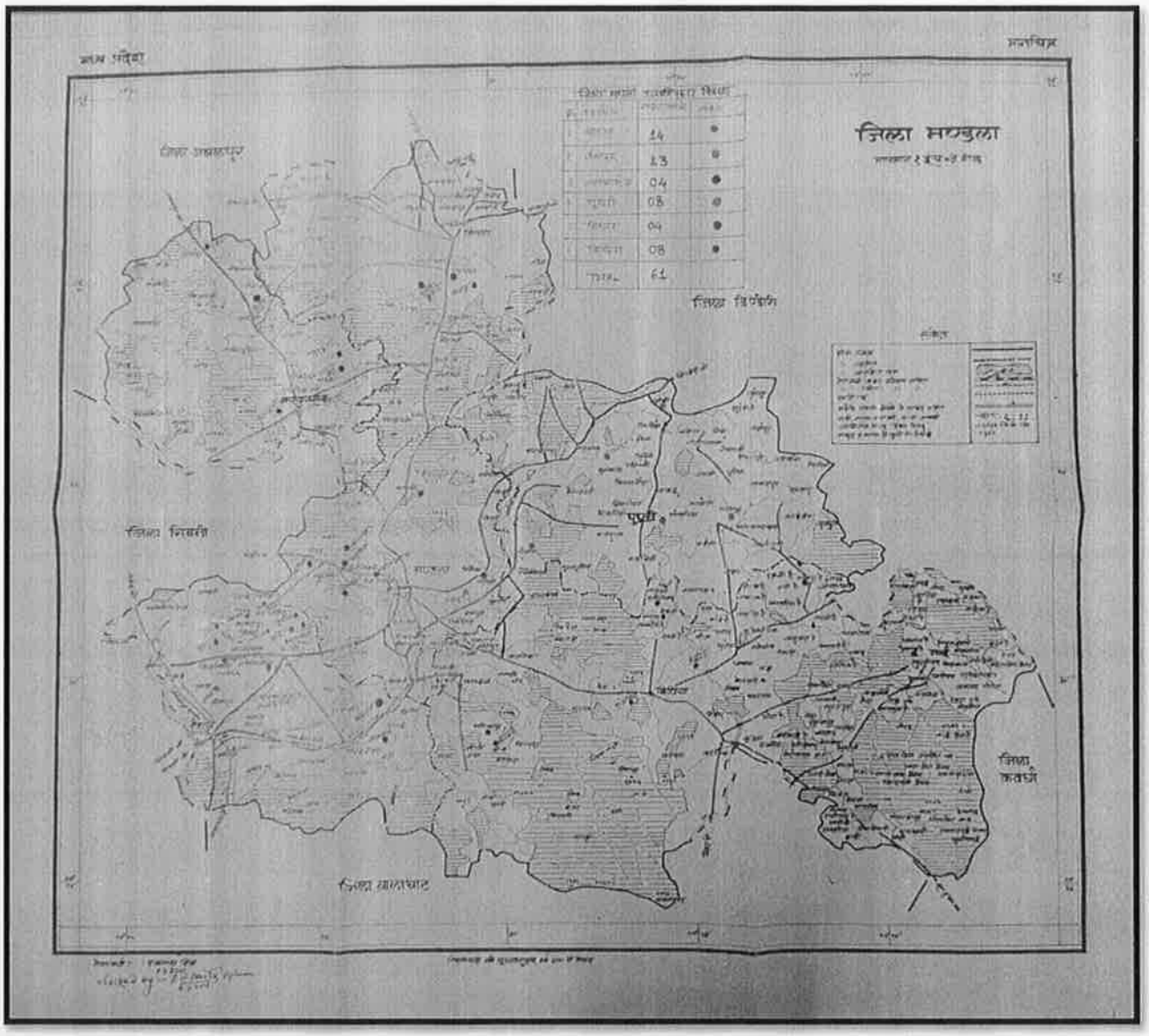
Details of Production (For Minor Mineral)				
Sr. No.	**Year**	**Name of Mineral**	**Production**	**Dispatch**
1	2020-21	Sand	27324.0 Cum	27324.0 Cum
2		Stone / Boulder / Gitti	130895.458 Cum	130895.458 Cum
3		Dolomite	328113.86 MT	328113.86 MT

Table : Detail of Demand and Supply for sand or Bajri or minor minerals in the financial year 2021-22

Details of Production (For Minor Mineral)				
Sr. No.	**Year**	**Name of Mineral**	**Production**	**Dispatch**
1	2021-22	Sand	288644.94 Cum	288644.94 Cum
2		Stone / Boulder / Gitti	116866.30 Cum	116866.30 Cum
3		Dolomite	623671.74 MT	623671.74 MT

CHAPTER-18

MINING LEASES MARKED ON THE MAP OF THE DISRICT



State Level Environment Impact Assessment Authority, M.P. (EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

CHAPTER-19

(DETAIL OF THE AREA WHERE THERE IS A CLUSTER OF MINING LEASES VIZ NUMBER OF MINING LEASES, LOCATION

Dhouranala 1 CLUSTER		
Stone	Shri Bhupendra Singh	2.00 Ha
Stone	Smt Sunita Agrawal W/O Uday Agrawal	1.60 Ha
Stone	Shri Shailendra Mishra S/O Shri Rajendra Kumar Mishra	1.00 Ha
	TOTAL	**4.60** Ha
Dhouranala 2 CLUSTER		
Stone	Shri Devandra Sukhwani S/O Shri Chetram Sukhwani	2.00 Ha
Stone	Shri Santosh Kumar Pandey	1.51 Ha
	Total	**3.51** Ha
MANAIRAIYAT AND KHAPAKALA CLUSTER		
Stone	Smt Jyoti Agrawal W/O Shri Raman Agrawal	4.00 Ha
Stone	M/S Sai Stone Crushers Pro. Shri Arvind Sahu Pro. Shri Mahesh Sahu	1.00 Ha
Stone	M/S Om Sai Ram Crusher Pro. Shri Lokesh Rai	1.500 Ha
Stone	Shri Vinodkumar Agarwal	2.80 Ha
Stone	Shri Manojchatri	2.50 Ha
	Total	**11.80** Ha
MACHARIYA CLUSTER		
Stone	Shri Shailendra Mishra S/O Shri Rajendra Kumar Mishra	1.000 Ha
Stone	Shri Anup Jaiswal S/O Shri Ramchandra Jaiswal	2.20 Ha
Stone	Smt Manju Kachwaha	2.00 Ha
	Total	**5.20** Ha
MANIKPUR CLUSTER		
Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal	1.00 Ha
Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal	2.00 Ha
	TOTAL	**3.00** Ha
KAJARWARA 1 CLUSTER		
Stone	Smt Jabin Malik W/O Shri Abdul Hamid	1.0 Ha
Stone	Shri Santosh Khandelwal S/O Shri Narayan Khandelwal	0.94 Ha
	Total	**1.94** Ha
KAJARWARA 2 CLUSTER		
Stone	Shri Arun Agrawal S/O Shri Shyam Sundar Agrawal	1.00 Ha
Stone	Smt Jabin Malik W/O Shri Abdul Hamid	1.50 Ha

Stone	Smt Jyoti Pandey W/O Shri Amit Pandey	1.10 Ha
Stone	Shri Ritendra Kumar Chourasia S/O Shri Chandranath	0.64 Ha
Stone	Shri Arun Kumar Agrawal S/O Shri Shyamsundar Agrawal	3.90 Ha
Stone	Ashish Kumar Panday	2.83 Ha
	Total	**10.97** Ha
Shinghori CLUSTER		
Stone	Shri Ram Singh Thakur S/O Shri Babulal Thakur	4.00 Ha
Stone	Shri Pushpendra Thakur S/O Ram Singh Thakur	2.00 Ha
	Total	**6.00** Ha
Nevsa Bhapsa CLUSTER		
Stone	Shri Nishantkumar Jaiswal S/O Shri Heeralal Jaiswal	1.63 Ha
Stone	Smt Sadhna Jaiswal W/O Heeralal	3.33 Ha
	Total	**4.96** Ha
Gajna CLUSTER		
Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/O Shri Shambhu Prasad Jain	1.60 Ha
Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/O Shri Shambhu Prasad Jain	3.61 Ha
Stone	Maa Narmada Stone Crusher Partner Shri Manish Sahu	3.00 Ha
	Total	**8.21** Ha
Paraswara CLUSTER		
Stone	Shri Manoj Guwani S/O Shri Rochiram Gurwani	1.00 Ha
Stone	Ramesh Kumar Mahule S/O Late Shri Ramdulare Mahule	2.00 Ha
	Total	**3.00** Ha

क्र0	पट्टेदार का नाम एवं पता	खनिज का नाम	रकवा हे0 में
भवरताल -1 क्लस्टर			
1	श्रीमति शीलदेवी झा पत्नि श्री अमीदत्त झा निवासी आजाद वार्ड मण्डला	डोलोमाईट	4.61
2	श्री प्रवीण चन्द पटेल आ0 श्री पी0डी0 पटेल निवासी बस्तर रोड धमतरी रायपुर (छ0ग0)	डोलोमाईट	3.14
		योग	7.75
भवरताल -2 क्लस्टर			
1	जय श्री श्याम मिनरल्स प्रो0 श्री संतोष कुमार अग्रवाल निवासी बम्हनी बंजर मण्डला	डोलोमाईट	4.48
2	ताल मिनरल्स पार्टनर नीलू पाठक श्रीमति लक्ष्मी अग्रवाल निवासी सिविल लाईन मण्डला	डोलोमाईट	4.45
		योग	8.93

भवरताल -3 क्लस्टर			
1	श्री संतोष जैन आ0 श्री संपत लाल जैन निवासी टीवी टावर रोड शंकर नगर रायपुर (छ0ग0)	डोलोमाईट	1.03
2	श्री राघवेन्द्र सिंघानिया आ0 श्री मालूराम सिंघानिया निवासी तात्यापरा चौक रायपुर (छ0ग0)	डोलोमाईट	0.78
3	श्री कमलेश मोहन झिकराम आ0 श्री मोहन लाल झिकराम निवासी बडी खैरी मण्डला	डोलोमाईट	2.43
		योग	4.24
भवरताल -4 क्लस्टर			
1	श्रीमति अरूणा सिहारे पत्नि श्री नरेन्द्र सिहारे निवासी सिविल लाईन मण्डला	डोलोमाईट	6.60
2	सुमेधा मिनरल्स प्रो0 श्रीमति सुमन अग्रवाल पत्नि स्व0 श्री समीर अग्रवाल निवासी इंदिरा मार्केट के पास जिला दुर्ग (छ0ग0)	डोलोमाईट	4.45
3	शोभाकान्त झा आ0 श्री शम्भूनाथ झा निवासी मण्डला जिला मण्डला म0प्र0	डोलोमाईट	4.41
4	गणपति मिनरल्स प्रो0 श्री शोभाकान्त झा निवासी मण्डला	डोलोमाईट	3.62
		योग	**19.08**
काटामाल क्लस्टर			
1	श्री नितिन कुमार अग्रवाल आ0 श्री राजकमार अग्रवाल निवासी मण्डला	डोलोमाईट	1.81
2	श्रीमति विद्या सोनी निवासी बम्हनी बंजर मण्डला	डोलोमाईट	1.42
		योग	**3.23**
ककैया 1 क्लस्टर			
1	श्री विनोद कुमार अग्रवाल निवासी सिविल लाईन मण्डला	डोलोमाईट	6.81
2	हीरा पावर एंण्ड स्टील्स लिमिटेड निवासी रायपुर छ0ग0	डोलोमाईट	13.25
3	श्री विनोद कुमार अग्रवाल निवासी सिविल लाईन मण्डला	डोलोमाईट	3.23
		योग	**23.29**
ककैया 2 क्लस्टर			
1	श्री अरूण कुमार डोगसरें निवासी मण्डला	डोलोमाईट	1.40
2	श्री विनोद कुमार अग्रवाल निवासी सिविल लाईन मण्डला	डोलोमाईट	5.11
		योग	**6.51**
मुगदरा 1 क्लस्टर			
1	मेसर्स सुपर मिनरल्स प्रो0 श्रीमति नविता दुबे निवासी मण्डला	डोलोमाईट	2.1
2	मेसर्स पूजा मिनरल्स प्रो0 श्री नरेन्द्र सिहारे निवासी मण्डला	डोलोमाईट	1.21
3	मेसर्स पूजा मिनरल्स प्रो0 श्री नरेन्द्र सिहारे निवासी मण्डला	डोलोमाईट	2.22
4	राक्स मिनरत्स प्रो0 श्री शोभाकान्त झा निवासी मण्डला	डोलोमाईट	1.56

5	मेसर्स गोरी मिनरल्स प्रो0 श्री नितिश अग्रवाल निवासी सिविल लाईन मण्डला जिला मण्डला म0प्र0	डोलोमाईट	2.86
6	म0प्र0 स्टेट माईनिंग कारपोरशन लि0 निवासी बम्हनी बंजर मण्डला	डोलोमाईट	2.52
7	पी0डी0 मिनरल्स प्रो0 श्री देवेन्द्र सिवहरे	डोलोमाईट	4.80
		योग	**17.27**
मुगदारा 2 क्लस्टर			
1	श्री नरेन्द्र गोयल आ0 श्री हरीराम गोयल निवासी गुरू गोविन्द नगर पंडरी जिला रायपुर (छ0ग0)	डोलोमाईट	2.08
2	मेसर्स ओ0सी0एल0 इण्डिया लिमिटेड श्री नारायण चन्द्र नायक	डोलोमाईट	19.223
		योग	**21.303**
भटियाटोला क्लस्टर			
1	मेसर्स सालासर मिनरल्स प्रो0 श्री विभोर अग्रवाल आ0 श्री विनोद कुमार अग्रवाल निवासी सिविल लाईन मण्डला म0प्र0	डोलोमाईट	2.26
2	मेसर्स सालासर मिनरल्स प्रो0 श्री विभोर अग्रवाल आ0 श्री विनोद कुमार अग्रवाल निवासी सिविल लाईन मण्डला म0प्र0	डोलोमाईट	2.82
3	श्री राजकुमार अग्रवाल आ0 स्व0 श्री आर0पी0 अग्रवाल निवासी मण्डला	डोलोमाईट	2.205
4	मेसर्स कुसुम मिनरल्स प्रो0 श्री भीकमचन्द जैन आ0 श्री नेमीचन्द जैन निवासी मालवीव नगर दुर्ग	डोलोमाईट	0.98
5	श्री राजकुमार अग्रवाल आ0 स्व0 श्री आर0पी0 अग्रवाल निवासी मण्डला	डोलोमाईट	2.3
6	मेसर्स गुप्ता लाज0 प्रो0 कृष्णा गुप्ता आ0 श्री प्रभुदत्त गुप्ता निवासी सावती मंजिल श्रीराम टावर नागपुर (महाराष्ट्र)	डोलोमाईट	1.42
7	मेसर्स नर्मदा मिनरल्स प्रो0 श्री रॉबिन अग्रवाल निवासी निवासी मण्डला	डोलोमाईट	2.2
8	मेसर्स महावीर मिनरल्स प्रो0 श्री निर्मल चन्द जैन आ0 श्री शोभाचन्द जैन निवासी दुर्ग (छ0ग0)	डोलोमाईट	2.83
9	मे0 हनुमान माईन्स एण्ड मिनरल्स प्रो0 श्री बलराम अग्रवाल आ0 श्री रामचन्द्र अग्रवाल निवासी 2/2 अरिहन्त कॉपलेक्स स्टेशन रोड रायपुर (छ0ग0)	डोलोमाईट	1.41
10	मेसर्स नर्मदा मिनरल्स प्रो0 श्री रॉबिन अग्रवाल निवासी निवासी मण्डला	डोलोमाईट	0.87
11	श्रीमति लक्ष्मी अग्रवाल पत्नि श्री विनोद अग्रवाल निवासी मण्डला	डोलोमाईट	2.8
12	कुमारी सिप्तेन बानो (अलिका मिनरल्स निवासी मण्डला	डोलोमाईट	3.4
13	श्री प्रभात शंकर अग्रवाल आ0 श्री कृष्ण गोयल अग्रवाल निवासी 39/4 नेहरू नगर (पूर्व) जिला दुर्ग	डोलोमाईट	2.4
14	श्री धर्मेन्द मोदी आ0 श्री प्रेमचन्द मोदी निवासी दुर्ग (छ0ग0)	डोलोमाईट	0.86
15	मे0 हनुमान माईन्स एण्ड मिनरल्स प्रो0 श्री बलराम अग्रवाल आ0 श्री रामचन्द्र अग्रवाल निवासी 2/2 अरिहन्त कॉपलेक्श स्टेशन रोड रायपुर (छ0ग0)	डोलोमाईट	4.7
		योग	**33.455**

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CHAPTER - 20
DETAILS OF ECO-SENSETIVE AREA, IF ANY IN THE DISTRICT

Extent and boundaries of Eco-sensitive Zone. – (1) The Eco-sensitive Zone covers the entire notified buffer area of Kanha Tiger Reserve around Kanha National Park and Phen Wildlife Sanctuary. The Eco-sensitive Zone shall be to an extent of zero kilometres (due to interstate boundary) to 30 kilometres around the boundary of Kanha National Park, the Buffer Zone, and the Phen Wildlife Sanctuary. The extent is upto 2 kilometres in areas where buffer does not exist. Zero extent of Eco-sensitive Zone is towards the eastern side having interstate boundary with Chhattisgarh. The total area of the Ecosensitive Zone is 1217.684 square kilometres.

(2) The boundary description of Eco-sensitive Zone around Kanha National Park, the Buffer Zone, and the Phen Wildlife Sanctuary is appended in **Annexure-I.**

(3) The maps of the Kanha National Park, the Buffer Zone, and the Phen Wildlife Sanctuary demarcating Eco-sensitive Zone along with boundary details and latitudes and longitudes are appended as **Annexure-IIA** and **Annexure-IIB.**

(4) The lists of geo-coordinates of the boundary of Kanha National Park, the Buffer Zone, and the Phen Wildlife Sanctuary and Eco-sensitive Zone are given in Table **A** and Table **B** of **Annexure-III.**

(5) The list of villages falling in the Eco-sensitive Zone along with their geo co-ordinates at prominent points is appended as Table **A** and Table **B** of **Annexure-IV.**

(6) The list of legal status, extent of area and revenue area within the Eco-sensitive Zone of Kanha National Park, the Buffer Zone, and the Phen Wildlife Sanctuary is appended as Table **A** to Table **E**
of **Annexure-V.**

2. Zonal Master Plan for Eco-sensitive Zone.-(1) The State Government shall, for the purposes of the
Eco-sensitive Zone prepare a Zonal Master Plan within a period of two years from the date of publication of this notification in the Official Gazette, in consultation with local people and adhering to
the stipulations given in this notification for approval of the competent authority in the State.

(2) The Zonal Master Plan for the Eco-sensitive Zone shall be prepared by the State Government in such manner as is specified in this notification and also in consonance with the relevant Central and State laws and the guidelines issued by the Central Government, if any.

(3) The Zonal Master Plan shall be prepared in consultation with the following Departments of the State Government, for integrating the ecological and environmental considerations into the said plan:-

(i) Environment;
(ii) Forest and Wildlife;
(iii) Agriculture;
(iv) Revenue;
(v) Urban Development;
(vi) Tourism;
(vii) Rural Development;
(viii) Irrigation and Flood Control;
(ix) Municipal;

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(x) Panchayati Raj;
(xi) Public Works Department.
(4) The Zonal Master Plan shall not impose any restriction on the approved existing land use, infrastructure and activities, unless so specified in this notification and the Zonal Master Plan shall factor in improvement of all infrastructure and activities to be more efficient and eco-friendly.
(5) The Zonal Master Plan shall provide for restoration of denuded areas, conservation of existing water bodies, management of catchment areas, watershed management, groundwater management, soil and moisture conservation, needs of local community and such other aspects of the ecology and environment that need attention.
(6) The Zonal Master Plan shall demarcate all the existing worshipping places, villages and urban settlements, types and kinds of forests, agricultural areas, fertile lands, green area, such as, parks and like places, horticultural areas, orchards, lakes and other water bodies with supporting maps giving details of existing and proposed land use features.
(7) The Zonal Master Plan shall regulate development in Eco-sensitive Zone and adhere to prohibited and regulated activities listed in the Table in paragraph 4 and also ensure and promote eco-friendly development for security of local communities' livelihood.
(8) The Zonal Master Plan shall be co-terminus with the Regional Development Plan.
(9) The Zonal Master Plan so approved shall be the reference document for the Monitoring Committee for carrying out its functions of monitoring in accordance with the provisions of this notification.
3. Measures to be taken by the State Government.- The State Government shall take the following measures for giving effect to the provisions of this notification, namely:-
(1) Land use.- (a) Forests, horticulture areas, agricultural areas, parks and open spaces earmarked formeasures recreational purposes in the Eco-sensitive Zone shall not be used or converted into areas for commercial or residential or industrial activities:
Provided that the conversion of agricultural and other lands, for the purposes other than that specified at part (a) above, within the Eco-sensitive Zone may be permitted on the recommendation of the Monitoring Committee, and with the prior approval of the competent authority under the Regional Town Planning Act and other rules and regulations of the Central Government or State Government as applicable and *vide* provisions of this notification, to meet the residential needs of
the local residents and for activities such as:-
(i) widening and strengthening of existing roads and construction of new roads;
(ii) construction and renovation of infrastructure and civic amenities;
(iii) small scale industries not causing pollution;
(iv) cottage industries including village industries; convenience stores and local amenities supporting eco-tourism including home stay; and
(v) promoted activities given in paragraph 4:
Provided further that no use of tribal land shall be permitted for commercial and industrial development activities without the prior approval of the competent authority under the Regional Town Planning Act and other rules and regulations of the State Government and without compliance of the provisions of article 244 of the Constitution or the law for the time being in force, including the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007):
Provided also that any error appearing in the land records within the Eco-sensitive Zone shall be corrected by the State Government, after obtaining the views of the Monitoring Committee,

once in each case and the correction of said error shall be intimated to the Central Government in the Ministry of Environment, Forest and Climate Change:
Provided also that the correction of error shall not include change of land use in any case except as provided under this sub-paragraph.
(b) Efforts shall be made to reforest the unused or unproductive agricultural areas with afforestation and habitat restoration activities.
(2) Natural water bodies.-The catchment areas of all natural springs shall be identified and plans for their conservation and rejuvenation shall be incorporated in the Zonal Master Plan and the guidelines shall be drawn up by the State Government in such a manner as to prohibit development activities at or near these areas which are detrimental to such areas.
(3) Tourism or eco-tourism.- (a) All new eco-tourism activities or expansion of existing tourism activities within the Eco-sensitive Zone shall be as per the Tourism Master Plan for the Ecosensitive Zone.
(b) The Tourism Master Plan shall be prepared by the Department of Tourism in the State Government in consultation with the State Departments of Environment and Forests.
(c) The Tourism Master Plan shall form a component of the Zonal Master Plan.
(d) The Tourism Master Plan shall be drawn based on the study of carrying capacity of the Ecosensitive Zone.
(e) The activities of eco-tourism shall be regulated as under, namely:-
(i) new construction of hotels and resorts shall not be allowed within one kilometre from the boundary of the protected area or upto the extent of the Eco-sensitive Zone, whichever is nearer:
Provided that beyond the distance of one kilometre from the boundary of the protected area till the extent of the Eco-sensitive Zone, the establishment of new hotels and resorts shall be allowed only in pre-defined and designated areas for eco-tourism facilities as per Tourism Master Plan;
(ii) all new tourism activities or expansion of existing tourism activities within the Ecosensitive Zone shall be in accordance with the guidelines issued by the Central Government in the Ministry of Environment, Forest and Climate Change and the ecotourism guidelines issued by the National Tiger Conservation Authority (as amended from time to time) with emphasis on eco-tourism, eco-education and eco-development;
(iii) until the Zonal Master Plan is approved, development for tourism and expansion of existing tourism activities shall be permitted by the concerned regulatory authorities based on the actual site specific scrutiny and recommendation of the Monitoring Committee and no new hotel, resort or commercial establishment construction shall be permitted within Eco-sensitive Zone area.
(4) Natural heritage.- All sites of valuable natural heritage in the Eco-sensitive Zone, such as the gene pool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc. shall be identified and a heritage conservation plan shall be drawn up for their preservation and conservation as a part of the Zonal Master Plan.
(5) Man-made heritage sites.- Buildings, structures, artefacts, areas and precincts of historical, architectural, aesthetic, and cultural significance shall be identified in the Eco-sensitive Zone and heritage conservation plan for their conservation shall be prepared as part of the Zonal Master Plan.
(6) Noise pollution. - Prevention and control of noise pollution in the Eco-sensitive Zone shall be carried out in accordance with the provisions of the Noise Pollution (Regulation and Control) Rules, 2000 under the Environment Act.

(7) Air pollution.- Prevention and control of air pollution in the Eco-sensitive Zone shall be carried in accordance with the provisions of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the rules made thereunder.

(8) Discharge of effluents.- Discharge of treated effluent in Eco-sensitive Zone shall be in accordance with the provisions of the General Standards for Discharge of Environmental Pollutants covered under the Environment Act and the rules made thereunder or standards stipulated by the State Government, whichever is more stringent.

(9) Solid wastes.- Disposal and Management of solid wastes shall be as under:-

(a) the solid waste disposal and management in the Eco-sensitive Zone shall be carried out in accordance with the Solid Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number S.O. 1357 (E), dated the 8th April, 2016; the inorganic material may be disposed in an environmental acceptable manner at site identified outside the Eco-sensitive Zone;

(b) safe and Environmentally Sound Management of Solid wastes in conformity with the existing rules and regulations using identified technologies may be allowed within Eco-sensitive Zone.

(10) Bio-Medical Waste.- Bio-Medical Waste Management shall be as under:-

(a) the Bio-Medical Waste disposal in the Eco-sensitive Zone shall be carried out in accordance with the Bio-Medical Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R. 343 (E), dated the 28th March, 2016.

(b) safe and Environmentally Sound Management of Bio-Medical Wastes in conformity with the existing rules and regulations using identified technologies may be allowed within the Ecosensitive
Zone.

(11) Plastic waste management.- The plastic waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the Plastic Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R. 340(E), dated the 18th March, 2016, as amended from time to time.

(12) Construction and demolition waste management.- The construction and demolition waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the Construction and Demolition Waste Management Rules, 2016 published by the Government of India in the Ministry of Environment, Forest and Climate Change *vide* notification number G.S.R. 317(E), dated the 29th March, 2016, as amended from time to time.

(13) E-waste.- The e - waste management in the Eco-sensitive Zone shall be carried out as per the provisions of the E-Waste Management Rules, 2016, published by the Government of India in the Ministry of Environment, Forest and Climate Change, as amended from time to time.

(14) Vehicular traffic.- The vehicular movement of traffic shall be regulated in a habitat friendly manner and specific provisions in this regard shall be incorporated in the Zonal Master Plan and till such time as the Zonal Master plan is prepared and approved by the Competent Authority in the State Government, the Monitoring Committee shall monitor compliance of vehicular movement under the relevant Acts and the rules and regulations made thereunder.

(15) Vehicular pollution.- Prevention and control of vehicular pollution shall be incompliance with applicable laws and efforts shall be made for use of cleaner fuels.

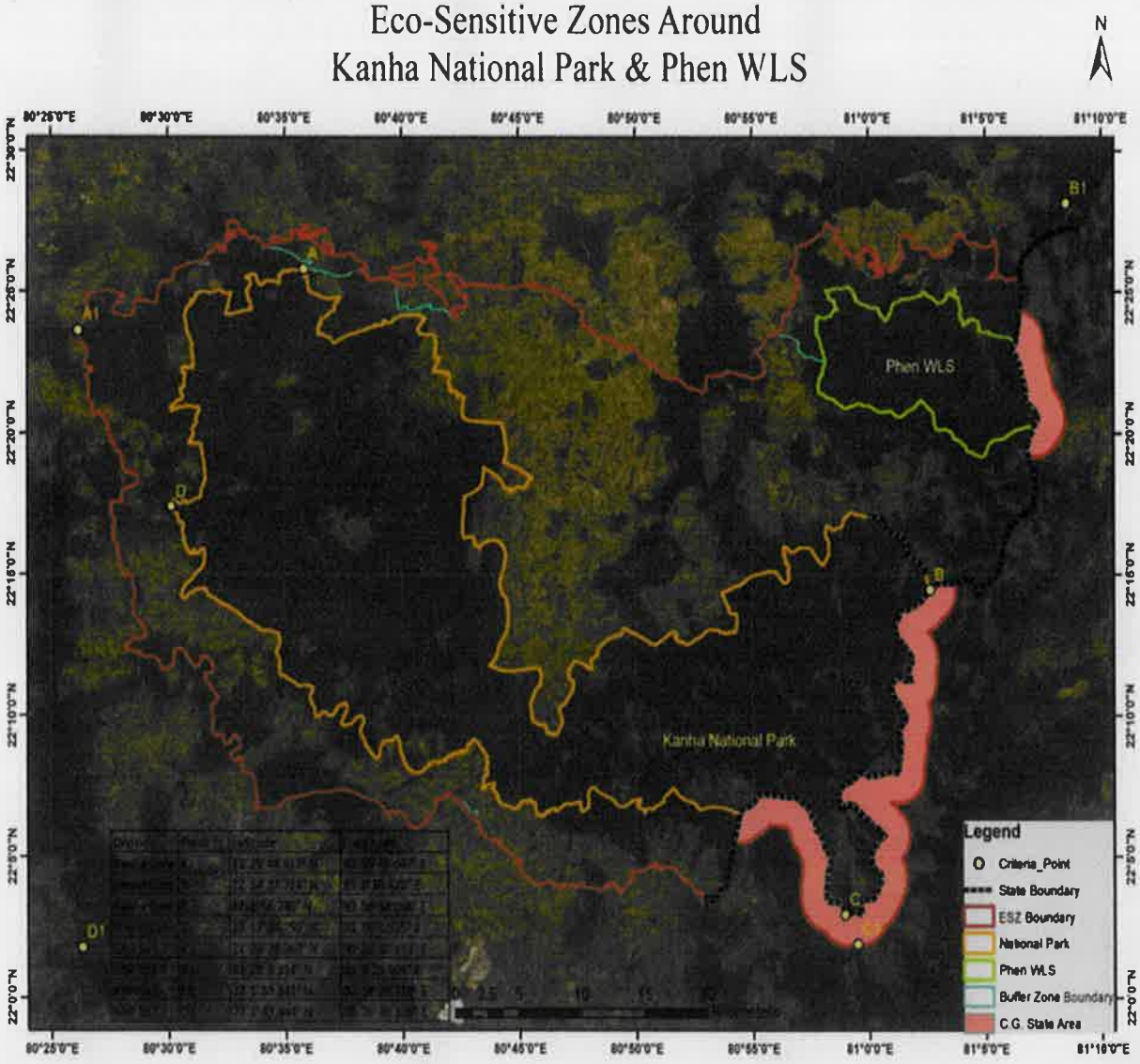
(16) Industrial units.- (a) On or after the publication of this notification in the Official Gazette, no new polluting industries shall be permitted to be set up within the Eco-sensitive Zone.

(ii) Only non-polluting industries shall be allowed within Eco-sensitive Zone as per the classification of Industries in the guidelines issued by the Central Pollution Control Board in February, 2016, as amended from time to time, unless so specified in this notification, and in addition, the non-polluting cottage industries shall be promoted.

(17) Protection of hill slopes.- The protection of hill slopes shall be as under:-

(a) The Zonal Master Plan shall indicate areas on hill slopes where no construction shall be permitted; (b) Construction on existing steep hill slopes or slopes with a high degree of erosion shall not be permitted.

GOOGLE MAP OF ECO-SENSITIVE ZONE AROUND KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY ALONG WITH LATITUDE AND LONGITUDE OF PROMINENT LOCATIONS



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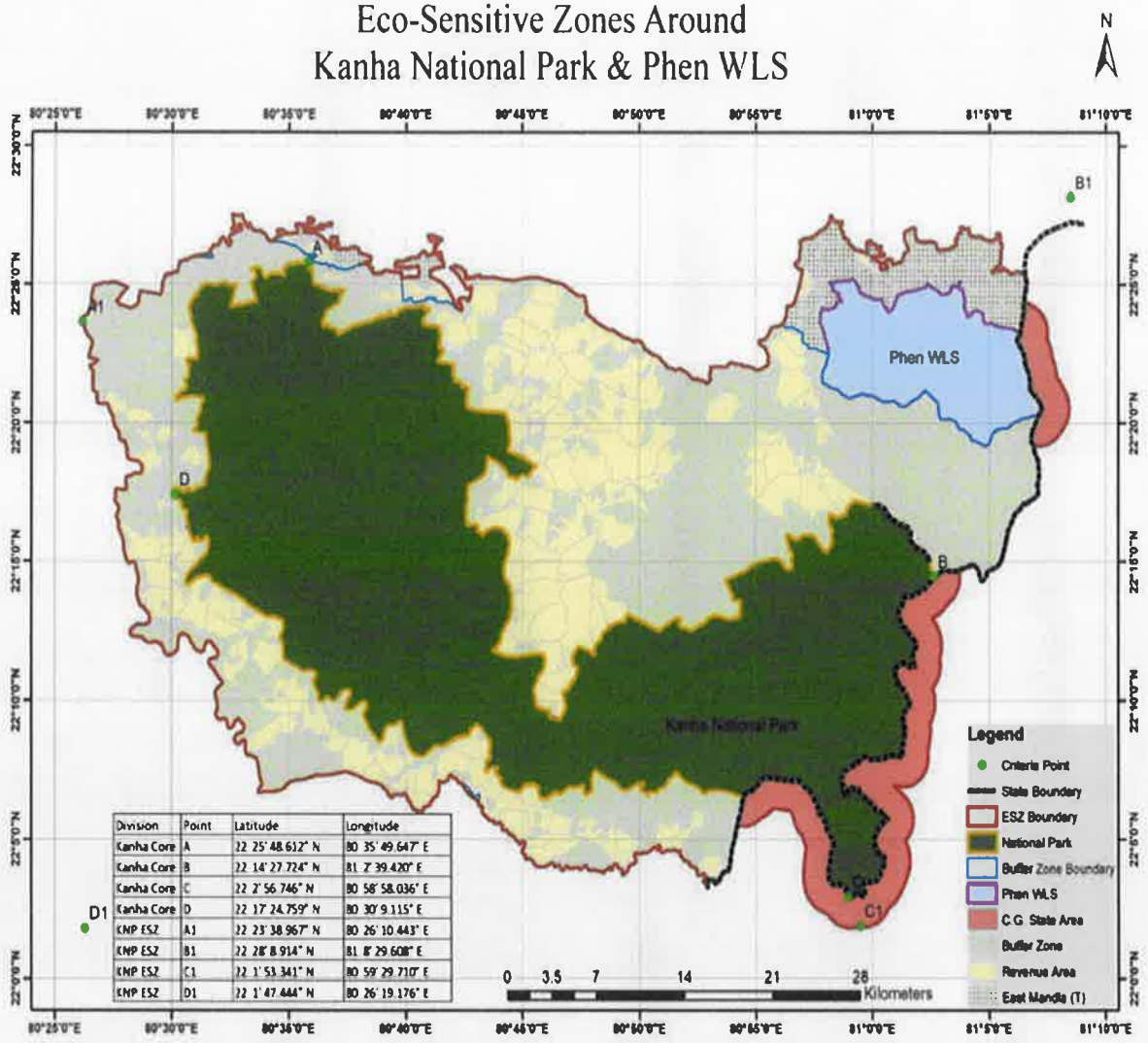
MAP OF ECO-SENSITIVE ZONE OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY ALONG WITH LATITUDE AND LONGITUDE OF PROMINENT LOCATIONS



Division	Point	Latitude	Longitude
Kanha Core	A	22 25' 48.612" N	80 35' 49.647" E
Kanha Core	B	22 14' 27.724" N	81 2' 39.420" E
Kanha Core	C	22 2' 56.746" N	80 58' 58.036" E
Kanha Core	D	22 17' 24.759" N	80 30' 9.115" E
KNP ESZ	A1	22 23' 38.967" N	80 26' 10.443" E
KNP ESZ	B1	22 28' 8.914" N	81 8' 29.608" E
KNP ESZ	C1	22 1' 53.341" N	80 59' 29.710" E
KNP ESZ	D1	22 1' 47.444" N	80 26' 19.176" E

TABLE A: GEO- COORDINATES OF PROMINENT LOCATIONS OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY

Point Code	Latitude	Longitude	Direction
Kanha National Park			
A	22°25' 48.61" N	80°35' 49.65" E	North
B	22°14' 27.72" N	81°02' 39.42" E	East
C	22°02' 56.74" N	80°58' 58.02" E	South
D	22°17' 24.75" N	80°30' 09.11" E	West
Phen Wildlife Sanctuary			
C	22°19' 10.25" N	81°7'17.76" E	North
B	22°25' 14.05" N	81°7'17.76" E	East

A	22°25' 13.48" N	80°57'44.26" E	South
D	22°19' 09.67" N	80°57'44.25" E	West

TABLE B: GEO-COORDINATES OF PROMINENT LOCATIONS OF ECO-SENSITIVE ZONE AROUND KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY

Kanha National Park - Phen Wildlife Sanctuary Eco-sensitive Zone			
Point Code	Latitude	Longitude	Direction
A1	22°23' 38.96" N	80°26' 10.44" E	North
B1	22°28' 08.91" N	81°08' 29.60" E	East
C1	22°01' 53.34" N	80°59' 29.71" E	South
D1	22°01' 47.44" N	80°26' 19.17" E	West

ANNEXURE-IV TABLE A. LIST OF VILLAGES COMING UNDER ECO-SENSITIVE ZONE OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY ALONG WITH GEO-COORDINATES

Sl. No.	Name of Division	Name of Village	Legal Status	District	Longitude			Latitude		
94	Buffer Zone	Hatta	Revenue	Mandla	80	50	32.35	22	21	19.52
95	Buffer Zone	Batwar	Revenue	Mandla	80	30	18.24	22	22	58.76
96	Buffer Zone	Boda Chhapri	Revenue	Mandla	80	28	39.44	22	20	3.62
97	Buffer Zone	Dhamangaon	Revenue	Mandla	80	32	9.76	22	25	15.42
98	Buffer Zone	Khatia Narangi	Revenue	Mandla	80	31	11.21	22	18	44.05
99	Buffer Zone	Khisi	Forest Village	Mandla	80	28	47.06	22	24	24.05
100	Buffer Zone	Kutwahi	Revenue	Mandla	80	27	47.72	22	20	45.33
101	Buffer Zone	Manegaon	Forest Village	Mandla	80	28	54.03	22	17	32.81
102	Buffer Zone	Mocha	Revenue	Mandla	80	29	20.83	22	18	48.80
103	Buffer Zone	Patpara	Revenue	Mandla	80	29	42.17	22	16	58.20
104	Buffer Zone	Samaiya (Bhagpur)	Forest Village	Mandla	80	31	7.32	22	25	29.71
105	Buffer Zone	Sotia	Revenue	Mandla	80	29	51.70	22	19	50.65
106	Buffer Zone	Baila	Forest Village	Mandla	81	2	39.75	22	18	59.32

107	Buffer Zone	Bandarwari	Forest Village	Mandla	81	1	10.87	22	17	29.31
108	Buffer Zone	Bhalapuri	Revenue	Mandla	80	56	20.94	22	18	18.26
109	Buffer Zone	Bhapsa	Revenue	Mandla	80	56	11.18	22	23	0.84
110	Buffer Zone	Bhimdongri	Revenue	Mandla	80	58	12.81	22	17	49.65
111	Buffer Zone	Bhimori	Forest Village	Mandla	81	4	48.74	22	17	3.05
112	Buffer Zone	Devgaon	Forest Village	Mandla	81	6	33.44	22	19	20.91
113	Buffer Zone	Harratola	Forest Village	Mandla	81	2	53.92	22	17	49.24
114	Buffer Zone	Khursipar	Forest Village	Mandla	80	59	22.42	22	18	24.75
115	Buffer Zone	Kikra	Revenue	Mandla	80	56	3.55	22	19	56.09
116	Buffer Zone	Kikra (Khaksatand)	Forest Village	Mandla	80	56	17.22	22	20	10.96
117	Buffer Zone	Kukti Sarai	Forest Village	Mandla	81	5	47.85	22	17	16.12
118	Buffer Zone	Lalpur	Revenue	Mandla	80	57	23.56	22	21	6.75
119	Buffer Zone	Mangli	Forest Village	Mandla	81	0	29.76	22	17	19.84
120	Buffer Zone	Manhori	Forest Village	Mandla	81	3	2.51	22	15	7.55
121	Buffer Zone	Margaon	Revenue	Mandla	80	57	45.94	22	19	43.49
122	Buffer Zone	Motinala	Revenue	Mandla	80	54	4.90	22	20	50.26
123	Buffer Zone	Narharganj	Revenue	Mandla	80	55	58.21	22	22	39.71
124	Buffer Zone	Newsa	Revenue	Mandla	80	55	35.61	22	21	27.70
125	Buffer Zone	Panarikheda	Forest Village	Mandla	80	54	9.20	22	21	41.03
126	Buffer Zone	Atariya	Revenue	Mandla	80	43	30.65	22	21	15.91
127	Buffer Zone	Barkheda	Revenue	Mandla	80	45	27.72	22	23	48.83
128	Buffer Zone	Bhimpuri Ryt	Revenue	Mandla	80	44	16.02	22	20	35.20
129	Buffer Zone	Birsa Mal	Revenue	Mandla	80	47	32.05	22	21	48.45

130	Buffer Zone	Chandgoan Ryt	Revenue	Mandla	80	56	5.64	22	17	21.75
131	Buffer Zone	Chandiya Ryt	Revenue	Mandla	80	41	35.25	22	23	32.94
132	Buffer Zone	Chatuakhar	Revenue	Mandla	80	44	57.19	22	22	21.32
133	Buffer Zone	Chauranga	Revenue	Mandla	80	44	56.03	22	23	11.09
134	Buffer Zone	Dharampuri Mal	Revenue	Mandla	80	46	2.00	22	20	34.85
135	Buffer Zone	Dharampuri Ryt	Revenue	Mandla	80	45	43.53	22	20	26.32
136	Buffer Zone	Indra	Forest Village	Mandla	80	43	42.05	22	23	36.90
137	Buffer Zone	Indri Ryt	Revenue	Mandla	80	57	17.74	22	17	39.32
138	Buffer Zone	Jailwara	Revenue	Mandla	80	43	50.52	22	22	31.97
139	Buffer Zone	Jogisonrha	Revenue	Mandla	80	42	52.26	22	23	34.57
140	Buffer Zone	Karanjiya	Revenue	Mandla	80	46	47.13	22	22	46.78
141	Buffer Zone	Katanga	Revenue	Mandla	80	39	43.15	22	25	27.15
142	Buffer Zone	Khalodi	Revenue	Mandla	80	43	51.66	22	24	18.50
143	Buffer Zone	Khalodi Ryt	Revenue	Mandla	80	45	51.36	22	24	18.58
144	Buffer Zone	Khamhariya	Revenue	Mandla	80	55	8.73	22	17	55.00
145	Buffer Zone	Khatola	Revenue	Mandla	80	42	19.08	22	22	53.15
146	Buffer Zone	Kisli Ryt	Revenue	Mandla	80	44	54.64	22	19	17.26
147	Buffer Zone	Magdha	Revenue	Mandla	80	32	49.78	22	26	54.88
148	Buffer Zone	Mangaveli Mal	Revenue	Mandla	80	46	41.51	22	21	34.56
149	Buffer Zone	Mangaveli Ryt	Revenue	Mandla	80	45	53.89	22	21	29.84
150	Buffer Zone	Manjhipur	Revenue	Mandla	80	42	17.18	22	25	13.55
151	Buffer Zone	Manoharpur	Revenue	Mandla	80	44	31.37	22	17	21.39
152	Buffer Zone	Mohad	Revenue	Mandla	80	45	49.73	22	22	15.07

153	Buffer Zone	Mohgaon	Revenue	Mandla	80	37	2.31	22	25	17.30
154	Buffer Zone	Murkuta Ryt	Revenue	Mandla	80	57	24.77	22	18	23.94
155	Buffer Zone	Rajo Mal	Revenue	Mandla	80	46	21.97	22	19	22.97
156	Buffer Zone	Rajo Ryt	Revenue	Mandla	80	46	15.25	22	19	5.60
157	Buffer Zone	Saliwara	Revenue	Mandla	80	55	29.29	22	18	54.77
158	Buffer Zone	Sarhi	Revenue	Mandla	80	39	16.25	22	24	40.09
159	Buffer Zone	Shahpur	Revenue	Mandla	80	32	21.57	22	26	19.50
160	Buffer Zone	Sijhora	Revenue	Mandla	80	46	42.23	22	24	36.20
161	Buffer Zone	Taktua	Revenue	Mandla	80	39	11.95	22	25	3.33

TABLE B. LIST OF VILLAGES OF OTHER DIVISION (WITHIN 2 KILOMETRES PERIPHERY) FALLING UNDER ECO-SENSITIVE ZONE OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY ALONG WITH GEO-COORDINATES

Sl. No.	Name of Division	Name of Village	Legal Status	District	Longitude			Latitude		
1	East Mandla	Maulasani Ryt	Revenue	Mandla	80	36	09.90	22	26	16.40
2	East Mandla	Mowala Mal	Revenue	Mandla	80	36	46.39	22	26	8.24
3	East Mandla	Majhgaon	Revenue	Mandla	80	59	37.56	22	25	58.01
4	East Mandla	Khudrahi	Forest Village	Mandla	80	57	8.42	22	24	16.01
5	East Mandla	Sathiya	Forest Village	Mandla	81	3	40.72	22	25	1.32
6	East Mandla	Orai	Forest Village	Mandla	81	1	49.51	22	25	26.82
7	East Mandla	Saida	Forest Village	Mandla	80	58	04.36	22	26	49.47
8	East Mandla	Surajpura	Forest Village	Mandla	80	56	54.58	22	25	52.59

ANNEXURE- V TABLE A. LEGAL STATUS AND EXTENT OF AREA (REVENUE AREA) WITHIN THE ECO-SENSITIVE ZONES OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY

Sl. No.	Division	District	Range	Beat	Name of Village	Legal Status	Area (ha.)
1	Buffer Zone	Mandla	Khatia	Chhapri	Soutia	Revenue	346.000
2	Buffer Zone	Mandla	Khatia	Chhapri	Bodachhapri	Revenue	533.000

3	Buffer Zone	Mandla	Khatia	Khatia	Khatia	Revenue	700.000
4	Buffer Zone	Mandla	Khatia	Mocha	Mocha	Revenue	518.000
5	Buffer Zone	Mandla	Khatia	Mocha	Patpra	Revenue	296.000
6	Buffer Zone	Mandla	Khatia	Samaiya	Dhamangaon	Revenue	247.250
7	Buffer Zone	Mandla	Khatia	Batwar	Batwar	Revenue	384.000
8	Buffer Zone	Mandla	Khatia	Aroli	Kutwahi	Revenue	903.000
9	Buffer Zone	Mandla	Sijhora	Sijhora	Khaloundi Ryt	Revenue	478.350
10	Buffer Zone	Mandla	Sijhora	Sijhora	Sijhora	Revenue	490.140
11	Buffer Zone	Mandla	Sijhora	Sijhora	Karanjiya	Revenue	677.090
12	Buffer Zone	Mandla	Sijhora	Sijhora	Barkheda	Revenue	537.040
13	Buffer Zone	Mandla	Sijhora	Sijhora	Chouranga	Revenue	483.890
14	Buffer Zone	Mandla	Sijhora	Chatuakhar	Mohad	Revenue	417.320
15	Buffer Zone	Mandla	Sijhora	Chatuakhar	Bhimpuri Ryt	Revenue	412.520
16	Buffer Zone	Mandla	Sijhora	Chatuakhar	Atriya	Revenue	223.000
17	Buffer Zone	Mandla	Sijhora	Chatuakhar	Jailwara	Revenue	314.380
18	Buffer Zone	Mandla	Sijhora	Chatuakhar	Chatuakhar	Revenue	344.520
19	Buffer Zone	Mandla	Sijhora	Manoharpur	Kisli Ryt	Revenue	633.320
20	Buffer Zone	Mandla	Sijhora	Manoharpur	Manoharpur	Revenue	1054.710
21	Buffer Zone	Mandla	Sijhora	Manoharpur	Rajo Ryt	Revenue	287.000
22	Buffer Zone	Mandla	Sijhora	Manoharpur	Rajo Mal	Revenue	385.440
23	Buffer Zone	Mandla	Sijhora	Manoharpur	Mangaweli Ryt	Revenue	394.090
24	Buffer Zone	Mandla	Sijhora	Manoharpur	Dharampuri Ryt	Revenue	109.620
25	Buffer Zone	Mandla	Sijhora	Manoharpur	Dharampuri Mal	Revenue	479.510
26	Buffer Zone	Mandla	Sijhora	Manoharpur	Mangaweli Mal	Revenue	344.420
27	Buffer Zone	Mandla	Sijhora	Manoharpur	Birsa	Revenue	359.470
28	Buffer Zone	Mandla	Sijhora	Sarhi	Taktaoa	Revenue	460.130
29	Buffer Zone	Mandla	Sijhora	Manjhipur	Khatola	Revenue	311.760
30	Buffer Zone	Mandla	Sijhora	Manjhipur	Jogisoda	Revenue	230.970
31	Buffer Zone	Mandla	Sijhora	Manjhipur	Manjhipur	Revenue	766.820

32	Buffer Zone	Mandla	Sijhora	Manjhipur	Katanga	Revenue	219.760
33	Buffer Zone	Mandla	Sijhora	Manjhipur	Sarhi	Revenue	291.340
34	Buffer Zone	Mandla	Sijhora	Manjhipur	Chandia Ryt	Revenue	374.950
35	Buffer Zone	Mandla	Sijhora	Katangi	Mohgaon	Revenue	70.010
36	Buffer Zone	Mandla	Sijhora	Katangi	Magdha	Revenue	195.740
37	Buffer Zone	Mandla	Sijhora	Katangi	Sahpur	Revenue	253.710
38	Buffer Zone	Mandla	Motianala	Narharganj	Narharganj	Revenue	373.060
39	Buffer Zone	Mandla	Motianala	Narharganj	Newsa	Revenue	506.230
40	Buffer Zone	Mandla	Motianala	Narharganj	Lalpur	Revenue	246.660
41	Buffer Zone	Mandla	Motianala	Narharganj	Bhapsa	Revenue	230.190
42	Buffer Zone	Mandla	Motianala	Motinala	Motinala	Revenue	386.080
43	Buffer Zone	Mandla	Motianala	Murkuta	Murkuta Ryt	Revenue	256.010
44	Buffer Zone	Mandla	Motianala	Murkuta	Indri Ryt	Revenue	549.490
45	Buffer Zone	Mandla	Motianala	Murkuta	Chandgaon Ryt	Revenue	635.350
46	Buffer Zone	Mandla	Motianala	Murkuta	Karanjiya (Khamriya)	Revenue	275.950
47	Buffer Zone	Mandla	Motianala	Murkuta	Saliwada Ryt	Revenue	192.010
48	Buffer Zone	Mandla	Motianala	Murkuta	Khaloundi	Revenue	289.530
49	Buffer Zone	Mandla	Motianala	Murkuta	Kikra	Revenue	162.270
50	Buffer Zone	Mandla	Motianala	Murkuta	Margaon	Revenue	230.610
51	Buffer Zone	Mandla	Motianala	Murkuta	Bhalapuri	Revenue	289.750
52	Buffer Zone	Mandla	Motianala	Mangli	Bhimdongri	Revenue	597.130

TABLE B. LEGAL STATUS AND EXTENT OF AREA (REVENUE AREA) OF OTHER DIVISION IN THE ECO-SENSITIVE ZONES OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY (WITHIN THE 2 KILOMETRES PERIPHERY)

Sl. No.	Division	District	Range	Beat	Name of Village	Legal Status	Area (ha.)
1	East Mandla	Mandla	Jagmandal	Orai	Maulasani Ryt	Revenue	106.380
2	East Mandla	Mandla	Jagmandal	Muala	Mowala Mal	Revenue	177.280
3	East Mandla	Mandla	Motinala	Majhgaon	Majhgaon	Revenue	290.600
			Total:				**574.260**

TABLE D. FOREST AREAS OF OTHER DIVISION INCLUDED IN THE ECO-SENSITIVE ZONE OF KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY (WITHIN 2 KILOMETRES PERIPHERY)

Division	ESZ	Range	Beat	Compartment	Legal Status	Area (Ha.)
East Mandla	Kanha National Park	Jagmandal	Orai	736	RF	227.095
East Mandla	Kanha National Park	Jagmandal	Orai	737	RF	30.485
		Total (Jagmandal):				**257.58**
East Mandla	Kanha National Park	Bichhiya	Mowala	1544	RF	306.087
		Total (Bichhiya):				**306.087**
East Mandla	Kanha National Park	Motinala	Bichhiya	1466	RF	398.639
		Total (Motinala):				**398.639**
East Mandla	Phen WLS	Mawai	Majhgaon	1210	RF	320.581
East Mandla	Phen WLS	Mawai	Majhgaon	1211	RF	453.632
East Mandla	Phen WLS	Mawai	Majhgaon	1205	RF	268.737
East Mandla	Phen WLS	Mawai	Majhgaon	1204	RF	250.096
East Mandla	Phen WLS	Mawai	Khudrahi	1206	RF	242.908
East Mandla	Phen WLS	Mawai	Khudrahi	1209	RF	367.632
East Mandla	Phen WLS	Mawai	Khudrahi	1207	RF	195.848
East Mandla	Phen WLS	Mawai	Khudrahi	1208	RF	204.239
East Mandla	Phen WLS	Mawai	Orai	1202	RF	266.235
East Mandla	Phen WLS	Mawai	Orai	1203	RF	259.933
East Mandla	Phen WLS	Mawai	Orai	1198	RF	207.288
East Mandla	Phen WLS	Mawai	Orai	1199	RF	218.002
East Mandla	Phen WLS	Mawai	Orai	1195	RF	273.314
East Mandla	Phen WLS	Mawai	Orai	1196	RF	253.665
East Mandla	Phen WLS	Mawai	Orai	1197	RF	247.821
East Mandla	Phen WLS	Mawai	Rehngi	O-2108	OA	5.294
East Mandla	Phen WLS	Mawai	Rehngi	1200	RF	20.493
East Mandla	Phen WLS	Mawai	Rehngi	O-2110	OA	5.926
East Mandla	Phen WLS	Mawai	Rehngi	O-2109	OA	2.193
East Mandla	Phen WLS	Mawai	Rehngi	1201	RF	113.829

East Mandla	Phen WLS	Mawai	Sathiya	1341	RF	276.633
East Mandla	Phen WLS	Mawai	Sathiya	1347	RF	285.373
East Mandla	Phen WLS	Mawai	Sathiya	1343	RF	270.968
East Mandla	Phen WLS	Mawai	Sathiya	1338	RF	378.929
East Mandla	Phen WLS	Mawai	Sathiya	1339	RF	411.602
East Mandla	Phen WLS	Mawai	Sathiya	1344	RF	221.946
East Mandla	Phen WLS	Mawai	Sathiya	1345	RF	251.964
East Mandla	Phen WLS	Mawai	Sathiya	1348	RF	256.598
East Mandla	Phen WLS	Mawai	Sathiya	1346	RF	268.256
		Total (Mawai):				6799.935
Total (East Mandla):						**7762.241**

TABLE E. AREA ABSTRACT OF ECO-SENSITIVE ZONE AROUND KANHA NATIONAL PARK - PHEN WILDLIFE SANCTUARY

Sl. No.	Name of the Division	Forest Area (Ha.)	Revenue Area (Ha.)	Total Area (Ha.)
1.	Buffer Zone (Kanha TR)	59813.890	53617.070	113430.960
2.	East Mandla (T)	7762.241	574.260	8336.501
	Total:	**67576.131**	**54191.330**	**121767.461**

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CHAPTER - 21
IMPACT ON ENVIRONMENT DUE TO THE MINING ACTIVITY

Impact on Environment due to mining activites varies based on quantum of production rate proposed. The different activites involved before & during mining are narrated below, which helps to assess the impact on environment. Population growth, economic development and environmental degradation are interlinked with each-other. The high growth in population speeds-up economic activities. Meanwhile, it also deteriorates environment as for the high level of economic development, plenty of natural resources are exploited. Similarly, mining activities have considerable impacts on environment.

Land degradation is one of the significant impacts arising out of mining and quarrying activity which is mainly in the form of alternation of land structrure due to excavation, stacking of top soil and loss of the land due to dumping of mine waste and overburden soil. Stone and sand dquarrying causes damage to property, deplection of ground water, loss of fertile top soil, degradation of forest land, adverse effect on the biodiversity and public health.

Mining and quarrying, either open cast or underground, destroys landscape and forest ecosystems. The waste materials that remain after the extraction of usable ores are dumped on the surrounding land, thus causing loss of top soil. Nutrients and supportive micro flora and vegetation. Air pollution, due to dust from the mines, is a common enviromental problem in mines and quarries especially open cast operations. Stone Mining activities are normally associated with different types of pollution is regarded as the most notable one, where particulate matter (dust) are generated and found in the surrounding areas of such activities. Particles with aerodynamic of less than 50 µm (termed Total Suspended Particulate matter, or TSP) can become suspended in the atmosphere, and those with aerodynamic diameters of less than 10 µm termed PM10 (inhalable particles) can be transported over long distances, and enter the human respiratory system.

Noise pollution is associated with many types of equipment used in mining operations, but blasting is considered the major source. Loud sound disturbed the vegetable nearby the area. It also affects stability of infrastructures, bulding and homes of people living near to these working sites. In this regard, noise pollution may include noise from vehicle engines, loading and unloading of rock into steel dumpers, chutes, power generation, and other sources. Mining operations impact the environment in several ways, and water pollution is a major concern in such operations. For instance quarry dust can change the chemistry of water resources by dissolving in them, it can also settle in water bodies and cause pollution. Furthermore, these operations disrupt the existing movement of surface water and groundwater; they interrupt natural water recharge and can lead to reduced quantity and quality of drinking water for residents and wildlife near or downstreams from a quarry site.

The pollution potential of the proposed project, it is possible impacts on the surrounding environment during pre-operational and operational phases and the necessary management actions proposed for control and abatement of pollution are furnished here under.

Impact on the some component of the environment is as below;

Air environment:

Althought mining does not cause any direct change in air environment, transportation etc In stone mining operations, the source of air pollution may cause deterioration of quality due to the fugitive dust emission during blasting, scooping, loading-unloading operations and transportation.

Loading and unloading of mineral would be associated with the fugitive emission in the active area whereas fugitive emission during transportation would affect the areas/villages situated adjacent to road side. Another source of air pollution would be emission from the trucks/tractor/other vechicles to be used of transportation of soil.

Water environment:

As far as impact on surface water is concerned, during mining and transportation, there are chances of contamination of surface water resources (pond, well etc.) with dust or by other means.

The labourers working in stone mining come from meighboring districts and colonies in the surrounding areas with inadequate facilities for waste disposal. This, in due course, leads to disposal of various things into surface water bodies which in due course of time results into surface water contamination through misuse/ mismanagement and decomposition of the trash.

Land environment:

There shall be no major impacts of stone mining on land due to rocky terrain having no soil cover generation of top soil shall be nil. Other impacts on land include disposal of packing material, carried by the workers. This packing material would include used sachet/gutka/pan masala pouches. Polythene bags are used by the workers to bring their foods etc.

Noise environment:

As far as noise pollution is concerned, blasting is considered the major source of noise pollution. The machinery used in mining of stone mineral creates sound and vibrates. As well as vechicles used for transport, loading- unloading of mineral etc. put impact on noise environment. Noise level in the working environment should be compared with the standards prescribed by central pollution.

Control Board which has been adopted and enforced by the Govt. of India through The Noise Pollution (Regulation and control) Rules, 2000.

Flora and Fauna:

The mining is a destructive activity generated by human being for providing strength and security to his living standard. The mining in the concerned zones provides raw materials in the form of crusher, gravels and stones, etc.for construction of roads, railway line and other infrastructures.

From the last few years the mining rate has increased several times. It results in the loss of biodiversity of both flora and fauna and physiographic features of the concerned region.

CHAPTER-22
REMEDIAL MEASURES TO MINTIGATE THE IMPACT OF MINING ON THE ENVIRONMENT

1.1 Air Enviornment:

Mitigation Measures

a) For Fugitive Dust Emission:

- All trucks should be covered by tarpaulin sheet to prevent dust emission.
- Water spraying should be there in haul road, crusher and mining area.
- Wet drilling should be preferred
- Sharp drill rods should be used to reduce dust generation
- Dust extractor should be used to reduce dust generation

b) For vehicular Emission:

- Overloading of trucks and trolleys should be prevented.
- Vechicular emission can pose serious health hazard. During the earth mining extraction, tractor/ truck should be used for transportation. Tractor/truck comprises of diesel engine produce particles are dangerously fine of PM10 & PM2.5. It is well known fact that combustion of diesel generates small particulate matter, nitrogen oxides and sulphur dioxide.
- Ultra low sulphur diesel should be used in vechicle. CPCB prescribed emission standards for the vehicle would be followed.
- Monitoring of dust fall at land located nearby the mining area.

1.2 Water Enviornment:

Mitigation measures

- Safeguards will be adopted against health risks on account of breeding of vectors in the water bodies created due to excavation.
- Labourers should not be allowed to through trashes in water bodies.
- Utmost care should be taken to minimize or control oil spills or leakage from vehicles used for soil transportation
- Water Quality Monitoring for the, ground watet should be carried out seasonally to ensure that the water quality is not affected by the project activities.
- The contractor should adhere all guidelines and rules for proper and scientific method of mining during the period of extracting of minerals that the project activities should not have any adverse effect on the physical components of the environment including recharge of ground waters or water quality.

1.3 Land Environment:

Mitigation measures

- Foreign materials like polythene bag, jute bag and useless articles should not be allowed to remain/spill on the land, or no pits/pockets should be allowed to be filled with such material.
- Mining should not exceed beyond the agreed extraction depth.
- Development of thick plants around mining lease areas.

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1.4 Noise environment:

Mitigation measures

- Well maintained vehicles should be used in order to reduce the noise during movement of vehicles.
- Regular and proper maintenance of transportation vechiles (trucks, tractor etc.) should be ensured.
- Proper and timely maintenance of machineries
- Major noise generating Equipments like DG set shall be housed.

1.5 Flora and Fauna:

Mitigation measures

- Sediment and erosion control by planting native trees and shrubs to stabilize degraded farming land.
- Regular monitoring of plants and animals on site.
- Establishing and maintaining habitat corridors.
- Controlling access to the site to protect habitats.

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CHAPTER-23
RECLAMATION ON MINED OUT AREA IN THE DISTRICT

(Best practice already implemented in the District, Requirement as per Rules and Regulation Proposed Reclamation Plan)

As per Madhya Pradesh Minor Mineral Rules 1996, quarry after exhaustion of mineral and on abandonment, the pit be used as a water tank or be used for fish culture or be used for Municipal solid waste dump yard.

As per requirement of Madhya Pradesh Minor Mineral Rules 1996 every stone quarry after exhaustion of minerals will plan Final Mine Closure Plan with the approval of Directorate of Geology and Mining GoMP and abandon the stone quarry as per method of approval within time frame prescribed and approved by authority.

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CHAPTER-24
RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Risk Assessment:

The proposed project involves stone mining through semi mechanized opencast mining. The anticipated risks are mentiond below:

Inundation

There is no chance of inundation of mine pits from surface waters such as rivers or nalas as it is situated a long away from river.

The lease hold areas in terms of temporary permits are located in the Dindori district of Madhya pradesh and the area in general receives appreciable amount of rain fall, which is in the range of 1450 mm (annual average).

Pit slope & dump slope failures

Mining is restricted to an average depth of 18 m from surface levels. No permanent dumps are proposed.

Dust from the screening & crushing operations

The hazard is the inhalation of dust which is created during the screening & crushing operations which may result in the various respiratory diseases to the workers. While it is not presently possible to totally remove the hazard, properly applied control measures can substantially reduce the risk. The dust generated during the screening & crushing operations can be controlled by providing proper enclosure to the plant area and by installing rain guns at transfer points inside the plant.

Water sprinkling at the crushing and screening plant units also forms an effective measure of controlling dust generation. Provision of green belt surrounding the plant area will further suppress the spread of airborne dust to the surrounding atmosphere. The workers engaged in these operations will be provided with dusk masks.

Noise

Loading, screening & crushing operations give rise to harmful levels of noise. Noise generated by screening & crushing can be well controlled by providing enclosure and the green belt. The workers engaged will be provided with ear muffs.

Loading

The main hazard associated with loading is the Mineral falling on to the loading labour/tractor, tractor toppling over due to uneven ground, failure of hydraulic systems. Good housekeeping practices, regular cleaning of the haulage roads and regular maintenance of the tractors, loading operations under supervision of competent presons, etc will be done to avoid such accidents.

Explosives

No magazine is within lease hold area. Contractual blasting is proposed. Personal protective Equipment (PPE) The PPE should be of good construction, where ever possible ISI certified, suitable for the hazard e.g. a dust respirator fitted with the correct filter to capture the particular hazardous dust and maintained to recommended standards. As personal protective.

Equipment only affords limited protection it should only be used as a last resort and then as an interim arrangement until other steps are taken to reduce the risk of personal injury to an acceptable level.

Disaster Management plan:

The following natural/industrial hazards may occur during normal operation:-

- Inundation of mine pit due to flood/excessive rains;
- Slope failure of pits
- Accident due to explosives;
- Accident due to heavy mining equipment

Mine Disaster

Thousands of miners die each year around the globe due to mining accidents, especially from underground coal mining, although hard rock mining is not immune from accidents, Underground mining has considerably less impact than opencast mining on land; it causes enough damage through subsidence. Apart from this, explosive natural gases, especially firedamp, dust explosions, collapsing of mine stones, mining-induced seismicity, flooding, or general mechanical errors from inproperly used or malfunctioning mining equipment and improper explosives underground can also cause to catastrophe.

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CHAPTER-25
DETAILS OF OCCUPATIONAL HEALTH (LAST FIVE YEAR DATA OF NUMBER OF PATIENT OF SILICOSIS & TUBERCULOSIS)

Health Hazards in Mining:

Some are the major health Hazards in mining as below:

Airborne particulate hazards:

Free crystalline silica is the most abundant material in the crust of the earth and is therefore the most common airborne powder encountered by miners and quarry employees. Althought quartz may also appear as tridimite or christobalite, the most common form of silica. Once silica-bearing rock is drilled, blasted, crushed or otherwise pulverized into fine particles, breathable particles are produced. The quantity of silica in different rock species varies but is not a reliable indicator of how much silica dust in an air sample can be found.

With sufficient exposure, silica can cause silicosis, a typical pneumoconiosis that develops insidiously after years of exposure. Exceptionally high exposure can cause acute or accelerated silicosis within months with significant impairment or death occurring within a few years. Exposure to silica is also associated with an increased risk of tuberculosis, lung cancer and of some autoimmune diseases, including scleroderma, systemic lupus erythematosus and rheumatoid arthritis.

Physical hazards:

Noise in mining is omnipresent. It is created by the ore`s powerful machines, fans, blasting and transport. Typically the underground mine has limited space, producing a reverberant environment. Noise sensitivity is higher than in a more open environment where the same sources are present.

The use of conventional means of noise control on mining machinery will reduce exposure to noise.

Chemical hazards:

Crystalline silica has long been a serious hazard in mining, with the risk of silicosis. Silicosis has been subject to considerable investigation. Axial water-fed rock drills, wet techniques, ventilation, enclosed cabins and respiratory protection facility largely control silicosis.

Due to unavailability of data on the basis of survey by having a discussion with doctors and hospital staff, it has been indentified that there is very few cases of silicosis & tuberculosis comes through out the year which is very normal and can be found anywhere.

CHAPTER-26
PLANTATION AND GREEN BELT DEVELOPMENT IN RESPECT OF LEASE ALREADY GRANTED

The basic approach to green belt/ plant growth in the lease area is to provide an esthetic look, reduce fugitive pollution, and monitor noise effect, etc.

Green Belt will be developed bases on the following principles:

Protect natural or semi-natural environments;

- Improve air quality within urban areas;
- Protect the unique character of rural communities that might otherwise be absorbed by expanding suburbs.
- Plants that grow fast should be preferred
- Preference for high canopy covers plants with local varieties
- Perennial and evergreen plants should be preferred
- Plants having a high Air pollution Tolerance Index (APTI) should be preferred.

The green belt has many benefits for people:

Walking, camping, and biking areas close to the cities and towns.

- Contiguous habitat network for wild plants, animals and wildlife.
- Cleaner air and water.
- Better land use of areas within the bordering cities.

Greenbelt Development & Plantation Programme,

Plantation should be developed at 2 M x 2 M spacing, the rate of survival should be aimed at 80% by regular watering & fencing to keep plants safe from animal grazing. Local species will be planted in consultation with local horticulturist. Diseased plants should be replaced by planting new saplings.

Recommendation for green Belt Development

It is strongly recommended to create greenbelt around the project or in case lease failed the authority should take proper action to stop mining operation or revoke mining permission with necessary action.

S.No.	Botanical Name	Common Name
1	*Caesalpinia pulcherrima*	Krushnachuda
2	*Peltophorum ferrugineum*	Radhachuda
3	*Saraca indica*	Ashok
4	*Mimusops elengi*	Bakul
5	*Mangifera indica*	Mango
6	*Phyllanthus embilca*	Amla
7	*Psidium guava*	Guava
8	*Leucaena leucocephala*	Babul
9	*Annona squamosa*	Sitaphala
10	*Azadirachta indica*	Neem
11	*Millingtonia hortensis*	Akash neem

Sr No.	Name of Mineral	Name & Address of Lessee's	Contact No. of Lessee	Mining Lease Grant Order	Area in Ha	Proposed Plantation	Plantation Done By PP	Species
1	2	3	4	5	6	9	10	11
1	Dolomite	Shri Raghvendra Singhaniya S/o Shri Maluram Singhaniya Resi- Tatyapara Chowk, Raipur (CG)	8085130204	No. F-3-21/98/12/2 Bhopal Date 19.06.98	0.78	100	200	Karanj
2	Dolomite	Shri Santosh Jain S/o Shri Sampat Lal Jain Resi- TV Tower Road Shankar Nagar, Raipur (CG)	8085130204	No. F-3-22/98/12/2 Bhopal Date 19.06.1998	1.03	100	200	Mango, Neem, Kathal, Kajanj, Gulmohar
3	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi- Malviya Nagar Durg (CG)	7974008400	No. F-3-23/98/12/2 Bhopal Date 16.06.1998	2.41	250	250	Ratanjot, Mango, Gulmohar, Karanj, Kathal
4	Dolomite	Smt Aruna Sahare W/o Shri Narendra Share Resi-Civil Lines, Mandla (MP)	9425417793	No. F-3-16/2004/12/2 Bhopal Date 12.04.2005	6.60	700	600	Mango, Amla, Karanj
5	Dolomite	Shri Shobhakant Jha S/o Shri Sambhunath Jha Resi-Mandla (MP)	9424339424	No. F-3/421/85/12/2 Bhopal Date 15.10.1992	4.41	500	400	Mango, Karanj, Guava, Kathal, Jamun
6	Dolomite	Sumedha Minerals Pro. Smt Suman Agrawal W/o Late Shri Sameer Agrawal Resi-	9424339424	No. F-3-99/93/12/2 Bhopal Date 22.09.1997	4.45	500	450	Sagaun Kathal, Neebu
7	Dolomite	Shri Kamlesh Mohan Jhikram S/o Shri Mohanlal Jhikram Resi- Badi Khairi, Mandla (MP)	9301120567	No. F-3-10/94/12/1 Bhopal Date 12.12.1994	2.43	300	300	Mango, Sagaun Kathal, Jamun
8	Dolomite	Shri Praveen Chand Patel S/o Shri P D Patel Resi- Bastar Road, Dhamtari, Raipur (CG)	9425152137	No. F-3-38/2000/12/2 Bhopal Date 01 09.2001	3.14	300	250	Mango, Amla, Karanj, Sagaun
9	Dolomite	Smt Sheeldevi Jha W/o Shri Amidatt Jha Resi- Azad Ward, Mandla (MP)	9669589179	No. F-3-52/2006/12/2 Bhopal Date 19.2.2009	4.61	500	450	Amla, Karanj, Sagun, Gulmohar
10	Dolomite	Jai Shri Shyam Minerals Pro Shri Santosh Kumar Agrawal Resi-Bamhani Banjar, Mandla (MP)	9301120567	No. F-3-18/09/12/2 Bhopal Date 26.06.2011	4.48	500	500	Sagaun Mango, Amla, Karanj, Kathal

11	Dolomite	Taal Minerals Partner Neelu Pathak Smt Laxmi Agrawal Resi- Civil Line, Mandla (MP)	9425821414	No. F-21/2008/12/2 Date 05.04.2012	4.45	500	350	Mango, Sagaun Jamun
12	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi- Malviya Nagar, Durg (CG)	7974008400	No. F-3-121/93/121/2 Bhopal Date 15.01.1996	1.21	150	120	Mango, Sagaun Gulmohar
13	Dolomite	M/s Narmada Mininig Corporation Pro. Shri Nilesh Rai Resi-Mandla	9425138873	No. F-3-71/2007/12/2 Bhopal Date 14.08.2008	4.54	450	400	Mango, Amla, Sagaun Karanj, Kathal
14	Dolomite	Shri Nitin Kumar Agrawal S/o Shri Rajkumar Agrawal Resi- Mandla	9425163943	No. F-3-14/95/12/2 Bhopal Date 08.10.1996	1.81	200	200	Gulmohar Mango, Karanj
15	Dolomite	Smt Vidhya SoniResi-Bamhani Banjar, Mandla (MP)	9302573355	No. F-3-114/93/12/2 Bhopal Date 03.11.93	1.42	150	200	Mango, Shitaphala, Karanj, Sagun, Amla
16	Dolomite	Shri vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	No. F-3/149/93/12/2 Bhopal Date 21.06.2002	6.81	600	500	Mango, Sagaun
17	Dolomite	Shri Vinod Kumar Agrawal Resi- Civil Line, Mandla(MP)	9425821414	No. F-3/63/95/12/2 Bhopal Date 12.05.1997	5.11	500	400	Gulmohar, Sagaun, Karanj
18	Dolomite	Shri vinod Kumar Agrawal Resi- Civil Line, Mandla (MP)	9425821414	No. F-3/163/97/12/2 Bhopal Date 10.03.1998	3.23	300	300	Gulmohar, Karanj
19	Dolomite	Shri Arun Kumar DongasreResi Mandla (MP)	9301120567	No F-3-145/96/12/2 Bhopal Date 17.01.2000	1.40	150	200	Karanj, Mango, Pipal
20	Dolomite	Heera Power & Steels Limited Resi- Raipur (CG)	9424360784	No. F-3-4/2012/12/2 Date 31.07.2019	13.25	500	450	Sagaun, Karanj
21	Dolomite	M/s Super Minerals Pro SmtNavita Dubey Resi- Mandla (MP)	8989191948	No. F-3-95/93/12/2 Bhopal Date 10.11.1993	2.10	200	200	Sagaun, Mango
22	Dolomite	M/s Pooja Minerals Pro Shri Narendra Sihare Resi-Mandla (MP)	9425417793	F-3-47/2003/12/2 Bhopal Date 25.05.2007	1.21	150	200	Gulmohar, Mango, Sagaun

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23	Dolomite	M/s Pooja Minerals Pro Shri Narendra Sihare Resi-Mandla (MP)	9425417793	F-3-96/93/12/2 Bhopal Date 10.11.1993	2.22	250	300	Mango, Sagaun
24	Dolomite	Shri Narendra Goyal S/o Shri Hariram Goyal Resi-Guru Govind Nagar, Pandri, Dist-Raipur (CG)	7999081095	F-3-27/98/12/2 Bhopal Date 15.10.1998	2.08	200	200	Gulmohar, Karanj, Mango
25	Dolomite	Rocks Minerals Pro Shri Shobhakant Jha Resi-Mandla (MP)	9424339424	F-3-10/92/12/2 Bhopal Date 12.05.1995	1.56	150	150	Karanj, Sagaun
26	Dolomite	M/s Gouri Minerals Pro Shri Nitish Agrawal Resi-Civil Line, Mandla (MP)	9425163943	F-3-130/97/12/2 Bhopal Date 26.06.1997	2.86	300	250	Gulmohar, Sagaun
27	Dolomite	M/s OCL India Limited Shri Narayan Chandra Nayak	7978048663	F-3-170/93/12 Bhopal Date 13/12/1993	19.223	2000	1500	Gulmohar, Karanj, Mango
28	Dolomite	M/s Salasar Minerals Pro Shri Vibhor Agrawal S/o Shri Vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	F-3-98/93/12/2 Bhopal Date 28.04.1999	2.26	250	300	Gulmohar, Mango, Pipal
29	Dolomite	M/s Salasar Minerals Pro Shri Vibhor Agrawal S/o Shri Vinod Kumar Agrawal Resi-Civil Line, Mandla (MP)	9425821414	F-3-25/94/12/2 Bhopal Date 29.11.1994	2.82	300	250	Pipal, Imli, Mango
30	Dolomite	Shri Rajkumar Agrawal S/o Late Shri R P Agrawal Resi-Mandla (MP)	9425163943	F-3-186/92/12/2 Bhopal Date 03.02.1993	2.205	200	250	Sagaun, Karanj
31	Dolomite	M/s Kusum Minerals Pro Shri Bhikamchand Jain S/o Shri Nemichand Jain Resi-Malviya Nagar, Durg (CG)	9425239955	F-3-98/95/12/2 Bhopal Date 21.01.1997	0.98	100	100	Karanj, Mango, Imli
32	Dolomite	Shri Rajkumar Agrawal S/o Late Shri R P Agrawal Resi-Mandla (MP)	9425163943	F-3-126/92/12/2 Bhopal Date 04.03.1993	2.30	250	250	Gulmohar, Karanj, Mangoi, Sagaun
33	Dolomite	M/s Gupta Log. Pro Krishna Gupta S/o Shri Prabhudatt Gupta Resi-SavtiManjil, Shriram Tower, Nagpur (MH)	7000516959	F-3-61/97/12/2 Bhopal Date 19.12.1997	1.42	150	200	Gulmohar, Sagaun, Mango
34	Dolomite	M/s Narmada Minerals Pro Shri Robin Agrawal Resi-Mandla (MP)	9425821414	F-3-267/93/12/2 Bhopal Date 17.11.1993	2.20	250	300	Gulmohar, Mango, Karanj

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35	Dolomite	M/s Mahaveer Minerals Pro Shri Nirmalchand Jain S/o Shri Shobhachand Jain Resi-Durg (CG)	7999846981	F-3-33/97/12/2 Bhopal Date 30.05.1997	2.83	300	250	Neem, Babul
36	Dolomite	M/s Hanuman Mines & Minerals Pro Shri Balram Agrawal S/p Shri Ramchandra Agrawal Resi-2/2 Arihant Complex, Station Road, Raipur (CG)	9425285734	F-3-259/95/12/2 Bhopal Date 03.11.1995	1.41	150	150	Gulmohar, Mango, Karanj
37	Dolomite	M/s Narmada Minerals Pro Shri Robin Agrawal Resi-Mandla (MP)	9425821414	F-3-115/93/12/2 Bhopal Date 22.06.1995	0.87	100	150	Gulmohar, Neem
38	Dolomite	Smt Laxmi Agrawal W/o Shri Vinod Agrawal Resi-Mandla (MP)	9425821414	F-3-232/93/12/2 Bhopal Date 29.09.1993	2.80	500	450	Gulmohar, Mango, Karanj
39	Dolomite	Kumari SiptenBano (Alika Minerals) Mandla	8458964993	F-3-272/97/12/2 Bhopal Date 20.02.2001	3.40	400	500	Neem, Sagaun
40	Dolomite	Shri Prabhat Shankar Agrawal S/o Shri Krishna Goyal Agrawal Resi- 39/4 Nehru Nagar Purv, Dist Durg (CG)		F-3-25/98/12/2 Bhopal Date 28.04.1999	2.40	250	250	Gulmohar, Neem, Mango
41	Dolomite	Shri Dharmendra Modi S/o Shri Premchand Modi Resi-Durg (CG)	9644807860	F-3-131/97/12/2 Bhopal Date 26.07.1997	0.86	100	100	Mango, Neem, Pipal
42	Dolomite	M/s Hanuman Mines & Minerals Pro Shri Balram Agrawal S/o Shri Ramchandra Agrawal Resi-2/2 Arihant Complex, Station Road, Raipur (CG)	9425285734	F-3-25/09/12/2 Bhopal Date 01.03.2011	4.70	400	400	Gulmohar, Karanj
43	Dolomite	MP State Mining Corporation Ltd Resi-Bamhani Banjar, Mandla (MP)		F-3-205/95/12/2 Bhopal Date 26.10.1996	2.52	300	600	Karanj, gulmohar, Neem
44	Dolomite	M/s P D Minerals Pro Shri Devendra Shivhare	9617825055	F-3318-19/khanij.QL/file no.2/2022 Date 10.03.2022	4.80	-	-	
45	Dolomite	M/s Ganpati Minerals Pro Shri.Shobhakant Jha Resi-Mandla	9424339424	3315-16/khanij/QL/File no.02/2022 Date 10.03.2022	3.62	-	-	
46	Stone	Shri Bhupendra Singh Resi-Poudi Mahrajpur Tehsil & Dist Mandla (MP)	9425165275	590 05-11-2007	2.00	500	500	Sagaun, Neem, Karanj

47	Stone	Smt Sunita Agrawal W/O Uday Agrawal Resi-Narmada Ji Ward Dist Mandla (MP)	9826865058	463 Date 01-07-2008	1.60	300	300	Karanj, Neem, Sua Babul
48	Stone	Shri Anup Jaiswal S/O Shri Ramchandra Jaiswal Resi- Jaiswal Niwas Dada Dhaniram Maharajapur Mandla	8889686379	972 Date 22-06-2019	1.53	1500	600	Sua Babul, Neem, Karanj
49	Stone	Shri Manoj Gurwani S/O Shri Rochiram gurwani Resi-Sardar Bhagat Singh Ward ,Mandla (MP)	7828627788	369A Date 02/03/2009	0.85	100	150	Neem, Mango, Sua Babul
50	Stone	Shri Devandra sukhwani S/O Shri Chetram sukhwani Resi-Sahid uday chandra Ward Mandla (MP)	9229671990	355A Date 30/11/2009	2.00	600	500	Gulmohar, Karanj, Mango
51	Stone	Shri Shailendramishra S/O Shri Rajendra kumar Mishra Resi- Badikheri, Dist mandla (MP)	7000623375	711 Date 22-07-2015	1.00	300	250	Neem, Karanj, babul
52	Stone	Shri Ritesh kachwaha S/O Shree chamanlal kachwaha Resi-Subhash Ward Mandla	9425821445	257 Date 24-04-2004	1.00	100	150	Gulmohar, Mango
53	Stone	Smt Jyoti Agrawal W/O Shri Raman Agrawal Resi- Narmada Ji Ward Mandla	9425164217	582 Date 05-08-2008	4.00	500	500	Sagaun, Neem, Mango
54	Stone	M/S Sai Stone Crushers Pro. Shri Arvind Sahu Pro. Shri Mahesh Sahu Resi - Shubhas Ward Mandla	9425148146	560 Date 09/11/2011	1.00	200	200	Gulmohar, Mango, Karanj
55	Stone	Shri Prakash Chandra Jain S/O Shreesanju Pratap Jain Resi -Pandav Ward Mandla Pro. Aadi Enterprisesmandla	8319020748	142 Date 10/02/2012	0.55	100	100	Neem, Sua Babul, Karanj
56	Stone	Shri Anup Jaiswal S/O Shri Ramchandra Jaiswal Resi - Dada Dhani Ram Ward Maharajpur, Mandla (MP)	8871196433	21642-43 Date 27/11/2014	2.20	400	350	Neem, babul, Guava
57	Stone	Shri Santosh Kumar Pandey Resi-Maharajpur Mandla (MP)	9399095915	8218-19 Date 25/05/2015	1.51	500	300	Gulmohar, Mango, Karanj

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58	Stone	M/S Dubey Stone Crushers Pro. Shri Sumit Dubey S/O Shri Surendra Dubey Resi - Ambedkar Ward Mandla	9179631340	1302 Date 10/11/2015	2.000	600	450	Neem, Mango, Karanj
59	Stone	M/S Om Sai Ram Crusher Pro. Shri Lokesh Rai Resi- Machli Talab Ke Pass Katrajabalpur Road Mandla (MP)	7000737362	508 Date 01/06/2015	1.500	400	350	Babul, Shisham, Mango
60	Stone	Shri Vinod Kumar Agarwal Resi- Mandla Dist. Mandla	9425164217	48 Date 08/01/2019	2.80	2000	500	Gulmohar, Neem, Karanj
61	Stone	Shri Shailendra Mishra s/o shri Rajendra kumar Mishra Resi- badi kheri mandla dist. Mandla (MP)	7000623375	1188 Date 05/10/2018	1.000	400	300	Karanj, Neem, Sua Babul
62	Stone	M/S Aadi Enterprises Shri Prakash Chand Jain S/O Shri Shambhu Prashad Jain Resi- Padav Ward Mandla Dist. Mandla	9770025738	359 Date 21/04/2020	1.56	1200	500	Mango, Sua Babul
63	Stone	Shri Manoj Chatri Resi- Dada Dhaniram Ward Maharajapur Dist.- Mandla (MP)	7000865612	9292-93 Date 03/05/2018	2.50	800	600	Neem, Sagaun, Mango
64	Stone	Shri Ram Singh Thakur S/O Shri Babulal Thakur Resi.- Bhuaa Bichiya Tehsil Bichiya Dist- Mandla (Mp)	9131561148	17342-43 Date 03-11-2016	4.000	1600	1000	Gulmohar, Sua Babul
65	Stone	Shri Nishantkumar Jaiswal S/O Shri Heeralal Jaiswal Resi.-Bhuaa Bichiya Tehsil Bichiya Dist,- Mandla (Mp)	9303522226	829 Date 08/07/2021	3.33	4800	1200	Mango, Karanj
66	Stone	Shri Ravishankar Rai S/O Shri Dilharan Rai Resi..- Bichiya Tehsil Bichiya Dist- Mandla	7000427252	531 Date 16/07/2008	1.00	200	150	Neem, Karanj
67	Stone	Shri Pushpendra Thakur S/O Ram Singh Thakur Resi. Bhuaa Bichiya Tehsil Bichiya Dist,- Mandla	9977951149	353 Date 03/05/2008	1.00	200	200	Neem, Sua Babul

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68	Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal Resi - Anjaniya Tehsil- Bichiya Dist.- Mandla	7000623156	826 Date 10-12-2009	1.00	200	300	Karanj, Babul, Mango
69	Stone	Maa Sheetla Stone Crusher Pro. Shri Mayank Agrawal S/O Rajkumar Agrawal Resi.- Anjaniya Tehsil- Bichiya Dist.- Mandla	7000623156	421 Date 26/07/2011	2.00	200	250	Gulmohar, Sagaun , Mango
70	Stone	Shri Rajesh Kumar Pandey S/O Narmada Prashad Pandey Resi.- Mavai Tehsil- Bichiya Dist.- Mandla	9424385520	687 Date 09/09/2013	1.000	200	200	Gulmohar, Mango
71	Stone	Smt Sadhna Jaiswal W/O Heeralal Resi.- Bichiya Tehsil Bichiya Dist,- Mandla	7049141408	268 Date 30/03/2015	1.630	600	450	Gulmohar, Sua Babul
72	Stone	Shri Vishal Tiwari S/O Shri Santosh Tiwari Resi.- Tehsil And Dist. Mandla	9977861197	15900-01DATE 23/11/2021	2.00	2400	1000	Gulmohar, Neem, Karanj
73	Stone	Shri Prshant Soni S/o Shri Vikal Bihari SOni Resi-Pipariya Teh Niwas DIst-Mandla (MP)	9770865191	555 Date 08-08-2016	1.00	400	250	Sagaun, Mango, Neem
74	Stone	Shri Krishnapal Singh S/o Shri Satya Singh Resi-1571 Chandan Colony, Ganganagar, Gadha, Jabalpur (MP)	7999191432	771 Date 30/09/2013	1.00	200	300	Mango, Sua Babul
75	Stone	Shri Vedprakash Kulaste Pro Hirak Infra Mine Pvt Ltd, Mandla		1120 Date 06/09/2017	1.00	500	20	Karanj, babul
76	Stone	Shri Bhupendra Barkade Resi-Kobrikhurd, Narayanganj Dist Mandla (MP)	7999700215	1136-37 Date 27/01/2020	1.10	1200	450	Neem, Mango
77	Stone	Shri Arun Agrawal S/o Shri SHyam Sundar Agrawal Resi-Bamhani Banjar Teh &Dist Mandla (MP)	9425163534	809 Date 16-10-2008	1.00	200	250	Neem, Karanj

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78	Stone	SmtJabin Malik W/o Shri Abdul Hamid Resi-Bamhani Banjar Tehsil NainpurDist Mandla (MP)	9407038441	9222-23 Date 07-07-2021	1.0	1200	300	Sagaun, Karanj,
79	Stone	Shri Santosh Khandelwal S/o Shri Narayan Khandelwal Resi- Nainpur Bamhani Banjar, Mandla (MP)	9301309939	728 Date 06/10/2016	0.94	400	250	Sagaun, Mango
80	Stone	SmtJabin Malik W/o Shri Abdul Hamid Resi-Bamhani Banjar Tehsil Nainpur Dist Mandla (MP)	9407038441	1140 Date 11-09-2017	1.50	400	350	Gulmohar, Mango
81	Stone	Smt Jyoti Pandey W/o Shri Amit Pandey Resi- Bamhani Banjar, Mandla (MP)	7000824536	549 Date 26/11/2010	1.10	200	180	Gulmohar, Karanj, Sua Babul
82	Stone	Shri Ritendra Kumar Chourasia S/o Shri Chandranath Resi- Bamhani Banjar Dist Mandla (MP)	9425484261	640 DATE 16/12/2011	0.64	200	200	Mango, Karanj, Babul
83	Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/o Shri Shambhu Prasad Jain Resi- Bhagat Singh ward, Mandla (MP)	7000579386	130 Date 08/02/2012	1.60	500	400	Neem, Sagaun
84	Stone	Shri Vardhman Global Infrastructure Pvt Ltd Director Shri Rakesh Jain S/o Shri Shambhu Prasad Jain Resi- Bhagat Singh ward, Mandla (MP)	7000579386	131 Date 08/02/2012	3.61	1000	800	Gulmohar, Karanj
85	Stone	Smt Sangeeta Agrawal W/o Shri Arun Agrawal Resi- Bamhani Banjar tehsil & Dist Mandla (MP)	9340362354	598 Date 23/11/2011	4.00	500	500	Sagaun, Karanj
86	Stone	Smt Pachli Bai W/o Shri Devsingh Saiyam Resi- Jhulpur Tehsil Nainpur Dist Mandla (MP)	7049077399	13 Date 04/01/2012	1.00	400	300	Mango, Karanj,
87	Stone	Shri Shersingh S/o Shri Tikaram Lodhi Resi- Khikhiri Tehsil Nainpur Dist Mandla (MP)	9174100355	521 Date 25/07/2013	1.00	400	200	Gulmohar, Sagaun

89	Stone	Shri Dharmendra Chandrawanshi S/o Shri Sevakram Chandrawanshi Resi- Sarrapipariya Tehsil Nainpur Dist Mandla (MP)	9669681773	639 Date 27/2013	1.00	400	250	Karanj,Sua babul
90	Stone	Smt Chhaya Agrawal W/o shri Rajesh Agrawal Resi-Bichhiya, Mandla (MP)	9171176493	4072-73 Date 17-03-2015	2.00	800	500	Neem, Karanj
91	Stone	Shri Arun Kumar Agrawal S/o Shri Shyamsundar Agrawal Resi Bamhani Banjar , Mandla (MP)	9111377665	570 Date 07/04/2017	3.90	1600	1000	Pipal, Mango, Sagaun
92	Stone	Shri Tarendra Baheliya S/o Shri Amritlal Baheliya Resi-Mali mohgaon Dist Mandla (MP)	9424631340	561 Date 10/08/2016	1.80	800	650	Karanj, Guava, Pipal
93	Stone	Shri Darshpreet Singh Singhu S/o Shri Gurmel Singh Singhu Resi- 24 Dasa Dhaniram Ward Maharajpur, Mandla (MP)	9977092379	876 Date 21/06/2017	1.90	800	300	Neem, Pipal, Karanj
94	Stone	M/s Shyam Baba Stone Crusher Pro Ayush Agrawal Resi- Bamhani Banjar Mandla (MP)	9669683639	437 Date 19/05/2015	2.00	800	450	Neem, Sheesham, Karanj
95	Stone	Shri Gajendra katre S/o Shri Digamber Katre Resi-Chargaon, Nainpur Dist Mandla (MP)	9425138873	41 Date 10-03-2016	3.00	1200	750	Karanj, Neem, Mango
96	Stone	Shri Rajesh Singh Bais Resi-Chicholi, Nainpur Dist Mandla (MP)	9764891720	2925-26 Date 05/06/201721/12/2017	1.50	800	350	Mango, Neem, Sagaun
97	Stone	Shri Arun Kumar Agrawal S/o Shri Shyamsundar Agrawal Resi- Bamhani Banjar, Mandla (MP)	9425855382	44 Date 08/01/2019	7.70	4000	1500	Karanj, Neem, Pipal
98	Stone	M/s Ganpati Minerals Pro Shri Shobhakant Jha Resi-Devdara, Mandla (MP)	9424339424	877 Date 21/06/2017	2.00	1000	450	Neem, Shisham, Pipal

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99	Stone	Maa Narmada Stone Crusher Partner Shri Manish Sahu Resi-Gajna Nainpur Dist Mandla (MP)	8305293673	1151 Date 13/09/2017	3.00	1500	750	Neem, Karanj
100	Stone	Shri Manoj Guwani S/o Shri Rochiram Gurwani Resi-Mandla (MP)	7828627788	102 Date 14/01/2019	1.00	1000	250	Neem, Pipal
101	Stone	Shri Abhay Sahu S/o Shri Rameshwar SahuResi-Khairi Narayanganj DIst Mandla (MP)	7489701086	260 Date 25-03-2015	3.10	1500	850	Karanj, Sagaun, Neem
102	Stone	Mahakali Stone Crusher Pro Smt Seema Namdev W/o Shri Nirvedh Namdev Resi-Narayanganj Mandla (MP)	6260585459	443 Date 20/05/2015	2.480	1500	600	Neem, Karanj, Sagaun
103	Stone	Ashib Hussain Resi-Bijadandam Tehsil Narayanganj Dist Mandla (MP)	9425654455	8897-98 Date 25/06/2019	1.00	1000	200	Karanj, Mango
104	Stone	Shri Ashish Agrawal S/o Shri Mulchand Agrawal Resi- Ghughri Tehsil &Dist Mandla (MP)	7471164733	1140 Date 04-12/2014	1.00	400	300	Sagaun, Mango, Pipal, Karanj
105	Stone	Shri Deepak Agrawal S/o Shri Ramprasad Agrawal Resi-Ghughri Tehsil & Dist Mandla (MP)	7471164733.	386 Date 02-05-2020	1.00	1000	250	Gulmohar, Mango, Karanj
106	Stone	Shri Ramprakash Sahu S/o Shri Jamna Prasad Sahu Resi- Ghughri Tehsil & Dist Mandla (MP)	9425851814	180 Date 15-01-2021	1.00	1000	200	Guava, Sagaun
107	Stone	Shri Khemkaran Sahu S/o Shri Narmada Prasad SahuResi- Mohgaon Tehsil Ghughri Dist Mandla (MP)	9752252299	641 Date 27/08/2013	1.50	500	350	Karanj, Mango
108	Stone	Shri Ajay Kumar Sahu S/o Shri Munna Lal Sahu Resi-Bagli Chabi Dist Mandla (MP)	9424729215	1662 Date 11/12/2017	2.00	1000	300	Guava, Karanj, Sagaun

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109	Stone	Maa Narmada Minerals Pro Shri Vipin Agrawal Resi-Ajaniya, Mandla (MP)	7000623156	152 Date 24/01/2019	1.00	800	160	Karanj, Sagaun, Imli
110	Stone	Smt Saraswati Dhurbey W/o Shri Pandit Singh Dhurvey Resi- Bhai Bahan Nala, Motinala, Bichhiya Dist Mandla (MP)	9425852915	15347-48 Date 29/09/2018	1.94	500	400	Sua Babul, Mango, Karanj
111	Stone	Shri Sushil Kumar Mishra Resi-Mandla (MP)	9425852123	1423 Date 14/11/2020	1.00	1000	150	Imli, Mango, Sua BAbul
112	Stone	Shri Sailesh Kumar Sahu Resi-Ramnagar, Bichhiya Dist Mandla (MP)	9425851855	1792-93 Date 06-02-2020	1.27	1200	170	Sagaun, Mango, Karanj
113	Stone	Shri Mevalal Baraya Resi-Danitola Bichhiya Dist Mandla (MP)	9131712238	388 Date 04/05/2020	1.00	1200	200	Gulmohar, Mango, Karanj

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Plantation Photographs –

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E-5, Arera Colony, Bhopal (M.P.)

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Assessment Authority, M.P.
(SEIAA)
Parya[illegible] Parisar
E-5, Ar[illegible], Bhopal (M.P.)

State Level Environment Impact Assessment Authority, M.P. (SEIAA)
Paryavaran Parisar
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Parvavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

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Paryavaran Parisar
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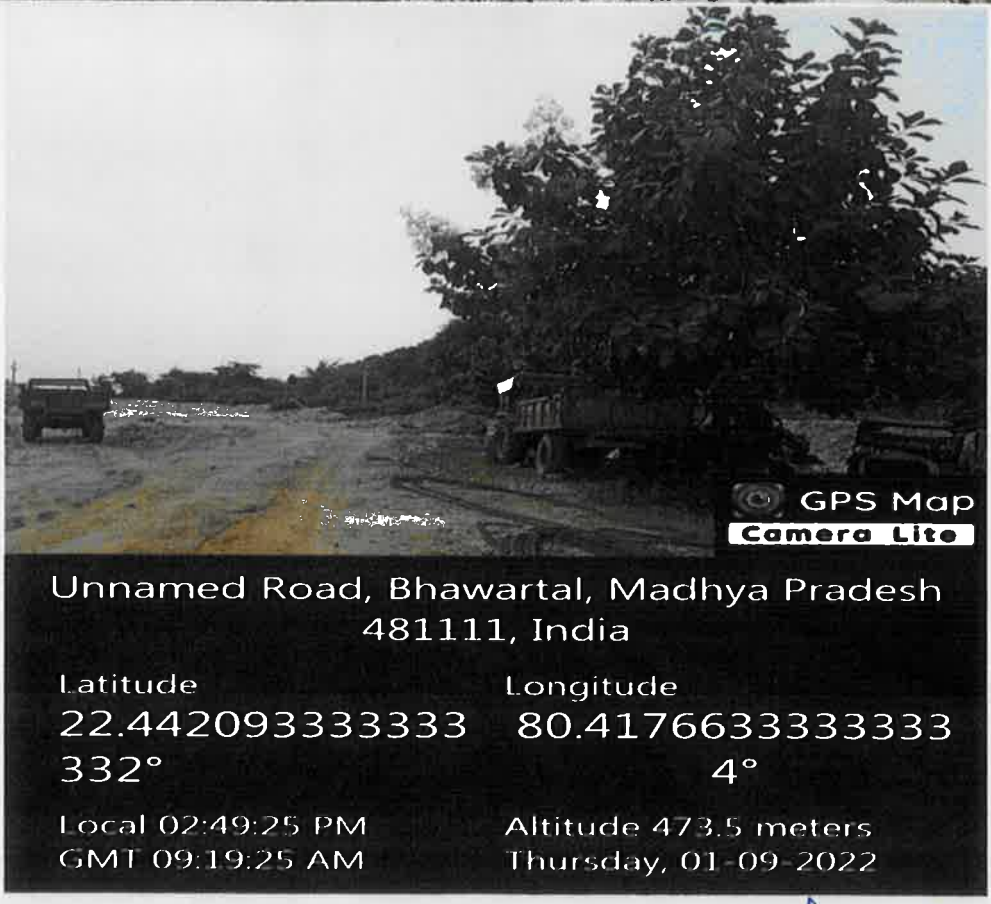

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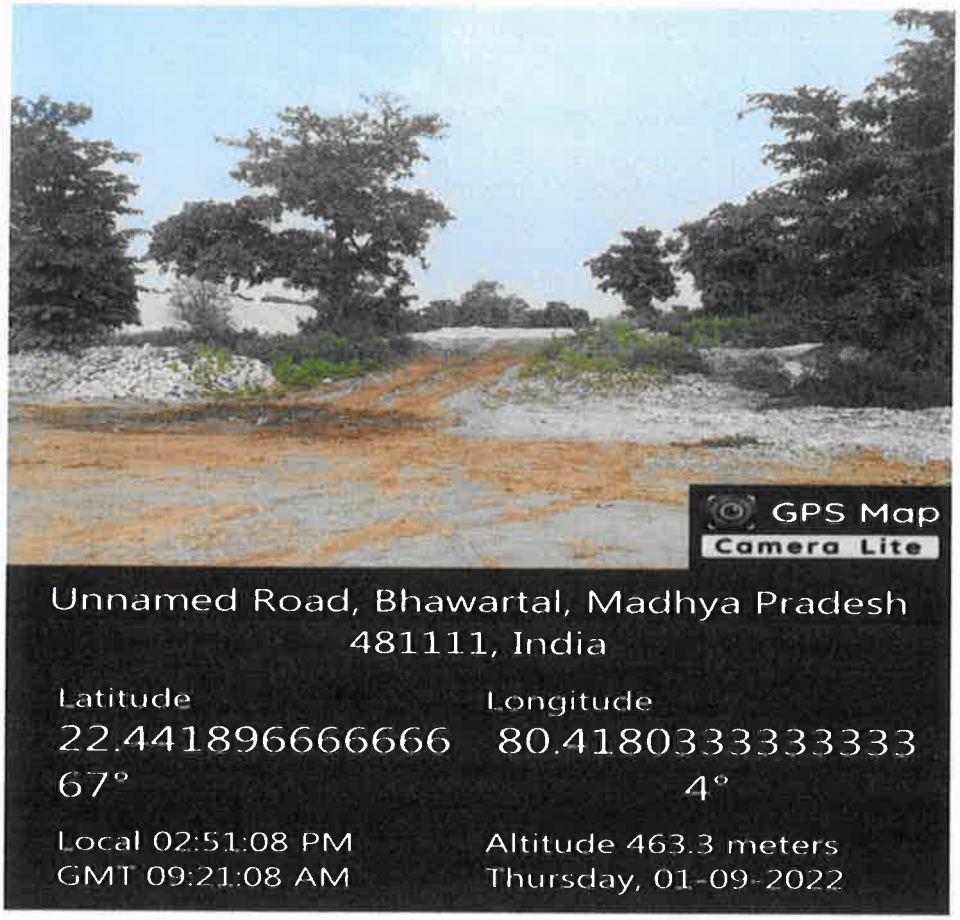

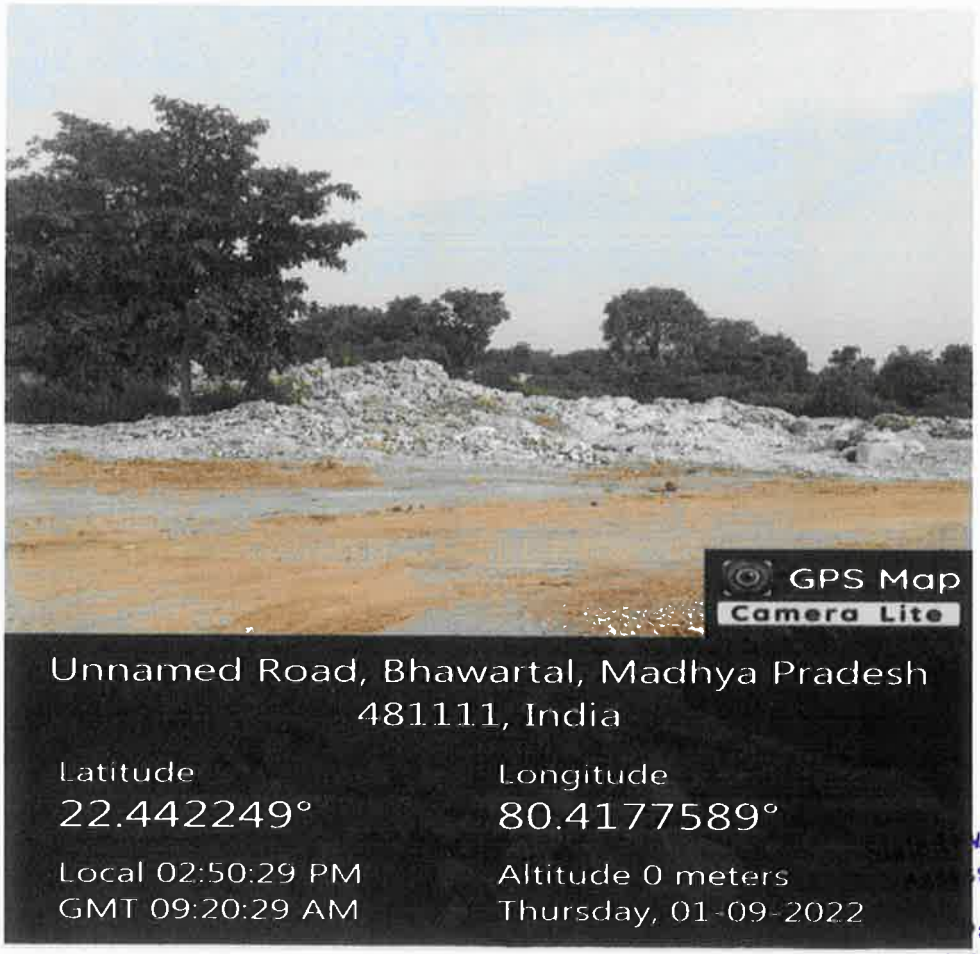

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CHAPTER - 27
ANY OTHER INFORMATION

The well developed Environmental management plan and Remedial measures is proposed to carryout in all mining areas in the District.

CER/CSR activities shall be carried out by providing social and welfare measures to the local community of the nearby villages. The main activities would be like drinking water facilities for the government schools children, public toilets to the local community and government schools, conducting free medical camps, providing solar lights to the villages besides encouraging the local cultural activities of the area. Any other CSR and CER activities as guided by the DEAC during the grant of Environmental Clearance Shall be implemented.

Further, several welfare measures are also taking for the mine affected People/mine affected Villages through District Mineral Foundation Trust Fund which is remitted by the Quarry lease holders.

This District Survey Report has been prepared by carrying out field work. The details related to the occurrence of mineral resources and other data of the district are subject to updation from time to time. Mining can become more environmentally sustainable by developing and integrating practices that reduce the environmental impact of mining operations. These practices include measures such as reducing water and energy consumption, minimizing land disturbance and waste production, preventing soil, water, and air pollution at mine sites, and conducting successful mine closure and reclamation activities.

Before granting of any quarrying lease, parameters related to geosciences and sustainable developments have to be considered. The introduction of e-permit system and implementation of Mineral Dealers Rule and the despatch slips / transit permits with tampered proof security features and tracking of mined out minerals would fetch more revenue to the State Exchequer as well as sustainable development.

State Level Environmental Impact
Assessment Authority, M.P.
(EPCO)
Paryavaran Parisar
E-5, Arera Colony, Bhopal (M.P.)

10. जिला सर्वेक्षण रिपोर्ट, मण्डला –

अ. अन्य गौण खनिज – रेत को छोड़कर , जिला, मण्डला

Mineral	**Other then Sand**
Earlier DSR Discussed	SEAC 591th Meeting dated 27.08.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (**Minor Minerals**)
Deliberation in the SEAC 591th Meeting dated 27.08.2022	**राज्य स्तरीय मूल्यांकन समिति की 591 वीं बैठक दिनांक 27/08/22** **गौण खनिज, जिला मण्डला –** आज दिनांक 27/8/22 को जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय एवं श्री दिवेश मरकाम, सहायक खनिज अधिकारी उपस्थित रहे। जिला सर्वेक्षण रिपोर्ट गौण खनिज हेतु प्रस्तुत की गई, जिसमें पाया :– 1. गौण खनिज की तालिका कमांक 3.2 पेज न0. 18 (PDF) मे सरल क0. 1,3,5,9,18,21–27, 34, 47, 49, 50, 53, 64–67, 70–81 आदि में लीजों के अक्षांश एंव देशांश प्रदर्शित नही किये गये है। 2. जिला सर्वेक्षण रिपोर्ट मे गौण खनिजों की जानकारी पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, नई दिल्ली द्वारा जारी अधिसूचना दिनांक 25/07/2018 मे बतायी गयी तालिका (16 बिन्दुओं के कॉलम) के अनुसार नही दर्शायी गयी है। 3. लीजवार पौधारोपण की जानकारी भी नहीं दी गई है।
Revised DSR received from District Collectorate (Mining)	Vide District Collectorate (Mining) Office, Mandla , No. 1422 dated 12.09.2022
SEAC meeting dated 21/09/22	• जिले की जिला सर्वेक्षण रिपोर्ट के चेप्टर चेप्टर –08 मे (पेज क0. 26 से 55) में खदान की जानकारी निर्धारित प्रपत्र मे दे दी गई है। • जिले में हरित क्षेत्र के विकास हेतु पूर्व के वर्षो में लीज धारकों द्वारा किये गये वृक्षारोपण की जानकारी, संख्या एंव प्रजातियों की जानकारी चेप्टर –26 मे (पेज क0. 94 से 104) मे दी गई है।

आज दिनांक 21/09/22 को जिला सर्वेक्षण रिपोर्ट के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय, एवं श्री दिवेश मरकाम, सहायक खनिज अधिकारी के साथ उपस्थित रहे ।

समिति ने पाया कि खनि. अधिकारी, कार्यालय कलेक्टर, (खनिज शाखा) जिला– मण्डला के पत्र

594वीं राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक
दिनांक 21 सितम्बर 2022

क्र0 1422 दिनांक 12/09/22 के माध्यम खदान की जानकारी निर्धारित प्रपत्र मे दे दी गई है तथा लीज धारकों द्वारा किये गये वृक्षारोपण की जानकारी, संख्या, भी प्रस्तुत कर दी गई है। अतः समिति मण्डला जिले की जिला सर्वेक्षण रिपोर्ट (गौण खनिज) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।

ब. मण्डला (रेत खनिज)

Mineral	**Sand**
Earlier DSR Discussed	SEAC 591& 592th Meeting dated 27.08.22 & 21.09.2022
Approved /or recommend for Updation (if Updation then elaborate issues)	Recommended for DSR Updation (S**and Mineral**)
Deliberation in the SEAC 591& 592th Meeting dated 27.08.22 & 21.09.2022	**राज्य स्तरीय मूल्यांकन समिति की 591वीं बैठक दिनांक 27/08/22** **जिला सर्वेक्षण रिपोर्ट – रेत खनिज, जिला – मण्डला** आज दिनांक 27/8/22 को जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय एवं श्री दिवेश मरकाम, सहायक खनिज अधिकारी उपस्थित रहे। नवीन जिला सर्वेक्षण रिपोर्ट रेत खनिज हेतु प्रस्तुत की गई, जिसमें पाया :– • जिला सर्वेक्षण रिपोर्ट के पेज न0. 43 (PDF) के एनेक्सर III में खनिज छूट के लिये सिफारिश नदी एंव धारा का भाग के अन्तर्गत जानकारी निरंक दर्शायी गयी है? इसको स्पस्ट करें। • रिपोर्ट की तालिका निरंक पेज क्र0. 67 (PDF) के अन्तर्गत दर्शायी गयी। रेत का मिनरल पोटेंशियल की गणना करने में प्री–एंव पोस्ट मानसून में रेत की उपलब्ध मात्रा एक समान दर्शायी गयी है। साथ ही इस तालिका में खनिज रेत हेतु लीजवार "माइनेबल मिनरल" पोटेंशियल घनमीटर में 60% के साथ नही दर्शाया गया है। • साथ ही उक्त तालिका में 03 वर्षो के उत्खनित रेत की खदानवार मात्रा भी दर्शायी जायें जिससे ज्ञात हो सके कि उक्त स्थल पर खदान का मिनरल पोटेंशियल विगत 03 वर्षो में कितना रहा है। • मिनरल पोटेंशियल की गणना दर्शाने वाली तालिका में टेबल मे अनावश्यक संशोधन कर रेत की 60% माइनेबल पोटेंशियल (रेत खनन) मीट्रिक टन में भी दर्शाये। चर्चा उपरांत समिति की यह अनुशंसा है कि मण्डला जिले की जिला सर्वेक्षण रिपोर्ट गौण खनिज एंव रेत खनिज को समिति की सुझाई गयी उपरोक्त अनुशंसाओं के तारतम्य में अद्यतन (अपडेट) किया जाये तथा संशोधित जिला सर्वेक्षण रिपोर्ट पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय की अधिसूचना दिनांक 25/07/18 के अनुसार पुनः प्रस्तुत की जावे तत्संबंध में उपस्थित खनिज अधिकारी को भी उपरोक्त संदर्भ में समझाईश दी गयी।
Revised DSR received from District Collectorate (Mining)	Received soft copy Vide District Collectorate (Mining) Office, Mandla , No. 1422 dated 12.09.2022
SEAC meeting dated 21/09/22	जिले की जिला सर्वेक्षण रिपोर्ट मे तालिका क्र0 निरंक पेज न0. 49 से 51 में

	माइनेबल मिनरल पोटेंशियल (घनमीटर में) 60% टोटल मिनरल पोटेंशियल, लीजवार, लंबाई, चौड़ाई एंव गहराई के साथ दर्शाया है एवं विगत 03 वर्षो के उत्खनित रेत की मात्रा का लीजवार पोटेंशियल दिया गया है। जिससे ज्ञात हो सके कि उस स्थल पर खदान का मिनरल पोटेंशियल विगत 03 वर्षो मे कितना रहा।

आज दिनांक **21/09/22** को जिला सर्वेक्षण रिर्पोटो के प्रस्तुतीकरण के दौरान संचानालय, भौमिकी एंव खनिकर्म, विभाग भोपाल से श्री पी.पी. राय, एवं श्री दिवेश मरकाम, सहायक खनिज अधिकारी के साथ उपस्थित रहे ।

चर्चा उपरांत समिति ने पाया कि खनि. अधिकारी,कार्यालय कलेक्टर,(खनिज शाखा) जिला– मण्डला के पत्र क0 1422, दिनांक 12/09/22 के माध्यम से मिनरल पोटेंशियल की गणना में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है मिनरल पोटेंशियल की गणना दर्शाने वाली टेबल में आवश्यक संशोधन कर रेत की 60 प्रतिशत माइनेबल पोटेंशियल (रेत खनन हेतु) मीट्रिक टन यूनिट में प्रस्तुत कर दी गई है। अतः समिति की अनुशंसा है कि मण्डला जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।

अतः समिति द्वारा सुझाई गई उपरोक्त अनुशांसाओ के साथ शाजापुर जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकारण की ओर प्रेषित किया जाये।

निम्नानुसार नवीन जिला सर्वेक्षण रिपोर्ट आज एजेण्डा में सूचीबद्ध नहीं था संबंधित खनिज अधिकारियों द्वारा बैठक के दौरान प्रस्तुत कर आज की बैठक में संबंधित खनिज अधिकारियों/निरीक्षकों के अनुरोध पर मान्नीय अध्यक्ष महोदय द्वारा प्रस्तुतीकरण की अनुमति प्रदान की गई :–

11. जिला सर्वेक्षण रिपोर्ट, नर्मदापुरम –

अ. अन्य गौण खनिज – रेत को छोड़कर, जिला नर्मदापुरम

Mineral	**Other then Sand**
Earlier DSR Discussed	SEAC 588th Meeting dated 16.08.2022
Approved /or recommend for	Recommended for DSR Updation (**Minor Minerals**)

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में राजगढ़ (अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

".....समिति की अनुशंसा है कि राजगढ़ जिले की जिला सर्वेक्षण रिपोर्ट (अन्य गौण खनिज–रेत को छोड़कर) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 594वीं बैठक दिनांक 21/09/2022 की अनुशंसा को मान्य करते हुए राजगढ़ (अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

तदानुसार जिला कलेक्टर, राजगढ़ को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

22. जिला सर्वेक्षण रिपोर्ट – हरदा (रेत खनिज)

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 751वी बैठक दिनांक 14.10.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में हरदा (रेत खनिज) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

".....समिति की अनुशंसा है कि हरदा जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघॉत निर्धारण प्राधिकारण की ओर प्रेषित किया जाये।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 594वीं बैठक दिनांक 21/09/2022 की अनुशंसा को मान्य करते हुए हरदा (रेत खनिज) की जिला सर्वेक्षण रिपोर्ट का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

तदानुसार जिला कलेक्टर, हरदा को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

23. जिला सर्वेक्षण रिपोर्ट – मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर)

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 751वी बैठक दिनांक 14.10.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

(श्रीमन् शुक्ला)	(अनिल कुमार शर्मा)	(अरूण कुमार भट्ट)
सदस्य सचिव	सदस्य	अध्यक्ष

".....समिति की अनुशंसा है कि मण्डला जिले की जिला सर्वेक्षण रिपोर्ट (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 594वीं बैठक दिनांक 21/09/2022 की अनुशंसा को मान्य करते हुए मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

तदानुसार जिला कलेक्टर, मण्डला को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

24. जिला सर्वेक्षण रिपोर्ट – **नर्मदापुरम (रेत एवं अन्य गौण खनिज – रेत को छोड़कर)**

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 751वी बैठक दिनांक 14.10.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में नर्मदापुरम (रेत एवं अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

".....समिति की अनुशंसा है कि नर्मदापुरम जिले की जिला सर्वेक्षण रिपोर्ट (रेत एवं अन्य गौण खनिज – रेत को छोड़कर) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।"

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 594वीं बैठक दिनांक 21/09/2022 की अनुशंसा को मान्य करते हुए नर्मदापुरम (रेत एवं अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है।

तदानुसार जिला कलेक्टर, नर्मदापुरम को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

25. जिला सर्वेक्षण रिपोर्ट – कटनी (रेत खनिज)

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 751वी बैठक दिनांक 14.10.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में कटनी (रेत खनिज) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

".....समिति की अनुशंसा है कि कटनी जिले की जिला सर्वेक्षण रिपोर्ट (रेत खनिज) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।"

(श्रीमन् शुक्ला)	(अनिल कुमार शर्मा)	(अरूण कुमार भट्ट)
सदस्य सचिव	सदस्य	अध्यक्ष

राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण, म.प्र.

(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)

पर्यावरण नियोजन एवं समन्वय संगठन
पर्यावरण परिसर, ई–5, अरेरा कॉलोनी
भोपाल–462016 (म.प्र.)
बेवसाईट– http://www.mpseiaa.nic.in
दूरभाष नं. – 0755–2466970, 2466859
फैक्स नं. – 0755–2462136

No: 1886 / SEIAA/2022
Date: 20/10/22

प्रति,

कलेक्टर
जिला – मण्डला (म.प्र.)

विषयः नवीन जिला सर्वेक्षण रिपोर्ट – मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर)

संदर्भः आपका पत्र क्र. 1422 दिनांक 12/09/22

राज्य स्तरीय समाघात निर्धारण प्राधिकरण द्वारा 751वी बैठक दिनांक 14.10.2022 में निम्नानुसार निर्णय लिया गया :–

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 594वीं बैठक दिनांक 21/09/2022 में मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट में निम्नानुसार सुझाव सहित अनुशंसा की गई है।

".....समिति की अनुशंसा है कि मण्डला जिले की जिला सर्वेक्षण रिपोर्ट (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) अनुमोदन हेतु विचारार्थ एंव आगामी कार्यवाही हेतु राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित की जाये।

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 594वीं बैठक दिनांक 21/09/2022 की अनुशंसा को मान्य करते हुए मण्डला (रेत एंव अन्य गौण खनिज – रेत को छोड़कर) की जिला सर्वेक्षण रिपोर्ट का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है। तदानुसार जिला कलेक्टर, मण्डला को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक भौमिकी तथा खनिकर्म को सूचित किया जाये।

उपरोक्त निर्णयानुसार कृपया अनुमोदित नवीन जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करने का कष्ट करें। सुलभ संदर्भ हेतु अनुमोदित नवीन जिला सर्वेक्षण रिपोर्ट की साफ्टकॉपी ई–मेल के माध्यम से आपकी ओर प्रेषित है।

(श्रीमन् शुक्ला)
सदस्य सचिव

क्र.. /SEIAA/2022 भोपाल दिनांक

प्रतिलिपि :–

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सदस्य सचिव