



राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण  
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार)



पर्यावरण नियोजन एवं समन्वय संगठन  
पर्यावरण परिसर, ई-5, अरेरा कॉलोनी  
भोपाल-462016 (म.प्र.)

वेबसाइट- <http://www.mpseiaa.nic.in>

दूरभाष नं. - 0755-2466970, 2466859

No: 1064 / SEIAA/2023

Date: 8/8/23

प्रति,

कलेक्टर

जिला - रतलाम (म.प्र.)

विषय: संशोधित जिला सर्वेक्षण रिपोर्ट जिला- रतलाम रेत खनिज (संशोधित)

संदर्भ: आपका पत्र क्र. 1493 दिनांक 11.07.2023


राज्य स्तरीय समाघात निर्धारण प्राधिकरण की 797<sup>वीं</sup> बैठक दिनांक 01.08.2023 में निम्नानुसार निर्णय लिया गया :-

राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC) की 657<sup>वीं</sup> बैठक दिनांक 11.07.2023 में रतलाम जिले की संशोधित जिला सर्वेक्षण रिपोर्ट (रेत खनिज) में निम्नानुसार सुझाव सहित अनुशंसा की गई है :

.....खनिज निरीक्षक द्वारा ग्राम मेलुखेड़ी तथा ग्राम गोंदी शंकर रेत खदान में जो कोर्डिनेट्स में सुधार जिला सर्वेक्षण रिपोर्ट रेत खनिज (संशोधित) समिति के समक्ष प्रस्तुत की गई थी जिसको समिति द्वारा मान्य किया गया एवं संशोधित जिला सर्वेक्षण रिपोर्ट जिला- रतलाम रेत खनिज (संशोधित) अनुमोदन हेतु विचारार्थ एवं आगामी कार्यवाही हेतु अनुशंसित उपरांत राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण की ओर प्रेषित किया जाये।

राज्य स्तरीय समाघात निर्धारण प्राधिकरण (SEIAA) द्वारा विस्तृत चर्चा एवं विचार विमर्श उपरांत SEAC की 657<sup>वीं</sup> बैठक दिनांक 11.06.2023 के अनुमोदन प्रस्ताव को मान्य करते हुए रतलाम जिले की संशोधित जिला सर्वेक्षण रिपोर्ट (रेत खनिज) का अनुमोदन SEAC द्वारा सुझाई गई उपरोक्त अनुशंसाओं के साथ किया जाता है। तदनुसार जिला कलेक्टर, रतलाम को जिला सर्वेक्षण रिपोर्ट जिला पोर्टल पर अपलोड करवाये जाने एवं संचालक, भौमिकी तथा खनिकर्म को सूचित किया जाये।

उपरोक्त निर्णयानुसार कृपया संशोधित जिला सर्वेक्षण रिपोर्ट जिला- रतलाम रेत खनिज (संशोधित) 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।

  
(मुजीबुरहमान खान)  
सदस्य सचिव

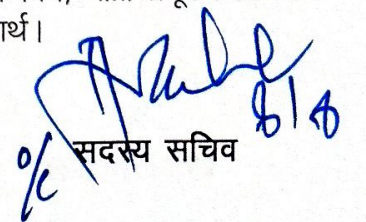
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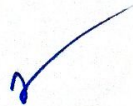
/SEIAA/2023 भोपाल

दिनांक 8/8/23

प्रतिलिपि :-

1. प्रमुख सचिव, म.प्र. शासन, पर्यावरण विभाग, मंत्रालय, भोपाल की ओर कृपया सूचनार्थ ।
2. संचालक, प्रशासन/तकनीकी, संचालनालय, भौमिकी तथा खनिकर्म, 29-ए, खनिज भवन, अरेरा हिल्स, भोपाल (म.प्र.)
3. सदस्य सचिव, राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति (SEAC), अनुसंधान एवं विकास विंग, म.प्र. प्रदूषण नियंत्रण बोर्ड, पर्यावरण परिसर, ई-5, अरेरा कॉलोनी, भोपाल (म.प्र.) - 462016 की ओर सूचनार्थ।

  
सदस्य सचिव



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11/07/2023

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कार्यालय कलेक्टर (खनिज शाखा) जिला-रतलाम (म0प्र0)

क्रमांक / 1493 / खनिज / 2023-24

रतलाम, दिनांक 11 / 07 / 2023

प्रति,

राज्य स्तरीय विशेषज्ञ  
मूल्यांकन समिति भोपाल (म.प्र.)  
पर्यावरण परिसर, ई-5, अरेरा कॉलोनी भोपाल

विषय :- खनिज रेत की जिला सर्वेक्षण रिपोर्ट संशोधन उपरांत पुनः प्रेषित करने बाबत।

संदर्भ :- राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति द्वारा दिये गये निर्देशानुसार।

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उपरोक्त विषयान्तर्गत एवं संदर्भित निर्देश के पालन में कार्यालयीन पत्र क्रमांक 932-33/खनिज/2023-24 दिनांक 01/05/2023 से ग्राम मेलुखेड़ी तथा पत्र क्र0 934-935/खनिज/2023-24 दिनांक 01/05/2023 से ग्राम गोंदीशंकर रेत खदान में कोर्डिनेट्स में सुधार हेतु पत्र प्रेषित कर जिला सर्वेक्षण रिपोर्ट में दर्ज जी.पी.एस. कोर्डिनेट्स के संशोधन पृष्ठ क्र0-12 में टेबल क्रमांक-3 के पृष्ठ नम्बर-13 में सरल क्रमांक 09 एवं 10 में सुधार किया गया तथा साथ ही टेबल नम्बर 21 में नदी की लम्बाई और चौड़ाई में भी सुधार किया गया है।

अतः उपरोक्तानुसार जिला सर्वेक्षण रिपोर्ट में संशोधन उपरांत अद्यतन किये जाने हेतु सादर प्रस्तुत है।

संलग्न :- उपरोक्तानुसार।

खनिज अधिकारी  
(खनिज शाखा)  
वास्तिवकलेक्टर, जिला रतलाम (म.प्र.)

पू0 क्रमांक / 1494 / खनिज / 2023-24  
प्रतिलिपि :-

रतलाम, दिनांक 11 / 07 / 2023

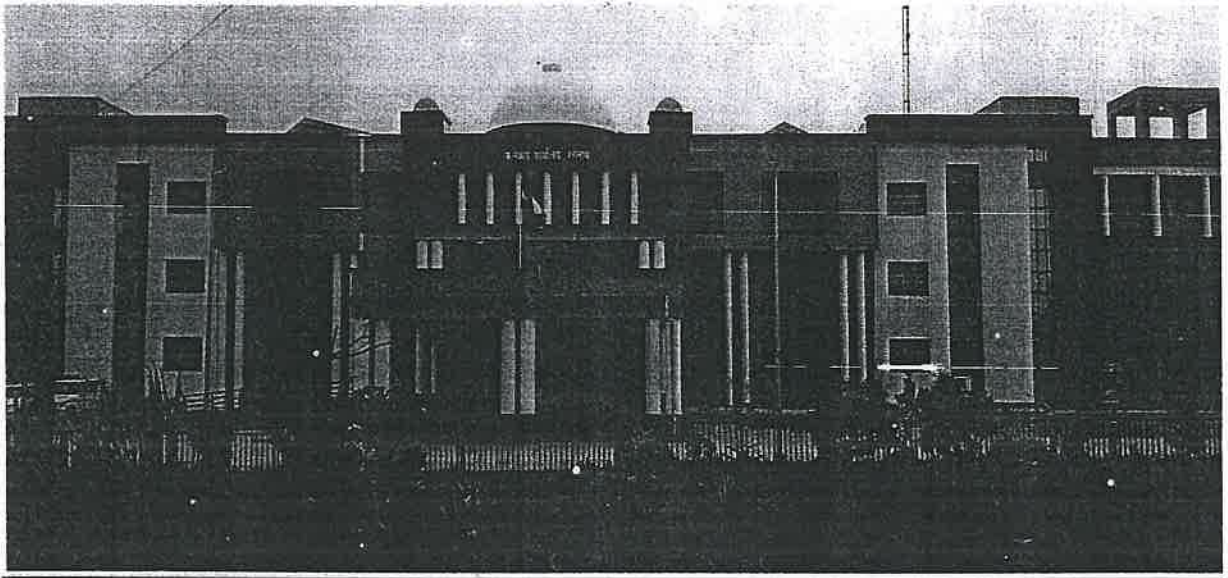
1. सदस्य/सचिव, राज्य स्तरीय पर्यावरण समाघात निर्धारण प्राधिकरण (म.प्र.) पर्यावरण परिसर, ई-5, अरेरा कॉलोनी भोपाल की ओर सूचनार्थ प्रेषित।

खनिज अधिकारी  
(खनिज शाखा)  
वास्तिवकलेक्टर, जिला रतलाम (म.प्र.)



**DISTRICT SURVEY REPORT OF**  
**FOR MINOR MINERAL-SAND**  
**RATLAM DISTRICT**

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



Prepared by

SUB DIVISIONAL COMMITTEE  
RATLAM (M.P.)  
YEAR-2022

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


## **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 its letter no.748/Khani, Dindori, dated 25-03-2021 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 Dindori 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 DEIAA/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.)  
Assessment Authority, M.P.  
Bhopal (M.P.)  
Paryavaran Parishad  
E-5, Arera Colony, Bhopal (M.P.)

## **INDEX**

CHAPTER	TITLE	PAGE NO.
<b>MINOR MINERALS OTHER THAN SAND MINING</b>		
Chapter - 1	Introduction	05
Chapter - 2	Overview of Mining activity in the District	11
Chapter - 3	The list of Mining leases of Stone Gitti in the District with location, area and period of Validity	16
Chapter - 4	Recommendation of Rnforcement & Monitoring Guidelones for Sand Mining by MOEF&CC- 2020	36
Chapter - 5	Details of Roylty or Revenue recievced in last three years	47
Chapter - 6	Details of Production of Sand or Bajri or Minor Mineral in last three years	48
Chapter - 7	Use of Mineral	49
Chapter - 8	General Profile of the District	50
Chapter - 9	Land Utilization pattern in the District : Forest, Agriculture, Horticulture, Mining etc.	53
Chapter - 10	Physiography of the District	56
Chapter - 11	Details of Month wise Rainfall Data of 1 Year	57
Chapter - 12	Rainfall of the District and climatic conditions	58
Chapter - 13	Geology of the District	60
Chapter - 14	Drainage and irrigation pattern	64
Chapter - 15	Surface water and Ground water scenario of the District	65
Chapter - 16	Mineral Map of the District	69
Chapter - 17	Details of Eco-Sensitive Area, if any, in the District	70
Chapter - 18	Impact on the environment Due to Mining Activity	74
Chapter - 19	Remedial Measures to Mitigate the Impact of Mining on the Environment	76
Chapter - 20	Reclamation on Mined Out Area in the District	79
Chapter - 21	Details of the Area of Where There is a Cluster of Mining Leases	80
Chapter - 22	Formation of sand	82
Chapter - 23	Sand Replenishment Plan and Projections	91
Chapter - 24	Risk Assessment & Disaster Management Plan	100
Chapter - 25	Details of Occupational Health	102
Chapter - 26	Plantation and Green Belt Development in Respect of Lease already Granted	105
Chapter - 27	Any Other Information	118

  
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 Assessment Authority, M.P.  
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 Paryavaran Parisar  
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# Chapter - 1

## Introduction


In pursuance to the Gazette Notification, Ministry of Environment, Forest and Climate Change (MoEF& CC), the **Government of India Notification NoS.O. 141 (E) Appendix-X, Dated 15.01.2016 & S.O. 3611 (E) New Delhi, 25<sup>th</sup> July 2018** laid procedure for preparation of District Survey Report of sand mining or river bed mining. The main purpose of preparation of District Survey Report (DSR) is to identify the Sand resources and developing the sand mining activities along with other relevant data of the district.

The process of making a DSR includes:

- Collection of baseline data from the department
- Development of related maps from satellite and secondary sources
- Understanding river flows and sedimentation vis-à-vis sand mining
- Tabulation and mapping of existing sand mining locations and yield
- Correlation with satellite data for pre and post monsoon sand yield
- Suggesting new locations for sand mining approvals
- Design and Development of DSR as per MoEF guidelines
- Interaction with line department for data / document ownership

For the first time, the Ministry of Environment, Forests and Climate Change (MoEFCC) has released guidelines to monitor and check illegal sand mining in the country.

- Sustainable Sand Management Guidelines (SSMG), 2016 focuses on the management of sand mining, but there was a need to have guidelines for effective enforcement of regulatory provisions and their monitoring.
- The 2020 guidelines are to be enforced simultaneously with the SSMG, 2016, in case of conflict; the new set will hold legal precedence. 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.
- However, 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.

  
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- Illegal and uncontrolled illegal mining also leads to loss of revenue to the State and degradation of the environment.

The fair and rapid advancement of technology in country has enabled surveillance and remote monitoring in the field of mining for the effective monitoring of the mining activities, particularly, sand mining. States are now utilizing remote sensing to prevent illegal mining. Rules have been made to prevent illegal mining, transportation and storage of minerals but in the recent past, it has been observed that there was large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled illegal mining leads to loss of revenue to the State and degradation of the environment. Thus, an effective policy for monitoring of sand mining in the Country has been enforced focusing on the effective monitoring of the sand mining since from the identification of sand mineral sources to its dispatch and end-use by consumers and the general public.

- 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.
- Audits: States to carry out river audits and put detailed survey reports of all mining areas in the public domain.
- Transparency: Online sales and purchase of sand and other riverbed materials (RBM) for transparency in the process.
- 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.
- Sustainability: Conduct replenishment study for river bed sand in order to nullify the adverse impacts arising due to excessive sand extraction.



- While the Sustainable Sand Mining Guidelines, 2016, require the preparation of District Survey Reports (DSR), which is an important initial step before grant of mining lease, the government has found that the DSRs carried out by state and district administrations are often not comprehensive enough, allowing space for illegal mining.

**Location and Boundaries:** Ratlam district is located on northwest part of Madhya Pradesh. It is one of the important tribal districts of Malwa regions of Madhya Pradesh. Sailana and Bajna blocks are major tribal blocks. The district is bounded by Mandsaur district in the north, Jhabua and Dhar district in the south, Ujjain and Shajapur districts in the east, Banswara district of Rajasthan state in the west and Jhalawar district of Rajasthan state in the northeast. The district area extends between the parallels of latitude 23°05' and 23°52' North and between the meridians of longitude 74°31' and 74°41' east, and it is falling in the Survey of India Topo Sheet No. 46I and 46M.

Ratlam District has an area of 4,861 square kilometres (1,877 sq mi). It is bounded by Mandsaur District to the north, Jhalawar District of Rajasthan state to the northwest, Ujjain District to the east, Dhar District to the south, Jhabua District to the southwest, and Pratapgarh District of Rajasthan to the west. It is divided into nine tehsils and is home to 9 at and 1,063 villages (as of 2001). The district is part of Ujjain Division.

The entire district lies on the Malwa plateau, along its western margins. The composition of surface rocks being that of the traps. The general scene is of an undulating country, sloping towards the north and marked by series of high grounds and valleys of north flowing streams, alternating from east to west. Among the subsidiary water divides between the streams, there are isolated hills or low hill ranges running for short distances. These hills attain prominence in the south-east of the district and near the western margins of the plateau. In the west they are dissected and slope in to the narrow valleys of seasonal streams of the Mahi.

**Origin:** In reward for their services and in recognition of their great deeds of valour, large territories in the south-western districts of Rajputana and northern Malwa were conferred on them. Their capital became Ratram (named after Raja Ratan Singh and his first son Ram Singh) which later got translated to 'Ratlam'.


**History:** Ratlam State was founded in 1652 by a great-grandson of Raja Udai Singh of Jodhpur, namely Raja Ratan Singh Rathore, son of Mahesh Das of Jalore. The latter,

father, and son, had performed important military services for the Emperor Shah Jahan by defeating the Persians and Uzbeks in Afghanistan. In reward for their services and in recognition of their great deeds of valour, large territories in the south-western districts of Rajputana and northern Malwa were conferred on them. Their capital became Ratram (named after Raja Ratan Singh and his first son Ram Singh) which later got translated to Ratlam

## General Features

**Table 1 Administrative Setup of the District**

SUB-DIVISION	TEHSIL	BLOCKS
Ratlam	Ratlam City	Ratlam City
	Ratlam Rural	Ratlam Rural
	Sailana	Sailana
	Bajna	-
	Raoti	-
	Jaora	Jaora
	Piploda	Piploda
	Alot	Alot
	Tal	-
Total	9	5

  
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## Chapter - 2

### Overview of Mining Activity in the District

No major minerals are found in the District. Mostly minor minerals are found in the district which includes stone, gitti, murrum and sand. Stone is mostly mined in the district and illegal mining has been a critical problem in the district.

Table 2 Mineral Production in the District

Sr. No.	Mineral	Production in (Cu. M)
<b>Major Mineral</b>		
1.	Nil	Nil
<b>Minor Mineral</b>		
2.	Stone/Gitti	1390299.58 Cu. M
3.	Murum	44041 Cu. M
4.	Sand	12926.92 Cu. M

Minor Mineral mined in the district

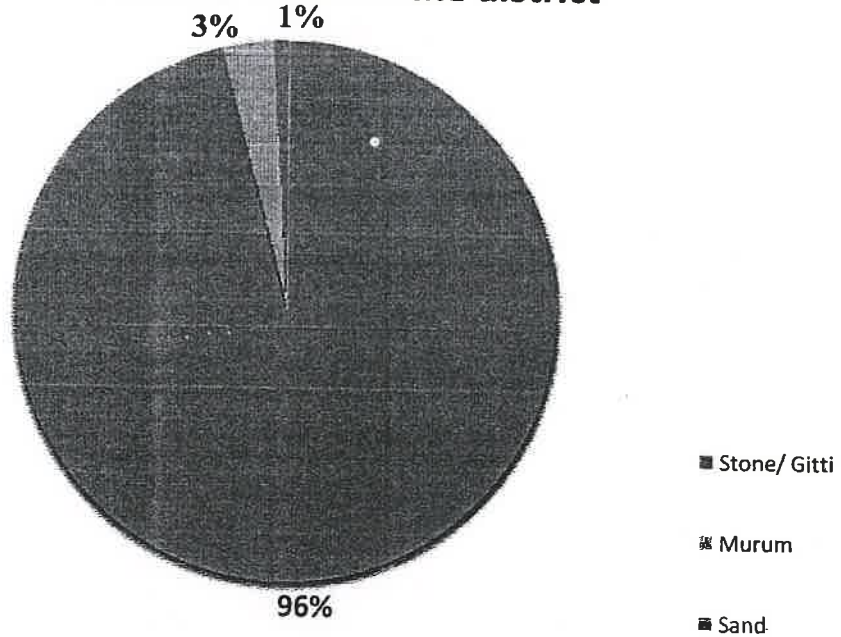


Figure 3 Production of Minor Mineral Mining in the District

BASE MAP OF RATLAM DISTRICT

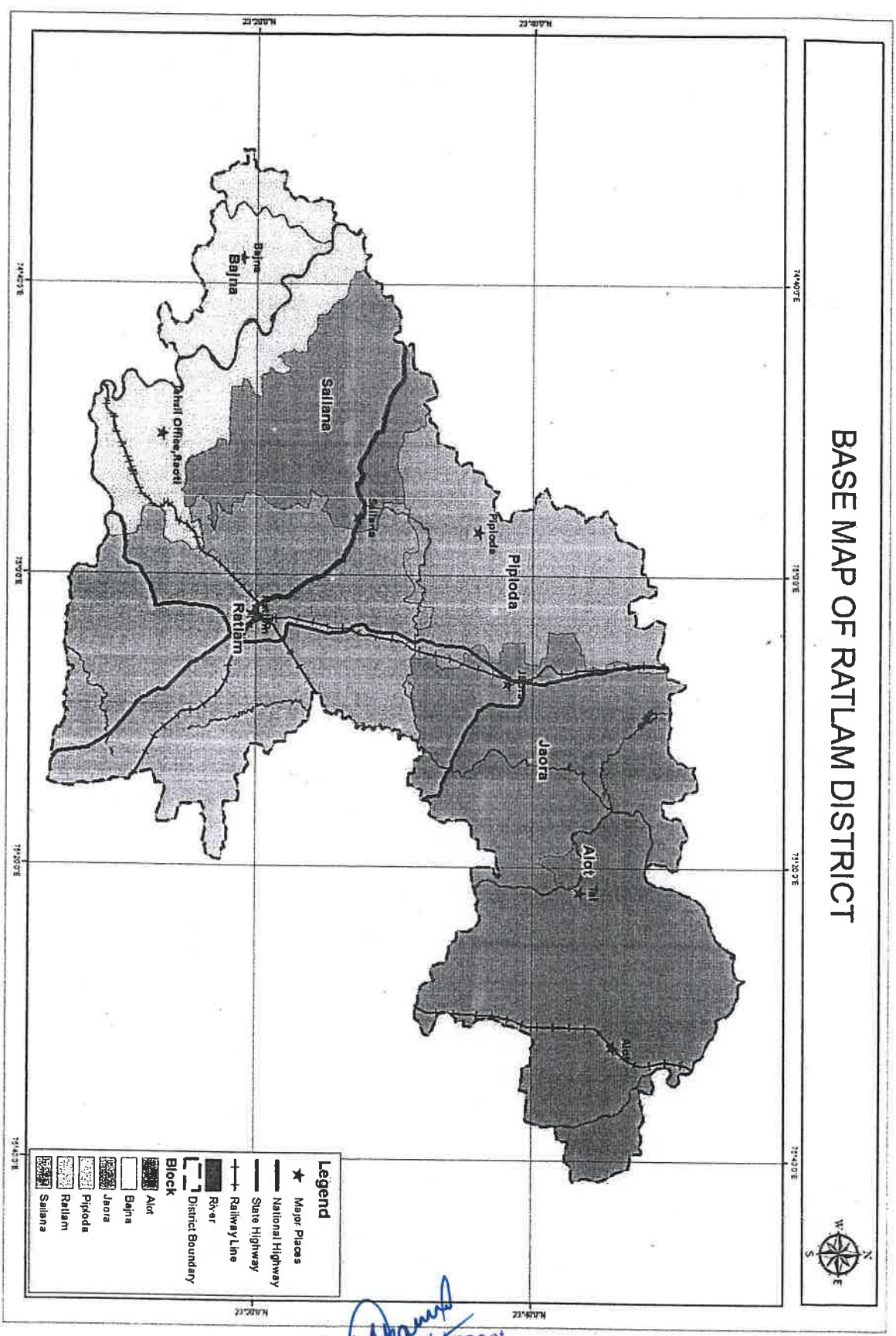


Figure 2 Base Map of the District

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Table 3 Sand Mines in Ratlam District

Sr. No.	Name of Mine	Tehsil	Khasra no.	Area (Ha)	Sand Capacity (in Cu.m)	Latitude (N)	Longitude(E)	Date of EC	Existing/Proposed
1	Kitu Khedi	Jaora	132	5.000	3000	23°42'52.45" 23°42'57.97" 23°42'54.73" 23°42'48.49"	75°17'54.39" 75°18'05.92" 75°18'08.86" 75°17'54.90"	18-06-2020	Existing
2	Bahadurpur Jagir	Jaora	375	3.000	3000	23°37'53.28" 23°37'51.56" 23°37'41.64" 23°37'43.29"	75°12'16.62" 75°12'19.33" 75°12'11.10" 75°12'09.00"	18-06-2020	Existing
3	Uni	Jaora	235	5.000	1700	23°44'50.12" 23°44'48.03" 23°44'40.86" 23°44'42.82"	75°16'48.35" 75°16'46.74" 75°17'02.61" 75°17'03.78"	12-02-2021	Existing
4	Karan Khedi	Jaora	126	1.700	1700	23°36'33.71" 23°36'22.16" 23°36'21.42" 23°36'32.95"	75°12'27.70" 75°12'39.33" 75°12'38.35" 75°12'26.61"	16-02-2021	Existing
5	Khojan Kheda	Jaora	02	6.000	1640	23°38'38.04" 23°38'39.00" 23°38'4.95" 23°38'6.04"	75°13'3.19" 75°13'5.73" 75°12'34.25" 75°12'33.46"	21-08-2020	Existing
6	Rafu Khedi	Jaora	241	8.000	1700	23°45'06.30" 23°45'05.40" 23°45'22.32" 23°45'22.20" 23°45'29.29" 23°45'30.78" 23°45'41.32" 23°45'39.71"	75°14'50.30" 75°14'50.35" 75°14'49.87" 75°14'48.49" 75°14'57.83" 75°14'57.82" 75°15'50.07" 75°15'50.05"	16-01-2017	Existing

7	Bhampur (Nimbodiya)	Jaora	289	6.000	1700	23°36'2.57" 23°36'4.69" 23°35'55.75" 23°35'41.67" 23°35'41.83" 23°35'54.75"	75°21'11.80" 75°21'14.29" 23°35'55.75" 75°21'23.87" 75°21'20.53" 75°21'19.14"	02-08-2016	Existing
8	Badodiya	Jaora	126	6.000	3000	23°33'53.21" 23°33'53.28" 23°33'40.67" 23°33'28.19" 23°33'28.78" 23°33'40.00"	75°13'10.00" 75°13'12.67" 75°13'14.67" 75°13'10.91" 75°13'8.24" 75°13'11.95"	14-10-2015	Existing
9	Gondi Shankar	Jaora	701	10.00	2500	23°46'51.50" 23°46'51.67" 23°47'24.34" 23°47'22.55" 23°46'27.91" 23°46'28.01" 23°46'03.92" 23°46'03.64"	75°16'60.59" 75°16'10.34" 75°16'02.98" 75°16'01.14" 75°16'05.50" 75°16'09.20" 75°16'08.89" 75°16'05.89"	28-10-2015	Existing
10	Melukheddi (Arwas)	Tal	01,110	8.000	3500	23°42'31.82" 23°42'31.67" 23°41'53.26" 23°41'55.05"	75°21'25.13" 75°21'21.00" 75°21'14.20" 75°21'18.01"	21-11-2017	Existing
11	Fatehpur	Tal	90,242	16.00	2500	23°36'34.18" 23°36'33.91" 23°36'23.19" 23°36'22.84" 23°36'12.42" 23°36'11.69" 23°35'55.80" 23°35'56.98"	75°20'54.05" 75°20'50.68" 75°20'55.35" 75°20'58.72" 75°21'7.47" 75°21'5.18" 75°21'22.19" 75°21'24.86"	01-02-2016	Existing
12	Nimbakhedi	Tal	240	8.000	3000	23°46'04.97" 23°46'03.64" 23°45'46.87" 23°45'36.27"	75°36'45.73" 75°36'42.99" 75°36'48.47" 75°36'47.40"	-	Existing
13	Laxmipura	Alot	153	8.000	3000				Existing

						23°45'36.69"	75°36'52.21"		
						23°45'40.71"	75°36'53.92"		
						23°45'55.87"	75°36'49.86"		
14	Umariya	Bajna	01	7.540	3060	23°21'43.60"	74°40'03.63"		
						23°21'46.30"	74°40'00.90"		
						23°22'10.08"	74°40'21.62"		
						23°22'08.61"	74°40'23.46"	02-02-2021	Existing

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



Location of the District

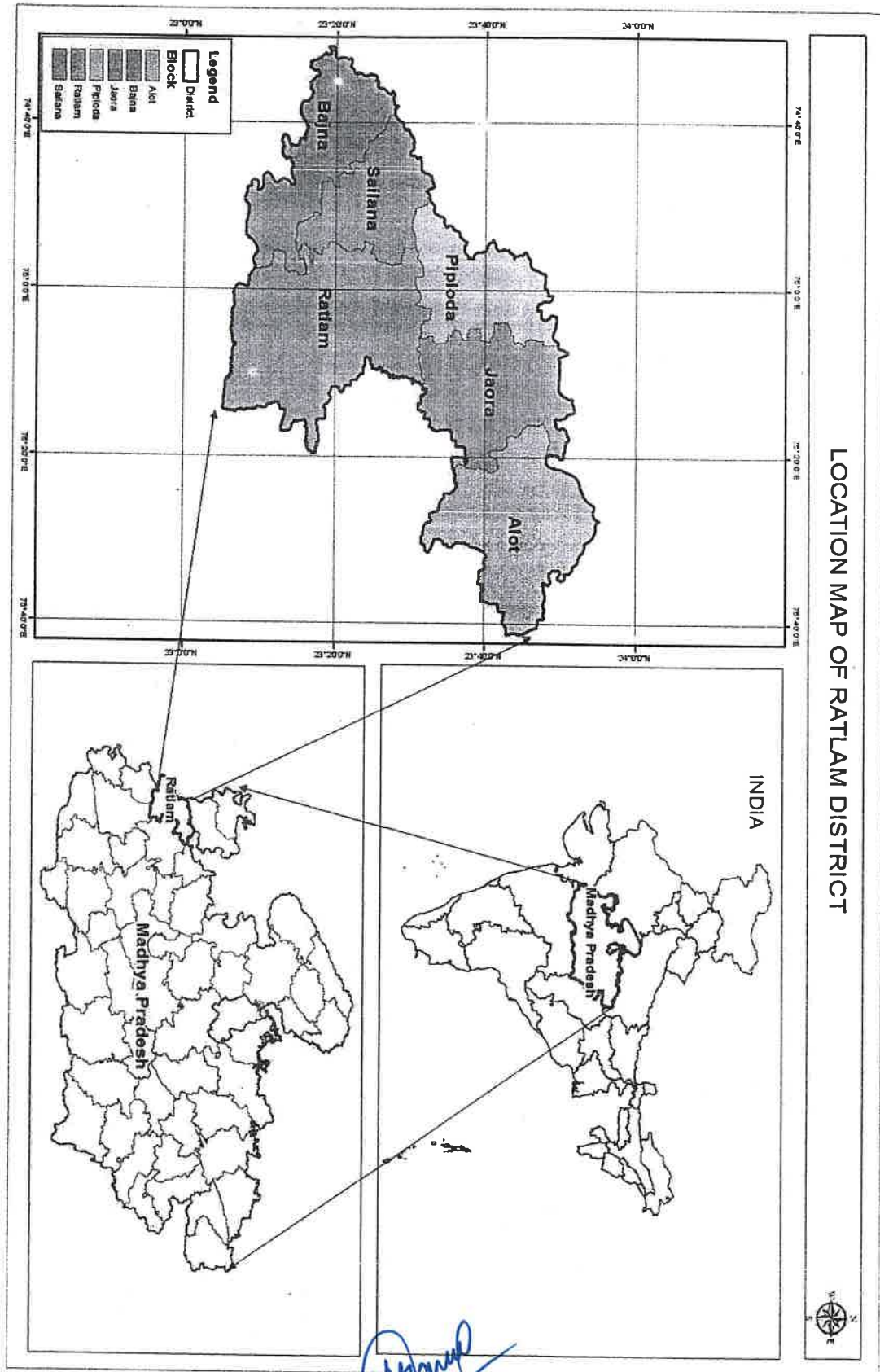
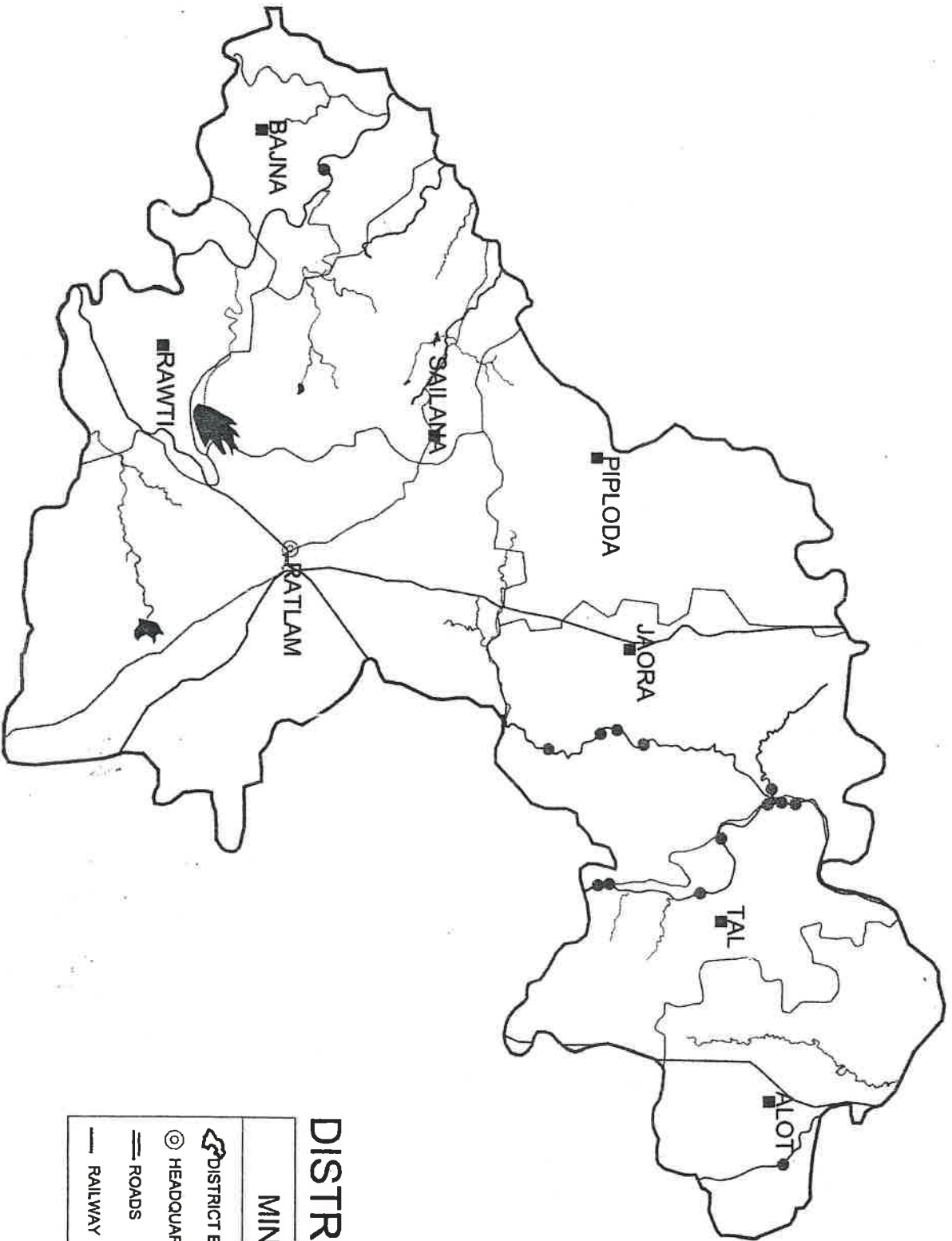



Figure 1 Location Map of the District

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









# MINING LEASES MARKED ON DISTRICT MAP



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



## DISTRICT - RATLAM

MINERAL SYMBOL	
	DISTRICT BOUNDARY
	BLOCK BOUNDARY
	HEADQUARTER
	SAND MINES
	ROADS
	TEHSIL/BLOCK
	RAILWAY
	STREAMS





8	Shri Aabid Khan S/o Aslam Khan R/o- Khudwadi Mohalla, Varoth road, Alot, Tehs. Alot, Dist. Ratlam	Stone Gitti	143	2.000	Village- Khamariya Tehsil- Alot	29-01-2019 to 28-01-2029	(1) N 23°44' 23.19" E 75°32' 08.15" (2) N 23°44' 23.19" E 75°32' 11.26" (3) N 23°44' 16.30" E 75°31' 11.26" (4) N 23°44' 16.30" E 75°32' 08.15"	
9	M/S R. K. Stone Crusher Partner: Shri Asif Khan S/o Aslam Khan, and Shri Abid Khan S/o Aslam Khan R/o Khudwadi Mohalla, Varoth road, Alot, Tehs. Alot, Dist. Ratlam	Stone Gitti	385/2/2	1.000	Village- Jeevanganth Tehsil- Alot	24-01-2019 to 23-01-2029	(1) N 23°44' 33.30" E 75°31' 55.74" (2) N 23°44' 33.30" E 75°31' 59.35" (3) N 23°44' 27.52" E 75°31' 55.74"	
10	Shri Wasim Khan S/o Shri Aslam Khan R/o Dargah Mohalla, Alot	Stone Gitti	504	2.000	Village- Mau Khedi Tehsil- Alot	02-09-2020 to 01-09-2030	(1) N 23°44' 27.69" E 75°31' 39.20" (2) N 23°44' 27.22" E 75°31' 43.44" (3) N 23°44' 21.80" E 75°31' 42.76" (4) N 23°44' 22.33" E 75°31' 38.53"	

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

Table 5 Gitti Stone Mine in Bajna Tehsil

Sr. No.	Lease Owner's Name and Address	Mineral	Mineral	Survey No.	Area (Ha)	Village/ Tehsil	Duration	Duration	Latitude (N) Longitude (E)	Latitude (N) Longitude (E)	Remar
1	Shri Surendra Singh Bhamra S/o Jager Singh R/o- 57, New Road, Ratlam, Dist. Ratlam	Stone Gitti	Stone Gitti	257	0.750	Village- Arniipada Tehsil- Bajna	10-05-2016 to 09-05-2026	(1) N 23°16' 10.88" E 74°58' 03.63" (2) N 23°16' 12.33" E 74°58' 04.85" (3) N 23°16' 05.52" E 74°58' 14.7"			

Table 6 Gitti Stone Mine in Jaora Tehsil

Sr. No.	Lease Owner's Name and Address	Mineral	Survey No.	Area (Ha)	Village/ Tehsil	Duration	Duration	Latitude (N) Longitude (E)	Remar
1	Shri Ramchandra Patidar S/o Shri Badrilal R/o- Village Daloda, Tehs. Daloda, Dist. - Mandasaur	Stone Gitti	33/2	3.000	Village- Rojhana Tehsil- Jaora	24-11-2011 to 23-11-2021	(1) N 23°41' 03.15" E 75°08' 20.01" (2) N 23°41' 03.16" E 75°08' 25.11" (3) N 23°41' 57.68" E 75°08' 25.31" (4) N 23°41' 57.77" E 75°08' 20.34"		
2	Shri Ajay Kumar Baser S/o Shri Rajmal R/o- 23, Ward No. -21, Kalaji Kharanja, Baser chank, Dist. Mandasaur	Stone Gitti	33/2	1.000	Village- Rojhana Tehsil- Jaora	01-01-2015 to 31-12-2024	(1) N 23°41' 08.55" E 75°08' 16.30" (2) N 23°41' 07.94" E 75°08' 22.89" (3) N 23°41' 06.20" E 75°08' 22.74" (4) N 23°41' 06.95" E 75°08' 16.22"		

3	Shri Sureshbhai Patel S/o Shri Kantilal R/o- Poonam Biliar Colony, Tehs. Jaora, Dist. Ratlam	Stone Gitti	33/2	3.000	Village- Rojhana Tehsil- Jaora	02-08-2016 to 01-08-2026	(1) N 23°40' 58.85" E 75°08' 10.79" (2) N 23°40' 58.84" E 75°08' 17.39" (3) N 23°40' 04.15" E 75°08' 17.61" (4) N 23°40' 04.32" E 75°08' 10.63"
4	Shri Kapil Patel S/o Shri Jaysankar Patel R/o- 103/1, Rapat road, Teh. Jaora	Stone Gitti	17/1	1.998	Village- Rojhana Tehsil- Jaora	01-09-2017 to 31-08-2027	(1) N 23°41' 20.22" E 75°08' 19.20" (2) N 23°41' 20.83" E 75°08' 20.60" (3) N 23°41' 20.95" E 75°08' 24.34" (4) N 23°41' 15.97" E 75°08' 24.30" (5) N 23°41' 15.81" E 75°08' 18.90"
5	Shri Ramechandra Patidar S/o Shri Badrilal R/o- Village Daloda, Tehs. Daloda, Dist- Mandasaur	Stone Gitti	18/1	2.000	Village- Rojhana Tehsil- Jaora	07-02-2017 to 06-02-2027	(1) N 23°41' 28.323" E 75°8' 15.849" (2) N 23°41' 28.499" E 75°8' 18.277" (3) N 23°41' 26.929" E 75°8' 19.092" (4) N 23°41' 26.673" E 75°8' 21.423" (5) N 23°41' 23.156" E 75°8' 20.814" (6) N 23°41' 22.681" E 75°8' 16.142"
6	Shri Aadi Gorecha S/o Shri Ravindra Gorecha R/o- 91, Kothi Bazaar, Teh.-Jaora, Dist. Ratlam	Stone Gitti	17/2, 17/3	1.298	Village- Rojhana Tehsil- Jaora	16-01-2018 to 15-01-2028	(1) N 23°41' 21.30" E 75°08' 24.20" (2) N 23°41' 20.90" E 75°08' 20.60" (3) N 23°41' 24.70" E 75°08' 21.20" (4) N 23°41' 24.90" E 75°08' 24.10"
7	Shri Khemraj Gurjar S/o Shri Devi Singh R/o 311, Akyparwal, Tehs. Jaora	Stone Gitti	321	3.450	Village- Sindurkiya Tehsil- Jaora	29-06-2021 to 28-06-2031	(1) N 23°40' 12.30" E 75°14' 46.63" (2) N 23°40' 12.10" E 75°14' 56.47" (3) N 23°40' 08.95" E 75°14' 50.30"
8	Shri Mahendra Singh Solanki S/o Shri Manohar Singh Solanki R/o- 28, Barnankhedi, Tehs. Jaora, Dist. Ratlam	Stone Gitti	355	2.000	Village- Sindurkiya Tehsil- Jaora	31-05-2017 to 30-05-2027	(1) N 23°39' 58.64" E 75°14' 47.17" (2) N 23°39' 59.89" E 75°14' 54.48" (3) N 23°39' 56.94" E 75°14' 55.16" (4) N 23°39' 55.65" E 75°14' 46.92"
9	Shri Nardev Sharma S/o Shobha Ram R/o- 129, Tilak Nagar, Tehs. Jaora, Dist. Ratlam	Stone Gitti	91/1/1	4.000	Village- Badawada Tehsil- Jaora	28-11-2021 to 27-11-2031	(1) N 23°34' 02.50" E 75°14' 36.40" (2) N 23°34' 03.10" E 75°14' 39.10" (3) N 23°34' 13.20" E 75°14' 38.40" (4) N 23°34' 13.40" E 75°14' 36.30"
10	Shri Rajesh Chordiya S/o Shri Babulal R/o- 14, Neem Chauk, Tehs. Jaora, Dist. Ratlam	Stone Gitti	116	4.000	Village- Badawada Tehsil- Jaora	09-01-2013 to 08-01-2023	(1) N 23°42' 34.92" E 75°09' 17.89" (2) N 23°42' 35.12" E 75°09' 25.20" (3) N 23°42' 26.35" E 75°09' 25.87" (4) N 23°42' 25.93" E 75°09' 19.11"
11	Shri Jitendra Hingad S/o Shri Mishrilal R/o- Badwada, Tehs. Jaora, Dist. Ratlam	Stone Gitti	226	1.000	Village- Faunchriya Tehsil- Jaora	10-01-2012 to 09-01-2022	(1) N 23°34' 06.84" E 75°16' 34.26" (2) N 23°34' 07.30" E 75°16' 36.41" (3) N 23°34' 06.72" E 75°16' 38.17" (4) N 23°34' 04.44" E 75°16' 37.93" (5) N 23°34' 05.35" E 75°16' 35.88" (6) N 23°34' 02.57" E 75°16' 36.01" (7) N 23°34' 02.51" E 75°16' 35.06"

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12	Shrimati Aarti Rarotiya W/o Shri Sudheer R/o- 18, Kamal Kha, Tehs. Jaora, Dist. Ratlam	Stone Gitti	486/1/1/A/1	2.000	Village- Ringnod Tehsil- Jaora	13-07-2015 to 12-07-2025	(1) N 24°44' 13.99" E 75°10' 56.45" (2) N 24°44' 10.42" E 75°10' 34.10" (3) N 24°44' 13.42" E 75°10' 26.47" (4) N 24°44' 16.78" E 75°10' 28.43"
13	M/S S.S. Industries , Jaora Pro. Shri Sanjeev Kumar Jain S/o Shri Chandmal R/o-65, Arihant Colony, Jaora Dist. Ratlam	Stone Gitti	486/1/1/A/1	2.000	Village- Ringnod Tehsil- Jaora	15-06-2016 to 14-06-2026	(1) N 23°43' 48.98" E 75°10' 25.20" (2) N 23°43' 47.50" E 75°10' 29.21" (3) N 23°43' 41.73" E 75°10' 26.42" (4) N 23°43' 42.49" E 75°10' 21.53"
14	Shri Dheeraj Singh Dodiya S/o Shri Yashwant Singh R/o- 68, Village: Nagdi, Tehs. Jaora, Dist. Ratlam	Stone Gitti	07	1.630	Village- Sada Khedi Tehsil- Jaora	21-06-2017 to 21-10-2026	(1) N 23°34' 43.68" E 75°06' 47.90" (2) N 23°34' 42.94" E 75°06' 47.90" (3) N 23°34' 39.02" E 75°06' 47.90"
15	Shri Vijendra Singh Panwar S/o Shri Shambhu Singh Panwar R/o- 12/1, Meenapur, Tehs. Jaora, Dist. Ratlam	Stone Gitti	07	2.000	Village- Sada Khedi Tehsil- Jaora	07-02-2018 to 06-02-2028	(1) N 23°34' 42.33" E 75°06' 25.12" (2) N 23°34' 38.64" E 75°06' 58.28" (3) N 23°34' 36.14" E 75°06' 58.28" (4) N 23°34' 38.18" E 75°06' 52.50"
16	Shri Shripal Jain S/o Shri Sagarnal Jain R/o- 67, Laxmibai Marg. Tehs. Jaora, Dist.- Ratlam	Stone Gitti	81	2.000	Village- Harpipliya Tehsil- Jaora	26-12-2017 to 25-12-2027	(1) N 23°40' 39.63" E 75°15' 25.74" (2) N 23°40' 39.46" E 75°15' 30.26" (3) N 23°40' 36.71" E 75°15' 29.69" (4) N 23°40' 36.57" E 75°15' 25.66"
17	Shri Mahendra Singh Solanki S/o Shri Manohar Singh Solanki R/o- 28, Village- Banankhedi, Tehs. Jaora, Dist. - Ratlam	Stone Gitti	355	2.000	Village- Sindurkiya Tehsil- Jaora	01-06-2018 to 31-05-2028	(1) N 23°40' 00.30" E 75°15' 04.29" (2) N 23°40' 00.29" E 75°15' 07.47" (3) N 23°40' 58.10" E 75°15' 04.22" (4) N 23°40' 58.37" E 75°15' 07.09"
18	Shri Raghuvver Ranawat S/o Shri Praveen Singh Ranawat R/o- Nagda, Tehs. Nagda, Dist.- Ratlam	Stone Gitti	486/1/1/A/1	1.500	Village- Ringnod Tehsil- Jaora	05-07-2018 to 04-07-2028	(1) N 23°44' 01.70" E 75°10' 10.12" (2) N 23°44' 02.98" E 75°10' 12.17" (3) N 23°44' 54.72" E 75°10' 12.98" (4) N 23°44' 54.82" E 75°10' 09.78"
19	Shri Sanjeev Kumar Jain S/o Shri Chandmal R/o- 65, Arihant colony, Dist. Ratlam	Stone Gitti	33/2	1.800	Village- Rojhana Tehsil- Jaora	13-04-2017 to 12-04-2027	(1) N 23°43'48.580" E 75°10' 26.047" (2) N 23°43'47.265" E 75°10' 29.726" (3) N 23°43' 42.104" E 75°10' 27.263" (4) N 23°43' 43.454" E 75°10' 23.383"
20	Shri Sandesh Kumar Jain S/o Shri Chandmal R/o- 65, Arihant colony, Dist. Ratlam	Stone Gitti	33/2	2.000	Village- Rojhana Tehsil- Jaora	22-05-2018 to 21-05-2028	(1) N 23°41' 02.39" E 75°08' 12.64" (2) N 23°41' 02.21" E 75°08' 16.04" (3) N 23°41' 01.17" E 75°08' 17.59" (4) N 23°40' 57.94" E 75°08' 17.27" (5) N 23°40' 58.19" E 75°08' 11.32" (6) N 23°40' 59.45" E 75°08' 11.34"

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



								(7) N 23°40' 59.39" E 75°08' 12.49"	
21	Shri Piyush Jain S/o Shri Pradeep Jain R/o 03, Kashmiri Gali Jaora	Stone Gitti	76, 77, 78, 80, 84, 85	2.000	Village- Sindurkiya Tehsil- Jaora	06-07-2020 to 05-07-2030	(1) N 23°40' 11.93" E 75°17' 17.53" (2) N 23°40' 16.03" E 75°17' 17.01" (3) N 23°40' 01.17" E 75°14' 18.56" (4) N 23°40' 57.94" E 75°14' 22.19" (5) N 23°40' 58.19" E 75°14' 22.23" (6) N 23°40' 59.45" E 75°14' 20.86"		

Table 7 Gitti Stone Mine in Piploda Tehsil

Sr. No.	Lease Owner's Name and Address	Mineral	Survey No.	Area (Ha)	Village/ Tehsil	Duration	Latitude (N) Longitude (E)	Remarks
1	Shrimati Renuka Rarotiya W/o Shri Madan R/o- 18, Pathantoli, Tehsil- Jawra, Dist. Ratlam	Stone Gitti	3, 4/8	1.253	Village- Mannat Kheda Tehsil- Piploda	01-01-2011 to 31-12-2021	(1) N 23°41' 06.20" E 75°03' 38.70" (2) N 23°41' 02.33" E 75°03' 41.33" (3) N 23°41' 04.50" E 75°03' 31.60" (4) N 23°41' 02.80" E 75°03' 31.40"	Renewal consider:
2	Shri Shantilal Rudrani S/o Shri Soruji, R/o- 10, Poonam Bihar Colony, Tehs. Jawra, Dist. Ratlam	Stone Gitti	461/1	2.000	Village- Akyaadeh Tehsil- Piploda	27-04-2013 to 02-05-2022	(1) N 23°38' 07.79" E 75°02' 58.95" (2) N 23°38' 08.65" E 75°03' 06.07" (3) N 23°38' 11.56" E 75°03' 05.90" (4) N 23°38' 11.03" E 75°02' 58.57"	Renewal consider:
3	M/S U. B. Infrastructure Pvt. Ltd. Pro. Shri Vikram Singh Anjana S/o Shri Mohantal, R/o- Anjana Complex, Karnal chowk, Dist. Neemach (M.P.)	Stone Gitti	42/1	2.000	Village- Jethana Tehsil- Piploda	24-12-2016 to 23-12-2026	(1) N 23°40' 50.78" E 75°00' 15.15" (2) N 23°40' 51.52" E 75°00' 21.35" (3) N 23°40' 48.40" E 75°00' 21.23" (4) N 23°40' 47.43" E 75°00' 15.19"	
4	Shri Rahul Oswal S/o Shri Chandraprakash Oswal, R/o- 14, Old Hospital Road, Tehs.- Jaora	Stone Gitti	146/1	2.000	Village- Badayala Chorasi Tehsil- Piploda	23-02-2018 to 22-02-2028	(1) N 23°34' 17.98" E 75°05' 12.60" (2) N 23°34' 16.64" E 75°05' 16.13" (3) N 23°34' 16.03" E 75°05' 15.89" (4) N 23°34' 16.08" E 75°05' 15.60" (5) N 23°34' 08.20" E 75°05' 13.52" (6) N 23°34' 08.92" E 75°05' 10.71"	
5	Shri Rahul Oswal S/o Shri Chandraprakash Oswal, R/o- 14, Old Hospital Road, Tehs.- Jaora	Stone Gitti	43/10	2.000	Village- Badayala Chorasi Tehsil- Piploda	23-02-2018 to 22-02-2028	(1) N 23°34' 18.65" E 75°05' 10.00" (2) N 23°34' 18.03" E 75°05' 12.45" (3) N 23°34' 08.87" E 75°05' 10.54" (4) N 23°34' 09.37" E 75°05' 08.23"	

(P.M.) Bhopal, Anand  
Sisodia, Jaora  
P.P.W. Anand  
Sisodia, Jaora  
Piploda









29	Shri Mukta Singh D/o Shri Prem Singh R/o A-101, Jupitar Tower Aharnadbad (GJ)	Stone Gitti	75/1	1.600	Village- Sujana Tehsil- Ratlam	28-11-2017 to 27-11-2027	(1) N 23°05' 31.40" E 74°11' 19.00" (2) N 23°05' 28.80" E 74°11' 18.80" (3) N 23°05' 29.80" E 74°11' 10.60" (4) N 23°05' 32.50" E 74°11' 10.30"
30	Raj Rajeshwari Stone Crusher, Shrimati Sunita Kumawat W/o Shri Jaswant R/o- A/54, Dongre Nagar, Ratlam	Stone Gitti	2/4/2	1.200	Village- Rajpura Tehsil- Ratlam	27-11-2016 to 26-11-2026	(1) N 23°17' 11.88" E 74°58' 15.05" (2) N 23°17' 11.96" E 74°58' 17.17" (3) N 23°17' 15.37" E 74°58' 17.04" (4) N 23°17' 15.73" E 74°58' 18.26" (5) N 23°17' 16.89" E 74°58' 18.34" (6) N 23°17' 16.90" E 74°58' 13.09" (7) N 23°17' 15.82" E 74°58' 13.06" (8) N 23°17' 15.22" E 74°58' 14.87"
31	Shri Vinod Bhai Patel S/o Shri Rajori Bhai, R/o Shakti Aara Machine Jawra Fatak Ratlam	Stone Gitti	535/1	2.000	Village- Sarwad Tehsil- Ratlam	04-12-2020 to 03-12-2030	(1) N 23°09' 45.37" E 75°10' 21.14" (2) N 23°09' 43.79" E 75°10' 24.36" (3) N 23°09' 47.00" E 75°10' 26.42" (4) N 23°09' 48.96" E 75°10' 23.05"
32	Shri Ejan Belim S/o Shri Akbar Belim R/o- Ashok nagar Ratlam	Stone Gitti	490/1	2.000	Village- Sarwad Tehsil- Ratlam	01-12-2017 to 30-11-2027	(1) N 23°10' 15.55" E 75°09' 21.76" (2) N 23°10' 15.23" E 75°09' 25.89" (3) N 23°10' 10.56" E 75°09' 25.49" (4) N 23°10' 10.84" E 75°09' 21.22"
33	Shri Vinod Bhai Patel S/o Shri Rajvi Bhai R/o- Shakti Aara Machine, Jawra Phatak, Teh. Ratlam, Dist.- Ratlam	Stone Gitti	535/1	1.000	Village- Sarwad Tehsil- Ratlam	02-12-2015 to 01-12-2025	(1) N 23°09' 45.37" E 75°10' 21.14" (2) N 23°09' 43.79" E 75°10' 24.36" (3) N 23°09' 47.00" E 75°10' 26.42" (4) N 23°09' 96.75" E 75°10' 23.05"
34	Shri Vikram Singh Rathod S/o Jaswant Singh R/o Village- Lunera, Tehs. Ratlam, Dist.- Ratlam	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	26-12-2011 to 25-12-2021	(1) N 23°18' 54.91" E 75°13' 19.60" (2) N 23°18' 54.65" E 75°13' 25.72" (3) N 23°18' 50.81" E 75°13' 25.51" (4) N 23°18' 51.08" E 75°13' 19.40"
35	Shri Mahendra Agarwal S/o Shri Prabhudayal R/o- 23, Joy Builder Colony, Ranisati Gate, Dist. Indore	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	22-07-2016 to 21-07-2026	(1) N 23°18' 48.84" E 75°13' 02.50" (2) N 23°18' 48.78" E 75°13' 08.79" (3) N 23°18' 45.34" E 75°13' 08.74" (4) N 23°18' 45.42" E 75°13' 02.54"
36	Shri Mahendra Agarwal S/o Shri Prabhudayal R/o- 23, Joy Builder Colony, Ranisati Gate, Dist. Indore	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	22-07-2016 to 21-07-2026	(1) N 23°18' 48.84" E 75°13' 02.50" (2) N 23°18' 48.78" E 75°13' 08.79" (3) N 23°18' 45.34" E 75°13' 08.74" (4) N 23°18' 45.42" E 75°13' 02.54"
37	Shri Bharat Rathod S/o Shri Shyam Sunder R/o- 14/1, Sahar Sary, Nahar pura road Ratlam	Stone Gitti	04	2.000	Village- Sarwani Khurd Tehsil- Ratlam	01-09-2016 to 31-08-2026	(1) N 23°19' 25.03" E 74°57' 57.31" (2) N 23°19' 25.17" E 74°57' 00.40" (3) N 23°19' 18.57" E 74°57' 00.69" (4) N 23°19' 17.38" E 74°57' 51.82"

Panchajanya  
 (O.P.C.E)  
 Jaisidepuravavaylar  
 Parajara Arera 5-5  
 Panchajanya  
 Jaisidepuravavaylar  
 Parajara Arera 5-5

38	Shri Kailash Kumawat S/o Shri Giridharial R/o- 120, Karnadi Road, Dist.- Ratlam	Stone Gitti	01	1,900	Village- Sarwani Khurd Tehsil- Ratlam	21-10-2015 to 20-10-2025	(1) N 23°19' 26.90" E 74°57' 40.40" (2) N 23°19' 30.30" E 74°57' 49.50" (3) N 23°19' 27.60" E 74°57' 49.80" (4) N 23°19' 24.70" E 74°57' 40.90"
39	Shri Prateek VijayVargiya S/o Shri Sudheer R/o- 120, ShriRam Mansion, Power House Road, Ratlam, Dist.- Ratlam	Stone Gitti	01	1,900	Village- Sarwani Khurd Tehsil- Ratlam	21-10-2015 to 20-10-2025	(1) N 23°19' 32.21" E 74°57' 43.04" (2) N 23°19' 16.57" E 74°57' 48.69" (3) N 23°19' 24.13" E 74°57' 53.09" (4) N 23°19' 21.32" E 74°57' 54.53" (5) N 23°19' 14.77" E 74°57' 48.94"
40	Shrimati Akansha Vijayvargiya W/o Shri Shashank R/o- 63, Lakkadpeetha, Ratlam, Dist.- Ratlam	Stone Gitti	01	1,000	Village- Sarwani Khurd Tehsil- Ratlam	12-12-2017 to 11-12-2027	(1) N 23°19' 22.930" E 74°57' 49.480" (2) N 23°19' 32.932" E 74°57' 53.905" (3) N 23°19' 28.878" E 74°57' 55.044" (4) N 23°19' 26.927" E 74°57' 50.370"
41	Shri Prateek VijayVargiya S/o Shri Sudheer R/o- 120, ShriRan Mansion, Power House Road, Ratlam, Dist.- Ratlam	Stone Gitti	04	1,500	Village- Sarwani Khurd Tehsil- Ratlam	12-12-2017 to 11-12-2027	(1) N 23°19' 15.11" E 74°57' 43.04" (2) N 23°19' 16.57" E 74°57' 48.69" (3) N 23°19' 24.13" E 74°57' 53.09" (4) N 23°19' 21.32" E 74°57' 54.53" (5) N 23°19' 14.77" E 74°57' 48.94"
42	Shri Nandkishore Sharma S/o Shri Ramkishan Sharma, R/o- 80, Sajjan Mill Road, Dist.- Ratlam	Stone Gitti	169	2,000	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	(1) N 23°18' 49.02" E 74°57' 14.00" (2) N 23°18' 49.09" E 74°57' 17.92" (3) N 23°18' 42.04" E 74°57' 17.99" (4) N 23°18' 42.04" E 74°57' 16.89" (5) N 23°18' 42.51" E 74°57' 15.86" (6) N 23°18' 42.05" E 74°57' 14.90" (7) N 23°18' 42.05" E 74°57' 14.12"
43	Shri Pankaj Purohit S/o Shri Bajrang R/o- 138, Jawahar nagar, Ratlam	Stone Gitti	169	1,500	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	(1) N 23°18' 55.46" E 74°57' 13.93" (2) N 23°18' 50.69" E 74°57' 18.92" (3) N 23°18' 49.45" E 74°57' 19.44" (4) N 23°18' 49.30" E 74°57' 14.11"
44	Shri Giridhari Purohit S/o Shri Lalji Purohit R/o- 120, Jawahar Nagar, Ratlam	Stone Gitti	169	1,750	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	(1) N 23°18' 55.70" E 74°57' 10.41" (2) N 23°18' 57.26" E 74°57' 11.83" (3) N 23°18' 55.43" E 74°57' 13.81" (4) N 23°18' 49.31" E 74°57' 13.87" (5) N 23°18' 49.20" E 74°57' 10.62"
45	Shrimati Megha Sharma W/o Shri Rohan Sharma R/o- 80, Sajjan Mill Road, Ratlam	Stone Gitti	169	1,000	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	(1) N 23°18' 49.02" E 74°57' 10.60" (2) N 23°18' 49.05" E 74°57' 13.82" (3) N 23°18' 44.84" E 74°57' 13.82" (4) N 23°18' 44.84" E 74°57' 11.63" (5) N 23°18' 46.82" E 74°57' 10.57"
46	Shri Gaurav Jain S/o Shri Ashok ji Jain R/o- 64A, Rajendra Nagar Ratlam	Stone Gitti	169	1,950	Village- Sarwani Khurd Tehsil- Ratlam	23-02-2018 to 22-02-2028	(1) N 23°18' 50.90" E 74°57' 20.50" (2) N 23°18' 47.80" E 74°57' 18.40" (3) N 23°18' 43.60" E 74°57' 16.00"



47	Shrimati Poorva Jain W/o Shri Gaurav Jain R/o- 64A, Rajendra Nagar Ratlam	Stone Gitti	169	1.650	Village- Sarwani Khurd Tehsil- Ratlam	23-02-2018 to 22-02-2028	(1) N 23°18' 46.20" E 74°57' 20.40" (2) N 23°18' 48.97" E 74°57' 23.26" (3) N 23°18' 45.80" E 74°57' 23.40" (4) N 23°18' 45.69" E 74°57' 18.21" (5) N 23°18' 49.19" E 74°57' 18.13" (6) N 23°18' 49.17" E 74°57' 19.89"
48	Shri Manoharlal Kumawat Ratlam	Stone Gitti	172	1.500	Village- Sarwani Khurd Tehsil- Ratlam	19-02-2018 to 18-02-2028	(1) N 23°18' 41.15" E 74°57' 18.17" (2) N 23°18' 39.85" E 74°57' 21.32" (3) N 23°18' 40.94" E 74°57' 23.47" (4) N 23°18' 37.29" E 74°57' 23.84" (5) N 23°18' 37.09" E 74°57' 18.27"
49	Shri Manoharlal Kumawat Ratlam	Stone Gitti	172	1.600	Village- Sarwani Khurd Tehsil- Ratlam	19-02-2018 to 18-02-2028	(1) N 23°18' 39.49" E 74°57' 10.28" (2) N 23°18' 38.28" E 74°57' 12.42" (3) N 23°18' 39.93" E 74°57' 13.90" (4) N 23°18' 40.00" E 74°57' 17.92" (5) N 23°18' 37.09" E 74°57' 18.01" (6) N 23°18' 36.25" E 74°57' 10.45"
50	Shri Premaram Puniya S/o Shri PeerRam R/o- 63, Aasharam Bapu Nagar, Ratlam	Stone Gitti	273/1	2.000	Village- Nawgawan Kalan Tehsil- Ratlam	05-07-2018 to 04-07-2028	(1) N 23°28' 37.60" E 74°59' 43.78" (2) N 23°28' 35.95" E 74°59' 48.57" (3) N 23°28' 31.77" E 74°59' 46.83" (4) N 23°28' 33.46" E 74°59' 42.13"
51	Shri Vijay Kumar Jadav S/o Shri Devilal R/o- 03, Nirala Nagar, Badwad Naka Ratlam	Stone Gitti	169	1.500	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	(1) N 23°18' 44.66" E 74°57' 11.72" (2) N 23°18' 44.67" E 74°57' 13.90" (3) N 23°18' 41.78" E 74°57' 13.94" (4) N 23°18' 41.73" E 74°57' 14.92" (5) N 23°18' 39.01" E 74°57' 12.65" (6) N 23°18' 39.70" E 74°57' 11.91"
52	Shri Rajmal Kumawat, R/o -Ratlam	Stone Gitti	172 o 173	1.300	Village- Sarwani Khurd Tehsil- Ratlam	01-06-2018 to 31-05-2028	(1) N 23°18' 43.0" E 74°57' 20.1" (2) N 23°18' 43.5" E 74°57' 21.6" (3) N 23°18' 44.0" E 74°57' 23.5" (4) N 23°18' 36.6" E 74°57' 21.7" (5) N 23°18' 37.8" E 74°57' 22.6" (6) N 23°18' 39.4" E 74°57' 24.3"
53	Shri Chetan Singh Solanki S/o Shri Narendra Singh R/o- 2065 D, Sudama Nagar, Indore, Dist. Indore	Stone Gitti	12	2.000	Village- Sujiana Tehsil- Ratlam	09-11-2017 to 08-11-2027	(1) N 23°05' 44.50" E 74°10' 59.60" (2) N 23°05' 44.41" E 74°11' 00.64" (3) N 23°05' 42.19" E 74°11' 01.26" (4) N 23°05' 40.95" E 74°11' 00.78" (5) N 23°05' 40.31" E 74°10' 59.54" (6) N 23°05' 41.46" E 74°10' 58.31"
54	Shrimati Neesreen Pakawala S/o Shabbeer Pakawala	Stone Gitti	273/16, 273/17	2.000	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	(1) N 23°21' 38.47" E 74°58' 25.82" (2) N 23°21' 39.11" E 74°58' 31.72"

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

	R/o- 16, Rambagh, Ratlam							(3) N 23°21' 36.71" E 74°58' 31.85" (4) N 23°21' 36.34" E 74°58' 28.26" (5) N 23°21' 35.85" E 74°58' 28.27"	
55	Shri Shaabbeer Pakawala S/o Nizzamuddin R/o- '6, Rambagh, Ratlam	Stone Gitti	273/17	1.000	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	(1) N 23°21' 36.32" E 74°58' 28.30" (2) N 23°21' 36.62" E 74°58' 31.94" (3) N 23°21' 38.08" E 74°58' 31.85" (4) N 23°21' 38.47" E 74°58' 33.53" (5) N 23°21' 35.40" E 74°58' 33.10" (6) N 23°21' 33.79" E 74°58' 29.89"		
56	Shri Jitendra Singh Thakur S/o Surendra Singh Thakur R/o- 15, Avishkar Apartment, Mahu road, Ratlam	Stone Gitti	273/17	1.500	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	(1) N 23°21' 41.52" E 74°58' 31.68" (2) N 23°21' 42.46" E 74°58' 35.12" (3) N 23°21' 38.68" E 74°58' 34.12" (4) N 23°21' 38.19" E 74°58' 31.87"		
57	Shri Dinesh Porwal S/o Shri Kishan Lal R/o- 4, Sahar Saray, Gayatri Cinema, Dist- Ratlam	Stone Gitti	65	2.000	Village- Bibdod Tehsil- Ratlam	11-04-2008 to 10-04-2028	(1) N 23°20' 19.39" E 74°57' 17.515" (2) N 23°20' 19.485" E 74°57' 23.575" (3) N 23°20' 15.701" E 74°57' 23.703" (4) N 23°20' 15.528" E 74°57' 17.526"		
58	Shrimati Archana Surana W/o Hitesh Surana R/o- 20, Jain Colony Ratlam	Stone Gitti	13/3/2	2.000	Village- Dhabaipada Tehsil- Ratlam	21-04-2022 to 20-04-2032	(1) N 23°17' 1.74" E 74°58' 17.788" (2) N 23°17' 3.357" E 74°58' 17.334" (3) N 23°17' 58.918" E 74°58' 18.219" (4) N 23°17' 57.224" E 74°58' 13.307"	State Level Environmental Impact Assessment Authority (SEIAA) M.P. Paryavaran Pariksha Bhawan, Bhopal (M.P.) E-5, Arera Colony, Bhopal (M.P.)	

Table 9 Gitti Stone Mine in Sailana Tehsil

Sr. No.	Lease Owner's Name and Address	Mineral	Survey No.	Area (Ha)	Village/ Tehsil	Duration	Latitude (N) Longitude (E)	Remark
1	Shri Rajendra Prasad Sunda S/o Shri Pannaram R/o- 134, Village Bidoribadi, Tehs. Laxmangarh, Dist. Sikar (Raj.)	Stone Gitti	3	1.000	Village- Janda Gujra Tehsil- Sailana	24-12-2016 to 06-07-2021	(1) N 23°35' 39.05" E 74°82' 73.1" (2) N 23°35' 38.2" E 74°82' 82.4" (3) N 23°35' 26.7" E 74°82' 78.1" (4) N 23°35' 26.7" E 74°82' 87.5"	Renewal under consideration
2	M/S Anish Infracon India Pvt. Ltd., Himmatnagar (Guj.) [Pro. Rijwan Vijapura S/o Shri Ilyas Hal. Mu.-1101/5, Near Salakheedi Bypass Ratlam	Stone Gitti	198/3/1	1.650	Village- Kher Khunta Tehsil- Sailana	17-05-2016 to 16-05-2026	(1) N 23°17' 26.19" E 74°52' 16.50" (2) N 23°17' 26.43" E 74°52' 21.98" (3) N 23°17' 23.08" E 74°52' 19.79" (4) N 23°17' 22.48" E 74°52' 16.88"	
3	Shri Dharmendra Singh Rathore S/o Shri Prabhunath Singh R/o- 32, Bajaar Chowk, Village Berda, Tehs. Sailana, Dist. Ratlam	Stone Gitti	25/1	2.000	Village- Jambudiya Tehsil- Sailana	06-10-2016 to 05-10-2026	(1) N 23°27' 30.27" E 74°42' 25.80" (2) N 23°27' 30.33" E 74°42' 29.03" (3) N 23°27' 21.01" E 74°42' 27.78" (4) N 23°27' 20.66" E 74°42' 25.58" (5) N 23°27' 24.01" E 74°42' 27.51"	



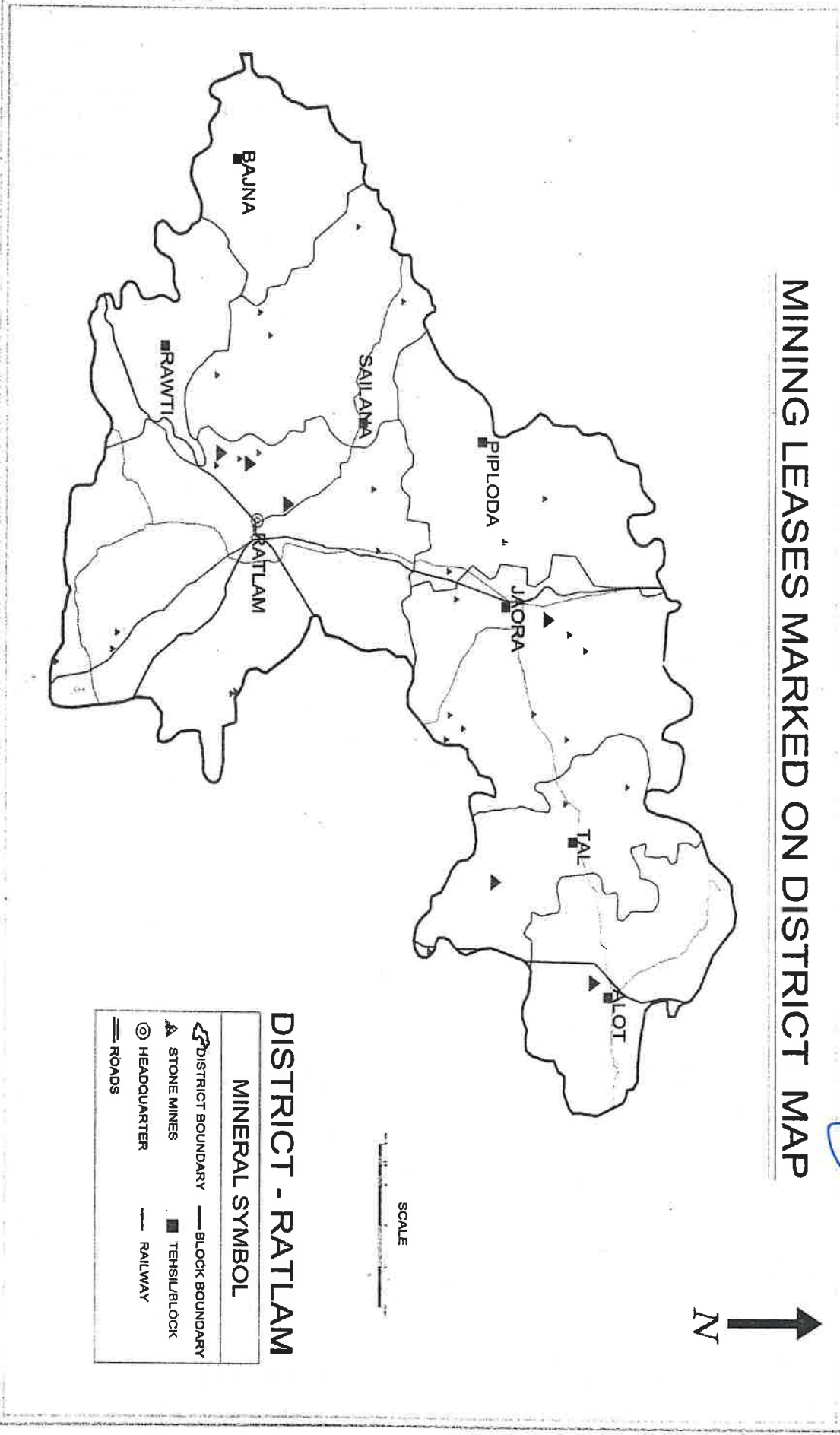


7	M/S South East Construction Company Pvt. Ltd. Pro. Shri Ajay Muwa S/o Shri Padmaya ji, R/o- 112, Kaliman Koli Street, Nishant nagar, Berugan bakam, Chennai	Stone Gitti	478	2.000	Village- Abupura Tehsil- Tal	24-11-2017 to 23-11-2022	(1) N 23°37' 24.22" E 75°25' 41.98" (2) N 23°37' 24.20" E 75°25' 47.63" (3) N 23°37' 22.26" E 75°25' 48.67" (4) N 23°37' 22.17" E 75°25' 46.24" (5) N 23°37' 17.69" E 75°25' 46.24" (6) N 23°37' 17.69" E 75°25' 42.15"	-
8	Shrimati Dulle Kunwar Rajput S/o Shri Pratap singh R/o- 210, Village-Kalukhedi, Tehs. Tal, Dist.Ratlam	Stone Gitti	244	2.000	Village- Kolu Khedi Tehsil- Tal	22-09-2016 to 21-09-2026	(1) N 23°32' 48.80" E 75°30' 30.79" (2) N 23°32' 48.95" E 75°30' 35.31" (3) N 23°32' 45.98" E 75°30' 35.40" (4) N 23°32' 45.83" E 75°30' 30.87"	-
9	Shri Ashish Gupta, R/o Jaora	Stone Gitti	358/1	2.000	Village- Malva Tehsil- Tal	07-02-2018 to 06-02-2028	(1) N 23°46' 40.00" E 75°19' 18.60" (2) N 23°46' 33.80" E 75°19' 18.50" (3) N 23°46' 33.80" E 75°19' 22.80" (4) N 23°46' 39.70" E 75°19' 22.50"	-

(P.W.) Jodhpur Colony, V-9-E  
Paryaran, Panchsarovar  
(0333)  
Assessment Authority, M.P.  
State



# MINING LEASES MARKED ON DISTRICT MAP



## DISTRICT - RATLAM

MINERAL SYMBOL	
DISTRICT BOUNDARY	BLOCK BOUNDARY
STONE MINES	TEHSIL/BLOCK
HEADQUARTER	RAILWAY
ROADS	

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







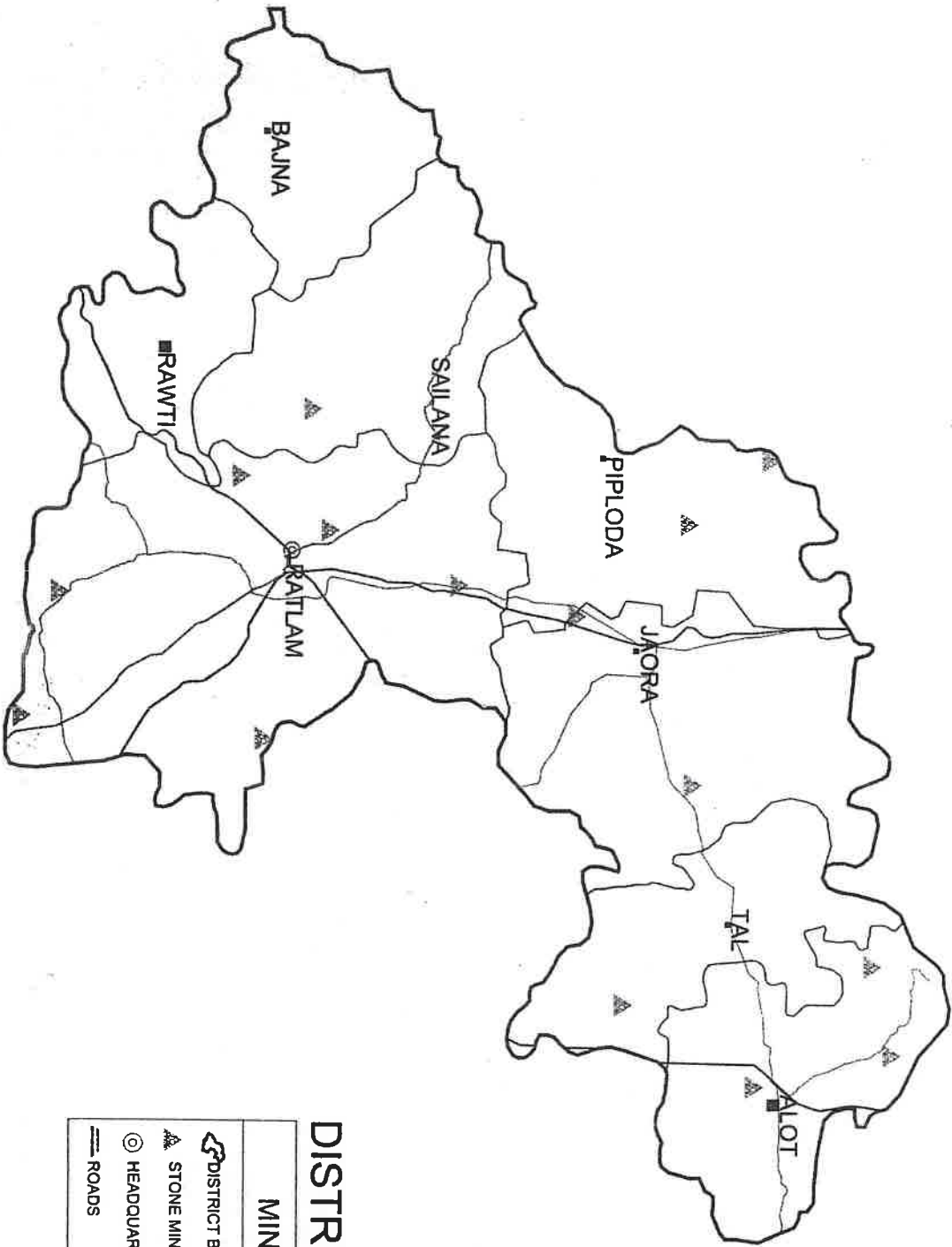


30	Gitti Stone	Shri Brijmohan Agnihotri Ratlam	Vill. Rampuriya Dist. Ratlam	219 / खनिज / 2021-22 21 / 02 / 2022	375/3	4.00	6 Month	N 23°17'09.43" E 75°57'54.53" N 23°17'14.46" E 75°57'56.12" N 23°17'17.16" E 75°57'17.16" N 23°17'24.96" E 75°57'00.39"
31	Gitti Stone	Shri Ajay Panwar Alot, Dist. Ratlam	Vill. Meenakheda, Dist. Ratlam	1499 / खनिज / 2017-18 15 / 05 / 2018	146	2.00	6 Month	N 23°21'27.64" E 75°58'06.95" N 23°21'29.66" E 75°58'09.38" N 23°21'33.43" E 75°58'08.23" N 23°21'34.96" E 75°58'10.18"
32	Gitti Stone	Shrimati Binu Kunwar Solanki Alot, Dist. Ratlam	Vill. Jeevanganth Dist. Ratlam	127 / खनिज / 2021-22 03 / 02 / 2022	385/2/2	2.00	6 Month	N 23°44'40.30" E 75°32'03.10" N 23°44'38.50" E 75°32'06.50" N 23°44'32.40" E 75°32'03.60" N 23°44'34.00" E 75°32'00.60"
33	Gitti Stone	Shri Laxmikant Rathod Ratlam	Vill. Sanwaliya Runddi Dist. Ratlam	1310 / खनिज / 2022-23 25 / 05 / 2022	3/1/1/1	2.00	6 Month	(1) N 23°17'29.90" E 74°57'31.20" (2) N 23°17'29.60" E 74°57'35.20" (3) N 23°17'23.10" E 74°57'36.40" (4) N 23°17'24.00" E 74°57'32.40"
34	Gitti Stone	Shri Aashish Gupta	Village Thikariya teh. Piploada, Dist. Ratlam	194 / खनिज / 2020-19 30 / 06 / 2019	11	1.00	6 Month	N 23°45'41.73" E 74°56'13.19" N 23°45'43.32" E 74°56'17.30" N 23°45'43.25" E 74°56'19.73" N 23°45'41.66" E 74°56'19.73" N 23°45'41.89" E 74°56'17.00" N 23°45'40.66" E 74°56'15.43"

  
 Paryavaran Parisar  
 (EPCB)  
 Assessment Authority, M.P.  
 State Environment  
 (S.E.A.)  
 Bhopla Colony, 'Bhopal' 5-E



# PROPOSED MINE LEASES MARKED ON DISTRICT MAP



MINERAL SYMBOL	
	DISTRICT BOUNDARY
	BLOCK BOUNDARY
	STONE MINES
	TEHSIL/BLOCK
	HEADQUARTER
	ROADS
	RAILWAY

## DISTRICT - RATLAM



  
 State Level Environmental Impact  
 Assessment Authority, M.P.  
 (EPCO)  
 Paryavaran Parisar  
 E-6, Arera Colony, Bhopal (M.P.)



## CHAPTER -4

### 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 these 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 guidelines 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:

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- 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.
- d) Identification of the source of Sand & M-Sand. The sources may be from Rivers, Lakes, Ponds, Dams, De-silting locations, Patta land/Khatedari 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/Khatedari 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  $\frac{3}{4}$ th part of the river; width needs to be identified on a map. Out of the  $\frac{3}{4}$ th part area, where there is a deposition/aggradation of the material needs to be identified. The remaining  $\frac{1}{4}$ th area needs to be kept as no mining zone for the protection of banks. The specific gravity of the material also needs to be ascertained by analyzing the sample from a NABL accredited lab. Thus, the quantity of material available in metric ton needs to be calculated for mining and no mining zone.
- 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

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land/Khatedari land be granted when there is possibility of replenishment of material. In case, there is no replenishment then mining lease shall only be granted when there is no riverbed mining possibility within 5 KM of the Patta land/Khatedari land. For government projects, mining could be allowed on Patta land/Khatedari land but the mining should only be done by the Government agency and material should not be used for sale in the open market. Cluster situation as mentioned in para k above is also applicable for the mining in Patta land/Khatedari land.

n) The State Government should define the transportation route from the mining lease considering the maximum production from the mines as at this stage the size of mining leases, their location, the quantity of mineral that can be mined safely etc. is available with the State Government. It is suggested that the transportation route should be selected in such a way that the movement of trucks/tippers/tractors from the villages having habitation should be avoided. The transportation route so selected should be verified by the State Government for its carrying capacity.

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

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

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 -V	Final List of Potential Mining Leases (Existing & Proposed)
Annexure -VI	Final List of Cluster & Contiguous Cluster
Annexure -VII	Final Transportation Routes for individual leases and leases in Cluster

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Assessment Authority, M.P.  
(EPCO)  
Paryavaran Parisar  
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**ANNEXURE NO.-I**  
**COMPLIANCE TO ENFORCEMENT AND MONITORING**  
**GUIDELINES FOR SAND MINING- 2020**

**Details of Sand/M-Sand Sources.**

**a) Rivers.**

River Name/M-Sand Plant	Total Stretch of River (in KM)	Type of River (Perennial or Non-Perennial)
Chambal River	1.5	Perennial
Maleni River	2.5	Perennial
Pingla River	1.0	Perennial
Shipra River	1.0	Perennial
Mahi River	2.5	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 (Existing & Proposed) Rivers.

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 Tones/Annum considering digging depth max as 3 meters	Mineral to be mined (Sand/ Bajri/ RBM etc.)	Existing/ Proposed
Chambal	Kitu Khedi	5.0	More than 10 KM	More than 0.25 KM	No	30000 cum.	Sand	Existing
Maleni	Bahadurpur Jagir	3.0	More than 10 KM	More than 0.25 KM	No	17850 cum.	Sand	Existing
Chambal	Uni	5.0	More than 10 KM	More than 0.25 KM	No	30000 cum.	Sand	Existing
Maleni	Karan Khedi	1.70	More than 10 KM	More than 0.25 KM	No	11040 cum.	Sand	Existing
Maleni	Khojan Kheda	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Pingla	Rafu Khedi	8.0	More than 10 KM	More than 0.25 KM	No	48450 cum.	Sand	Existing
Chambal	Bhanpur	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Maleni	Badodiya	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Chambal	Gondi Shankar	10	More than 10 KM	More than 0.25 KM	No	59760 cum.	Sand	Existing
Chambal	Melukhedi	8.0	More than 10 KM	More than 0.25 KM	No	96000 cum.	Sand	Existing
Chambal	Fatehpur	16	More than 10 KM	More than 0.25 KM	No	96000 cum.	Sand	Existing
Chambal	Nimbakhedi	8.0	More than 10 KM	More than 0.25 KM	No	48000 cum.	Sand	Existing
Shipra	Laxmipura	8.0	More than 10 KM	More than 0.25 KM	No	50400 cum.	Sand	Existing
Mahi	Umariya	7.54	More than 10 KM	More than 0.25 KM	No	45000 cum.	Sand	Existing

#### Patta Lands/Khatedari Land: (existing & proposed)

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

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## ANNEXURE-III


### Cluster & Contiguous Cluster details

#### 1. Clusters:

River Name	Cluster No.	Lease No.	Location (Reverbed/Patta Land)	Village	Area(Ha)	Total excavation (ton)	Total Mineral excavation (ton)
NIL							

#### 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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(EPCO)  
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## ANNEXURE-IV

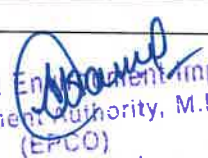
### Transportation Routes for individual Sand Quarry and Sand Quarry in Cluster

#### 1. Transportation Routes For Individual Sand Quarry

Lease Name	Transportation Route No.	Number of tippers/ day of lease	Number of tippers/ day of all the lease on route	Length of Route in KM	Type of road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
Kitu Khedi	1	08	08	0.5	unpaved	unpaved	Lease Owner	Enclosed
Bahadurpur Jagir	1	20	20	0.9	unpaved	unpaved	Lease Owner	Enclosed
Uni	1	25	25	0.7	unpaved	unpaved	Lease Owner	Enclosed
Karan Khedi	1	20	20	3.2	unpaved	unpaved	Lease Owner	Enclosed
Khojan Kheda	1	03	03	1.3	unpaved	unpaved	Lease Owner	Enclosed
Rafu Khedi	1	05	05	2.1	unpaved	unpaved	Lease Owner	Enclosed
Bhanpur	1	10	10	1.4	unpaved	unpaved	Lease Owner	Enclosed
Badodiya	1	08	08	0.5	unpaved	unpaved	Lease Owner	Enclosed
Gondi Shankar	1	20	20	0.9	unpaved	unpaved	Lease Owner	Enclosed
Melukhedi	1	25	25	0.7	unpaved	unpaved	Lease Owner	Enclosed
Fatehpur	1	20	20	3.2	unpaved	unpaved	Lease Owner	Enclosed
Nimbakhedi	1	03	03	1.3	unpaved	unpaved	Lease Owner	Enclosed
Laxmipura	1	05	05	2.1	unpaved	unpaved	Lease Owner	Enclosed
Umariya	1	10	10	1.4	unpaved	unpaved	Lease Owner	Enclosed

#### *Transportation Routes For Clusters:*

Cluster No.	Transportation Route No.	Number of tippers/ day of lease	Number of tippers/ day of all the lease on route	Length of Route in KM	Type of road (Black Topped/ unpaved)	Recommendation for road (Black Topped/ unpaved)	The road will be Constructed by Govt/ Lease Owner	Route Map & Location
NIL								

  
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## ANNEXURE-V

### Final list of Potential Sand Mining Area (Existing & Proposed)

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 Tones/Annum considering digging depth max as 3 meters.	Mineral to be mined (Sand/Bajri/RBM etc.)	Existing/Proposed
Chambal	Kitu Khedi	5.0	More than 10 KM	More than 0.25 KM	No	30000 cum.	Sand	Existing
Maleni	Bahadurpur Jagir	3.0	More than 10 KM	More than 0.25 KM	No	17850 cum.	Sand	Existing
Chambal	Uni	5.0	More than 10 KM	More than 0.25 KM	No	30000 cum.	Sand	Existing
Maleni	Karan Khedi	1.70	More than 10 KM	More than 0.25 KM	No	11040 cum.	Sand	Existing
Maleni	Khojan Kheda	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Pingla	Rafu Khedi	8.0	More than 10 KM	More than 0.25 KM	No	48450 cum.	Sand	Existing
Chambal	Bhanpur	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Maleni	Badodiya	6.0	More than 10 KM	More than 0.25 KM	No	36000 cum.	Sand	Existing
Chambal	Gondi Shankar	10	More than 10 KM	More than 0.25 KM	No	59760 cum.	Sand	Existing
Chambal	Melukhedi	8.0	More than 10 KM	More than 0.25 KM	No	96000 cum.	Sand	Existing
Chambal	Fatehpur	16	More than 10 KM	More than 0.25 KM	No	96000 cum.	Sand	Existing
Chambal	Nimbakhedi	8.0	More than 10 KM	More than 0.25 KM	No	48000 cum.	Sand	Existing
Shipra	Laxmipura	8.0	More than 10 KM	More than 0.25 KM	No	50400 cum.	Sand	Existing
Mahi	Umariya	7.54	More than 10 KM	More than 0.25 KM	No	45000 cum.	Sand	Existing

### Patta Lands/Khatedari Land: (existing & proposed)

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

  
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 (EPCO)  
 Paryavaran Parisar  
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**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								

  
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## Chapter - 5


### Details of Royalty and Revenue received in last three years for Sand and Minor Mineral Mine lease (2018-19, 2019-20 and 2020-21):

Table 11 Revenue received in last three years for Sand Mine lease

Year	Revenue
2018- 2019	58,63,656
2019 - 2020	12,92,692
2020- 2021	-

Table 12 Revenue received in last three years for Minor Mineral Mine lease

Year	Mineral Name	Revenue
2018- 2019	Gitti	8,20,35,486
2019 - 2020	Gitti	6,53,15,729
2020 - 2021	Gitti	16,68,35,950
2018- 2019	Murru	26,50,468
2019 - 2020	Murru	5,10,000
2020 - 2021	Murru	22,02,050
2018- 2019	Boulder	-
2019 - 2020	Boulder	-
2020 - 2021	Boulder	1,25,00,000
2018- 2019	Soil	-
2019 - 2020	Soil	87,78,950
2020 - 2021	Soil	13,45,93,450

  
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## Chapter - 6

### Details of Sand and Minor Mineral Production in last 3 years (2018-19, 2019-20 and 2020-21):

Table 13 Sand Production in last 3 years

Year	Production(In Cu.Mt)
2018- 2019	58536.56
2019 - 2020	12926.92
2020 - 2021	-

Table 14 Minor Mineral Production in last 3 years

Year	Mineral Name	Production(In Cu.Mt)
2018- 2019	Gitti	820354.86
2019 - 2020	Gitti	544297.74
2020 -2021	Gitti	1390299.58
2018- 2019	Murum	53009.36
2019 - 2020	Murum	10200
2020 - 2021	Murum	44041
2018- 2019	Boulder	-
2019 - 2020	Boulder	-
2020 - 2021	Boulder	250000
2018- 2019	Soil	-
2019 - 2020	Soil	175579
2020 - 2021	Soil	2691869

  
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## Chapter - 7

# Uses of Minerals

Major and Minor Minerals are mainly use for construction purpose. Minor Minerals' comprise of gravel, building stones, soil, ordinary clay, ordinary sand, and murrum. Other sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral.

**Crushed stone (Gitti):** Angular crushed stone is the key material for macadam road construction, which depends on the interlocking of the individual stones' angular faces for its strength. Also use as rip rap, as railroad track ballast, as composite material (with a binder) in concrete, tarmac, and asphalt concrete.

**Sand:** Sand is used to give strength, bulk and other properties to construction materials like asphalt and concrete. In landscaping, it is used as a decorative material. A particular type of sand is used for glass manufacturing. Likewise, it is used for metal casting as a moulding material.

**Murrum:** It is a mixture of minerals, organic matters, gravels, rock particles etc. Murrum is used in plinth filling, road pavements, backfilling in trenches, footing pits, etc. Given that it doesn't contain any organic matters and can be compacted easily forming hard surfaces, it is a soil suitable in the field of construction.

**Soil:** Ordinary earth soil used for filling the embankment, roads, railways and building. Soil which is excavated from mine is also used for different purpose of construction.

**Brick Clay/Soil:** Brick clay/Soil is rich in alumina, silica, calcium, oxides of iron, magnesium and organic matter. These are low grade clays used most for the manufacturing of building bricks and similar clay products.

  
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## Chapter - 8

### General Profile of the District

<b>1. Geographical Position</b>	The district area extends between the parallels of latitude 23°05' and 23°52' North and between the meridians of longitude 74°31' and 74°41' East, and it is falling in the Survey of India Topo Sheet No. 46I and 46M.
<b>2. Area and Population</b>	<p>I. Geographical Area (Sq.Km) Total Area (Sq.Km): 4861 Km<sup>2</sup></p> <p>II. CENSUS 2011</p> <p>I. Population</p> <ul style="list-style-type: none"><li>a. Total Population: 1,455,069</li><li>b. Male Population: 738,241</li><li>c. Female Population: 716,828</li></ul> <p>II. Literates</p> <ul style="list-style-type: none"><li>a. Total Literates: 825,880</li><li>b. Male: 485,090</li><li>c. Female: 340,790</li></ul> <p>III. Main Workers (Census 2011)</p> <ul style="list-style-type: none"><li>a. Total Workers: 690,980</li><li>b. Male Workers: 411,446</li><li>c. Female Workers: 279,534</li><li>d. Cultivators: 218,692</li><li>e. Agricultural Labourers: 305,946</li></ul>

  
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	<p>f. Other Workers: 154,414</p> <p>V.Languages Spoken in the District</p> <p>Hindi is a common language spoken by the inhabitant of the city. However people also speak Malwi and Rajawari language within their communities.</p>
<b>3. Temperature</b>	<p>Mean- Maximum temperature: 32.2°C</p> <p>Mean- Minimum temperature: 18.8°C</p>
<b>4. Rainfall (In mm)</b>	<p>Normal – South West Monsoon:mm</p> <p>Annual Rainfall: 921.41mm</p>
<b>5.Agriculture</b>	<p>a. Total Cultivated Area (Ha):486.0</p> <p>b. Net Area Sown (Ha): 333.0</p> <p>c. Area Sown more than once (Ha): 167</p>
<b>6.Rivers, etc.</b>	<p>Ratlam district falls under Ganga and Mahi river basins. The tributaries of Chambal River drain about 70 % geographical area of the district. Southwest part of the district is drained by the Mahi River and its tributaries.</p>
<b>7. Revenue Administrative Divisions</b>	<p>Revenue Divisions:</p> <p>a. Revenue Blocks: 5</p> <p>b. Revenue Tehsils: 9</p>
<b>8. Local Bodies</b>	<p>a. Corporations: nil</p> <p>b. Municipalities: 9 (1 Nigam+1 Ngar Palika+7 Nagar Parishads)</p> <p>c. Village Panchayats: 418</p>

  
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## 8.1 Census Data 2011

Table 15 Census Data for year 2011

Description	2011
Actual Population	1,455,069
Male	738,241
Female	716,828
Population Growth	19.72%
Area Sq. km.	4,861
Density/KM <sup>2</sup>	299
Proportion to population of Madhya Pradesh	2.00%
Sex Ratio (Per 1000)	971
Child Sex Ratio (0-6 Age)	939
Average Literacy	66.78
Male Literacy	77.54
Female Literacy	55.77
Total Child Population (0-6 Age)	218,354
Male Population (0-6 Age)	112,637
Female Population (0-6 Age)	105,717
Literates	825,880
Male Literates	485,090
Female Literates	340,790
Child Proportion (0-6 Age)	15.01%
Boys Proportion (0-6 Age)	15.26%
Girls Proportion (0-6 Age)	14.75%

  
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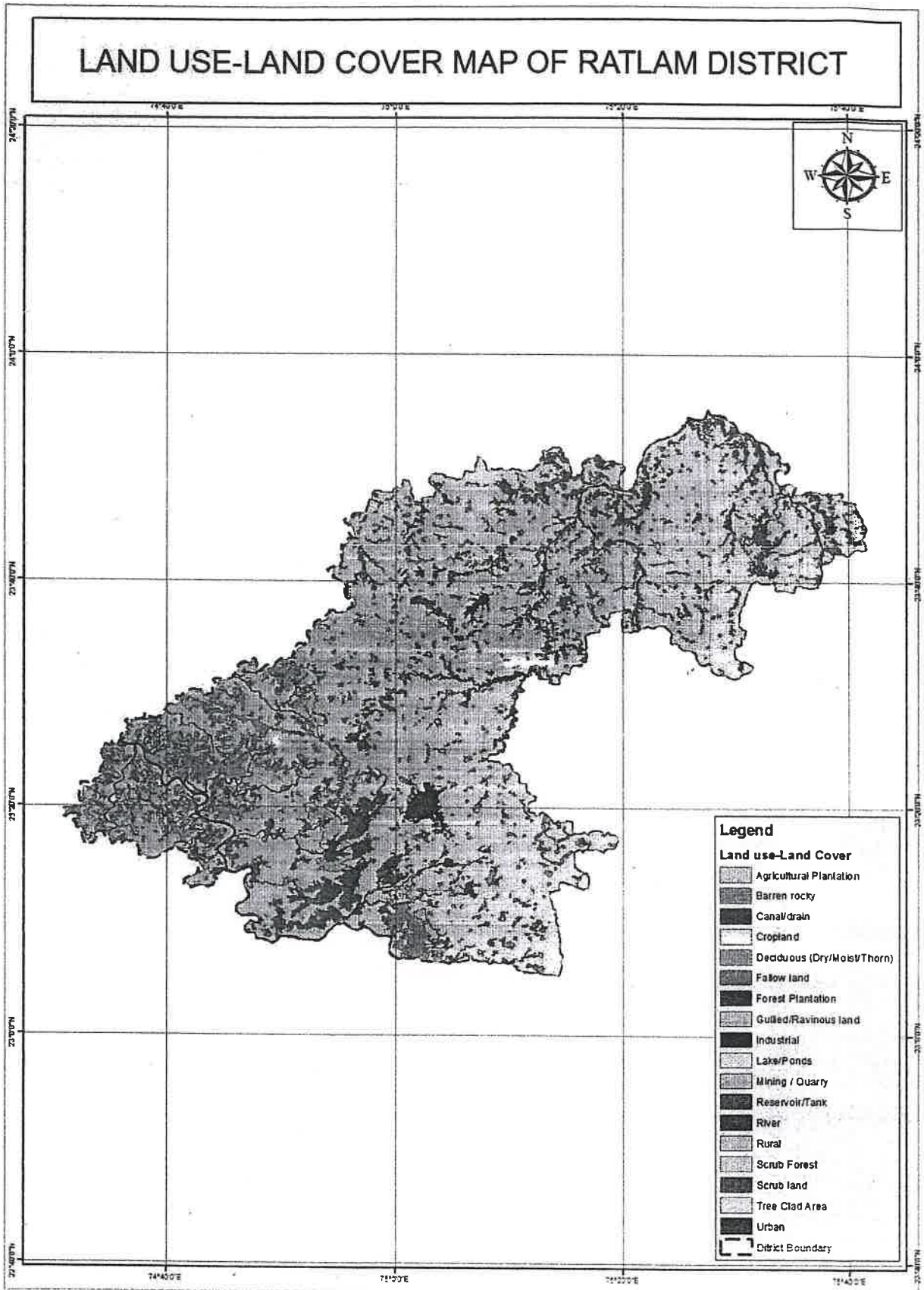
## Chapter - 9

### Land utilization Pattern in the District: Forest, Agricultural, Mining, etc.,

Land use/land cover (LULC) changes are main issues of universal environment change. The Satellite remote sensing data with their monotonous nature have proved to be rather useful in mapping land use/land cover decorations and changes with time. Quantification of such changes is conceivable through GIS techniques even if the subsequent spatial datasets are of dissimilar scales or resolutions. Such studies have helped in considerate the dynamics of human happenings in space and time. Land use refers to man's activities.

Table 16 Land Use Pattern of the Study Area

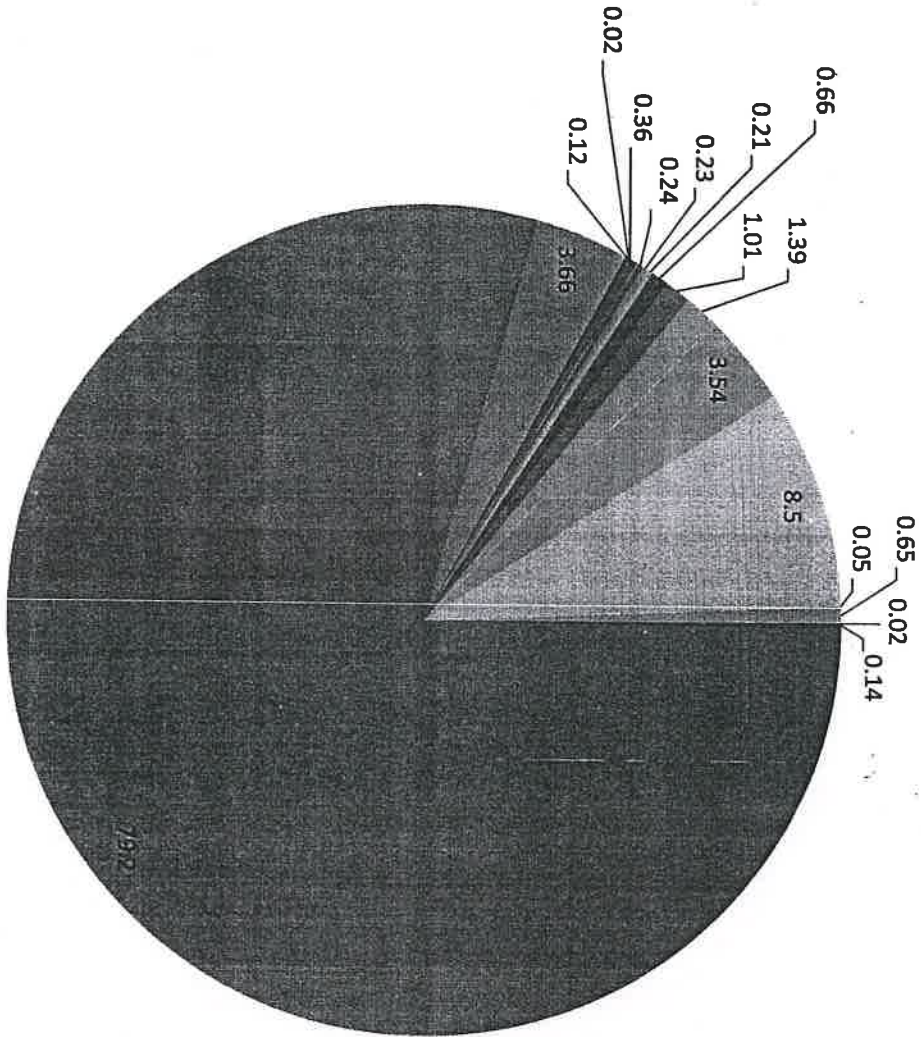
Sr. No.	Class	Area in Ha.	Percentage of coverage
1	Agricultural Plantation	300.2215	0.02 %
2	Barren rocky	652.0083	0.14 %
3	Cropland	381699.5	79.2 %
4	Deciduous (Dry/Moist/Thorn)	17634.94	3.66 %
5	Fallow land	491.9822	0.12 %
6	Forest Plantation	8.950163	0.02 %
7	Gullied/Ravinous land	1736.262	0.36 %
8	Industrial	1137.785	0.24 %
9	Lake/Ponds	1088.487	0.23 %
10	Mining / Quarry	1004.544	0.21 %
11	Reservoir/Tank	3201.045	0.66 %
12	River	4847.668	1.01 %
13	Rural	6703.966	1.39 %
14	Scrub Forest	17073.8	3.54 %
15	Scrub land	40985.16	8.5 %
16	Tree Clad Area	243.8377	0.05 %
17	Urban	3119.907	0.65 %
	Total	481930.1014	100 %




**Land Use and Land Cover Map of the District**

  
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## Breakup of Land Use Area



- Agricultural Plantation
- Barren rocky
- Cropland
- Deciduous (Dry/Moist/Thorn)
- Fallow land
- Forest Plantation
- Gullied/Ravinous land
- Industrial
- Lake/Ponds
- Mining / Quarry
- Reservoir/Tank
- River
- Rural
- Scrub Forest
- Scrub land
- Tree Clad Area
- Urban

  
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**Land Use and Land Cover Breakup of the District**



## Chapter - 10

### Physiography of the District

The whole Ratlam district lies on Malwa plateau. The general scene is of undulating country sloping towards north and marked by series of high hills and valleys. There are isolated hills and attain prominence in the southeast of the district and near the western margins of the plateau. In the west hills are dissected and slopes into the narrow valleys of seasonal streams of Mahi. Geomorphology of Ratlam district can be divided into five divisions.

1. The Malwa plateau in the east
2. The plateau of Sailana
3. The western hills of Sailana
4. The Chambal valley
5. The Mahi valley

In general, Ratlam district is characterized by hilly to undulating terrain with altitude ranging between 434 m and 549 m above mean sea level. The highest elevation in the district is 639.7 m above mean sea level near Sakraoda in Sailana block and lowest elevation of the district is 305 m above mean sea level at village Chandragarh in Sailana block.

The district is bounded by Mandsaur district in the north, Jhabua and Dhar district in the south, Ujjain and Shajapur districts in the east, Banswara district of Rajasthan state in the west and Jhalawar district of Rajasthan state in the northeast. The district area extends between the parallels of latitude 23°05' and 23°52' North and between the meridians of longitude 74°31' and 74°41' east, and it is falling in the Survey of India TopoSheet No. 46I and 46M.

  
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## Chapter - 12

### Rainfall of the the District Climate Condition

#### Rainfall

The normal annual rainfall of Ratlam district is 992.90 mm. Ratlam district receive maximum rainfall during southwest monsoon period i.e. June to November. About 92.8% of annual rainfall is received during monsoon season.

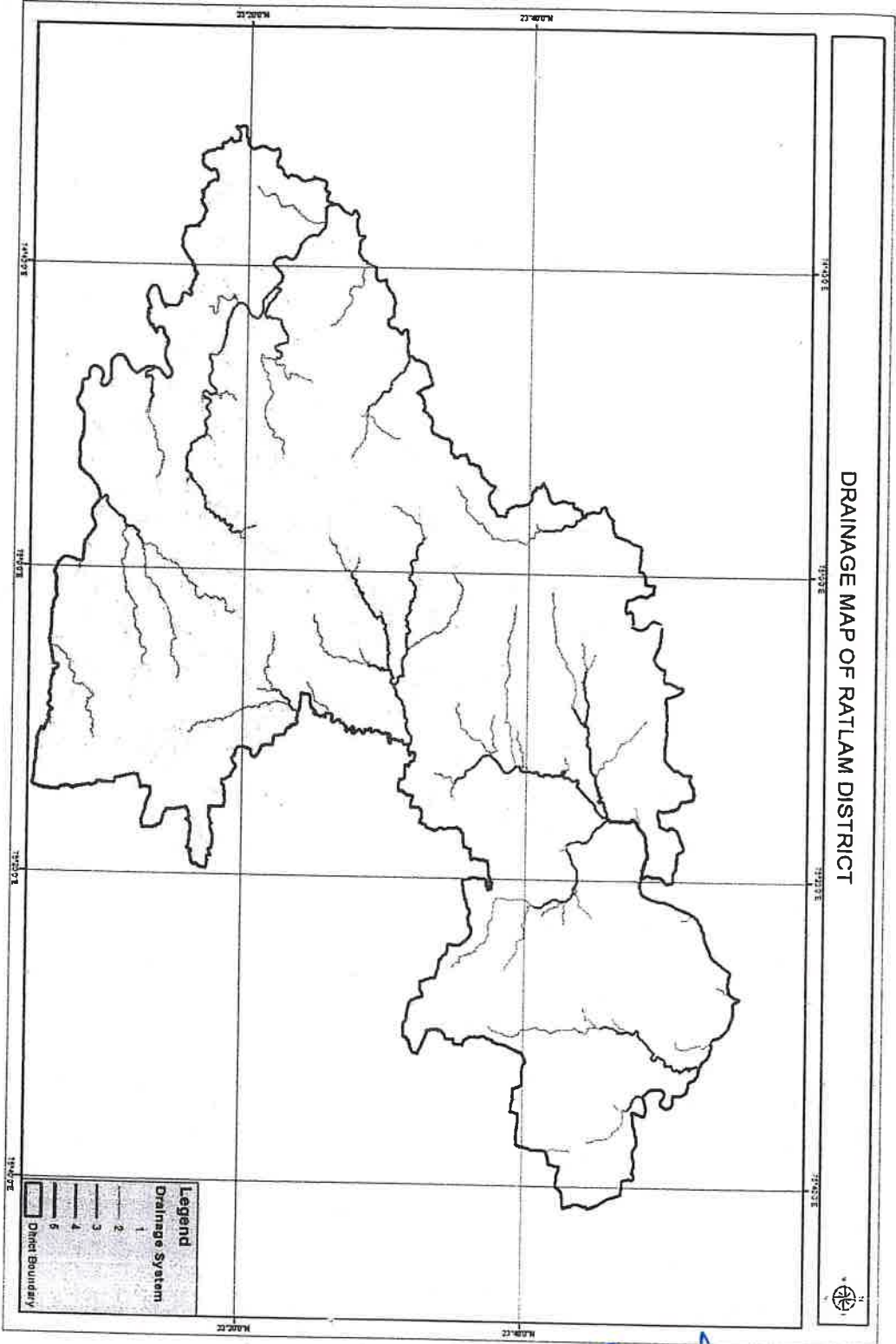
#### Climatic Conditions

A hot summer and general dryness characterize the climate of Ratlam district, except during the southwest monsoon season. The year can be divided in to four seasons. The winter commences from middle of November and lasts till the end of February. The period from March to about middle of June is the hot summer season. May is the hottest month of the year. The southwest monsoon starts from middle of June and lasts till end of September. October and middle of November constitute the post monsoon or retreating monsoon season. The temperature starts rising from the beginning of February and reaching maximum in the month of May. The normal annual mean maximum temperature is 32.2°C and normal annual mean minimum temperature is 18.8°C. The individual day maximum temperature in May goes up to 39.7°C. The wind velocity is high during the pre-monsoon period as compared to post monsoon period. The wind velocity is highest in June around 14.1 km/hr and lowest is 6.0 km/hr in October. The average normal annual wind velocity of Ratlam district is 9.0 km/hr.

  
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DRAINAGE MAP OF RATLAM DISTRICT



Drainage Map of the District

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## Chapter - 13

### Geology of the District

The generalized lithology of the District is as follow:

Geologically almost entire Ratlam district is occupied by Deccan Trap basalts except narrow patch of alluvium and sedimentary rocks of Vindhya super group in isolated patches, which are forming different type of aquifer in the area. Occurrence and movement of groundwater in hard rock is mainly controlled by secondary porosity through joints and fractures. Presences of vesicle in basaltic lava flow of Deccan Traps play an important role in groundwater movement. Groundwater in general occurs under unconfined to semi-confined conditions. The general geological conditions of the district and formation wise settings are discussed below:

#### Vindhya

The hillocks of Vindhya sandstone occur as inlier in northwest and northern block of Piploda, Alot town, Dhodhar and Pingrala village. The sandstone is quartzitic in nature and very hard and compact. At shallow depth the sandstone forms poor aquifer system.

#### Basalts

The basalts underlie a major part of the district and generally groundwater occurs under phreatic conditions in shallow weathered, jointed and fractured horizons. The area has mostly vesicular and massive in nature.

#### Alluvium

The alluvium deposits are restricted to narrow linear along the river courses of Chambal, Kshipra, Maleni and Mahi. The thickness of alluvium varies from 12 to 15 meters, which is proportionately thinning away from the river line. The thickness of alluvium along the Kurel River reported about 20 meter near Rajhumgarh. The alluvium deposits consist series of consolidated, fine to medium grained sand admix in varying proportion.


  
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**Table 18 Geological Profile of the District**

Age	Period and sub Period	Geological Formation	Associate Mineral Deposits
upper Cretaceous to Eocene	Malwa Group Deccan Trap	Kankaria Formation	Dark grey to black fine grained hard compact basalt sparely morderatly porphyritic Rock

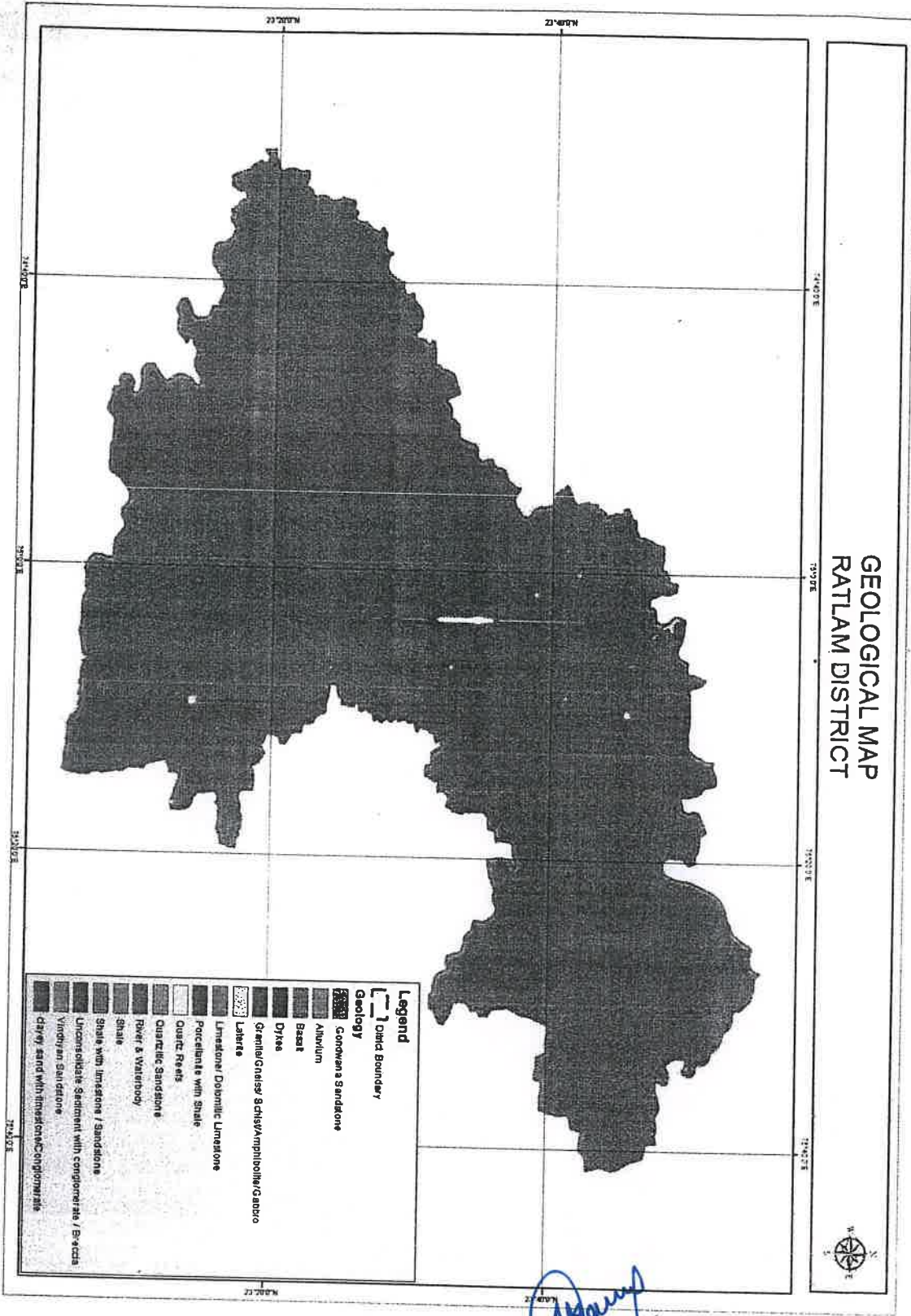
Following Local lithological Sequence is observed in the area-

Lithology	Approx thickness in Meter	Physical properties
Soft Murram	Average 1.00 m from the surface	Brownish-Red coloured with red bowls.
Murum/ Hard murrum	Average 1.00 m- 3.00m below the soft murrum.	Brownish grey, hard weathered basaltic murrum.
Basalt Stone	3.00m to12 m	Dark grayish to Black , fine grained hard and compact, massive, horizontally disposed.

  
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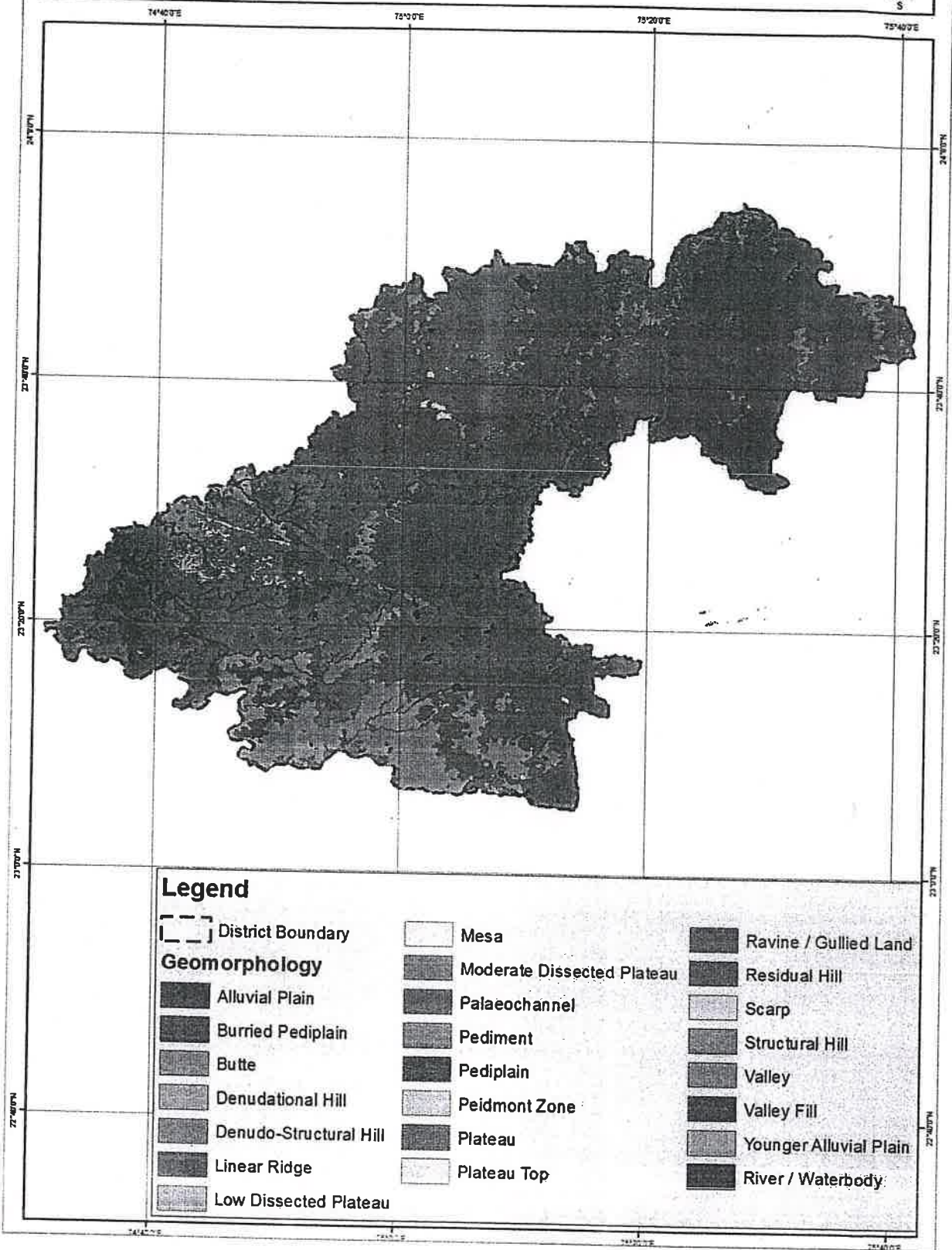
**GEOLOGICAL MAP  
RATLAM DISTRICT**



**Geological Map of the District**

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# GEOMORPHOLOGICAL MAP OF RATLAM DISTRICT



Geomorphologic Map of the District

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## Chapter - 14


### Drainage and Irrigation Pattern

#### Drainage Pattern

Ratlam district falls under Ganga, Chambal and Mahi river basins. The tributaries of Chambal River drain about 70 % geographical area of the district. Southwest part of the district is drained by the Mahi River and its tributaries. The type of drainage in general is dendritic developed on Deccan Trap basaltic rocks. The Chambal River flows in the northeast part of the district. The important tributaries of Chambal River in the district are Kshipra, Maleni and Pingla rivers. The Mahi River flows in the southwest part of the district. The Mahi River is a consequent river, which originate from Dhar district. The main tributaries of the Mahi River are Bageri, Jammer, Karan, Pundia, Bunad Pampavati and Telni.

#### Irrigation Practices

Irrigation is the artificial application of water to the soil for normal growth of plants. Water is an important determinant factor for production of crops in agriculture sector. Intensive and extensive cultivation of land depends mainly on the availability of water. Medium and minor irrigation schemes are implemented in the state for augmenting the water supply for agriculture. The various sources of irrigation are canals, tanks, tube wells, ordinary wells, springs and channels.

  
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## Chapter - 15

# Surface Water and Ground water scenario of the District

### Ground Water

Ground Water is found beneath the earth's surface and is an important source of water in most of the Districts in the State. Ground Water is withdrawn for Agriculture, Municipal and industrial use. The depth at which the ground water occurs is called Ground water Table.

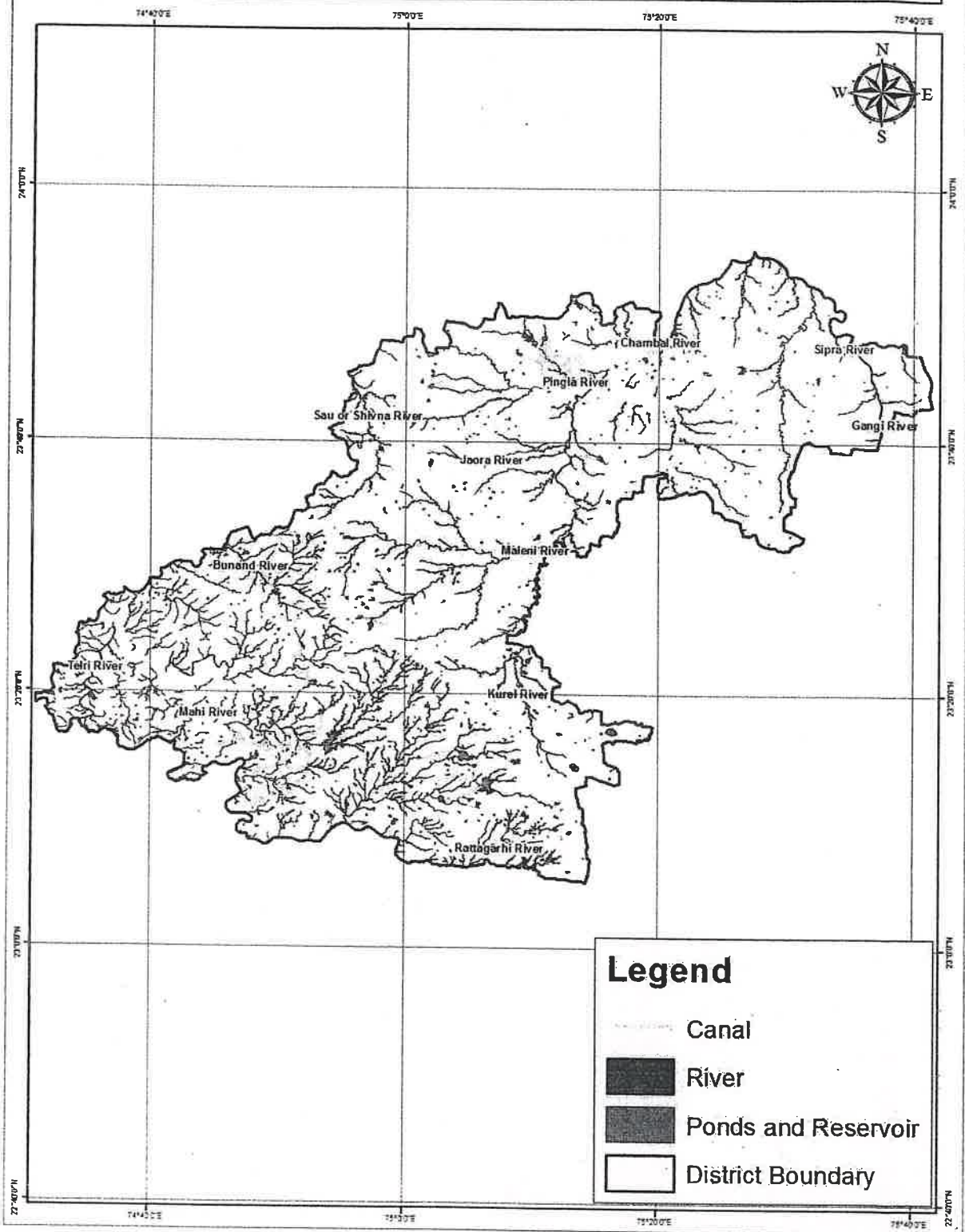
Variation of groundwater levels in an area is an important component of hydrological cycle because it is a physical reflection of aquifer systems. As the change in groundwater level is directly related to groundwater balance and its continuous records provide direct information of subsurface geo-environmental changes due to withdrawal of groundwater. To monitor the seasonal and annual change in quantity and quality of groundwater, CGWB has established 15 Groundwater Monitoring Wells and 21 Piezometers in entire Ratlam district. The monitoring of groundwater levels in these wells was carried out by CGWB during the month of May, August, November and January. High frequency Groundwater level monitoring was carried out at Ratlam, Dhodhar and Jaora deep piezometer using Automatic Water Level Recorders. Analyses of Groundwater level data of pre-monsoon period indicate that there is rise as well as decline in water level in the district. In general, rise in water level is in the range of 0.06 to 0.1 m/year whereas decline is in the range of 0.03 to 0.36 m/yr.

### Surface Water

The type of drainage in general is dendritic, developed on Deccan Trap basaltic rocks. The Chambal River flows in the northeast part of the district. The important tributaries of Chambal River in the district are Kshipra, Maleni and Pingla rivers. The Mahi River flows in the southwest part of the district. The main tributaries of the Mahi River are Bageri, Jammer, Karan, Pundia, Bunad Pampavati and Telni.

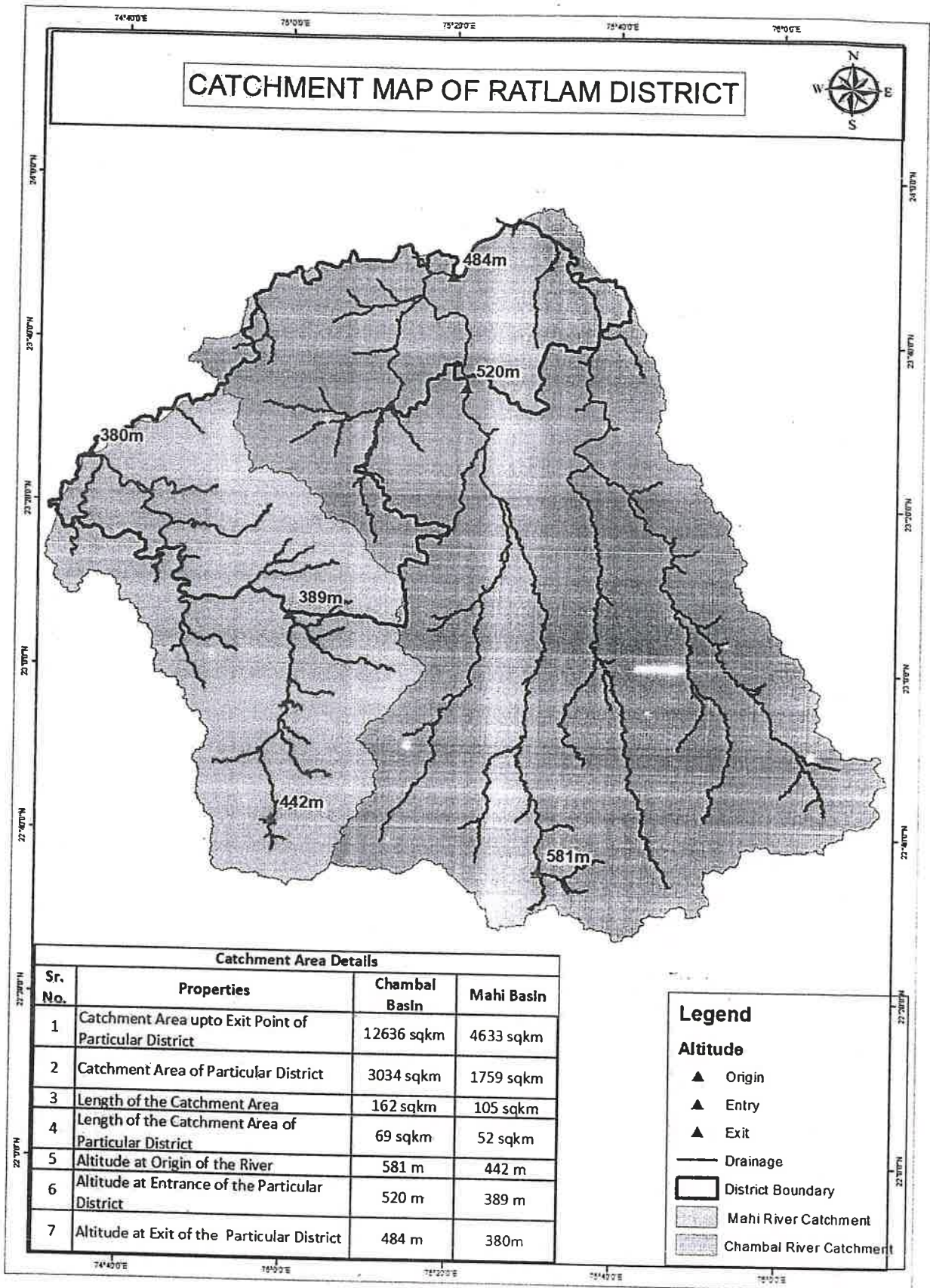
  
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# WATER RESOURCES MAP OF RATLAM DISTRICT



Water Resources Map of the District

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**Catchment Map of District**

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**Table 19 Details of Catchment Area**

<b>Sr. No.</b>	<b>Properties</b>	<b>Chambal Basin</b>	<b>Mahi Basin</b>
1	Catchment Area up to Exit Point of Particular District	12636 sqkm	4633 sqkm
2	Catchment Area of Particular District	3034 sqkm	1759 sqkm
3	Length of the Catchment Area	162 sqkm	105 sqkm
4	Length of the Catchment Area of Particular District	69 sqkm	52 sqkm
5	Altitude at Origin of the River	456 m	442 m
6	Altitude at Entrance of the Particular District	520 m	389 m
7	Altitude at Exit of the Particular District	484 m	380m

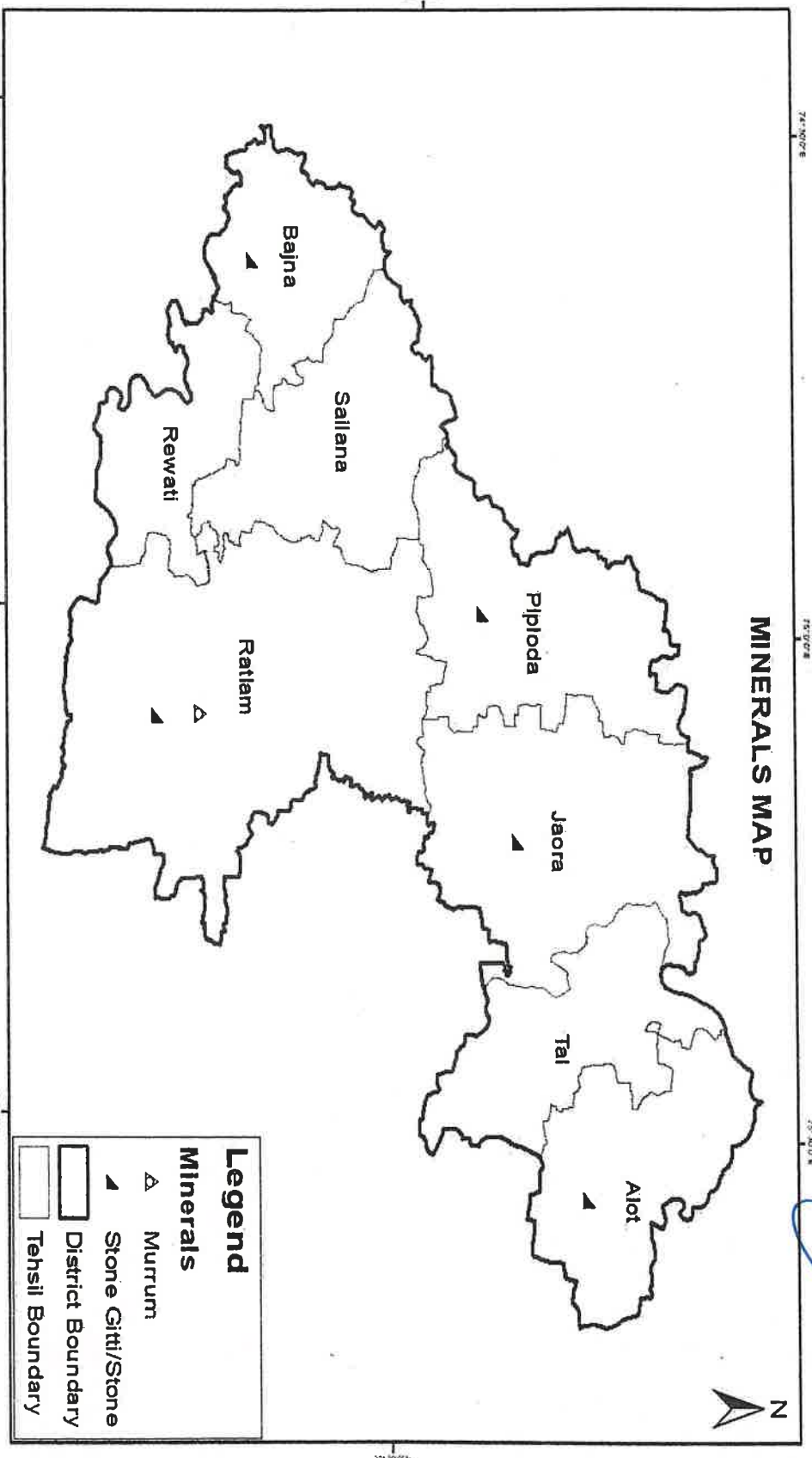
  
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# Chapter - 16

## Mineral Map of the District

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Mineral map of the District

## Chapter - 17

### Details of Eco-Sensitive Area, if any, in the District

The Sailana Bird Sanctuary, also known as Kharmour Bird Sanctuary, is situated in Sailana Village of the Ratlam District. This sanctuary is spread in a total area of 13 km<sup>2</sup> and was established in 1983. This sanctuary is home to and is named after the 'Kharmour' bird, a very rare species; and it is also a major stop for a wide variety of migratory birds. It is also one of the breeding habitats of Lesser Florican in India. This place is located amidst the hills of Malwa region and is internationally acclaimed for its rich and varied variety of flora and fauna. The region is covered by dense forest and grassy terrain because of the suitable climatic conditions like moisture, soil texture and availability of water. The life supporting conditions in the sanctuary provides habitat to several exotic species. Besides having a rich population of species like deer, rabbits, wild boars etc, the sanctuary is also home to several endangered species.

The Gazette of India, Extraordinary, *vide* notification of the Government of India in the Ministry of Environment, Forest and Climate Change notification dated 08<sup>th</sup> October 2020 whereas, a draft notification was published in the Gazette of India, Extraordinary, *vide* notification of the Government of India in the Ministry of Environment, Forest and Climate Change number S.O. 1193 (E), dated the 20<sup>th</sup> March 2020, in which after exercising the powers conferred by sub-section (1) and clauses (v) and (xiv) of sub-section (2) and sub-section (3) of section 3 of the Environment (Protection) Act 1986 (29 of 1986) (hereafter in this notification referred to as the Environment Act), read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies an area to an extent varying from 100 meter to 2.00 kilometres around the boundary of Sailana Wildlife Sanctuary, in Ratlam district in the State of Madhya Pradesh as the Sailana Wildlife Sanctuary Eco-sensitive Zone.

Sailana wildlife sanctuary has three parts viz, Amba (8.51 square kilometers), Sherpur (0.91 square kilometers) and Shikarwadi private agriculture and grazing land (3.54 square kilometers). Coordinates of which are as following:-

#### A. SAILANA - KHARMOR - AMBA SANCTUARY

Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
North	74°51'42.780"	23°32' 7.341"
East	74°53'9.472"	23°31'27.482"
South	74°52'28.874"	23°30'4.023"
West	74°51'17.628"	23°31'9.435"

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**B. SAILANA KHARMOR - SHERPUR SANCTUARY**

Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
North	74°55'11.977"	23°32'46.343"
East	74°55'28.154"	23°32'38.529"
South	74°55'7.029"	23°32'13.065"
West	74°54'39.729"	23°32'22.508"

**C. SAILANA KHARMOR - SHIKARWADI SANCTUARY**

Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
North	74°56'6.892"	23°26'53.075"
East	74°56'40.834"	23°26'2.233"
South	74°56'10.211"	23°25'27.536"
West	74°55'34.007"	23°25'56.693"

**D. ECO-SENSITIVE ZONE OF SAILANA KHARMOR AMBA SANCTUARY**

Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
North	74°51'28.492"	23°33'17.012"
East	74°54'18.192"	23°31'41.712"
South	74°52'35.210"	23°28'59.345"
West	74°50'08.921"	23°30'55.184"

**E. ECO-SENSITIVE ZONE OF THE SAILANA KHARMOR SHERPUR SANCTUARY**

Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
North	74°55'18.790"	23°33'55.614"
East	74°56'38.576"	23°32'40.108"
South	74°55'12.558"	23°31'08.221"
West	74°53'43.016"	23°32'30.653"

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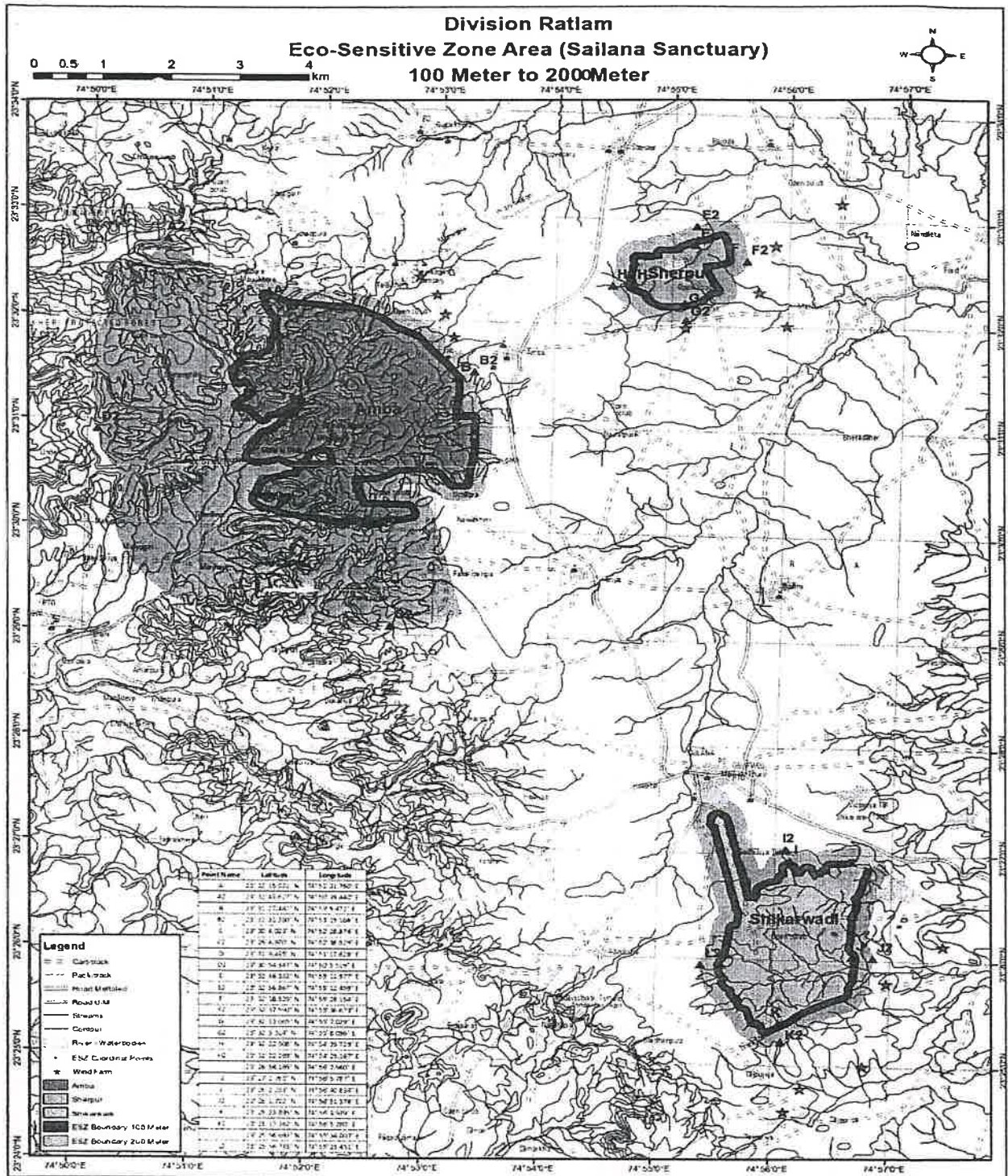
**F. ECO-SENSITIVE ZONE OF THE SAILANA KHARMOR SHIKARWADI SANCTUARY**


Direction Co-ordinates	Co-ordinates	
	Longitude	Latitude
<b>North</b>	74°56'04.795"	23°28'18.324"
<b>East</b>	74°57'52.627"	23°26'29.573"
<b>South</b>	74°56'08.313"	23°24'16.185"
<b>West</b>	74°54'24.023"	23°26'03.601"

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**MAP OF ECO-SENSITIVE ZONE OF SAILANA WILDLIFE SANCTUARY ALONG WITH LATITUDE AND LONGITUDE OF PROMINENT LOCATIONS ON SURVEY OF INDIA (SOI) TOPOSHEET:-**



  
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## Chapter - 18

### Impact on the Environment due to Mining Activity

Generally, the Environmental impacts can be categorized as either primary or secondary. Primary impacts are those, which are attributed directly by the project, secondary impacts are those, which are indirectly induced and typically include the associated investment and changed pattern of social and economic activities by the proposed action.

The impact has been ascertained for the project assuming that the pollution due to mining activity has been completely spelled out under the baseline environmental status for the entire ROM which is proposed to exploit from the mines.

#### Air

Mining Operations are carried out by opencast semi mechanized/ Mechanized method, dust particles are generated due to various activities like, Excavation, Loading, handling of mineral and transportation. The air quality in the mining area depends upon the nature and concentration of emissions and meteorological conditions.

The major air pollutants due to mining activity includes: -

Particulate Matter (Dust) of various sizes.

- Gases, such as, Sulphur Dioxide, Oxides of Nitrogen, Carbon Monoxide etc., from vehicular exhaust.
- Dust is the single Air pollutant observed in the open cast mines. Diesel operating drilling machines, small amount of blasting and movement of machinery/ vehicles produce gaseous (NO<sub>x</sub> and SO<sub>x</sub>) emissions, usually at low levels. Dust can be of significant nuisance surrounding land users and potential health risk in some circumstances.

#### Water Impact

The mining operation leads to intersection of the water table which causes ground water depletion. Due to the interruption surface water sources like River, Nallah, Odai etc., surface water system, Drainage pattern of the area is altered.

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## **Noise**

Noise pollution is mainly due to operation of Machineries and occasional plying of machineries. These activities will create Noise pollution in the surrounding area.

## **Land Environment**


The topography of the area will change; due to the Topographical changes the entire Eco system will be altered.

## **Flora and Fauna**

The impact on biodiversity is difficult to quantify because of its diverse and dynamic characteristics.

Mining activities generally result in the deforestation, land degradation, water, air and noise pollution which directly or indirectly affect the faunal and floral status of the project area.

However, occurrence and magnitude of these impacts are entirely dependent upon the project location, mode of operation and technology involved.

  
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## Chapter - 19


# Remedial Measure to mitigate the impact of Mining on the Environment:

### Air

Mitigated measures suggested for air pollution controls are based on the baseline ambient air quality of the area

The following measures are proposed to be adopted in the mines such as,

- Dust generation shall be reduced by using sharp teeth of shovels.
- Wet drilling shall be carried out to contain the dust.
- Controlled blasting techniques shall be adopted.
- Water spraying on haul roads, service roads and overburden dumps will help in reducing considerable dust pollution.
- Proper and regular maintenance of mining equipment's have to be considered.
- Transport of material in trucks covered with tarpaulin.
- The mine pit water can be utilized for dust suppression in and around mine areas.
- Information on wind direction and meteorology will be considered while planning, so that pollutants, which cannot be fully suppressed by engineering technique, will be prevented from reaching the nearby agriculture area.
- Comprehensive green belt around overburden dumps has to be carried out to reduce to fugitive dust emissions in order to create clean and healthy environment.

  
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## Water

- Construction of garland drains to divert surface run-off into the mining area.
- Construction of check dams / gully plugs at strategic places to arrest silt wash off from broken up area.
- Retaining walls with weep hole will be constructed around the mine boundaries to arrest silt wash off.
- The mined out pits shall be converted into the water reservoir at the end of mine life. This will help in recharging ground water table by acting as a water harvesting structure.
- Periodic analysis of mine pit water and ground water quality in nearby villages.
- Domestic sewage from site office & urinals/latrines provided in ML is discharged in septic tank followed by soak pits.

## Noise

- Periodic maintenance of machinery, equipment shall be ensured to keep the noise generated at minimum.
- Development of thick green belt around mining area and haul roads to reduce the noise.
- Provision of earplugs to workers exposed to high noise generating activities. Workers and operators at work site will be provided with earmuffs.
- Conducting periodical medical check-up of all workers for any noise related health problems.
- Proper training to personnel to create awareness about adverse noise level effects.
- Periodic noise monitoring at suitable locations in the mining area and nearby habitations to assess efficacy of adopted control measures.
- During the blasting, optimum spacing, burden and charging of holes will be made under the supervision of competent qualified mines foreman, mate as approved by Director of Mines safety.


  
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## Land Environment

- Riparian vegetation should be developed that doesn't stress with changes over short period of time.
- Safety barrier zone should be left out in order to prevent quick sand condition or rapid erosion of river banks.
- Development of suitable greenbelt in safety and barrier zone
- Waste dumps should be stabilized taking proper measures
- Degradation of land environment should be checked by briefing the worker about routine works regarding cleanliness and proper mining measures.
- No such infrastructure or any construction should be done that might hinder the natural flow of the river.

## Biological Environment


- Development of gap filling saplings in the safety barrier left around the quarry area.
- Carrying out thick greenbelt with local flora species predominantly with long canopy leaves on the inactive mined out upper benches.
- Development of dense poly-culture plantation using local flora species in the mining area at conceptual stage.
- Adoption of suitable air pollution control measures as suggested above.
- Transport of materials in trucks covered with tarpaulin.
- Construction of garland drains and settling tank to arrest silt wash off from lease area.
- Construction of retention walls around lower boundary of mining area to arrest silt wash off and roll down boulders.
- Retaining walls with weep hole will be constructed around the mine boundaries to arrest silt wash off.

  
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## Chapter – 20

### Reclamation of Mined out area

There is no proposal for backfilling, reclamation and rehabilitation. The quarry pit should be fenced by barbed wire to prevent inherent entry of public and cattle. The quarried out pit will be allowed to collect rain and seepage water which act as a reservoir for storage. The Quarried pit may be used as water reservoir for both Domestic and Agriculture purpose, in case of stone mining and inland sand mining. For Rover sand mining, the quarry should be demarcated using pillars and left for replenishment during monsoon season. No mining should be undertaken during monsoon period to avoid accidents and mishaps.

  
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(EPCO)  
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## Chapter - 21

### Details of the area of where there is cluster of mining lease viz no. of mining lease Location

**Table-20 DETAIL OF THE CLUSTER OF MINING LEASE (Gitti)**

S.No	Particulars	Cluster Area (Ha.)
<b>Banjli cluster</b>		
1	Shri Nandkishore S/o Ramkishan Sharma	
2	Shri Vyankatesh Timanna S/o Shri Malyaya	
3	Shri Subhash Chandra Jain S/o Rakhabchandra	
4	Shri Pankaj Purohit S/o Shri Bajrang	
5	Shri Ratanlal Kumawat S/o Shri KanhaiyaLal	
6	Shrimati Chenakumari W/o Shri Mahendra	
7	Shri Subhashchandra Jain S/o Shri Rakhabchadra	
8	Shri Vyankatesh Timanna S/o Shri Malyaya	
<b>Total Areas</b>		<b>9.100</b>
<b>Bibdoud cluster</b>		
1	M/S Kamdhenu Stone and Sand, Partner Shri Sanjay Patwala	
2	M/S Kamdhenu Stone and Sand, Partner Shri Sanjay Patwala	
3	M/S Kamdhenu Stone and Sand, Partner Shri Sanjay Patwala	
4	Shri Rishabh Paweja S/o Shri Mahendra Pawecha	
5	Shri Rahul Jaisawal S/o Shri Narendra Kumar	
<b>Total Areas</b>		<b>15.100</b>
<b>Sanwaliya-Runddi cluster</b>		
1	Shri Kailash Kumawat S/o Shri Girdharilal	
2	Shri Prateek VijayVargiya S/o Shri Sudheer	
3	Shrimati Akansha Vijayvargiya S/o Shri Shashank	
4	Shri Prateek VijayVargiya S/o Shri Sudheer	
5	Shri Bharat Rathod S/o Shri Shyam Sundar	
6	Sayyad Afsaar Ali S/o Wahid Ali	
7	Sayyad Afsaar Ali S/o Wahid Ali	
8	Shri Deepak Tauk S/o Shri Kailash Tauk	
9	Shri Rahul Tauk S/o Shri Kailash Tauk	
<b>Total Areas</b>		<b>20.300</b>
<b>Sarvani-Khurd cluster</b>		
1	Shri Nandkishore Sharma S/o Shri Ramkishan Sharma,	
2	Shri Pankaj Purohit S/o Shri Bajrang	
3	Shri Girdhari Purohit S/o Shri Lal ji Purohit	
4	Shrimati Megha Sharma W/o Shri Rohan Sharma	
5	Shri Gaurav Jain S/o Shri Ashok ji Jain	
6	Shrimati Poorva Jain W/o Shri Gaurav Jain	
7	Shri Manoharlal Kumawat	
8	Shri Manoharlal Kumawat	
9	Shri Vijay Kumar Jadav S/o Shri DeviLal	
10	Shri Rajmal Kumawat	
<b>Total Areas</b>		<b>15.750</b>
<b>Rojana cluster</b>		
1	Shri Ramchandra Patidar S/o Shri BadriLal	
2	Shri Ajay Kumar Baser S/o Shri Rajmal	
3	Shri Sureshbhai Patel S/o Shri Kantilal	
4	Shri Kapil Patel S/o Shri Jayshankar Patel	

  
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5	Shri Ramchandra Patidar S/o Shri BadriLal	
6	Shri Aadi Gorecha S/o Shri Ravindra Gorecha	
7	Shri Sanjeev Kumar Jain S/o Shri Chandmal	
8	Shri Sandesh Kumar Jain S/o Shri Chandmal	
<b>Total Areas</b>		<b>16.096</b>
<b>Sindurkiya cluster</b>		
1	Shri Khemraj Gurjar S/o Shri Devi Singh	
2	Shri Mahendra Singh Solanki S/o Shri Manohar Singh	
3	Shri Mahendra Singh Solanki S/o Shri Manohar Singh	
<b>Total Areas</b>		<b>7.450</b>
<b>Jeevan-Garh &amp; Mau-Khedi &amp; Khamariya cluster</b>		
1	Shri Sanjay Singh Solanki S/o Shri Ishwar Singh	
2	Shri Ranjeet Dayma S/o Shri Bherulal	
3	Shri Jakiuddin S/o Shri Gulam Jilani	
4	Shri Ranjeet Dayma S/o Shri Bherulal Dayma	
5	Shri Aasharam Jat S/o Shri Kheraj Ramji	
6	Kumari Minal Solanki S/o Shri Hitendra Singh Solanki	
7	Shri Aabid Khan S/o Aslam Khan	
8	M/S R. K. Stone Crusher Partner: Shri Asif Khan S/o Aslam Khan, and Shri Abid Khan S/o Aslam Khan	
9	Shri Wasim Khan S/o Shri Aslam Khan	
<b>Total Areas</b>		<b>17.00</b>
<b>Latitude and longitude of above mines are provided in chapter – 3</b>		

  
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## Chapter -22

### Formation of sand

Majority of rivers originate from mountains and as they continue their journey with force, through these mountains, the bigger rocks and boulders disintegrate slowly, and over a period of time, starts rolling down as fragments. These fragments become smaller and smaller due to weathering process by water, wind and other rocks. Thus, developed sand particles are transported, washed and stored and again transported during floods and deposited at river beds and largely on river shores. In case the sand deposits are mined / removed, cavities are formed in their place and again filled during next cycle(s) of deposition.

River sand is preferred as a source of sand because of the following factors:

- Cities tend to be located near rivers so transport costs are low, the energy in a river grinds rocks into gravels and sands,
- Eliminating the costly step of mining, grinding, and sorting of rocks
- The material produced by rivers tends to consist of resilient minerals of angular shape that are preferred for construction.
- Also, offer the advantages of being naturally sorted by grain-size, easily accessible, and able to be transported inexpensively using barges. Despite plentiful supplies of desert sand (Aeolian) which produce materials unsuitable for making concrete.

A meandering stream has a single channel that winds snakelike through its valley. As water flows around these curves, the outer edge of water is moving faster than the inner edge. This creates an erosion surface on the outer edge (a cut bank) and a depositional surface on the inner edge (a point bar). Where the bends of two meanders meet, they bypass the curve of river, creating an oxbow lake which may then be in-filled with over wash sediment.

Meanders change position by eroding sideways and slightly downstream. The sideways movement occurs because the maximum velocity of the stream shifts toward the outside of the bend, causing erosion of the outer bank. At the same time the reduced current at the inside of the meander results in the deposition of coarse sediment, especially sand. Thus by eroding its outer bank and depositing material along its inner bank, a stream moves sideways without changing its channel size. Due to the slope of the channel, erosion is more effective on the downstream side of a meander.



The specific gravity of an aggregate is considered as the measure of strength or quality of the material. Specific gravity is defined as the ratio of weight of a given volume of aggregate to the weight of equal volume of water. Aggregates having low specific gravity are generally weaker than those with aggregates having high specific gravity. This property helps in a general identification of aggregates. The specific gravity of (sand) is considered to be around 2.65 to 2.67. Sand particles composed of quartz have a specific gravity between 2.65 to 2.67. While inorganic clays generally range from 2.70 to 2.80. Soils with large amounts of organic matter or porous particles have specific gravity below 2.60 (Some range as low as 2.00).

### **Sources of sand**

Sand is world's second most consumed natural resource after water. Rapid urbanization and global population growth have created unbound demand for this limited natural resource. With urbanization as key driving factor, construction industry has expanded considerably over the last few decades leading to overuse of river sand for construction purposes. This increasing discrepancy between the need for aggregates in the society and scarcity of natural sand due to exhaustion of resources and environmental considerations, has urged concrete manufacturers to look for a suitable and sustainable alternative fine aggregate. The economical and ecological alternative is manufactured sand.

### **Natural Sources**

Natural sand is produced by natural forces, such as river sand and sea sand. Generally, sand found at foot of mountains is more weathered, containing more mud, organic impurities and light substances. Sea sand often contains shells and other impurities, and its components such as the chlorine, sulfate and magnesium salts may cause corrosion of steel bars. All the components will affect the performance of concrete. Sources of sand can be river bed material, de-siltation pits in reservoirs/dams, agricultural land etc. these can be broadly classifies as:

Following are the natural types of the sand:

- **Pit Sand**

This sand is found as deposits in soil and it is obtained by forming pits into soils. It is excavated from a depth of about 1 m to 2 m from ground level. The pit sand consists of sharp angular grains which are free from salts and it proves to be excellent material for mortar or concrete work. For making mortar, the clean pit sand free from organic matter and clay should only be used.

- **River Sand**

This sand is obtained from banks or beds of rivers. The river sand consists of fine rounded grains probably due to mutual attrition under the action of water current. The colour of river sand is almost white. As river sand is usually available in clean condition, it is widely used for all purposes.

- **Sea Sand**

This sand is obtained from sea shores. The sea sand, like river sand, consists of fine rounded grains. The colour of sea sand is light brown. The sea sand contains salts. These salts attract moisture from the atmosphere. Such absorption causes dampness, efflorescence and disintegration of work. The sea sand also retards the setting action of cement. Due to all such reasons, it is the general rule to avoid the use of sea sand for engineering purposes except for filling of basement, etc. It can however be used as a local material after being thoroughly washed to remove the salt.

### **Manufactured Sand**

Manufactured sand (M-Sand) is artificial sand produced from crushing hard stones into small sand sized angular shaped particles (rock particles with a particle size of less than 4.75 mm and is made by artificial crushing and sieving after soil removal treatment), washed and finely graded to be used as construction aggregate. It is a superior alternative to River Sand for construction purpose. The main technical indicators of artificial sand are particle gradation, fineness modulus, stone powder content, void ratio, apparent density, bulk density, methylene blue value (MB), crushing value index, mica content, light-matter content, etc.

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## Sand Mining

Sand Mining is an activity referring to the process of the removal of sand from rivers, streams and lakes.

- Sand is mined from beaches and dredged from river beds.
- There are no official figures for the amount of sand mined illegally, but in 2015-16, there were over 19,000 cases of illegal mining of minor minerals, which include sand, in the country.
- To stop illegal mining, the Ministry of Environment, Forest and Climate Change (MoEF) issued Enforcement and Monitoring Guidelines for Sand mining.
- These guidelines focus on the effective monitoring of the sand mining.

Following considerations shall be kept in mind for sand mining:


- Parts of the river reach that experience deposition or aggradations shall be identified. The Leaseholder/ Environmental Clearance holder may be allowed to extract the sand and gravel deposit in these locations to manage aggradations problem.
- Sand and gravel may be extracted across the entire active channel during the dry season.
- Abandoned stream channels on the terrace and inactive floodplains are to be preferred rather than active channels and their deltas and flood plains. The stream should not be diverted to form the inactive channel.
- Layers of sand which could be removed from the river bed shall depend on the width of the river and replenishment rate of the river.
- Sand shall not be allowed to be extracted where erosion may occur, such as at the concave bank.
- Segments of the braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.
- Sand and gravel shall not be extracted up to a distance of 1 kilometre (1 km) from major bridges and highways on both sides, or five times (5x) of the span (x) of a bridge/public civil structure (including water intake points) on up-stream side and ten times (10x) the span of such bridge on down-stream side, subjected to a

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Assessment Authority  
E.P.  
Paryavaran Parisar  
E-5, Arera Colony, Bhopal (M.P.)



minimum of 250 meters on the upstream side and 500 meters on the downstream side.

- Sand and gravel could be extracted from the downstream of the sand bar at river bends. Retaining the upstream one to two-thirds of the bar and riparian vegetation is accepted as a method to promote channel stability.
- The flood discharge capacity of the river could be maintained in areas where there is a significant flood hazard to existing structures or infrastructure. Sand and gravel mining may be allowed to maintain the natural flow capacity based on surveyed cross-section history. Alternatively, off-channel or floodplain extraction is recommended to allow rivers to replenish the quantity taken out during mining.
- The Piedmont Zone (Bhabhar area) particularly in the Himalayan foothills, where riverbed material is mined, and this sandy-gravelly track constitute excellent conduits and hold the greater potential for groundwater recharge. Mining in such areas should be preferred in locations selected away from the channel bank stretches.
- Mining depth should be restricted to 3 meters and distance from the bank should be  $\frac{1}{4}$ <sup>th</sup> or river width and should not be less than 7.5 meters.
- Demarcation of mining area with pillars and geo-referencing should be done prior to the start of mining.
- A buffer distance/un-mined block of 50 meters after every block of 1000 meters over which mining is undertaken or at such distance as may be the directed/prescribed by the regulatory authority shall be maintained.
- River bed sand mining shall be restricted within the central  $\frac{3}{4}$ <sup>th</sup> width of the river/rivulet or 7.5 meters (inward) from river banks but up to 10% of the width of the river, as the case may be and decided by regulatory authority while granting environmental clearance in consultation with irrigation department. Regulating authority while regulating the zone of river bed mining shall ensure that the objective to minimize the effects of riverbank erosion and consequential channel migration are achieved to the extent possible. In general, the area for removal of minerals shall not exceed 60% of the mine lease area, and any deviation or relaxation in this regard shall be adequately supported by the scientific report.

  
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- The mining from the area outside river bed shall be permitted subject to the condition that a safety margin of two meters (2 m) shall be maintained above the groundwater table while undertaking mining and no mining operation shall be permissible below this level unless specific permission is obtained from the Competent Authority. Further, the mining should not exceed nine-meter (9 m) at any point in time.
- The permanent boundary pillars need to be erected after identification of an area of aggradations and deposition outside the bank of the river at a safe location for future surveying. The distance between boundary pillars on each side of the bank shall not be more than 100 meters.



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**Table 21 Portion of the River or Stream Recommended for Mineral Concession Area in District**

S. No.	Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilo meter)	Average width of area recommended for mineral concession (in meters)	Average depth of area recommended for mineral concession (in meters)	Total Sand Potential in m <sup>3</sup> = Area x Depth	Mineable mineral potential (in MT (60% of total mineral potential) = Volume x 60/100	Last 3 year Sand Excavation Details			Remark
							2019-20	2020-21	2021-22	
1	Kitu Khedi (Tehsil Jaora, Survey No. 132, Area 5.00 Ha)	0.415	120	0.5	24900	20916	4200	4200	0	---
2	Bahadurpur Jagir (Tehsil Jaora, Survey No. 375, Area 3.00 Ha)	0.370	88	0.5	16280	13675.2	4200	4200	0	---
3	Uni (Tehsil Jaora, Survey No. 235, Area 5.00 Ha)	0.500	100	0.5	25000	21000	0	0	0	---
4	Karan Khedi (Tehsil Jaora, Survey No. 126, Area 1.70 Ha)	0.480	35	0.5	8400	7056	0	0	0	---
5	Khojan Kheeda (Tehsil Jaora, Survey No. 02, Area 6.00 Ha)	1.2	50	0.5	30000	25200	2296	2296	0	---
6	Rafu Khedi (Tehsil Jaora, Survey No. 241, Area 8.00 Ha)	0.950	85	0.5	40375	33915	0	0	0	---
7	Bhanpur (Tehsil Jaora, Survey No. 289, Area 6.00 Ha)	0.600	100	0.5	30000	25200	0	0	0	---
8	Badodiya (Tehsil Jaora, Survey No. 126, Area 6.00 Ha)	0.764	80	0.5	30560	25670.4	0	0	0	---
9	Gondi Shankar (Tehsil Jaora, Survey No. 701, Area 10.00 Ha)	1.2	83	0.5	60000	50400	0	0	0	---
10	Melukhedi (Tehsil Tal, Survey No. 01, 110, Area 8.00 Ha)	0.810	100	0.5	40500	34020	0	0	0	---
11	Fatehpur (Tehsil Tal, Survey No. 90, 242, Area 16.00 Ha)	1.4	115	0.5	80500	67620	0	0	0	---
12	Nimbakhedi (Tehsil Tal, Survey No. 240, Area 8.00 Ha)	0.9	90	0.5	40500	34020	0	0	0	---
13	Laxmipura (Tehsil Aloi, Survey No. 153, Area 8.00 Ha)	0.8	100	0.5	40000	33600	0	0	0	---
14	Unariya (Tehsil Bajina, Survey No. 01, Area 7.54 Ha)	0.9	84	0.5	37800	31752	0	0	0	---
	Total	11.289	1230	7	504815	424044.6	10696	10696	0	---

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## 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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## Chapter - 23

# Sand Replenishment Plan and Projections

### 23.1 Sand Replenishment Assessment

The process of sand replenishment is highly dependent upon the rainfall received in the catchment areas of rivers and their tributaries and velocity of river. It is a dynamic process. Thus it is difficult to predict, what quantity of sand may be reclaimed/ replenished by river. Because, in case of less rain, less water in the river, there may be less erosion and transportation may also be minimal and as a result deposition too will be less. Moreover, in case of floods, the sudden gush of water may force the change in river course, thus old sites of sand deposition may not be relevant. Thus, the above figures may just be a mere prediction, based on the production in the preceding years. More so, practically, it is not possible that in such a short period, single person can visit each spot within the district and determine how much quantity of sand may be replenished every year. The data narrated in the report, regarding annual deposition of sand and associated aggregates and minable mineral potential is concerned, is only an estimation based on the production data provided by the district mining office. Thus, the figures may vary from area to area and year on year basis. Therefore, this document is not a static one but have to be a dynamic one, the figures of which may vary with respect to the area under question for which the prior environmental clearance will be sought.

In order to establish a safe extraction limit, such that the extracted sand gets replenished annually, a replenishment study is to be carried out. For this purpose, the river bed RL at selected points in the dry portion of riverbed will be measured during pre-monsoon period and again during post- monsoon period in order to assess the annual quantum of sand deposition. If it is observed that, there is an average increase in riverbed RL, it shows that it is due to deposition of sand during the monsoon flow of the river and by multiplying it with the area of lease one can measure the quantity of sand replenished every year.

Sand quarrying from the river bed will have both positive and negative impacts.

#### NEGATIVE IMPACTS

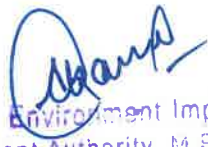
It includes destruction of natural river course, sand erosion, bank erosion, bank cutting and widening and deepening of river bed, change in hydrological status and recharging conditions and destruction to closely linked flora, fauna and aquatic life.



## POSITIVE IMPACTS

Employment and socio-economic status of the habitats living besides the river depends on sand mining industries. Construction of concrete infrastructure, roads and some other related activities depends on the river bed sand. Continuous accumulation of sand ultimately leads to the reduction in water carrying capacity of the river leading excessive flood in the river. Sustainable extraction of sand from river will lead to overcoming the problem.

Initially replenishment study requires four surveys. The first survey needs to be carried out in the month of April for recording the level of mining lease before the monsoon. The second survey is at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the offset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned. The replenishment period may vary on nature of the channel and season of deposition arising due to variation in the flow. Such period and season may vary on the geographical and precipitation characteristic of the region and requires to be defined by the local agencies preferable with the help of the Central Water Commission and Indian Meteorological Department. The excavation will, therefore, be limited to estimated replenishment estimated with consideration of other regulatory provisions.

  
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## 23.2 Need for Sand Replenishment Study and Factorstobe considered


Environmental status of the mined out area may be affected badly if proper care is not taken to ensure sustainable extraction of sand from river bed. Proper study of the following factors must be taken into consideration to reveal the actual potential of sand deposition in river course after completion of periodical excavation annually. The main factors to be considered for the study of the replenishment potential of particular river course are:

Formation of sand comprises of the following:

- Catchment area and geographical strata
- Erosion, weathering and transportation of load
- Climatic conditions, precipitation
- Geomorphology, physiographic manmade structures and activity details

Deposition/sedimentation of material or sediment yield depends upon several factors like:

- Catchment area
- Span of river/ flood plain
- Travelling distance of suspended particles
- Slope/gradient/ depth of water channel;/meandering of river
- Geology traversed
- Climatic conditions
- Tributaries/ confluence
- Type/ stage of river and flow velocity
- Flow during lean period

  
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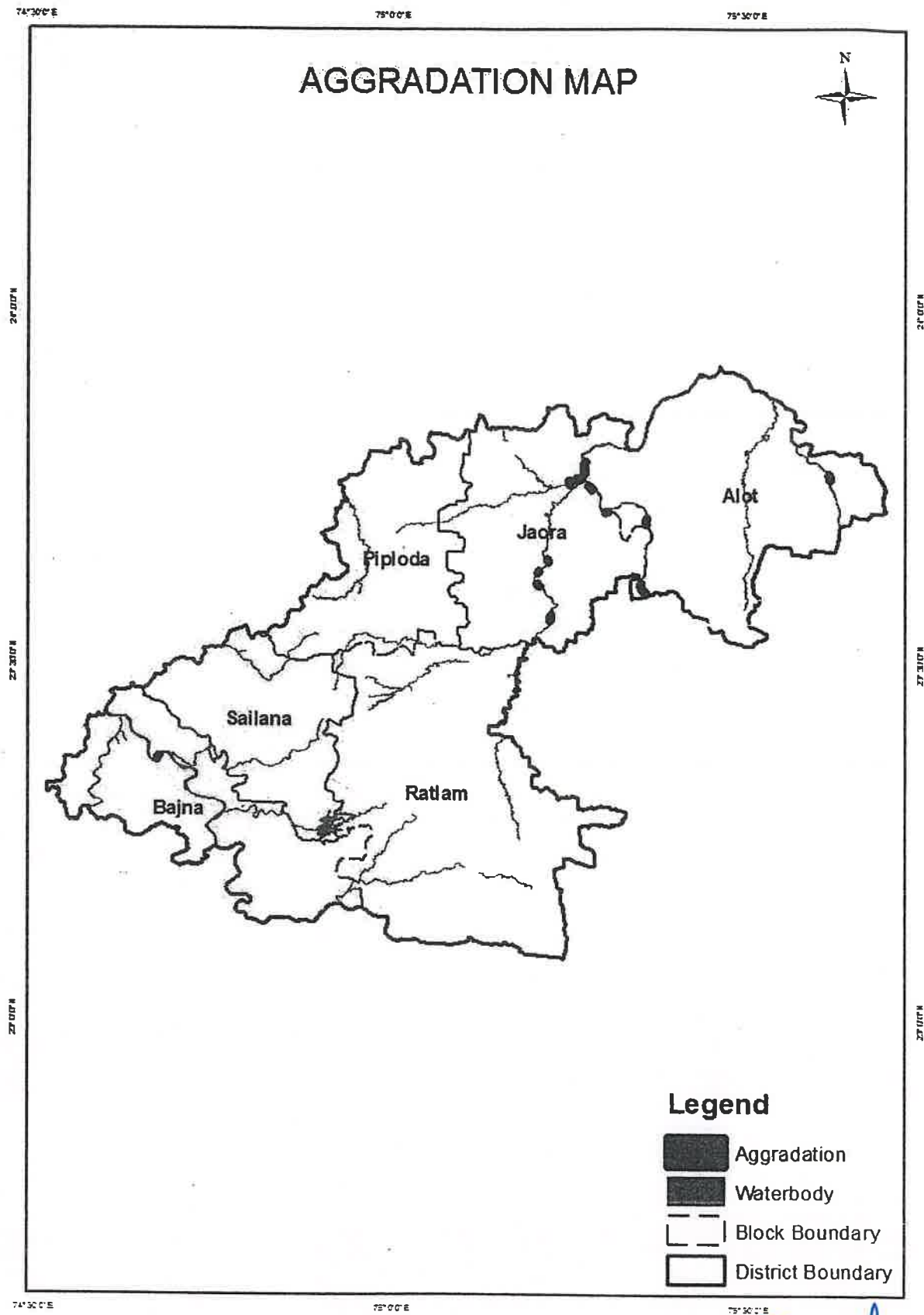


## REPLENISHMENT STUDY FOR YEAR 2021


Name of District	Normal date of onset of monsoon	Normal date of offset of monsoon	Name of River	Name of Mine	Length of sand mine (in meter)	Width of sand mine (in meter)	Average depth of sand mine (in meter)	Pre-monsoon quantity of sediment load (in cum.)	Post-monsoon quantity of sediment load (in cum.)	Approx. quantity of production per annum (in cum.)	Quantity of sand mineral produced per annum since last three years (in cum.)
Ratlam	01 July	01 october	Chambal	Kitu Khedi	500	100	1.0	48000	50000	2000	2018-19-Nil 2019-20-3000 2020-21-3000
			Maleni	Bahadurpur Jagir	350	85	1.0	24750	29750	5000	2018-19 Nil 2019-20 3000 2020-21 3000
			Chambal	Uni	500	100	1.0	48000	50000	2000	Nil
			Maleni	Karan Khedi	230	80	1.0	15400	18400	3000	Nil
			Maleni	Khojan Kheda	750	80	0.5	28000	30000	2000	2018-19-Nil 2019-20-1640 2020-21-1640
			Maleni	Rafu Khedi	950	85	1.0	78750	80750	2000	Nil
			Chambal	Bhanpur (Nimbodiya)	600	100	1.0	58000	60000	2000	Nil
			Maleni	Badodiya	750	80	1.0	58000	60000	2000	Nil
			Maleni	Gondi Shankar	1200	83	1.0	96600	99600	3000	Nil
			Chambal	Melukhedi (Arwas)	1600	100	1.0	155000	160000	5000	Nil
			Chambal	Fatehpur	1600	100	1.0	157000	160000	3000	Nil
			Chambal	Nimbakhedi	800	100	1.0	78000	80000	2000	Nil
			Shipra	Laxmipura	700	120	1.0	79000	84000	5000	Nil
			Mahi	Umariya	750	100	1.0	75000	75000	2000	Nil

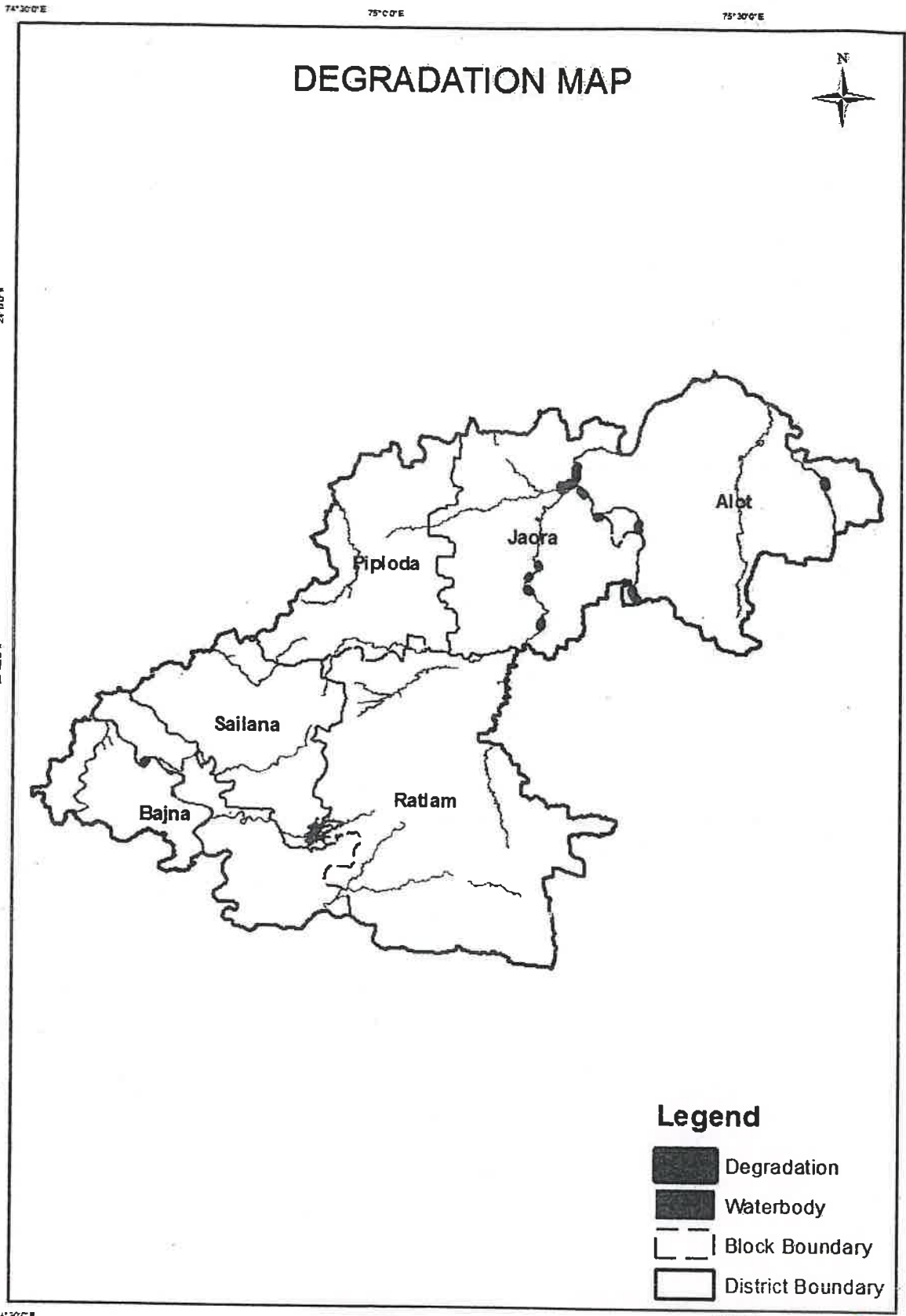
  
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 Assessment and Replenishment  
 State Level

### 23.3 Aggradations and Degradation Study



Aggradations Map of the District

  
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**Degradation Map of the District**

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



Table 22 Block Wise Details of Aggradations and Degradations

Degradation (Pre-Monsoon)				Aggradations (Post-Monsoon)			
Sr. No.	Block Name	Total Area in sqm	Standard Depth After Aggregation 3m	Sand Quantity in Cu. M	Total Area in sqm	Standard Depth After Degradation 0.5m	Sand Quantity in Cu. M
1.	Jaora	5,08,500	3	23,000	5,08,500	0.5	30,000
2.	Tal	4,00,000	3	10,000	4,00,000	0.5	15,250
3.	Alot	84,000	3	5,000	84,000	0.5	8,000
4.	Bajna	75,000	3	2,000	75,000	0.5	3,500

Based on the study presented above about aggregation & degradation and the specific studies for each mine during the preparation of mining plan, the areas of prohibition for mining can be found out. The areas facing aggregation are possible and promising areas for mining of sand whereas the areas facing severe degradation are to be left out and should be left undisturbed. Mining should not be allowed at such location.

Table 23 Drainage System with description of main Rivers

S. NO.	Name of the River	Area Drained	Area Drained in the District
1	Chambal River	12,636 sqkm	3,034sqkm
2	Mahi River	4,633 sqkm	1,759 sqkm



## Chapter - 24

### **Risk Assessment & Disaster Management Plan:**

The Disaster Management Plan (DMP) is supposed to be a dynamic, changing, document focusing on continual improvement of emergency response planning and arrangements.

The disaster management plan is aimed to ensure safety of life, protection of environment, protection of installation, restoration of production and salvage operations in this same order of priorities. For effective implementation of the disaster management plan, it should be widely circulated and personnel training through rehearsals/induction conducted by the respective department from time to time.

### **General Responsibilities during an Emergency**

During an emergency, it becomes more enhanced and pronounced when an emergency warning is raised, the workers in-charge, should adopt safe and emergency shut down and attend any prescribed duty as essential employee. If no such responsibility is assigned, he should adopt a safe course to assembly point and await instructions. He should not resort to spread panic. On the other hand, he must assist emergency personnel towards objectives of DMP.

### **Co-ordination with Local Authorities**


The mine manager who is responsible for emergency will always keep a jeep ready at site. In case any eventualities the victim will be taken to the nearby hospitals after carrying out the first aid at site. A certified first aid certificate holder will be responsible to carry out the first aid at site. The mine manager should collect and have adequate information of the nearby hospitals, fire station, police station, village Panchayat heads, taxi stands, medical shop, district revenue authorities etc., and use them efficiently during the case of emergency.

### **Disaster Management Plan**

The objectives of DMP are to describe the company's emergency preparedness, organization, the resource availability and response actions applicable to deal with various types of situations that can occur at mines in shortest possible time.

Thus, the overall objectives of the emergency plan are summarized as: -

- Rapid control and containment of Hazardous situation
- Minimum the risk and impact of event/ accident

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



- Effective prevention of damage to property.
- In order to achieve effectively the objectives of emergency planning, the critical elements that form the backbone of Disaster Management Plan (DMP) are: -
- Reliable and early detection of an emergency and immediate careful planning.
- The command, co-ordination and response organization structure along with availability of efficient trained personnel.
- The availability of resources for handling emergencies.
- Appropriate emergency response action.
- Effective notification and communication facilities.
- Regular review and updating DMP.
- Training of the concerned personnel.
- Steps taken for minimizing the effects may include rescue operations, first aid, evacuation, rehabilitation and communicating promptly to people living nearby.

Mining and allied activities are associated with several potential hazards to both the employees and the public at large. A worker in a mine will be able to work under conditions, which are adequately safe and healthy. At the same time the environmental conditions also will not impair his working efficiency. This is possible only when there is adequate safety in mines. Hence mine safety is one of the most essential aspects of any working mine. The safety of the mine and the employees is taken care of by the Mines Act 1952, which is well defined with laid down procedure to ensure safety and constantly monitored and supervised by Directorate General of Mines Safety and Department of Mines, State Government.

  
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 (EPCO)  
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## Chapter - 25

### Details of the Occupational Health issues in the District:

Open cast method involves dust generation by excavation, loading and transportation of mineral. At site, during excavation and loading activity, dust is main pollutant which affects the health of workers whereas environmental and climatic conditions also generate the health problems. Addressing the occupational health hazard means gaining an understanding of the source (its location and magnitude or concentration), identifying an exposure pathway (e.g., a means to get it in contact with someone), and determination of likely a receptor (someone receiving the stuff that is migrating).

Occupational hazard due to open cast mining mainly comes under the physical hazards. Possible physical hazards are as below: -

**Physical Hazards due to Mining Operations:**

Following health related hazards were identified in open cast mining operations to the workers:

**Light:** - The workers may be exposed to the risk of poor illumination or excessive brightness. The effects are eye strain, headache, eye pain and lachrymation, congestion around the cornea and eye fatigue. In present case, the mining activity is done during day time only.


**Heat and Humidity:** - The most common physical hazard is heat. The direct effects of heat exposure are burns, heat exhaustion, heat stroke and heat cramps; the indirect effects are decreased efficiency, increased fatigue and enhanced accident rates. Heat and humidity are encountered in hot and humid condition when temperatures and air temperatures increase in summer time up to 46.10C or above in the river bed mining area.

**Eye Irritation:** - During the high windy days in summer the dust could be the problems for eyes like itching and watering of eyes.

**Respiratory Problems:** - Large amounts of dust in air can be a health hazard, exacerbating respiratory disorders such as asthma and irritating the lungs and bronchial passages.


**Noise Induced Hearing Loss:** - Machinery is the main source of noise pollution at the mine site.

**Risk Level using Risk Matrix:** Risk Matrix is used to identify the level of risk involved in various hazards identified.

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

**Table 26 Number of Health centers in Ratlam District**

S. no.	Name of District	Block Name	No. of Hospitals	CHC	PHC	MO
1.	Ratlam	Alot	1	1	5	2
2.		Jaora	1	0	4	12
3.		piploda	0	1	4	-
4.		Ratlam	4	1	6	8
5.		Sailana	0	1	4	7
6.		Bajna	0	1	2	5

  
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**Table 27 TB and Silicosis Patient's list of Ratlam District.**

S. No.	Year	No. of TB Patients	No. of Silicosis Patients
1.	2019-2020	3999	0
2.	2020-2021	2640	0
3.	2021-2022	2878	0

Malaria control in Madhya Pradesh is complex because of vast tracts of forest with tribal settlement. Fifty four million individuals of various ethnic origins, accounting for 8% of the total population of India, contributed 30% of total malaria cases, 60% of total falciparum cases and 50% of malaria deaths in the country. Ambitious goals to control tribal malaria by launching "Enhanced Malaria Control Project" (EMCP) by the National Vector Borne Disease Control Programme (NVBDCP), with the World Bank assistance, became effective in September 1997 in eight north Indian states. Under EMCP, the programme used a broader mix of new interventions, i.e. insecticide-treated bed nets, spraying houses with effective residual insecticides, use of larvivorous fishes, rapid diagnostic tests for prompt diagnosis, treatment of the sick with effective radical treatment and increased public awareness and IEC.

The strategic plan will serve as the guide to all the districts and the state of Madhya Pradesh to achieve the TB elimination goals. Success of this endeavour will be an important chapter in the history of control of infectious diseases.

Tuberculosis is a disease dreaded due to its social consequences and age old myths and misconceptions regarding its transmission and treatment. It is more often mistreated by the unqualified and untrained thus leading to patients suffering physically and monetarily. Elimination of Tuberculosis will entail mammoth efforts by each and every stakeholder involved. The launch of this document provides with the necessary roadmap and momentum, in direction of meeting the goals specified.

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

## Chapter - 26

# Plantation and Green Belt Development in respect of lease granted in the

District:

Table 28 LIST OF PLANTATION DONE BY LESSEES RATLAM

Sr. No.	Lease Owner's Name and Address	Mineral	Survey No.	Area (Ha)	Village/ Tehsil	Duration	Plantation Target as per EC (per year)	No. of Plantation done	Name of Plank
1	Shri Mohanlal Kumawat S/o Shri Ghasilal R/o- 117/2, Shastri Nagar, Ratlam	Stone Gitti	137	1.000	Village- Narnli Tehsil- Ratlam	23-05-2018 to 22-05-2028	1000	70	Mango, Neem, Gulmohar
2	Sayyad Akhter Ali S/o Wahid Ali R/o- 10/10, Mahaveer Nagar, Ratlam	Stone Gitti	137	2.500	Village- Narnli Tehsil- Ratlam	29-09-2017 to 28-09-2027	1000	120	Ratanjot, Amla, Guava, Gulmoha
3	Sayyad Mohabbat Ali S/o Wahid Ali R/o- 10/10, Mahaveer Nagar, Ratlam	Stone Gitti	143/1	1.000	Village- Narnli Tehsil- Ratlam	14-11-2016 to 13-11-2026	1000	60	Gulmohar, Mang, Neem, Amla, Gua
4	Shri Jakir Hussain S/o Shri Chhote Kha R/o- 45, Nahar pura, Teh. Ratlam	Stone Gitti	222/1	1.000	Village- Nandlai Tehsil- Ratlam	23-01-2016 to 22-01-2026	1000	80	Mango, Karanj, Guava, Kathal,
5	Shri Vijay Jadav S/o Shri Devlial R/o- 03 Nirala nagar, Barwad road, Ratlam	Stone Gitti	222/1	1.500	Village- Nandlai Tehsil- Ratlam	06-01-2017 to 05-01-2027	1000	80	Amar, Mango, Gau Kathal, Neebu Jamun
6	Shri Naveen Vijaywargiya S/o Laxminarayan R/o 61, Lakkadpetha, Teh.-Ratlam	Stone Gitti	222/1	1.000	Village- Nandlai Tehsil- Ratlam	06-01-2017 to 05-01-2027	1000	60	Mango, Amla, Karanj, Kathal, Jamun
7	Shri Nandkishore S/o Ramkishan Sharma R/o 80, Sajjan Mill Road, Dist. Ratlam	Stone Gitti	136/1/1/1	1.000	Village- Banjli Tehsil- Ratlam	09-06-2017 to 08-06-2027	1000	100	Mango, Amla, Karanj, Kathal, Jamun
8	Shri Vyankatesh Timanna S/o Shri Malayaya R/o- 81, Rajendra Nagar, Ratlam	Stone Gitti	136/1/1/1	1.000	Village- Banjli Tehsil- Ratlam	09-06-2017 to 08-06-2027	1000	40	Amla, Karanj, Sag
9	Shri Naveen Vijaywargiya S/o Laxminarayan R/o- 61, Lakkad Petha, Dist. Ratlam	Stone Gitti	136/1/1/1	1.000	Village- Banjli Tehsil- Ratlam	11-05-2011 to 10-05-2021	1000	60	Ratanjot, Mango Amla, Guava, Karanj, Kathal

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Assesses  
Authority, M.P.  
Ratlam





24	Shri Rijwan S/o Shri Abdul Rehman R/o- Ashok Nagar, Ratlam	Stone Gitti	65	2.000	Village- Bibdod Tehsil- Ratlam	07-02-2018 to 06-02-2028	1000	40	Mango, Kathal Guava
25	Sayyad Afsar Ali S/o Wahid Ali, R/o- 16/10, Rahmat Nagar, Dist.- Ratlam	Stone Gitti	3/1/1/1	4.000	Village- Sarwliya Rundi Tehsil- Ratlam	24-11-2021 to 23-11-2031	1000	120	Kathal, Karanj Guava
26	Sayyad Afsar Ali S/o Wahid Ali, R/o- 16/10, Rahmat Nagar, Dist.- Ratlam	Stone Gitti	3/1/1/1	4.000	Village- Sarwliya Rundi Tehsil- Ratlam	27-08-2019 to 26-08-2029	1000	120	Mango, Guava Shitaphal, Kara
28	Shri Deepak Tauk S/o Shri Kalash Tauk R/o- 148, Village- Munddi, Tehsil- Ratlam	Stone Gitti	3/1/1/1	2.000	Village- Sarwliya Rundi Tehsil- Ratlam	27-02-2018 to 26-02-2028	1000	80	Gulmohar, Nee Amla, Guava.
29	Shri Rahul Tauk S/o Shri Kalash Tauk R/o- 148, Village- Munddi, Tehsil- Ratlam	Stone Gitti	3/1/1/1	2.000	Village- Sarwliya Rundi Tehsil- Ratlam	27-02-2018 to 26-02-2028	1000	70	Mango, Amla Guava, Neebu Karanj, Neem, Ja
30	Shri Mukta Singh S/o Shri Prem Singh R/o A-101, Jupiter Tower Ahemdabad (GJ) Raj Rajeshwari Stone Crusher, Shrimati Sunita Kumawat W/o Shri Jaswant R/o- A/54, Dongre Nagar, Ratlam	Stone Gitti	75/1	1.600	Village- Sujiana Tehsil- Ratlam	28-11-2017 to 27-11-2027	1000	40	Mango, Guava Kathal
31	Shri Vinod Bhai Patel S/o Shri Raoji Bhai, R/o Shakti Aara Machine Jawra Fatak Ratlam	Stone Gitti	2/4/2	1.200	Village- Raipura Tehsil- Ratlam	27-11-2016 to 26-11-2026	1000	90	Gulmohar, Man Neem, Amla, Gu
32	Shri Ejan Belim S/o Shri Akbar Belim R/o- Ashok nagar Ratlam	Stone Gitti	490/1	2.000	Village- Sarwad Tehsil- Ratlam	04-12-2010 to 03-12-2020	1000	110	Mango, Neebu Kathal, Jamun Karanj, Khann
33	Shri Vinod Bhai Patel S/o Shri Rajvi Bhai R/o- Shakti Aara Machine, Jawra Phatak, Teh. Ratlam, Dist.- Ratlam	Stone Gitti	535/1	1.000	Village- Sarwad Tehsil- Ratlam	02-12-2015 to 01-12-2025	1000	110	Mango, Cuav Kath il
34	Shri Vikram Singh Rathod S/o Jaswant Singh R/o Village- Lunera, Tehs. Ratlam, Dist.- Ratlam	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	26-12-2011 to 25-12-2021	1000	80	Mango, Amla Neelgiri
35	Shri Mahendra Agarwal S/o Shri Prabhudayal R/o- 23, Joy Builder Colony, Ranisati Gate, Dist. Indore	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	22-07-2016 to 21-07-2026	1000	90	Mango, Neem Karanj, Guav
36	Shri Mahendra Agarwal S/o Shri Prabhudayal R/o- 23, Joy Builder Colony, Ranisati Gate, Dist. Indore	Stone Gitti	117/1	2.000	Village- Lunera Tehsil- Ratlam	22-07-2016 to 21-07-2026	1000	90	Neelgiri, Man Shitaphal, Gua Jamun
37	Shri Bharat Rathod S/o Shri Shyam Sundar R/o- 14/1, Sahar Saray, Nahar pura road, Dist. Ratlam	Stone Gitti	04	2.000	Village- Sarwani Khurd Tehsil- Ratlam	01-09-2016 to 31-08-2026	1000	60	Mango, Karan Guava, Sagui

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Liabilities  
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Year  
2026

39	Shri Kailash Kumawat S/o Shri Giridharial R/o- 120, Karmadi Road, Dist. - Ratlam	Stone Gitti	01	1.900	Village- Sarwani Khurd Tehsil- Ratlam	21-10-2015 to 20-10-2025	1000	80	Mango, Karanj, Guava, Gulmohar Jannu, Neebu,
40	Shri Prateek VijayVargiya S/o Shri Sudheer R/o- 120, ShriRan Mansion, Power House Road, Ratlam, Dist. - Ratlam	Stone Gitti	01	1.900	Village- Sarwani Khurd Tehsil- Ratlam	21-10-2015 to 20-10-2025	1000	60	Mango, Guava, Jannu, Kathal Gulmohar
41	Shrimati Akansha Vijayvargiya S/o Shri Shashank R/o- 63, Lakkadpeetha, Ratlam, Dist. - Ratlam	Stone Gitti	01	1.000	Village- Sarwani Khurd Tehsil- Ratlam	12-12-2017 to 11-12-2027	1000	50	Mango, Karanj, Guava, Neebu, Am Jannu, Neem
42	Shri Prateek VijayVargiya S/o Shri Sudheer R/o- 120, ShriRan Mansion, Power House Road, Ratlam, Dist. - Ratlam	Stone Gitti	04	1.500	Village- Sarwani Khurd Tehsil- Ratlam	12-12-2017 to 11-12-2027	1000	60	Mango, Karanj, Amla, Jannu, Kat
43	Shri Nandkishore Sharma S/o Shri Ramkishan Sharma, R/o- 80, Sajjan Mill Road, Dist. - Ratlam	Stone Gitti	169	2.000	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	1000	50	Mango, Karanj, Amla, Jannu, Kal
44	Shri Pankaj Purohit S/o Shri Bajrang R/o- 138, Jawahar nagar, Ratlam	Stone Gitti	169	1.500	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	1000	50	Mango, Guava, Neem, Jannu, Gulmohar
45	Shri Giridhari Purohit S/o Shri Lal ji Purohit R/o- 120, Jawahar Nagar, Ratlam	Stone Gitti	169	1.750	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	1000	60	Gulmohar, Pipa Ashok, Neem,
46	Shrimati Megha Sharma W/o Shri Rohan Sharma R/o- 80, Sajjan Mill Road, Ratlam	Stone Gitti	169	1.000	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	1000	50	Gulmohar, Neer Amla, Mango, As
47	Shri Gaurav Jain S/o Shri Ashok ji Jain R/o- 64A, Rajendra Nagar Ratlam	Stone Gitti	169	1.950	Village- Sarwani Khurd Tehsil- Ratlam	23-02-2018 to 22-02-2028	1000	40	Gulmohar, Neer Amla, Mango, As
48	Shrimati Poorva Jain W/o Shri Gaurav Jain R/o- 64A, Rajendra Nagar Ratlam	Stone Gitti	169	1.650	Village- Sarwani Khurd Tehsil- Ratlam	23-02-2018 to 22-02-2028	1000	40	Gulmohar, Mani Neem, Amla, Gu
49	Shri Manoharal Kumawat Ratlam	Stone Gitti	172	1.500	Village- Sarwani Khurd Tehsil- Ratlam	19-02-2018 to 18-02-2028	1000	60	Gulmohar, Neer Amla, Mango, As
50	Shri Manoharal Kumawat Ratlam	Stone Gitti	172	1.600	Village- Sarwani Khurd Tehsil- Ratlam	19-02-2018 to 18-02-2028	1000	60	Gulmohar, Neer Amla, Mango, As
51	Shri Premaram Puniya S/o Shri PeerRam R/o- 63, Aasharam Bapu Nagar, Ratlam	Stone Gitti	273/1	2.000	Village- Nawgawan Kalan Tehsil- Ratlam	05-07-2018 to 04-07-2028	1000	30	Gulmohar, Neer Amla, Mango, As
52	Shri Vijay Kumar Jadav S/o Shri Devidal R/o- 03, Nirala Nagar, Badwad Naka Ratlam	Stone Gitti	169	1.500	Village- Sarwani Khurd Tehsil- Ratlam	24-02-2018 to 23-02-2028	1000	60	Gulmohar, Man Neem, Amla, Gu

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 Ratlam

53	Shri Rajmal Kumawat, R/o -Ratlam	Stone Gitti	172 o 173	1.300	Village- Sarvani Khurd Tehsil- Ratlam	01-06-2018 to 31-05-2028	1000	60	Gulmohar, Neem Amla, Mango, Ash
54	Shri Chetan Singh Solanki S/o Shri Narendra Singh R/o- 2065 D, Sudama Nagar, Indore, Dist. Indore	Stone Gitti	12	2.000	Village- Sujiana Tehsil- Ratlam	09-11-2017 to 08-11-2027	1000	30	Gulmohar, Neem Amla, Mango, Ash
55	Shrimati Neesreen Pakawala S/o Shabbeer Pakawala R/o- 16, Rambagh, Ratlam	Stone Gitti	273/16, 273/17	2.000	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	1000	60	Gulmohar, Neem Amla, Mango, Ash
56	Shri Shabbeer Pakawala S/o Nizzamuddin R/o- 16, Rambagh, Ratlam	Stone Gitti	273/17	1.000	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	1000	60	Gulmohar, Neem Amla, Mango, Ash
57	Shri Jitendra Singh Thakur S/o Surendra Singh Thakur R/o- 15, Avishkar Apartment, Mathu road, Ratlam	Stone Gitti	273/17	1.500	Village- Rampuriya Tehsil- Ratlam	17-12-2020 to 16-12-2030	1000	60	Gulmohar, Neem Amla, Mango, Ash
58	Shri Dinesh Porwal S/o Shri Kishanlal R/o- 4, Sahar Saray, Gayatri Cinema, Dist- Ratlam	Stone Gitti	65	2.000	Village- Bibod Tehsil- Ratlam	11-04-2008 to 10-04-2028	1000	50	Gulmohar, Neem Amla, Mango, Ash
59	Shrimati Archana Surana W/o Hitesh Surana R/o- 20, Jain Colony Ratlam	Stone Gitti	13/3/2	2.000	Village- Dhabaipada Tehsil- Ratlam	21-04-2022 to 20-04-2032	1000	30	Gulmohar, Neem Amla, Mango, Ash
60	Shri Ajay Singh Chauhan S/o Shri Shaubhan Singh R/o- Village Daulatganj, Tehs. Tal, Dist. Ratlam	Stone Gitti	04	2.000	Village- Kharwa Kalan Tehsil- Tal	07-09-2017 to 06-09-2027	1000	30	Gulmohar, Neem Amla, Mango, Ash
61	Shri Santosh Kumar Palwal S/o Shri Rameshchandra, R/o-Tajkheda, Tehs. Tal, Dist. Ratlam	Stone Gitti	04	2.000	Village- Kharwa Kalan Tehsil- Tal	05-01-2011 to 04-01-2021	1000	50	Gulmohar, Neem Amla, Mango, Ash
62	Shri Rituraj Singh S/o Shri Shivraj Singh R/o- Village Mandawal, Tehs. Tal, Dist. Ratlam	Stone Gitti	2/1	1.000	Village- Napa Kheda Tehsil- Tal	08-02-2011 to 07-02-2021	1000	60	Gulmohar, Neem Amla, Mango, Ash
63	Moh. Shahid Hussain S/o Jahur Hussain R/o- Station Road, Tehs. Tal, Dist. Ratlam	Stone Gitti	137	2.000	Village- Abupura Tehsil- Tal	01-07-2011 to 30-06-2021	1000	60	Gulmohar, Neem Amla, Mango, Ash
64	Shri Sabir Hussain S/o Shri Fajuddin Hussain, R/o- Village Pawar, Tehs. Hathtn, Dist. Palwal (Haryama) Hal. Mu.- Village Abupura, Tehs. Tal, Dist. Ratlam	Stone Gitti	147	2.000	Village- Abupura Tehsil- Tal	17-08-2016 to 16-08-2026	1000	40	Gulmohar, Neem Amla, Mango, Ash
65	Shri Sachin Banthiya S/o Shri Sanjay Kumar ji, R/o- 28, Ward- 03, Rama Pratap Marg, Tal, Tehs. Tal, Dist. Ratlam	Stone Gitti	147	2.000	Village- Abupura Tehsil- Tal	21-06-2017 to 20-06-2027	1000	80	Gulmohar, Neem Amla, Mango, Ash
66	M/S South East Construction Company Pvt. Ltd.	Stone Gitti	478	2.000	Village- Abupura	24-11-2017 to	1000	30	Gulmohar, Mang











	S/o Shri Kheraj Ranji, R/o- Nayagaon Alay, Dist. Nagaur (R1)					Tehsil- Alot	07-11-2027			Amla, Mango, Ash
105	Shrimati Sitara Khan W/o Shri Aslam Khan, R/o- 145, Dargah Mohalla, Tehs. Alot, Dist. Ratlam	Stone Gitti	18	1,000	Village- Khedi Tehsil- Alot	27-06-2017 to 26-06-2027	1000	40	Gulmohar, Neem Amla, Mango, Ash	
106	Kumari Minal Solanki S/o Shri Harendra Singh Solanki R/o- 97, Ward no.- 07, Bada Rawla, Alot	Stone Gitti	04	2,000	Village- Khamariya Tehsil- Alot	29-01-2019 to 28-01-2029	1000	30	Gulmohar, Neem Amla, Mango, Ash	
107	Shri Abid Khan S/o Aslam Khan R/o- Khudwadi Mohalla, Varoth road, Alot, Tehs. Alot, Dist. Ratlam	Stone Gitti	143	2,000	Village- Khamariya Tehsil- Alot	29-01-2019 to 28-01-2029	1000	10	Gulmohar, Neem Amla, Mango, Ash	
108	M/S R. K. Stone Crusher Partner: Shri Asif Khan S/o Aslam Khan, and Shri Abid Khan S/o Aslam Khan R/o Khudwadi Mohalla, Varoth road, Alot, Tehs. Alot, Dist. Ratlam	Stone Gitti	385/2/2	1,000	Village- Jeevangarh Tehsil- Alot	24-01-2019 to 23-01-2029		10	Gulmohar, Neem Amla, Mango, Ash	
109	Shri Wasim Khan S/o Shri Aslam Khan R/o Dargah Mohalla, Alot	Stone Gitti	504	2,000	Village- Mau Khedi Tehsil- Alot	02-09-2020 to 01-09-2030	1000	10	Gulmohar, Neem Amla, Mango, Ash	

(P.F.W.) Jodhpur  
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Assessment Authority, M.P.  
State Level Impact  
Assessment Authority, M.P.

Parera Arera 'S-E'  
Paryar Patisar  
Jodhpur

श्री जकीउद्दीन काजी पिता श्री गुलाम जिलानी, ग्राम भाउखेडी तहसील आलोट जिला रतलाम सर्वे नंबर 513, 517 रकबा 2.000 हे०

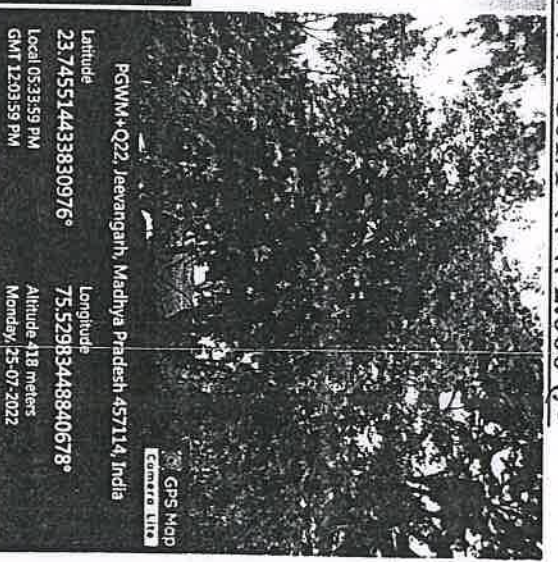
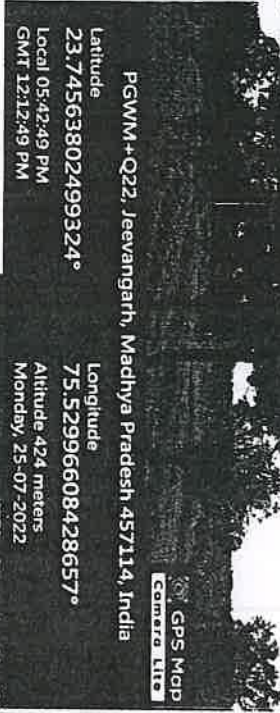



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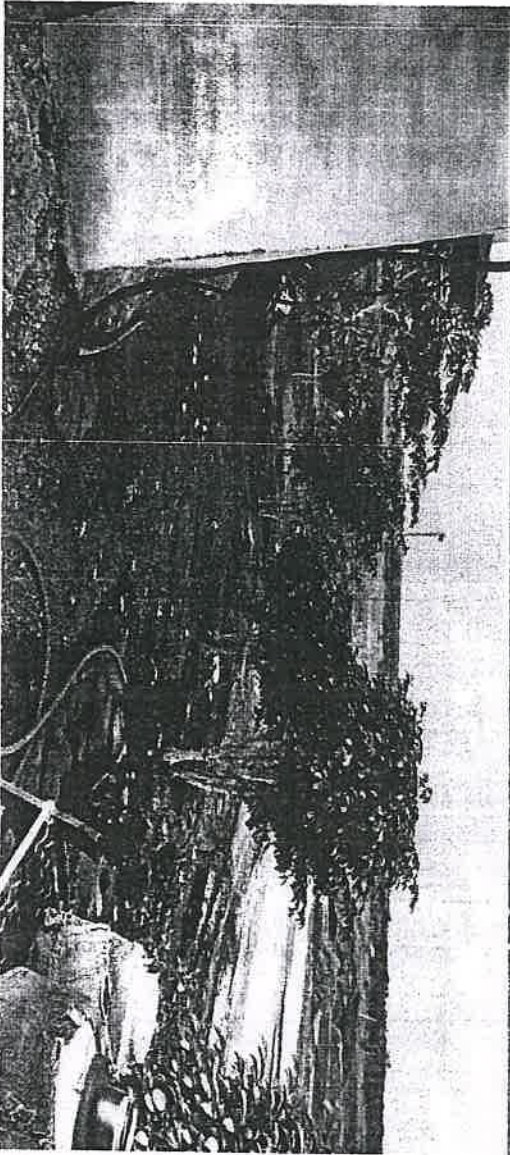
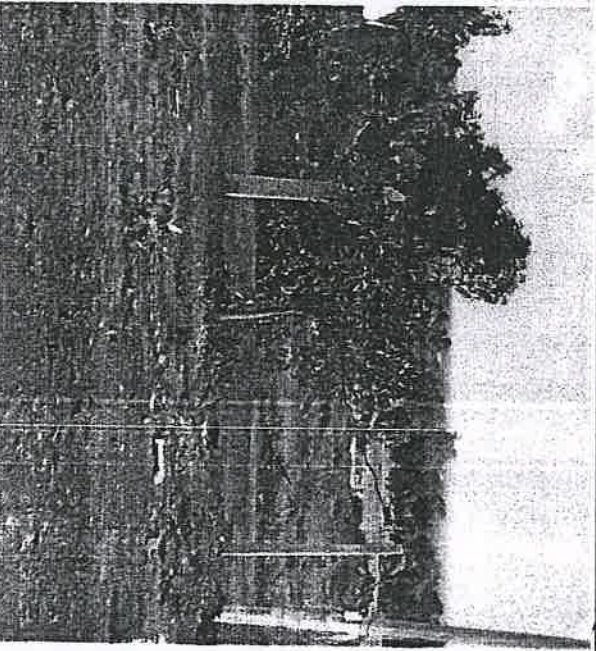
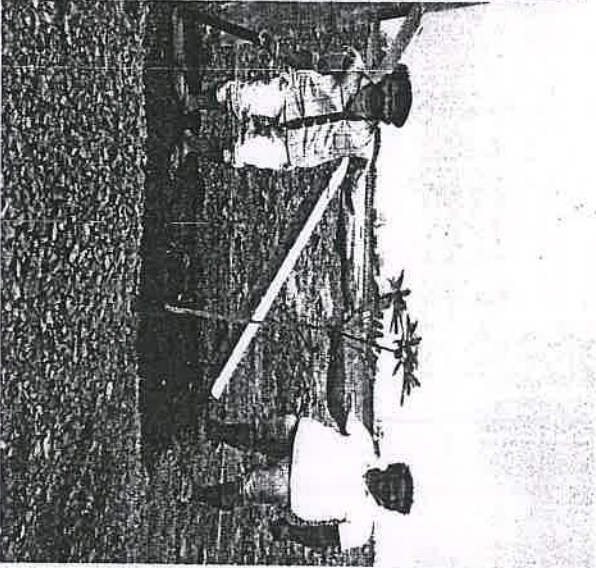
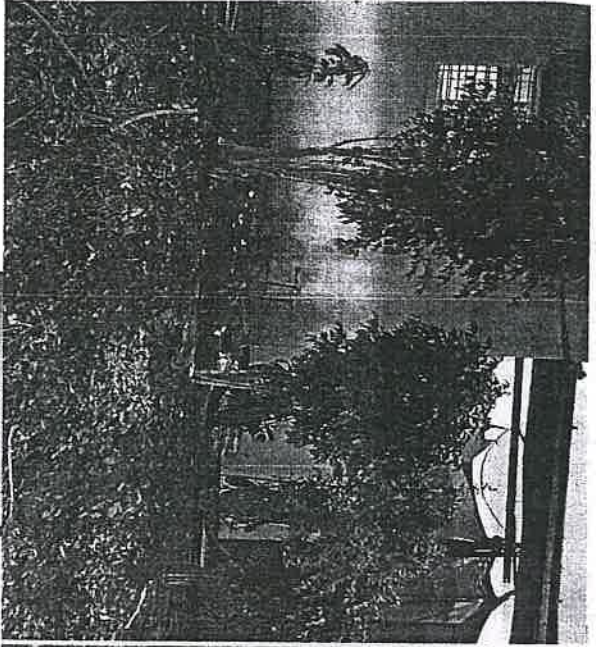
श्री रणजीत पिता भेरुलाल दायमा ग्राम माउखेडी तहसील आलोट जिला रतलाम सर्वे नंबर 501/1 रकबा 2.000 हे०



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



श्री राहुल ओस्त्वाल पिता श्री चंद्रप्रकाश ओस्त्वाल ग्राम बडायलाचौरासी तह0 पिपलोदा जिला रतलाम सर्वे नंबर 146/1 रकबा 2.000 हे०

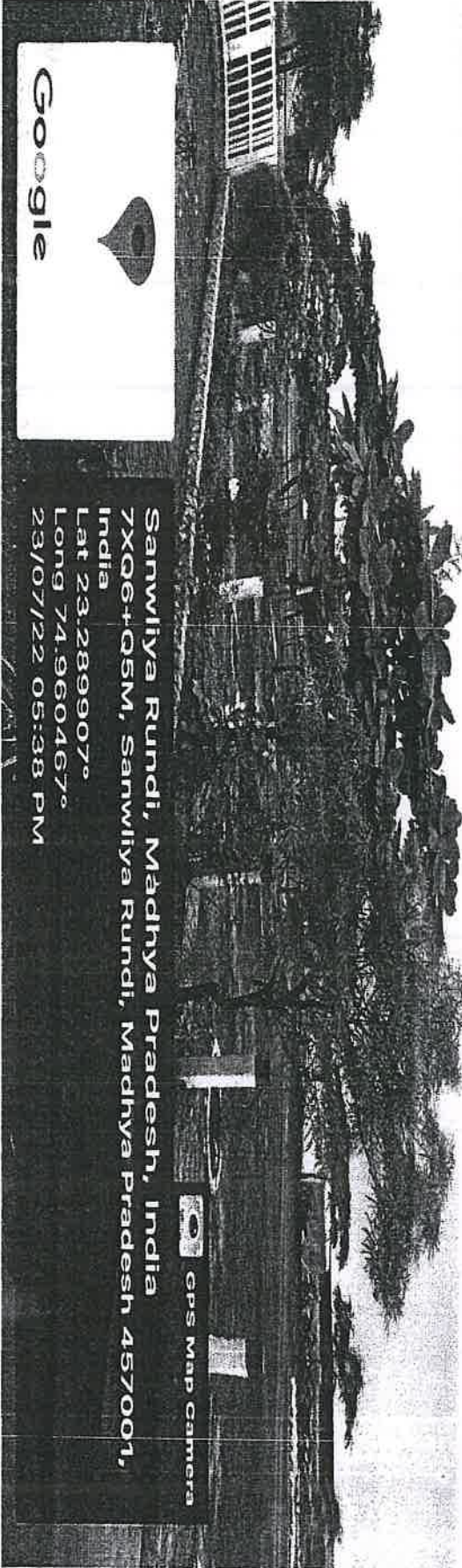
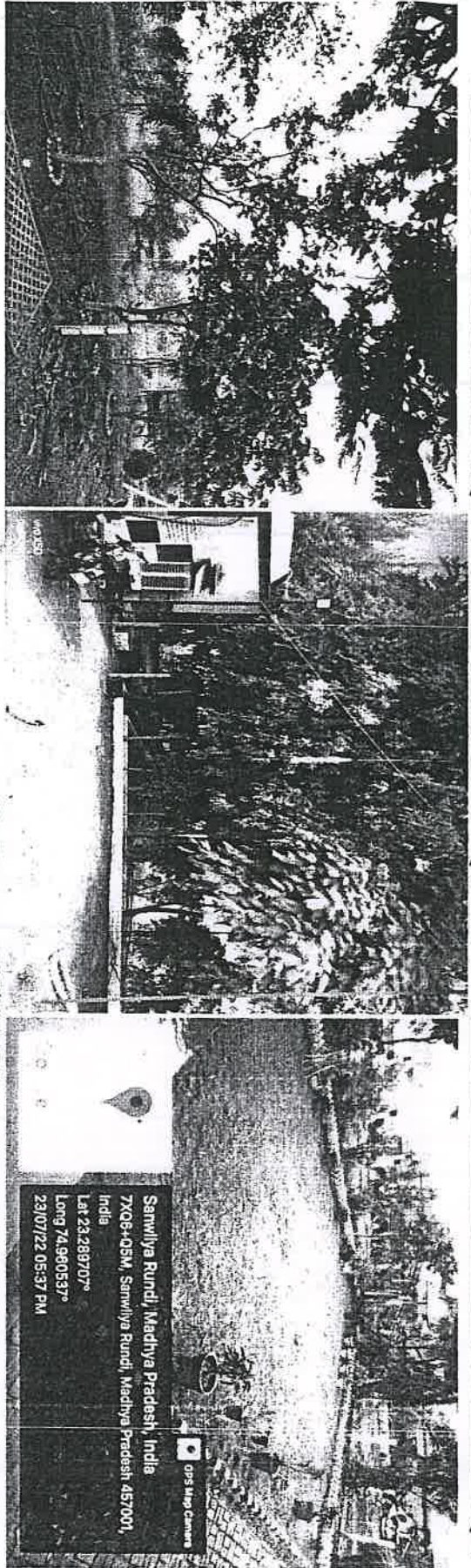


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श्री सैय्यद अफसार अली पिता वाहिद अली, ग्राम सांवलियारून्डी तहसील व जिला रतनाम सर्वे नंबर 3/1/1/1 रकबा 4.000 हे०



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

**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.

  
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